Surface Water Supply of the United States 1954

Part 10. The Great Basin

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1344

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

Surface Water Supply of the United States 1954

Part 10. The Great Basin

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

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UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1958

UNITED STATES DEPARTMENT OF THE INTERIOR

FRED A. SEATON, *Secretary*

GEOLOGICAL SURVEY

Thomas B. Nolan, *Director*

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

PREFACE

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

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

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

CALENDAR FOR WATER YEAR 1954

OCTOBER 1953

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER 1953

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

DECEMBER 1953

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JANUARY 1954

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FEBRUARY 1954

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

MARCH 1954

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

APRIL 1954

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

MAY 1954

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

JUNE 1954

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

JULY 1954

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

AUGUST 1954

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

SEPTEMBER 1954

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

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SURFACE WATER SUPPLY OF THE GREAT BASIN, 1954

SCOPE OF WORK

This volume is one of a series of 18 reports presenting measurements of stage, discharge, and content of streams, lakes, and reservoirs in the United States during the water year ending September 30, 1954. Since 1888, when the United States Geological Survey first studied streamflow in relation to problems of irrigation, similar measurements have been made at more than 13,050 gaging stations in the 48 States and at many others in the Territories of Alaska and Hawaii. On September 30, 1954, the Geological Survey and cooperating organizations were maintaining 6,750 gaging stations, including those in Alaska and Hawaii. Discharge measurements on'y were made at many other points in the 1954 water year, most of which are published at the end of this report.

COOPERATION

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

California: State Department of Public Works, F. B. Durkee, director, through Division of Water Resources, A. D. Edmonston, State engineer; San Bernardino County Flood Control District.

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

Nevada: Office of State Engineer, H. A. Shamberger.

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

Utah: Office of State Engineer, J. M. Tracy; Utah Water & Power Board, J. A. Howell, chairman, succeeded by Charles Redd, and G. D. Clyde, director.

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

Work in the Bear River basin (exclusive of Malad Valley) was done under cooperative agreements with the State Department of Reclamation of Idaho, the Office of State Engineer of Utah, Utah Water & Power Board, and the Office of State Engineer of Wyoming.

Assistance in the form of funds or services was given by the Corps of Engineers, Department of the Army, in collecting records published herein for 3 gaging stations in Utah, 2 in California, and 5 in Nevada.

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

The following organizations aided in collecting records:

California: Walker River Irrigation District.
Idaho: 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.

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

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

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

DEFINITION OF TERMS AND ABBREVIATIONS

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

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

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

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

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

Cfs-day is the volume of water represented by a flow of 1 cfs 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 plate 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 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 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

A. DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OREG.

B. SEVIER RIVER NEAR JUAB, UTAH

C. LOGAN RIVER NEAR LOGAN, UTAH

GAGING-STATION STRUCTURES

the stage-discharge relation is affected by changing stage. If so, the rate of change in stage is used as a factor in the determination of discharge.

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

The data herein presented generally comprise a description of the station, a skeleton rating table, and a table showing the daily discharge and monthly and yearly discharge and runoff of the stream. Records are published for the water year which begins on October 1 and ends on September 30. A calendar for the water year 1954 is shown on page IV for the purpose of finding the day of the week for any date.

The description of the station gives the location, drainage area, records available, type and history of gages, average discharge, extremes of discharge, general remarks, and notations of revisions of the previously published record. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "Location" for some stations, is that determined and used by the Corps of Engineers unless otherwise noted. Under "Records available" are given 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 5 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 to the 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 italicized. If the figure is repeated, it is italicized 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 for maximum are the maximum daily discharges, not the momentary discharges when the water was at crest stage. Likewise, the minimums in this summary are the minimum daily discharges.

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

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

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

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

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

Runoff at some stations, as indicated by the monthly mean, may vary widely from natural runoff, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, values of cubic feet per second per square mile and runoff in inches are not published unless storage or diversion records are included to indicate the extent of the regulation or diversion, or unless satisfactory adjustments can be made for changes in contents of reservoirs or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur when relatively large negative adjustments are made or when evaporation is large in comparison with the observed discharge.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and therefore the discharge recorded does not actually show the water supply available at the stations for further development, because water must first be supplied to existing irrigation systems.

PUBLICATIONS

To facilitate publication of the annual series of reports, the area of the United States is divided into 14 parts whose boundaries coincide with certain natural drainage lines. Formerly, the results of streamflow measurements were published in 14 volumes, one for each of the 14 parts. Beginning with the reports for 1951, the records are published

in 18 volumes, there being 2 volumes each for Parts 1, 2, 3, and 6. The boundaries of the various parts are indicated by the following list and the map in figure 1:

Part 1. North Atlantic slope basins, in two volumes:
- A. North Atlantic slope basins, Maine to Connecticut.
- B. North Atlantic slope basins, New York to York River.

2. South Atlantic slope and eastern Gulf of Mexico basins, in two volumes:
- A. South Atlantic slope basins, James River to Savannah River.
- B. South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River.

3. Ohio River basin, in two volumes:
- A. Ohio River basin except Cumberland and Tennessee River basins.
- B. Cumberland and Tennessee River basins.

4. St. Lawrence River basin.
5. Hudson Bay and upper Mississippi River basins.
6. Missouri River basin, in two volumes:
- A. Missouri River basin above Sioux City, Iowa.
- B. Missouri River basin below Sioux City, Iowa.

7. Lower Mississippi River basin.
8. Western Gulf of Mexico basins.
9. Colorado River basin.
10. The Great Basin.
11. Pacific slope basins in California.
12. Pacific slope basins in Washington and upper Columbia River basin.
13. Snake River basin.
14. Pacific slope basins in Oregon and lower Columbia River basin.

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

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

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

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

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

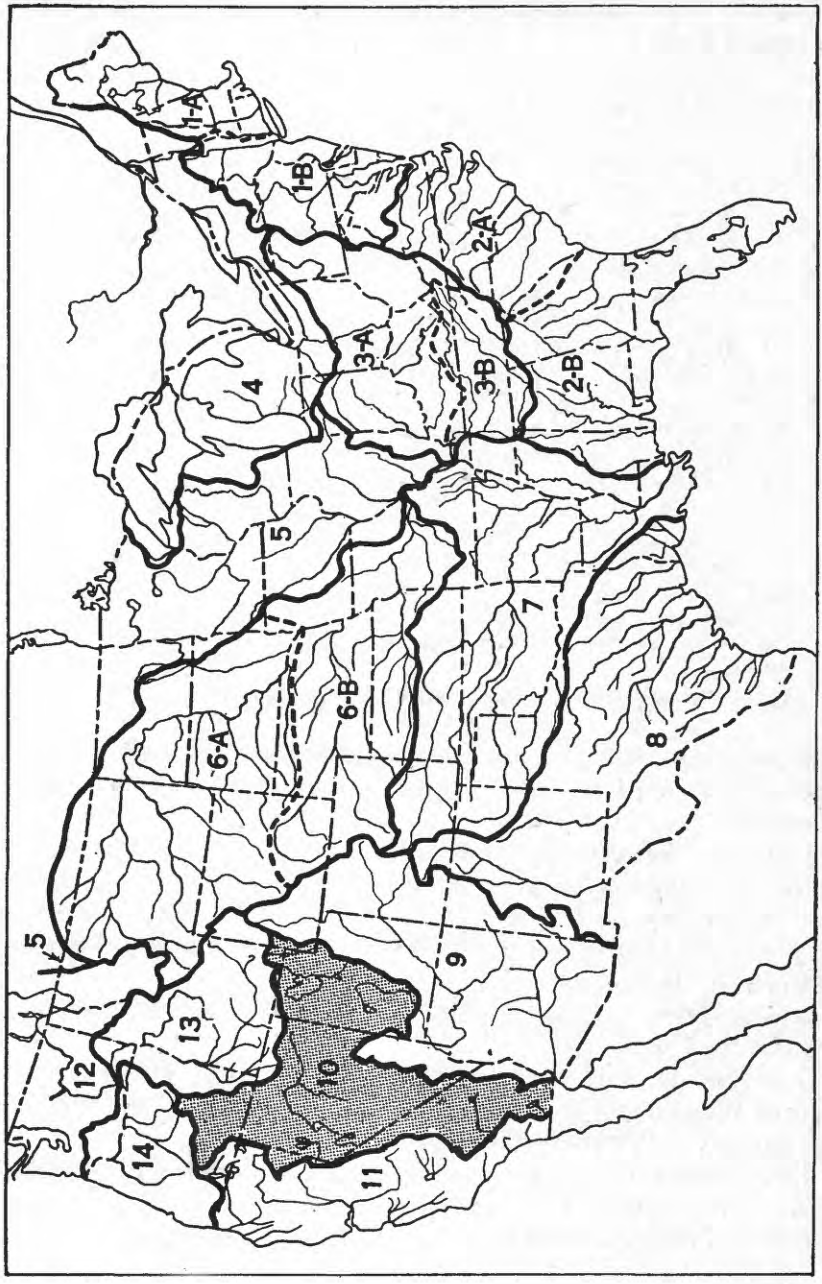

FIGURE 1.—Map of the United States showing areas covered by the 18 annual volumes on surface-water supply. The area covered by this report is shaded.

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

[A, Annual Report; B, Bulletin; W, Water-Supply Paper]

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.	
11th A, pt. 2	Monthly discharge and descriptive information	1884 to September 1890.
12th A, pt. 2	do	1884 to June 30, 1891.
13th A, pt. 3	do	1884–92.
14th A, pt. 2	Monthly discharge	1888–93.
B 131	Descriptions, measurements, gage heights, and ratings	1893–94.
16th A, pt. 2	Descriptive information only.	
B 140	Descriptions, measurements, gage heights, ratings, and monthly discharge.	1895.
W 11	Gage heights	1896.
18th A, pt. 4	Descriptions, measurements, rating, and monthly discharge	1895–96.
W 15	Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.	1897.
W 16	Descriptions, measurements, and gage heights of 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.
W 27	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.
W 28	Measurements, ratings, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries.	1898.
20th A, pt. 4	Monthly discharge	1898.
W 35 to 39	Descriptions, measurements, gage heights, and ratings	1899.
21st A, pt. 4	Monthly discharge	1899.
W 47 to 52	Descriptions, measurements, gage heights, and ratings	1900.
22d A, pt. 4	Monthly discharge	1900.
W 65, 66	Descriptions, measurements, gage heights, and ratings	1901.
W 75	Monthly discharge	1901.

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, 1899–1954

Year	WSP	Year	WSP	Year	WSP	Year	WSP	Year	WSP
1899	38, [a]39	1911	310	1923	570	1934	765	1945	1040
1900	51	1912	330	1924	590	1935	790	1946	1060
1901	66, 75	1913	360	1925	610	1936	810	1947	1090
1902	85	1914	390	1926	630	1937	830	1948	1120
1903	100	1915	410	1927	650	1938	860	1949	1150
1904	133, [b]134	1916	440	1928	670	1939	880	1950	1180
1905	176, [b]177	1917	460	1929	690	1940	900	1951	1214
1906	212, [b]213	1918	480	1930	705	1941	930	1952	1244
1907–8	250, [b]251	1919–20	510	1931	720	1942	960	1953	1284
1909	270, [b]271	1921	530	1932	735	1943	980	1954	1344
1910	290	1922	550	1933	750	1944	1010		

[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 under "Miscellaneous discharge measurements" at the end of each report. The streams and points of measurement are listed in the same order as the streams and gaging stations in the body of the report. An index of the records obtained before 1904 has been published in Water-Supply Paper 119.

Each of the reports on the surface-water supply for the year 1939 (Water-Supply Paper 880 for the Great Basin) contains, for the area included in that report, a summary of yearly discharge at gaging stations at which 10 or more complete years of record had been collected. These summaries were reprinted separately.

Reports also have been published that are compilations of records for various areas, usually a single State or drainage basin. These reports contain records previously published (some of which may have been revised), as well as some records not contained in the annual series of water-supply papers. The following table lists reports of this type for the Great Basin.

Reports containing compilations of discharge by States and drainage basins

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	*Reports*
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

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The table below contains a list of gaging stations for the area covered by this report, at which records of discharge were collected during the water year October 1953 to September 1954 by agencies other than the Geological Survey. The records of these stations are not contained in publications of the Geological Survey, nor have they been published elsewhere except as noted in footnotes to the table. Records for many canals and ditches and occasional records for several natural streams, none of which are here listed, have also been collected, and some of them have been published in the reports of irrigation projects or in reports of the water commissioner of the drainage basin in which the streams are situated.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
City Creek	Salt Lake City, Utah, near mouth of canyon.	1898–1954[a]	Salt Lake City.
Cottonwood Creek	do	1898–1954[a]	Do.
Emigration Creek	Salt Lake City, Utah, near mouth of canyon.	1898–1954[a]	Do.
Ephraim Creek	Near Ephraim, Utah	1914–54	Intermountain Forest & Range Experiment Station.
Little Cottonwood Creek.	Salt Lake City, Utah, near mouth of canyon.	1898–1954[a]	Salt Lake City.
Little Truckee River.	Above Boca Reservoir, near Boca, Calif.	1942–54	Washoe County Water Conservation District.
Do	Below Boca Reservoir, near Boca, Calif.	1942–54	Do.
Mill Creek	Salt Lake City, Utah, near mouth of canyon.	1898–1954[a]	Salt Lake City.
Otter Creek Outlet	Antimony, Utah, at former Geological Survey gaging station near Coyote.	1920–54[b]	Sevier River water commissioner.
Parleys Creek	Salt Lake City, Utah, near mouth of canyon.	1898–1954[a]	Salt Lake City.
Sevier River	Delta, Utah, at former Geological Survey gaging station.	1920–54[b]	Sevier River water commissioner.

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

Stream	Location	Period	Collected by
Truckee River	At Derby Dam, Nev	1907–10[a], 1926–54.	Federal Court Watermaster for Truckee River and Truckee-Carson Irrigation District.
Do	At Farad, Calif	1938–54[d]	Truckee-Carson Irrigation District.
Do	At Pyramid Dam, Nev	1928–54	Federal Court Watermaster for Truckee River.
Do	At Tahoe, Calif	1895–96, 1900–54[d]	Federal Court Watermaster for Truckee River and Truckee-Carson Irrigation District.
Do	At Vista, Nev	1899–1907[c], 1927–54.	Federal Court Watermaster for Truckee River.
Walker River	Near Wabusha, Nev	1902–8[c], 1920–34[c], 1940–54.	Walker River Irrigation District.
Wildhorse Creek	SE¼ sec. 34, T. 34 S., R. 33 E., in canyon above all diversions, 5½ miles north of Andrews, Oreg.	1950–54	Oregon State engineer.

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

HYDROLOGIC CONDITIONS

Deficient runoff during the 1954 water year was the outstanding hydrologic characteristic in a large portion of the Great Basin. Severe drought conditions continued in the southern portion of Utah and Nevada, and the drought area expanded to include the northern part of these states. Runoff for the Beaver River and Sevier River in south-central Utah was the fifth lowest of record in 40 years. More significant, of the 6 lowest years of records on the Beaver River, 4 have occurred in the past 5 years. Stream flow from the Weber River and Bear River in the northeastern part of the basin was the fourth lowest year of record in 50 years and averaged only about 75 percent of the median. Runoff for the water year 1954 of the Humboldt River at Palisade, Nev., in the north-central portion was the third lowest year of record in 47 years and only 35 percent of median. Drought conditions in the part of the Great Basin in southern California early in the water year were alleviated by above-normal runoff in January, but late in the water year runoff in that area again became deficient. Runoff in the part of the Great Basin in Oregon was near normal for the year. No outstanding floods occurred during the year in the area covered by this report. Flash floods produced by cloudburst-type storms common in the southern part of the basin during the summer months were less numerous than usual. For three key gaging stations in the area covered by this report a comparison of the monthly and yearly mean discharge during the 1954 water year with the median for the 25-year period 1921–45 is shown in figure 2.

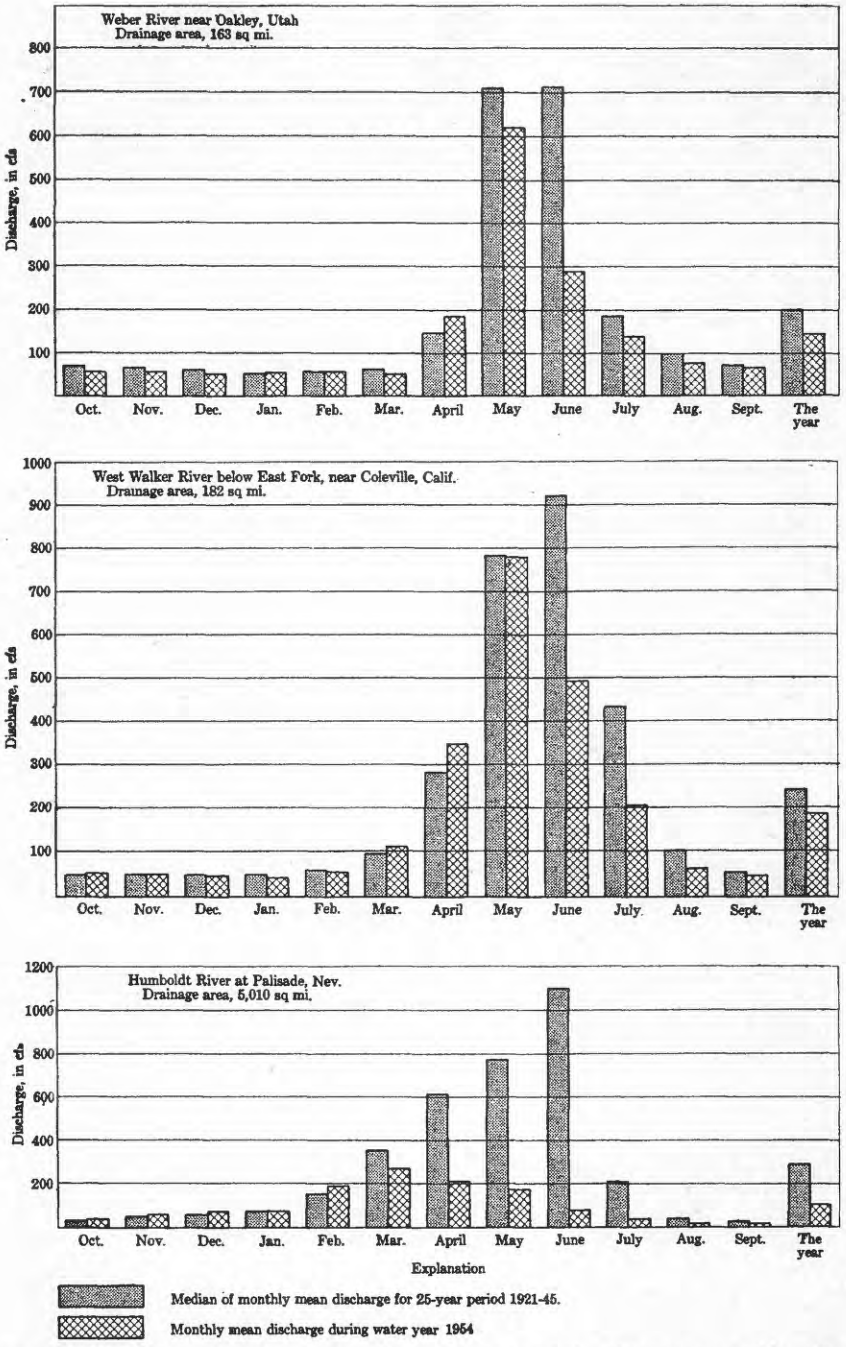

FIGURE 2.—Comparison of discharge at three key gaging stations during 1954 water year with median discharge for 25-year period.

GAGING-STATION RECORDS

GREAT SALT LAKE BASIN

GREAT SALT LAKE, UTAH

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

Records available.—September 1875 to December 1899, March to July 1904, and October 1912 to September 1954 in reports of Geological Survey. July 1903 to December 1934 in reports of U. S. Weather Bureau. Diagram showing fluctuations of lake from 1851 to 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 since October 1902 at datum 4,198.1 ft above mean sea level, datum of 1929. Prior to October 1938, staff gages at sites and datums as follows: September 1875 to October 1877 at Black Rock at datum 4,208.4 ft above mean sea level; November 1877 to November 1879 at Farmington Bay at datum 4,206.9 ft above mean sea level; November 1879 to April 1881 near Black Rock at datum 4,203.1 ft above mean sea level; April 1881 to December 1899 at Garfield Landing at datum 4,198.5 ft above mean sea level; July 1903 to October 1938 at Saltair at datum 4,196.9 ft above mean sea level.

Extremes.—Maximum elevation during year, 4,199.45 ft Apr. 1 and 15 at Midlake gage; minimum, 4,197.55 ft Sept. 15 at Boat Harbor gage.

1851–1954: Maximum elevation, 4,211.6 ft in 1873, computed from traditional data by E. C. LaRue (see WSP 880, p. 125); minimum, 4,193.7 ft Oct. 15 and Nov. 1, 1940, at Boat Harbor gage and Oct. 15, 1940, at Midlake gage.

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

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

Gage height, in feet, water year 1953–54

Day	Boat Harbor	Midlake	Day	Boat Harbor	Midlake
Oct. 1	12.05	0.9	Apr. 1	12.4	1.35
Oct. 15	11.95	.75	Apr. 15	12.5	1.35
Nov. 1	11.85	.5	May 1	12.45	1.15
Nov. 15	11.85	.4	May 15	12.4	1.1
Dec. 1	11.85	.65	June 1	12.15	1.0
Dec. 15	11.9	1.00	June 15	12.05	.85
Jan. 1	11.9	.65	July 1	11.95	.75
Jan. 15	11.9	.65	July 15	11.8	.5
Feb. 1	12.15	.9	Aug. 1	11.45	.35
Feb. 15	12.2	1.0	Aug. 15	11.1	− .1
Mar. 1	12.25	1.1	Sept. 1	10.8	− .4
Mar. 15	12.3	1.15	Sept. 15	10.65	− .5

BEAR RIVER BASIN

HILLIARD-EAST FORK CANAL NEAR STATE LINE, NEAR EVANSTON, WYO.

Location.—Lat 40°55′, long 110°49′, in NW¼ sec. 16, T. 2 N., R. 10 E., in Utah, on left bank 8 ft upstream from abandoned forest-road bridge, 300 ft downstream from new road bridge, three-quarters of a mile downstream from head, and 25 miles southeast of Evanston.

Records available.—October 1949 to September 1954 in reports of Geological Survey. April 1944 to September 1949 (irrigation seasons only) in Bear River Hydrometric Data reports.

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

Average discharge.—5 years (1949–54), 5.83 cfs (4,220 acre-ft per year).

Extremes.—1949–54: Maximum daily discharge, 39 cfs June 15, 20, 1952, May 20, 21, 1954; no flow during winter and at other times each year.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*3.9	0	0	0	0	0	0	7.9	26	13	11	7.8
2	3.9	0	0	0	0	0	0	7.9	23	22	10	9.0
3	3.9	0	0	0	0	0	0	7.9	23	27	10	16
4	4.0	0	0	0	0	0	0	8.2	27	27	*12	10
5	4.0	0	0	0	0	0	0	*8.6	28	30	14	10
6	4.0	0	0	0	0	0	0	9.0	24	26	10	9.1
7	3.9	0	0	0	0	0	0	10	22	23	9.5	8.8
8	3.8	0	0	0	0	0	0	9.6	20	*24	9.0	10
9	3.4	0	0	0	0	0	0	8.8	*20	23	8.8	9.7
10	3.3	0	0	0	0	0	0	6.9	18	22	8.7	9.1
11	3.6	0	0	0	0	0	0	6.6	18	19	9.1	9.2
12	3.9	0	0	0	0	0	0	12	20	21	12	10
13	4.0	0	0	0	0	0	0	24	22	27	10	11
14	3.9	0	0	0	0	0	0	23	24	27	10	*10
15	4.8	0	0	0	0	0	0	27	21	25	11	9.0
16	4.5	0	0	0	0	0	0	38	*23	22	9.2	8.4
17	4.3	0	0	0	0	0	0	38	21	26	8.7	8.4
18	4.0	0	0	0	0	0	0	38	22	23	8.4	8.2
19	2.8	0	0	0	0	0	0	38	25	24	8.2	8.1
20	2.7	0	0	0	0	0	0	39	27	*20	8.8	7.9
21	2.9	0	0	0	0	0	0	39	27	19	9.6	7.8
22	2.9	0	0	0	0	0	0	36	13	17	8.7	7.7
23	2.8	0	0	0	0	0	0	24	2.4	16	8.1	11
24	2.7	0	0	0	0	0	0	11	*1.8	15	*7.7	10
25	3.1	0	0	0	0	0	0	1.8	1.7	14	7.6	9.0
26	3.4	0	0	0	0	0	0	1.2	1.6	16	7.2	9.1
27	2.5	0	0	0	0	0	2.4	.7	1.6	18	7.4	8.3
28	*1.0	0	0	0	0	0	8.3	.4	1.6	14	7.1	7.8
29	0	0	0	0	-------	0	8.2	15	1.6	13	7.4	*7.7
30	0	0	0	0	-------	0	8.2	28	1.6	12	7.0	7.5
31	0	-------	0	0	-------	0	-------	25	-------	12	6.9	-------
Total	97.9	0	0	0	0	0	27.1	550.5	507.9	637	283.1	275.0
Mean	3.16	0	0	0	0	0	.90	17.8	16.9	20.5	9.13	9.17
Ac-ft	194	0	0	0	0	0	54	1,090	1,010	1,260	562	545

Calendar year 1953	Max 33	Min 0	Mean 4.35	Ac-ft 3,150
Water year 1953–54	Max 39	Min 0	Mean 6.52	Ac-ft 4,720

*Discharge measurement made on this day.

BEAR RIVER NEAR UTAH-WYOMING STATE LINE

Location.—Lat 40°58′, long 110°51′, in SE¼ sec. 30, T. 3 N., R. 10 E., on left bank just downstream from West Fork and 2.8 miles upstream from Utah-Wyoming State line.

Drainage area.—176 sq mi.

Records available.—July 1942 to September 1954.

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

Average discharge.—12 years, 192 cfs (139,000 acre-ft per year).

Extremes.—Maximum discharge during year, 1,220 cfs May 22 (gage height, 3.26 ft); minimum, 25 cfs Aug. 31, Sept. 1.

1942–54: Maximum discharge, 2,750 cfs June 14, 1953 (gage height, 4.89 ft); minimum, 16 cfs Apr. 11, 1951, but may have been less during period of ice effect or no gage-height record.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*27	46	40				42	178	282	*174*	46	*26*
2	28	48				[a] 40	*58*	*155*	248	152	42	30
3	28	48					40	155	253	138	42	*73*
4	30	49					44	207	303	141	*49	48
5	30	49				(*)	53	*303	325	167	*64*	40
6	31	*51*	[b] 38		[b] 40		53	388	272	135	48	36
7	31	44					48	476	234	115	43	34
8	30	44					44	572	207	*115	40	37
9	31	43					48	668	*203	118	37	40
10	32	44					44	735	*186*	101	37	37
11	30	46				[b] 40	48	*720	190	92	38	34
12	30	44					53	766	203	98	49	37
13	32	46	[b] 40				*58	766	234	135	44	40
14	31	44					80	782	277	121	44	38
15	32	43					78	735	238	106	43	34
16	33	37	[b] 45 (*)	[b] 38			87	675	282	87	37	32
17	31	*43				42	112	*682	253	98	34	31
18	30	32	38			[b] 45	141	774	253	106	33	30
19	30	[b] 30	36			[b] 48	155	814	287	109	32	28
20	32	[b] *28*			[a] 40	46	155	856	292	87	33	28
21	36	[b] 32				44	159	881	292	82	37	28
22	31	[b] 38				48	178	*1,000*	298	70	36	30
23	37	[b] 42				*40	203	630	292	62	32	40
24	44	43				36	234	551	*287	57	*31	46
25	43	44	[b] 38			38	287	*565	292	55	30	44
26	38	42				38	298	517	292	62	28	46
27	46	42				37	*314*	406	*294*	87	27	42
28	*48	40				36	314	353	287	62	27	36
29	*51*	42			-------	37	238	325	234	55	*26*	*33
30	48	42			-------	37	216	325	212	51	26	33
31	46	-------			-------	46	-------	262	-------	*48*	26	-------
Total	1,077	1,266	1,208	1,178	1,120	1,258	3,862	17,222	7,902	3,086	1,161	1,111
Mean	34.7	42.2	39.0	38	40	40.6	129	556	263	99.5	37.5	37.0
Ac-ft	2,140	2,510	2,400	2,340	2,220	2,500	7,660	34,160	15,670	6,120	2,300	2,200

Calendar year 1953	Max 2,280	Min --	Mean 182	Ac-ft 131,400
Water year 1953–54	Max 1,000	Min --	Mean 114	Ac-ft 82,220

Peak discharge (base, 1,100 cfs)—May 22 (2 a.m.) 1,220 cfs (3.26 ft).

*Discharge measurement made on this day.
[a] No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.
[b] Stage-discharge relation affected by ice.

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 1954. July 1942 to September 1948 at site 1½ miles downstream, published as "near Evanston"; records not equivalent at times because of diversions between sites for irrigation.

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

Average discharge.—5 years (1949–54), 35.7 cfs (25,850 acre-ft per year).

Extremes.—Maximum discharge during year, 227 cfs May 9 (gage height, 2.54 ft); minimum, 1.4 cfs Mar. 19, result of freezeup.

1949–54: Maximum discharge, 626 cfs May 3, 1952 (gage height, 4.27 ft); 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.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*5.3*	9.2	9.2				9.2	44	*50*	6.2	4.7	*2.7*
2	5.3	9.2	8.8				*8.0*	*36*	44	6.2	4.7	3.3
3	5.3	10	[b] 8.5			[a] 8.0	10	38	44	5.9	4.4	*20*
4	5.3	10					13	62	38	6.2	*3.9	8.4
5	5.3	10				*8.8	17	*95	36	10	*5.0*	4.4
6	5.6	10				8.8	17	108	31	8.0	4.2	3.6
7	5.6	9.2				8.4	13	128	30	7.1	3.6	3.1
8	5.6	8.4	[b] 8.0			7.7	12	132	28	*6.5	3.4	3.3
9	5.6	*11*				7.7	14	148	*27	6.8	3.3	3.1
10	5.6	10				8.8	13	148	24	5.6	3.4	3.1
11	5.6	10				8.8	14	*148	23	5.9	3.6	3.1
12	5.6	10				7.7	17	144	22	6.5	4.8	3.3
13	5.6	10		[b] 8.0		8.8	*18	132	22	7.7	4.4	3.9
14	5.9	9.6				8.8	27	130	29	10	3.7	4.2
15	6.8	9.6			[a] 9.0	8.8	25	120	31	8.0	3.6	4.2
16	7.1	7.4	(*)			8.5	28	115	37	5.9	3.6	4.0
17	6.5	*8.8	[b] 9.0			8.5	42	118	35	5.9	3.6	3.9
18	6.2	*5.9*				9.2	59	132	27	8.0	3.7	3.9
19	6.2	8.8				*10*	56	135	22	9.2	3.9	3.9
20	6.8	8.0				9.6	47	134	19	7.4	4.5	3.9
21	8.0	9.6				9.6	46	130	18	7.1	4.4	4.0
22	7.4	10				9.6	54	*156*	16	5.9	4.7	4.0
23	8.0	10				8.4	62	100	14	4.5	4.2	6.2
24	8.4	11				9.2	71	77	*13	4.4	*3.7	8.0
25	8.4	9.6				9.6	*87*	*76	14	*4.2*	3.4	8.0
26	7.4	9.6	[b] 8.0			10	83	71	17	4.5	3.3	5.9
27	9.2	8.8				8.8	83	54	24	*22*	3.3	5.0
28	*9.6	8.4		[a] 8.0		8.4	83	42	18	7.1	3.3	4.8
29	*10*	7.7			-------	8.8	56	38	13	5.0	3.4	*4.5
30	9.6	8.0			-------	8.8	52	45	*10*	5.0	3.6	4.2
31	9.2	-------			-------	8.0	-------	42	-------	4.8	2.8	-------
Total	212.0	277.8	257.5	248.0	252.0	270.1	1,136.2	3,078	776	217.5	120.1	147.9
Mean	6.84	9.26	8.31	8.0	9.0	8.71	37.9	99.3	25.9	7.02	3.87	4.93
Ac-ft	420	551	511	492	500	536	2,250	6,110	1,540	431	238	293

Calendar year 1953	Max 403	Min 4.0	Mean 31.9	Ac-ft 23,130
Water year 1953–54	Max 156	Min 2.7	Mean 19.2	Ac-ft 13,870

Peak discharge (base, 250 cfs)..... No peak above base.

*Discharge measurement made on this day.

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

[b] Stage-discharge relation affected by ice.

BEAR RIVER ABOVE SULPHUR CREEK, NEAR EVANSTON, WYO.

Location.—Lat 41°08′, long 110°53′, in NW¼NE¼ sec. 6, T. 13 N., R. 119 W., on right bank 2 miles upstream from Myers Bridge, 5¾ miles upstream from Sulphur Creek, and 9½ miles southeast of Evanston. Prior to Oct. 1, 1953, at site 1,200 ft downstream.

Drainage area.—282 sq mi.

Records available.—October 1946 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 7,130 ft (from river-profile map). Prior to Oct. 1, 1953, at site 1,200 ft downstream at different datum.

Average discharge.—8 years, 212 cfs (153,500 acre-ft per year).

Extremes.—Maximum discharge during year, 1,330 cfs May 22 (gage height, 4.43 ft); minimum, 5.2 cfs Sept. 8.

1946–54: Maximum discharge, 2,970 cfs June 14, 1953 (gage height, 5.73 ft, site and datum then in use); minimum, 5.1 cfs Sept. 12, 1953.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*8.8	32	55				70	233	223	*136	7.6	6.0
2	8.8	33	55				72	195	213	52	7.6	7.2
3	9.6	36					80	186	177	26	*7.2	12
4	9.6	40					103	210	165	19	7.6	16
5	10	43					150	*315	177	19	11	8.8
6	10	50					162	410	165	19	12	7.2
7	9.6	45					*112	514	159	14	9.6	6.8
8	10	42	48			55	117	603	133	12	8.0	5.6
9	10	50					150	658	117	10	7.6	6.4
10	10	55					139	808	*117	9.6	7.2	6.4
11	10	57					144	*723	100	8.8	7.6	6.4
12	10	59					162	827	94	14	8.0	6.0
13	10	55					*174	762	100	18	16	6.4
14	10	54					207	782	139	19	19	6.8
15	12	52		50	55		159	736	159	16	16	7.2
16	13	*48	55				144	585	183	15	15	7.2
17	14	48	(*)		(*)		162	537	192	13	13	7.2
18	13	45					198	639	150	16	12	7.2
19	14	37					189	*664	150	24	13	7.2
20	15	32					192	*756	153	22	10	7.6
21	19	35					183	820	144	20	12	8.8
22	20	50				60	204	1,170	128	21	14	8.0
23	21						233	801	*177	19	10	10
24	27					(*)	243	621	192	17	7.6	15
25	29						315	*664	213	15	*6.8	19
26	27	60	50				356	627	240	15	6.4	17
27	27						352	514	370	16	6.0	17
28	33						390	430	315	18	6.0	16
29	*34				-------	61	290	333	240	15	5.6	14
30	34				-------	61	258	226	213	14	5.6	*19
31	34	-------			-------	76	-------	223	-------	11	5.6	-------
Total	522.4	1,478	1,573	1,550	1,540	1,803	5,710	17,572	5,298	663.4	300.6	295.4
Mean	16.9	49.3	50.7	50	55	58.2	190	567	177	21.4	9.70	9.85
Ac-ft	1,040	2,930	3,120	3,070	3,050	3,580	11,330	34,850	10,510	1,320	596	586

Calendar year 1953	Max 2,500	Min 6.0	Mean 185	Ac-ft 134,000
Water year 1953–54	Max 1,170	Min 5.6	Mean 105	Ac-ft 75,980

Peak discharge (base, 1,100 cfs)— May 22 (9:30 a.m.) 1,330 cfs (4.43 ft).

*Discharge measurement made on this day.

NOTE.—Stage-discharge relation affected by ice Nov. 18 to Mar. 28 (no gage-height record Jan. 29 to Feb. 16).

SULPHUR CREEK NEAR EVANSTON, WYO.

Location.—Lat 41°10′, long 110°52′, in SE¼ sec. 29, T. 14 N., R. 119 W., on left bank 4.8 miles upstream from mouth and 9 miles southeast of Evanston.

Drainage area.—80.5 sq mi.

Records available.—April 1942 to September 1954.

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.—12 years, 23.7 cfs (17,160 acre-ft per year).

Extremes.—Maximum discharge during year, 253 cfs Apr. 5 (gage height, 3.67 ft); minimum, 0.5 cfs Sept. 20.

1942–54: Maximum discharge, 1,220 cfs Apr. 23, 1952; maximum gage height, 6.01 ft, present datum, Apr. 21, 1948; no flow Sept. 10, 1949.

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

Revisions (water years).—WSP 1040: 1943–44.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.0*	*4.9*	10				23	20	75	*2.7	1.2	0.9
2	*1.0	4.9	11	8.0			27	20	61	2.8	1.1	1.2
3	1.3	4.9	8.3				49	13	47	2.8	1.2	*1.4*
4	1.5	5.3	7.6				75	10	31	2.5	*1.4	1.4
5	1.6	7.1	8.1			*8.0	*136*	*8.3	23	3.2	*2.5*	1.2
6	1.9	*10*	7.6				129	*7.6*	36	3.6	1.5	1.0
7	1.9	7.6					*76	8.3	62	3.8	1.2	.9
8	1.9	7.4					84	11	52	3.3	1.1	1.0
9	3.3	7.9			10		118	9.0	40	2.4	1.1	.9
10	3.3	9.6					100	8.1	41	2.1	1.1	.8
11	2.7	9.6	8.0				82	13	30	2.0	1.1	.8
12	2.8	9.6					87	12	23	2.0	2.0	.8
13	3.3	8.7					*88	13	22	2.1	1.5	1.0
14	3.5	8.1				15	89	9.3	55	2.5	1.4	.9
15	4.0	7.9					58	8.1	60	2.8	1.2	.8
16	4.2	7.4	(*)				42	10	*92	2.5	1.1	.8
17	4.2	*8.1	9.0	8.0	(*)		38	15	74	2.5	1.1	.7
18	3.8	6.0					36	29	52	3.8	1.1	*.6*
19	3.8	8.1					34	*19	38	7.1	1.1	.6
20	4.9	5.9				14	*26	12	29	*9.3*	1.1	.6
21	6.4	8.7				16	18	22	19	9.0	1.4	.6
22	5.3	7.9			10	17	12	*166*	14	6.2	1.4	.7
23	5.1	6.7				16	11	113	12	4.6	1.3	.9
24	5.5	7.1				*17	11	50	7.6	2.7	*1.2	1.0
25	6.2	8.3	8.0			16	10	23	5.9	2.2	1.2	1.0
26	6.2	9.3				17	10	16	4.6	2.4	1.1	.8
27	6.4	10				18	5.3	11	9.6	2.4	1.0	.8
28	*7.6	10				18	*4.9*	9.3	6.2	2.1	1.0	.8
29	6.4	10			-------	21	7.1	9.0	4.2	1.6	1.0	.8
30	5.7	10			-------	20	10	15	*3.5*	1.6	1.0	*.8
31	5.1	-------			-------	*25*	-------	33	-------	*1.8*	.9	-------
Total	121.8	237.0	258.6	248.0	280	444.0	1,496.3	723.0	1,029.6	101.9	38.6	26.5
Mean	3.93	7.90	8.34	8.0	10	14.3	49.9	23.3	34.3	3.29	1.25	.88
Ac-ft	242	470	513	492	555	881	2,970	1,430	2,040	202	77	53

Calendar year 1953	Max 162	Min 1.0	Mean 17.1	Ac-ft 12,360
Water year 1953–54	Max 166	Min 0.6	Mean 13.7	Ac-ft 9,920

Peak discharge (base, 300 cfs)—— No peak above base.

*Discharge measurement made on this day.

NOTE.—Stage-discharge relation affected by ice Nov. 18, 27–30, Dec. 7 to Mar. 19 (no gage-height record Jan. 4 to Feb. 16; discharge estimated on basis of weather records and records for stations on nearby streams).

YELLOW CREEK NEAR EVANSTON, WYO.

Location.—Lat 41°09′, long 111°03′, in SW¼ sec. 21, T. 5 N., R. 8 E., in Utah, on left bank 600 ft downstream from Sage Creek, 1½ miles upstream from Coyote Creek, and 9¾ miles southwest of Evanston.

Drainage area.—80 sq mi, approximately.

Records available.—February 1943 to September 1945, October 1949 to September 1954.

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

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

Extremes.—Maximum discharge during year, 26 cfs Apr. 14 (gage height, 1.35 ft); no flow Oct. 1 to Feb. 15, July 3 to Sept. 30.

1943–45, 1949–54: Maximum discharge, 477 cfs Apr. 28, 1952 (gage height, 7.04 ft); no flow at times.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0	0			*3.3*	12	3.8	*0.1*	0	0
2	0	0	0	0		[a] 0.8	4.8	11	*4.0*	.1	0	0
3	0	0	0	0			8.8	9.5	3.3	*0*	0	0
4	0	0	0	0		(**)	9.9	*9.1	2.8	0	0	0
5	0	0	0	0			14	9.5	2.3	0	0	0
6	0	0	0	0		[b] .8	18	15	1.9	0	0	0
7	0	0	0	0			*14	*17*	1.6	0	0	0
8	0	0	0	0	0		14	17	1.6	0	0	0
9	0	0	0	0			14	16	1.6	0	0	0
10	0	0	0	0			14	16	1.9	0	0	0
11	0	0	0	0			14	16	1.3	0	0	0
12	0	0	0	0			*16	14	1.3	0	0	0
13	0	0	0	0			17	12	1.4	0	0	0
14	0	0	0	0			*21*	9.9	1.3	0	0	0
15	0	0	0	0			20	8.8	1.4	*0	0	0
16	0	0	0	0		[b] 3.5	14	7.6	1.0	0	0	0
17	0	*0	*0	0			12	6.5	*1.4	0	0	0
18	0	0	0	0			12	5.0	1.0	0	0	0
19	0	0	0	0			12	4.6	1.2	0	0	0
20	0	0	0	0			*12	*3.6	.8	0	0	0
21	0	0	0	0			10	3.0	.5	0	0	0
22	0	0	0	0	[a] 1.0		9.5	4.3	.4	0	0	0
23	0	0	0	0		*3.8	9.1	6.9	.4	0	0	0
24	0	0	0	0		4.0	10	8.8	.4	0	0	0
25	0	0	0	0		3.8	12	6.2	.3	0	*0	0
26	0	0	0	0		3.6	13	4.0	.3	0	0	0
27	0	0	0	0		3.0	13	3.3	.4	0	0	0
28	0	0	0	0		3.0	14	3.0	.3	0	0	*0
29	0	0	0	0	-------	3.8	15	*2.8*	.2	0	0	0
30	0	0	0	0	-------	4.6	12	2.8	*.1*	0	0	0
31	0	-------	0	0	-------	*6.2*	-------	3.6	-------	0	0	-------
Total	0	0	0	0	13.0	91.2	382.4	268.8	40.2	0.2	0	0
Mean	0	0	0	0	0.46	2.94	12.7	8.67	1.34	0.01	0	0
Ac-ft	0	0	0	0	26	181	758	533	80	0.4	0	0

Calendar year 1953	Max 50	Min 0	Mean 6.33	Ac-ft 4,580
Water year 1953–54	Max 21	Min 0	Mean 2.18	Ac-ft 1,580

Peak discharge (base, 100 cfs)----- No peak above base.

*Discharge measurement or observation of no flow made on this day.
**Field estimate made on this day.
[a] No gage-height record; discharge estimated on basis of weather records for stations on nearby streams.
[b] Stage-discharge relation affected by ice.

BEAR RIVER NEAR EVANSTON, WYO.

Location.—Lat 41°19′, long 111°01′, in sec. 1, T. 15 N., R. 121 W., on left bank 300 ft upstream from road bridge and 3½ miles northwest of Evanston.

Drainage area.—715 sq mi.

Records available.—October 1913 to September 1954.

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

Average discharge.—41 years, 235 cfs (170,100 acre-ft per year).

Extremes.—Maximum discharge during year, 1,270 cfs May 22 (gage height, 4.80 ft); no flow Aug. 17 to Sept. 30.

1913–54: Maximum discharge, 3,690 cfs June 14, 1921 (gage height, 6.35 ft), from rating curve extended above 2,700 cfs; no flow at times in 1924, 1931, 1933–34, 1939–40, 1942, 1946, 1948, 1954.

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

Revisions (water years).—WSP 1010: 1942–43. WSP 1090: Drainage area.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	16	73				*103*	264	199	*99*	*1.6*	0
2	1.1	*14*	64				112	239	209	*42	1.0	0
3	1.1	20	[b]60				147	209	169	13	*.9	0
4	*1.0*	30				[b]65	204	*204	136	7.1	.9	0
5	1.1	32					292	256	116	5.9	.9	0
6	1.1	41					*411*	333	112	5.6	.8	0
7	1.4	45				[b]90	264	394	127	5.6	.7	0
8	1.4	38				112	258	471	118	4.8	.6	0
9	1.4	38	[b]55			*120	298	533	101	3.6	.5	0
10	1.1	46			[a]65	192	286	647	*93	3.1	.3	0
11	1.0	54				*256*	272	628	86	2.8	.2	0
12	1.0	61				187	278	*655	71	2.8	.2	0
13	1.1	63				169	289	643	66	2.6	.3	0
14	1.8	56				158	*333	624	*64*	2.1	.2	0
15	2.1	55		[a]60		142	292	592	136	*1.8	.2	0
16	2.4	54	[b]65			142	232	478	162	1.6	.1	0
17	3.1	*54	(*)		(*)	147	222	407	248	*1.1*	*0*	0
18	3.4	56				118	239	456	174	1.4	0	0
19	3.4	42				114	239	492	127	1.8	0	0
20	5.2	37				114	232	*552	101	1.6	0	0
21	4.4	49				112	214	610	86	2.8	0	0
22	5.2	58	[b]60		[b]65	*114	216	*1,010*	*68	3.1	0	0
23	4.8	71				108	234	937	73	3.1	0	0
24	6.3	70				105	239	659	84	3.1	0	0
25	8.0	73				101	283	667	142	2.8	0	0
26	8.6	75				99	330	*610	192	3.4	0	0
27	11	*78*	[a]60			99	339	522	301	4.4	0	0
28	12	70				99	364	435	*354*	3.1	0	0
29	*17	70			-------	105	330	342	250	2.4	0	0
30	15	66			-------	108	275	*185*	176	2.4	0	0
31	17	-------			-------	93	-------	192	-------	1.8	0	-------
Total	145.6	1,532	1,862	1,860	1,820	3,594	7,827	15,246	4,341	241.7	9.4	0
Mean	4.70	51.1	60.1	60	65	116	261	492	145	7.80	0.30	0
Ac-ft	289	3,040	3,690	3,690	3,610	7,130	15,520	30,240	8,610	479	19	0

Calendar year 1953	Max 2,260	Min 1.0	Mean 191	Ac-ft 138,000
Water year 1953–54	Max 1,010	Min 0	Mean 105	Ac-ft 76,320

Peak discharge (base, 1,200 cfs)—— May 22 (5 p.m.) 1,270 cfs (4.80 ft).

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of weather records and records for nearby stations on Bear River.

[b] Stage-discharge relation affected by ice.

CHAPMAN CANAL AT STATE LINE, NEAR EVANSTON, WYO.

Location.—Lat 41°24′, long 111°02′, in SE¼ sec. 36, T. 17 N., R. 121 W., on right bank at highway bridge, 6½ miles downstream from headgates and 10 miles northwest of Evanston.

Records available.—October 1945 to September 1954 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 Bear River Hydrometric Data reports.

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

Average discharge.—9 years (1945–54), 16.1 cfs (11,660 acre-ft per year).

Extremes.—1942–54: 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 in Utah, and for irrigation in Saleratus Creek basin in Utah.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0*	11	[b] *38*	0	*0*	[a] 20	32	18	54	*38*	0	0
2	0	9.1	[b] 38	0	0	[a] 25	32	18	65	*15	0	0
3	*0*	*7.4*	[b] 38	0	*0*	[a] 25	*40*	17	53	3.4	*0*	*0*
4	0	12	[b] 38	0	0	[a] 25	46	*16*	45	*0*	0	0
5	0	13	[b] 25	0	0	[b] 30	62	40	42	0	0	0
6	0	13	*0*	0	0	32	*80*	*72	54	0	0	0
7	0	18	*0*	*0*	0	30	*74	77	61	0	0	0
8	0	15	0	0	0	30	71	79	62	0	0	0
9	0	14	0	0	0	*36	74	75	40	0	0	0
10	0	17	0	0	0	51	75	79	33	0	0	0
11	0	21	0	0	0	61	72	79	*30	0	0	0
12	0	25	0	0	0	60	55	78	21	0	0	0
13	0	27	0	0	0	51	24	*86*	15	0	0	0
14	0	26	0	0	0	53	*24	85	9.7	0	0	0
15	0	23	0	0	0	35	23	85	25	0	0	0
16	.4	23	0	0	0	*5.8*	22	82	36	0	0	0
17	.3	*27	0	0	0	23	22	71	*68	0	0	0
18	.5	28	0	0	0	27	22	57	55	0	0	0
19	.7	[b] 26	0	0	0	[a] 60	23	61	44	0	0	0
20	1.9	[b] 23	0	0	0	[a] *70*	*23	*62	36	0	0	0
21	3.4	30	0	0	0	[a] 60	22	65	27	0	0	0
22	2.1	[b] 35	0	0	0	*53	22	77	*22	0	0	0
23	2.1	[b] *40*	0	*0*	0	41	22	75	22	0	*0*	*0*
24	2.2	[b] 40	0	0	0	40	22	41	20	0	0	0
25	3.4	[b] 40	0	0	0	36	21	20	.2	0	0	0
26	4.7	40	0	0	0	35	22	22	*0*	0	0	0
27	*5.8	39	0	0	*0*	35	22	20	.1	0	*0*	0
28	6.3	34	0	0	[b] *10*	34	22	19	.3	0	0	0
29	8.5	36	0	0	-------	34	20	48	.8	0	0	0
30	9.4	39	0	0	-------	35	*18*	58	2.1	0	0	0
31	*9.7*	-------	0	0	-------	32	-------	58	-------	0	0	-------
Total	61.4	751.5	177	0	10	1,184.8	1,109	1,740	943.2	56.4	0	0
Mean	1.98	25.0	5.71	0	0.4	38.2	37.0	56.1	31.4	1.82	0	0
Ac-ft	122	1,490	351	0	20	2,350	2,200	3,450	1,870	112	0	0

Calendar year 1953	Max 100	Min 0	Mean 23.4	Ac-ft 16,960
Water year 1953–54	Max 86	Min 0	Mean 16.5	Ac-ft 11,960

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of records for Bear River near Evanston, Wyo., and Bear River near Woodruff, Utah.

[b] Stage-discharge relation affected by ice.

BEAR RIVER NEAR WOODRUFF, UTAH

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

Drainage area.—870 sq mi, approximately.

Records available.—April 1942 to September 1954.

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

Average discharge.—12 years, 227 cfs (164,300 acre-ft per year).

Extremes.—Maximum discharge during year, 1,060 cfs May 23 (gage height, 3.49 ft); no flow Aug. 23 to Sept. 30.

1942–54: 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.

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

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	a *0.1*	15	32			50	*80*	244	154	**98*	1.3	0
2	a .1	15	31			50	80	219	168	39	1.2	0
3	a .1	15	30			50	90	193	148	25	1.2	0
4	a .1	14	30			50	140	174	106	19	1.3	0
5	a .1	*18*	45			45	171	171	82	16	**1.5*	0
6	a .1	15	61			**40*	*268	*193	71	15	1.3	0
7	a .2	16				60	252	248	66	12	1.2	0
8	.3	21				80	183	291	61	9.7	1.2	0
9	.4	19				90	196	350	60	7.6	1.2	0
10	.6	16				140	223	408	61	6.1	1.1	0
11	.7	17	60			*180*	196	492	*53	5.0	.9	0
12	.7	22				110	196	*463	46	5.2	.9	0
13	.6	23				80	252	480	40	5.0	.9	0
14	1.0	25	65		70	80	264	430	37	*3.8	.9	0
15	1.3	25		65		110	287	430	36	4.1	.7	0
16	1.5	23				140	223	377	36	3.3	.6	0
17	1.5	*23	70			110	193	312	50	3.1	.6	0
18	1.7	23	(*)			95	190	312	100	3.3	.4	0
19	2.2	20				65	206	*354	77	4.7	.4	0
20	3.3	16				55	*202	377	58	6.1	.3	0
21	4.1	18				65	193	458	43	4.1	.2	0
22	3.1	19				70	177	679	35	3.1	.1	0
23	4.4	28				75	186	*1,010*	29	2.9	*0*	0
24	3.8	34				75	202	718	*24*	2.4	0	0
25	3.3	33				75	212	660	30	2.2	0	0
26	3.8	35	65			75	271	*615	115	17	0	0
27	*7.6	34				75	295	540	183	1.7	0	0
28	10	*40*			60	75	295	441	*308*	*1.3*	0	0
29	12	34			-------	75	*324*	350	256	1.4	0	0
30	13	37			-------	80	264	209	177	1.3	0	0
31	*15*	-------			-------	80	-------	*166*	-------	1.3	0	-------
Total	96.7	688	1,849	2,015	1,950	2,500	6,311	12,364	2,710	329.7	19.4	0
Mean	3.12	22.9	59.6	65	69.6	80.6	210	399	90.3	10.6	0.63	0
Ac-ft	192	1,360	3,670	4,000	3,870	4,960	12,520	24,520	5,380	654	38	0

Calendar year 1953	Max 2,300	Min 0.1	Mean 166	Ac-ft 120,500
Water year 1953–54	Max 1,010	Min 0	Mean 84.5	Ac-ft 61,160

Peak discharge (base, 1,300 cfs)—— No peak above base.

*Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of field estimate Sept. 28, 1953.

NOTE.—Stage-discharge relation affected by ice Nov. 19–21, Dec. 2 to Apr. 4 (no gage-height record Jan. 26 to Feb. 18).

DIVERSIONS FROM BEAR RIVER BETWEEN WOODRUFF AND RANDOLPH GAGING STATIONS, UTAH

Between Woodruff and Randolph gaging stations, 12 canals divert water from Bear River for irrigation. Records available April to September 1950–52, and May to September 1953, June to September 1954, in reports of Geological Survey. Seasonal records available 1944–47, 1949, in Bear River Hydrometric Data Report. All canals equipped with water-stage recorders. Prior to 1949, 6 canals equipped with staff gages only, which were read at least 3 or 4 times weekly. Records of discharge are combined to show total diverted flow. Records good.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									*381*	*235*	36	24
2									346	145	35	26
3									344	110	35	27
4									295	95	35	26
5									242	89	*39*	25
6									213	86	38	*23*
7									208	81	36	23
8									204	75	36	23
9									194	69	35	23
10									204	65	33	24
11									190	62	34	24
12									177	58	34	25
13									168	56	35	26
14									158	55	33	27
15									170	56	30	24
16									178	51	30	23
17									191	49	30	23
18									209	51	30	24
19									204	56	29	25
20									174	56	29	26
21									149	52	29	26
22									128	47	31	26
23									117	*39*	31	27
24									*105*	43	29	28
25									108	45	28	*31*
26									139	54	27	31
27									230	45	27	30
28									333	45	26	30
29									353	40	26	30
30									299	39	26	*30*
31										39	*25*	
Total									6,411	2,088	977	780
Mean									214	67.4	31.5	26.0
Ac-ft									12,720	4,140	1,940	1,550

The period	Max	Min	Mean	Ac-ft
				20,350

WOODRUFF CREEK NEAR WOODRUFF, UTAH

Location.—Lat 41°29′, long 111°16′, in SE¼SE¼ sec. 28, T. 9 N., R. 6 E., on left bank 1¼ miles upstream from Birch Creek and 6 miles southwest of Woodruff.

Drainage area.—65 sq mi, approximately.

Records available.—October 1949 to September 1954 in reports of Geological Survey. October 1937 to September 1943 records for site 1½ miles upstream available in files at 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).

Average discharge.—5 years (1949–54) 38.1 cfs (27,580 acre-ft per year).

Extremes.—maximum discharge during year, 157 cfs July 18 (gage height, 3.65 ft); minimum, 2.9 cfs Nov. 9, result of freezeup.

1949–54: Maximum discharge, 528 cfs May 25, 1950 (gage height, 5.72 ft); minimum, 2.9 cfs Mar. 29, 1951, Nov. 9, 1953, 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	11	11	[b]9.0			*12*	50	*33*	13	8.2	7.2
2	10	11	5.9	8.5			12	42	30	13	8.2	7.5
3	10	12	6.0	8.5			18	38	29	12	8.2	8.2
4	10	12	7.0	8.5		[b]10	24	42	28	12	8.5	7.9
5	*9.5*	11	[b]6.0	8.5	[a]8.5		29	57	27	13	*14*	7.5
6	9.5	*15*	[b]7.0	8.5			*32	*83	26	12	10	6.6
7	9.5	10	[b]8.0	9.5		13	25	105	25	12	9.0	6.6
8	9.5	8.5	[b]7.0	9.0		16	23	116	*22	11	9.0	6.9
9	9.5	10	[b]9.0	8.5		27	24	130	22	11	8.5	6.9
10	9.5	14	[b]10	[b]8.0		*35*	24	*158*	24	10	8.2	6.6
11	9.5	14	[b]8.0	[b]8.0		[b]25	24	111	21	10	8.2	*6.3*
12	10	14	[b]10	8.2		[b]20	28	121	21	10	8.5	6.6
13	9.5	14	[b]10	7.9	[a]11	[b]18	35	119	20	10	9.0	7.2
14	10	12	[b]11	8.2		[b]16	*42	116	20	*10	9.0	7.2
15	10	13	*12*	8.5		[b]16	42	106	20	10	8.2	7.2
16	10	12	12	8.5	*12	18	41	92	21	9.5	7.9	6.6
17	10	12	12		12	19	48	88	20	9.0	7.9	6.9
18	10	*12	*12		14	17	54	80	18	*19*	7.9	7.2
19	10	8.5	12		[b]10	15	*55	72	17	16	7.9	8.2
20	10	[b]*7.0*	12		[b]11	16	55	*68	17	12	7.9	8.5
21	10	7.9	11		13	15	52	66	16	12	8.2	8.5
22	*11*	9.0			12	13	50	62	16	11	9.0	8.5
23	11	12			[b]11	14	54	51	15	11	8.2	9.5
24	11	12	[b]9.0	[a]9.5	[b]11	*14	62	47	15	11	7.9	*10*
25	11	9.5			[b]13	14	70	45	15	12	*7.5	10
26	10	9.5			[b]13	12	74	43	15	12	*7.2*	9.0
27	11	10	9.5		[b]11	13	75	*38	17	*12	7.5	9.5
28	11	8.2	9.5		[b]12	13	*35*	37	18	10	7.5	*10
29	*11	7.5	10		-------	12	66	35	15	9.0	7.5	10
30	11	7.5	[b]9.5		-------	12	56	35	*14*	*8.5*	7.5	10
31	11	-------	[b]9.0		-------	9.5	-------	*33*	-------	8.5	7.5	-------
Total	315.0	326.1	291.4	278.3	295.0	472.5	1,289	2,266	617	351.5	259.7	238.8
Mean	10.2	10.9	9.40	8.98	10.5	15.2	43.0	73.1	20.6	11.3	8.38	7.96
Ac-ft	625	647	578	552	585	937	2,560	4,490	1,220	697	515	474

Calendar year 1953	Max 183	Min 5.9	Mean 26.1	Ac-ft 18,880
Water year 1953–54	Max 138	Min ---	Mean 19.2	Ac-ft 13,880

*Discharge measurement made on this day.

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

[b] Stage-discharge relation affected by ice.

BIRCH CREEK NEAR WOODRUFF, UTAH

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

Drainage area.—17 sq mi, approximately.

Records available.—October 1949 to September 1954.

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

Average discharge.—5 years, 8.20 cfs (5,940 acre-ft per year).

Extremes.—Maximum daily discharge during year, 22 cfs July 1–6; no flow Aug. 26 to Sept. 30.

1949–54: Maximum discharge, 172 cfs May 22, 1950 (gage height, 3.73 ft); no flow Aug. 26 to Sept. 30, 1954.

Remarks.—Records good except those for periods of ice effect or no gage-height record, which are fair. No diversions above station. Flow regulated by two small reservoirs 1¼ miles upstream (capacity, 2,430 acre-ft). Birch Creek Reservoir (capacity, 2,260 acre-ft) completed in November 1951.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	*0.2*	[b]0.4			0.4	*0.6*	*5.6*	2.4	*22*	*15*	0
2	.4	.2	[b].3			[b].4	.6	4.8	2.0	22	14	0
3	.4	.2	[b].3			[b].3	.7	4.4	1.8	22	14	0
4	.4	.2	[b].3			[b].4	.8	4.2	1.7	22	14	0
5	.4	.3	[b].3			[b].4	1.2	4.2	1.6	22	14	0
6	.4	.3	.5			.7	*1.6	*4.4	1.7	22	13	0
7	.4	.3	.5			.7	1.2	4.6	1.7	20	13	0
8	.4	.3	.4		[a]0.3	.7	1.2	4.6	*1.6	20	13	0
9	.4	.3	.4			.8	1.3	4.6	1.4	20	13	0
10	.3	.3	.4	[b]0.4		*1.3*	1.3	4.6	1.7	20	13	0
11	.3	.3	.4			[b].9	1.3	4.6	1.4	20	13	0
12	.3	.3	.4			[b].5	1.6	4.4	1.2	21	12	0
13	*2.4*	.3	.4			[b].6	1.8	4.6	1.1	20	12	0
14	1.3	.3	.4			[b].6	2.4	4.4	1.1	*20	12	0
15	.3	.3	.4			[b].6	2.3	4.2	1.1	20	11	0
16	.2	.3	.5		*.4	[b].6	2.3	4.2	1.1	19	11	0
17	.2	.3	.4		.4	[b].6	2.6	3.8	1.1	19	10	0
18	.2	*.4	*.5		.4	[b].6	3.5	3.6	.8	19	9.7	0
19	*.1*	.3	.5		.4	[b].7	*4.0	3.5	.7	19	8.1	0
20	.1	.4	.5		.4	[b].6	4.4	*3.3	.7	18	.5	0
21	.1	.3	.4	.5	.4	[b].6	4.8	3.5	3.1	18	.4	0
22	.1	.3	.5	.5	.4	[b].6	4.6	3.6	8.5	17	.3	0
23	.1	.4	.5	.5	.4	.6	4.8	3.1	10	17	.2	0
24	.1	.4	[b].4	.5	.4	*.6	5.4	2.8	11	17	.1	0
25	.1	.4	[b].3	.5	.4	.6	5.8	2.6	12	17	*.1	0
26	.1	.4	[b].2	.5	.4	.6	5.8	2.6	13	18	0	0
27	.1	.4	[b].3	.5	.4	.6	5.8	*2.4	13	*17	0	0
28	.1	.4	[b].4	.5	.5	.6	6.2	2.4	17	17	0	0
29	*.1	.4	[b].5	.4	-------	.6	6.2	2.1	19	16	0	0
30	.1	.4	[b].5	[a].4	-------	.6	5.8	2.6	19	16	0	0
31	.2	-------	[b].5	[a].4	-------	.6	-------	2.1	-------	*15*	0	-------
Total	10.5	9.6	12.7	13.2	9.8	19.0	91.9	116.4	153.5	592	236.4	0
Mean	0.34	0.32	0.41	0.43	0.35	0.61	3.06	3.75	5.12	19.1	7.63	0
Ac-ft	21	19	25	26	19	38	182	231	304	1,170	469	0

Calendar year 1953	Max 27	Min	Mean 5.48	Ac-ft 3,970
Water year 1953–54	Max 22	Min 0	Mean 3.46	Ac-ft 2,500

*Discharge measurement made on this day.

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

[b] Stage-discharge relation affected by ice.

BIG CREEK NEAR RANDOLPH, UTAH

Location.—Lat 41°37′, long 111°15′, in SE¼ sec. 10, T. 10 N., R. 6 E., on left bank 3½ miles downstream from main forks and 4¾ miles southwest of Randolph.

Drainage area.—52.2 sq mi.

Records available.—October 1949 to September 1954. March 1939 to September 1944 (fragmentary), at site a quarter of a mile downstream; records not equivalent at times because of two small diversions between sites for irrigation.

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

Average discharge.—5 years (1949–54), 25.2 cfs (18,240 acre-ft per year).

Extremes.—Maximum discharge during year, 49 cfs July 18 (gage height, 1.21 ft); minimum, 7.3 cfs Mar. 26, but may have been less during periods of ice effect or no gage-height record.

1949–54: Maximum discharge, 146 cfs May 18, 1950 (gage height, 2.46 ft); minimum, 1.6 cfs Mar. 12, 1951 (ice jam upstream).

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*15*	14	12				*9.2*	20	*19*	13	10	8.1
2	15	14					9.8	18	19	13	10	8.6
3	15	14					11	*17*	18	13	10	9.2
4	15	14				[a] 9.0	12	18	18	13	10	8.6
5	15	14					12	18	18	13	*11*	8.6
				[a] 9.0	[a] 9.0							
6	15	*15*					*13	19	18	13	10	8.1
7	15	14				[a] 11	11	*20	18	12	10	*7.8*
8	15	15	[b] 8.5			[a] 15	11	20	*18	12	9.5	7.8
9	15	14				*[a] 20	11	21	18	12	9.5	7.8
10	15	14				[a] *25*	11	*22*	19	12	9.2	7.8
11	15	14				[a] 18	11	22	18	12	9.2	7.8
12	15	14				[a] 15	11	22	17	12	9.5	8.6
13	15	14		[b] 9.0		[a] 13	12	22	17	12	9.5	*9.8*
14	*14*	14	[b] 10			[a] 12	*13	22	17	*12	8.9	8.1
15	15	14	[b] 12			[a] 12	13	22	17	12	8.6	8.1
16	15	14		[b] 10	(*)	[a] 13	12	21	17	*11*	8.6	8.1
17	14	14		[b] 10		[a] 13	13	21	16	11	8.6	7.8
18	14	*14	*[b] 13			[a] 12	15	21	16	*15*	8.6	7.8
19	14	[b] 12			[a] 11	[a] 10	16	21	16	14	8.6	7.8
20	14	[b] *9.0*				[a] 11	*16	21	15	12	8.3	7.8
21	14	[b] 10				[a] 10	15	*21	15	12	9.2	7.8
22	15	[b] 10	[b] 11			[a] 9.0	15	22	15	11	9.2	7.8
23	15	[b] 11				[a] 9.5	16	21	14	11	8.9	8.6
24	15	[b] 12		[a] 10		*9.5	17	20	14	11	8.6	9.2
25	14	[b] 12				9.2	18	20	14	11	8.6	8.6
26	14	12				8.3	19	21	14	12	*8.6	8.6
27	14	12	[a] 11			8.6	20	*20	15	*13	8.3	*8.3
28	14	12				9.2	*21*	20	15	11	8.3	7.8
29	*14	12			-------	9.5	21	20	14	11	8.3	7.8
30	14	12			-------	8.9	20	20	*18*	11	8.3	7.8
31	14	-------			-------	[b] 8.0	-------	19	-------	11	*8.1*	-------
Total	452	390.0	322.0	295.0	288.0	353.7	425.0	632	492	374	282.0	246.4
Mean	14.6	13.0	10.4	9.52	10.3	11.4	14.2	20.4	16.4	12.1	9.10	8.21
Ac-ft	897	774	639	585	571	702	843	1,250	976	742	559	489

Calendar year 1953	Max 40	Min ----	Mean 18.5	Ac-ft 13,410
Water year 1953–54	Max 25	Min ----	Mean 12.5	Ac-ft 9,030

*Discharge measurement made on this day.

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

[b] Stage-discharge relation affected by ice.

RANDOLPH CREEK NEAR RANDOLPH, UTAH

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

Drainage area.—30.3 sq mi.

Records available.—October 1949 to September 1954.

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

Average discharge.—5 years, 4.79 cfs (3,470 acre-ft per year).

Extremes.—Maximum discharge during year, 10 cfs Mar. 9 (gage height, 1.17 ft); minimum, 0.8 cfs Nov. 14.

1949–54: Maximum discharge, 32 cfs Mar. 21, 1951 (gage height, 1.44 ft); minimum, 0.5 cfs Aug. 14, 1953.

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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	4.2	2.0	*5.0*	5.0	5.6	*4.4*	2.6	*5.8*	*5.2*	4.4	4.0
2	3.0	*4.4*	*1.9*	5.0	5.0	5.2	4.2	*2.2*	5.6	3.4	*4.6*	4.2
3	2.8	4.4	1.9	4.8	[b]*4.5*	5.0	4.4	2.6	5.6	2.7	4.6	4.0
4	2.6	4.2	2.2	4.8	[b]4.5	[b]5.0	4.2	4.8	5.6	2.7	4.6	4.0
5	*2.3*	3.8	2.2	4.8	[b]4.5	[b]5.0	4.0	*6.6*	5.6	3.0	4.6	4.0
6	2.6	3.8	2.3	5.0	5.0	[b]5.0	*3.0	*6.3	5.6	3.1	4.4	4.2
7	2.7	3.8	2.4	5.0	[b]4.7	5.4	1.9	6.1	5.6	2.7	4.4	4.2
8	2.7	3.8	2.3	5.0	[b]4.7	5.6	1.6	6.1	4.0	2.6	4.2	2.6
9	2.6	4.2	2.7	5.0	[b]4.7	7.1	1.6	6.1	2.2	2.6	4.2	*1.7*
10	2.4	4.4	3.6	[b]5.0	[b]4.7	*7.8*	1.6	6.1	2.3	3.0	4.2	1.8
11	2.4	4.4	4.0	5.0	5.2	6.8	*1.4*	6.1	2.1	3.6	4.4	2.8
12	2.6	4.4	4.2	4.8	5.2	5.6	2.7	5.8	*1.8*	3.6	4.4	*4.4*
13	3.0	4.4	4.2	4.8	5.2	5.4	2.7	5.8	2.0	*5.0	4.4	4.4
14	3.0	2.8	4.4	4.8	5.2	5.4	2.7	5.8	2.0	3.4	4.6	4.2
15	3.1	*1.1*	4.4	5.0	5.2	5.6	2.1	5.8	2.8	3.0	4.4	3.8
16	3.1	1.7	5.0	5.0	*5.2	6.3	1.9	5.8	2.3	5.0	2.6	3.8
17	3.1	*2.6	*5.6*	5.0	5.4	5.8	1.9	5.6	*2.3	2.8	2.1	3.8
18	3.1	3.0	*5.6	5.0	5.4	5.6	2.2	5.6	2.3	2.2	*1.7*	3.8
19	3.1	3.8	5.6	5.0	5.2	5.6	1.9	5.6	2.2	2.3	1.8	3.4
20	3.3	3.6	5.6	4.8	5.4	5.6	*1.9	3.4	3.8	2.1	2.7	3.3
21	3.4	3.8	5.6	4.6	5.4	5.6	3.0	*2.7	2.2	1.9	4.2	3.4
22	3.4	3.6	5.6	4.8	5.4	5.4	2.2	3.3	2.1	[a]1.8	4.2	3.6
23	4.1	4.2	5.0	4.8	*5.4*	5.4	1.9	3.0	2.0	[a]1.7	4.0	3.8
24	*5.6*	3.8	5.4	4.8	*5.6*	5.4	2.3	2.8	1.9	[a]*1.6*	4.0	3.8
25	5.2	3.1	5.0	4.6	5.6	*5.2	2.6	3.1	1.9	[a]1.6	4.0	3.6
26	4.4	2.8	5.4	*4.2*	5.6	5.0	2.1	4.8	5.4	[a]1.8	*4.0	3.3
27	3.8	2.8	5.0	4.6	5.4	5.2	2.3	*5.8	5.6	[a]1.8	4.0	*3.3
28	*3.8	2.8	5.2	4.8	5.4	5.2	2.4	5.8	5.4	*1.7	4.0	3.4
29	3.8	1.9	5.2	5.0	-------	5.2	2.4	5.8	5.4	3.6	4.0	3.6
30	3.8	1.9	5.2	*5.0	-------	5.0	2.6	5.8	5.4	4.4	4.0	3.6
31	3.8	-------	5.0	5.0	-------	*4.4*	-------	5.8	-------	4.4	4.0	-------
Total	101.4	103.5	129.7	150.8	143.7	171.4	76.1	153.5	108.8	90.3	121.7	107.8
Mean	3.27	3.45	4.18	4.86	5.13	5.53	2.54	4.95	3.63	2.91	3.93	3.59
Ac-ft	201	205	257	299	285	340	151	304	216	179	241	214

Calendar year 1953	Max 7.3	Min 0.6	Mean 4.11	Ac-ft 2,970
Water year 1953–54	Max 7.8	Min 1.1	Mean 4.00	Ac-ft 2,890

*Discharge measurement made on this day.
[a] No gage-height record; discharge estimated on basis of records for stations on nearby streams.
[b] Stage-discharge relation affected by ice.

B. Q. WEST SIDE CANAL AT KENNEDY RANCH, NEAR RANDOLPH, UTAH

Location.—Lat 41°48'00", long 111°05'30", in NE¼SW¼ sec. 7, T. 12 N., R. 8 E. on left bank 800 ft upstream from road bridge, three-quarters of a mile west of Kennedy Ranch, and 10½ miles northeast of Randolph.

Records available.—October 1949 to September 1952, May 1953 to September 1954, in reports of Geological Survey (discontinued). April 1944 to September 1949 (irrigation seasons only) in Bear River Hydrometric Data reports.

Gage.—Water-stage recorder.

Extremes.—Maximum daily discharge during period, 51 cfs May 27; no flow for many days June to August.

1949–54: Maximum daily discharge, 144 cfs May 26, 1952; no flow at times each year.

Remarks.—Records fair. Records show flow bypassing Bear River near Randolph, Utah, gaging station. About 3,800 acres of land irrigated from canal below station in Utah and Wyoming.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									*45*	7.9	*0*	8.3
2									35	13	0	8.8
3									32	7.4	0	*9.2*
4									32	6.2	0	8.8
5									33	9.5	0	7.9
6									34	*15	0	7.9
7									20	*16*	0	7.7
8									5.2	16	0	7.2
9									7.2	15	0	7.2
10									9.0	14	5.3	7.4
11									*8.1	14	14	6.6
12									25	13	*17*	6.4
13									31	12	14	*5.6
14									30	12	11	7.7
15									27	*13	9.5	4.8
16									*25	13	10	7.0
17									19	12	13	7.4
18									6.0	12	11	7.7
19									7.0	12	6.4	4.3
20									17	13	3.0	4.5
21									17	13	1.4	5.6
22									17	11	6.5	2.2
23									14	5.4	8.5	*1.8*
24									*12	4.8	*8.3	3.6
25									13	1.8	8.1	6.2
26									12	*0*	7.7	8.3
27								*51*	*0*	0	7.9	*8.1
28								42	0	0	7.9	7.7
29								12	0	0	8.5	7.4
30								*8.3*	0	0	7.2	7.4
31								20	-------	0	7.4	-------
Total								133.3	532.5	282.0	193.6	200.7
Mean								26.6	17.8	9.10	6.25	6.69
Ac-ft								264	1,060	559	384	398

The period	Max	Min	Mean	Ac-ft 2,660
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*Discharge measurement made on this day.

BEAR RIVER NEAR RANDOLPH, UTAH

Location.—Lat 41°48′, long 111°06′, in SE¼NE¼ sec. 7, T. 12 N., R. 8 E., on left bank 4.2 miles upstream from Twin Creek, 5.5 miles upstream from Utah-Wyoming State line, and 11 miles northeast of Randolph.

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

Records available.—December 1943 to September 1954.

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

Average discharge.—10 years (1944–54), 223 cfs (161,400 acre-ft per year).

Extremes.—Maximum discharge during year, 258 cfs Apr. 9 (gage height, 3.09 ft); minimum, 5.8 cfs Sept. 12.

1943–54: Maximum discharge, 2,660 cfs May 8, 1952 (gage height, 8.80 ft); minimum, that of Sept. 12, 1954.

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.

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	ª *18*	34	45				*155	47	*79*	*16*	7.8	*6.4*
2	*12	35	43				160	41	73	13	7.8	6.7
3	12	36	40				167	36	61	12	7.8	7.0
4	12	37	40			90	173	32	53	12	8.6	6.7
5	13	40	40				*192	30	45	13	*10*	6.4
6	13	41	50		90		210	*29	42	13	9.8	6.4
7	13	42					218	29	*38	*12	9.8	6.4
8	13	41		75		*95	*250*	*38*	37	11	9.8	6.4
9	16	40					236	28	39	10	9.0	6.4
10	18	41	75				218	28	44	9.8	8.6	6.4
11	18	41					219	29	40	9.8	8.6	6.4
12	19	42					209	28	40	9.8	8.2	6.7
13	19	42					164	32	37	9.4	9.4	7.4
14	20	41					129	33	34	9.4	7.8	7.0
15	20	33			(*)		158	35	36	9.0	7.0	6.7
16	22	31				210	169	36	33	9.0	7.0	6.7
17	23	*31	80				169	38	30	9.0	6.7	6.7
18	24	29	(*)				162	43	37	9.0	7.0	6.7
19	24	27					149	40	38	9.4	7.0	6.4
20	25	*25*		80	110		116	35	26	10	7.4	6.4
21	26	28					*89	34	23	9.0	7.8	6.4
22	29	35				*210	76	37	21	8.2	8.2	6.4
23	28	44				200	70	44	20	8.2	7.8	7.4
24	30	42				*180*	78	84	19	8.2	*7.0	7.0
25	31	*51*				173	70	*139*	19	8.2	6.7	7.0
26	33	47	75			167	55	118	20	8.6	6.7	6.7
27	33	45				158	49	*115	20	8.6	6.7	*6.7
28	*34	45		90		155	47	110	20	*8.6	6.7	6.4
29	34	45			-------	164	*46*	110	19	8.2	6.7	6.4
30	34	45		(*)	-------	167	48	99	*18*	8.2	*6.4*	6.7
31	34	-------			-------	164	-------	94	-------	*7.8*	6.4	-------
Total	694	1,156	2,168	2,465	2,860	5,193	4,251	1,661	1,061	307.4	242.2	199.4
Mean	22.4	38.5	69.9	79.5	102	168	142	53.6	35.4	9.92	7.81	6.65
Ac-ft	1,380	2,290	4,300	4,890	5,670	10,300	8,430	3,290	2,100	610	480	396

Calendar year 1953	Max 1,610	Min 12	Mean 140	Ac-ft 101,100
Water year 1953–54	Max 250	Min 6.4	Mean 61.0	Ac-ft 44,140

*Discharge measurement made on this day.
ª No gage-height record; discharge interpolated.
NOTE.—Stage-discharge relation affected by ice Nov. 19–22, Nov. 26 to Mar. 24.

TWIN CREEK AT SAGE, WYO.

Location.—Lat 41°49′, long 110°58′, in SE¼ sec. 7, T. 21 N., R. 119 W., on left bank at Sage, 5 miles upstream from mouth.

Drainage area.—246 sq mi.

Records available.—April 1943 to September 1954.

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.—11 years, 21.5 cfs (15,570 acre-ft per year).

Extremes.—Maximum discharge during year, 69 cfs Apr. 6 (gage height, 2.99 ft); minimum, 0.8 cfs Nov. 20, result of freezeup.

1943–54: 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 or no gage-height record, which are fair. Many diversions above station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	*3.3*	6.5				**9.0*	9.9	*11*	2.7	2.5	3.3
2	3.3	3.5					9.4	10	11	2.7	2.4	2.4
3	3.3	3.5				7.0	16	9.0	9.9	2.5	2.4	2.2
4	3.8	4.9					28	7.6	8.6	*2.8*	2.5	2.7
5	3.5	4.1					**39*	8.0	7.2	2.5	3.5	3.0
6	2.4	5.2			6.0		*55*	**8.6*	6.2	3.0	2.7	1.8
7	*1.2*	5.5				**7.0*	**32*	6.6	**7.2*	3.0	2.7	*1.7*
8	2.0	5.8	5.5	5.0		7.0	**26*	*3.5*	8.3	3.0	3.0	1.8
9	2.5	4.9				9.0	35	4.4	7.6	3.0	3.5	1.7
10	2.2	4.4				11	27	4.7	8.0	3.3	3.8	1.7
11	3.8	4.9				11	22	4.9	7.6	3.3	*4.1*	1.8
12	4.4	4.4				11	**24*	5.2	7.2	4.1	4.1	2.2
13	4.1	5.8					31	8.6	5.5	4.1	3.8	2.7
14	3.5	7.2					29	8.6	6.6	4.7	4.1	*3.8*
15	4.4	6.2			(*)	11	**29*	8.3	6.6	**5.2*	3.3	3.0
16	6.2	4.7	6.0				20	8.0	**6.6*	5.2	2.5	3.0
17	5.8	**6.2*				11	24	7.6	7.6	5.2	2.5	3.0
18	8.3	7.6	(*)			11	32	9.0	8.0	5.2	2.4	3.0
19	7.6	5.8				11	**26*	**9.0*	8.0	*6.2*	1.7	2.7
20	7.2	3.5		5.5		9.9	20	7.2	8.0	6.2	1.7	3.0
21	*9.4*	4.7			7.5	8.3	**16*	6.9	6.9	5.2	2.4	3.0
22	8.3	4.1				**9.4*	14	7.2	6.2	4.9	1.8	3.3
23	9.0					13	9.9	7.2	5.5	5.5	1.7	3.5
24	6.9					10	9.4	6.6	4.9	4.4	**1.7*	3.8
25	7.2					**11*	11	5.2	4.9	4.9	*1.5*	3.5
26	5.8	8.0	5.0			8.6	**9.9*	5.8	4.7	4.9	1.7	3.5
27	5.2					9.0	9.0	12	4.9	4.9	2.0	3.3
28	**4.9*			6.0		9.9	9.9	11	4.9	**4.7*	2.5	**3.3*
29	4.7				-------	11	9.9	12	4.1	3.8	3.3	3.3
30	3.8			(*)	-------	12	9.9	12	*3.3*	2.7	3.5	3.0
31	3.3	-------			-------	9.9	-------	*13*	-------	3.0	3.5	-------
Total	151.5	174.2	169.5	166.0	193.5	297.0	642.3	247.6	207.0	126.2	84.8	84.0
Mean	4.89	5.81	5.47	5.35	6.91	9.58	21.4	7.99	6.90	4.07	2.74	2.80
Ac-ft	300	346	336	329	384	589	1,270	491	411	250	168	167

Calendar year 1953	Max 54	Min 1.0	Mean 9.06	Ac-ft 6,560
Water year 1953–54	Max 55	Min 1.2	Mean 6.97	Ac-ft 5,040

Peak discharge (base 200 cfs)_____ No peak above base.

*Discharge measurement made on this day.

NOTE.—Stage-discharge relation affected by ice Nov. 23 to Mar. 17 (no gage-height record Dec. 23 to Mar. 6, Mar. 13–16); discharge estimated on basis of 2 discharge measurements, weather records, and records for stations on nearby streams.

BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WYO.

Location.—Lat 41°56'20", long 110°59'05", in SE¼SE¼ sec. 25, T. 23 N., R. 120 W., 800 ft downstream from Pixley Dam, 17.5 miles downstream from Twin Creek and 11 miles south of Cokeville.

Drainage area.—2,040 sq mi, approximately.

Records available.—October 1941 to November 1943, October 1952 to September 1954. Published as "near Cokeville" 1941–43.

Gage.—Water-stage recorder. Altitude of gage is 6,185 ft (from river-profile map). Oct. 1, 1941, to Nov. 30, 1943, at site 200 ft downstream at different datum.

Extremes.—Maximum discharge during year, 282 cfs Apr. 9 (gage height, 4.18 ft); minimum, 4.6 cfs May 25.

1941–43, 1952–54: Maximum discharge, 1,640 cfs Apr. 6 or 7, 1942 (gage height, 8.35 ft from high-water mark in gage well, site and datum then in use); minimum, that of May 25, 1954.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*28*	47	60				*200	16	7.4	*5.8*	*6.7*	9.4
2	28	47	58				188	16	7.0	5.8	7.0	9.0
3	30	48	55				191	*17*	6.7	5.8	7.0	8.6
4	29	49	*55*			100	200	16	6.7	6.1	7.4	9.0
5	29	51	55				217	*16	6.7	5.8	7.4	8.6
6	28	*56*	60		95		236	16	6.1	6.1	7.8	8.6
7	28	55					247	14	6.4	6.1	9.0	8.6
8	28	55		80		105	*258	14	6.4	6.1	9.0	8.6
9	28	*55*					*276*	14	6.1	5.8	13	9.0
10	31	55	80				260	12	6.1	5.8	*25*	9.4
11	32	56					249	12	*6.1	5.8	20	9.4
12	33	56					249	11	6.1	6.1	18	9.4
13	32	57					227	11	6.1	6.1	17	9.8
14	33	*66*					169	11	6.4	6.1	16	9.8
15	34	58				230	134	10	6.4	*6.7	14	9.8
16	36	51	85		(*)		87	9.4	6.4	12	14	10
17	36	48					76	12	6.7	*14*	12	9.8
18	37	*48	(*)				78	*7.8	6.7	14	12	9.8
19	38	41					87	7.8	6.7	13	12	9.8
20	39	*38*		85	120		108	7.4	6.4	12	9.4	9.8
21	39	40					*103	6.7	6.7	11	7.8	9.8
22	42	45					78	*5.5*	6.7	11	7.8	9.4
23	40	51				225	75	5.8	6.1	11	7.8	9.0
24	42	56				215	74	5.8	*5.2*	10	7.4	8.6
25	45	58				205	71	5.5	5.8	9.8	*7.8	8.6
26	45	59	80			200	71	6.1	6.1	9.4	7.8	8.6
27	46	60				190	38	*6.4	6.4	7.8	7.8	*8.2*
28	*47	60		95		190	28	6.4	*7.8*	*6.7	7.8	8.2
29	47	60		(*)	-------	200	28	7.0	6.7	6.7	9.8	*49*
30	47	60			-------	208	*12*	7.4	6.4	6.7	10	*38
31	47	-------	-------	-------	-------	201	-------	7.8	-------	6.7	9.8	-------
Total	1,124	1,586	2,378	2,620	3,085	5,859	4,315	320.8	193.5	251.8	335.3	343.6
Mean	*36.3*	52.9	76.7	84.5	110	189	144	10.3	6.45	8.12	10.8	11.5
Ac-ft	2,230	3,150	4,720	5,200	6,120	11,620	8,560	636	384	499	665	682

Calendar year 1953	Max 1,210	Min 12	Mean 142	Ac-ft 102,500
Water year 1953–54	Max 276	Min 5.2	Mean 61.4	Ac-ft 44,470

* Discharge measurement made on this day.

NOTE.—Stage-discharge relation affected by ice Nov. 20–22, Nov. 27 to Mar. 29.

BEAR RIVER ABOVE SUBLETTE CREEK, NEAR COKEVILLE, WYO.

Location.—Lat 42°02'20", long 110°57'05", in SW¼SE¼ sec. 20, T. 24 N., R. 119 W., on left bank 1,500 ft upstream from Sublette Creek and 3¼ miles south of Cokeville.

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

Records available.—April 1948 to September 1954.

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

Average discharge.—6 years, 277 cfs (200,500 acre-ft per year).

Extremes.—Maximum discharge during year, 292 cfs Apr. 9 (gage height, 4.45 ft); minimum, 10 cfs July 8.

1948–54: Maximum discharge, 2,620 cfs May 10, 1952 (gage height, 9.90 ft); minimum, that of July 8, 1954.

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

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	*31*	52	65				215	35	*18*	22	17	18
2	31	52					210	38	18	16	17	19
3	33	52				105	216	*39*	18	14	17	19
4	33	55	60				220	*39	20	14	18	20
5	32	60					235	38	23	*13*	19	19
6	32	62			95		250	37	26	16	17	19
7	32	62				*105	262	35	30	14	18	19
8	32	62		80		110	*264	34	33	18	19	18
9	31	62				200	*233*	34	*34*	23	19	*17*
10	33	62	80				274	33	34	24	27	17
11	34	62				250	260	34	*34	27	*30*	17
12	35	62					255	32	34	29	28	17
13	37	62					245	31	34	*28	26	18
14	38	*73*					209	31	33	27	24	18
15	40	65	85		120		144	33	33	25	22	18
16	40	58					124	33	33	27	21	18
17	40	*53	(*)				96	35	33	30	20	18
18	41	55	85			250	90	*32	31	30	20	17
19	42	53					94	29	30	*22*	19	17
20	44	*45*		85			110	29	30	30	19	17
21	45	47					*116	27	28	27	17	17
22	45	50					94	24	26	26	16	17
23	47	52			110	240	85	22	25	26	16	17
24	50	55				230	83	21	21	26	15	19
25	51	55				220	83	*18*	19	27	14	19
26	51	58	80	90		210	83	18	22	23	*13*	19
27	*51	65				200	76	*18	24	24	13	19
28	*52*	65				200	*34*	18	30	21	13	*19
29	52	65		95	-------	210	52	18	27	*21	16	19
30	52	65			-------	230	34	18	24	21	21	*62*
31	52	-------			-------	220	-------	18	-------	19	20	-------
Total	1,259	1,746	2,400	2,615	2,975	6,255	4,801	901	825	720	591	587
Mean	40.6	58.2	77.4	84.4	106	202	160	29.1	27.5	23.2	19.1	19.6
Ac-ft	2,500	3,460	4,760	5,190	5,900	12,410	9,520	1,790	1,640	1,430	1,170	1,160

Calendar year 1953	Max 1,350	Min 29	Mean 158	Ac-ft 114,500
Water year 1953–54	Max 288	Min 13	Mean 70.3	Ac-ft 50,930

*Discharge measurement made on this day.

NOTE.—No gage-height record Oct. 28 to Nov. 16, Nov. 20 to Dec. 16, Jan. 27 to Mar. 6, Mar. 14–22, May 28 to June 10; discharge estimated on basis of weather records and records for nearby Bear River stations. Stage-discharge relation affected by ice Dec. 17 to Jan. 26, Mar. 7–13, Mar. 23 to Apr. 2.

SMITHS FORK NEAR BORDER, WYO.

Location.—Lat 42°17′, long 110°52′, in NW¼ sec. 33, T. 27 N., R. 118 W., on left bank 4½ miles upstream from Howland Creek, 6 miles downstream from Hobble Creek, and 12 miles northeast of Border.

Drainage area.—165 sq mi.

Records available.—May 1942 to September 1954.

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

Average discharge.—12 years, 197 cfs (142,600 acre-ft per year).

Extremes.—Maximum discharge during year, 832 cfs May 22 (gage height, 3.56 ft); minimum, 41 cfs about Mar. 31 (result of freezeup), but may have been less during periods of ice effect or no gage-height record.

1942–54: Maximum discharge, 1,360 cfs May 29, 1951 (gage height, 4.56 ft); minimum, 37 cfs Mar. 11, 1948, but may have been less during periods of ice effect.

Remarks.—Records good except those for periods of ice effect or no gage-height record, which are fair. One small diversion for irrigation of about 150 acres above station.

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	*86	74	74		[b] 60		[a] 60	244	393	317	145	101
2	86	74	[b] 70				[a] 60	214	367	305	145	106
3	86	74	[b] 70			[a] 55	[a] 60	219	359	294	142	110
4	86	74	[b] 70				[a] 63	251	355	279	142	112
5	86	72	[b] 70				[a] 70	*332	367	268	148	106
6	85	76	[b] 70		[a] 55	(*)	[a] 66	393	389	261	148	103
7	85	75	[b] 72			[b] 55	[a] 65	439	384	251	142	101
8	83	70	[b] 70			56	[a] 65	463	359	244	140	101
9	83	72	[b] 70			61	[a] 65	489	348	*234	133	99
10	83	74	[b] 70			62	[a] 70	565	*355	230	*131	97
11	83	72	[b] 70			62	[a] 73	592	332	220	133	97
12	83	72	[b] 70			61	[a] 76	592	320	214	129	103
13	81	74	[b] 70			[b] 60	[a] 80	598	320	204	124	99
14	81	74	[b] 70			[b] 60	[a] 84	604	324	201	122	97
15	83	72	[b] 72	[a] 60			*92	609	332	204	120	93
16	83	72	[b] 72				92	609	351	198	118	93
17	81	74	*[b] 70				108	662	344	204	116	92
18	80	*70					135	*662	332	220	116	92
19	78	[b] 68					135	692	332	223	116	93
20	78	[b] 65	[a] 70		[a] 65		135	722	344	207	116	92
21	80	[b] 66					145	764	*371	198	127	92
22	78	[b] 66					163	788	384	191	124	92
23	78	[b] 68				[a] 60	204	680	393	185	116	92
24	80	72					244	614	401	180	112	93
25	80	74					272	582	393	174	110	92
26	78	75	[a] 60				301	565	397	168	*108	90
27	*76	76					301	516	434	168	106	88
28	76	74					351	*479	393	163	104	*88
29	75	72		*61	-------		305	444	351	158	103	88
30	74	70		61	-------		286	424	328	*155	101	88
31	74	-------		63	-------		-------	397	-------	150	101	-------
Total	2,509	2,161	2,090	1,865	1,715	1,827	4,226	16,198	10,852	6,668	3,838	2,890
Mean	80.9	72.0	67.4	60.2	61.2	58.9	141	523	362	215	124	96.3
Ac-ft	4,980	4,290	4,150	3,700	3,400	3,620	8,380	32,130	21,520	13,230	7,610	5,730

Calendar year 1953	Max 962	Min 53	Mean 170	Ac-ft 123,300
Water year 1953–54	Max 782	Min --	Mean 156	Ac-ft 112,700

*Discharge measurement made on this day.

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

[b] Stage-discharge relation affected by ice.

BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WYO.

Location.—Lat 42°07'30", long 110°58'20", in SE¼NE¼ sec. 28, T. 25 N., R. 119 W., at narrows, 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 to September 1954.

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

Extremes.—Maximum discharge during period, 673 cfs May 11 (gage height, 3.83 ft); minimum, 68 cfs Sept. 12.

Remarks.—Records excellent. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								377	284	*246*	104	85
2								345	263	232	104	88
3								333	242	219	104	88
4								337	229	216	104	88
5								377	232	209	106	90
6								435	246	197	104	92
7								475	266	186	102	88
8								508	256	*180	102	85
9								530	*249	177	104	79
10								565	263	174	100	77
11								*625*	263	180	*108	75
12								625	260	183	108	79
13								601	249	177	102	80
14								583	238	169	97	79
15								559	229	169	90	*74
16								571	225	166	87	74
17								571	225	158	85	75
18								607	222	166	85	77
19								*565	219	180	83	77
20								535	*213*	180	83	77
21								535	216	171	85	77
22								607	*229	166	83	75
23								595	235	152	83	79
24								513	252	150	82	79
25								450	280	140	*77	77
26								435	270	130	74	72
27								412	294	128	74	*71*
28								*385	*325*	121	*71*	71
29								361	291	*112	72	71
30							*408	341	270	110	80	*99
31								*321*	-------	*106*	83	-------
Total								15,079	7,535	5,250	2,826	2,398
Mean								486	251	169	91.2	79.9
Ac-ft								29,910	14,950	10,410	5,610	4,760

The period	Max	Min	Mean	Ac-ft
	---	---	---	66,450

*Discharge measurement made on this day.

BEAR RIVER AT BORDER, WYO.

Location.—Lat 42° 11′, long 111°03′, in NE¼NE¼ sec. 15, T. 14 S., R. 46 E., in Idaho, on left bank a quarter of a mile west of Wyoming-Idaho State line, half a mile west of Border, and 2.1 miles upstream from Thomas Fork.

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

Records available.—October 1937 to September 1954.

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

Average discharge.—17 years, 415 cfs (300,400 acre-ft per year).

Extremes.—Maximum discharge during year, 630 cfs May 11 (gage height, 3.20 ft); minimum, 64 cfs Sept. 11.

1937–54: 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, which are fair. Natural flow of stream affected by diversions for irrigation and return flow from irrigated area.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	165	199			290	342	419	259	*234*	97	92
2	110	165	184			270	339	370	236	212	100	*95*
3	110	163	160	170	220	280	344	339	210	189	103	91
4	108	163	140			280	342	*342	199	180	107	75
5	*111*	170	*140*			240	367	370	201	173	123	74
6	111	191				240	422	433	206	175	123	74
7	105	191				240	430	476	226	182	123	70
8	101	186	190	190		*220*	*426	504	236	177	123	67
9	*100*	184				250	451	526	226	161	122	66
10	107	182				280	458	549	236	155	116	*65*
					210							
11	114	184				310	430	593	239	155	*129*	67
12	116	184				350	422	*608*	228	*160	124	70
13	116	184	175	185		310	436	589	224	156	116	68
14	111	186				290	405	556	220	150	105	70
15	110	191				330	358	497	*218	145	108	70
16	112	182			(*)	400	326	494	228	134	101	*70
17	116	179	(*)			*420*	*298*	472	228	128	103	71
18	117	*175	195	190	225	420	307	*490	220	124	103	71
19	116	170				399	324	447	214	131	100	74
20	118	160				396	326	422	210	136	91	76
21	122	*150*				399	339	412	199	134	93	80
22	120	150				386	*344	447	180	128	92	82
23	120	190	200	185	240	*386	344	465	*177*	123	92	84
24	139	190				379	376	416	184	117	92	84
25	163	182				370	416	370	206	114	*91	83
26	166	188				361	444	352	210	112	92	82
27	*170	197			280	355	469	329	236	120	92	80
28	170	*204*	165	175		342	454	*324	*234*	114	93	81
29	168	202		(*)	-------	334	*479*	314	275	*108	*90*	80
30	168	199			-------	334	458	298	254	100	91	*80
31	165	-------			-------	336	-------	*288*	-------	*97*	93	-------
Total	3,892	5,407	5,613	5,650	6,365	10,197	11,676	13,511	6,669	4,524	3,228	2,292
Mean	126	180	181	182	227	329	389	436	222	146	104	76.4
Ac-ft	7,720	10,720	11,130	11,210	12,620	20,230	23,160	26,800	13,230	8,970	6,400	4,550

Calendar year 1953	Max 1,850	Min 98	Mean 327	Ac-ft 236,900
Water year 1953–54	Max 608	Min 65	Mean 217	Ac-ft 156,700

*Discharge measurement made on this day.

NOTE.—Stage-discharge relation affected by ice Nov. 21–24, Dec. 3 to Mar. 18.

THOMAS FORK NEAR WYOMING-IDAHO STATE LINE

Location.—Lat 42°24′, long 111°01′, in NW¼SE¼ sec. 19, T. 28 N., R. 119 W., in Wyoming, on left bank 1.3 miles downstream from Giraffe Creek, 1.5 miles upstream from State line, and 3½ miles northeast of Geneva, Idaho.

Drainage area.—113 sq mi.

Records available.—October 1949 to September 1954.

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

Average discharge.—5 years, 59.5 cfs (43,080 acre-ft per year).

Extremes.—Maximum discharge during year, 200 cfs May 7 (gage height, 3.39 ft); minimum, 3.8 cfs Mar. 18, result of freezeup.

1949–54: Maximum discharge, 869 cfs May 18, 1950 (gage height, 5.55 ft, datum then in use); minimum, that of Mar. 18, 1954.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	15	*15*	13	*12*	12	*14*	128	*69*	*30*	*15*	8.4
2	*11*	15	13	13	12	12	14	115	64	29	14	8.4
3	12	16	12	13	12	*11*	15	111	61	28	14	8.4
4	12	16	12	13	12	12	20	*118	56	27	14	*8.1*
5	12	17	12	13	12	12	26	145	54	28	13	8.6
6	12	*20*	14	*12*	12	12	31	168	57	27	14	8.6
7	12	17	14	12	12	12	26	*177	60	26	13	8.4
8	12	15	13	12	12	12	26	173	57	25	12	8.4
9	12	15	14	12	12	15	26	171	53	25	12	8.6
10	12	15	14	12	12	*21*	26	177	62	25	12	8.4
11	12	16	*11*	13	13	20	29	162	55	24	*12	8.6
12	12	15	14	12	13	17	36	148	49	*24	12	8.4
13	12	15	13	12	*14*	15	45	136	46	23	13	8.6
14	12	16	13	13	14	14	50	126	47	22	12	8.4
15	13	16	14	13	14	13	60	118	*46	23	11	8.6
16	14	16	*14	*14*	14	14	*61	110	47	22	11	*8.6
17	13	16	13	14	*14	15	81	*105	46	21	11	8.6
18	13	16	13	13	14	13	99	102	41	21	11	8.4
19	12	*14	*14*	13	*13*	19	90	96	37	*20*	11	*8.4*
20	12	*11*	15	12	14	17	87	90	37	20	11	8.6
21	13	12	14	12	14	17	88	102	35	*19	12	8.6
22	14	12	12	a 12	13	17	93	107	35	19	11	8.6
23	14	15	12	a 12	13	*16	107	90	34	19	10	9.2
24	*16*	15	12	a 12	14	14	119	84	34	18	9.9	*10*
25	16	14	12	a 12	13	14	138	80	*33*	18	9.2	9.6
26	16	15	12	a 12	13	13	146	80	34	18	9.6	9.2
27	*16	18	12	a 12	12	14	140	78	53	17	*9.9	10
28	15	17	13	*14	12	14	*164*	74	46	16	9.6	9.2
29	14	15	13	13	-------	14	152	*69*	36	*15*	8.9	*9.0
30	14	14	13	14	-------	14	145	72	33	*15	8.6	9.2
31	15	-------	13	12	-------	13	-------	69	-------	15	*8.4*	-------
Total	407	459	405	391	361	448	2,154	3,581	1,417	679	355.1	262.1
Mean	13.1	15.3	13.1	12.6	12.9	14.5	71.8	116	47.2	21.9	11.5	8.74
Ac-ft	807	910	803	776	716	889	4,270	7,100	2,810	1,350	704	520

Calendar year 1953	Max 162	Min 11	Mean 36.4	Ac-ft 26,360
Water year 1953–54	Max 177	Min 8.1	Mean 29.9	Ac-ft 21,660

Peak discharge (base, 150 cfs)—— Apr. 28 (2 a.m.) 171 cfs (3.24 ft); May 7 (2:30 a.m.) 200 cfs (3.39 ft).

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

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, ¾ 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 1954.

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.—38 years, 520 cfs (376,500 acre-ft per year).

Extremes.—Maximum discharge during year, 680 cfs May 14 (gage height, 4.35 ft); minimum, 81 cfs Sept. 18.

1913–16, 1919–54: 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 or no gage-height record, which are fair. Many diversions above station for irrigation.

Cooperation.—Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. Six discharge measurements were made by Geological Survey.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*131*	202	210	*190*	230	270	401	557	*394*	*309*	145	106
2	133	202	195	190	230	250	397	511	355	281	145	110
3	133	207	*160*	190	230	240	405	460	309	261	147	*117*
4	137	197	165	190	230	**219*	394	435	272	244	145	114
5	137	199	180	190	*220*	220	420	435	269	238	147	104
6	141	218	200	195	220	220	476	472	281	236	*161*	97
7	143	226	200	200	220	220	511	529	296	238	154	96
8	139	*223	195	200	220	220	524	566	309	233	154	92
9	137	229	*195	200	220	250	529	571	299	228	150	89
10	135	226	190	200	220	280	562	594	305	217	150	87
11	141	226	180	190	220	320	543	*620	305	204	147	87
12	147	229	185	195	220	350	529	659	299	202	156	94
13	147	229	195	200	220	310	524	*663*	290	*202	150	92
14	147	226	205	200	220	290	529	663	287	*196	135	87
15	143	*235*	215	200	230	340	484	602	266	192	125	87
16	143	229	210	205	235	410	428	571	305	182	125	85
17	143	226	200	*210*	235	440	405	533	338	172	*117	84
18	150	221	200	210	235	450	*379*	515	321	167	117	*83*
19	152	215	215	210	235	470	409	*502	302	167	115	87
20	152	205	*220*	*209	235	*490*	412	480	290	167	112	89
21	150	*167*	220	200	250	490	*424	511	275	167	108	90
22	152	190	215	200	250	480	431	571	249	*165	108	94
23	152	225	205	200	250	*481	420	576	*230*	165	106	97
24	158	220	190	195	250	468	455	580	236	161	108	102
25	177	220	170	195	250	480	480	502	249	161	*104*	102
26	*194	215	165	190	*280*	450	520	468	272	158	106	104
27	194	220	170	190	280	435	562	443	272	179	110	102
28	197	225	180	190	280	424	562	*420	321	189	123	102
29	*199*	230	185	190	-------	401	566	428	351	182	123	104
30	199	225	190	190	-------	390	*580*	420	331	165	108	104
31	197	-------	190	200	-------	387	-------	*405*	-------	*154*	106	-------
Total	4,800	6,507	5,995	6,114	6,615	11,145	14,261	16,262	8,878	6,182	4,007	2,887
Mean	155	217	193	197	236	360	475	525	296	199	129	96.2
Ac-ft	9,520	12,910	11,890	12,130	13,120	22,110	28,290	32,260	17,610	12,260	7,950	5,730

Calendar year 1953	Max 1,880	Min 127	Mean 383	Ac-ft 277,000
Water year 1953–54	Max 663	Min 82	Mean 257	Ac-ft 185,800

*Discharge measurement made on this day.

NOTE.—Stage-discharge relation affected by ice Nov. 22 to Mar. 21, Mar. 23, 26 (no gage-height record Jan. 12–20).

RAINBOW INLET CANAL NEAR DINGLE, IDAHO

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

Records available.—October 1945 to September 1954 in reports of Geological Survey. January 1922 to September 1945 in files of Salt Lake City district office.

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

Average discharge.—32 years, 303 cfs (219,400 acre-ft per year).

Extremes.—Maximum discharge during year, 585 cfs Mar. 19 (gage height, 3.00 ft); minimum daily, 11 cfs on several days.

1945–54: Maximum discharge, 4,180 cfs May 7, 1952 (gage height, 8.62 ft); minimum daily, 11 cfs for several days in 1954.

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 NE¼ sec. 34, T. 13 S., R. 44 E., for 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. One discharge measurement made by Geological Survey.

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	53	144	169	144	182	204	372	*426*	*11*	16	51	13
2	*50*	148	160	*138*	191	210	372	410	12	15	44	14
3	55	148	132	142	188	217	378	380	14	15	51	15
4	76	150	*105*	144	177	213	388	346	14	15	55	*16*
5	100	144	113	148	184	210	396	326	13	15	44	15
6	100	150	146	152	180	202	429	313	12	15	55	14
7	89	165	171	154	180	*177*	472	346	12	27	63	13
8	72	167	162	160	169	182	490	375	12	41	*67*	12
9	76	182	150	167	165	215	496	394	12	39	67	12
10	71	*193*	150	168	160	245	526	341	12	39	58	*11*
11	69	186	141	169	*156*	274	*532*	264	12	38	51	11
12	67	175	132	154	165	330	514	262	12	34	48	12
13	69	152	148	154	173	318	508	254	12	36	44	12
14	69	148	152	144	175	326	517	231	12	38	51	12
15	80	152	167	152	186	378	493	180	12	46	50	11
16	87	156	171	156	191	399	452	156	13	63	43	11
17	85	146	158	160	184	415	418	148	13	*65*	41	11
18	89	140	150	165	184	438	369	132	13	51	27	11
19	94	138	160	162	215	*460*	*367*	109	14	51	26	11
20	94	126	*175*	160	169	429	383	89	14	48	19	11
21	104	*111*	169	158	177	429	386	48	14	36	15	12
22	107	113	175	156	191	432	391	19	13	27	16	12
23	109	162	155	160	195	438	386	31	12	24	17	12
24	113	165	155	158	222	438	388	46	12	19	15	12
25	121	165	130	155	222	421	410	46	13	*14*	13	12
26	136	171	120	152	217	413	440	26	13	26	12	12
27	142	169	124	150	*247*	407	460	27	14	26	*11*	12
28	*148*	173	132	152	226	396	469	22	14	36	12	12
29	146	175	136	150	-------	383	452	22	15	50	12	12
30	148	177	148	158	-------	372	460	*16*	*16*	60	13	13
31	144	-------	145	*173*	-------	375	-------	16	-------	63	13	-------
Total	2,963	4,691	4,601	4,815	5,271	10,346	13,114	5,801	387	1,088	1,104	369
Mean	95.6	156	148	155	188	334	437	187	12.9	35.1	35.6	12.3
Ac-ft	5,880	9,300	9,130	9,550	10,450	20,520	26,010	11,510	768	2,160	2,190	732

Calendar year 1953	Max 1,320	Min 16	Mean 247	Ac-ft 178,700
Water year 1953–54	Max 532	Min 11	Mean 149	Ac-ft 108,200

NOTE.—Stage-discharge relation affected by ice Jan. 10, 20, 21, 24–26; backwater from irregular release of water at Mud Lake June 1 to July 6, Aug. 21 to Sept. 30; discharge interpolated, or computed on basis of discharge measurements.

BEAR RIVER BELOW STEWART DAM, NEAR MONTPELIER, IDAHO

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

Records available.—October 1945 to September 1954 in reports of Geological Survey. January 1922 to September 1945 in files of Salt Lake City district office.

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

Average discharge.—32 years, 72.7 cfs (52,630 acre-ft per year).

Extremes.—Maximum daily discharge during year, 28 cfs Mar. 27; minimum, 3 cfs Feb. 25.

1923–54: Maximum daily discharge, 3,050 cfs June 3, 1923; minimum daily, 1 cfs on several days in 1931, 1934, 1940, 1948.

Remarks.—Records good. Discharge measurements generally made once each week. Water diverted at Stewart Dam for storage and regulation in Bear Lake. Many diversions above station for irrigation.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*12*	15	*16*	[a] 16	16	16	[a] *23*	*8*	*19*	12	14	6
2	12	15	*15*	[a] 16	16	*15*	23	9	19	12	14	6
3	12	15	[a] 15	[a] 16	17	18	[a] 22	9	18	12	16	6
4	13	14	[a] 15	16	17	20	[a] 22	8	13	12	15	7
5	14	14	[a] 15	16	16	22	22	8	7	12	14	7
6	14	14	[a] 15	16	17	22	22	8	*6*	*11*	16	7
7	14	14	15	16	17	22	14	8	6	14	17	7
8	13	14	[a] 15	[a] 16	17	[a] 22	9	8	7	11	*18*	7
9	13	14	15	[a] 16	17	[a] 22	9	8	7	11	18	6
10	14	14	15	[a] 16	17	[a] 23	9	10	7	11	17	6
11	14	14	[a] 15	16	16	[a] 23	9	16	7	11	16	7
12	14	14	[a] 15	[a] 16	16	[a] 24	9	16	8	12	16	7
13	*15*	14	[a] 15	[a] 16	16	[a] 25	9	16	7	11	15	7
14	15	*13*	15	[a] 16	17	[a] 25	8	15	8	11	16	6
15	14	14	15	[a] 16	17	[a] 26	8	16	8	11	15	6
16	15	14	15	[a] 16	17	[a] 26	8	17	8	12	16	6
17	15	14	15	[a] 16	16	[a] 25	8	16	8	13	16	6
18	14	15	15	[a] 16	18	[a] 24	8	16	8	13	16	6
19	14	15	16	16	*19*	[a] 22	7	18	9	13	14	6
20	14	[a] 15	16	[a] 16	18	21	8	18	9	13	14	6
21	15	[a] 15	16	[a] 16	19	22	[a] 9	18	9	13	12	*5*
22	14	[a] 14	16	16	16	[a] 21	9	18	9	13	11	5
23	14	[a] 14	[a] 16	[a] 16	14	[a] 21	10	*19*	9	13	7	6
24	14	14	[a] 16	[a] 16	14	[a] 20	9	18	8	13	*4*	6
25	14	14	[a] 16	[a] 16	*18*	[a] 20	8	17	8	13	4	6
26	14	14	[a] 16	[a] 16	19	19	8	17	8	13	4	7
27	14	15	[a] 16	[a] 16	14	*28*	8	18	9	13	4	7
28	14	15	16	[a] 16	15	27	8	17	9	13	4	7
29	14	*16*	[a] 16	[a] 16	-------	27	8	18	11	14	5	*8*
30	15	16	[a] 16	16	-------	[a] 25	8	18	12	*15*	6	8
31	15	-------	[a] 16	16	-------	23	-------	19	-------	15	6	-------
Total	432	432	479	496	461	696	342	445	281	386	380	193
Mean	13.9	14.4	15.5	16.0	16.5	22.5	11.4	14.4	9.4	12.5	12.3	6.4
Ac-ft	857	857	950	984	914	1,380	678	883	557	766	754	383

Calendar year 1953	Max 32	Min 6	Mean 14.3	Ac-ft 10,380
Water year 1953–54	Max 28	Min 4	Mean 13.8	Ac-ft 9,960

[a] No gage-height record; discharge estimated on basis of discharge measurements, weather records and records for nearby stations.

MONTPELIER CREEK AT IRRIGATORS WEIR, NEAR MONTPELIER, IDAHO

Location.—Lat 42°20′, long 111°14′, in SE¼ sec. 31, T. 12 S., R. 45 E., on right bank 3 miles east of Montpelier and 3½ miles downstream from South Fork.

Drainage area.—50.9 sq mi.

Records available.—December 1942 to September 1954.

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

Average discharge.—11 years (1943–54), 23.1 cfs (16,720 acre-ft per year).

Extremes.—Maximum discharge during year, 49 cfs Apr. 24 (gage height, 0.92 ft); minimum, 1.7 cfs Jan. 10, result of freezeup.

1942–54: 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.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*7.6*	8.9	*8.9*	7.1	7.4	*7.1*	8.3	32	27	*15*	8.6	7.8
2	7.7	9.1	8.5	7.1	7.2	[a]7.4	*8.0*	29	24	14	8.3	8.0
3	8.3	9.1	7.7	7.1	7.0	7.7	8.0	27	23	14	8.3	*8.5*
4	8.8	9.4	7.8	7.0	7.0	7.4	8.6	*28	23	13	8.3	8.5
5	8.9	10	7.7	7.1	7.1	7.6	10	29	22	13	8.3	8.2
6	8.3	*12*	8.0	7.0	7.2	7.6	12	31	24	13	8.3	7.7
7	8.3	11	8.0	7.1	7.0	7.4	12	30	25	14	8.3	7.6
8	8.2	10	7.7	7.0	6.6	7.4	11	31	24	14	8.3	7.6
9	8.3	10	8.0	7.0	*6.5*	10	12	31	22	14	7.6	7.6
10	8.3	9.9	7.2	*6.5*	7.4	*11*	13	31	*29*	14	7.6	7.6
11	8.5	11	6.2	7.0	7.4	10	13	32	26	13	8.0	7.4
12	8.5	10	7.7	7.0	7.1	8.9	15	31	23	*13	8.3	7.7
13	8.8	9.9	7.7	6.8	7.4	8.5	17	31	22	13	*9.4*	8.0
14	8.6	10	7.4	7.1	7.6	8.5	19	30	*22	13	8.6	8.0
15	8.9	9.6	7.6	7.6	7.2	8.2	21	28	21	13	8.3	7.8
16	9.3	9.1	*7.4	7.4	7.1	8.5	*22	28	22	12	8.0	7.7
17	9.1	9.6	7.2	7.4	*7.1	8.8	26	*28	21	12	8.0	7.7
18	8.8	9.3	7.7	7.2	7.2	8.5	33	28	20	12	8.0	7.4
19	8.9	*8.8	7.7	7.2	7.0	8.2	33	27	19	14	7.6	7.4
20	8.9	*7.8*	8.0	6.5	7.2	8.3	31	27	18	13	7.6	7.6
21	8.9	8.2	7.4	7.0	7.2	8.3	33	34	18	12	8.3	7.8
22	9.1	8.3	6.2	7.6	7.1	8.3	34	*37*	17	11	8.6	7.8
23	9.3	9.1	5.9	7.6	7.2	8.3	35	31	17	11	8.0	7.7
24	*9.9*	8.9	5.7	*7.8*	7.2	*8.4	37	28	17	10	*6.8*	8.0
25	9.9	8.6	5.9	7.6	7.4	8.3	*39*	28	*16*	10	7.2	7.4
26	*9.4	9.4	[b]*5.6*	6.8	7.7	8.0	38	28	16	10	7.2	7.4
27	9.3	10	[b]6.4	7.4	7.2	8.3	36	28	19	11	*7.4	7.6
28	9.1	9.6	7.1	*7.6	7.2	8.6	39	*26*	19	10	7.4	7.7
29	9.1	9.1	7.4	7.6	-------	8.6	37	26	16	9.9	7.6	*7.6
30	9.1	8.8	7.2	7.7	-------	8.3	35	26	16	*9.4	7.6	*7.2*
31	9.1	-------	7.1	7.6	-------	8.0	-------	26	-------	*9.0*	8.0	-------
Total	273.2	284.5	226.0	223.5	200.9	258.4	695.9	907	628	379.3	247.8	232.0
Mean	8.81	9.48	7.29	7.21	7.18	8.34	23.2	29.3	20.9	12.2	7.99	7.73
Ac-ft	542	56.4	448	443	398	513	1,380	1,800	1,250	752	492	460

Calendar year 1953	Max 60	Min 5.6	Mean 16.5	Ac-ft 11,970
Water year 1953–54	Max 39	Min 5.6	Mean 12.5	Ac-ft 9,040

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

BEAR LAKE AT LIFTON, NEAR ST. CHARLES, IDAHO

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

Records available.—October 1903 to June 1906 (gage heights only), October 1945 to September 1954. January 1921 to September 1945 (elevations only) in files of Salt Lake City district office, Geological Survey.

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, 964,500 acre-ft May 11, 12 (gage height, 17.11 ft); minimum, 702,000 acre-ft Sept. 22–30 (gage height, 13.22 ft).

1921–54: Maximum contents, 1,423,000 acre-ft June 10, 1923 (gage height, 23.68 ft); no contents Nov. 9–19, 1935 (gage height, 2.00 ft).

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

Contents at 10 a.m., in thousands of acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	864.8	856.0	858.7	862.1	868.9	892.7	926.8	961.0	940.5	898.2	825.7	744.0
2	864.8	856.0	859.4	862.1	869.6	893.4	927.5	961.7	937.8	895.4	823.7	741.3
3	864.1	856.0	859.4	862.1	869.6	894.0	928.2	962.4	935.7	892.7	821.0	738.6
4	864.1	856.0	859.4	862.1	870.2	894.7	928.9	962.4	933.7	890.0	819.0	735.9
5	863.4	856.6	859.4	862.1	870.9	895.4	930.3	962.4	932.3	887.9	817.0	733.2
6	863.4	857.3	859.4	862.8	870.9	896.1	931.6	963.1	930.3	885.9	815.0	730.6
7	862.8	857.3	860.0	862.8	871.6	896.8	932.3	963.8	928.9	883.2	812.3	728.0
8	862.1	857.3	860.0	862.8	871.6	897.5	933.0	963.8	926.8	881.1	809.6	725.3
9	862.1	857.3	860.0	862.8	872.3	899.5	933.7	963.8	925.5	879.8	807.6	722.6
10	861.4	858.0	860.0	862.8	872.3	900.9	935.0	963.8	925.5	878.4	805.6	719.9
11	861.4	858.0	860.0	862.8	873.0	902.3	936.4	964.5	924.8	876.4	803.6	717.3
12	860.7	858.0	860.0	862.8	873.6	903.7	937.1	964.5	924.8	874.3	800.9	716.0
13	860.7	858.0	860.0	862.8	874.3	904.3	938.4	963.8	924.8	872.3	798.9	714.7
14	860.0	858.0	860.0	862.8	875.7	905.0	939.8	963.8	924.8	870.2	796.2	713.3
15	860.0	858.0	860.0	863.4	877.0	905.7	941.2	963.8	924.1	867.5	793.5	712.0
16	860.0	858.0	860.0	863.4	879.1	906.4	942.5	963.1	922.0	865.5	790.8	710.6
17	860.0	858.0	860.7	864.1	881.1	907.1	943.9	962.4	920.7	862.8	788.2	709.3
18	859.4	858.0	860.7	864.1	883.2	908.4	945.3	961.7	920.0	860.0	784.8	708.0
19	858.7	858.0	860.7	864.1	884.5	909.1	946.6	961.0	918.6	857.3	781.5	706.6
20	858.0	858.0	860.7	864.1	885.9	909.8	948.0	960.4	917.9	854.6	778.8	704.7
21	857.3	858.0	860.7	864.1	886.6	910.5	949.4	959.7	917.3	851.9	776.1	703.3
22	856.6	858.0	860.7	864.1	887.2	911.8	950.8	961.0	915.9	849.2	773.4	702.0
23	856.0	858.0	860.7	864.8	887.9	912.5	952.1	960.4	914.5	846.5	770.8	702.0
24	856.0	858.0	861.4	865.5	889.3	913.9	952.8	959.0	913.2	843.8	768.7	702.0
25	855.3	858.0	861.4	866.2	890.0	915.2	953.5	956.9	911.8	841.1	766.1	702.0
26	855.3	858.7	861.4	866.2	890.6	916.6	954.9	954.9	909.8	838.4	763.4	702.0
27	855.3	858.7	861.4	866.8	891.3	919.3	955.5	952.8	908.4	836.4	760.7	702.0
28	855.3	858.7	861.4	867.5	892.0	921.3	956.9	950.1	906.4	834.4	757.4	702.0
29	856.0	858.7	861.4	868.2	-------	923.4	958.3	947.3	903.7	832.4	754.0	702.0
30	856.0	858.7	861.4	868.2	-------	924.8	959.0	944.6	900.9	830.4	750.6	702.0
31	856.0	-------	861.4	868.9	-------	925.5	-------	942.5	-------	827.7	747.3	-------
(†)	15.52	15.56	15.60	15.71	16.05	16.54	17.03	16.79	16.18	15.10	13.90	13.22
(‡)	−10.2	+2.7	+2.7	+7.5	+23.1	+33.5	+33.5	−16.5	−41.6	−73.2	−80.4	−45.3

†Gage height, in feet, at 10 a.m., on last day of month.
‡Change in contents in thousands of acre-feet.

NOTE.—Change in contents: Calendar year 1953, −148.6 acre-ft; water year 1954, −164.2 acre-ft.

BEAR LAKE OUTLET CANAL NEAR PARIS, IDAHO

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

Records available.—October 1945 to September 1954 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.—32 years, 352 cfs (254,800 acre-ft per year).

Extremes.—Maximum discharge during year, 1,340 cfs July 7; maximum gage height, 18.31 ft July 8; minimum daily, 1 cfs for many days.

1922–54: 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 doubtful or no gage-height record, which are fair. Discharge measurements generally made six times a week during period of release from Bear Lake.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*24*	*2*	2	*2*	1	1	1	*1*	653	1,110	843	868
2	24	2	2	2	1	1	1	1	755	1,120	849	868
3	24	2	2	2	1	1	1	1	640	1,110	852	893
4	24	2	2	2	1	1	1	1	526	1,100	824	*912*
5	24	2	2	2	1	1	1	1	619	1,100	741	902
6	24	2	2	*1*	1	1	1	1	748	1,140	*685*	902
7	24	2	2	1	1	1	1	1	767	1,270	773	899
8	24	2	2	1	1	1	1	1	625	*1,300*	758	905
9	24	2	2	1	1	1	1	1	366	1,230	791	880
10	24	2	2	1	1	1	1	177	324	1,160	871	849
11	24	2	2	1	1	1	1	581	159	1,130	893	650
12	24	*3*	2	1	1	1	1	573	*15*	1,090	944	454
13	24	3	2	1	1	1	1	589	15	1,150	874	401
14	24	3	2	1	1	1	1	649	258	1,220	773	304
15	14	3	2	1	1	1	1	737	545	1,200	791	245
16	3	3	2	1	1	1	1	767	563	1,130	840	343
17	3	3	2	1	1	1	1	788	*515*	*1,160*	915	310
18	3	3	2	1	1	1	1	900	431	1,220	908	278
19	*2*	3	2	1	1	1	1	1,050	424	1,230	931	254
20	2	3	2	1	1	1	1	1,100	415	1,220	940	235
21	2	3	2	1	1	1	1	*1,110*	525	1,130	*1,040*	209
22	2	3	2	1	1	1	1	945	734	1,010	1,040	214
23	2	3	2	1	1	1	1	828	803	963	971	137
24	2	3	2	1	1	1	1	1,060	794	918	896	28
25	2	2	2	1	1	1	1	1,090	846	912	877	24
26	2	2	2	1	1	1	1	945	963	915	880	24
27	2	2	2	1	1	1	1	663	1,010	871	856	*22*
28	2	2	2	1	1	1	1	516	1,000	797	890	24
29	2	2	2	1	-------	1	1	468	998	*688*	883	23
30	2	2	2	1	-------	1	1	379	*1,040*	718	871	110
31	2	-------	2	1	-------	1	-------	483	-------	846	871	-------
Total	385	73	62	36	28	81	30	16,407	18,071	33,158	26,871	13,167
Mean	12.4	2.4	2.0	1.2	1.0	1.0	1.0	529	602	1,070	867	439
Ac-ft	764	145	123	71	56	61	60	32,540	35,840	65,770	53,300	26,120

Calendar year 1953	Max 1,280	Min 2	Mean 426	Ac-ft 308,500
Water year 1953–54	Max 1,300	Min 1	Mean 297	Ac-ft 214,800

NOTE.—No gage-height record or doubtful gage-height record Oct. 1 to May 9, June 12–13; discharge computed on basis of discharge measurements and record of gate changes.

BEAR RIVER AT PESCADERO, IDAHO

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

Records available.—October 1945 to September 1954 in reports of Geological Survey (discontinued). January 1922 to September 1945 available in files of Salt Lake City district office, Geological Survey.

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

Average discharge.—32 years, 542 cfs (392,400 acre-ft per year).

Extremes.—Maximum discharge during year, 1,400 cfs July 8 (gage height, 4.94 ft); minimum daily, 57 cfs Oct. 17.

1922–54: Maximum daily discharge, 3,840 cfs June 10, 1923; minimum daily, 23 cfs Mar. 14–17, 1936.

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

Cooperation.—Records collected by Utah Power & Light Co.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*119*	*63*	*109*	*75*	90	95	150	97	701	1,130	839	867
2	70	66	107	75	90	95	141	*96*	879	1,150	839	879
3	64	66	100	75	90	95	145	96	896	1,150	856	890
4	62	67	95	75	90	*92	183	99	752	1,150	850	896
5	61	67	95	75	90	*90*	231	105	675	1,150	811	902
6	61	*69	95	75	90	95	250	102	811	1,160	*706*	896
7	64	72	95	75	90	105	*258*	133	879	1,250	731	*908*
8	67	74	*90	75	*85*	133	252	140	884	*1,380*	752	908
9	69	73	90	75	85	160	247	133	647	*1,370	757	902
10	67	86	90	75	85	*229*	237	121	546	1,330	839	902
11	64	83	90	75	85	215	214	433	436	1,300	856	806
12	63	79	90	75	90	195	189	593	244	1,250	914	576
13	66	78	90	75	*100*	160	168	610	*160*	1,210	920	477
14	67	74	90	80	100	175	172	670	162	1,250	806	436
15	70	75	90	80	95	180	170	747	522	1,270	789	288
16	73	75	90	80	90	200	170	822	642	1,230	789	319
17	*57*	75	90	80	90	210	178	822	652	1,200	873	365
18	60	70	90	80	90	200	174	884	571	1,230	*908	340
19	62	70	90	*79	95	200	*181	1,090	550	1,240	908	305
20	61	90	90	75	95	200	211	1,140	546	1,240	908	288
21	61	95	85	80	95	170	187	1,150	542	1,240	974	258
22	61	95	80	80	95	175	162	[a] *1,160*	731	*1,110	*1,000*	247
23	61	97	*75*	80	100	185	152	[a] 950	833	1,040	1,000	244
24	60	101	75	80	100	189	150	[a] 940	839	968	914	134
25	61	101	75	80	100	189	126	*[a] 1,150	873	938	862	74
26	61	101	75	80	100	175	119	1,090	950	938	856	66
27	61	109	75	80	100	170	116	873	1,050	926	844	66
28	60	*117*	75	85	95	170	102	661	*1,060*	839	844	66
29	61	112	75	85	-------	165	97	624	1,050	794	850	64
30	60	111	75	*90*	-------	160	*95*	550	1,060	*642*	862	*62*
31	62	-------	75	90	-------	145	-------	542	-------	806	867	-------
Total	2,016	2,511	2,706	2,439	2,600	5,017	5,227	18,623	21,143	34,881	26,524	14,431
Mean	65.0	83.7	87.3	78.7	92.9	162	174	601	705	1,125	856	481
Ac-ft	4,000	4,980	5,370	4,840	5,160	9,950	10,370	36,940	41,940	69,190	52,610	28,620

Calendar year 1953	Max 1,540	Min 57	Mean 556	Ac-ft 402,700
Water year 1953–54	Max 1,380	Min 57	Mean 378	Ac-ft 274,000

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of one discharge measurement and records for other Bear River stations.

NOTE.—Stage-discharge relation affected by ice Nov. 17–22, Dec. 4 to Mar. 7, Mar. 11–23, 26, 29–31 (no gage-height record Feb. 13 to Mar. 4; discharge estimated as for footnote *a*).

GEORGETOWN CREEK NEAR GEORGETOWN, IDAHO

Location.—Lat 42°30′, long 111°19′, in NE¼ sec. 4, T. 11 S., R. 44 E., on left bank 150 ft downstream from Little Right Hand Fork and 3 miles northeast of Georgetown.

Drainage area.—22.2 sq mi.

Records available.—October 1911 to September 1914 (fragmentary), November 1939 to September 1954.

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

Average discharge.—14 years (1940–54), 31.3 cfs (22,660 acre-ft per year).

Extremes.—Maximum discharge during year, 39 cfs Oct. 31 (gage height, 2.01 ft); minimum daily, 24 cfs for many days Jan. 26 to Apr. 11.

1911–14, 1939–54: Maximum discharge observed, 162 cfs June 8, 1912; minimum daily, 18 cfs for many days February to May 1941.

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

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	31	28	26	25	24	24	24	25	33	31	31	29
2	31	28	26	25	24	24	24	25	33	31	31	29
3	31	28	26	25	24	24	24	25	33	32	31	29
4	31	28	26	25	24	24	25	*25	32	32	31	29
5	31	28	26	25	24	24	25	25	33	32	31	29
6	30	28	26	25	24	24	25	26	33	32	31	29
7	30	28	26	25	24	24	25	26	33	31	31	29
8	30	27	26	25	24	24	24	26	33	31	31	28
9	30	27	26	25	24	25	24	27	33	31	30	28
10	30	27	26	25	24	25	24	28	34	31	30	28
11	30	27	26	25	24	25	24	30	33	31	30	28
12	30	27	26	25	24	24	25	31	32	*31	30	29
13	30	27	26	25	24	24	25	31	32	31	29	28
14	30	27	26	25	24	24	25	31	*32	31	29	28
15	30	27	26	25	24	24	25	31	32	31	29	28
16	29	27	*26	25	24	24	*25	32	32	31	29	28
17	29	27	25	25	*24	24	25	*32	32	31	29	28
18	29	27	25	25	24	24	25	32	31	31	30	28
19	29	*27	25	25	24	24	25	32	31	31	30	28
20	28	27	25	25	24	[a] 24	25	32	31	31	30	28
21	28	27	25	25	24	[a] 24	25	35	31	31	30	28
22	28	27	25	25	24	[a] 24	25	35	31	31	29	28
23	28	27	25	25	24	[a] 24	25	34	31	31	29	28
24	28	26	25	25	24	*24	25	34	31	31	29	28
25	28	26	25	25	24	24	25	34	32	31	29	28
26	*28	26	25	24	24	24	25	35	32	31	29	28
27	28	26	25	24	24	25	25	34	32	31	*29	28
28	28	26	25	*24	24	25	25	34	32	31	29	28
29	28	26	25	24	-------	25	25	34	32	31	29	*28
30	28	26	25	24	-------	24	25	34	31	*31	29	28
31	28	-------	25	24	-------	24	-------	33	-------	31	29	-------
Total	907	810	791	769	672	750	743	948	963	965	923	848
Mean	29.3	27.0	25.5	24.8	24.0	24.2	24.8	30.6	32.1	31.1	29.8	28.3
Ac-ft	1,800	1,610	1,570	1,530	1,330	1,490	1,470	1,880	1,910	1,910	1,830	1,680

Calendar year 1953	Max 41	Min 25	Mean 30.0	Ac-ft 21,720
Water year 1953–54	Max 35	Min 24	Mean 27.6	Ac-ft 20,010

*Discharge measurement made on this day,

[a] No gage-height record; discharge estimated on basis of recorded range in stage.

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.

Drainage area.—3,540 sq mi, approximately.

Records available.—May to September 1896, May and June 1898, October 1953 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,760 ft (from topographic map).

Extremes.—Maximum discharge during year, 1,410 cfs July 9 (gage height, 4.78 ft); minimum daily, 100 cfs Oct. 4, 5.

Remarks.—Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Flow regulated by 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. One discharge measurement made by Geological Survey in addition to those made by the power company.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*250*	140	*190*	135	165	160	259	246	743	1,120	856	890
2	165	140	190	135	165	160	*239*	239	890	1,160	862	911
3	120	*140	160	*130*	160	155	256	232	1,000	1,170	883	925
4	*100*	138	165	130	160	*150*	315	*222	897	1,170	883	925
5	100	143	158	130	155	150	426	229	762	1,170	869	*932*
6	115	151	165	135	155	*150	*508*	239	828	1,170	795	925
7	125	149	160	140	155	160	473	246	940	1,220	*749*	925
8	140	147	155	140	*150*	176	454	281	990	*1,370	788	925
9	150	147	160	140	150	256	435	281	883	*1,400*	788	925
10	150	147	165	140	150	*368*	390	277	724	1,360	828	925
11	150	160	160	135	150	315	377	315	622	1,310	869	876
12	150	160	*155	140	160	300	356	699	459	1,270	904	705
13	155	158	155	140	*180*	260	335	*730	292	1,220	940	533
14	155	156	160	145	180	300	323	756	*246*	1,240	883	468
15	155	151	160	145	170	310	323	808	351	1,280	808	408
16	155	151	165	145	160	340	307	890	705	1,260	815	296
17	155	156	170	145	155	356	311	890	730	1,210	849	381
18	155	156	170	145	155	323	*323	904	699	1,230	911	377
19	150	*121*	165	145	160	340	315	1,020	622	1,250	918	347
20	150	158	165	140	160	300	327	1,140	616	1,250	918	319
21	150	185	155	145	160	280	335	1,240	593	1,230	961	307
22	150	190	140	150	165	292	311	*1,280*	693	1,160	1,010	277
23	150	190	130	150	170	288	292	1,080	869	1,080	*1,080*	292
24	150	187	*125*	*150	175	296	288	1,030	897	1,010	961	263
25	150	185	125	145	170	284	288	1,190	911	961	883	151
26	150	192	125	150	170	270	266	1,210	968	961	876	114
27	145	198	130	150	170	277	273	1,080	1,080	*961	869	109
28	145	*200*	130	160	160	263	281	856	*1,110*	904	862	*107
29	140	192	135	160	-------	263	270	737	1,100	842	876	*106*
30	140	190	135	*165*	-------	256	256	705	1,080	*718*	883	109
31	140	-------	135	165	-------	226	-------	633	-------	743	883	-------
Total	4,555	4,878	4,758	4,470	4,535	8,024	9,912	21,685	23,300	35,400	27,200	15,753
Mean	147	163	153	144	162	259	330	700	777	1,142	877	525
Ac-ft	9,030	9,680	9,440	8,870	9,000	15,920	19,660	43,010	46,210	70,210	53,950	31,250

Calendar year 1953	Max -----	Min ---	Mean ---
Water year 1953-54	Max 1,400	Min 100	Mean 451

Ac-ft -------
Ac-ft 326,200

*Discharge measurement made on this day.

NOTE.—No gage-height record Oct. 1 to Nov. 3; discharge estimated on basis of one discharge measurement and records for other Bear River stations and Soda Reservoir. Stage-discharge relation affected by ice Dec. 6 to Mar. 7, Mar. 12–16, 19–21.

BEAR RIVER AT ALEXANDER, IDAHO

Location.—Lat 42°39′, long 111°42′, in NW¼ sec. 17, T. 9 S., R. 41 E., on right bank 600 ft downstream from Soda hydroelectric plant of Utah Power & Light Co., half a mile southeast of Alexander, and 5 miles downstream from Soda Creek.

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

Records available.—March 1911 to September 1916, April 1919 to September 1954.

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

Average discharge.—39 years (1911–16, 1919–20, 1921–54), 765 cfs.

Extremes.—Maximum daily discharge during year, 1,440 cfs July 12; minimum daily, 123 cfs Apr. 3.

1911–16, 1919–54: 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 and Soda hydroelectric plant.

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

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	216	203	279	166	262	275	171	319	761	1,330	885	1,030
2	193	246	340	254	255	227	169	297	844	1,230	924	1,050
3	198	236	252	*156*	219	240	*123*	473	1,100	1,220	901	1,050
4	213	212	256	260	262	226	269	638	1,010	1,080	851	*1,070*
5	208	*244	179	162	238	254	550	374	809	1,170	933	868
6	176	222	287	207	251	*214*	*761*	256	784	*1,300	779	844
7	170	261	264	244	209	268	688	433	963	1,270	751	1,030
8	174	227	256	226	264	277	690	422	1,050	1,330	854	838
9	174	210	210	260	237	474	660	*209*	868	1,340	845	771
10	170	212	308	201	224	554	618	563	808	1,260	993	600
11	160	233	273	226	*208*	530	496	770	678	911	946	388
12	170	232	*207	228	243	362	507	1,010	552	*1,440*	877	650
13	149	294	166	216	*296*	*611*	457	869	*499*	1,290	935	791
14	*187*	202	287	227	281	507	600	882	798	1,320	720	500
15	157	238	295	252	255	479	602	902	837	1,310	*715*	428
16	140	250	206	243	214	430	479	855	647	1,320	961	409
17	158	194	255	216	256	463	*362	1,140	589	1,300	1,000	398
18	175	297	252	236	261	506	258	*1,290*	661	1,330	974	392
19	237	*168*	278	259	255	588	510	1,130	588	1,240	1,020	390
20	223	183	295	198	209	378	292	1,260	618	1,010	1,020	461
21	▪230	253	202	217	254	435	411	1,110	798	1,130	902	440
22	▪255	294	255	260	264	429	378	933	879	1,020	953	367
23	▪190	340	237	233	254	344	283	*976	969	1,000	*1,070*	332
24	229	207	252	256	293	432	169	970	888	1,000	1,060	374
25	201	304	204	*196	228	474	277	1,120	985	973	1,010	361
26	*265*	286	210	251	280	460	452	1,020	786	929	*976	355
27	149	260	*146*	203	249	348	359	793	658	1,000	898	326
28	251	*544*	189	233	243	388	409	618	1,100	*998	865	*258*
29	231	219	237	221	-------	424	381	452	1,220	908	878	*277
30	240	278	159	*555*	-------	356	464	624	*1,380*	723	1,030	276
31	193	-------	*542*	196	-------	261	-------	622	-------	*599*	1,060	-------
Total	6,022	7,344	7,578	7,058	6,959	12,214	12,845	23,330	25,077	35,281	28,586	17,324
Mean	194	245	244	228	249	394	428	753	836	1,138	922	577
Ac-ft	11,940	14,570	15,030	14,000	13,800	24,230	25,480	46,270	49,740	69,980	56,700	34,360

Calendar year 1953	Max 1,380	Min 127	Mean 706	Ac-ft 511,300
Water year 1953–54	Max 1,440	Min 123	Mean 520	Ac-ft 376,100

*Discharge measurement made on this day.
▪ No gage-height record; discharge estimated from output records of Soda powerplant.

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 1954 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.—32 years, 788 cfs (570,500 acre-ft per year).

Extremes.—Maximum daily discharge during year, 1,750 cfs July 7; minimum daily, 30 cfs Jan. 1.

1922–54: Maximum daily discharge, 5,480 cfs May 8, 1922; minimum daily, 15 cfs May 3, 4, 1925.

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

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

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	363	189	*356	*30*	527	624	490	704	874	ª 968	777	*1,190
2	298	492	576	593	189	460	737	359	704	ª 1,190	931	860
3	349	321	494	334	212	463	584	712	*953	ª 1,060	966	*1,630*
4	*100*	355	250	363	521	156	290	920	830	ª 1,270	1,010	1,210
5	530	578	503	258	328	617	501	586	1,030	ª 1,060	635	821
6	338	251	498	244	363	280	*750	685	548	ª 979	814	1,340
7	256	454	230	283	440	446	1,200	748	673	*ª *1,760*	*528*	1,110
8	426	366	504	593	*918*	425	1,240	349	795	820	880	640
9	253	455	418	499	*94*	873	847	*161*	930	849	817	541
10	300	421	*843*	579	168	923	149	611	762	907	967	306
11	486	199	466	191	403	*1,150*	613	886	678	1,090	1,030	668
12	322	578	221	*500	386	522	*1,260*	1,010	622	1,620	881	850
13	162	482	336	335	427	637	913	780	*187*	770	937	935
14	474	468	258	199	642	923	932	333	552	993	956	428
15	252	222	795	482	561	552	*780	692	1,000	1,090	1,110	615
16	556	508	639	492	568	449	934	599	494	1,280	717	698
17	204	366	382	370	469	1,140	641	905	225	1,230	859	528
18	142	623	*161*	375	536	361	372	*1,630*	534	993	716	302
19	428	427	706	264	480	630	1,080	983	235	922	1,030	458
20	581	249	612	253	354	739	653	1,440	485	1,150	1,060	787
21	352	437	257	551	320	588	817	606	1,010	638	*1,440*	630
22	646	353	577	*752*	602	637	322	172	848	945	939	613
23	337	555	629	453	303	712	540	213	762	980	944	381
24	478	644	405	410	*427	813	*139*	358	754	559	1,000	*212*
25	441	371	369	339	566	351	727	887	741	1,120	923	440
26	261	403	308	252	590	820	661	620	341	894	828	933
27	*565	571	220	630	317	425	850	490	257	*1,200	995	288
28	318	*818*	382	194	529	814	840	334	ª 1,040	587	1,180	335
29	*659*	*99*	367	237	-------	1,080	507	296	ª 1,100	597	1,040	231
30	316	327	346	718	-------	*143*	632	361	ª *1,140*	*199*	1,020	327
31	570	-------	748	400	-------	328	-------	509	-------	636	769	-------
Total	11,763	12,582	13,856	12,173	12,240	19,081	21,001	19,839	21,104	30,346	28,699	20,207
Mean	379	419	447	393	437	616	700	640	703	979	926	674
Ac-ft	23,330	24,960	27,480	24,140	24,280	37,850	41,650	39,350	41,860	60,190	56,920	40,080

Calendar year 1953	Max 1,700	Min 28	Mean 812	Ac-ft 587,500
Water year 1953–54	Max 1,750	Min 30	Mean 611	Ac-ft 442,100

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

COTTONWOOD CREEK NEAR CLEVELAND, IDAHO

Location.—Lat 42°20′, long 111°46′, in SW¼ sec. 34, T. 12 S., R. 40 E., on right bank 500 ft upstream from Cleveland irrigation canal 2½ miles west of Cleveland.

Drainage area.—61.7 sq mi.

Records available.—November 1938 to September 1954.

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.—15 years (1939–54), 31.1 cfs (22,520 acre-ft per year).

Extremes.—Maximum discharge during year, 133 cfs Apr. 28 (gage height, 1.98 ft); minimum, 0.9 cfs Aug. 31.

1938–54: 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 or no gage-height record, which are fair. Treasureton Canal diverts above station in SE¼ sec. 8, T. 12 S., R. 39 E., for irrigation in Battle Creek basin.

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	*1.5*	[a]6.5	9.5	[b]*8.5*	10	12	*16*	*52*	10	*5.0*	2.3	1.3
2	1.6	[a]5.8	8.8	[b]9.0	[b]9.5	[b]11	16	43	8.8	4.7	2.4	1.7
3	1.7	*5.2*	[b]8.0	[b]9.5		[b]*10*	20	37	7.8	4.5	2.4	*2.2
4	1.8	*5.4	8.4	[b]10		[b]10	22	32	*6.9	4.3	2.9	2.2
5	1.8	5.7	7.2	*9.9		[b]10	42	34	6.9	3.4	3.6	2.0
6	1.8	6.6	7.5	9.9	[b]9.0	[b]11	*51	*38	9.9	3.4	*5.0*	1.4
7	2.4	6.3	7.8	9.9		12	44	36	10	3.2	4.1	1.4
8	2.3	5.7	*6.3	9.9		15	43	30	8.4	2.9	3.4	1.3
9	2.2	5.7	6.9	9.9		32	46	29	8.1	2.8	3.2	*1.8*
10	2.2	5.7	[b]8.0	[b]9.5	(*)	*50*	47	28	9.5	2.9	2.9	1.4
11	2.6	6.0	[b]7.0	[b]9.0	10	40	52	25	11	2.6	3.0	1.3
12	3.0	6.0	*5.7*	[b]9.0	11	28	*65*	*22	8.1	2.3	3.2	2.2
13	3.0	6.0	6.3	[b]9.5	11	[b]24	*70	20	6.6	1.8	3.2	3.0
14	3.0	6.0	6.9	10	11	24	80	15	7.8	*1.4*	3.2	3.0
15	3.0	6.3	8.8	10	11	23	82	13	7.2	1.8	2.9	2.9
16	3.4	6.3	10	*11*	11	20	82	12	*12*	2.3	2.6	2.8
17	3.4	8.1	10	11	11	20	94	10	12	2.3	2.2	2.8
18	4.7	8.4	11	[b]11	11	*18	*111*	8.4	9.9	2.6	2.2	2.9
19	5.0	7.2	*12*	11	[b]10	18	94	6.0	8.8	3.0	1.6	3.0
20	5.0	[b]6.0	12	[b]11	[b]10	18	90	5.7	8.4	3.0	1.7	3.0
21	5.7	6.6	11	[b]10	11	18	*78	8.8	7.5	3.0	1.8	2.9
22	6.3	6.6	[b]10	9.9	11	17	77	16	*5.4	2.6	2.2	2.8
23	6.0	8.8	[b]9.0	9.9	11	18	85	9.9	5.0	2.3	1.7	3.9
24	7.2	9.5	[b]9.0	10	11	18	90	6.0	4.7	2.0	1.4	*5.4*
25	*7.8*	9.5	[b]8.0	[b]10	12	15	90	5.2	*4.5*	1.7	1.5	4.3
26	7.8	9.9	[b]8.5	[b]9.0	11	13	81	*5.0*	4.5	1.7	1.3	3.9
27	7.8	9.9	8.4	[b]9.5	11	16	73	6.3	7.2	*2.8	1.3	3.6
28	7.5	*10*	[b]8.5	9.9	*14*	18	100	6.0	8.4	2.9	1.5	3.4
29	7.2	9.1	9.1	9.9	-------	18	76	6.6	6.0	2.4	1.4	3.4
30	7.2	8.8	[b]9.0	11	-------	14	63	8.8	5.4	2.2	1.3	3.2
31	7.2	-------	[b]8.5	11	-------	13	-------	9.1	-------	2.2	*1.0*	-------
Total	133.1	213.6	267.1	308.6	290.5	584	1,980	583.8	236.7	86.0	74.4	79.8
Mean	4.29	7.12	8.62	9.95	10.4	18.8	66.0	18.8	7.89	2.77	2.40	2.66
Ac-ft	264	424	530	612	576	1,160	3,930	1,160	469	171	148	158

Calendar year 1953	Max 147	Min 0.8	Mean 19.1	Ac-ft 13,860
Water year 1953–54	Max 111	Min 1.0	Mean 13.3	Ac-ft 9,600

Peak discharge (base, 150 cfs)—— No peak above base.

*Discharge measurement made on this day.
[a] No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.
[b] Stage-discharge relation affected by ice.

BEAR RIVER NEAR PRESTON, IDAHO

Location.—Lat 42°10′, long 111°51′, in NW¼ sec. 36, T. 14 S., R. 39 E., on left bank 600 ft downstream from headgates of West Cache Canal, 5 miles downstream from Mink Creek, 5 miles north of Preston, and 5½ miles upstream from Battle Creek.

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

Records available.—October 1889 to September 1917 (gage heights only, January to September 1917), January 1944 to September 1954.

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

Average discharge.—10 years (1944–54), 955 cfs (691,400 acre-ft per year).

Extremes.—Maximum discharge during year, 2,920 cfs Jan. 27 (gage height, 4.65 ft); minimum, 4.0 cfs Oct. 4 (gage height, 0.22 ft); minimum daily, 50 cfs May 9.

1889–1916, 1944–54: 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. Natural flow affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

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	248	262	349	*131*	518	662	462	722	599	728	609	905
2	171	544	547	482	234	381	672	226	447	987	827	630
3	262	**169*	524	476	239	603	557	693	801	855	784	*1,240*
4	*73*	371	344	399	537	*146*	437	861	587	979	877	1,150
5	368	557	448	*297	321	615	487	467	839	912	478	665
6	238	284	528	315	404	231	*658	660	380	707	702	1,180
7	163	377	347	288	370	390	1,100	589	460	*1,590*	*259*	941
8	389	414	481	570	*945*	446	*1,280*	341	644	587	760	508
9	133	446	430	486	*205*	868	763	*50*	827	561	675	350
10	325	389	*773*	648	*225	897	336	428	590	758	773	185
11	383	215	611	234	332	1,020	491	*528*	473	616	909	*520*
12	206	525	267	465	422	648	1,270	910	421	1,520	684	719
13	156	432	326	404	365	525	*882	632	192	726	731	783
14	426	427	278	193	809	989	*912*	245	396	590	751	333
15	180	240	748	569	555	512	*765	516	724	1,050	915	507
16	397	432	635	513	626	557	974	391	377	1,050	545	608
17	266	394	461	378	539	*1,100*	513	705	*102*	945	687	457
18	222	*548*	*192*	379	508	372	435	*1,190*	169	912	579	219
19	346	408	673	310	429	446	1,090	807	300	712	687	375
20	434	276	560	257	417	500	634	1,180	190	1,010	901	638
21	324	286	362	535	413	838	780	629	932	421	**1,190*	473
22	514	402	577	*697*	589	801	440	104	635	727	824	561
23	260	*521*	656	*520*	265	724	*511*	107	*589*	801	777	307
24	430	643	454	505	403	750	*102*	183	489	349	833	*116*
25	476	391	422	393	656	349	672	636	478	978	747	363
26	287	439	326	270	532	813	553	421	219	700	688	706
27	*472	490	213	558	438	405	703	354	106	*993	764	252
28	290	*652*	456	255	477	719	904	96	814	416	1,050	243
29	544	413	266	308	-------	1,050	489	138	893	498	805	149
30	317	319	477	647	-------	212	519	198	*952*	*110*	935	217
31	*587*	-------	738	*532*	-------	359	-------	338	-------	453	638	-------
Total	9,887	12,266	14,469	13,014	12,773	18,928	20,391	15,345	15,625	24,241	23,384	16,300
Mean	319	409	467	420	456	611	680	495	521	782	754	543
Ac-ft	19,610	24,330	28,700	25,810	25,330	37,540	40,440	30,440	30,990	48,080	46,380	32,330

Calendar year 1953	Max 1,690	Min 73	Mean 751	Ac-ft 543,500
Water year 1953–54	Max 1,590	Min 50	Mean 539	Ac-ft 390,000

*Discharge measurement made on this day.

LITTLE BEAR RIVER NEAR PARADISE, UTAH

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

Drainage area.—203 sq mi.

Records available.—October 1938 to September 1954 in reports of Geological Survey. January 1936 to October 1939 (fragmentary) in reports of water commissioner.

Gage.—Water-stage recorder. Altitude of gage is 4,680 ft (from topographic map). Prior to Nov. 27, 1945, at site 150 ft upstream at different datum. Nov. 28, 1945, to May 19, 1952, at present site at datum 1.50 ft higher.

Average discharge.—16 years (1938–54), 87.4 cfs (63,270 acre-ft per year).

Extremes.—Maximum discharge during year, 413 cfs Apr. 14 (gage height, 2.55 ft); minimum, 9.5 cfs Aug. 16.

1938–54: Maximum discharge, 1,390 cfs Apr. 27, 1952 (gage height, 5.81 ft, present datum); minimum, 4 cfs Aug. 14, 1940.

Remarks.—Records good except those for period of ice effect, which is fair. Natural flow affected by diversions for irrigation and return flow from irrigated area.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	50	*55	53	*56	52	*75*	*137*	*30*	*19	15	14
2	18	52	48	53	53	50	90	133	29	*21*	14	15
3	18	55	*44*	53	50	*48*	133	*114	28	19	14	13
4	18	56	48	53	49	48	173	101	26	19	14	13
5	*18	56	49	53	49	48	224	104	28	21	14	13
6	16	*60*	47	53	50	48	244	114	29	20	13	12
7	16	50	50	53	*48*	52	170	*127	30	19	*13	*12
8	18	49	48	55	48	70	*163	122	30	18	13	12
9	18	49	49	53	48	*198*	173	122	29	16	13	12
10	16	49	57	*52*	50	190	166	119	29	17	14	12
11	*18*	49	52	52	52	156	159	114	28	16	15	12
12	16	*48*	55	55	52	106	184	106	28	16	15	12
13	18	49	56	53	62	86	202	*101	29	15	13	12
14	18	48	55	53	*84*	86	*285	95	29	16	12	12
15	18	50	56	53	66	82	248	86	30	16	12	*12
16	18	50	56	55	59	86	224	80	30	15	*11	12
17	19	53	56	55	56	86	256	77	29	14	11	12
18	21	52	55	53	57	84	*318	68	*29	16	13	13
19	22	52	56	56	52	78	*309	60	29	*16	15	13
20	27	49	*59*	55	52	77	268	53	26	*18	14	12
21	44	49	59	52	52	80	236	55	25	17	*16*	12
22	45	52	53	55	53	75	221	66	23	16	15	*11*
23	48	56	49	56	52	78	180	53	24	16	*13	18
24	*53*	56	48	*72*	56	80	153	45	25	16	12	*25*
25	52	55	48	59	62	82	159	*39	22	16	13	*15
26	50	55	48	[b]52	*65	78	159	33	23	15	13	13
27	50	55	52	59	59	80	153	31	26	13	15	16
28	49	53	49	62	52	82	170	*29	25	*12	13	16
29	49	53	*53	59	-------	86	149	31	22	12	13	16
30	47	52	52	57	-------	*87	143	32	*21	*12	14	16
31	44	-------	52	57	-------	73	-------	*31	-------	*14	*13	-------
Total	895	1,562	1,614	1,711	1,544	2,612	5,787	2,478	811	506	418	408
Mean	28.9	52.1	52.1	55.2	55.1	84.3	193	79.9	27.0	16.3	13.5	13.6
Ac-ft	1,780	3,100	3,200	3,390	3,060	5,180	11,480	4,920	1,610	1,000	829	809

Calendar year 1953	Max 369	Min 13	Mean 75.9	Ac-ft 54,930
Water year 1953-54	Max 318	Min 11	Mean 55.7	Ac-ft 40,360

Peak discharge (base, 400 cfs)..... Apr. 14 (9:30 a.m.), 413 cfs (2.55 ft).

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

HYRUM RESERVOIR NEAR HYRUM, UTAH

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

Drainage area.—220 sq mi.

Records available.—October 1938 to September 1954.

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

Extremes.—Maximum contents observed during year, 15,280 acre-ft Apr. 30, May 1, 16 (elevation, 4,672.0 ft); minimum observed, 1,430 acre-ft Sept. 28–30 (elevation, 4,635.9 ft).

1938–54: Maximum contents observed, 16,100 acre-ft June 12, 13, 1953 (elevation, 4,673.7 ft); minimum, 1,130 acre-ft Oct. 5, 1940 (elevation, 4,634.7 ft).

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

Cooperation.—Capacity table furnished by Bureau of Reclamation.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	-------	-------	-------	-------	-------	-------	15,280	13,360	9,960	5,610	2,510
2	-------	-------	-------	-------	-------	-------	-------	-------	13,220	9,840	5,500	2,450
3	-------	-------	-------	-------	-------	-------	-------	-------	13,130	9,750	5,400	2,340
4	-------	-------	-------	-------	-------	-------	-------	-------	12,900	9,410	5,360	2,280
5	-------	-------	-------	-------	-------	-------	-------	-------	12,800	9,200	5,320	2,250
6	-------	-------	-------	-------	-------	-------	-------	-------	12,670	9,040	5,220	2,170
7	-------	-------	-------	-------	-------	-------	-------	-------	12,530	8,870	5,110	2,140
8	-------	-------	-------	-------	-------	-------	-------	-------	12,390	8,750	4,940	2,110
9	-------	-------	-------	-------	-------	-------	-------	-------	12,350	8,500	4,800	2,050
10	2,840	4,600	7,700	10,180	10,440	10,790	14,290	-------	12,260	8,380	4,700	2,000
11	-------	-------	-------	-------	-------	-------	-------	-------	12,170	8,300	4,460	1,920
12	-------	-------	-------	-------	-------	-------	-------	-------	12,080	8,100	4,360	1,890
13	-------	-------	-------	-------	-------	-------	-------	-------	12,030	7,940	4,290	1,830
14	-------	-------	-------	-------	-------	-------	-------	-------	11,940	7,700	4,230	1,810
15	-------	-------	-------	-------	-------	-------	-------	-------	11,900	7,580	4,100	1,750
16	-------	-------	-------	-------	-------	-------	-------	15,280	11,810	7,460	3,930	1,720
17	-------	-------	-------	-------	-------	-------	-------	15,230	11,760	7,340	3,800	1,670
18	-------	-------	-------	-------	-------	-------	-------	15,190	11,720	7,070	3,740	1,640
19	-------	-------	-------	-------	-------	-------	-------	15,190	11,580	6,990	3,640	1,640
20	3,110	5,430	8,950	10,220	10,520	12,670	15,090	15,090	11,540	6,880	3,480	1,640
21	-------	-------	-------	-------	-------	-------	-------	15,040	11,490	6,680	3,420	1,640
22	-------	-------	-------	-------	-------	-------	-------	14,810	11,310	6,610	3,330	1,620
23	-------	-------	-------	-------	-------	-------	-------	14,580	11,220	6,530	3,230	1,540
24	-------	-------	-------	-------	-------	-------	-------	14,430	10,960	6,380	3,110	1,510
25	-------	-------	-------	-------	-------	-------	-------	14,290	10,700	6,310	2,990	1,510
26	-------	-------	-------	-------	-------	-------	-------	14,100	10,650	6,270	2,930	1,460
27	-------	-------	-------	-------	-------	-------	-------	13,870	-------	6,120	2,870	1,460
28	-------	-------	-------	-------	10,570	-------	-------	13,780	-------	6,010	2,720	1,430
29	-------	-------	-------	-------	-------	-------	-------	13,640	-------	5,900	2,690	1,430
30	-------	6,720	-------	-------	-------	-------	15,280	13,540	10,090	5,860	2,660	1,430
31	3,740	-------	9,790	10,440	-------	13,780	-------	13,450	-------	5,760	2,570	-------
(†)	4,643.8	4,652.3	4,659.9	4,661.4	4,661.7	4,668.8	4,672.0	4,668.1	4,660.6	4,649.7	4,640.0	4,635.9
(‡)	+780	+2,980	+3,070	+650	+130	+3,210	+1,500	−1,830	−3,360	−4,330	−3,190	−1,140

†Elevation, in feet, on last day of month.
‡Change in contents, in acre-feet.

NOTE.—Change in contents: Calendar year 1953, −2,510 acre-ft; water year 1954, −1,530 acre-feet.

LITTLE BEAR RIVER NEAR HYRUM, UTAH

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

Drainage area.—222 sq mi.

Records available.—October 1938 to September 1954.

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

Extremes.—Maximum daily discharge during year, 288 cfs Apr. 17; minimum daily, 0.5 cfs Oct. 30 to Nov. 1, Nov. 3.

1938–54: Maximum discharge, 986 cfs Apr. 30, 1952 (gage height, 4.54 ft); minimum daily, that of Oct. 30 to Nov. 1, Nov. 3, 1953.

Remarks.—Records good. Flow regulated by Hyrum Reservoir (see p. 55).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.3*	*0.5*	*2.3	*4.0*	*60	71	61	*254*	2.2	2.0	1.3	0.9
2	1.1	.6	2.3	12	59	68	60	247	2.2	2.0	2.0	1.1
3	1.0	.5	2.3	23	58	66	94	102	2.3	1.8	2.0	1.8
4	1.1	.6	2.3	31	57	64	117	*28	1.9	2.2	1.9	1.8
5	*1.1	.6	*2.2*	38	56	62	141	8.1	1.9	*3.0*	*2.3*	1.8
6	1.1	*.9	2.2	41	55	61	163	8.1	2.3	2.5	1.8	1.8
7	1.3	.8	2.3	45	54	61	193	9.8	2.2	2.0	1.3	1.8
8	1.0	.6	2.2	47	54	64	226	43	*1.6*	1.9	.9	1.8
9	.9	.6	2.2	49	54	*81*	*170	60	1.6	1.6	.9	1.4
10	.9	.6	2.3	48	53	44	114	60	1.6	1.5	.9	1.1
11	.9	.6	2.3	48	54	5.9	165	97	1.6	1.5	.9	.9
12	.8	.6	2.3	48	54	5.7	147	74	1.6	1.5	.9	1.0
13	.7	.6	2.3	50	56	5.5	189	*35	1.6	1.5	.9	1.0
14	.7	.8	2.3	50	67	5.3	*174	9.0	1.6	1.5	.7	.9
15	.8	.9	2.3	50	71	5.0	191	8.1	2.2	1.4	.7	.9
16	.9	.9	2.5	50	70	4.8	252	7.3	3.0	1.4	.7	.8
17	.9	1.0	2.5	52	69	*4.6*	*288*	6.4	*3.8*	1.6	.8	.7
18	.8	1.3	2.5	53	70	4.8	285	5.9	3.7	1.9	.9	.7
19	.7	1.3	2.5	55	68	4.8	*285	5.5	3.0	2.0	1.3	.7
20	.6	1.1	*2.6*	54	66	4.8	285	5.7	2.6	1.5	1.6	.7
21	.6	1.5	2.6	40	65	4.8	285	5.5	*2.5	2.0	1.5	.7
22	.6	2.0	2.6	31	65	4.8	280	5.5	2.6	1.5	1.6	1.3
23	.6	2.0	2.5	38	65	5.0	276	4.2	2.6	1.3	1.1	*2.5*
24	.6	2.0	2.5	53	65	5.0	123	3.5	2.8	1.0	.9	1.6
25	.6	2.0	2.5	*64*	67	5.0	*45*	*3.0	3.2	1.0	.9	1.5
26	.6	2.0	2.5	61	*70	23	45	2.6	3.2	1.1	.8	1.1
27	.6	2.2	2.6	61	*45*	65	100	2.8	3.0	1.0	.8	.9
28	.6	2.2	2.6	61	*76*	65	240	2.5	3.0	1.0	.7	.9
29	.6	2.0	*2.6	64	-------	65	264	2.2	2.8	1.0	.7	.9
30	.5	*2.3*	2.6	62	-------	*65	256	2.8	2.3	*.9	.7	.9
31	.5	-------	2.6	62	-------	61	-------	*2.0*	-------	.9	*.7	-------
Total	25.0	35.6	74.9	1,445.0	1,723	1,061.8	5,514	1,110.5	72.5	49.0	35.1	35.9
Mean	0.81	1.19	2.42	46.6	61.5	34.3	184	35.8	2.42	1.58	1.13	1.20
Ac-ft	50	71	149	2,870	3,420	2,110	10,940	2,200	144	97	70	71

Calendar year 1953	Max 333	Min 0.5	Mean 51.7	Ac-ft 37,460
Water year 1953–54	Max 288	Min .5	Mean 30.6	Ac-ft 22,190

*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 NE¼ sec. 36, T. 12 N., R. 1 E., on right bank 100 ft downstream from powerhouse of Utah Power & Light Co. and 2½ miles east of Logan.

Records available.—May 1913 to September 1954.

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

Average discharge.—41 years, 110 cfs (79,640 acre-ft per year).

Extremes.—1913–54: Maximum daily discharge, 204 cfs Apr. 14, 1952, Apr. 23, 1953; 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 SE¼SW¼ sec. 29, T. 12 N., R. 2 E. Water returned to river 125 ft below gaging station on Logan River above State dam.

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

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	113	114	*118*	93	89	86	87	193	*188*	*178*	*111*	*85
2	113	114	*110	95	87	*80*	91	193	182	178	110	86
3	113	114	109	96	86	80	96	*193	182	175	109	89
4	111	114	110	96	90	84	98	193	*182	174	109	86
5	111	114	108	97	89	80	98	*198*	182	170	110	83
6	111	114	107	97	86	85	*129	196	180	167	110	84
7	110	114	110	97	*81*	91	132	194	180	162	107	84
8	110	114	105	97	89	89	128	194	*178*	159	105	84
9	113	*114	104	97	87	95	125	193	182	154	103	81
10	113	113	108	93	90	*98*	128	193	182	152	103	81
11	113	114	98	91	87	98	129	193	180	148	102	80
12	113	*115*	103	*97	86	98	137	193	180	146	104	81
13	113	115	104	95	93	95	46	193	180	*141	104	81
14	113	115	99	93	*97*	97	*0*	193	180	138	103	79
15	111	115	104	98	87	96	• 0	193	182	137	101	78
16	110	115	105	98	89	96	106	193	183	131	99	78
17	111	115	104	97	86	97	185	191	183	131	99	77
18	111	113	103	95	90	97	191	191	182	128	97	75
19	111	109	102	95	83	95	193	191	182	132	96	74
20	111	*105*	104	90	85	92	191	190	182	131	96	*72*
21	111	113	105	86	87	95	191	190	*182	127	97	72
22	110	111	*96	96	86	93	180	188	180	125	98	72
23	110	114	87	96	85	92	193	185	180	122	98	85
24	109	114	86	*101*	86	95	*194*	185	182	122	95	*101*
25	108	110	*81*	95	*89	90	194	186	180	119	92	98
26	108	110	86	*84*	*91	91	194	186	182	119	90	96
27	109	113	95	90	89	92	194	185	182	119	91	95
28	*109	113	90	95	85	93	193	185	182	116	90	96
29	109	111	98	93	-------	93	193	*183	182	*114	89	96
30	*86*	111	89	92	-------	92	193	183	180	*110	87	96
31	*114*	-------	86	89	-------	87	-------	183	-------	111	*86*	-------
Total	3,418	3,390	3,109	2,924	2,455	2,842	4,209	5,900	5,439	4,336	3,091	2,525
Mean	110	113	100	94.3	87.7	91.7	140	190	181	140	99.7	84.2
Ac-ft	6,780	6,720	6,170	5,800	4,870	5,640	8,350	11,700	10,790	8,600	6,130	5,010

Calendar year 1953	Max 204	Min 0	Mean 135	Ac-ft 98,010
Water year 1953–54	Max 198	Min 0	Mean 120	Ac-ft 86,560

*Discharge measurement made on this day.

LOGAN, HYDE PARK & SMITHFIELD CANAL NEAR LOGAN, UTAH

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

Records available.—June 1904 to December 1907, January 1909 to September 1954 (fragmentary prior to May 1924).

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

Average discharge.—31 years (1923–54), 29.0 cfs (21,000 acre-ft per year).

Extremes.—1906, 1924–54: Maximum daily discharge, 136 cfs May 30, 31, 1930; no flow at times in most years.

Remarks.—Records excellent except those for Apr. 19–30 and those below 10 cfs, which are good. No diversion above station. Canal diverts from Logan River in NE¼NE¼ sec. 31, T. 12 N., R. 2 E., for irrigation and domestic supply north of Logan.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*24*	0.7	*7.0*	*6.5*	4.0	3.7	2.3	68	*114*	*56*	31	23
2	24	*.6*	6.5	6.5	4.0	3.4	2.9	60	108	*51	30	23
3	23	.6	6.5	6.1	4.0	3.7	.7	*44	94	49	29	23
4	23	.6	6.5	6.1	4.0	3.7	.2	*41*	86	47	32	*24*
5	23	.6	6.5	5.7	4.0	1.5	.2	69	88	44	*34*	24
6	22	.7	6.5	5.3	4.0	.2	.4	90	78	45	29	24
7	22	.7	6.5	5.3	4.0	.1	.6	106	72	43	29	24
8	22	.7	6.5	4.9	4.0	.1	.4	115	64	41	29	22
9	20	*.7	6.1	4.9	4.3	.2	.4	119	56	42	28	22
10	19	.6	6.1	4.6	4.3	.6	.4	122	56	41	28	22
11	19	.6	5.7	4.6	4.3	.7	.4	120	54	40	29	22
12	19	.6	6.1	4.6	4.3	.6	.4	*151	*53*	40	27	22
13	19	.7	6.1	4.6	*4.6*	*6.1*	.1	131	57	40	27	22
14	17	.7	6.1	4.6	4.6	6.1	*0*	128	64	40	27	22
15	21	.9	6.1	4.9	4.0	1.5	0	124	66	40	27	22
16	19	.9	5.7	4.9	4.0	.1	.4	119	70	40	*27	22
17	18	.7	5.3	4.6	4.0	.2	.7	*124	72	38	27	22
18	19	.6	4.9	4.6	4.0	.2	.6	128	73	38	26	23
19	8.3	.7	4.9	4.6	3.7	.7	20	130	76	43	26	23
20	2.3	.9	5.3	4.3	3.7	2.9	24	*129	78	38	26	22
21	2.0	4.1	5.3	4.3	3.7	1.5	22	126	68	36	27	22
22	2.0	8.6	*4.3*	4.6	8.7	1.3	*29	100	*66	*36	26	22
23	1.8	*9.0*	4.3	4.9	*3.4*	.2	42	75	66	36	25	17
24	1.3	8.2	4.6	4.9	3.4	*0*	62	90	65	34	25	4.3
25	1.1	*7.0	4.9	4.6	3.4	0	68	91	64	33	*25	3.7
26	*.9*	6.5	5.7	4.3	*3.7	0	80	92	64	33	*24*	*3.4*
27	.9	6.5	6.5	4.3	3.7	0	*86*	94	64	33	24	3.4
28	.9	6.5	6.5	4.3	3.7	0	81	108	63	32	24	3.4
29	.9	6.5	7.0	4.3	-------	0	71	110	60	32	24	3.4
30	1.1	7.0	7.0	*4.0*	-------	0	75	110	56	32	24	3.4
31	.9	-------	6.5	4.0	-------	.4	-------	*112	-------	*31*	24	-------
Total	397.4	83.7	183.5	150.7	110.5	39.7	671.1	3,206	2,115	1,224	840	539.0
Mean	12.8	2.79	5.92	4.86	3.95	1.28	22.4	103	70.5	39.5	27.1	18.0
Ac-ft	788	166	364	299	219	79	1,330	6,360	4,200	2,430	1,670	1,070

Calendar year 1953	Max 128	Min 0.1	Mean 27.6	Ac-ft 19,980
Water year 1953–54	Max 131	Min 0	Mean 26.2	Ac-ft 18,980

*Discharge measurement made on this day.

LOGAN RIVER ABOVE STATE DAM, NEAR LOGAN, UTAH

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

Drainage area.—218 sq mi.

Records available.—June 1896 to September 1954. 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.—41 years (1913–54), 109 cfs (78,910 acre-ft per year). Average combined discharge of river, tailrace, and canal, 31 years (1923–54), 232 cfs (168,000 acre-ft per year).

Extremes.—Maximum discharge during year, 331 cfs May 22 (gage height, 2.20 ft); minimum daily, 11 cfs for many days November to January, April.

1913–54: 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.

1934–54: Maximum combined daily discharge (Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal), 1,400 cfs May 24, 30, 1950; minimum daily, 50 cfs Jan. 21, 1935.

Remarks.—Records excellent above 20 cfs and fair below. Diversions from river and springs above station for power, irrigation, and municipal supply. Flow regulated by powerplants above station. For records of combined flow of Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal see p. 61. Combined flow record excludes that in Logan city culinary pipelines 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.

LOGAN RIVER ABOVE STATE DAM, NEAR LOGAN, UTAH—Continued

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	19	31	*11*	*13*	*12*	*12*	*11*	31	44	18	*17*	*17
2	19	31	*11	12	12	12	11	19	36	18	*16*	17
3	19	36	11	12	12	12	15	15	41	18	16	18
4	19	*40*	12	12	12	12	26	*14*	*42	*17*	16	17
5	19	32	12	12	12	16	40	18	55	17	17	18
6	18	38	12	12	12	17	*42	69	62	17	17	17
7	18	35	12	*11*	12	17	15	*114	*66*	17	16	17
8	18	31	12	11	12	17	14	136	57	17	16	17
9	18	*25	11	12	12	26	16	174	62	17	16	17
10	18	19	11	11	12	*48*	14	223	60	17	16	17
11	18	19	12	11	12	36	14	223	52	17	16	18
12	19	20	12	*11	12	25	14	236	46	18	16	18
13	19	22	12	11	*13*	15	111	242	41	*18	16	18
14	18	22	12	12	12	16	188	248	30	18	16	18
15	18	20	*13*	12	12	16	*200*	239	27	18	16	18
16	18	21	12	12	12	18	91	242	36	18	16	18
17	*17*	20	12	11	12	18	28	*252	40	18	16	21
18	17	17	12	11	12	18	48	245	32	18	16	*23*
19	26	17	12	12	12	14	32	245	27	*21*	16	18
20	35	16	12	12	12	12	21	242	31	19	16	18
21	34	14	12	12	12	14	15	275	*47	18	16	18
22	32	*11*	*12	12	12	14	22	*319	47	18	17	19
23	38	13	12	12	12	16	18	278	44	18	17	19
24	42	11	12	12	12	17	22	205	40	18	16	15
25	42	11	12	12	*12	17	55	194	35	18	16	14
26	38	11	12	12	*12	16	73	185	32	19	16	14
27	36	11	12	12	12	17	67	153	34	18	16	14
28	*36	11	12	12	12	17	96	105	30	18	17	14
29	35	11	12	12	-------	*15	71	81	20	*20	17	14
30	*46*	11	12	12	-------	14	48	71	*18*	20	17	*13*
31	32	-------	12	12	-------	13	-------	50	-------	18	17	-------
Total	801	627	368	365	337	547	1,438	5,143	1,234	559	505	514
Mean	25.8	20.9	11.9	11.8	12.0	17.6	47.9	166	41.1	18.0	16.3	17.1
Ac-ft	1,590	1,240	730	724	668	1,080	2,850	10,200	2,450	1,110	1,000	1,020

Calendar year 1953	Max 702	Min 11	Mean 67.9	Ac-ft 49,140
Water year 1953–54	Max 319	Min 11	Mean 34.1	Ac-ft 24,660

*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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*156*	146	*131*	112	105	102	*100*	292	*341*	*252*	159	125
2	156	146	128	114	103	*95*	105	272	326	247	156	126
3	155	151	126	114	102	96	112	252	317	242	154	*150*
4	153	*155*	128	114	106	100	124	*248*	310	238	157	127
5	153	147	126	115	105	98	138	285	325	231	*161*	125
6	151	153	126	114	102	102	171	355	320	229	156	125
7	150	150	128	113	*97*	108	148	414	318	222	152	125
8	150	146	124	113	105	106	142	445	299	217	150	123
9	151	140	121	114	103	121	141	486	300	213	147	120
10	150	133	125	109	106	*147*	142	538	298	210	147	120
11	*150*	134	116	107	103	135	143	*536*	286	*205*	147	120
12	151	136	121	113	102	124	151	560	279	204	147	121
13	151	138	122	111	111	116	157	566	278	199	147	121
14	148	138	117	110	*114*	119	188	569	274	196	146	119
15	150	136	123	115	103	114	200	556	275	195	144	118
16	147	137	123	115	105	114	197	554	289	189	142	118
17	146	136	121	113	102	115	214	567	295	187	142	120
18	147	131	120	111	106	115	240	564	287	184	139	121
19	145	127	119	112	99	110	245	566	285	196	138	115
20	148	*122*	121	106	101	107	236	561	291	188	138	*112*
21	147	131	122	102	103	110	228	591	297	181	140	112
22	144	131	112	113	102	108	231	*607*	293	179	141	113
23	150	136	103	113	100	108	253	538	290	176	140	121
24	152	133	103	*118*	101	112	278	480	287	174	136	120
25	151	128	*98*	112	104	107	317	471	279	170	133	116
26	147	128	104	*100*	107	107	347	463	278	171	130	113
27	146	130	114	106	105	109	347	432	280	170	131	112
28	146	130	108	111	101	110	*370*	398	275	166	131	113
29	145	128	117	109	-------	108	335	374	262	166	130	113
30	*133*	129	108	108	-------	106	316	364	*254*	162	128	112
31	147	-------	104	105	-------	100	-------	345	-------	*160*	*127*	-------
Total	4,616	4,106	3,659	3,442	2,903	3,429	6,316	14,249	8,788	6,119	4,436	3,576
Mean	149	137	118	111	104	111	211	460	293	197	143	119
Ac-ft	9,160	8,140	7,260	6,830	5,760	6,800	12,530	28,260	17,430	12,140	8,800	7,090

Calendar year 1953	Max 949	Min 98	Mean 231	Ac-ft 167,100
Water year 1953-54	Max 607	Min 95	Mean 180	Ac-ft 130,200

BLACKSMITH FORK ABOVE UTAH POWER & LIGHT CO.'S DAM, NEAR HYRUM, UTAH

Location.—Lat 41°37'20", long 111°44'25", in NE¼ sec. 8, T. 10 N., R. 2 E., on right bank three-quarters of a mile upstream from diversion dam, 3¼ miles upstream from powerplant of Utah Power & Light Co., and 6 miles east of Hyrum.

Drainage area.—260 sq mi.

Records available.—July 1900 to December 1902, November 1913 to September 1954.

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

Average discharge.—40 years (1914–54), 126 cfs (91,220 acre-ft per year).

Extremes.—Maximum discharge during year, 317 cfs Apr. 18 (gage height, 3.21 ft); minimum daily, 66 cfs Sept. 22.

1913–54: Maximum discharge, 1,620 cfs May 15, 1917 (gage height, 6.5 ft, site and datum then in use), from rating curve extended above 600 cfs; minimum daily, 29 cfs Jan. 3, 1935.

Remarks.—Records excellent. Some diversions for irrigation of meadowlands above station. Low-water flow may be regulated by powerplant above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	89	89	*88	83	*79	82	89	175	111	89	81	76
2	89	89	87	83	78	81	95	158	109	89	79	77
3	90	88	85	84	78	81	104	*146	107	89	79	77
4	89	88	87	84	78	81	116	140	106	89	79	77
5	*89	89	85	83	79	81	134	142	102	89	81	77
6	88	*94	85	83	78	81	152	148	104	89	81	75
7	88	89	88	83	78	83	130	*158	104	87	81	74
8	88	88	85	83	78	88	123	160	102	87	79	74
9	88	88	85	83	78	109	127	164	102	85	79	73
10	88	88	87	82	78	125	125	166	106	85	77	73
11	88	87	82	82	79	123	127	164	102	85	77	72
12	89	87	87	83	78	118	136	158	100	84	78	73
13	89	87	85	82	81	94	154	*156	100	84	78	73
14	89	87	85	82	83	89	*190	150	100	83	78	73
15	89	87	85	82	81	87	199	146	100	83	77	73
16	90	87	85	81	79	90	201	142	100	82	75	72
17	90	85	84	81	79	94	231	136	100	79	76	72
18	90	87	84	81	79	89	268	134	*98	84	77	71
19	90	88	84	83	78	87	252	130	96	84	77	71
20	90	85	85	81	79	87	228	129	95	83	79	71
21	90	87	85	81	79	87	208	129	95	82	76	69
22	90	88	83	81	78	87	205	134	94	82	76	66
23	90	90	79	82	78	87	201	127	92	81	77	70
24	92	88	81	85	79	89	208	121	90	81	76	72
25	90	88	79	82	79	89	217	*118	90	79	72	71
26	90	87	81	79	*83	88	212	118	90	79	70	68
27	90	87	82	81	81	90	199	116	89	82	71	67
28	90	87	82	83	81	90	196	114	92	81	74	67
29	90	85	83	82	-------	95	181	112	92	81	72	68
30	89	85	*82	81	-------	*95	173	112	*90	*81	74	69
31	89	-------	82	81	-------	90	-------	111	-------	81	*74	-------
Total	2,770	2,629	2,607	2,547	2,216	2,837	5,181	4,314	2,958	2,599	2,380	2,161
Mean	89.4	87.6	84.1	82.2	79.1	91.5	173	139	98.6	83.8	76.8	72.0
Ac-ft	5,490	5,210	5,170	5,050	4,400	5,630	10,280	8,560	5,870	5,160	4,720	4,290

Calendar year 1953	Max 285	Min 79	Mean 117	Ac-ft 84,860
Water year 1953–54	Max 268	Min 66	Mean 96.4	Ac-ft 69,800

Peak discharge (base, 140 cfs)—— Apr. 18 (10:30 p.m.) 317 cfs (3.21 ft).

*Discharge measurement made on this day.

HAMMOND (EAST SIDE) CANAL NEAR COLLINSTON, UTAH

Location.—Lat 41°50′, long 112°03′, in SE¼ sec. 27, T. 13 N., R. 2 W., on right bank 3,600 ft downstream from Cutler Dam and 4 miles north of Collinston.

Records available.—June 1912 to September 1954.

Gage.—Water-stage recorder.

Average discharge.—37 years (1917–54), 51.6 cfs (37,360 acre-ft per year).

Extremes.—1912–54: Maximum daily discharge, 182 cfs June 28, July 1, 1932, June 27, 28, 1933; no flow for periods during each year.

Remarks.—Records excellent. Canal diverts from east side of Bear River in NW¼SW¼ sec. 26, T. 13 N., R. 2 W., at dam at which West Side Canal and intake of Cutler powerplant also divert. Water used for irrigation in eastern Box Elder County.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*98*	0	0	0	0	0	*0*	*68*	140	161	149	*144*
2	90	0	0	0	0	0	0	78	*140	*159	158	*144
3	82	0	0	0	0	0	0	106	*139	159	160	144
4	82	0	0	0	0	0	0	116	140	161	160	142
5	85	0	0	0	0	0	0	*128	133	*165*	160	144
6	81	0	0	0	0	0	0	130	122	164	160	144
7	*76	0	0	0	0	0	0	142	125	163	158	139
8	70	0	0	0	0	0	0	151	124	164	157	135
9	72	0	0	0	0	0	0	162	121	162	160	131
10	72	0	0	0	0	0	0	*166	103	163	159	132
11	73	0	0	0	0	0	0	*161	*98*	163	*160	129
12	68	0	0	0	0	0	0	158	109	162	*159	119
13	55	0	0	0	0	0	0	160	122	158	162	119
14	55	0	0	0	0	0	0	159	146	*161	162	113
15	47	0	0	0	0	0	0	157	149	161	162	114
16	23	0	0	0	0	0	0	162	152	*161	*164*	115
17	36	0	0	0	0	0	0	168	152	162	164	*113
18	48	0	0	0	0	0	0	*169	*155	160	162	110
19	48	0	0	0	0	0	0	169	161	162	162	110
20	40	0	0	0	0	0	0	169	167	162	164	110
21	29	0	0	0	0	0	0	*168	172	159	158	110
22	*34	0	0	0	0	0	0	162	174	156	158	111
23	33	0	0	0	0	0	0	162	174	148	*148*	84
24	34	0	0	0	0	0	0	163	175	*146*	147	47
25	34	0	0	0	0	0	0	162	178	148	146	*36*
26	20	0	0	0	0	0	66	152	*180*	149	145	38
27	8.9	0	0	0	0	0	*84*	144	179	149	144	38
28	12	0	0	0	0	0	61	143	*175	149	145	37
29	*20	0	0	0	-------	0	50	142	171	147	144	37
30	11	0	0	0	-------	0	73	142	165	147	145	38
31	0	-------	0	0	-------	0	-------	142	-------	147	144	-------
Total	1,530.9	0	0	0	0	0	334	4,561	4,441	4,878	4,821	3,127
Mean	49.4	0	0	0	0	0	11.1	147	148	157	156	104
Ac-ft	3,040	0	0	0	0	0	662	9,050	8,810	9,680	9,560	6,200

Calendar year 1953	Max 169	Min 0	Mean 55.3	Ac-ft 40,070
Water year 1953–54	Max 180	Min 0	Mean 64.9	Ac-ft 47,000

*Discharge measurement made on this day.

WEST SIDE CANAL NEAR COLLINGSTON, UTAH

Location.—Lat 41°50′, long 112°04′, in SW¼ sec. 27, T. 13 N., R. 2 W., on left bank 4,200 ft downstream from Cutler Dam and 4 miles north of Collinston.

Records available.—June 1912 to September 1954.

Gage.—Water-stage recorder.

Average discharge.—42 years, 229 cfs (165,800 acre-ft per year).

Extremes.—1912–54: Maximum daily discharge, 748 cfs May 19, 20, 1954; no flow during periods in every year except 1914.

Remarks.—Records excellent except those computed from staff-gage readings and for Feb. 25 to Mar. 1, which are good, and those for periods of no gage-height record, which are fair. Canal diverts from west side of Bear River in NW¼SW¼ sec. 26, T. 13 N., R. 2 W., at dam at which Hammond (East Side) Canal and intake of Cutler powerplant also divert. Water used for irrigation in eastern Box Elder County.

Cooperation.—Gage-height record and 10 discharge measurements furnished by Utah Power & Light Co.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*393*	*116*	54			*14*	*0*	*261*	644	646	*595*	*641*
2	393	116	51			*0*	0	268	*619	644	611	*639
3	393	114	*52			0	0	354	*617	644	611	626
4	393	112				0	0	467	*617	641	608	611
5	383	111				0	0	*475	562	641	619	613
6	367	110	[a] 50			0	0	506	496	644	637	617
7	*360	[a] 110				0	0	619	500	677	650	606
8	343	[a] 102			[a] 28	0	0	646	494	*695*	663	593
9	343	[a] 93	[a] 39			0	0	670	460	695	663	587
10	344	*93				0	0	*668	397	695	663	566
11	344	93				0	0	*681	*379*	692	*666	522
12	333	93			(*)	0	0	711	402	695	666	451
13	316	93		(*)		0	0	722	479	692	*668*	496
14	290	93				0	0	725	458	*692	668	484
15	256	93		[a] 28		0	0	727	408	692	668	484
16	205	94				0	0	738	429	*692	659	486
17	192	93				0	0	736	473	677	648	*467
18	181	93				0	0	*743	*630	635	646	450
19	181	93				0	0	*748*	644	646	644	450
20	173	92	[a] 30		[a] 25	0	0	748	697	634	644	465
21	159	90	(*)			0	0	*722	722	613	622	486
22	*158	90				0	0	681	*725*	587	619	484
23	[a] 158	90				0	0	686	725	555	619	273
24	[a] 158	76				0	0	688	722	*553*	617	*119*
25	[a] 158	65			*22	0	0	679	722	555	615	135
26	110	64			22	0	0	628	718	566	613	140
27	85	64			23	0	45	593	688	578	630	144
28	*78*	64			23	0	270	595	*659	576	637	142
29	*90	63			-------	0	283	595	670	576	637	141
30	118	*59*			-------	0	*300*	593	661	574	637	144
31	117	-------			-------	0	-------	619	-------	574	639	-------
Total	7,572	2,732	1,106	868	735	14	898	19,292	17,417	19,676	19,782	13,062
Mean	244	91.1	35.7	28	26.2	0.5	29.9	622	581	635	638	435
Ac-ft	15,020	5,420	2,190	1,720	1,460	28	1,780	38,270	34,550	39,030	39,240	25,910

Calendar year 1953	Max 747	Min 0	Mean 260	Ac-ft 188,300
Water year 1953–54	Max 748	Min 0	Mean 283	Ac-ft 204,600

*Discharge measurement made on this day.
[a] No gage-height record; discharge estimated on basis of 4 discharge measurements and notes of gate changes by employee of Utah Power & Light Co.
[s] Computed from once-daily staff-gage reading.

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 1954.

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 daily discharge during year, 2,210 cfs Apr. 10, 16; minimum daily, 30 cfs Nov. 22, May 15, 16, June 23.

1889–1954: Maximum discharge observed, 11,600 cfs June 7–10, 1909 (gage height, 7.70 ft, site and datum then in use); practically no flow at 12 p.m. Aug. 5, 1920.

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

Cooperation.—Seven discharge measurements furnished by Utah Power & Light Co.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	▪270	1,340	1,140	*164*	782	1,400	▪1,180	*1,440*	32	33	36	36
2	▪80	641	715	1,450	1,140	881	▪1,310	980	*32	33	36	45
3	▪270	1,020	*1,100	961	1,030	924	▪903	1,280	32	34	36	41
4	▪*32*	968	1,100	620	898	*747*	▪579	298	32	34	36	33
5	▪160	909	1,130	646	925	1,840	▪*569*	619	213	56	34	33
6	▪550	454	472	1,340	*862*	946	▪1,250	1,320	*362*	*31*	36	33
7	▪280	1,400	863	1,020	996	953	*1,690	302	728	39	34	158
8	▪940	517	1,220	1,190	1,200	1,060	1,560	272	699	31	36	33
9	▪515	832	623	804	1,080	1,410	*1,960	31	283	32	38	33
10	350	▪990	1,310	1,050	*774*	844	*2,210*	32	504	32	*42*	33
11	58	▪905	1,020	795	840	1,950	1,900	307	*866*	34	42	33
12	252	976	1,070	960	900	1,480	1,640	150	750	34	36	34
13	346	740	1,140	*1,100	969	*1,990*	1,320	72	488	34	*52*	136
14	305	1,020	699	1,340	1,830	1,790	1,640	62	108	*44	32	*52*
15	432	987	1,280	1,170	*2,000*	1,620	1,940	*30*	70	38	32	973
16	806	1,020	811	586	1,670	1,540	2,210	30	168	*36	33	32
17	536	825	503	1,270	1,910	1,450	1,550	55	448	34	33	*33
18	702	937	1,370	944	1,430	1,540	1,870	60	293	39	32	36
19	650	1,350	1,150	1,020	1,670	1,510	2,010	53	31	36	32	34
20	431	*1,990*	1,070	863	1,190	1,410	2,140	31	31	38	32	34
21	619	1,130	482	1,210	1,440	1,200	2,160	576	32	38	33	34
22	818	*30*	*1,790*	943	864	1,120	1,200	694	44	34	36	36
23	*1,080*	55	1,220	962	1,140	1,550	1,460	940	*30*	34	33	657
24	850	*890	1,050	1,120	1,490	1,730	1,550	36	31	34	34	*1,400*
25	1,080	1,650	659	1,250	*1,370	1,410	1,550	43	31	52	33	577
26	1,030	876	605	1,020	1,010	*1,540*	1,750	32	32	*36*	33	79
27	1,050	912	*567*	1,140	965	1,220	1,500	122	32	*194*	33	803
28	765	1,500	1,070	1,100	1,230	1,730	1,540	100	33	31	33	1,110
29	*879	733	738	1,030	-------	1,440	929	214	33	102	34	1,110
30	1,070	1,120	834	*1,820*	-------	1,010	1,180	34	33	102	36	348
31	545	-------	1,110	890	-------	*1,150*	-------	33	-------	33	38	-------
Total	17,751	28,717	29,711	31,778	33,605	42,385	46,040	10,248	6,501	1,412	1,076	8,009
Mean	573	957	958	1,025	1,200	1,367	1,535	331	217	45.5	34.7	267
Ac-ft	35,210	56,960	58,930	63,030	66,650	34,070	91,320	20,330	12,890	2,800	2,130	15,890

Calendar year 1953	Max 3,510	Min 22	Mean 1,157	Ac-ft 837,600
Water year 1953–54	Max 2,210	Min 30	Mean 705	Ac-ft 510,200

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

LITTLE MALAD RIVER ABOVE ELKHORN RESERVOIR, NEAR MALAD CITY, IDAHO

Location.—Lat 42°20′, long 112°26′, on line between secs. 35 and 36, T. 12 S., R. 34 E., on left bank, 2 miles downstream from Wright Creek, 2½ miles upstream from Elkhorn Dam, and 14 miles northwest of Malad City.

Drainage area.—120 sq mi, approximately.

Records available.—August 1911 to August 1913 (published as "near Malad"), October 1931 to September 1932, November 1940 to September 1954.

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

Average discharge.—15 years (1911–12, 1931–32, 1941–54), 17.9 cfs.

Extremes.—Maximum discharge during year, 95 cfs June 27 (gage height, 1.89 ft); minimum daily, 12 cfs Sept. 8–11 (gage height, 0.44 ft).

1911–13, 1931–32, 1940–54: Maximum discharge, 270 cfs Feb. 22, 1948 (gage height, 3.26 ft), from rating curve extended above 50 cfs by weir formula; minimum, 6.8 cfs Aug. 19, 1948, Jan. 3, 1951; minimum gage height, 0.31 ft Aug. 19, 1948.

Remarks.—Records excellent except those for periods of no gage-height record, which are fair. Diversions above station for irrigation of about 400 acres.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*14*	*15*	17	17	18	18	18	*18*	15	*14*	*15*	*14*
2	14	15	17	17	17	*16*	*17*	18	15	15	15	14
3	14	16	17	17	17	16	18	18	15	15	15	14
4	14	16	*18*	17	*16*	17	18	17	15	16	15	14
5	14	16	17	17	17	18	18	17	15	15	15	13
6	14	16	17	17	17	18	18	17	16	15	15	13
7	14	16	*17	*18*	16	19	18	17	15	15	15	13
8	15	15	17	18	16	20	18	17	16	15	15	*12*
9	15	15	17	17	16	*23*	18	17	16	15	*14*	12
10	15	16	17	17	16	22	17	16	16	15	14	12
11	15	16	*16*	17	16	19	17	17	15	15	14	12
12	15	16	17	18	16	18	18	16	15	14	14	13
13	15	16	17	18	17	16	18	16	*14*	14	14	13
14	15	16	17	18	18	17	18	16	15	14	14	13
15	15	16	17	18	17	17	17	16	15	14	14	13
16	15	16	17	*18	16	18	17	16	*15	14	14	13
17	15	17	17	18	17	18	18	16	14	14	14	13
18	15	17	17	18	17	17	18	*15*	14	14	14	13
19	15	16	18	18	16	17	18	15	14	14	14	13
20	15	16	18	17	*17	18	18	15	14	14	14	13
21	15	16	18	*16*	17	18	18	17	14	*14	14	13
22	15	17	17	18	17	17	*18	18	14	15	14	13
23	*16*	*18*	16	18	17	18	18	16	14	15	*14	14
24	16	18	16	18	19	18	17	16	14	15	14	14
25	16	17	16	18	*20*	18	18	16	14	15	14	14
26	16	18	16	16	19	*18	18	16	14	*17*	14	*14
27	16	17	17	18	17	18	17	16	*20*	15	14	14
28	16	17	17	18	18	18	*20*	*16	16	15	14	14
29	16	17	17	18	-------	18	19	16	15	15	14	14
30	*15	17	17	18	-------	18	18	16	15	15	14	14
31	15	-------	17	18	-------	18	-------	15	-------	15	14	-------
Total	465	490	526	544	477	564	536	508	449	457	442	398
Mean	15.0	16.3	17.0	17.5	17.0	18.2	17.9	16.4	15.0	14.7	14.3	13.3
Ac-ft	922	972	1,040	1,080	946	1,120	1,060	1,010	891	906	877	789

Calendar year 1953	Max 26	Min 13	Mean 18.1	Ac-ft 13,100
Water year 1953–54	Max 28	Min 12	Mean 16.0	Ac-ft 11,610

*Discharge measurement made on this day.

NOTE.—No gage-height record July 10–20, July 27 to Aug. 22, Sept. 19–25; discharge estimated on basis of weather records and records for Devil Creek above Campbell Creek, near Malad City.

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, 1.3 miles upstream from bridge on Campbell Creek, 7½ miles northeast of Malad City.

Drainage area.—13 sq mi, approximately.

Records available.—November 1938 to September 1954.

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.—15 years (1939–54), 10.5 cfs (7,600 acre-ft per year).

Extremes.—Maximum discharge during year, 24 cfs Mar. 9 (gage height, 1.10 ft, site and datum then in use); minimum, 3.0 cfs Sept. 2; minimum daily, 4.6 cfs Jan. 27.

1938–54: Maximum discharge observed, 160 cfs (revised) Apr. 2, 1943, from rating curve extended above 47 cfs; maximum gage height, 2.38 ft Apr. 19, 1952; minimum discharge recorded, 1.6 cfs Jan. 13, 1950 (gage height, 0.43 ft).

Revisions.—The maximum discharge observed for the water year 1943 has been revised to 160 cfs Apr. 2, 1943, superseding figure published in WSP 980.

Remarks.—Records good except those for period of no gage-height record, which are fair. Diversions for irrigation of 20 to 30 acres. Stream receives part of flow of Birch Creek. Powerplant and reservoir on Birch Creek cause slight diurnal fluctuations.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.8	6.9	8.9	6.9	7.4	7.4	*7.1*	8.9	7.4	*6.4*	*5.1*	5.6
2	7.8	6.9	8.9	7.1	7.8	7.8	7.4	*9.3*	7.1	6.4	5.1	5.6
3	*8.2*	6.9	8.9	7.1	7.8	7.4	8.5	9.3	7.4	6.1	5.1	*5.9*
4	7.8	*6.6*	*9.7*	7.1	7.8	7.4	9.7	8.9	7.4	6.1	5.1	5.6
5	7.8	7.1	9.3	7.1	7.8	7.8	10	8.5	7.4	6.1	5.3	5.9
6	7.8	8.2	9.3	7.1	7.8	7.8	9.3	8.5	7.4	5.8	5.3	5.9
7	7.8	7.8	8.5	7.1	7.8	8.5	8.2	8.5	7.4	5.8	5.3	5.9
8	7.8	7.4	*7.8	7.1	7.8	8.9	8.2	8.9	7.1	5.8	5.3	5.6
9	7.8	7.4	7.8	6.6	7.8	*16*	8.2	8.9	7.4	5.8	5.1	5.3
10	7.4	7.4	7.8	6.1	7.4	12	8.2	8.9	*7.8*	5.6	5.3	5.3
11	7.8	7.1	7.8	6.1	7.4	9.7	8.2	9.3	7.1	5.6	5.3	5.6
12	7.4	6.9	7.8	6.1	7.4	7.1	8.2	9.3	7.1	5.3	5.3	5.6
13	7.4	6.9	7.8	6.6	7.8	*6.6*	8.2	9.3	7.1	5.3	5.3	5.3
14	7.8	7.1	7.8	7.1	7.4	6.6	8.5	9.3	7.1	5.3	5.3	5.6
15	7.8	7.1	7.1	*7.1	*7.1*	6.9	8.5	8.9	7.1	5.3	5.3	5.6
16	7.4	7.1	7.1	7.1	7.1	7.1	8.9	8.9	*7.1	5.3	*5.6*	5.6
17	7.1	7.1	7.1	7.1	7.4	7.1	9.3	8.5	7.1	5.3	5.6	5.3
18	7.1	7.1	7.1	7.4	7.1	6.9	9.3	8.2	7.1	5.3	5.6	5.6
19	7.1	7.1	7.8	7.4	7.4	6.6	8.9	7.8	7.1	5.3	5.3	5.6
20	7.1	7.1	7.8	7.1	*7.8	6.6	8.9	8.2	7.1	*5.1*	5.6	5.9
21	7.4	7.4	7.8	7.1	7.8	6.6	8.5	8.9	7.1	*5.6	5.6	5.3
22	8.2	7.4	7.1	7.4	7.4	6.9	*8.2	8.2	7.1	5.3	5.6	*5.0*
23	8.2	7.4	*6.6*	7.4	7.4	8.5	8.2	8.2	7.1	5.3	*5.6	5.3
24	7.8	6.9	6.6	7.4	*8.2*	8.5	8.5	7.8	6.9	5.1	5.6	5.0
25	7.8	7.1	6.6	7.1	7.8	8.5	8.5	7.8	6.9	5.1	5.6	5.3
26	7.8	7.4	6.6	6.1	7.8	*7.8	8.5	7.8	7.1	5.3	5.3	*5.3
27	7.8	*8.2*	6.6	*4.6*	7.8	7.1	*8.5*	7.8	7.4	*5.3*	5.6	5.3
28	7.8	*9.3*	6.6	6.4	7.8	7.1	*11*	*7.4	6.9	5.1	5.6	5.3
29	7.8	8.9	6.6	*8.5*	-------	6.9	9.7	7.4	6.6	5.3	5.6	5.3
30	*7.4	8.9	6.6	7.1	-------	6.6	9.3	7.4	*6.4*	5.1	5.6	5.3
31	*6.6*	-------	6.6	7.1	-------	6.6	-------	7.4	-------	5.1	5.6	-------
Total	236.6	222.1	236.4	214.6	213.1	243.3	260.6	262.4	214.3	170.6	167.5	164.7
Mean	7.63	7.40	7.63	6.92	7.61	7.85	8.69	8.46	7.14	5.50	5.40	5.49
Ac-ft	469	441	469	426	423	483	517	520	425	338	332	327

Calendar year 1953	Max 19	Min 6.2	Mean 9.29	Ac-ft 6,720
Water year 1953–54	Max 16	Min 4.6	Mean 7.14	Ac-ft 5,170

*Discharge measurement made on this day.

NOTE.—No gage-height record Dec. 7, Dec. 9 to Jan. 14; discharge estimated on basis of weather records and records for other streams in Malad River basin.

MALAD RIVER AT WOODRUFF, IDAHO

Location.—Lat 42°02′, long 112°14′, in sec. 15, T. 16 S., R. 36 E., on left abutment of bridge on county road at Woodruff, 2½ miles north of Idaho-Utah State line.

Drainage area.—485 sq mi, approximately.

Records available.—November 1938 to September 1954.

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, 223 cfs Mar. 10 (gage height, 4.95 ft); minimum observed, 19 cfs Aug. 24–26 (gage height, 1.95 ft).

1938–54: Maximum discharge, 650 cfs Jan. 22 or 23, 1943 (gage height, 8 ft, from information by observer), from rating curve extended above 370 cfs by logarithmic plotting; minimum observed, 15 cfs July 15, 16, 1940; minimum gage height observed, 1.92 ft Aug. 7, 1947.

Remarks.—Records good except those below 30 cfs and those during periods of rapidly changing stage, which are fair. Flow regulated by several small reservoirs above station. Diversions above station for irrigation of 25,000 to 30,000 acres.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*24*	*38*	57	54	69	90	*73*	*48*	27	*25*	21	21
2	24	38	57	54	68	*74*	72	47	23	24	21	21
3	24	38	57	54	71	83	67	47	23	24	21	21
4	24	38	58	*53*	71	83	72	40	23	24	21	21
5	29	43	59	53	71	84	60	40	23	24	21	21
6	29	44	59	57	71	84	60	40	23	24	21	21
7	24	44	*59	53	71	91	58	40	23	24	20	23
8	27	44	*54*	54	67	101	58	38	23	24	20	23
9	25	44	54	60	64	105	58	38	23	24	20	23
10	25	44	54	59	*63*	*223*	60	34	28	24	20	22
11	25	44	54	59	69	133	60	34	27	24	20	*20*
12	25	44	54	59	69	133	60	33	*30*	23	20	20
13	25	44	54	59	69	88	59	29	27	24	20	20
14	28	44	54	59	119	102	59	29	25	24	20	20
15	30	45	54	60	*178*	102	59	28	25	24	20	20
16	30	45	54	*65	119	91	59	28	*24	25	20	20
17	36	48	54	66	107	88	51	28	25	24	20	20
18	36	53	63	68	110	82	51	28	24	24	20	20
19	30	53	66	65	124	88	51	28	26	24	21	20
20	31	55	66	62	*122	82	51	28	26	25	21	20
21	36	48	*72*	59	116	88	47	28	26	*22	*23*	20
22	31	54	69	53	124	91	*46	28	25	*21*	23	22
23	31	57	54	53	117	91	46	29	25	21	*21	*24*
24	39	*63*	54	55	117	92	46	27	26	21	*19*	24
25	*42*	57	54	58	124	92	46	27	23	21	19	22
26	39	57	54	64	124	*84	40	27	*22*	21	19	20
27	36	56	54	*69*	111	82	*38*	27	24	21	21	*20
28	37	55	57	63	90	79	38	*26	25	21	21	22
29	37	61	54	66	-------	79	46	27	26	21	21	22
30	*37	63	54	68	-------	85	48	27	26	21	21	22
31	37	-------	54	69	-------	74	-------	27	-------	21	21	-------
Total	953	1,461	1,771	1,850	2,695	2,944	1,639	1,005	746	714	637	635
Mean	30.7	48.7	57.1	59.7	96.2	95.0	54.6	32.4	24.9	23.0	20.5	21.2
Ac-ft	1,890	2,900	3,510	3,670	5,350	5,840	3,250	1,990	1,480	1,420	1,260	1,260

Calendar year 1953	Max 312	Min 20	Mean 62.4	Ac-ft 45,130
Water year 1953–54	Max 223	Min 19	Mean 46.7	Ac-ft 33,820

*Discharge measurement made on this day.

BEAR RIVER NEAR CORINNE, UTAH

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

Records available.—October 1949 to September 1954.

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

Average discharge.—5 years, 1,949 cfs (1,411,000 acre-ft per year).

Extremes.—Maximum discharge during year, 2,570 cfs Apr. 16 (gage height, 8.11 ft); minimum, 102 cfs July 11; minimum daily, 103 cfs July 11, Sept. 1.

1949–54: 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: 1951.

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	*701	888	1,290	[b]1,250	1,060	1,560	1,390	1,410	180	127	*134*	*103*
2	326	1,370	1,320	[b]*500*	[b]*910*	*1,450*	1,490	*1,600*	162	120	120	*109
3	215	842	*922	[b]1,400	1,140	*1,070*	1,090	1,360	*153	113	113	119
4	218	1,130	1,260	[b]1,070	1,130	1,090	806	1,460	166	115	115	128
5	*204*	1,260	1,300	[b]790	[b]980	1,100	*536*	*626	150	115	113	133
6	206	1,170	1,280	[b]800	1,010	1,610	1,270	732	202	107	114	133
7	467	698	869	[b]1,440	[b]950	1,140	1,770	1,480	468	112	107	134
8	*445	1,350	1,090	[b]1,180	1,120	1,220	*1,790	[a]625	852	112	107	176
9	1,000	*838	1,250	[b]1,300	1,300	1,210	1,890	[a]450	921	118	112	151
10	752	1,030	787	[b]1,000	1,220	1,510	2,060	[a]150	630	107	114	131
11	539	1,100	1,440	[b]1,170	*885*	1,180	2,230	*[a] 110*	633	*103*	*110	132
12	331	1,080	1,200	[b]970	*918	1,840	2,070	317	*1,040*	104	113	133
13	328	1,240	1,200	[b]*1,150*	*1,040*	*1,630*	*1,700*	*235*	*995*	*104	*126*	133
14	496	937	1,280	[b]1,340	*1,250*	*2,110*	1,620	219	727	106	121	138
15	483	1,230	915	[b]1,510	1,860	1,810	1,990	154	405	105	118	160
16	623	1,110	1,330	[b]1,380	*2,000*	1,820	*2,350*	126	247	107	115	*813
17	865	1,300	1,000	925	1,830	1,590	2,320	110	282	109	108	438
18	805	1,090	801	1,320	1,790	1,660	1,840	[a]110	*514	119	*106*	165
19	809	1,090	1,320	[b]1,140	1,650	1,690	1,970	122	428	126	107	133
20	810	1,530	1,270	1,240	1,630	1,540	2,330	132	211	125	107	120
21	624	*1,970*	*1,260	1,060	1,490	1,430	2,280	*133	142	119	106	114
22	750	1,420	832	1,350	1,560	1,380	2,130	505	127	122	115	115
23	918	407	*1,730*	[b]1,130	972	1,490	1,740	860	119	121	*120	199
24	1,210	*206	[b]1,370	[b]*1,150*	1,230	1,670	1,650	1,120	119	116	*121*	731
25	1,090	811	[b]1,200	[b]1,300	*1,700	1,790	1,720	363	*116*	112	113	1,290
26	*1,160	1,640	[b]810	[b]1,420	1,480	1,660	1,870	173	119	120	114	703
27	1,210	1,180	[b]750	[b]1,190	1,220	1,590	1,780	143	134	130	109	320
28	1,130	1,160	[b]*580*	[b]1,300	1,220	1,500	1,760	142	*145	*236	108	668
29	984	1,580	[b]1,220	[b]1,260	-------	*1,740	1,720	180	140	175	110	1,210
30	1,010	1,190	[b]960	[b]1,180	-------	1,590	1,350	246	131	143	110	*1,310*
31	*1,320*	-------	[b]1,060	*1,700*	-------	1,090	-------	254	-------	154	107	-------
Total	22,029	33,847	34,836	36,915	36,545	46,760	52,512	15,647	10,657	3,802	3,513	10,342
Mean	711	1,128	1,124	1,191	1,305	1,508	1,750	505	355	123	113	345
Ac-ft	43,690	67,130	69,100	73,220	72,490	92,750	104,200	31,040	21,140	7,540	6,970	20,510

Calendar year 1953	Max 3,350	Min 90	Mean 1,297	Ac-ft 939,100
Water year 1953–54	Max 2,350	Min 103	Mean 842	Ac-ft 609,800

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

WEBER RIVER BASIN

WEBER RIVER NEAR OAKLEY, UTAH

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

Drainage area.—163 sq mi.

Records available.—October 1904 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 6,600 ft (from topographic map). Prior to Oct. 25, 1933, staff gage a quarter of a mile downstream at different datum.

Average discharge.—50 years, 227 cfs (164,300 acre-ft per year).

Extremes.—Maximum discharge during year, 1,260 cfs May 21 (gage height, 3.01 ft); minimum not determined, occurred during period of ice effect.

1904–54: Maximum discharge observed, 4,010 cfs July 6, 1907, June 5–7, 1909; minimum recorded, 16 cfs Mar. 12, 1941.

Remarks.—Records good except periods of ice effect or no gage-height record, which are fair. Several small diversions for irrigation by several small lakes and a small reservoir (total capacity about 3,200 acre-ft).

Revisions (water years).—WSP 790: 1934.

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					(*)	(*)	a 60	284	*357	189	96	79
2				a 50			a 65	255	333	*187	90	92
3		a 60					a 70	242	325	170	88	104
4				(*)			75	242	377	182	88	90
5			a 50		a 60		88	291	394	184	92	81
				b 50								
6		70					96	357	357	165	83	74
7						a 50	81	*438	314	158	81	67
8				a 50			81	499	280	150	81	67
9			b 50				92	566	259	142	79	65
10	a 55		a 50				92	*673	245	133	77	60
				b 50								
11		a 60	a 50				98	667	245	131	77	60
12							109	763	259	126	85	62
13			b 50			b 50	131	814	269	126	83	63
14				a 50			162	884	*291	124	77	60
15				a 50			158	822	269	133	74	57
16				b 50			160	748	299	131	70	54
17		a 50		b 50			189	756	310	131		52
18			a 50				238	*861	302	145	a 70	51
19							238	978	306	158		50
20					a 50		229	1,040	299	128		48
		b 50										
21							235	*1,100	280	124	77	49
22						a 50	245	1,060	269	115	70	46
23				a 50			252	734	248	111	67	62
24							266	642	238	104	60	58
25							299	667	225	100	58	57
			b 50									
26	a 60	a 50					306	594	238	102	54	70
27							318	499	333	122	58	56
28	(*)						357	424	259	113	62	52
29			a 50			(*)	325	429	222	109	60	*51
30		(*)		a 60	-------		*306	420	198	*104	*57	51
31		-------		-------	-------		-------	373	-------	100	58	-------
Total	1,760	1,660	1,550	1,580	1,500	1,550	5,421	19,122	8,600	4,197	2,282	1,888
Mean	56.8	55.3	50	51	54	50	181	617	287	135	73.6	62.9
Ac-ft	3,490	3,290	3,070	3,130	2,980	3,070	10,750	37,930	17,060	8,320	4,530	3,740

Calendar year 1953	Max 2,110	Min ---	Mean 188	Ac-ft 136,300
Water year 1953–54	Max 1,100	Min ---	Mean 140	Ac-ft 101,400

Peak discharge (base, 1,200 cfs)---- May 21 (12:15 a.m.) 1,260 cfs (3.01 ft).

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of discharge measurements, weather records, and records for stations near Wanship and Coalville.

[b] Stage-discharge relation affected by ice.

WEBER RIVER NEAR WANSHIP, UTAH

Location.—Lat 40°47'30", long 111°24'15", in center sec. 29, T. 1 N., R. 5 E., on left bank 1.2 miles south of Wanship and 1¼ miles upstream from Silver Creek.

Drainage area.—324 sq mi.

Records available.—October 1950 to September 1954.

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

Extremes.—Maximum discharge during year, 1,280 cfs May 22 (gage height, 3.64 ft); minimum, 36 cfs Sept. 17 (gage height, 1.02 ft).

1950–54: Maximum discharge, 2,340 cfs May 30, 1951 (gage height, 4.73 ft); minimum, that of Sept. 17, 1954.

Remarks.—Records good except those for periods of backwater, ice effect, or no gage-height record, which are fair. Many diversions above station for irrigation. Records do not include water diverted from Weber River basin through Weber-Provo diversion canal (see pp. 107, 108). Flow slightly regulated by several small lakes and reservoirs.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	78	82		*112	*110	130	117	*332	148	68	54
2	54	80			106	104	143	102	286	*139	° 61	71
3	54	83		[a] 70	106	[b] 100	148	91	230	130	° 61	*94*
4	54	83		(*)	104	108	143	89	227	121	° 64	94
5	54	89			106	*98*	139	*83*	304	*161*	° *76*	87
6	*53*	*127*			106	102	161	85	316	139	° 72	82
7	53	110		80	*98*	134	139	112	274	125	° 68	75
8	54	100	[b] 75	82	104	133	130	171	243	106	° 64	82
9	56	98		73	102	278	132	221	214	87	° 61	78
10	53	100			102	*304*	136	*312	214	75	° 59	73
11	53	98		[b] 70	102	216	136	293	188	59	° 57	71
12	58	85			104	127	143	308	177	62	° 61	68
13	58	76		[b] 77	121	123	156	324	180	62	° 64	71
14	58	73		75	*166*	121	194	369	*259	*52*	° 64	66
15	60	73	80	70	127	127	194	422	233	52	° 63	58
16	59	71	78	70	121	151	188	455	233	52	° 60	53
17	60	71	78	68	127	146	221	519	260	52	56	43
18	60	70	83	68	130	114	247	*650	243	68	60	*41*
19	60	[b] *64*	*85*	71	106	110	*264*	724	233	119	56	46
20	68	[b] 66	85	83	[b] 115	117	260	851	221	98	54	48
21	82	[b] 70	82	96	123	114	235	*964	202	98	68	49
22	75	73	76	100	121	117	125	*1,130*	191	91	73	44
23	80	89		106	114	136	117	730	188	89	66	59
24	*93*	108		114	134	136	108	577	180	80	60	50
25	91	108		*136*	158	132	112	561	*169*	82	64	60
26	83	98	[b] 70	[b] 120	158	130	110	524	171	83	62	73
27	80	91		[b] 115	121	125	*96*	431	*457*	87	59	60
28	*76	82		132	119	127	108	365	282	83	56	54
29	76	82		132	-------	*136	*110	336	202	70	56	*53
30	80	*80	[a] 70	127	-------	123	104	340	171	*71	*54	54
31	78	-------	[a] 70	119	-------	106	-------	328	-------	76	*52*	-------
Total	2,031	2,576	2,334	2,744	3,313	4,255	4,629	12,584	7,080	2,817	1,919	1,911
Mean	65.5	85.9	75.3	88.5	118	137	154	406	236	90.9	61.9	63.7
Ac-ft	4,030	5,110	4,630	5,440	6,570	8,440	9,180	24,960	14,040	5,590	3,810	3,790

Calendar year 1953	Max 1,540	Min 52	Mean 154	Ac-ft 111,200
Water year 1953–54	Max 1,130	Min 41	Mean 132	Ac-ft 95,590

Peak discharge (base, 1,200 cfs)—— May 22 (9:15 a.m.) 1,280 cfs (3.64 ft).

*Discharge measurement made on this day.
[a] No gage-height record; discharge estimated on basis of discharge measurement, weather records, and records for nearby stations.
[b] Stage-discharge relation affected by ice.
° Backwater due to construction of Wanship Dam.

WEBER RIVER NEAR COALVILLE, UTAH

Location.—Lat 40°53'40", long 111°24'00", in SE¼NE¼ sec. 20, T. 2 N., R. 5 E., on left bank, 1½ miles south of Coalville, and 6 miles downstream from Silver Creek.

Drainage area.—438 sq mi.

Records available.—April 1927 to September 1954.

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.—27 years, 212 cfs (153,500 acre-ft per year).

Extremes.—Maximum discharge during year, 1,200 cfs May 22 (gage height, 3.82 ft); minimum, 33 cfs July 15 (gage height, 0.62 ft).

1927–54: 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. Records do not include water diverted from basin through Weber-Provo canal (see pp. 107, 108). Flow slightly regulated by several small reservoirs above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	101	99		127	*129	140	115	294	*162	51	42
2	43	102	96	[b] 90	*119	114	160	108	259	146	50	56
3	46	104			119	102	172	99	206	131	50	66
4	50	104			119	117	172	96	196	121	53	77
5	50	110		(*)	115	106	169	87	256	151	64	73
6	48	149		[a] 90	119	115	191	84	288	134	59	68
7	48	140			108	136	172	97	266	119	56	65
8	48	125			115	194	149	145	224	102	55	68
9	50	125			117	297	149	184	196	82	53	66
10	50	125	[b] 90		119	328	151	*259	204	66	52	66
11	48	125		[b] 90	117	315	156	264	174	55	50	65
12	56	110			121	158	165	256	160	50	51	65
13	66	99			136	138	181	267	160	42	56	65
14	65	94			131	134	216	310	*220	36	55	64
15	66	92		[a] 85	146	136	216	356	226	36	52	56
16	71	89			•134	169	211	412	208	40	53	52
17	73	90	94	82	136	181	242	464	245	40	51	46
18	71	92	96	81	146	136	273	*564	226	48	48	43
19	70	84	99	82	112	129	288	650	219	96	43	44
20	81	[b] 83	101	90	117	142	282	755	208	74	40	44
21	106	[b] 86	97	106	131	138	270	*855	191	81	43	43
22	99	92	89	108	134	134	151	1,060	179	73	51	42
23	102	106	89	117	127	153	140	725	177	73	50	50
24	119	129		127	144	153	125	528	174	68	43	51
25	121	129		153	172	151	117	496	167	66	42	51
26	115	119		134	179	149	115	468	169	74	41	66
27	115	110	[b] 90	125	134	144	99	*394	418	77	40	59
28	*102	101		146	114	138	104	342	297	70	39	55
29	101	99		149	-------	*158	*114	307	214	60	40	*55
30	102	*97		146	-------	146	92	294	184	*56	43	56
31	101	-------		136	-------	119	-------	304	-------	58	*42	-------
Total	2,331	3,210	2,840	3,202	3,658	4,859	5,182	11,345	6,590	2,487	1,516	1,713
Mean	75.2	107	91.6	103	131	157	173	366	220	80.2	48.9	57.1
Ac-ft	4,620	6,370	5,630	6,350	7,260	9,640	10,280	22,500	13,070	4,930	3,010	3,400

Calendar year 1953	Max 1,370	Min 43	Mean 162	Ac-ft 117,400
Water year 1953–54	Max 1,060	Min 36	Mean 134	Ac-ft 97,060

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of discharge measurements, weather records, and records for other Weber River stations.

[b] Stage-discharge relation affected by ice.

CHALK CREEK AT COALVILLE, UTAH

Location.—Lat 40° 55'10", long 111°24'00", in NE¼SE¼ sec. 8, T. 2 N., R. 5 E., on left bank 100 ft downstream from bridge on U. S. Highway 189 in Coalville.

Drainage area.—253 sq mi.

Records available.—October 1904 to December 1905 (gage heights only), April 1927 to September 1954.

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.—27 years (1927–54), 60.8 cfs (44,020 acre-ft per year).

Extremes.—Maximum discharge during year, 164 cfs May 10 (gage height, 1.19 ft); minimum, 6.3 cfs Aug. 17 (gage height, 0.24 ft).

1927–54: 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.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	21	*22*	16	15	*17	*25*	70	*57*	*28*	8.1	*7.2*
2	12	24	20	16	*14	15	25	59	51	27	7.6	11
3	*11*	24	17	17	15	*11*	27	54	49	22	7.6	*25*
4	11	25	18	*18	16	15	34	*52*	46	22	7.6	19
5	11	25	17	18	15	15	47	68	47	28	8.1	15
6	11	*28*	22	17	17	15	59	85	54	27	7.6	15
7	12	26	22	18	14	19	43	*110	54	24	8.6	17
8	12	22	16	18	16	21	38	122	47	21	8.6	18
9	12	22	19	17	16	28	40	133	41	16	8.1	17
10	11	25	21	14	18	40	40	*145*	46	17	8.6	17
11	14	24	12	15	18	*44*	37	*122	43	17	9.8	12
12	15	24	17	15	*21	26	37	117	38	16	*11*	12
13	12	24	20	17	22	24	40	102	36	13	11	13
14	12	22	18	16	21	22	51	93	*37	13	9.0	15
15	14	21	20	17	15	13	54	85	38	11	8.6	14
16	13	21	20	18	16	27	46	81	40	*9.8*	7.6	15
17	13	21	21	18	19	28	47	73	43	9.8	*6.8*	15
18	13	22	19	17	19	24	57	71	43	15	7.6	12
19	13	16	20	16	*11*	20	64	70	40	24	7.2	9.8
20	15	*11*	20	15	15	26	64	70	37	18	6.8	9.0
21	16	20	19	*13*	*25*	25	64	77	32	18	7.2	9.0
22	15	22	15	15	21	24	66	135	27	15	8.1	9.0
23	14	26	*9.0*	17	16	25	70	126	25	13	7.2	12
24	16	26	11	19	20	26	71	89	*22*	11	7.6	13
25	17	25	14	16	22	26	81	77	22	9.8	7.6	13
26	16	26	15	15	22	26	91	71	24	12	7.6	13
27	17	26	14	16	12	25	91	*66	37	13	8.1	11
28	*19	25	15	*21*	14	24	*104*	57	36	11	7.6	11
29	18	24	17	21	-------	*25	*89	54	31	11	8.1	*11
30	19	*22	16	20	-------	26	71	55	29	*13	7.6	11
31	*21*	-------	*15*	17	-------	18	-------	61	-------	11	*7.6	-------
Total	439	690	541.0	523	485	720	1,673	2,650	1,172	516.4	250.2	401.0
Mean	14.2	23.0	17.5	16.9	17.3	23.2	55.8	85.5	39.1	16.7	8.07	13.4
Ac-ft	871	1,370	1,070	1,040	962	1,430	3,320	5,260	2,320	1,020	496	795

Calendar year 1953	Max 349	Min 9.0	Mean 49.7	Ac-ft 36,010
Water year 1953–54	Max 145	Min 6.8	Mean 27.6	Ac-ft 19,950

Peak discharge (base, 400 cfs)—— No peak above base.

*Discharge measurement made on this day.

ECHO RESERVOIR AT ECHO, UTAH

Location.—Lat 40°57'50", long 111°26'00", in NW¼SW¼ sec. 30, T. 3 N., R. 5 E., near outlet works at left end of Echo Dam on Weber River, 1 mile southeast of Echo.

Drainage area.—732 sq mi.

Records available.—October 1930 to September 1954.

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, 54,000 acre-ft May 27 (elevation, 5,545.5 ft); minimum, 676 acre-ft Sept. 30 (elevation, 5,468.2 ft).

1930–54: Maximum contents, 74,460 acre-ft May 31, 1937 (elevation, 5,560.35 ft); no storage Sept. 12 to Dec. 3, 1931, Sept. 24 to Nov. 2, 1934, Oct. 12 to Nov. 21, 1944.

Remarks.—Reservoir is formed by earth-fill, rock-faced dam. Storage began in October 1930. Dam completed in 1931. Capacity, 73,940 acre-ft between elevations 5,450 ft (bottom of outlet tunnel) and 5,560 ft (top of radial gates in spillway) above mean sea level. Dead storage negligible. Water is used for irrigation on the Echo project.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15,600	13,260	18,410	25,400	30,050	30,420	36,930	49,380	52,860	45,190	26,440	8,310
2	15,200	13,260	18,640	25,660	29,960	30,420	37,240	49,620	52,600	44,730	25,830	7,740
3	14,790	13,260	18,860	25,830	29,960	30,240	37,550	49,870	52,220	44,150	25,060	7,220
4	14,330	13,260	19,090	26,100	29,960	30,240	37,970	49,990	51,970	43,580	24,300	6,910
5	14,140	13,260	19,320	26,270	29,960	30,240	38,180	50,110	51,600	43,010	23,960	6,650
6	13,950	13,320	19,620	26,530	30,050	30,240	38,610	50,360	51,480	42,440	23,710	6,340
7	13,760	13,450	19,860	26,800	30,050	30,240	39,250	50,240	51,480	41,770	23,380	6,130
8	13,510	13,380	20,170	27,060	30,140	30,330	39,580	49,990	51,600	41,220	22,800	5,720
9	13,320	13,380	20,320	27,240	30,140	30,710	39,900	49,870	51,600	40,560	22,230	5,480
10	13,200	13,380	20,560	27,500	30,140	31,180	40,120	49,620	51,720	39,900	21,670	5,360
11	13,140	13,320	20,790	27,770	30,140	31,650	40,230	49,620	51,720	38,820	21,110	5,250
12	13,080	13,630	21,030	27,950	30,140	31,750	40,440	49,500	51,720	38,290	20,480	5,130
13	13,080	13,820	21,270	28,130	30,140	31,750	40,660	49,500	51,480	37,760	19,930	5,060
14	13,080	14,010	21,510	28,310	30,240	31,750	41,110	49,250	51,230	36,930	19,390	4,980
15	13,080	14,270	21,750	28,490	30,240	32,910	41,660	49,010	50,980	36,200	18,790	4,870
16	13,140	14,400	21,990	28,760	30,240	32,130	42,110	48,770	50,730	35,490	18,110	4,680
17	13,140	14,600	22,230	29,040	30,240	32,520	42,670	48,770	50,480	34,680	17,520	4,470
18	13,140	14,860	22,470	29,220	30,240	32,910	43,350	48,770	50,360	33,890	16,940	4,260
19	13,200	15,060	22,720	29,400	30,240	33,300	43,920	48,890	50,110	33,300	16,230	4,050
20	13,140	15,260	22,960	29,680	30,240	33,590	44,730	49,380	49,870	32,710	15,400	3,820
21	13,260	15,460	23,290	29,870	30,240	33,890	45,310	49,870	49,500	32,130	14,660	3,560
22	13,260	15,740	23,540	29,960	30,420	34,180	45,900	51,850	49,010	31,650	14,140	3,090
23	13,320	16,020	23,710	30,050	30,420	34,380	46,370	52,600	48,520	31,180	13,570	2,660
24	13,320	16,300	23,880	30,140	30,420	34,680	46,720	53,490	47,920	30,610	12,950	2,060
25	13,320	16,650	24,040	30,240	30,610	34,980	47,080	53,740	47,320	30,140	12,300	1,850
26	13,320	17,010	24,130	30,240	30,710	35,390	47,560	53,870	46,610	29,590	11,710	1,680
27	13,380	17,300	24,210	30,140	30,710	35,700	47,920	54,000	46,250	29,130	11,140	1,520
28	13,320	17,590	24,470	30,140	30,520	35,900	48,280	53,870	46,370	28,580	10,590	1,380
29	13,260	17,890	24,720	30,240	-------	36,100	48,770	53,620	46,130	28,130	10,050	1,040
30	13,200	18,110	24,970	30,140	-------	36,410	49,010	53,360	45,660	27,680	9,520	676
31	13,200	-------	25,150	30,140	-------	36,620	-------	53,110	-------	27,060	8,910	-------
(†)	5,502.3	5,509.5	5,518.3	5,523.9	5,524.3	5,530.5	5,541.5	5,544.8	5,538.7	5,520.5	5,494.6	5,468.2
(‡)	−2,820	+4,910	+7,040	+4,990	+380	+6,100	+12,390	+4,100	−7,450	−18,600	−18,150	−8,230

†Elevation, in feet, at end of month.
‡Change in contents, in acre-feet.

NOTE.—Change in contents: calendar year 1953, −13,670 acre-ft; water year 1954, −15,340 acre-ft.

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 1954.

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.—27 years, 282 cfs (204,200 acre-ft per year).

Extremes.—Maximum discharge during year, 613 cfs May 20 (gage height, 3.92 ft); minimum daily, 2.6 cfs Mar. 18, 19, Apr. 5, 6, 15–17.

1927–54: Maximum discharge, 3,060 cfs May 13, 1952 (gage height, 7.34 ft); minimum daily, 0.9 cfs Mar. 27, 28, 1953.

Remarks.—Records good. Many diversions above and below station for irrigation. Flow regulated by Echo Reservoir (see p. 74).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*261*	126	**11*	7.4	*202*	183	44	*52*	*507*	*429	351	*322*
2	261	126	7.4	5.2	*171	**185*	44	52	495	444	361	307
3	250	126	*4.7*	*3.9*	142	155	44	52	463	451	358	272
4	212	126	4.9	3.9	124	130	18	52	432	459	345	248
5	199	126	4.9	*3.9	124	130	*2.6*	66	444	451	243	222
6	192	153	5.2	3.9	124	130	2.6	190	389	444	*214*	216
7	185	*169*	5.2	3.9	124	130	33	278	264	444	313	224
8	187	169	5.2	3.9	124	132	50	341	269	432	341	234
9	160	169	5.2	3.9	124	147	78	375	250	440	332	197
10	110	169	5.8	3.9	138	174	102	432	**226*	*463*	319	153
11	95	76	5.5	3.9	158	185	*118*	*432	258	440	316	134
12	86	32	5.2	3.9	164	180	106	425	307	399	322	126
13	86	32	5.5	3.9	164	151	65	459	338	414	325	*120*
14	86	20	5.5	3.9	178	134	19	541	368	403	332	132
15	84	*8.2*	5.5	3.9	176	94	2.6	550	403	407	341	147
16	84	8.6	5.8	3.9	160	48	2.6	550	421	410	354	176
17	84	9.0	5.8	3.9	160	19	2.6	559	389	410	351	178
18	*83*	9.0	5.8	3.9	162	*2.6*	2.8	585	365	410	375	160
19	90	9.0	6.1	3.9	162	2.6	2.8	*599	385	385	385	169
20	100	9.0	6.1	3.9	142	24	2.8	*604*	407	371	*392*	174
21	100	9.0	6.4	53	*114*	42	2.8	581	429	345	375	226
22	100	9.0	6.4	83	126	42	2.8	459	467	332	341	272
23	118	10	6.8	93	134	43	2.8	417	479	325	329	245
24	128	10	6.8	138	134	43	2.8	463	479	329	325	197
25	126	10	6.4	167	151	43	3.0	554	471	341	316	185
26	134	10	6.8	183	174	44	3.0	550	459	329	310	178
27	153	10	6.8	160	185	44	3.0	*541	436	316	310	176
28	162	11	6.8	158	183	44	3.0	537	429	*293*	310	212
29	*149	11	7.1	190	-------	*44	*3.0	524	436	*301	307	*248
30	126	11	7.1	*202*	-------	44	25	528	432	332	310	245
31	126	-------	7.1	202	-------	44	-------	524	-------	338	*319	-------
Total	4,317	1,772.8	190.8	1,711.8	4,224	2,813.2	793.6	12,872	11,897	12,092	10,222	6,095
Mean	139	59.1	6.15	55.2	151	90.7	26.5	415	397	390	330	203
Ac-ft	8,560	3,520	378	3,400	8,380	5,580	1,570	25,530	23,600	23,980	20,280	12,090

Calendar year 1953	Max 1,840	Min 0.9	Mean 244	Ac-ft 176,300
Water year 1953–54	Max 604	Min 2.6	Mean 189	Ac-ft 136,900

*Discharge measurement made on this day.

LOST CREEK NEAR CROYDON, UTAH

Location.—Lat 41°10'35", long 111°24'20", in SW¼SE¼ sec. 8, T. 5 N., R. 5 E., on right bank 0.8 mile downstream from Francis Fork, 1.6 miles upstream from Hell Canyon, and 9½ miles northeast of Croydon.

Drainage area.—133 sq mi.

Records available.—February 1921 to December 1923, April 1941 to September 1954.

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.—15 years, 38.7 cfs (28,020 acre-ft per year).

Extremes.—Maximum discharge during year, 89 cfs Apr. 24 (gage height, 4.51 ft); minimum, 5.1 cfs Aug. 30.

1921–23, 1941–54: 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 on several days in August and September 1941–42.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*9.8*	13	*13	[a] 13	14	[a] *16*	*19*	*60*	*21*	10	6.6	*5.6
2	10	12	[b] 12	[a] 13	*[b] 13*	*16	20	53	20	10	7.0	5.9
3	10	12	[b] 12	[a] 13	[b] 13	17	25	49	19	9.4	7.4	6.8
4	11	12	[b] 12	[a] *14*	*16*	17	30	48	18	9.4	10	6.6
5	11	12	[b] 12	*14	15	17	36	50	17	9.9	*20*	6.4
6	11	13	13	[b] 14	*15*	17	40	*53*	18	9.4	11	6.2
7	11	13	*14*	14	15	17	33	*56	18	9.0	9.0	6.1
8	11	13	[b] 13	14	15	16	31	56	17	8.6	8.6	6.1
9	11	13	[b] 13	14	15	17	32	55	*17	8.2	8.2	6.1
10	11	13	14	[b] *12*	15	18	33	53	19	7.8	7.8	6.1
11	11	13		[b] 12	14	18	32	*49	17	7.8	7.8	6.1
12	12	13		[b] 12	14	18	36	47	16	7.8	8.2	6.2
13	12	13	[b] 12	14	13	18	44	44	14	7.4	8.2	6.6
14	12	13		14	13	18	53	41	15	7.8	7.8	6.6
15	12	13		14	13	*19*	52	39	17	7.4	7.4	6.4
16	12	13	14	14	14	18	50	86	18	*7.0*	6.6	6.4
17	13	13	13	14	14	18	55	33	17	7.4	6.6	6.4
18	13	13	13	14	14	18	64	32	15	9.9	6.6	6.4
19	12	12	14	14	14	18	70	*30	14	*16*	6.2	6.6
20	12	[b] *11*	14	[b] 13	14	18	68	29	13	10	6.2	6.9
21	13	[b] 11	14	[b] 18	14	17	66	30	13	9.0	7.0	7.3
22	13	12		[b] 13	13	17	65	32	13	8.2	7.0	7.3
23	13	*14*		13		17	68	28	12	8.2	6.6	*8.7*
24	*14*	13		14			76	26	*11*	7.8	6.2	8.7
25	13	14	[b] 12	[b] 13			*83*	24	11	7.4	6.2	8.5
26	13	13		[b] 13	[a] 15	[a] 18	83	24	12	8.3	6.2	8.0
27	13	13		[b] 13			79	*23	14	16	5.6	7.6
28	13	13		13			*82	22	14	8.6	5.6	7.6
29	*12	13		13	-------		72	22	12	*7.4	5.6	7.1
30	12	13	[a] 12	14	-------	*18	66	22	*11	7.4	*5.4*	*7.3
31	12	-------		14	-------	18	-------	*21*	-------	7.0	5.4	-------
Total	368.8	382	390	416	400	544	1,563	1,187	463	275.5	234.0	204.6
Mean	11.9	12.7	12.6	13.4	14.3	17.5	52.1	38.3	15.4	8.89	7.55	6.82
Ac-ft	731	758	774	825	793	1,080	3,100	2,350	918	546	464	406

Calendar year 1953	Max --	Min 9.1	Mean 27.5	Ac-ft 19,940
Water year 1953-54	Max 83	Min 5.4	Mean 17.6	Ac-ft 12,740

Peak discharge (base, 130 cfs)----- No peak above base.

*Discharge measurement made on this day.

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

[b] Stage-discharge relation affected by ice.

WEBER RIVER AT DEVILS SLIDE, UTAH

Location.—Lat 41°03'40", long 111°34'25", in SE¼SE¼ sec. 23, T. 4 N., R. 3 E., on right bank 350 ft downstream from highway underpass on U. S. Highway 30S, 1½ miles west of Devils Slide, and 1¾ miles downstream from Lost Creek.

Drainage area.—1,100 sq mi, approximately.

Records available.—February 1905 to September 1954.

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

Average discharge.—49 years, 443 cfs (320,700 acre-ft per year).

Extremes.—Maximum discharge during year, 661 cfs May 21 (gage height, 3.10 ft); minimum daily, 35 cfs Dec. 24, 25.

1905–54: Maximum discharge observed, 6,000 cfs May 22, 1920 (gage height, 8.0 ft, site and datum then in use); minimum, 18 cfs Sept. 23, 1934, Mar. 6, 1948.

Remarks.—Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Flow regulated by Echo Reservoir (see p. 74).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*285*	142	**52*	[b] 38	*255*	247	101	162	*591*	*474	360	**348*
2	274	141	46	38	230	*242	99	148	570	488	379	342
3	271	141	42	*36*	*193	220	102	133	538	503	386	299
4	235	141	43	38	169	186	98	137	500	*507*	392	263
5	211	142	41	*38	169	188	*78*	*110*	503	507	288	235
6	206	167	43	38	173	186	99	195	481	492	*220*	223
7	200	*191*	45	40	169	191	101	317	326	496	317	225
8	197	188	40	40	169	195	131	406	311	481	370	242
9	191	188	40	40	171	218	144	422	*308	474	360	216
10	120	191	44	[b] 39	180	271	173	456	*271*	488	345	154
11	117	140	[b] 39	38	204	*282*	195	*488	282	488	335	133
12	104	51	36	40	216	265	193	474	348	419	342	126
13	104	52	40	39	223	225	180	492	396	436	348	*113*
14	104	51	38	40	235	204	171	604	432	425	351	120
15	104	46	42	40	237	175	146	599	467	429	363	135
16	105	47	43	40	216	113	141	591	515	432	367	160
17	104	47	45	40	213	91	154	591	478	439	370	180
18	*102*	47	44	40	218	57	184	604	429	460	392	158
19	104	47	44	40	209	*51*	204	*608	432	449	*429*	141
20	119		44	40	197	58	200	621	463	399	425	152
21	119		44	57	*165*	95	193	*630*	481	389	425	188
22	122		38	128	171	92	191	496	526	360	376	268
23	131		[b] 36	139	188	96	195	432	538	354	357	258
24	152		*35*	188	195	96	206	478	542	348	354	197
25	152	[a] 46	[b] 35	218	209	96	*215*	583	538	360	348	184
26	152		[b] 36	228	232	95	213	*612	522	354	332	180
27	169		38	213	245	98	204	608	507	345	348	171
28	184		36	200	242	102	*202	591	488	326	342	197
29	*177		38	237	-------	101	162	583	496	**314*	332	255
30	142	49	[b] 38	255	-------	*107	142	587	485	345	332	*263
31	142	-------	[b] 38	*258*	-------	98	-------	608	-------	354	342	-------
Total	4,899	2,669	1,263	2,903	5,693	4,741	4,815	14,366	13,764	13,135	11,027	6,126
Mean	158	89.0	40.7	93.6	203	153	160	463	459	424	356	204
Ac-ft	9,720	5,290	2,510	5,760	11,290	9,400	9,550	28,490	27,300	26,050	21,870	12,150

Calendar year 1953	Max 1,800	Min 35	Mean 316	Ac-ft 229,000
Water year 1953-54	Max 630	Min 35	Mean 234	Ac-ft 169,400

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of weather records and records for other Weber River stations.

[b] Stage-discharge relation affected by ice.

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 East Canyon Dam, 9 miles southeast of Morgan.

Drainage area.—144 sq mi.

Records available.—October 1937 to September 1954 in reports of Geological Survey. November 1931 to September 1954 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 500 ft east of dam.

Extremes.—Maximum contents observed during year, 19,870 acre-ft May 10 (gage height, 122.0 ft); no contents Sept. 21–30.

1931–54: 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. 21–30, 1954.

Remarks.—Reservoir was formed in 1896 by a 58-ft rock-fill dam (capacity, 3,850 acre-ft), which was raised 25 ft in 1900 (capacity, 9,000 acre-ft), was raised 12 ft more in 1902 (capacity, 14,000 acre-ft), and later was replaced by present concrete dam, which formed a reservoir having a capacity of 28,730 acre-ft between gage heights 0.0 ft (bottom of outlet tunnel) and 140.8 ft (top of flashboards in spillway). Gage height of spillway crest is 135 ft. No dead storage. Water is used for irrigation in Davis and Weber Counties.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		8,710									10,800	3,680
2								19,500		17,820		
3				11,960								
4	8,440						17,010			17,600		
5												
6			10,690						19,200			
7					13,500	14,740			19,310			
8		9,090										2,710
9								19,840				
10				12,230				19,870				
11	8,440						17,730					
12										16,560		
13			11,050						19,060			
14					13,820	15,420						1,830
15		9,450										
16								19,760				
17				12,530								
18	8,440						18,380			14,820		1,170
19												
20			11,430						19,000			
21					14,130	15,910				13,940		0
22		9,780							19,000			
23							18,830	19,580				
24				12,860							4,900	
25	8,530						18,960			12,890		
26												
27			11,710						18,410			
28					14,440	16,360						
29		10,280										
30		[a]10,340					[a]19,340	19,390	[a]18,060	11,380		0
31	[a]8,690		[a]11,850	13,250		[a]16,640		19,390		[a]11,090	[a]3,840	
(†)				100.9	105.2			120.7				
(‡)	+110	+1,650	+1,510	+1,400	+1,190	+2,200	+2,700	+50	−1,330	−6,970	−7,250	−3,840

†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.—Lat 40°55'20", long 111°36'20", in NW¼ sec. 10, T. 2 N., R. 3 E., on right bank 2,500 ft downstream from East Canyon Dam, 2½ miles upstream from Sheep Canyon, and 9 miles southeast of Morgan.

Drainage area.—155 sq mi (revised).

Records available.—October 1937 to September 1954 in reports of Geological Survey. October 1931 to September 1954 in report of Weber River water commissioner.

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

Average discharge.—23 years (1931–54), 54.0 cfs (39,090 acre-ft per year).

Extremes.—Maximum discharge during year, 166 cfs July 13 (gage height, 1.19 ft); minimum daily, 3.2 cfs Nov. 21, 22.

1931–54: Maximum discharge, 872 cfs May 4, 1952 (gage height, 3.49 ft); minimum daily, 3.2 cfs for several days during 1948, 1953–54.

Remarks.—Records good. No diversion between station and East Canyon Reservoir (see p. 74), which completely regulates flow.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*27*	*5.9*	*3.6*	*4.2*	*4.7*	*4.7*	*6.5*	*7.8*	33	76	a *166*	*78
2	27	4.2	*3.6	4.2	4.7	4.7	6.5	7.8	33	76	a 156	76
3	23	4.2	3.6	4.2	*4.7	*4.7	6.5	7.8	33	76	a 152	76
4	19	4.2	3.6	4.2	4.7	4.7	6.5	7.8	33	78	a 150	76
5	19	3.6	3.6	4.2	4.7	4.7	6.5	7.8	33	76	a 148	78
6	19	3.6	3.6	4.2	4.7	4.7	6.5	7.8	33	76	a 146	78
7	19	3.6	3.6	*4.7*	4.7	4.7	6.5	7.8	*32*	76	a 144	76
8	19	3.6	4.2	4.7	4.7	4.7	6.5	20	29	73	a 154	78
9	19	3.6	4.2	4.2	4.7	4.7	6.5	31	29	73	a 152	79
10	19	3.6	4.7	4.2	4.7	4.7	6.5	29	*29	*72*	a 150	78
11	19	3.6	4.7	*4.2	4.7	4.7	6.5	31	28	72	a 148	76
12	19	3.6	4.7	4.2	4.7	4.7	7.1	*31	27	113	a 146	78
13	19	3.6	4.7	4.2	4.7	4.7	7.1	31	26	*164*	a 144	79
14	19	3.6	4.7	4.2	4.7	4.7	*7.8*	31	26	162	a 142	81
15	19	3.6	4.7	4.2	4.7	4.7	7.8	31	26	162	a 150	82
16	19	3.6	5.3	4.2	4.7	5.3	7.1	31	26	160	a 154	78
17	19	3.6	5.3	4.2	4.7	5.3	7.1	31	26	158	a 152	a 74
18	19	3.6	5.9	4.2	4.7	5.3	7.1	31	26	158	a 109	a 96
19	18	3.6	*6.5*	4.2	*4.2*	5.3	7.8	31	26	158	82	a 113
20	19	3.6	5.3	4.2	4.2	*5.3*	7.8	31	*26*	158	*79*	a *119*
21	19	*5.2*	4.7	4.2	4.2	5.9	7.8	31	*25*	156	80	a 25
22	18	3.2	4.2	4.2	4.2	*6.5*	7.8	31	53	156	79	a 22
23	18	3.6	3.6	4.7	4.2	6.5	7.8	32	76	156	79	a 20
24	18	3.6	3.6	4.7	4.2	6.5	7.8	33	76	a 154	*79	a 18
25	18	3.6	3.6	4.7	4.7	6.5	7.8	33	76	a 156	79	a 16
26	18	3.6	3.6	4.7	4.7	6.5	7.8	*33	76	a 156	79	a 16
27	17	3.6	3.6	4.7	4.7	6.5	7.8	33	78	a 156	79	a 15
28	16	3.6	4.2	4.7	4.7	6.5	*7.8	33	78	*a 156	79	a 14
29	11	3.6	4.2	4.7	-------	6.5	7.8	33	*79*	*154	79	a 13
30	*7.8	3.6	4.2	4.7	-------	*6.5	7.8	*34*	*78	*154	79	*a 12
31	7.8	-------	4.2	4.7	-------	6.5	-------	34	-------	152	79	-------
Total	567.6	111.3	133.8	135.7	128.6	167.9	216.2	804.6	1,275	3,923	3,684	1,820
Mean	18.3	3.71	4.32	4.38	4.59	5.42	7.21	26.0	42.5	127	119	60.7
Ac-ft	1,130	221	265	269	255	333	429	1,600	2,530	7,780	7,310	3,610

Calendar year 1953	Max 175	Min 3.2	Mean 48.7	Ac-ft 35,210
Water year 1953–54	Max 164	Min 3.2	Mean 35.5	Ac-ft 25,730

*Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of discharge measurements and record of gate changes at East Canyon Reservoir.

HARDSCRABBLE CREEK NEAR PORTERVILLE, UTAH

Location.—Lat 40°57'10", long 111°43'00", in sec. 34, T. 3 N., R. 2 E., two-thirds of a mile upstream from Tucker Hollow and 2¾ miles southwest of Porterville.

Drainage area.—24.9 sq mi.

Records available.—October 1941 to September 1954 in reports of Geological Survey.

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

Average discharge.—13 years (1941–54), 33.6 cfs (24,330 acre-ft per year).

Extremes.—Maximum discharge during year, 64 cfs Apr. 28 (gage height, 1.91 ft); minimum, 3.4 cfs Sept. 11, but may have been less during periods of ice effect.

1941–54: Maximum discharge, 464 cfs Aug. 20, 1945 (gage height, 3.60 ft); minimum recorded, 3.0 cfs Feb. 11, 1944.

Remarks.—Records good except periods of ice effect or no gage-height record, which are fair. Transbasin diversion from Arthurs Fork to Farmington Creek.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*7.6*	7.8	*8.3			..	*9.6*	37	*22*	*11*	5.6	4.1
2	7.8	7.8					13	32	19	10	5.5	*4.7
3	8.0	7.8		[a] 6.0	(*)	(*)	20	30	18	9.9	5.5	4.8
4	8.0	7.8				[b] 4.0	26	30	18	11	6.4	4.5
5	8.0	8.3					33	31	19	11	*7.0*	3.9
6	8.0	*10*	[b] 7.5		[b] 5.0		36	37	19	9.4	5.8	4.1
7	7.8	8.5				5.6	26	*44	18	9.0	5.5	4.1
8	7.8	8.0				7.0	23	50	16	9.0	5.3	4.1
9	7.6	7.8				*16*	26	56	17	8.0	5.3	4.1
10	7.6	8.0				14	26	59	*18	8.0	5.3	3.9
11	7.6	8.3		(*)		12	24	58	16	7.8	5.1	*3.5*
12	7.8	8.5			5.8	9.1	28	*58	15	7.8	5.3	3.7
13	8.0	8.5		[a] 6.5	6.4		34	59	15	7.8	5.1	4.4
14	8.0	8.3			*6.6*		55	*60*	15	7.6	5.0	4.4
15	8.0	8.3					44	58	15	7.2	4.7	4.1
16	7.8	8.3	[a] 7.0			[b] 7.0	41	56	16	7.0	4.5	4.2
17	7.8						46	53	15	7.0	4.7	4.4
18	7.6						54	49	14	7.4	4.8	4.4
19	7.6	[b] 7.5					56	*46	14	7.6	4.7	4.4
20	8.3					8.0	53	44	13	7.4	4.4	4.7
21	8.3				[b] 5.0	8.0	48	48	13	11	5.5	4.8
22	7.8	8.3	[b] 6.5			8.3	46	44	13	7.2	5.0	4.8
23	8.3	9.1				8.5	46	36	12	7.0	4.7	*6.6*
24	*9.0*	8.5				8.5	47	32	12	6.8	4.4	6.0
25	8.5	8.0		[b] 5.5		8.5	54	31	12	5.8	4.2	5.5
26	8.0	8.0				8.3	54	*30	13	6.0	*4.1*	5.5
27	8.3	8.0				8.3	53	27	17	6.6	4.2	5.8
28	8.0	7.8	[a] 6.0			9.0	*57	26	13	*5.5	4.2	5.6
29	8.0	7.8				9.9	48	25	12	6.2	4.2	5.5
30	*7.8	7.8			-------	*10	44	24	*11	6.2	4.2	*5.8
31	7.8	-------			-------	[b] 9.0	-------	*22*	-------	5.8	4.1	-------
Total	246.5	242.8	214.3	188.0	143.8	241.0	1,170.6	1,292	460	245.0	154.3	140.4
Mean	7.95	8.09	6.91	6.06	5.14	7.77	39.0	41.7	15.3	7.90	4.98	4.68
Ac-ft	489	482	425	373	285	478	2,320	2,560	912	486	306	278

Calendar year 1953	Max 323	Min ---	Mean 40.7	Ac-ft 29,480
Water year 1953–54	Max 60	Min 3.5	Mean 13.0	Ac-ft 9,390

Peak discharge (base, 220 cfs)----- No peak above base.

*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.

EAST CANYON CREEK BELOW DIVERSIONS, NEAR MORGAN, UTAH

Location.—Lat 41°02'10", long 111°41'30", in SW¼ sec. 35, T. 4 N., R. 2 E., on left bank 1 mile southwest of Morgan and 3 miles upstream from mouth.

Records available.—November 1950 to September 1954.

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

Extremes.—Maximum discharge during year, 190 cfs July 26 (gage height, 3.22 ft); minimum daily, 0.4 cfs Nov. 8, but may have been less during period of ice effect.

1950–54: Maximum discharge, 926 cfs May 8, 1952 (gage height, 9.19 ft); minimum daily, that of Nov. 8, 1953, but may have been less during period of ice effect.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*20*	*2.5*				9.1	*11*	*29*	1.3	*31*	121	47
2	14	1.3	(*)		[a] 6.0	*6.5	12	26	4.0	38	*128*	*49
3	14	.7			(*)	6.5	17	15	4.5	35	124	49
4	12	.7		[a] 4.0	6.5	12	21	3.6	3.6	32	126	46
5	10	.8			7.8	10	25	2.5	2.2	34	124	47
6	7.8	1.9			9.5	9.5	31	1.2	11	34	121	53
7	7.3	1.2			7.3	8.2	26	*1.0*	8.6	34	119	53
8	8.2	.4			7.8	7.8	24	2.0	3.6	32	122	52
9	5.3	.6			7.3	16	24	6.5	3.3	32	127	55
10	5.0	.8		[a] 5.0	8.2	*18*	26	16	*5.7	33	127	50
11	7.3	.8			8.2	17	24	*12	6.1	34	120	48
12	8.6	1.0	[b] 2.0		7.3	12	22	4.5	4.8	52	119	50
13	6.5	1.5			8.2	16	26	3.8	5.0	116	115	56
14	9.5	1.5			10	16	40	5.0	1.9	115	111	53
15	10	1.3			8.2	14	38	4.3	2.8	116	107	59
16	11	1.1			8.2	12	35	4.5	4.0	120	118	52
17	10				8.2	12	37	3.3	2.3	120	114	50
18	9.5	[b] 1.0		[b] 6.0	8.2	12	*44*	3.8	4.5	120	84	63
19	6.1				5.3	12	44	5.3	3.3	117	42	94
20	5.0	1.5			7.8	12	40	6.1	1.5	117	*40*	*98*
21	7.3				*11*	12	38	3.6	*.8*	124	47	66
22	8.2				7.8	11	36	6.1	5.3	129	49	15
23	10				7.3	11	36	4.3	18	130	49	*14*
24	12				7.8	11	34	3.1	24	128	49	16
25	11	[b] 1.0	[a] 2.0		7.8	10	36	*2.2	26	130	52	15
26	10		[a] 2.0	[a] 6.0	7.8	10	34	1.4	26	128	53	14
27	9.5		[b] 2.0	[a] 6.0	7.3	10	29	2.6	*31*	*137*	54	17
28	10		[a] 2.0	[b] 6.0	8.2	10	*30	4.5	31	136	51	16
29	9.5		[b] 2.0			10	30	5.0	29	*134	48	16
30	*3.8		[a] 2.0	[a] 6.0	-------	*12	25	2.3	*30	129	46	*16
31	*3.1*	-------	[a] 2.0		-------	10	-------	1.1	-------	128	45	-------
Total	281.5	32.6	62.0	168.0	217.0	355.6	895	191.6	305.1	2,795	2,752	1,329
Mean	9.08	1.09	2.00	5.42	7.75	11.5	29.8	6.18	10.2	90.2	88.8	44.3
Ac-ft	558	65	123	333	430	705	1,780	380	605	5,540	5,460	2,640

Calendar year 1953	Max 543	Min 0.4	Mean 73.8	Ac-ft 53,420
Water year 1953–54	Max 137	Min .4	Mean 25.7	Ac-ft 18,620

*Discharge measurement made on this day.

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

[b] Stage-discharge relation affected by ice.

WEBER RIVER NEAR MORGAN, UTAH

Location.—Lat 41°03'50", long 111°43'40", in NE¼ sec. 21, T. 4 N., R. 2 E., on right bank 300 ft downstream from Line Creek and 2½ miles northwest of Morgan.

Records available.—October 1950 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,970 ft (by barometer). Prior to Dec. 3, 1952, at site a quarter of a mile upstream at different datum.

Extremes.—Maximum discharge during year, 607 cfs May 21 (gage height, 3.11 ft); minimum daily, less than 60 cfs during December and January.

1950–54: Maximum daily discharge, 6,000 cfs May 5, 6, 1952; minimum daily, that of December 1953 and January 1954.

Remarks.—Records good except those for periods of no gage-height record, which are fair. Many diversions above and below station for irrigation. Flow regulated by Echo and East Canyon Reservoirs (see pp. 74, 78).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*315*	192			*255*	261	*132*	199	*516*	466	471	*405*
2	300	189	(*)		246	249	135	182	498	489	498	*401
3	310	185	80		*204	*237	146	156	480	502	498	377
4	281	185			185	199	156	148	448	502	*512*	353
5	258	189			182	196	148	*122*	440	507	462	323
6	249	213		60	182	199	176	135	453	498	*361*	320
7	236	*244*			*176*	201	158	252	326	498	413	309
8	236	244			182	201	176	341	288	489	484	312
9	236	244			182	249	187	373	*295	471	489	323
10	171	244			190	284	216	417	267	484	484	261
11	161	220	70	(*)	207	*298*	231	462	*261*	489	471	231
12	142				225	278	237	*444	309	*430*	471	225
13	136	100			231	246	246	453	357	502	476	219
14	136				249	225	278	543	381	507	462	*216*
15	136				249	213	252	548	405	498	466	225
16	133			70	228	144	228	538	476	507	480	240
17	136				225	126	246	530	462	516	489	258
18	133				234	100	281	543	417	538	480	260
19	*126*				222	*90*	*298*	*562	413	*543*	466	265
20	142				219	90	292	567	430	502	462	270
21	155				196	112	281	*592*	444	512	489	270
22	158			116	190	116	264	516	471	489	453	285
23	164	80	60	132	204	120	278	430	502	484	430	300
24	199			179	207	124	278	466	512	466	426	260
25	207			216	219	124	270	*543	512	476	422	250
26	207			225	243	122	270	567	507	484	405	240
27	224			219	255	122	*240	538	502	*480	409	230
28	244			204	255	132	234	525	494	466	413	230
29	249			234	-------	135	213	507	*484	448	405	270
30	*192			255	-------	137	179	507	484	458	397	290
31	189	-------		*258*	-------	*126	-------	525	-------	480	401	-------
Total	6,161	3,949	2,060	3,408	6,042	5,456	6,726	13,231	12,834	15,181	14,045	8,418
Mean	199	132	66.5	110	216	176	224	427	428	490	453	281
Ac-ft	12,220	7,830	4,090	6,760	11,980	10,820	13,340	26,240	25,460	30,110	27,860	16,700

Calendar year 1953	Max 2,290	Min --	Mean 423	Ac-ft 306,600
Water year 1953–54	Max 592	Min --	Mean 267	Ac-ft 193,400

*Discharge measurement made on this day.

NOTE.—No gage-height record Nov. 12 to Jan. 21, Sept. 18–30; discharge estimated on basis of discharge measurements, weather records, and records for other Weber River stations.

WEBER RIVER AT GATEWAY, UTAH

Location.—Lat 41°08′, long 111°50′, in NW¼SW¼ sec. 27, T. 5 N., R. 1 E., on right bank 800 ft downstream from Union Pacific Railroad bridge, 2,500 ft downstream from Strawberry Creek, and 2,500 ft east of section house at Gateway.

Drainage area.—1,610 sq mi, approximately.

Records available.—October 1889 to October 1901, April to June 1903 (gage heights only), June 1919 to September 1954. Published as "near Uinta" 1889–1903.

Gage.—Water-stage recorder. Altitude of gage is 4,790 ft (by barometer). Prior to June 22, 1919, 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.—34 years (1920–54), 600 cfs (434,400 acre-ft per year).

Extremes.—Maximum discharge during year, 785 cfs May 21 (gage height, 2.00 ft); minimum daily, 82 cfs Dec. 25, 26, 31, Jan. 1.

1889–1903, 1919–54: Maximum discharge observed, 7,980 cfs May 31, 1896; minimum, 45 cfs Sept. 24, 1934.

Remarks.—Records good. Many diversions above and below station for irrigation. Flow regulated by Echo and East Canyon Reservoirs (see pp. 74, 78).

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	*580*	220	*117*	*82*	322	322	*208*	372	**600*	518	482	404
2	352	220	*115	87	318	311	243	340	580	528	510	**408*
3	356	214	112	89	*274	*297	265	318	555	546	510	396
4	336	217	108	91	265	256	281	315	528	541	*523*	364
5	304	217	106	93	*256*	249	294	326	510	560	510	336
6	297	234	108	95	256	249	344	*311*	536	536	*396*	326
7	288	256	108	100	259	252	288	416	432	532	420	318
8	284	*259*	106	104	259	259	288	500	372	523	500	318
9	288	256	100	104	256	384	297	541	*392	500	505	326
10	237	252	104	102	262	*404*	318	590	356	510	500	274
11	220	249	97	102	281	392	322	650	*336*	523	482	240
12	208	153	85	*108	281	348	340	*630	364	*464*	482	237
13	198	140	89	108	315	308	360	620	416	523	487	234
14	195	136	85	106	*352*	288	444	700	436	532	478	**31*
15	195	128	87	104	352	274	416	710	460	523	474	234
16	192	119	91	100	326	214	380	720	532	528	482	237
17	192	119	93	100	322	192	392	700	523	532	487	265
18	187	117	95	97	326	175	452	690	487	555	487	265
19	*181*	117	95	97	311	*155*	496	*715	464	*580*	474	271
20	189	115	102	95	304	165	487	710	492	536	464	288
21	198	*110*	102	91	284	176	474	*755*	496	541	487	281
22	203	115	*95	*126	284	189	452	725	518	514	464	301
23	203	119	87	181	*294	200	469	600	546	510	440	311
24	228	117	84	226	297	200	487	600	555	487	424	274
25	237	112	*82*	265	304	195	*523*	*675	560	500	420	252
26	237	112	82	274	326	192	518	710	560	510	408	249
27	243	112	83	271	329	195	*492	665	565	*510	416	240
28	256	115	83	265	318	231	505	635	546	496	416	237
29	256	112	*85	284	-------	246	436	620	*536	469	412	281
30	*231	112	85	311	-------	237	376	600	536	478	400	301
31	217	-------	82	*322*	-------	*203	-------	615	-------	496	400	-------
Total	7,588	4,874	2,953	4,580	8,333	7,758	11,647	18,074	14,789	16,101	14,340	8,699
Mean	245	162	95.3	148	298	250	388	583	493	519	463	290
Ac-ft	15,050	9,670	5,860	9,080	16,530	15,390	23,100	35,850	29,330	31,940	28,440	17,250

Calendar year 1953	Max 2,470	Min 82	Mean 535	Ac-ft 387,200
Water year 1953–54	Max 755	Min 82	Mean 328	Ac-ft 237,500

*Discharge measurement made on this day.

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 1954.

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

Extremes.—Maximum discharge during year, 525 cfs Apr. 19 (gage height, 3.38 ft); minimum daily, 4.6 cfs June 12.

1950–54: Maximum discharge, 7,070 cfs May 6, 1952 (gage height, 10.89 ft); minimum daily, that of June 12, 1954.

Remarks.—Records good except those for periods of no gage-height record, which are fair. Many diversions above and below station for irrigation. Flow regulated by Echo and East Canyon Reservoirs (see pp. 74, 78).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	126	*126*		*327*	296	201	15	26	29	*26*	29
2	16	122	*117		316	289	229	14	18	29	31	*43*
3	26	120	113	90	289	275	275	13	18	46	32	*39
4	26	122	109		258	*248	296	12	20	32	30	29
5	20	143	122		*242	236	296	12	12	52	48	32
6	16	183	120		239	236	346	*11*	27	44	35	28
7	16	201	122		*236*	220	342	15	18	40	*54*	24
8	18	207	115		236	210	302	25	17	33	27	24
9	18	214	111	100	236	313	316	42	16	25	32	26
10	20	220	109		242	*394*	342	44	*15	30	34	23
11	27	226			248	391	346	52	9.2	40	27	23
12	22	152			268	342	357	48	*4.6*	52	30	25
13	14	115		(*)	285	299	383	*50	16	44	26	23
14	13	*103*		101	313	278	457	53	16	*75*	26	20
15	11	107		97	306	258	457	46	19	45	26	20
16	46	103	100	99	316	217	406	51	37	46	27	18
17	12	111		97	289	183	398	40	37	40	29	24
18	8.3	111		101	302	162	453	33	20	56	29	24
19	*5.1*	109		99	278	*141*	*512*	40	12	51	27	21
20	13	117		99	275	149	449	*30	22	41	26	20
21	29	115		97	255	160	353	65	19	52	36	19
22	41	117		115	239	168	265	*132*	24	45	40	21
23	85	129		177	245	186	144	35	49	37	37	27
24	131	126		248	255	201	62	*21	38	*23*	29	29
25	133	126		292	261	207	48	36	41	34	26	26
26	147	115	90	296	285	192	*45	35	47	50	29	28
27	146	122		299	292	189	27	21	*53*	41	31	21
28	160	117		289	289	214	34	21	*44	*35	33	*16*
29	*171*	109		299	-------	248	20	22	38	29	30	22
30	152	111		324	-------	248	*16*	20	40	28	29	22
31	*136	-------		*331*	-------	*207	-------	29	-------	32	26	-------
Total	1,696.4	4,099	3,164	4,720	7,622	7,357	8,177	1,083	772.8	1,256	968	745
Mean	54.7	137	102	152	272	237	273	34.9	25.8	40.5	31.2	24.8
Ac-ft	3,360	8,130	6,280	9,360	15,120	14,590	16,220	2,150	1,530	2,490	1,920	1,480

Calendar year 1953	Max 1,940	Min 5.1	Mean 309	Ac-ft 223,400
Water year 1953–54	Max 512	Min 4.6	Mean 114	Ac-ft 82,030

*Discharge measurement made on this day.

NOTE.—No gage-height record Dec. 11 to Jan. 13; discharge estimated on basis of records for stations at Gateway and Plain City.

SOUTH FORK OGDEN RIVER NEAR HUNTSVILLE, UTAH

Location.—Lat 41°16′, long 111°40′, in SE¼ sec. 12, T. 6 N., R. 2 E., on right bank half a mile downstream from Magpie Creek, 1 mile upstream from Huntsville Mountain Canal, and 5½ miles east of Huntsville.

Drainage area.—148 sq mi.

Records available.—March 1921 to September 1954.

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.—33 years, 110 cfs (79,640 acre-ft per year).

Extremes.—Maximum discharge during year, 409 cfs Apr. 25 (gage height, 2.72 ft); minimum, 28 cfs Sept. 23 (gage height, 0.74 ft).

1921–54: 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, which are fair.

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	*41*	42	42	[b]*40*	45	45	*72*	249	*84*	*50*	36	34
2	41	42	41	43	44	42	*77	212	81	50	36	35
3	43	43	*41	43	45	*41*	97	189	78	47	36	36
4	43	43	41	43	*46	*42	125	189	75	47	39	35
5	43	43	40	43	43	41	154	224	77	47	*43*	34
6	43	*48*	42	43	42	43	176	264	78	47	39	*33*
7	43	43	43	43	41	47	138	288	77	45	39	*34
8	43	43	42	44	41	51	125	*291*	*72	44	37	34
9	43	42	42	44	[b]41	79	129	285	73	44	37	34
10	43	42	43	[b]44	43	*89*	129	277	74	43	36	34
11	44	43	[b]40	45	43	82	131	252	68	43	36	34
12	*45*	43	43	*45	43	68	148	239	65	42	36	34
13	45	43	43	45	46	61	185	*227	65	40	36	35
14	44	42	41	45	*49*	58	242	212	65	42	36	34
15	43	42	42	46	45	57	236	198	64	41	36	34
16	43	42	42	45	44	57	234	183	68	40	36	34
17	42	43	42	45	44	58	280	169	64	40	36	34
18	41	43	42	45	45	58	345	159	62	43	36	34
19	43	42	43	46	*59	57	351	150	61	50	36	34
20	43	*41	43	44	43	57	328	*138	58	43	36	35
21	43	41	*44	44	43	60	313	138	57	43	36	34
22	43	43	41	44	43	60	305	136	56	41	36	35
23	44	46	)	46	43	64	316	118	54	41	36	*38
24	45	43	)	*50	46	69	345	*108	53	39	35	36
25	44	42	)	46	48	73	381	105	53	39	*34	36
26	43	42	[b]40)	[b]45	49	73	372	100	53	41	36	35
27	43	42	)	48	46	75	*366	94	57	*43	35	36
28	43	42	)	48	45	78	*384*	91	56	39	36	36
29	43	41	43	47	-------	79	328	88	*53	39	35	36
30	42	41	43	47	-------	77	285	86	*51*	*36*	35	36
31	*42	-------	[b]40	47	-------	72	-------	*84*	-------	37	35	-------
Total	1,334	1,278	1,289	1,393	1,235	1,913	7,097	5,543	1,952	1,326	1,127	1,043
Mean	43.0	42.6	41.6	44.9	44.1	61.7	237	179	65.1	42.8	36.4	34.8
Ac-ft	2,650	2,530	2,560	2,760	2,450	3,790	14,080	10,990	3,870	2,630	2,240	2,070

Calendar year 1953	Max 568	Min --	Mean 109	Ac-ft 79,170
Water year 1953–54	Max 384	Min 33	Mean 72.7	Ac-ft 52,620

Peak discharge (base, 400 cfs)----- Apr. 25 (12 p.m.) 409 cfs (2.72 ft)

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

PINE VIEW RESERVOIR NEAR OGDEN, UTAH

Location.—Lat 41°15'20", long 111°50'25", in NW¼SE¼ sec. 16, T. 6 N., R. 1 E., at trash rack at Pine View Dam on Ogden River, 7 miles northeast of Ogden.

Drainage area.—310 sq mi, approximately.

Records available.—November 1936 to September 1954.

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

Extremes.—Maximum contents during year, 36,050 acre-ft May 15, 16 (elevation, 4,867.20 ft); minimum, 398 acre-ft Nov. 10 (elevation, 4,826.10 ft).

1936–54: Maximum contents, 45,370 acre-ft May 17, 1938 (elevation, 4,873.00 ft); minimum, 80 acre-ft Feb. 19, 1937 (elevation, 4,818.99 ft).

Remarks.—Reservoir is formed by earth-fill, rock-faced dam; storage began Nov. 16, 1936. Capacity, 44,180 acre-ft at elevation 4,872 ft (top of spillway gates); 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. Dead storage negligible. Water is used for irrigation on Ogden River project.

Cooperation.—Capacity table furnished by Bureau of Reclamation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,530	1,870	1,040	959	1,720	5,840	10,240	31,710	35,250	29,360	20,020	9,680
2	6,280	1,720	986	986	1,760	5,900	10,730	32,010	35,100	29,070	19,670	9,380
3	6,150	1,620	1,010	1,010	1,800	5,960	10,820	32,460	34,940	28,790	19,440	9,070
4	5,960	1,410	1,040	1,040	1,830	5,960	11,150	32,760	34,780	28,500	18,990	8,840
5	5,840	1,220	1,040	1,010	1,870	6,020	11,670	33,230	34,460	28,220	18,660	8,550
6	5,660	1,070	1,100	1,010	1,910	6,020	12,100	33,690	34,310	27,940	18,430	8,330
7	5,530	876	1,160	1,040	1,980	6,020	12,740	34,150	34,150	27,660	17,990	8,040
8	5,420	678	1,190	1,040	2,020	6,020	13,200	34,460	34,150	27,380	17,660	7,750
9	5,300	489	1,220	1,040	2,060	6,210	13,680	34,940	34,000	26,830	17,340	7,540
10	5,180	398	1,260	1,040	2,090	6,530	14,150	35,100	33,840	26,560	17,020	7,330
11	5,010	526	1,290	1,040	2,130	6,790	14,550	35,410	33,840	26,290	16,590	7,060
12	4,900	678	1,320	1,040	2,170	7,060	14,940	35,730	33,840	25,880	16,380	6,790
13	4,730	678	1,380	1,040	2,210	7,130	15,250	35,730	33,530	25,480	16,070	6,530
14	4,560	544	1,480	1,040	2,370	7,270	15,960	35,890	33,530	25,220	15,660	6,280
15	4,400	416	1,550	1,040	2,580	7,330	16,490	36,050	33,230	24,960	15,350	6,020
16	4,240	562	1,650	1,040	2,840	7,400	17,020	36,050	33,070	24,560	15,040	5,840
17	4,080	655	1,800	1,070	3,110	7,470	17,770	35,730	32,920	24,170	14,750	5,660
18	3,930	608	1,830	1,070	3,430	7,610	18,770	35,730	32,760	23,920	14,350	5,420
19	3,730	608	1,940	1,070	3,730	7,680	19,900	35,570	32,460	23,660	13,960	5,240
20	3,580	632	2,020	1,070	3,880	7,750	21,310	35,410	32,310	23,410	13,580	5,070
21	3,480	655	2,090	1,100	4,140	7,900	22,280	35,100	32,010	23,030	13,290	4,900
22	3,340	678	2,170	1,100	4,400	8,110	23,280	35,410	31,710	22,650	13,010	4,670
23	3,250	701	2,290	1,130	4,560	8,250	24,170	35,410	31,410	22,410	12,650	4,510
24	3,110	724	2,410	1,190	4,730	8,400	25,090	35,570	31,110	22,040	12,370	4,400
25	2,920	771	2,490	1,290	5,070	8,620	26,020	35,570	30,810	21,670	12,020	4,400
26	2,750	822	2,210	1,350	5,300	8,920	27,110	35,570	30,520	21,430	11,670	4,350
27	2,620	904	1,940	1,450	5,530	9,070	28,220	35,410	30,230	21,310	11,320	4,290
28	2,450	986	1,650	1,520	5,900	9,380	29,360	35,410	30,080	21,190	10,980	4,240
29	2,330	1,010	1,380	1,550	-------	9,680	30,230	35,410	29,940	20,950	10,570	4,190
30	2,170	1,040	1,070	1,620	-------	9,920	30,810	35,250	29,640	20,600	10,320	4,140
31	2,020	-------	655	1,650	-------	10,080	-------	35,250	-------	20,250	10,000	-------
(†)	4,831.8	4,828.9	4,827.4	4,830.8	4,839.6	4,845.5	4,863.8	4,866.7	4,863.0	4,855.8	4,845.4	4,836.5
(‡)	−4,640	−980	−385	+995	+4,250	+4,180	+20,730	+4,440	−5,610	−9,390	−10,250	−5,860

†Elevation, in feet, at end of month.
‡Change in contents in acre-feet.

NOTE.—Change in contents: Calendar year 1953, −9,420 acre-ft; water year 1954, −2,520 acre-ft.

OGDEN RIVER BELOW PINE VIEW DAM, NEAR OGDEN, UTAH

Location.—Lat 41°15'17", long 111°50'47", in NE¼SW¼ sec. 16, T. 6 N., R. 1 E., on left bank 1,500 ft downstream from Wheeler Creek, 2,000 ft downstream from Pine View Dam, and 6½ miles northeast of Ogden.

Drainage area.—321 sq mi.

Records available.—October 1937 to September 1954, 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 4,798.30 ft above mean sea level (levels by Bureau of Reclamation).

Average discharge.—17 years (1937–54), 93.1 cfs (67,400 acre-ft per year).

Extremes.—Maximum discharge during year, 117 cfs Nov. 13 (gage height, 2.53 ft); minimum daily, 0.1 cfs Jan. 19–22.

1937–54: Maximum discharge, 3,190 cfs May 3, 1952 (gage height, 7.76 ft); minimum daily, that of Jan. 19–22, 1954, when reservoir gates were closed.

Remarks.—Records good except those for periods of ice effect, which are fair. Flow regulated by Pine View Reservoir (see p. 86). Pine View pipeline diverts water above station for use in irrigation and power development.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.2	1.2	1.0	1.0	0.2	0.7	6.6	49	52	32	29	28
2	10	1.1	.8	.9	.2	.6	*11	48	53	35	13	27
3	10	1.1	*.7	.9	.2	.6	17	40	56	33	28	24
4	10	1.2	.9	.8	*.2	*.6	20	43	55	29	30	25
5	9.6	1.3	.8	.7	.2	.5	31	55	56	30	32	26
6	9.6	2.1	.8	.7	.2	.6	38	35	48	30	32	26
7	9.6	1.5	1.0	.6	.2	.8	22	36	30	32	30	*25
8	10	1.4	.8	.6	.2	1.2	19	77	*36	37	30	18
9	10	1.4	.8	.6	.2	7.2	24	89	21	36	30	25
10	10	1.3	.9	.6	.2	8.9	21	81	16	32	30	24
11	11	1.1	.8	.7	.2	6.3	20	74	25	33	29	24
12	11	30	[b].8	*.7	.3	3.2	25	82	35	34	28	24
13	11	73	.8	.6	.5	2.3	28	*83	33	35	27	24
14	11	112	[b].8	.5	1.1	2.1	49	80	33	33	27	24
15	11	78	.9	.4	.7	2.3	30	72	33	35	27	22
16	11	1.0	.8	.3	.5	2.4	25	77	33	34	31	19
17	11	1.0	.8	.3	.5	2.3	25	77	35	34	29	21
18	11	.7	.8	.2	.5	2.1	24	85	37	33	27	22
19	11	.5	.8	.1	.5	2.4	21	86	37	34	27	21
20	11	.3	.8	.1	.5	2.6	18	*87	37	34	27	20
21	6.0	.5	.8	.1	.5	2.6	16	69	33	33	27	18
22	2.4	.6	.6	.1	.5	2.6	15	39	17	34	27	20
23	2.3	.7		.2	.5	3.2	14	49	38	34	27	10
24	2.3	.7		.6	.6	3.4	14	*45	36	33	27	1.3
25	1.8	.6		.3	.8	3.0	16	48	39	32	27	1.3
26	1.7	.7	[b].6	.3	.8	3.0	17	50	39	27	27	1.3
27	1.7	.7		.3	.7	3.2	*18	49	42	*20	27	1.3
28	1.7	.7		.2	.7	4.3	21	49	35	20	30	1.3
29	2.0	.7		.2	-------	6.6	32	50	*34	20	29	1.3
30	1.8	.8	.8	.2	-------	6.6	44	50	32	22	29	1.1
31	*1.4	-------	.9	.2	-------	5.5	-------	50	-------	30	28	-------
Total	229.1	317.9	23.9	14.0	12.4	93.7	681.6	1,904	1,106	970	868	525.9
Mean	7.39	10.6	0.77	0.45	0.44	3.02	22.7	61.4	36.9	31.3	28.0	17.5
Ac-ft	454	631	47	28	25	186	1,350	3,780	2,190	1,920	1,720	1,040

Calendar year 1953	Max 1,060	Min 0.3	Mean 88.6	Ac-ft 64,160
Water year 1953–54	Max 112	Min .1	Mean 18.5	Ac-ft 13,370

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

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 above mouth.

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

Records available.—May 1905 to September 1954 in reports of Geological Survey. January 1904 to May 1905 in reports of State engineer. Prior to 1909, gage heights only.

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

Extremes.—Maximum discharge during year, 679 cfs Apr. 19 (gage height, 4.71 ft); minimum daily, 7.7 cfs Aug. 17.

1904–54: 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. During summer months practically entire flow is diverted above station for irrigation. Flow is partly regulated by Echo, East Canyon and Pine View Reservoirs (see pp. 74, 78, 86).

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	88	279	217	*177*	*443*	355	342	22	32	30	36	*14*
2	62	275	219	181	432	415	355	21	32	29	28	14
3	59	291	*209	181	392	412	398	23	36	14	34	*16
4	62	307	207	221	368	*387	420	25	35	32	30	16
5	63	322	229	270	*345	363	443	20	37	33	28	20
6	58	368	219	207	342	363	507	20	37	33	36	20
7	56	365	223	209	345	363	510	*14*	41	27	32	20
8	59	384	219	209	340	355	440	16	*64	32	*87*	20
9	60	*392*	213	207	342	432	446	16	63	29	36	20
10	56	384	209	203	340	*578*	461	20	46	15	32	20
11	58	277	205	203	352	578	473	27	34	*18*	24	20
12	64	225	192	207	371	519	476	28	25	14	11	20
13	63	192	172	*207	382	470	507	*27	24	16	14	20
14	65	238	168	211	382	440	598	26	30	30	12	20
15	55	238	167	211	371	417	*636*	26	32	31	12	20
16	*54*	179	172	209	371	384	548	22	34	23	9.2	20
17	64	*162*	172	207	342	342	526	30	32	40	7.7	20
18	56	188	174	209	358	322	555	28	29	33	8.0	20
19	56	183	174	209	342	298	633	32	29	37	8.0	20
20	56	179	177	213	327	*295*	598	*27	24	32	8.8	19
21	64	184	183	211	317	315	479	37	23	32	8.8	20
22	112	184	175	*215*	*293*	322	340	111	*23*	37	8.8	20
23	305	192	168	270	298	330	267	*113*	*21*	*53*	9.2	20
24	*350*	198	160	355	310	340	147	*56	22	22	9.6	57
25	350	196	*158*	395	317	365	96	41	24	16	10	*105*
26	347	174	188	392	327	368	*46	41	28	17	10	91
27	327	172	303	395	340	342	50	54	40	45	11	79
28	322	170	327	392	345	342	40	37	*47	*48	11	73
29	334	188	*342*	406	-------	387	37	38	39	45	11	69
30	322	198	337	435	-------	387	*26*	39	32	43	12	67
31	*293	-------	293	*449*	-------	*355	-------	40	-------	37	12	-------
Total	4,340	7,284	6,571	8,066	9,839	11,941	11,400	1,077	1,015	937	557.1	980
Mean	140	243	212	260	351	385	380	34.7	33.8	30.2	18.0	32.7
Ac-ft	8,610	14,450	13,030	16,000	19,520	23,680	22,610	2,140	2,010	1,860	1,100	1,940

Calendar year 1953	Max 3,190	Min 38	Mean 524	Ac-ft 379,000
Water year 1953–54	Max 636	Min 7.7	Mean 175	Ac-ft 127,000

*Discharge measurement made on this day.

TRIBUTARIES BETWEEN WEBER AND JORDAN RIVERS

HOLMES CREEK NEAR KAYSVILLE, UTAH

Location.—Lat 41°03'18", long 111°53'40", in NE¼ sec. 25, T. 4 N., R. 1 W., on left bank 2 miles northeast of Kaysville.

Records available.—May 1950 to September 1954.

Gage.—Water-stage recorder and concrete control. Altitude of gage is 5,130 ft (by barometer).

Extremes.—Maximum discharge during year, 6.2 cfs Apr. 14 and May 21; minimum, 0.9 cfs several days in August.

1950–54: Maximum discharge, 36 cfs May 3, 1952 (gage height, 1.13 ft); no flow part of several days during 1951.

Remarks.—Records good. No diversion above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.9*	2.1	**2.0*	*1.6*	1.9	1.9	*1.9*	3.0	*2.8*	*2.0*	1.2	**1.0*
2	2.0	2.1	1.9	1.6	1.9	[b]*1.8	*2.1	3.0	2.8	2.0	1.3	1.0
3	2.0	2.0	1.8	1.8		[b]1.8	2.6	3.0	*2.6	1.9	1.2	1.1
4	2.0	2.0	1.8	1.9		[b]1.8	3.0	*3.0	2.4	1.9	*1.8*	1.0
5	2.0	2.0	1.9	*2.0*		1.8	3.4	3.0	2.8	1.9	1.6	1.0
6	2.0	2.1	1.8	2.0		1.8	3.9	3.0	2.8	1.9	1.5	1.0
7	2.0	2.0	1.8	2.0	[b]1.9	1.9	3.4	3.2	2.8	1.8	1.4	1.1
8	1.9	2.1	1.9			2.0	3.2	3.4	2.6	1.8	1.3	1.1
9	1.9	2.1	1.9	[a]1.8		*2.3*	3.4	3.9	2.6	1.6	1.2	1.1
10	1.9	2.1	1.8			2.1	3.4	4.2	2.4	1.6	1.1	1.1
11	1.9	2.0	[b]1.8	*1.9		2.0	3.6	4.2	2.3	1.6	1.2	1.1
12	1.9	2.0	[b]1.8	1.8	[a]2.0	1.8	3.9	4.2	2.3	1.5	1.3	1.2
13	1.9	2.0	1.9	1.8	[a]2.0	[b]1.8	4.2	4.2	2.3	*1.5	1.2	1.2
14	*1.9	2.0	1.9	1.8	2.0	2.0	*4.5*	4.2	2.3	1.6	1.3	1.1
15	1.9	2.0	1.9	1.8	1.9	1.9	4.2	*4.5*	2.3	1.5	1.1	1.0
16	2.0	2.1	1.9	1.8	*1.8	1.8	*3.4	4.5	2.4	1.5	1.2	*1.0
17	2.0	*2.1	1.9	1.8	1.8	**1.5*	3.4	4.2	2.3	1.5	1.2	1.0
18	1.9	2.1	1.9	1.8	1.8	1.8	3.4	*4.2	2.1	1.6	*1.1	1.1
19	1.9		1.9	1.8	[b]1.8	1.9	3.4	4.2	2.1	1.6	1.1	1.1
20	2.0	[b]2.0	1.9	1.8	[b]1.8	1.8	3.4	3.9	2.1	1.6	1.1	1.1
21	2.1		*1.9	1.8	2.0	1.8	3.4	4.5	2.1	1.5	1.2	1.1
22	2.1	2.1	1.8	1.8	1.9	1.8	3.4	4.2	*2.1	1.5	1.1	1.2
23	2.1	2.1		1.9	2.0	1.9	3.4	3.6	2.1	*1.4*	1.1	1.3
24	*2.3*	2.1		1.9	2.0	1.9	3.4	3.6	2.1	1.4	*1.0*	*1.5*
25	2.3	2.0		1.8	2.0	1.9	3.4	3.4	2.1	1.4	1.0	1.4
26	2.3	2.0	[b]1.6	1.8	2.0	1.8	3.0	3.2	2.3	1.6	1.0	1.4
27	2.3	2.0		1.8	[b]1.9	1.8	3.0	3.2	2.4	1.5	1.0	1.4
28	2.3	1.9		1.9	[b]1.9	1.8	3.0	3.0	2.3	1.5	1.0	1.3
29	*2.1	1.9	1.5	1.9	-------	1.9	3.0	3.0	2.1	*1.4	1.0	1.3
30	2.1	1.9	1.5	1.9	-------	1.9	3.0	3.0	*2.0*	1.4	1.0	1.2
31	2.1	-------	1.6	1.9	-------	1.9	-------	*2.8*	-------	1.4	1.0	-------
Total	63.0	60.9	55.3	56.8	53.5	57.9	99.7	112.5	70.7	49.9	36.8	34.5
Mean	2.03	2.03	1.78	1.83	1.91	1.87	3.32	3.63	2.36	1.61	1.19	1.15
Ac-ft	125	121	110	113	106	115	198	223	140	99	73	68

Calendar year 1953	Max 24	Min 1.5	Mean 4.32	Ac-ft 3,130
Water year 1953–54	Max 4.5	Min 1.0	Mean 2.06	Ac-ft 1,490

Peak discharge (base, 10 cfs)—— No peak above base.

*Disoharge 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.

FARMINGTON CREEK ABOVE DIVERSIONS, NEAR FARMINGTON, UTAH

Location.—Lat 41°00'05", long 111°52'25", in NE¼ sec. 18, T. 3 N., R. 1 E., on right bank 1.0 mile northeast of Farmington.

Drainage area.—9.9 sq mi, approximately.

Records available.—November 1949 to September 1954.

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.

Extremes.—Maximum discharge during year, 43 cfs Apr. 18 (gage height, 1.32 ft); minimum, 0.9 cfs Aug. 25, 30, 31.

1949–54: Maximum discharge, 254 cfs May 22, 1950 (gage height, 1.74 ft), site and datum then in use; minimum, that of Aug. 25, 30, 31, 1954.

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

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	1.7	3.6	*3.6	3.6	4.0	3.6	4.8	18	11	4.0	1.5	*1.1
2	2.0	4.0	4.4	3.6	4.0	*2.7	*6.9	17	11	4.0	1.5	1.5
3	2.2	4.4	4.8	3.6	4.0	3.0	11	17	10	3.6	1.5	2.0
4	2.4	4.0	4.8	3.6	4.0	3.0	15	19	9.4	3.6	5.7	1.9
5	2.4	4.0	4.8	3.6	4.0	3.0	19	22	11	4.0	4.0	1.4
6	2.4	5.6	4.8	3.6	4.4	3.0	20	26	11	3.0	2.0	1.4
7	2.4	4.4	4.8	3.6	4.4	3.3	14	28	10	3.0	1.9	1.4
8	2.4	3.6	5.2	3.6	4.8	4.0	11	28	10	2.7	1.9	1.5
9	2.7	3.6	5.2	3.6	4.4	8.1	13	28	10	2.4	1.7	1.2
10	3.0	3.6	5.2	3.0	4.4	10	12	28	10	2.4	1.7	1.1
11	3.0	4.0	4.0	*3.3	4.4	9.4	11	28	8.8	2.4	1.7	1.1
12	3.3	4.0	5.2	3.0	4.4	7.5	13	28	8.1	2.4	*1.9	1.2
13	3.3	4.8	4.8	3.0	4.8	5.6	16	28	8.1	*2.4	1.7	1.4
14	*3.3	4.4	4.8	3.3	4.4	5.2	*26	28	8.1	2.4	1.5	1.2
15	3.3	4.0	4.8	3.0	4.0	5.2	20	28	*7.5	2.2	1.4	1.1
16	3.3	4.0	4.8	3.0	*4.0	4.8	*19	28	9.4	2.0	1.4	*1.1
17	3.3	*3.6	4.8	3.0	4.0	*3.6	24	28	6.9	2.2	1.5	1.1
18	3.3	3.3	4.8	2.7	4.0	4.0	30	*26	6.2	2.4	1.5	1.2
19	3.3	2.7	4.8	2.7	3.6	5.2	*30	26	5.6	3.6	1.4	1.2
20	3.6	2.4	4.8	2.7	4.0	4.8	28	24	5.2	2.7	1.4	1.2
21	4.0	3.3	*4.4	2.7	4.4	4.8	26	28	4.8	3.6	1.7	1.2
22	4.0	3.3	3.6	2.7	4.4	4.4	26	26	4.8	2.4	1.7	1.4
23	4.0	3.6	3.6	2.7	4.0	4.8	26	22	4.4	2.4	1.5	3.3
24	4.4	3.6	4.0	2.7	4.0	4.8	30	20	4.0	2.2	1.2	2.4
25	4.4	3.6	4.0	2.7	4.4	4.8	34	19	4.0	2.4	1.4	2.0
26	4.0	3.6	4.0	3.0	4.4	4.4	*32	17	5.2	3.6	1.5	1.7
27	4.4	3.6	4.4	3.0	3.6	4.0	32	16	11	3.0	1.2	1.5
28	4.4	4.0	4.0	3.0	3.6	4.4	32	15	7.5	2.2	1.1	1.5
29	*4.0	4.0	4.0	3.3	-------	4.4	26	14	5.2	*1.9	1.1	1.5
30	4.0	3.6	4.0	3.3	-------	4.8	22	14	4.4	1.9	1.1	1.7
31	3.6	-------	4.0	3.6	-------	4.0	-------	18	-------	1.7	1.1	-------
Total	101.8	114.2	139.2	97.8	116.8	148.6	629.7	706	232.6	84.7	53.4	44.5
Mean	3.28	3.81	4.49	3.15	4.17	4.79	21.0	22.8	7.75	2.73	1.72	1.48
Ac-ft	202	227	276	194	232	295	1,250	1,400	461	168	106	88

Calendar year 1953	Max 115	Min 1.5	Mean 14.4	Ac-ft 10,390
Water year 1953–54	Max 34	Min 1.1	Mean 6.77	Ac-ft 4,900

Peak discharge (base, 80 cfs)------ No peak above base.

*Discharge measurement made on this day.

RICKS CREEK ABOVE DIVERSIONS, NEAR CENTERVILLE, UTAH

Location.—Lat 40°56'24", long 111°52'10", in NW¼ sec. 5, T. 2 N., R. 1 E., on left bank half a mile east of alternate U. S. Highway 91 and 1.2 miles north of Centerville.

Records available.—April 1950 to September 1954.

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

Extremes.—Maximum discharge during year, 4.0 cfs Apr. 28 (gage height, 0.79 ft); minimum, 0.3 cfs Sept.14.

1950–54: Maximum discharge, 31 cfs May 15, 1952; maximum gage height, 1.27 ft May 23, 1950; minimum discharge, 0.1 cfs Apr. 9, 1953.

Remarks.—Records good.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	1.0	*0.7	0.8	0.7	0.8	1.2	3.0	1.9	0.9	0.7	0.4
2	.9	1.0	.7	.8	.7	*.7	*1.3	2.8	1.9	.9	*.6	.5
3	1.0	.9	.7	.8	.7	.8	1.6	*2.6	*1.7	.9	.6	.6
4	1.0	.9	.6	.8	.7	.8	1.7	2.8	1.6	1.0	1.0	.4
5	1.0	.9	.8	.8	.7	.8	2.0	2.8	2.0	1.0	.7	.4
6	.9	1.1	.8	.8	.7	.8	2.2	3.2	2.0	1.0	.6	.4
7	.9	1.0	.8	.8	.7	.9	1.9	3.2	1.9	.9	.6	.4
8	.9	1.0	.8	.8	.7	.9	1.7	3.4	1.9	.9	.6	.4
9	.9	.9	.8	.8	.7	1.2	1.7	3.6	1.7	.9	.6	.4
10	.9	.9	.8	.8	.7	1.1	1.7	3.6	1.6	.9	.6	.4
11	1.0	.9	.8	.8	.7	1.1	1.6	3.6	1.6	.9	.6	.4
12	1.0	1.0	.8	*.8	.7	.9	1.7	3.6	1.4	.9	.6	.4
13	.9	.9	.7	.8	.7	.9	1.6	3.6	1.3	.8	.6	.4
14	*1.0	.9	.8	.8	.7	1.0	2.6	3.6	1.4	.8	.6	.4
15	.9	.9	.8	.8	.7	1.1	2.0	3.4	1.3	*.8	.5	.4
16	.9	.8	.8	.8	*.7	1.1	*1.9	3.2	1.6	.8	.6	*.4
17	.9	*.9	.8	.8	.7	*.9	2.0	3.2	1.3	.9	.6	.4
18	.9	.9	.9	.8	.6	1.1	2.4	*3.0	1.2	.9	.6	.4
19	1.0	.8	.9	.8	.7	1.1	2.4	2.8	1.2	.9	*.6	.4
20	1.0	.8	.9	.8	.8	1.0	2.4	2.6	1.1	.8	.6	.4
21	1.0	.8	*.9	.8	.8	1.1	2.4	3.0	1.1	.8	.7	.4
22	1.0	.8	.8	.8	.8	1.1	2.4	3.2	*1.1	.8	.6	.4
23	1.1	.8	.8	.8	.8	1.1	2.4	2.4	1.0	.8	.6	.6
24	1.1	.8	.8	.8	.8	1.1	2.6	2.2	1.1	.7	.5	.5
25	1.0	.8	.8	.8	.8	1.1	3.0	2.0	1.0	.8	.5	.4
26	1.0	.8	.8	.7	.8	1.1	3.2	1.9	1.2	.8	.5	.4
27	1.1	.8	.8	.8	.8	1.1	3.2	2.0	1.3	.8	.4	.4
28	1.0	.8	.8	.8	.8	1.2	3.6	1.9	1.1	.8	.4	.4
29	*1.0	.8	.8	.8	-------	1.1	3.4	1.9	1.0	.7	.4	.4
30	1.0	.8	.8	.7	-------	1.2	3.2	2.0	1.0	.7	.4	.4
31	1.0	-------	.8	.7	-------	1.1	-------	1.9	-------	.7	.4	-------
Total	30.1	26.4	24.6	24.5	20.4	31.3	67.0	88.0	42.5	26.2	17.9	12.6
Mean	0.97	0.88	0.79	0.79	0.73	1.01	2.23	2.84	1.42	0.85	0.58	0.42
Ac-ft	60	52	49	49	40	62	133	175	84	52	36	25

Calendar year 1953	Max 26	Min 0.6	Mean 2.98	Ac-ft 2,160
Water year 1953–54	Max 3.6	Min .4	Mean 1.13	Ac-ft 817

Peak discharge (base, 10 cfs)..... No peak above base.

*Discharge measurement made on this day.

PARRISH CREEK ABOVE DIVERSIONS, NEAR CENTERVILLE, UTAH

Location.—Lat 40°55'25", long 111°51'30", in NE¼ sec. 8, T. 2 N., R. 1 E., on left bank 1 mile northeast of Centerville.

Drainage area.—2.0 sq mi, approximately.

Records available.—November 1949 to September 1954.

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

Extremes.—Maximum discharge during year, 2.7 cfs Apr. 18; minimum, 0.2 cfs on several days during July, August, and September.

1949–54: Maximum discharge, 30 cfs May 5, 1952; minimum, 0.2 cfs at times in July, August, and September 1954.

Remarks.—Records good except those for period of doubtful or no gage-height record, which are fair. Record includes flow through pipeline for Centerville City water supply.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0.5*	0.6	**0.4*	*0.4*	*0.4*	*0.4*	*0.7*	1.9	*1.0*	0.5	*0.2*	0.2
2	.5	.6	.4	*.5*	.4	*.4	*.8	1.9	1.0	.5	*.2	.2
3	.5	.6	.4	.5	.4	.4	1.0	*1.8	*.9	.5	.2	.4
4	.5	.6	.4	.5	.4	.4	1.1	1.8	[a] .9	.5	.2	.2
5	.5	.6	.4	.5	.4	.5	1.3	1.8	[a] .9	*.6*	.2	.2
6	.5	*.8*	.4	.5	.4	.5	1.5	1.9	[a] .8	.5	.2	.2
7	.5	.7	.4	.5	.4	.5	1.2	2.0	[a] .8	.5	.2	.2
8	.5	.7	.4	.5	.4	.5	1.3	2.3	[a] .8	.5	.2	.2
9	.5	.7	.4	.5	.4	.6	1.3	2.4	[a] .8	.4	.2	.2
10	.5	.6	.4	.5	.4	.7	1.4	*2.5*	[a] .8	.4	.2	.2
11	.5	.6	.4	.5	.4	.7	1.5	2.5	[a] .7	.4	.2	.3
12	[a] .5	.6	.4	*.5	.4	.6	1.7	2.4	[a] .7	.4	.2	.3
13	*.5	.6	.4	.5	.4	.6	1.8	2.2	[a] .6	.4	.2	.3
14	*.6*	.6	.4	.5	.4	.6	2.1	2.1	[a] .6	.4	.2	.3
15	.6	.6	.4	.5	*.5*	.6	1.8	2.1	[a] .6	*.4	.2	.3
16	.6	.6	.4	.4	*.5	.6	*1.8	2.0	[a] .6	.3	.2	*.3
17	.6	*.6	.4	.4	.5	.6	2.1	1.9	[a] .6	.3	.2	
18	.5	.5	.4	.4	.4	.7	*2.3*	*1.7	[a] .6	.3	.2	
19	.5	.5	.4	.4	.4	*.6	2.2	1.6	[a] .6	.3	*.3	
20	.6	.5	.4	.4	.5	.6	2.0	1.6	[a] .5	.4	.2	
21	.6	.5	.4	.4	.5	.6	2.0	1.6	[a] .5	.5	.3	
22	.6	.5	*.4	.4	.5	.6	2.0	1.8	*.5	.4	.3	
23	.6	.5	.4	.5	.5	.7	2.0	1.5	.5	.4	.3	[d] .3
24	.6	*.4*	.4	.5	.5	.7	2.0	1.3	.5	.4	.2	
25	.6	.4	.4	.4	.5	.7	1.9	1.3	.5	.4	.2	
26	.6	.4	*.5*	.4	.5	.6	2.0	1.3	.6	.4	.2	
27	.6	.4	.4	.4	.5	.7	2.0	1.2	.9	.4	.2	
28	*.6	.4	.4	.5	.5	.7	2.0	1.2	.6	*.3*	.2	
29	.6	.4	.4	.4	-------	.7	2.0	1.2	.5	.3	.2	
30	.6	.4	.4	.5	-------	.7	1.9	1.2	.5	.3	*.2	
31	.6	-------	.4	.4	-------	.7	-------	*1.1*	-------	*.2*	.2	-------
Total	17.1	16.5	12.5	14.2	12.4	18.5	50.7	55.1	20.4	12.5	6.6	8.2
Mean	0.55	0.55	0.40	0.46	0.44	0.60	1.69	1.78	0.68	0.40	0.21	0.27
Ac-ft	34	33	25	28	25	37	101	109	40	25	13	16

Calendar year 1953	Max 21	Min 0.4	Mean 2.21	Ac-ft 1,600
Water year 1953–54	Max 2.5	Min ---	Mean .67	Ac-ft 486

*Discharge measurement made on this day.

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

[d] Doubtful gage-height record; discharge computed on basis of records for nearby stations.

CENTERVILLE CREEK ABOVE DIVERSIONS, NEAR CENTERVILLE, UTAH

Location.—Lat 40°55′00″, long 111°51′20″, in SE¼ sec. 8, T. 2 N., R. 1 E., on right bank 1.2 miles east of Centerville.

Records available.—November 1949 to September 1954.

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

Extremes.—Maximum daily discharge during year, 3.6 cfs Apr. 14; minimum daily, 0.6 cfs Aug. 19, Sept. 4, 14–22.

1949–54: Maximum daily discharge, 30 cfs May 6, 7, 1952; minimum daily, that of Aug. 19, Sept. 4, 14–22, 1954.

Remarks.—Records good except those for periods of no gage-height record, which are fair. 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	*1.3*	*1.4		1.3	*1.5*	*1.2*	2.3	1.7	1.0	0.7	0.7
2	1.3	1.4	1.3		1.2	*1.3	*1.2	2.1	1.6	.9	*.7	.8
3	1.3	1.4	1.3		1.2	1.2	1.5	*2.1	*1.3	.9	.7	*1.2*
4		1.3	1.4		1.2	1.2	2.3	2.0	1.2	*1.1*	*1.2*	*.6*
5		1.4	1.4		1.2	*1.1*	3.0	2.1	1.7	1.1	.9	.7
	[a] 1.3											
6		*1.7*	1.3	[a] 1.3	1.2	1.1	3.2	2.1	*1.9*	.9	.8	.8
7		1.4			1.2	1.3	2.7	2.2	1.8	.9	.8	.7
8		1.5			1.2	1.2	2.6	2.2	1.7	.9	.8	.8
9		1.6			1.2	1.3	2.8	2.5	1.7	.8	.8	.8
10		1.6			1.2	1.2	2.8	*2.6*	1.6	.8	.8	.7
	[a] 1.2											
11		1.6			1.2	1.2	2.6	2.5	1.5	.8	.8	.7
12		1.7		*1.3	1.2	1.2	2.7	2.5	1.4	.8	.8	.7
13		1.7	[a] 1.3	1.4	1.2	1.2	2.8	2.5	1.3	.8	.8	.7
14	*1.2	1.6		1.4	1.2	1.1	*3.6*	2.5	1.4	.7	.7	.6
15	1.2	1.6		1.3	*1.1*	1.1	3.1	2.5	1.3	*.7	.7	.6
16	1.2	1.6		1.3	*1.1	1.1	2.9	2.5	1.6	.7	.7	*.6
17	1.2	*1.7		1.3	1.1	1.1	2.9	2.5	1.3	.7	.7	.6
18	1.2	1.6		1.3	1.1	1.2	3.1	*2.4	1.2	.8	.7	.6
19	1.2	*1.5*		1.3	1.2	*1.2	*2.8	2.3	1.2	.8	*.6*	.6
20	1.3	1.4		1.8	1.2	1.1	2.6	2.2	1.2	.8	.7	.6
21	1.3	1.5		1.3	1.8	1.1	2.5	2.5	1.2	.9	.8	.6
22	1.3	1.6	(*)	1.3	1.4	1.1	2.5	2.6	*1.1	.8	.8	.6
23	1.3	1.6		1.3	1.4	1.2	2.4	2.2	1.1	.8	.8	.8
24	1.4	1.6		1.4	1.5	1.2	2.4	2.0	1.1	.7	.7	.8
25	1.3	1.6		1.3	*1.6*	1.2	2.5	1.9	*1.0*	.8	.7	.7
			[a] 1.2									
26	1.3	1.6		1.2	1.6	1.2	2.4	1.8	1.1	.8	.7	.7
27	1.3	1.6		1.2	1.6	1.2	2.3	1.8	1.6	.8	.7	.8
28	*1.3	1.6		1.3	1.5	1.2	2.6	1.8	1.2	.8	.7	.9
29	1.4	[a] 1.5		1.3	-------	1.2	2.5	*1.7*	1.1	.8	.7	.8
30	1.3	[a] 1.5		1.3	-------	1.2	2.4	1.8	1.1	.7	*.7	.8
31	1.3	-------		1.3	-------	1.2	-------	1.8	-------	.7	.7	-------
Total	39.2	46.3	39.5	40.4	35.6	36.9	76.9	68.5	41.2	25.5	23.4	21.6
Mean	1.26	1.54	1.27	1.30	1.27	1.19	2.56	2.21	1.37	0.82	0.75	0.72
Ac-ft	78	92	78	80	71	73	153	136	82	51	46	43

Calendar year 1953	Max 20	Min 1.0	Mean 3.52	Ac-ft 2,550
Water year 1953–54	Max 3.6	Min .6	Mean 1.36	Ac-ft 983

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of discharge measurements, weather records, and records for nearby stations.

STONE CREEK ABOVE DIVERSIONS, NEAR BOUNTIFUL, UTAH

Location.—Lat 40°54'10", long 111°50'40", in NW¼ sec. 21, T. 2 N., R. 1 E., on right bank 2.2 miles east of Bountiful.

Records available.—April 1950 to September 1954.

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

Extremes.—Maximum discharge during year, 6.4 cfs Apr. 14 (gage height, 1.03 ft); minimum not determined, occurred during period of no gage-height record.

1950–54: Maximum discharge, 82 cfs May 5, 1952 (gage height, 2.79 ft); no flow Oct. 5, 1951.

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

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		1.2	1.3	*1.1*	1.3	*1.2	*1.1*	3.6	*2.0*			
2		1.2	1.3	1.1	1.3	*1.0*	1.3	3.0	1.8			
3		1.2	1.3	1.2	1.4	1.2	2.0	*3.0	*1.4	0.8		
4		1.2	1.3	1.2	1.4	1.1	2.8	3.0	1.3			
5		1.2	*1.4*	1.2	1.4	1.1	*3.6	3.0	1.6		[a] 0.4	
6		*1.6*	1.2	1.2	1.4	1.1	3.9	3.0	2.0			
7	0.5	1.3	1.2	1.2	1.4	1.2	3.3	3.0	2.0			
8		1.3	1.2	1.2	1.4	1.3	3.0	3.6	1.6			
9		1.3	1.2	1.2	1.4	2.0	2.8	3.9	1.6			
10		1.3	1.3	1.1	1.4	*2.5*	3.0	*4.6*	1.6			
11		1.3	1.2	1.2	1.4	1.8	2.8	4.6	1.3	.7		
12		1.3	1.2	*1.2	1.4	1.4	3.3	4.6	1.2			
13	(*)	1.3	1.1	1.2	1.4	1.3	3.9	4.6	1.1	(**)		
14	.6	1.2	1.2	1.2	1.4	1.3	*4.9*	4.6	1.2			
15	.6	1.2	1.2	1.1	*1.3	1.4	4.6	4.6	1.1			[a] 0.3 (**)
16	.7	*1.2	1.3	1.1	1.3	1.4	4.2	4.2	1.2			
17	.8	1.2	1.3	1.1	1.3	1.3	3.9	4.2			(*)	
18	.7	1.2	1.2	1.1	*1.1*	1.4	4.2	*3.9				
19	.8	1.2	1.2	1.1	1.2	*1.4	*4.2	3.9				
20	.9	*1.1*	1.2	1.1	1.3	1.4	3.6	3.3				
21	1.1	1.1	1.2	1.1	1.4	1.4	3.6	3.9	1.0	.6	[a] .3	
22	1.1	1.1	*1.0	1.1	1.3	1.4	3.6	4.2	(*)			
23	1.3	1.2	1.0	1.1	1.3	1.3	3.9	3.3				
24	*1.4*	1.2	1.1	*1.5*	1.6	1.3	3.9	2.8				
25	1.4	1.2	1.1	1.2	*1.8*	1.3	4.2	2.5				
26	1.3	1.2	1.1	1.1	1.6	1.3	4.2	2.5				
27	1.4	1.2	1.1	1.2	1.3	1.3	4.2	2.5				
28	*1.3	1.2	1.1	1.3	1.2	1.2	4.6	2.3	.8	.5		
29	1.2	1.2	1.1	1.3	-------	1.2	4.2	2.3				
30	1.2	*1.2	1.0	1.3	-------	1.2	3.9	2.3		(*)	(*)	
31	1.2	-------	1.0	1.3	-------	1.1	-------	*2.0*	-------	[a] .5		-------
Total	25.5	36.8	36.6	36.4	38.4	41.6	106.7	106.8	37.0	20.0	10.3	9.0
Mean	0.82	1.23	1.18	1.17	1.37	1.34	3.56	3.44	1.23	0.65	0.33	0.3
Ac-ft	51	73	73	72	76	83	212	212	73	40	20	18

Calendar year 1953	Max 41	Min ---	Mean 4.56	Ac-ft 3,310
Water year 1953–54	Max 4.9	Min ---	Mean 1.38	Ac-ft 1,000

Peak discharge (base, 15 cfs)------ No peak above base.

*Discharge measurement made on this day.
**Field estimate made on this day.
[a] No gage-height record; discharge estimated on basis of engineers' notes, weather records, and records for nearby streams.

NOTE.—Water bypassing gage in pipeline Oct. 1–13, June 17 to July 30; discharge computed on basis of record at station, computation of flow at outlet of pipe, engineers' notes, and records for nearby streams.

MILL CREEK AT MUELLER PARK, NEAR BOUNTIFUL, UTAH

Location.—Lat 40°51'50", long 111°50'10", in SE¼ sec. 33, T. 2 N., R. 1 E., on right bank 2 miles southeast of Bountiful.

Drainage area.—8.8 sq mi, approximately.

Records available.—April 1950 to September 1954.

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

Extremes.—Maximum daily discharge during year, 10 cfs Apr. 14; minimum daily, 0.5 cfs for several days during August and September.

1950–54: Maximum daily discharge, 140 cfs Apr. 28, 1952; minimum, that of August and September 1954.

Remarks.—Records good. Records include flow of pipeline which diverts about a quarter of a mile above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.3*	1.8	1.7	*1.5*	1.6	*2.2	*2.9*	6.0	4.4	2.0	1.2	*0.5*
2	1.3	1.8	1.6	1.5	1.6	*1.9*	3.2	5.7	4.2	2.0	1.2	.8
3	1.5	1.8	1.6	1.5	1.7	2.0	4.5	*5.9	4.0	1.9	1.1	.9
4	1.7	1.9	1.6	1.5	1.7	2.1	5.6	5.8	3.9	1.8	*1.5*	.8
5	1.7	1.9	1.8	1.5	1.7	2.0	*6.1	5.8	4.4	1.9	1.4	.7
6	1.7	*2.3*	1.8	1.5	1.7	2.0	8.1	5.9	*4.6*	1.7	1.1	.7
7	1.5	2.0	1.8	1.5	1.6	2.1	8.6	5.8	4.2	1.6	1.1	.6
8	*1.5*	1.9	1.8	1.5	1.6	*2.2*	6.2	7.4	3.9	1.5	1.1	.6
9	1.5	1.8	1.7	1.6	1.6	2.8	*6.6	8.3	3.9	1.5	1.0	.6
10	1.4	1.8	1.7	1.6	1.6	*3.1*	6.9	8.9	4.0	1.5	1.0	.5
11	1.4	1.8	1.6	1.6	1.6	3.1	6.8	8.4	3.7	1.5	1.0	.5
12	1.5	1.8	*2.0*	*1.6	1.6	2.7	7.7	8.7	3.6	1.4	1.0	.6
13	*1.4	*1.6*	1.9	1.6	1.7	2.6	8.9	9.1	3.4	1.4	1.0	.6
14	1.5	1.6	1.9	1.6	2.0	2.6	*10*	9.6	3.6	1.4	.9	.5
15	1.5	1.6	1.9	1.6	*1.7	2.6	9.4	9.6	*3.3	*1.2	.8	.5
16	1.7	*1.6	1.9	1.6	1.7	2.6	8.6	9.4	3.4	1.2	.8	*.5
17	1.7	1.9	1.9	1.6	1.7	2.6	8.6	*9.9*	3.1	1.4	*.9	.5
18	1.5	1.9	1.9	1.6	*1.5*	2.9	9.3	*9.5	3.1	1.6	.9	.6
19	1.5	1.8	1.9	1.6	1.7	*2.7	*9.9	8.8	3.0	1.6	.8	.6
20	1.6	1.6	1.8	1.6	1.9	2.8	8.5	8.7	2.8	1.6	.7	.6
21	1.8	1.8	*1.8	1.6	1.7	2.8	8.0	9.3	2.6	*2.1*	1.0	.5
22	1.7	1.8	1.7	1.6	1.7	2.6	*8.2	9.5	2.4	1.5	1.0	.5
23	1.6	1.8	1.7	1.6	1.7	2.8	8.2	*6.5	*2.3*	1.3	.9	.7
24	*1.9*	1.6	1.7	*1.7*	1.9	2.8	8.0	5.5	2.3	1.2	.7	.7
25	1.9	1.6	1.6	1.7	2.0	*2.5*	8.0	5.2	2.3	*1.0*	.7	.7
26	1.9	1.6	1.7	1.7	2.0	2.4	7.6	5.6	2.5	1.2	.6	.7
27	1.8	1.7	1.6	1.6	*2.1*	2.4	7.3	5.4	3.6	1.2	.7	.7
28	*1.6	1.7	*1.5*	1.6	2.1	2.6	8.1	4.9	2.9	1.1	.6	.6
29	1.8	1.6	1.5	1.7	-------	2.7	7.5	4.8	2.3	1.0	*.5*	.6
30	1.8	*1.6	1.5	1.7	-------	2.7	6.7	4.7	2.3	*1.1	*.5	.6
31	1.8	-------	1.5	1.7	-------	2.6	-------	*4.5*	-------	1.1	.5	-------
Total	50.0	53.0	53.6	49.4	48.7	78.5	224.0	223.1	100.0	45.5	28.2	18.5
Mean	1.61	1.77	1.73	1.59	1.74	2.53	7.47	7.20	3.33	1.47	0.91	0.62
Ac-ft	99	105	106	98	97	156	444	443	198	90	56	37

Calendar year 1953	Max 61	Min 1.2	Mean 8.80	Ac-ft 6,380
Water year 1953–54	Max 10	Min .5	Mean 2.66	Ac-ft 1,930

*Discharge measurement made on this day.

JORDAN RIVER BASIN

SALT CREEK AT NEPHI, UTAH

Location.—Lat 39°42'45", long 111°48'25", in NE¼ sec. 3, T. 13 S., R. 1 E., on right bank 1 mile east of Nephi.

Records available.—December 1950 to September 1954.

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.

Extremes.—Maximum discharge during year, 299 cfs Sept. 3; minimum daily, 6.5 cfs Aug. 27, 30, Sept. 1.

1950–54: Maximum discharge, 724 cfs May 2, 1952; minimum, 1.1 cfs Dec. 13, 1951.

Remarks.—Records good except those for periods 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*10*	14	*13*	11	11	13	*17*	32	*29*	18	10	*6.5*
2	11	14	13	11	*10*	*12*	17	28	28	17	8.4	11
3	12	13	13	11	10	12	20	*24*	27	*17*	9.8	25
4	12	13	13	11	10	12	20	*25	28	17	10	
5	11	14	13	11	10	12	23	27	27	17	9.4	
6	11	*15*	13	11	11	12	25	32	28	16	8.7	
7	11	14	13	11	10	12	25	39	25	15	9.2	
8	11	13	13	11	10	12	25	45	24	15	9.8	
9	12	13	12	11	10	13	25	50	24	14	9.8	
10	12	13	13	9.8	10	13	26	*52	23	14	9.4	
11	13	13	12	*9.5	10	14	27	50	23	14	9.4	[a]8.5
12	13	13	13	11	11	13	*28	53	23	14	9.4	
13	*13	13	13	11	11	12	33	*54	24	15	9.8	
14	13	13	*13	11	*13*	13	38	54	25	15	9.8	
15	13	13	13	11	*12	13	39	54	23	14	9.8	
16	13	*13	13	11	12	*13	37	53	23	14	*10	
17	13	13	13	11	12	13	39	54	22	20	9.7	
18	13	13	13	11	13	13	*45*	54	23	14	9.4	
19	13	13	13	11	12	13	45	58	23	13	9.1	
20	*14*	*12*	13	11	12	14	44	54	23	12	8.8	*10
21	13	14	13	11	12	14	43	*59*	*23	12	10	10
22	13	14	11	10	12	14	41	59	24	*12	*11*	9.8
23	14	13	*10*	11	12	15	40	47	22	12	9.1	10
24	14	13	11	11	12	15	42	*42	22	12	7.1	12
25	14	13	11	*14*	13	15	39	40	22	16	6.7	11
26	14	13	11	11	13	15	37	39	23	*26*	6.7	*27*
27	14	13	12	11	12	15	35	36	24	13	*6.5*	11
28	13	13	11	11	12	16	37	34	22	12	7.0	11
29	13	13	12	11	-------	17	33	32	*20*	12	7.0	10
30	14	13	11	11	-------	*18*	35	32	20	*11*	6.5	10
31	14	-------	11	11	-------	17	-------	30	-------	11	6.7	-------
Total	394	397	382	340.3	318	425	980	1,342	717	454	274.0	310.3
Mean	12.7	13.2	12.3	11.0	11.4	13.7	32.7	43.3	23.9	14.6	8.84	10.3
Ac-ft	781	787	758	675	631	843	1,940	2,660	1,420	900	543	615

Calendar year 1953	Max 113	Min 9.5	Mean 26.8	Ac-ft 19,380
Water year 1953–54	Max 59	Min 6.5	Mean 17.4	Ac-ft 12,550

*Discharge measurement made on this day.

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

CURRANT CREEK NEAR GOSHEN, UTAH

Location.—Lat 39°53'05", long 111°53'05", in NW¼SE¼ sec. 1, T. 11 S., R. 1 W., on right bank 0.9 miles upstream from canal diversions and 5.4 miles south of Goshen.

Drainage area.—303 sq mi.

Records available.—August 1953 to October 1954.

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

Extremes.—Maximum discharge during period September 1953 to September 1954, 77 cfs Apr. 26 (gage height, 1.67 ft); minimum daily, 0.5 cfs Dec. 30.

Remarks.—Records good except 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.

Discharge, in cubic feet per second, 1953

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-------	51	11	-------	51	21	-------	23
2	-------	51	12	-------	51	22	-------	30
3	-------	50	13	-------	51	23	-------	30
4	-------	51	14	-------	52	24	-------	30
5	-------	51	15	-------	52	25	-------	34
6	-------	51	16	-------	52	26	-------	39
7	-------	51	17	-------	26	27	-------	39
8	-------	51	18	-------	7.4	28	*51	39
9	-------	51	19	-------	12	29	50	39
10	-------	51	20	-------	18	30	50	38
						31	50	-------
Total							-------	1,222.4
Mean							-------	40.7
Runoff in acre-feet							-------	2,420

CURRANT CREEK NEAR GOSHEN, UTAH—Continued

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*36	19	4.8		5.3	5.1	16	69	63	54	34	46
2	34	15	5.1		5.1	3.5	24	67	57	50	42	45
3	27	12	5.1		5.1	1.9	22	63	57	51	47	44
4	22	*14	5.1		5.1	1.9	22	52	54	51	46	44
5	22	17	4.8		5.3	1.9	23	55	51	51	46	44
6	22	17	[b]4.5		5.3	1.9	22	63	51	51	46	44
7	21	17	4.2	(*)	5.3	1.9	23	67	51	50	46	
8	19	17	4.8		5.3	1.9	*23	68	51	50	46	[a]44
9	19	17	4.8		*5.3	*1.9	22	68	51	50	46	
10	23	17	*4.6	[a]0.8	5.3	1.8	21	68	51	50	46	
11	26	16	3.6		5.3	1.8	21	67	55	50	46	
12	26	15	2.7		5.3	1.8	21	*67	57	50	46	
13	26	15	2.4		5.3	1.7	21	67	57	50	46	[a]30
14	26	15	2.3		5.3	1.7	20	67	58	50	46	
15	26	15	1.8		5.3	1.7	20	67	58	*41	46	
16	26	15	1.7		5.3	1.7	20	67	58	18	46	*29
17	26	15	1.6		5.5	1.7	26	67	*58	14	*47	31
18	25	15	1.3		5.8	1.7	30	67	58	14	47	34
19	20	15	1.1		5.8	1.7	30	51	58	35	50	34
20	16	15	1.1	[a]4.0	5.8	1.7	35	26	57	52	53	34
21	16	15	1.0	6.8	5.8	1.7	43	50	47	51	56	34
22	15	15	.9	5.1	5.8	1.7	43	66	27	49	59	33
23	15	15		5.1	5.8	1.7	50	66	44	49	59	33
24	15	15		5.3	6.0	1.7	58	67	58	47	58	33
25	15	15	[b].9	5.5	5.5	1.9	59	68	58	44	54	28
26	15	15		5.5	5.1	2.4	69	*70	58	43	48	24
27	17	15	.8	5.5	5.1	3.1	*70	70	60	39	45	20
28	18	15	.7	5.5	5.1	3.5	72	69	64	38	45	17
29	18	15	.6	5.5	-------	4.2	69	70	64	38	44	17
30	18	9.8	.5	5.3	-------	5.3	69	70	64	36	44	17
31	18	-------	.6	5.3	-------	7.1	-------	70	-------	35	44	-------
Total	668	457.8	76.1	79.6	151.3	75.2	1,064	1,989	1,655	1,351	1,474	1,010
Mean	21.5	15.3	2.45	2.57	5.40	2.43	35.5	64.2	55.2	43.6	47.5	33.7
Ac-ft	1,320	908	151	158	300	149	2,110	3,950	3,280	2,680	2,920	2,000

Calendar year 1953	Max --	Min ---	Mean ----	Ac-ft ------
Water year 1953–54	Max 72	Min 0.5	Mean 27.5	Ac-ft 19,930

*Discharge measurement made on this day.

[a] No gage-height record; discharge interpolated or estimated on basis of 1 discharge measurement and water commissioner's notes.

[b] Stage-discharge relation affected by ice.

PAYSON CREEK ABOVE DIVERSIONS, NEAR PAYSON, UTAH

Location.—Lat 39°58'10", long 111°41'35" (revised), in SE¼SE¼ sec. 3, T. 10 S., R. 2 E., on left bank a quarter of a mile upstream from diversion dam for Strawberry Water Users Association powerplant, 5 miles southeast of Payson.

Drainage area.—19.6 sq mi.

Records available.—July 1947 to September 1954.

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

Average discharge.—7 years, 14.1 cfs (10,210 acre-ft per year).

Extremes.—Maximum discharge during year, 71 cfs May 6 (gage height, 1.08 ft); minimum, 3.7 cfs Sept. 22, but possibly less during of doubtful gage-height record.

1947–54: 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, 2.1 cfs Feb. 12, 1952.

Remarks.—Records good except those for periods of ice effect or doubtful gage-height record, which are fair. Flow affected by several small reservoirs.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*5.0	5.5	5.0	5.3		5.5	6.0	22	11	7.7	6.0	7.6
2	5.3	5.3	5.1	5.3		5.5	6.0	30	11	8.7	5.9	8.2
3	6.2	5.3	5.1	5.3			6.0	30	11	9.4	5.7	8.2
4	6.0	*5.7	5.1	5.5		[b]5.5	6.4	42	10	9.2	6.0	7.4
5	5.7	5.9	5.0	5.5			7.0	47	10	8.9	6.0	7.4
6	5.7	6.0	5.3	5.5		5.7	7.7	50	11	8.4	5.9	6.2
7	5.7	5.7	5.1	*5.3	[d]5.3	5.7	6.8	*47	11	8.0	5.9	6.2
8	5.7	5.7	[b]5.1			5.7	*7.2	40	10	7.2	5.7	7.9
9	5.7	5.7	[b]5.1		(*)	*6.2	8.4	35	10	7.2	5.7	6.5
10	5.7	5.7	5.1			6.2	8.7	31	11	7.0	5.7	6.0
11	5.7	5.9	[b]*5.0			5.9	9.2	26	10	7.0	5.9	5.2
12	5.9	5.7	[b]5.0	[d]5.1		5.9	11	*23	9.7	7.5	5.7	5.0
13	5.9	5.5	4.8			[b]5.7	14	20	9.4	8.0	5.7	4.6
14	5.7	5.5	5.0		5.5	[b]5.7	26	19	10	7.2	5.7	4.4
15	5.9	5.5	5.0		5.5	5.5	27	18	9.7	*6.8	5.5	4.1
16	5.7	5.5	5.0		5.5	5.7	26	17	9.4	6.8	5.7	*4.1
17	5.7	5.5	5.0		5.5	5.9	31	17	*9.2	6.8	*5.7	4.1
18	5.5	5.3	5.1	5.3	5.5	5.9	39	17	8.7	7.0	6.5	4.1
19	5.3	5.1	5.3	5.3		5.7	42	16	8.4	7.0	7.9	4.1
20	6.2	5.0	5.1	5.3		5.7	40	15	9.2	6.8	11	4.1
21	6.6	5.3	5.3	5.3		5.7	38	15	10	6.6	11	4.1
22	5.7	5.5		5.3		5.5	39	19	10	6.6	11	5.9
23	5.7	5.9		5.3	[d]5.3	5.5	41	17	9.4	6.6	10	4.8
24	5.9	5.7	[b]5.3			5.5	41	15	9.4	6.4	10	5.2
25	5.9	5.5				5.7	39	14	9.4	6.6	9.6	4.8
26	5.9	5.5				5.7	36	*13	9.4	7.5	9.6	5.7
27	5.9	5.5	5.3	[d]5.3		5.7	38	12	10	7.2	8.9	4.8
28	5.7	5.3	5.3			5.9	*37	12	9.4	6.6	8.6	4.6
29	5.5	5.1	5.5		-------	5.9	31	12	8.7	6.4	8.2	4.4
30	5.3	5.1	5.3		-------	6.0	29	12	8.2	6.4	7.9	4.1
31	5.3	-------	5.3		-------	6.0	-------	12	-------	6.4	7.6	-------
Total	177.6	165.4	159.8	162.9	149.4	177.7	704.4	715	293.6	225.9	226.2	161.8
Mean	5.73	5.51	5.15	5.25	5.34	5.73	23.5	23.1	9.79	7.29	7.30	5.39
Ac-ft	352	328	317	323	296	352	1,400	1,420	582	448	449	321

Calendar year 1953	Max 131	Min 4.4	Mean 12.2	Ac-ft 8,860
Water year 1953–54	Max 50	Min 3.9	Mean 9.10	Ac-ft 6,590

Peak discharge (base, 80 cfs)—— No peak above base.

*Discharge measurement made on this day.
[b] Stage-discharge relation affected by ice.
[d] Doubtful gage-height record; discharge computed on the basis of available recorder trace, 2 discharge measurements, weather records and records for nearby streams.

SPANISH FORK AT THISTLE, UTAH

Location.—Lat 40°00′, long 111°30′, in SW¼ sec. 28, T. 9 S., R. 4 E., on right bank at Thistle, 600 ft downstream from confluence of Soldier Fork and Thistle Creek.

Drainage area.—490 sq mi, approximately.

Records available.—January 1908 to September 1925 and October 1936 to September 1954 in reports of Geological Survey. January 1933 to September 1954 in reports of Spanish Fork water commissioner.

Gage.—Water-stage recorder. Altitude of gage is 4,950 ft. Prior to May 12, 1937, staff gages at several sites within 1 mile downstream at different datums. May 12, 1937, to Oct. 8, 1938, staff gage at present site and datum.

Average discharge.—38 years (1908–25, 1933–54), 94.9 cfs (68,700 acre-ft per year).

Extremes.—Maximum discharge during year, 203 cfs Sept. 26 (gage height, 3.59 ft); minimum, 25 cfs July 9.

1908–25, 1933–54: 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 ice effect or no gage-height record, which are fair.

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	*37	52	52	b 42	a 50	52	62	103	58	*37*	a 34	*26*
2	35	52	51			*49*	*61*	96	60	30		27
3	*33*	51	52			49	65	91	59	28		36
4	34	51	49	46		50	68	85	59	28		35
5	37	*54	48	b 48		50	72	*91	60	28		34
6	37	56	b 46	*b 48		50	78	94	*61*	30		33
7	35	52	*54*	51	a 55	53	*72	*100	58	29	35	30
8	36	52	48	52		58	71	121	56	26	35	45
9	36	51				52	73	131	50	*25*	33	*35
10	35	51	b 41	b 45	*56	65	76	142	52	26	30	34
11	35	51	(*)		55	*63	80	*146*	55	27	32	37
12	38	51		45	57	55	86	142	54	29	*31	51
13	39	51	43	40	64	52	94	135	51	28	32	48
14	41	51		39	*92*	54	110	*128	54	*31	31	37
15	41	51	b 44	39	71	57	103	123	50	29	30	*34
16	42	52		39	61	61	100	119	*47	30	28	36
17	42	52	47	*38	61	58	110	111	47	31	29	35
18	42	54	*49	39	61	54	*119*	97	48	36	28	32
19	43	48	49	40	*48*	54	118	94	49	35	28	32
20	46	*44*	52	40	52	55	114	90	49	36	30	34
21	47	48	52		57	57	108	90	45	36	32	32
22	48	49			60	59	102	92	42	*34	32	32
23	52	*57*			60	71	97	84	42	32	31	34
24	52	56			*63	*72*	98	80	40	32	30	38
25	52	54	b 42		63	68	100	81	40	33	28	34
26	52	52		a 50	61	66	98	80	41	34	28	*91
27	*54*	52			53	63	*94	*76	42	33	*27*	43
28	*52	50			49	63	97	70	40		28	42
29	52	50	45		-------	64	94	69	39	a 33	29	35
30	51	51	b 42		-------	65	100	66	*38*		28	*34
31	51	-------	b 40		-------	59	-------	*61*	-------		27	-------
Total	1,327	1,546	1,409	1,415	1,614	1,798	2,720	3,088	1,486	965	956	1,126
Mean	42.8	51.5	45.5	45.6	57.6	58.0	90.7	99.6	49.5	31.1	30.8	37.5
Ac-ft	2,630	3,070	2,790	2,810	3,200	3,570	5,400	6,120	2,950	1,910	1,900	2,230

Calendar year 1953	Max 229	Min 33	Mean 70.3	Ac-ft 50,860
Water year 1953–54	Max 146	Min 25	Mean 53.3	Ac-ft 38,580

Peak discharge (base, 330 cfs)—— No peak above base.

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of weather records and 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 SW¼ sec. 34, T. 7 S., R. 6 E., on left bank 40 ft downstream from west portal of tunnel and 18 miles northeast of Thistle.

Records available.—October 1945 to September 1954 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, 1932–54: Maximum daily discharge, 595 cfs July 9, 1923; minimum daily observed, 4 cfs many times when no water is being diverted from Strawberry Reservoir.

Remarks.—Records good. Records show water diverted from Strawberry Reservoir (in Colorado River basin, capacity, 270,000 acre-ft) plus tunnel seepage, for use on lands of Strawberry project.

Cooperation.—Records furnished by Strawberry Water Users Association.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94							24	265	462	*151*	207
2	114								261	432	179	*224*
3	108								279	403	254	164
4	89							6	331	325	286	119
5	70								360	278	300	92
6	87								268	300	314	86
7	115							13	*174*	390	324	65
8	155							10	213	458	313	44
9	*192*							45	238	486	306	32
10	96							128	218	*488*	324	*5*
11							6	160	174	487	328	5
12								229	175	451	353	5
13								302	200	451	*376*	11
14								380	217	453	357	63
15					6			460	200	381	306	72
16		6	6	6		6		470	221	293	279	104
17								486	225	260	298	119
18								*490*	312	226	310	88
19								490	356	219	354	80
20								480	415	185	356	91
21	6							467	443	170	331	99
22								218	486	171	324	132
23							22	74	493	134	259	131
24							100	110	493	83	259	104
25							98	112	493	159	260	69
26							*185*	151	*496*	180	292	40
27							130	165	496	104	297	28
28							130	169	496	*88*	311	29
29					------		125	228	495	88	256	45
30					------		120	220	493	116	206	48
31		------			------		------	219	------	134	206	------
Total	1,246	180	186	186	168	186	992	6,330	9,986	8,850	9,069	2,401
Mean	40.2	6	6	6	6	6	33.1	204	333	285	293	80.0
Ac-ft	2,470	357	369	369	333	369	1,970	12,560	19,810	17,550	17,990	4,760

Calendar year 1953	Max 469	Min ---	Mean 102	Ac-ft 73,940
Water year 1953–54	Max 496	Min ---	Mean 109	Ac-ft 78,910

NOTE.—Discharge for periods Oct. 11 to Apr. 22, May 2–6 estimated on basis of observed tunnel seepage on Oct. 10, Apr. 23, May 1, 6.

DIAMOND FORK NEAR THISTLE, UTAH

Location (revised).—Lat 40°03'50", long 111°26'30", in NW¼ sec. 1, T. 9 S., R. 4 E., on left bank about 0.4 mile downstream from Little Diamond Creek, 5.0 miles upstream from mouth, and 5.2 miles northwest of Thistle.

Drainage area.—146 sq mi.

Records available.—January 1908 to September 1917, April 1940 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,140 ft. Prior to Apr. 9, 1940, staff gage 4 miles downstream at different datum. Apr. 9, 1940, to Oct. 6, 1949, water-stage recorder 2.7 miles downstream at different datum.

Average discharge.—17 years (1914–17, 1940–54), 119 cfs (86,150 acre-ft per year).

Extremes.—Maximum discharge during year not determined, occurred during period of no gage-height record; minimum not determined.

1908–17, 1940–54: Maximum discharge, 1,610 cfs May 4, 1952 (gage height, 5.18 ft); minimum, 1.0 cfs Nov. 9, 1948.

Remarks.—Records good except those for periods of ice effect or no gage-height record, which are fair. Beginning in 1915, flow supplemented by diversion from Strawberry Reservoir for irrigation in Jordan River basin (see p. 101).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*112	21	20	[b] 16	19		*25*	117	254	*488*	*156*	224
2	131	21	18	17	17		26	56	261	451	177	*248*
3	131	22	20	18			30	51	281	424	251	201
4	114	22	19	20		[b] 18	32	50	316	348	286	165
5	90	*24	17	20			38	*48	361	310	301	125
6	104	*87*	17	*21	[b] 18		40	*47*	301	307	307	114
7	125	23	21	22		20	*32	62	214	348	316	92
8	154	22	15	20		21	33	59	228	[a] 420	310	83
9	*184*	22	17			28	38	96	248	[a] 450	304	*53
10	133	21	20	[b] 20	*19	*33*	38	185	246	[a] 460	316	25
11	50	21	*[b] 15		19	29	39	224	210	[a] 470	325	*17*
12	24	21	[b] 16		20	21	40	*267	*205*	[a] 440	354	35
13	21	21	17	21	20		44	332	221	[a] 420	*371	20
14	21	20	16	22	*22*	*[b] 20	53	388	241	*428	364	62
15	21	20	20	21	20		47	454	224	388	335	*86
16	21	20	20	21	18	22	44	*510*	*238	328	313	121
17	21	21	*22*	20	19	21	46	490	241	292	319	137
18	*80*	21	*21	20	[b] 18	21	48	490	319	264	325	114
19	21	18	21	21	[b] 16	20	51	498	354	246	348	102
20	24	*16*	21	21	[b] 15	22	51	490	388	210	344	112
21	25	20	21	20	20	23	54	474	420	186	328	118
22	22	20	18	20	20	22	54	325	454	*179	325	150
23	25	21		21	18	24	56	110	478	158	286	158
24	26	21		21	*20	25	151	118	486	104	275	144
25	24	20	[b] 15	*86	20	25	158	133	486	158	275	96
26	23	20		22	20	25	179	160	510	186	289	68
27	23	20	17	[b] 20	17	24	*188*	*184	515	133	298	40
28	*22	19	[b] 16	24	[b] 17	27	182	190	*531	*100	301	40
29	21	19	18	21	-------	27	175	231	519	102	267	51
30	20	19	[b] 18	20	-------	29	179	226	498	123	228	*62
31	21	-------	[b] 15	19	-------	24	-------	221	-------	146	224	-------
Total	1,774	623	556	635	520	701	2,165	7,286	10,248	9,061	9,218	3,063
Mean	57.2	20.8	17.9	20.5	18.6	22.6	72.2	235	342	292	297	102
Ac-ft	3,520	1,240	1,100	1,260	1,030	1,390	4,290	14,450	20,330	17,970	18,280	6,080

Calendar year 1953	Max 498	Min ---	Mean 133	Ac-ft 96,320
Water year 1953–54	Max 531	Min ---	Mean 126	Ac-ft 90,940

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of records for Spanish Fork at Thistle and other nearby streams.

[b] Stage-discharge relation affected by ice.

SPANISH FORK AT CASTILLA, UTAH

Location.—Lat 40°03'00", long 111°32'50", in SW¼NE¼ sec. 12, T. 9 S., R. 3 E., on left bank 600 ft upstream from outlet of Cold Springs, 1¼ miles northwest of Castilla, and 3 miles downstream from Diamond Fork.

Drainage area.—670 sq mi, approximately.

Records available.—May 1919 to September 1925 and October 1936 to September 1954 in reports of Geological Survey. January 1933 to September 1954 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.—27 years (1919–25, 1933–54), 221 cfs (160,000 acre-ft per year).

Extremes.—Maximum discharge during year, 622 cfs July 13 (gage height, 5.77 ft); minimum, 23 cfs Jan. 10.

1919–25, 1933–54: 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 period of no gage-height record, which are fair. Flow is materially increased by diversion from Strawberry Reservoir in Colorado River basin into Diamond Fork (see p. 101).

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	*148	78	80	58	82	78	92	238	328	499	178	235
2	160	80	76	61	74	70	92	162	342	475	204	275
3	162	78	80	64	74	63	98	150	353	452	264	242
4	146	81	76	70	76	72	103	139	391	391	331	193
5	130	*84	74	69	75	70	115	*141	435	337	337	146
6	133	92	74	*72	82	74	130	146	376	337	342	131
7	150	81	86	80	75	80	*108	*168	264	403	350	115
8	180	81	74	78	76	84	105	187	274	465	348	133
9	224	81	68	67	80	97	114	215	305	496	339	*94
10	166	81	74	55	*80	115	117	284	302	502	339	76
11	98	80	*65	68	76	*107	119	334	242	506	345	69
12	82	80	61	76	80	82	128	*379	235	475	*367	91
13	81	78	68	75	92	69	143	460	254	452	391	84
14	82	80	67	75	135	78	168	540	289	*458	385	100
15	84	80	74	76	107	84	160	570	266	406	345	*124
16	87	80	76	76	90	87	146	574	*272	326	310	150
17	89	81	80	75	90	86	164	581	279	299	318	166
18	86	82	*81	75	95	80	178	577	342	286	326	144
19	81	69	82	76	72	78	184	581	397	276	359	128
20	87	60	87	76	68	81	180	574	445	245	385	135
21	89	72	87	74	89	87	176	570	482	217	367	141
22	87	75	72	68	94	86	166	425	513	*222	359	
23	94	86	55	76	87	105	166	174	534	189	307	
24	92	86	55	82	*92	115	240	189	527	131	292	
25	89	81	57	105	95	102	266	195	534	176	289	
26	84	80	63	84	92	102	292	224	538	228	320	[a] 135
27	84	80	75	67	76	94	*294	*245	548	170	337	
28	*84	76	67	90	69	95	302	242	530	128	345	
29	80	76	72	84	-------	98	282	302	534	121	307	
30	78	75	64	84	-------	105	294	307	513	137	247	*107
31	78	-------	61	84	-------	89	-------	299	-------	162	233	-------
Total	3,395	2,374	2,231	2,320	2,373	2,713	5,122	10,172	11,644	9,967	9,966	4,159
Mean	110	79.1	72.0	74.8	84.8	87.5	171	328	388	322	321	139
Ac-ft	6,730	4,710	4,430	4,600	4,710	5,380	10,160	20,180	23,100	19,770	19,770	8,250

Calendar year 1953	Max 607	Min 55	Mean 211	Ac-ft 153,000
Water year 1953–54	Max 581	Min 55	Mean 182	Ac-ft 131,800

*Discharge measurement made on this day.

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

SPANISH FORK NEAR LAKE SHORE, UTAH

Location.—Lat 40°09'30", long 111°43'50", in SE¼SE¼ sec. 32, T. 7 S., R. 2 E., on left bank 1 mile upstream from mouth and 2½ miles north of Lake Shore.

Drainage area.—700 sq mi, approximately.

Records available.—December 1903 to July 1907, March 1909 to September 1925, January 1938 to September 1954.

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 same site.

Average discharge.—33 years (1904–6, 1909–19, 1920–25, 1938–54), 92.1 cfs.

Extremes.—Maximum discharge during year, 189 cfs Apr. 14 (gage height, 2.73 ft); practically no flow during most of summer months.

1903–7, 1909–25, 1938–54: Maximum discharge measured, 3,020 cfs Apr. 28, 1952; practically no flow at times during irrigation season of most years.

Remarks.—Records good prior to Apr. 24, poor thereafter. Flow regulated by many diversions for irrigation and hydroelectric powerplant. Discharge includes that of overflow canal which diverts part of high flow about 1 mile above gage.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	56	81		103	104	117	[f] 4	0	0	[a] 0.8	0
2	3.0	56	85		93	101	116	0	0	0	[a] .3	0
3	2.0	54	90	[a] 90	91	96	119	0	0	0	0	[f] 15
4	4.8	*56	89		92	99	122	0	0	0	0	0
5	5.7	59	87		91	101	130	0	0	0	0	0
6	3.6	78	77	*97	99	103	149	0	0	0	0	0
7	8.6	76	90	96	92	105	131	0	0	0	0	0
8	6.1	69	89	95	95	110	*123	0	0	0	0	0
9	2.2	74	75	88	95	*118	126	0	0	0	0	0
10	1.7	91	*87	81	97	139	128	0	0	0	0	0
11	4.4	87	82	96	*94	137	128	0	0	0	0	0
12	5.8	77	75	95	94	118	133	*0	0	0	0	0
13	5.4	76	81	95	102	101	146	0	0	0	0	[f] 16
14	10	76	81	94	138	104	163	0	0	[f] 5	0	
15	4.0	74	85	92	129	112	169	0	0	(*)	0	[a] .1
16	5.2	77	85	91	109	116	150	0	*0			(**)
17	28	82	91	87	108	111	161	0	0	[a] .3		
18	34	87	*91	91	112	107	172	0	0			0
19	23	83	93	92	99	105	171	0	0		(*)	0
20	22	78	95	91	91	105	165	0	0		[a] .1	
21	44	86	99	90	106	110	149	0	0	0		[a] .1
22	42	89	85	83	110	114	91	0	0	0		
23	45	89	77	90	107	118	[f] 25	0	0	0		
24	66	100	76	93	107	136	[f] 5	0	0	0		
25	69	94	81	117	*111	124		0	0	0		[f] 9
26	66	91	90	99	112	129		*0	0	0	0	[f] 49
27	65	86	93	91	103	117	[a] .5	0	0		0	[f] 2
28	62	78	90	103	97	115	(*)	0	0		0	
29	*62	75	91	100	-------	118		0	0	[a] .3	0	[a] .1
30	60	78	87	99	-------	127		0	0		0	
31	55	-------	[a] 90	99	-------	111	-------	0	-------		0	-------
Total	817.5	2,332	2,668	2,895	2,877	3,511	3,092.0	4	0	8.3	1.6	92.2
Mean	26.4	77.7	86.1	93.4	103	113	103	0.1	0	0.27	0.07	3.07
Ac-ft	1,620	4,630	5,290	5,740	5,710	6,960	6,130	7.9	0	16	3.2	183

Calendar year 1953	Max 195	Min ---	Mean 66.9	Ac-ft 48,430
Water year 1953–54	Max 172	Min 0	Mean 50.1	Ac-ft 36,290

*Discharge measurement or observation of no flow made on this day.
**Field estimate made on this day.
[a] No gage-height record; discharge estimated on basis of 3 discharge measurements, weather records, and records for other Spanish Fork stations.
[f] Fragmentary gage-height record; discharge computed from partly estimated gage heights.

HOBBLE CREEK NEAR SPRINGVILLE, UTAH

Location.—Lat 40°09'30", long 111°31'30", in NE¼ sec. 6, T. 8 S., R. 4 E., on right bank 1,000 ft downstream from Springville hydroelectric plant, 1¼ miles downstream from Right Fork, and 4 miles southeast of Springville.

Drainage area.—105 sq mi.

Records available.—March 1904 to December 1916 (1906–7 gage heights only), April 1945 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,920 ft. Prior to June 1, 1909, staff gage 200 ft downstream at different datum (destroyed by flood). June 1, 1909, to Dec. 31, 1916, staff gage 800 ft upstream at different datum. Apr. 17, 1945, to July 23, 1952, water-stage recorder at present site at datum 1.70 ft higher.

Average discharge.—19 years (1904–5, 1907–16, 1945–54), 55.6 cfs.

Extremes.—Maximum discharge during year, 71 cfs Apr. 24 (gage height, 2.46 ft); minimum daily, 10 cfs Sept. 21.

1904–16, 1945–54: 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. See WSP 1284 for diversions and regulation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	22	24	19	24	24	24	53	26	15	11	13
2	20	22	24	20	23	22	24	48	26	15	12	13
3	20	22	23	20	22	22	26	48	26	15	12	13
4	20	*22	24	22	22	22	28	45	24	15	12	13
5	20	22	23	22	22	22	31	42	24	15	13	12
6	20	25	22	22	22	23	*38	36	23	14	13	12
7	20	25	23	*22	22	23	36	39	23	14	12	13
8	20	26	*22	22	22	24	34	41	22	14	12	13
9	20	25	22	22	22	*25	35	43	20	13	12	13
10	22	24	23	20	22	23	37	45	21	12	12	13
11	21	23	20	22	*22	28	38	*42	20	11	*12	13
12	22	23	19	22	22	24	40	46	20	12	12	12
13	22	22	20	22	22	24	45	43	18	12	12	13
14	22	22	21	22	24	22	55	41	17	12	12	13
15	21	22	22	22	24	23	56	38	13	*13	12	13
16	21	22	22	22	24	24	55	38	*12	14	12	*12
17	23	23	22	22	24	24	58	37	16	14	12	12
18	21	23	22	22	24	23	64	37	16	15	12	12
19	21	22	22	23	22	22	66	34	20	13	12	12
20	22	22	22	22	22	23	66	29	14	12	12	13
21	24	22	22	22	23	22	65	26	13	12	12	10
22	23	22	21	22	24	22	63	30	12	13	12	13
23	24	23	20	23	24	23	65	33	12	13	12	11
24	26	24	18	23	24	24	64	33	12	13	13	12
25	24	24	17	24	24	24	63	*28	12	12	13	14
26	24	22	18	23	24	24	59	30	17	13	13	14
27	23	23	19	22	23	23	53	31	20	15	13	15
28	22	22	17	22	22	23	*54	28	17	17	13	15
29	23	22	17	22	-------	24	51	31	16	16	13	14
30	22	23	17	23	-------	24	54	27	15	13	13	13
31	22	-------	17	23	-------	23	-------	26	-------	12	13	-------
Total	675	686	645	681	641	728	1,447	1,148	547	419	381	384
Mean	21.8	22.9	20.8	22.0	22.9	23.5	48.2	37.0	18.2	13.5	12.3	12.8
Ac-ft	1,340	1,360	1,280	1,350	1,270	1,440	2,870	2,280	1,080	831	756	762

Calendar year 1953	Max 129	Min 17	Mean 36.2	Ac-ft 26,190
Water year 1953–54	Max 66	Min 10	Mean 23.0	Ac-ft 16,620

Peak discharge (base, 120 cfs)..... No peak above base.

*Discharge measurement made on this day.

PROVO RIVER NEAR KAMAS, UTAH

Location.—Lat 40°35'00", long 111°00'30", in NE¼ sec. 2, T. 3 S., R. 8 E., on right bank 3 miles upstream from Soapstone Creek and 14 miles east of Kamas.

Drainage area.—29.6 sq mi.

Records available.—August 1949 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 8,110 ft (by barometer).

Average discharge.—5 years, 54.6 cfs (39,530 acre-ft per year).

Extremes.—Maximum discharge during year, 345 cfs May 9 (gage height, 2.58 ft); minimum, 2.7 cfs Oct. 26.

1949–54: Maximum discharge, 765 cfs May 27, 1951 (gage height, 3.49 ft); minimum, that of Oct. 26, 1953.

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 (see p. 121).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	4.6	4.0	4.0	4.4	4.2		70	67	82	31	5.0
2	4.2	*4.6	4.2	3.8	4.4	4.2		*64*	*64*	80	30	6.8
3	4.2	4.6	4.2	3.8	4.2	4.2	[a] 6.0	67	68	80	31	*12*
4	4.2	4.4	*4.4	3.8	4.0	4.2		92	77	80	32	8.2
5	4.0	4.8	4.4	3.8	4.0	4.2	(*)	131	75	*84*	*32	7.2
6	3.7	4.6		3.8	4.0	4.0	11	168	75	80	32	6.6
7	3.7	5.5		3.8	4.2	*3.7*	10	*208	70	79	*43*	6.0
8	3.7	*6.0*		3.8	4.0	3.8	9.4	223	71	77	40	7.8
9	*3.5*	5.7	[b] 4.5	3.8	4.2	4.4	9.5	*253*	77	70	38	6.3
10	3.5	4.6		3.8	4.2	5.2	9.9	*239	75	56	34	5.5
11	3.7	5.0		3.8	4.0	6.6	12	239	73	56	28	5.0
12	3.8	4.8	4.6	3.8	*3.8*	*7.8*	14	249	75	*62	28	5.2
13	3.8	5.0	4.4	*3.7*	3.8		18	246	96	68	28	*5.7
14	3.8	4.6	4.2	3.7	[b] 4.2		23	*236	*98	65	27	5.5
15	4.6	4.8	4.2	3.8	[b] 4.2		21	211	96	62	25	4.8
16	4.8	4.4	4.2	3.8	[b] 4.2		25	199	102	60	24	4.4
17	4.4	4.0	4.0	3.8	4.2		35	211	96	64	20	4.2
18	4.0	*3.8*	4.0	3.8	4.4		45	205	92	70	17	4.2
19	4.0		4.0	4.0	[b] 4.0		51	202	90	56	14	3.8
20	4.6	[b] 4.5	4.0	4.0	[b] 4.0		52	187	90	42	8.8	3.8
21	4.8			4.2	3.8	[a] 6.0	59	173	90	42	8.8	*3.7*
22	4.6	4.4		4.0	3.8		68	168	92	41	8.5	3.8
23	5.0	4.2		3.8	4.2		80	131	92	40	7.5	6.3
24	4.8	4.6	[b] 4.0		4.0		92	*120	92	39	7.5	5.7
25	5.0	4.6			4.0		106	110	100	40	16	5.0
26	*5.1*	4.4			4.0		106	102	102	39	14	4.8
27	4.8	4.2		[b] 4.0	*5.2*		112	88	*113*	37	12	4.4
28	5.0	4.2	4.2		5.0		*115*	79	100	35	7.5	3.8
29	4.8	4.0	4.0				90	75	94	34	6.0	3.8
30	4.6	4.0	4.2				*84	70	84	33	5.5	3.7
31	4.6		4.0					64		*52*	*5.0*	
Total	133.5	137.9	130.2	120.4	116.4	170.5	1287.8	4,879	2,585	1,785	661.1	163.0
Mean	4.31	4.60	4.20	3.88	4.16	5.50	42.9	157	86.2	57.6	21.3	5.43
Ac-ft	265	274	258	239	231	338	2,550	9,680	5,130	3,540	1,310	323

Calendar year 1953	Max 446	Min 3.5	Mean 43.9	Ac-ft 31,780
Water year 1953–54	Max 252	Min 3.5	Mean 33.3	Ac-ft 24,140

Peak discharge (base, 400 cfs)—— No peak above base.

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

WEBER-PROVO DIVERSION CANAL AT OAKLEY, UTAH

Location.—Lat 40°42'30", long 111°16'30", in NW¼ sec. 28, T. 1 S., R. 6 E., on right bank 1,400 ft downstream from head and three-quarters of a mile east of Oakley.

Records available.—October 1945 to September 1954 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.—1945–54: Maximum daily discharge, 747 cfs June 20, 1947; 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 readings, which are fair. Canal diverts from Weber River in SW¼SW¼ sec. 21, T. 1 S., R. 6 E., for irrigation and water supply in Jordan River basin. Figures given herein represent water diverted from main stem of Weber River, some of which may return to Weber River through seepage.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	37	a46	0	0	0	184	0	0	0	0
2	0	0	34	49	0	0	0	155	0	0	0	0
3	0	0	38	49	0	0	0	128	11	0	0	0
4	0	0	*34	*49	0	0	0	*115	26	0	0	0
5	0	0	38	49	0	0	0	153	0	0	0	0
6	0	0	37	51	0	0	0	202	0	0	0	0
7	0	0	42	51	0	0	0	202	0	0	0	0
8	0	0	36	52	0	0	0	209	0	0	0	0
9	0	0	37	50	0	0	0	211	0	0	0	0
10	0	0	41	50	0	0	0	214	0	0	0	0
11	0	17	a41	49	0	0	0	275	0	0	0	0
12	0	36	a41	50	0	0	0	316	0	*0	0	0
13	0	35	41	51	0	0	0	316	0	0	0	0
14	0	34	43	58	0	0	0	*316	*0	0	0	0
15	0	36	44	56	0	0	0	205	20	0	0	0
16	0	36	45	56	0	0	0	127	10	0	0	0
17	0	41	45	59	0	0	0	49	0	0	0	0
18	0	41	43	60	0	0	0	0	0	0	0	0
19	0	36	44	42	0	0	0	0	0	0	0	0
20	0		45	16	0	0	0	0	0	0	0	0
21	0		36	0	0	0	78	0	0	0	0	0
22	0		35	0	0	0	183	0	0	0	0	0
23	0	a37	15	0	0	0	198	0	0	0	0	0
24	0		25	0	0	0	209	*0	0	0	0	0
25	0		28	0	0	0	235	0	0	0	0	0
26	0		32	0	0	0	241	0	0	0	0	0
27	0	39	40	0	0	0	229	0	0	0	0	0
28	*0	39	41	0	0	0	237	0	0	0	0	0
29	0	38	*47	0	-------	0	233	43	0	0	0	0
30	0	37	41	0	-------	0	*226	63	0	0	0	0
31	0	-------	45	0	-------	0	-------	19	-------	0	0	-------
Total	0	724	1,191	993	0	0	2,069	3,502	67	0	0	0
Mean	0	24.1	38.4	32.0	0	0	69.0	113	2.23	0	0	0
Ac-ft	0	1,440	2,360	1,970	0	0	4,100	6,950	133	0	0	0

Calendar year 1953	Max 697	Min 0	Mean 62.2	Ac-ft 45,000
Water year 1953–54	Max 316	Min 0	Mean 23.4	Ac-ft 16,950

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

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

NOTE.—Discharge computed from once-daily staff-gage readings Dec. 13 to Jan. 20.

WEBER-PROVO DIVERSION CANAL NEAR WOODLAND, UTAH

Location.—Lat 40°36'40", long 111°18'15", in SW¼SE¼ sec. 30, T. 2 S., R. 6 E., on right bank 100 ft upstream from outlet to Provo River and 4½ miles northwest of Woodland.

Records available.—October 1931 to September 1954 (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.—1931–54: Maximum daily discharge, 676 cfs June 20, 1947; no water diverted from Weber River or Beaver Creek for several months during each year.

Remarks.—Records good. Canal diverts water from Weber River in SW¼SW¼ sec. 21, T. 1 S., R. 6 E., and from Beaver Creek in NE¼SE¼ sec. 17, T. 2 S., R. 6 E., to Provo River for irrigation along Provo and Jordan Rivers. Figures given herein represent quantity of water reaching Provo River during periods when water was diverted from Weber River and Beaver Creek. Not all of flow diverted reaches Provo River due to evaporation, transpiration, and seepage losses. No water diverted from Weber River or Beaver Creek on days for which no figures are given.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			25	a 21				165				
2			20	21				136				
3		(*)	19	21				116				
4			13	*20				*98				
5			20	a 20			(*)	131				
6			20	a 20				178				
7			*23	a 20				183				
8			20	21	(*)			193				
9			17	20				197				
10			22	21				199				
11		14	17	a 20				240				
12		14	10	a 20				297		(*)		
13		19	19	20				299				
14		20	19	18				303	(*)			
15		20	22	19				232				
16		20	22	19				124				
17		23	23	19				62				
18		29	23	18								
19		17	23	17								
20		16	23	8.5								
21		21	21				27					
22		22	18				122					
23		29	13				149					
24		30	15				162	(*)				
25		29	20				183					
26		28					195					
27		27					192					
28		24	a 20				195					
29		23					197	41				
30		23					190	67				
31								36				
Total		448	607	383.5			1,612	3,297				
Mean			19.6									
Ac-ft		889	1,200	761			3,200	6,540				

Calendar year 1953	Max ----	Min ----	Mean ---- Ac-ft ----
Water year 1953-54	Max ----	Min ----	Mean ---- Ac-ft ----

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

PROVO RIVER NEAR HAILSTONE, UTAH

Location.—Lat 40° 36′, long 111°22′, in SE¼ sec. 34, T. 2 S., R. 5 E., on right bank 3 miles upstream from Ross Creek and Hailstone.

Drainage area.—233 sq mi.

Records available.—October 1949 to September 1954.

Average discharge.—5 years, 238 cfs. (Since October 1953 flow includes that of Duchesne tunnel.)

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

Extremes.—Maximum discharge during year, 1,480 cfs May 14 (gage height, 4.70 ft); minimum, 17 cfs Aug. 31.

1949–54: Maximum discharge, 2,220 cfs June 14, 1953; minimum, that of Aug. 31, 1954.

Remarks.—Records good except those for periods of ice effect or doubtful or no gage-height record, which are fair. Beginning October 1953, records include flow diverted from Duchesne River into Provo River by Duchesne tunnel (see p. 121).

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	*39*	77	100				*90*	597	*447*	*181*	[d] 47	*23*
2	39	75	92			[b] 75	90	500	382	175	46	31
3	39	**65*	[b] 92				100	447	367	172	47	*73*
4	39	66	85		[a] 75		107	**435*	382	161	60	62
5	39	72	[b] 97	(*)		79	*121	597	371	170	*68*	49
6	39	83	[b] 102			79	129	721	357	159	*60	39
7	39	74	*100			87	110	*908	339	155	59	42
8	39	71		[a] 90	*71	*95	119	1,060	306	143	59	50
9	39	74			68	129	133	1,200	300	135	57	50
10	40	77			68	*149*	145	*1,280	226	119	57	46
11	42	79			68	125	151	*1,220	219	112	56	43
12	42	80	[b] 95		69	95	172	1,350	219	*107	59	47
13	42	82			79	90	219	1,350	235	112	63	*50
14	42	87			*87*	100	266	*1,390*	*240	114	68	44
15	43	92			72	97	249	1,240	263	100	65	40
16	44	93			72	98	251	1,060	297	90	60	38
17	43	98			72	97	293	1,030	290	88	56	38
18	43	102	92		74	87	346	1,070	275	109	44	40
19	43	79	90		[b] 65	82	367	1,070	224	112	40	40
20	49	[b] 90	90		[b] 74	92	343	1,110	201	93	43	38
21	57	[b] 96	90		[b] 74	87	371	1,090	211	97	44	37
22	57	[b] 98			75	83	475	1,180	224	93	42	37
23	63	107		[a] 80	71	87	521	756	*179*	[d] 86	37	54
24	*72*	*109*			77	87	567	*651	191	[d] 80	32	59
25	72	107	[b] 90		80	87	655	624	186	[d] 74	32	56
26	69	104			80	83	683	589	216	[d] 80	32	54
27	69	102			74	83	683	488	275	[d] 90	34	53
28	72	93			72	85	*776*	443	243	[d] 80	28	47
29	72	95			-------	90	*688	451	216	[d] 72	25	44
30	72	93	[a] 90		-------	92	655	500	201	[d] 64	22	43
31	72	-------	[a] 90		-------	74	-------	467	-------	[d] *54*	*20*	-------
Total	1,571	2,620	2,880	2,630	2,067	2,819	9,875	26,874	8,082	3,477	1,462	1,367
Mean	50.7	87.3	92.9	84.8	73.8	90.9	329	867	269	112	47.2	45.6
Ac-ft	3,120	5,200	5,710	5,220	4,100	5,590	19,590	53,300	16,030	6,900	2,900	2,710

Calendar year 1953	Max 1,970	Min 39	Mean 218	Ac-ft 158,000
Water year 1953–54	Max 1,390	Min 20	Mean 180	Ac-ft 130,400

Peak discharge (base, 1,200 cfs)—— May 14 (4:30 a.m.) 1,480 cfs (4.70 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 station near Kamas.
[b] Stage-discharge relation affected by ice.
[d] Doubtful gage-height record; discharge estimated as for "a."

DEER CREEK RESERVOIR NEAR CHARLESTON, UTAH

Location.—Lat 40° 24′, long 111° 32′, in SW¼SW¼ sec. 5, T. 5 S., R. 4 E., at dam on Provo River, a quarter of a mile upstream from Deer Creek and 4½ miles southwest of Charleston.

Drainage area.—560 sq mi.

Records available.—December 1940 to September 1954.

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, 127,000 acre-ft May 24, 25 (elevation, 5,406.78 ft); minimum, 65,910 acre-ft Sept. 30 (elevation, 5,374.60 ft).

1940–54: Maximum contents, 154,000 acre-ft June 19, 1946 (elevation, 5,417.65 ft); minimum, 1,200 acre-ft Dec. 16, 1940 (elevation, 5,296.8 ft).

Remarks.—Reservoir is formed by earth-fill dam with concrete cutoff wall. Storage began in October 1940; dam completed in October 1941. Capacity, 152,560 acre-ft between elevations 5,280 ft (bottom of outlet tunnel) and 5,417 ft (top of 20-foot radial gates). Dead storage, 2,870 acre-ft below elevation 5,305 ft (sill of trash-rack structure). Water used for irrigation, domestic, and industrial purposes. Contents given herein include dead storage and are computed from 12 p.m. elevations which are based on trend indicated by 8 a.m. readings.

Cooperation.—Records of daily elevations and contents furnished by Provo River water commissioner.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101,800	101,100	103,800	95,700	92,010	96,450	103,500	113,400	125,000	111,700	93,360	76,930
2	101,400	101,200	103,400	95,510	92,070	96,640	103,800	113,600	124,700	111,200	92,800	76,430
3	101,000	101,300	103,100	95,280	92,030	96,750	104,100	113,400	124,300	110,200	92,230	76,040
4	100,600	101,500	102,900	95,050	91,970	96,930	104,300	113,100	123,800	109,500	91,620	75,600
5	100,500	101,600	102,700	94,750	91,950	97,160	104,700	112,900	123,300	108,800	91,150	75,100
6	100,400	101,800	102,500	94,460	91,900	97,430	105,000	112,900	123,000	108,100	90,650	74,650
7	100,400	101,900	102,300	94,270	91,860	97,680	105,300	113,200	123,000	107,400	90,090	74,240
8	100,300	102,100	102,100	94,020	91,800	98,010	105,600	113,900	122,900	106,700	89,540	73,820
9	100,200	102,200	101,900	93,740	91,770	98,460	105,900	114,700	122,600	105,800	88,990	73,430
10	100,100	102,500	101,600	93,460	91,640	98,770	106,200	115,700	122,400	105,100	88,380	73,020
11	100,100	102,700	101,300	93,120	91,450	98,830	106,400	116,900	122,100	104,500	87,800	72,560
12	100,100	102,900	101,000	92,800	91,400	98,830	106,500	118,000	121,900	104,000	87,260	72,130
13	100,000	103,100	100,700	92,520	91,580	98,770	106,900	119,200	121,500	103,500	86,710	71,790
14	100,000	103,300	100,500	92,230	92,050	98,730	107,300	120,400	121,200	102,900	86,170	71,510
15	100,000	103,500	100,300	92,010	92,480	98,790	107,800	121,500	120,700	102,400	85,630	71,110
16	100,000	103,700	100,000	91,800	92,800	99,000	108,200	122,200	120,200	101,700	85,090	70,630
17	100,000	103,800	99,800	91,520	93,190	99,220	108,700	122,800	119,800	101,000	84,470	70,200
18	100,000	103,900	99,550	91,280	93,510	99,430	109,200	123,300	119,200	100,600	83,880	69,800
19	100,000	104,000	99,330	91,080	93,740	99,700	109,700	124,000	118,700	100,300	83,310	69,410
20	100,000	104,100	99,180	90,870	93,970	100,100	110,000	124,700	118,000	99,920	82,780	69,010
21	100,000	104,100	98,920	90,630	94,250	100,400	110,100	125,300	117,400	99,410	82,310	68,620
22	100,000	104,300	98,670	90,320	94,570	100,600	110,300	126,300	116,800	98,880	81,870	68,220
23	100,200	104,500	98,400	90,300	94,880	100,900	110,600	126,800	116,200	98,340	81,330	67,890
24	100,300	104,700	98,050	91,120	95,240	101,200	111,000	127,000	115,500	97,760	80,770	67,620
25	100,500	104,900	97,640	91,670	95,540	101,500	111,400	127,000	114,900	97,180	80,300	67,390
26	100,500	104,900	97,310	91,820	95,770	101,800	111,700	126,800	114,300	96,720	79,820	67,110
27	100,600	104,700	97,060	91,860	95,960	102,100	112,100	126,600	113,900	96,270	79,310	66,840
28	100,700	104,600	96,830	92,050	96,220	102,300	112,500	126,300	113,400	95,740	78,840	66,500
29	100,900	104,300	96,560	92,080	-------	102,600	112,900	125,600	112,800	95,160	78,420	66,180
30	100,900	104,000	96,310	91,990	-------	103,000	113,200	125,400	112,300	94,590	77,940	65,910
31	101,000	-------	95,960	91,950	-------	103,300	-------	125,200	-------	93,930	77,440	-------
(†)	5394.63	5396.13	5392.02	5389.90	5392.15	5395.76	5400.55	5405.98	5400.13	5390.95	5381.75	5374.60
(‡)	−1,100	+3,000	−8,040	−4,010	+4,270	+7,080	+9,900	+12,000	−12,900	−18,370	−16,490	−11,530

†Elevation, in feet, at end of month.
‡Change in contents in acre-feet.

NOTE.—Change in contents: Calendar year 1953, −27,940 acre-ft; water year 1954, −36,190 acre-ft.

PROVO RIVER BELOW DEER CREEK DAM, UTAH

Location.—Lat 40° 24'10", long 111°31'45", in NE¼NE¼ 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 northeast of Vivian Park.

Drainage area.—560 sq mi.

Records available.—May 1953 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,270 ft (from topographic map).

Extremes.—1953: Maximum discharge during period May to September, 669 cfs June 26 (gage height, 4.23 ft); minimum, 252 cfs July 22, 23.

1953–54: Maximum discharge during water year, 557 cfs May 16 (gage height, 3.96 ft); minimum, 41 cfs Apr. 1.

Remarks.—Records good. Flow regulated by Deer Creek Reservoir (see p. 110).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	------	------	------	------	------	------	355	541	484	*441*	392
2	------	------	------	------	------	------	------	351	541	473	395	392
3	------	------	------	------	------	------	------	371	*553	481	385	395
4	------	------	------	------	------	------	------	395	549	481	385	*402*
5	------	------	------	------	------	------	------	437	549	481	385	402
6	------	------	------	------	------	------	------	437	545	481	381	402
7	------	------	------	------	------	------	------	430	553	481	*575*	402
8	------	------	------	------	------	------	------	426	553	*496*	381	402
9	------	------	------	------	------	------	------	395	557	473	388	402
10	------	------	------	------	------	------	------	332	526	420	381	398
11	------	------	------	------	------	------	------	*307*	507	*420	381	398
12	------	------	------	------	------	------	------	*323	514	441	388	398
13	------	------	------	------	------	------	------	332	522	470	395	398
14	------	------	------	------	------	------	------	332	518	473	395	398
15	------	------	------	------	------	------	------	335	553	473	395	402
16	------	------	------	------	------	------	------	335	*596	473	388	398
17	------	------	------	------	------	------	------	326	596	477	385	392
18	------	------	------	------	------	------	------	326	600	459	385	385
19	------	------	------	------	------	------	------	329	596	448	385	375
20	------	------	------	------	------	------	------	345	600	455	395	361
21	------	------	------	------	------	------	------	406	600	462	402	361
22	------	------	------	------	------	------	------	481	600	417	398	351
23	------	------	------	------	------	------	------	470	*624	*548*	392	358
24	------	------	------	------	------	------	------	452	649	477	398	358
25	------	------	------	------	------	------	------	452	*653*	470	*406	351
26	------	------	------	------	------	------	------	452	653	466	412	342
27	------	------	------	------	------	------	------	452	612	470	412	342
28	------	------	------	------	------	------	------	473	526	470	402	342
29	------	------	------	------	------	------	------	492	499	*466	395	342
30	------	------	------	------	------	------	------	499	*492*	466	395	*523*
31	------	------	------	------	------	------	------	*526*	------	459	395	------
Total	------	------	------	------	------	------	------	12,374	16,977	14,311	12,196	11,364
Mean	------	------	------	------	------	------	------	399	566	462	393	379
Ac-ft	------	------	------	------	------	------	------	24,540	33,670	28,390	24,190	22,540

*Discharge measurement made on this day.

PROVO RIVER BELOW DEER CREEK DAM, UTAH—Continued

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	307	167	348	339	244	111	*77*	430	388	459	351	286
2	*310*	167	*351*	339	244	111	104	430	385	459	355	286
3	310	*167	351	339	244	112	104	426	385	459	355	*292*
4	301	165	345	339	244	112	104	430	385	459	358	289
5	219	165	339	*342	244	109	105	444	388	*470*	358	284
6	163	165	339	345	244	107	*107	437	388	466	358	284
7	174	165	339	345	244	107	105	437	278	444	358	284
8	181	*163*	339	345	*244	*107	105	434	*263*	423	358	284
9	190	165	*339	345	244	111	107	441	306	430	*364*	284
10	169	165	345	345	287	203	107	508	323	430	*364	281
11	*141*	165	345	345	*323*	*249*	116	537	326	395	351	278
12	143	165	345	345	323	249	256	537	326	343	355	278
13	143	163	345	348	323	249	109	537	329	*318	351	269
14	141	163	345	348	195	249	105	537	444	381	351	*229
15	141	163	345	348	111	249	99	*541*	*448	375	332	*227*
16	141	178	345	345	*104*	161	114	541	448	364	326	275
17	141	188	342	345	104	107	133	537	455	364	326	272
18	165	188	342	348	109	*102*	133	522	452	361	326	266
19	165	188	342	348	109	102	181	507	470	351	323	263
20	165	188	342	348	109	102	267	499	466	345	320	255
21	167	188	342	348	111	102	327	496	462	345	320	258
22	167	190	339	*351*	111	102	342	422	462	358	320	263
23	167	190	339	273	112	102	312	479	459	361	304	261
24	169	190	339	*244*	114	104	317	481	462	358	301	263
25	167	192	*335*	244	114	105	329	*492	*478*	358	295	263
26	167	250	335	244	114	105	351	452	466	358	295	261
27	169	304	339	244	114	105	381	430	459	355	292	258
28	169	*351*	339	244	112	105	388	426	448	348	*286*	255
29	169	351	339	244	-------	105	*409	426	448	351	289	255
30	167	351	339	244	-------	105	*428*	430	452	351	292	258
31	167	-------	335	244	-------	104	-------	*480*	-------	351	289	-------
Total	5,655	5,960	10,593	9,815	5,195	4,153	6,117	14,666	12,244	11,985	10,223	8,061
Mean	182	199	342	317	186	134	204	473	408	387	330	269
Ac-ft	11,220	11,820	21,010	19,470	10,300	8,240	12,130	29,090	24,290	23,770	20,280	15,990

Calendar year 1953	Max ---	Min --	Mean ---
Water year 1953-54	Max 541	Min 77	Mean 287

Ac-ft -------	
Ac-ft 207,600	

*Discharge measurement made on this day.

PROVO RIVER AT VIVIAN PARK, UTAH

Location.—Lat 40°21'40", long 111°33'45", in NW¼NW¼ 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 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,200 ft (from topographic map). Prior to Nov. 13, 1933, staff gage at site three-quarters of a mile downstream at different datum.

Average discharge.—42 years (1912–54), 359 cfs (259,900 acre-ft per year). Since 1932 flow includes that of Weber-Provo diversion canal and since October 1953 that of Duchesne tunnel.

Extremes.—Maximum discharge during year, 601 cfs May 16 (gage height, 3.33 ft); minimum, 74 cfs Apr. 1.

1911–54: Maximum discharge observed, 3,180 cfs June 11, 1921; minimum, 23 cfs Mar. 11, 1948.

Remarks.—Records good. Station is below diversions for irrigation in Heber Valley and above those in vicinity of Provo. Flow regulated by Deer Creek Reservoir (see p. 110) and small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River drainage into Daniels Creek. Records include flow of Weber-Provo diversion canal (see p. 108), and Duchesne tunnel (see p. 121).

PROVO RIVER AT VIVIAN PARK, UTAH—Continued

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	*334*	*189*	378	363	267	129	*107*	461	435	471	381	313
2	334	189	378	363	267	129	129	461	422	474	384	313
3	334	*189	*384*	363	267	129	129	*458*	422	474	384	*319*
4	311	191	378	366	267	129	130	461	422	474	390	316
5	221	193	369	*369	269	127	132	471	422	477	390	313
6	185	198	369	369	269	124	*136	474	428	*481*	390	313
7	196	193	369	369	269	124	137	474	321	458	390	313
8	202	191	369	369	269	*124	136	474	*300*	441	394	313
9	212	191	*372	*372*	*269	129	136	481	330	444	*400*	313
10	183	191	372	369	311	208	136	547	340	444	*400	308
11	164	191	372	372	345	*261*	136	575	350	415	384	305
12	164	191	372	372	345	261	290	575	354	368	387	305
13	164	189	372	372	*351*	259	143	579	354	*328	384	294
14	*168*	191	372	369	238	259	143	583	444	394	381	*264
15	162	191	372	369	152	259	136	586	*448	390	366	*248*
16	162	202	372	369	145	190	146	*593*	441	384	357	302
17	170	214	372	369	136	127	168	586	444	381	354	297
18	187	216	372	372	132	122	170	583	444	378	354	294
19	185	216	372	372	*129*	*120*	216	568	458	372	351	286
20	187	216	369	372	132	122	300	561	461	363	348	278
21	187	216	*363*	372	134	122	366	565	464	363	348	283
22	185	216	363	372	134	122	381	499	471	372	345	286
23	189	219	363	302	137	125	354	536	467	378	328	288
24	189	216	363	275	136	125	357	547	467	378	325	288
25	189	219	363	275	137	129	372	*547	474	375	319	283
26	187	269	363	*267*	136	129	387	515	481	375	319	283
27	189	328	363	267	134	130	419	484	*484*	378	316	278
28	189	*378*	363	267	130	130	419	481	464	375	*313*	272
29	189	378	363	267	-------	132	*441	474	461	375	313	275
30	189	378	363	267	-------	134	*454*	474	461	375	319	275
31	189	-------	363	267	-------	130	-------	464	-------	381	313	-------
Total	6,290	6,749	11,448	10,578	5,907	4,740	7,106	16,137	12,734	12,536	11,127	8,818
Mean	203	225	369	341	211	153	237	521	424	404	359	294
Ac-ft	12,480	13,390	22,710	20,980	11,720	9,400	14,090	32,010	25,260	24,860	22,070	17,490

Calendar year 1953	Max 730	Min 117	Mean 373	Ac-ft 270,100
Water year 1953-54	Max 593	Min 107	Mean 313	Ac-ft 226,500

*Discharge measurement made on this day.

SOUTH FORK PROVO RIVER AT VIVIAN PARK, UTAH

Location.—Lat 40°21'10", long 111°34'10", in NW¼SE¼ 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 1954.

Gage.—Water-stage recorder and Parshall flume. Altitude of gage is 5,240 ft (from topographic map). Prior to June 15, 1913, staff gage at site half a mile downstream at different datum. June 15, 1913, to Nov. 21, 1933, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.—42 years (1912–54), 29.8 cfs (21,570 acre-ft per year).

Extremes.—Maximum discharge during year, 39 cfs Jan. 25 (gage height, 1.09 ft); minimum, 5.4 cfs May 28, 29.

1911–54: Maximum discharge observed, 123 cfs May 27, 1922; minimum, that of May 28, 29, 1954.

Remarks.—Records good. Station is below all diversions.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	25	*24*	22	21	20	20	*22*	*18*	14	14	*9.0*
2	*18*	26	24	22	21	20	20	21	18	15	15	10
3	17	26	23	*21*	*20*	20	20	20	17	13	*16*	11
4	19	*23*	23	21	20	20	20	20	15	9.4	16	13
5	21	*26	23	*21	21	20	20	20	15	*7.4*	16	13
6	21	*27*	23	21	21	20	*21	20	16	8.7	15	14
7	22	26	23	21	21	20	20	20	16	11	14	14
8	*25*	26	23	21	21	*20	20	20	16	11	14	14
9	23	26	*23	21	*21	*21*	20	18	16	13	*13*	13
10	23	26	23	21	21	21	20	17	17	*17*	14	13
11	24	25	23	21	21	21	20	*17	16	17	*14	14
12	24	25	22	21	21	21	20	17	17	14	15	16
13	24	25	22	21	22	20	20	17	14	*16	16	17
14	24	25	22	21	*23	20	20	16	*8.4*	13	16	*16
15	22	25	22	21	22	20	20	20	10	13	15	16
16	22	25	22	21	21	20	19	20	14	15	15	16
17	21	25	22	21	21	20	19	20	*14	16	16	16
18	22	25	22	21	21	20	19	19	17	16	16	17
19	22	25	23	21	21	20	19	17	15	14	15	16
20	23	25	23	21	21	20	19	17	13	15	16	16
21	23	25	22	21	21	20	19	15	14	16	16	16
22	23	25	22	21	21	*19*	20	17	17	15	14	16
23	25	25	22	21	21	20	20	18	17	15	15	17
24	25	25	22	24	21	20	20	18	17	14	14	*18*
25	24	25	22	*25*	21	20	21	*17	16	8.4	15	17
26	24	25	22	21	20	20	19	16	16	13	15	16
27	24	24	22	21	20	20	*16	14	16	15	14	16
28	25	24	*21	21	20	20	*20	10	16	17	*15*	15
29	25	24	21	21	-------	20	*22	*6.0*	16	14	15	15
30	25	24	21	21	-------	20	22	13	15	16	15	15
31	24	-------	21	21	-------	20	-------	18	-------	15	13	-------
Total	693	753	693	660	587	623	595	540.0	462.4	426.9	462	445.0
Mean	22.4	25.1	22.4	21.3	21.0	20.1	19.8	17.4	15.4	13.3	14.9	14.8
Ac-ft	1,370	1,490	1,370	1,310	1,160	1,240	1,180	1,070	917	847	916	883

Calendar year 1953	Max 38	Min 12	Mean 24.7	Ac-ft 17,870
Water year 1953–54	Max 27	Min 6.0	Mean 19.0	Ac-ft 13,750

*Discharge measurement made on this day.

PROVO RIVER AT PROVO, UTAH

Location.—Lat 40°14'15", long 111°41'55", in NW¼SE¼ 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 1954. Published as Provo River at San Pedro, Los Angeles and Salt Lake Railway bridge near Provo, 1903–4 and as Provo River at Rio Grande Western Railway 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 1,100 ft upstream at different datum.

Average discharge.—18 years (1933–34, 1937–54), 181 cfs (131,000 acre-ft per year).

Extremes.—Maximum discharge during year, 464 cfs Dec. 3 (gage height, 2.40 ft); minimum daily, 1.9 cfs Aug. 24.

1903–5, 1933–34, 1937–54: Maximum discharge, 2,520 cfs May 6, 1952 (gage height, 6.37 ft); practically no flow during several periods.

Remarks.—Records good. Station is below all diversions. At times entire flow is diverted above station for irrigation. Flow regulated by Deer Creek Reservoir and small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River drainage into Daniels Creek. Flow affected by Weber-Provo diversion canal (see p. 108) and Duchesne tunnel (see p. 121). Factory race diverts water above station into Provo Bay, an arm of Utah Lake, and Provo River water commissioner furnished following records of this diverted flow acre-ft for water year 1953–54:

Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water year
651	654	676	676	610	676	639	700	596	556	492	399	7,325

PROVO RIVER AT PROVO, UTAH—Continued

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	195	387	*372*	290	134	115	24		3.7	2.2	*2.5*
2	10	195	387	372	287	134	144	*59*		3.7	2.5	2.5
3	*9.0*	193	*591*	368	287	132	138	28		4.0	2.2	2.5
4	9.0	[a] 195	391	368	287	132	140	21		4.0	2.2	2.8
5	16	[a] 200	379	372	287	132	138	16		5.2	2.5	3.7
6	17	*208	379	372	284	130	144	12		*6.0*	2.8	*5.2*
7	15	208	379	*368	284	130	138	10		4.8	2.2	3.4
8	15	203	375	372	284	130	*134	11		4.4	2.5	2.8
9	14	200	*379	364	284	138	124	10	[a] 7.0	4.8	2.8	2.8
10	12	200	383	364	303	*181	119	8.5		4.4	2.5	2.5
11	12	198	383	364	*350	*236*	115	8.0		4.8	2.5	2.5
12	15	193	379	364	350	230	*211*	8.0		5.2	2.8	2.5
13	20	*190*	379	*364*	*358*	224	98	8.5		4.0	*5.1*	2.5
14	24	193	379	364	288	224	83	8.0		4.0	2.8	*2.5
15	26	198	387	364	173	224	60	7.6		*3.4	2.5	2.5
16	30	200	387	364	159	177	45	7.2		3.7	2.2	2.5
17	32	216	383	368	132	124	29	9.2	(*)	3.7	2.2	2.5
18	48	222	383	368	134	128	20		7.2	4.8	*2.2	2.5
19	60	219	383	368	130	120	12		[a] 6.0	4.0	2.2	2.8
20	76	219	387	368	126	120	15	[a] 7.0		3.4	2.5	3.1
21	98	219	387	368	*124*	*119*	31		4.8	3.1	2.2	2.8
22	130	219	383	368	126	119	13	11	5.2	2.8	2.2	2.5
23	155	227	383	333	132	120	8.0	13	5.6	3.4	2.2	2.5
24	166	224	383	284	134	126	8.5	12	5.2	3.1	*1.9*	3.1
25	180	227	383	300	134	132	6.8	10	4.8	3.1	2.5	3.7
26	198	265	383	*280*	134	130	*7.2	*9.0	4.8	2.8	2.5	4.0
27	208	316	387	284	134	130	6.8		9.0	2.8	2.5	4.4
28	*211*	361	383	287	134	130	*5.2*		*10*	*2.2*	2.8	4.4
29	203	372	383	287	-------	130	7.2	[a] 8.0	6.4	2.2	2.8	4.4
30	198	*375*	*372*	290	-------	140	9.0		*4.4*	2.5	3.1	4.4
31	195	-------	372	290	-------	138	-------		-------	2.6	2.8	-------
Total	2412.0	6,850	11,859	10,719	6,129	4,594	2124.7	359.0	198.4	116.6	76.9	92.8
Mean	77.8	228	383	346	219	148	70.8	11.6	6.61	3.76	2.48	3.09
Ac-ft	4,780	13,590	23,520	21,260	12,160	9,110	4,210	712	394	231	153	184

Calendar year 1953	Max 545	Min 2.5	Mean 171	Ac-ft 124,100
Water year 1953–54	Max 391	Min 1.9	Mean 125	Ac-ft 90,300

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of 3 discharge measurements and records for stations at Vivian Park and below Deer Creek Dam.

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., and 8 miles northeast of American Fork.

Drainage area.—55 sq mi, approximately.

Records available.—October 1945 to September 1954 in reports of Geological Survey. January 1927 to September 1945 in files of Salt Lake City district office.

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

Average discharge.—27 years, 53.4 cfs (38,660 acre-ft per year).

Extremes.—Maximum discharge during year, 273 cfs May 21 (gage height, 6.04 ft); minimum, 7 cfs Feb. 14.

1927–54: Maximum discharge not determined, occurred July 30, 1953 (gage height, 9.2 ft, from floodmark); minimum discharge, 4 cfs (estimated) Jan. 25, 1952.

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

Cooperation.—Records collected by Utah Power & Light Co.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*22*	*21*	*18*	16	17	15	*16*	74	70	*65*	24	19
2	**21*	21	17	16	17	13	17	*63*	68	58	24	20
3	21	21	17	17	16	*12*	18	68	73	55	26	**21*
4	21	20	17	**18*	17	14	20	74	85	53	29	20
5	21	20	16	17	18	17	21	85	92	53	*30*	20
6	*21	*20	16	16	18	17	22	*92	85	50	26	19
7	21	20	15	14	19	20	20	106	73	52	26	19
8	21	20	15	*14	19	*22*	19	106	68	48	25	21
9	22	ε 20	14	14	*20*	22	*26	138	67	44	24	20
10	22	20	14	*13*	19	*20	32	*156	67	43	24	18
11	22	20	*13*	14	*17	21	40	166	*64*	40	25	18
12	ε 22	20	*13	15	*17	20	47	196	67	43	26	19
13	22	20	14	14	12	20	47	*179	67	42	*27	19
14	22	20	15	14	*10*	17	81	190	71	39	26	18
15	22	20	16	15	12	16	76	190	71	84	25	18
16	22	ε 20	17	15	*16	17	76	187	76	*34	24	18
17	22	19	18	14	16	20	85	204	*80	39	24	*17
18	22	19	18	14	14	20	92	207	94	42	23	18
19	22	19	18	15	14	*20	*94*	*200	100	*42	23	18
20	22	19	18	15	12	19	92	*200	95	39	23	17
21	22	*18*	18	14	13	19	90	*220*	97	38	23	17
22	21	18	16	14	12	18	92	205	97	35	23	17
23	21	18	16	16	11	18	90	162	90	31	22	*25*
24	21	*ε 18	15	16	11	18	92	142	87	30	21	21
25	21	ε 19	15	14	13	17	90	148	82	30	21	20
26	21	ε 19	16	14	19	17	*94	*124	83	80	21	20
27	21	19	15	15	18	17	94	109	*107*	29	20	20
28	21	19	16	17	16	17	92	100	85	26	20	19
29	21	18	17	18	-------	17	87	94	73	**23*	*19*	19
30	21	18	16	18	-------	17	83	88	67	24	19	19
31	21	-------	16	17	-------	16	-------	76	-------	24	19	-------
Total	665	583	495	473	433	553	1,845	4,354	2,401	1,235	732	572
Mean	21.5	19.4	16.0	15.3	15.5	17.8	61.5	140	80.0	39.8	23.6	19.1
Ac-ft	1,320	1,160	982	938	859	1,100	3,660	8,640	4,760	2,450	1,450	1,130

Calendar year 1953	Max 350	Min 13	Mean 52.8	Ac-ft 38,200
Water year 1953–54	Max 220	Min 10	Mean 39.3	Ac-ft 28,450

*Discharge measurement made on this day.
ε Computed from staff-gage readings.

NOTE.—No gage-height record Oct. 1–11, Oct. 13 to Nov. 8, Nov. 10–15, 17–23, Nov. 27 to Dec. 16, Feb. 17, 18, Apr. 9–11; discharge estimated on basis of 4 discharge measurements and weather records.

DRY CREEK NEAR ALPINE, UTAH

Location.—Lat 40°28'35", long 111°45'25", in NE¼ sec. 18, T. 4 S., R. 2 E., on right bank 2 miles northeast of Alpine and 3½ miles upstream from Fort Creek.

Records available.—July 1947 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,320 ft (from topographic map). Prior to Aug. 3, 1951, at site 500 ft downstream at different datum (destroyed by flood).

Average discharge.—7 years, 21.6 cfs (15,640 acre-ft per year).

Extremes.—Maximum discharge during year, 185 cfs May 13 (gage height, 1.72 ft); minimum, 1.8 cfs Oct. 16.

1947–54: Maximum discharge not determined, occurred Aug. 3, 1951; minimum, 1.6 cfs Sept. 3, 1953.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	5.9	4.3	4.6	*4.3*	*5.4*	*7.3*	47	20	*19*	5.1	*2.7*
2	*3.4	5.1	*4.1*	4.6	4.3		8.6	41	21	17	4.8	4.3
3	3.8	4.8	4.1	4.6	4.8		9.9	39	25	16	5.6	5.6
4	3.8	4.3	4.1	4.8	4.8	[b]5.5	11	46	29	15	8.4	4.6
5	3.4	4.6		4.8	5.6		14	*55*	29	15	*9.8*	3.8
6	3.4	*5.1		4.8	6.2		14	*69	22	14	6.2	3.6
7	3.4	4.6		*5.1*	6.5	5.6	12	80	19	13	5.6	3.6
8	3.4	4.3		*4.6	6.7	6.5	12	85	18	12	5.4	5.4
9	3.4	4.8	[b]4.3	4.3	*7.3*	8.6	*14	90	18	11	5.1	3.8
10	3.4	5.6		[b]4.3	7.3	*9.9	15	*80	19	11	5.1	3.6
11	3.4	6.2		[b]4.3	6.7	8.9	18	105	*17*	8.9	5.4	3.6
12	3.6	7.0	(*)		*6.2	9.2	23	120	19	8.9	5.4	3.6
13	3.6	*7.3*			6.2	[b]9.2	28	*142	20	8.9	5.6	3.8
14	3.4	7.3	4.1		6.2	[b]8.0	32	136	22	8.3	5.1	3.6
15	3.8	6.7	4.3		5.4	[b]7.5	29	129	18	8.0	4.6	3.2
16	3.6	6.2	4.6		5.4	7.0	32	124	19	*7.6	4.3	3.2
17	3.2	6.2	*4.8*		5.4	6.7	42	115	*23	7.6	4.3	*2.9
18	*2.9*	5.1	4.8	[a]4.0	5.6	6.5	54	102	30	8.0	4.1	3.4
19	2.9	4.8	4.8			6.2	50	*92	32	8.3	*4.1	3.4
20	4.6	[b]4.5	4.8		[b]5.6	6.2	51	87	31	7.6	4.1	3.4
21	4.3	3.8				5.9	54	95	32	7.3	4.3	3.2
22	3.8	3.8			5.6	5.9	61	70	29	7.0	4.3	3.2
23	4.6	3.8			5.6	5.9	61	50	27	7.0	3.8	*5.7*
24	4.8	*5.6*			6.5	5.9	66	48	26	6.5	3.6	4.6
25	5.4	3.6	[b]4.6	3.6	6.5	5.9	67	46	24	6.5	3.4	4.3
26	5.1	3.8			6.2	5.4	*68	37	32	7.6	3.4	4.1
27	5.6	4.1			5.6	5.4	*74*	*32	*59*	7.3	3.4	3.8
28	*7.0*	4.1			3.4	[b]5.5	5.6	65	31	29	6.5	3.2	3.6
29	6.7	4.3	4.8		3.8	-------	5.9	55	29	24	5.6	3.2	3.6
30	5.9	4.3	4.6		4.1	-------	7.3	54	27	20	5.6	*2.7*	4.1
31	5.9	-------	[b]4.6		4.3	-------	7.3	-------	*22*	-------	*5.1*	2.7	-------
Total	129.1	149.6	138.3		128.4	163.2	205.3	1101.8	2,271	753	297.1	145.5	115.3
Mean	4.16	4.99	4.46		4.14	5.83	6.62	36.7	73.3	25.1	9.58	4.69	3.84
Ac-ft	256	297	274		255	324	407	2,190	4,500	1,490	589	289	229

Calendar year 1953	Max 225	Min 2.9	Mean 18.8	Ac-ft 13,630
Water year 1953–54	Max 142	Min 2.7	Mean 15.3	Ac-ft 11,100

Peak discharge (base, 100 cfs)..... May 13 (5:45 p.m.) 185 cfs (1.72 ft); June 27 (3 a.m.) 120 cfs (1.78 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.

FORT CREEK AT ALPINE, UTAH

Location.—Lat 40°27'55", long 111°46'45", in SE¼ sec. 13, T. 4 S., R. 1 E., on right bank three-quarters of a mile north of Alpine and 1½ miles upstream from mouth.

Drainage area.—6.1 sq mi, approximately.

Records available.—July 1947 to September 1954.

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

Average discharge.—7 years, 8.66 cfs (6,230 acre-ft per year).

Extremes.—Maximum discharge during year, 59 cfs June 27 (gage height, 2.38 ft); minimum daily, 0.2 cfs Sept. 6.

1947–54: Maximum discharge, 246 cfs Aug. 4, 1951 (gage height, 4.60 ft), from rating curve extended above 78 cfs; no flow Sept. 6, 1951.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	4.1	*3.9*	2.8	*3.8*	5.5	*6.5*	11	3.0	*3.9*	*2.8*	2.4
2	*1.5	3.9	3.9	2.8	4.1	5.4	8.1	9.8	4.8	3.8	2.6	2.7
3	*1.1*	*3.8*	3.9	2.8	4.2	[b]5.4	9.5	9.8	5.4	3.4	2.5	*3.0*
4	2.6	3.8	3.8	2.8	4.2	5.4	11	14	5.4	3.4	.6	2.8
5	2.6	4.1	[b]3.8	2.8	5.0	*5.2*	13	11	5.4	3.8	2.3	2.5
6	2.5	*4.3*	3.8	2.8	5.2	5.5	12	*20	5.5	2.4	2.8	*.2*
7	2.6	4.1	3.8	3.0	5.4	6.1	10	28	5.0	2.1	2.8	2.3
8	2.7	4.2	[b]3.8	*2.7	6.1	6.1	10	30	4.6	2.8	2.7	2.5
9	2.0	4.1	[b]3.8	*2.6*	*7.0*	7.0	*12	*34*	3.9	2.7	2.7	2.5
10	1.8	4.1	3.8	[b]2.6	6.3	*7.7	14	*23	3.7	2.6	1.9	2.2
11	1.5	4.2	}	[b]2.6	5.7	6.8	16	24	3.2	2.6	.7	2.2
12	1.2	4.2	(*)		*5.5	6.8	20	22	4.4	2.6	2.6	1.6
13	2.1	4.1	[b]3.8		5.5	[b]6.8	24	*22	4.4	2.6	2.7	.5
14	2.6	4.1	}		5.5	[b]6.8	27	15	5.7	2.7	2.6	2.6
15	2.4	3.9	3.8		5.2	6.8	23	15	4.8	.9	2.5	2.5
16	3.6	3.9	3.8		5.2	6.8	26	21	4.6	*1.5	2.5	2.5
17	3.6	3.9	3.9	[a]2.8	5.4	6.5	31	20	*4.4	2.6	.7	*2.3
18	3.9	3.9	3.9		4.6	6.5	30	18	3.7	2.7	1.9	2.4
19	4.1	3.9	3.8		[b]4.8	6.5	28	17	*2.9*	2.8	*2.5	.7
20	4.8	3.9	3.6		[b]5.0	6.5	28	15	3.9	2.5	2.5	1.8
21	2.7	3.8	3.4		5.2	6.5	28	21	4.1	2.2	2.7	2.2
22	2.4	3.8	}		5.4	6.5	*32*	17	3.9	*.3*	2.7	2.2
23	3.4	3.9			5.5	6.5	28	6.1	3.4	2.5	2.1	2.7
24	4.1	3.9		3.0	6.8	6.5	27	9.1	3.4	2.4	*.5	2.8
25	4.4	3.9		3.0	7.2	6.3	25	8.4	3.4	2.5	2.4	2.4
26	4.4	3.9	[b]3.0	2.8	6.8	6.1	*19	7.4	5.6	3.1	2.5	.6
27	*5.4*	3.9		2.8	5.9	5.9	18	*6.8	*10*	3.3	2.5	2.8
28	5.4	3.9		3.0	6.1	6.3	19	6.8	3.4	1.5	2.5	2.7
29	4.4	4.1		3.0	-------	6.8	16	6.5	4.1	1.1	2.5	2.7
30	4.2	3.9		3.3	-------	6.8	14	6.1	4.1	3.0	1.2	2.8
31	4.1	-------	}	*3.4*	-------	6.3	-------	*5.0*	-------	3.0	1.3	-------
Total	96.8	119.5	109.7	88.2	152.6	196.6	585.1	479.8	134.1	79.3	67.8	66.1
Mean	3.12	3.98	3.54	2.85	5.45	6.34	19.5	15.5	4.47	2.56	2.19	2.20
Ac-ft	192	237	218	175	303	390	1,160	952	266	157	134	131

Calendar year 1953	Max 68	Min 0.2	Mean 8.26	Ac-ft 5,980
Water year 1953–54	Max 34	Min 0.2	Mean 5.96	Ac-ft 4,320

Peak discharge (base, 75 cfs)------ No peak above base.

*Discharge measurement made on this day.
[a] No gage-height record; discharge estimated on basis of discharge measurements, weather records, and records for nearby streams.
[b] Stage-discharge relation affected by ice.

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN TO JORDAN RIVER BASIN

The following tunnels and ditches in Utah, each equipped with a water-stage recorder, divert water from Colorado River basin to Jordan River basin.

Duchesne tunnel diverts water from Duchesne River to Provo River. Gage is located in NE¼ sec. 2, T 3. S., R. 8 E.

Strawberry tunnel whose west portal is in SW¼ sec. 34, T. 7 S., R. 6 E., diverts water from Strawberry Reservoir on Strawberry River to Diamond Fork in Jordan River basin. Records furnished by Spanish Fork Water Users Association and include tunnel seepage (see p. 101 for 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 NW¼ sec. 15, T. 6 S., R. 6 E.

Strawberry River and Willow Creek ditches divert water from Strawberry River basin to Daniels Creek. The flow of each is gaged in sec. 4, T. 2 S., R. 12 W., Uinta special meridian.

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

Month	Duchesne tunnel	Strawberry tunnel	Hobble Creek ditch	Strawberry River and Willow Creek ditches
October	167	2,470	3	86
November	493	357	0	0
December	460	369	0	0
January	430	369	0	0
February	389	333	0	0
March	430	369	0	0
April	1,830	1,970	0	0
May	16,180	12,560	901	422
June	4,950	19,810	90	406
July	1,650	17,550	0	234
August	681	17,990	1	136
September	555	4,760	0	9
Water year 1953–54	28,220	78,910	995	1,290

JORDAN RIVER AT NARROWS, NEAR LEHI, UTAH

Location.—Lat 40°26'40", long 111°55'15", in SE¼NW¼ sec. 26, T. 4 S., R. 1 W., at Narrows, 5½ miles northwest of Lehi and 7½ miles downstream from Utah Lake.

Drainage area.—2,960 sq mi, approximately, including 280 sq mi in closed basin in Cedar Valley.

Records available.—May to December 1904, July 1913 to September 1954.

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, 7½ miles upstream at different datum.

Average discharge.—41 years (1913–54), 375 cfs (271,500 acre-ft per year).

Extremes.—1913–54: Maximum daily discharge, 1,410 cfs June 10, 1952; no flow at times when gates are closed.

Remarks.—Records good. They represent combined flow of Jordan River, Utah & Salt Lake Canal, and East Jordan Canal. Flow may be regulated by gates and pumps at outlet of Utah Lake, pumps at Pelican Point, and diversion dam at Narrows.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	503	*149*	119	247	53	*281*	412	*418*	657	832	765	762
2	484	135	*118*	239	*52*	351	413	426	691	839	793	*773*
3	506	143	118	236	57	362	413	489	718	817	799	772
4	503	143	118	249	77	349	413	493	738	807	784	763
5	510	137	119	252	101	369	413	581	683	826	600	714
6	*511*	142	143	252	111	372	373	631	523	849	*588*	682
7	511	136	175	234	113	372	400	608	*472*	870	660	707
8	510	140	175	252	115	372	409	600	512	*877*	702	705
9	511	139	189	260	198	377	370	619	608	868	753	671
10	497	143	141	263	335	377	349	662	607	873	763	670
11	462	140	128	263	343	321	373	682	602	869	788	675
12	460	140	201	263	355	336	400	712	604	869	789	676
13	460	140	194	269	*379*	373	406	727	624	870	790	671
14	459	135	199	272	368	382	372	726	631	870	791	671
15	458	141	201	*274*	358	380	334	741	621	871	790	656
16	264	140	201	263	366	414	172	770	642	871	805	674
17	191	127	206	81	374	*429*	*142*	772	640	872	810	668
18	184	127	206	38	315	372	144	778	688	873	818	666
19	177	133	211	*51*	346	389	169	779	764	856	*819*	664
20	179	125	201	106	367	410	203	*781*	769	824	813	665
21	181	*118*	194	125	366	392	221	746	782	784	790	662
22	181	113	213	119	335	368	260	572	811	775	784	663
23	182	117	221	121	370	396	275	523	847	741	763	597
24	149	120	221	113	370	429	310	605	849	729	750	569
25	126	120	221	126	370	410	436	594	*853*	754	731	551
26	124	120	226	132	275	414	584	557	849	738	698	506
27	*125*	120	203	134	328	404	629	542	803	*672*	709	432
28	132	119	239	128	212	394	*644*	589	732	692	740	*333*
29	150	119	234	130	-------	374	632	643	784	714	755	395
30	155	119	236	131	-------	330	595	645	842	748	779	397
31	158	-------	*253*	112	-------	412	-------	656	-------	751	755	-------
Total	10,001	3,934	5,823	5,715	7,409	11,711	11,266	19,667	20,946	25,201	23,474	19,060
Mean	323	131	188	184	265	378	376	634	698	813	757	635
Ac-ft	19,840	7,800	11,550	11,340	14,700	23,230	22,350	39,010	41,550	49,990	46,560	37,800

Calendar year 1953	Max 860	Min 112	Mean 605	Ac-ft 437,800
Water year 1953–54	Max 877	Min 31	Mean 450	Ac-ft 325,700

SURPLUS CANAL AT SALT LAKE CITY, UTAH

Location.—Lat 40°44′, long 111°55′, in SW¼SW¼ sec. 14, T. 1 S., R. 1 W., on right bank 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 1954.

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 same datum. Since Dec. 31, 1946, auxiliary water-stage recorder about 1 mile downstream.

Average discharge.—11 years (1943–54), 214 cfs (154,900 acre-ft per year).

Extremes.—Maximum discharge during year, 439 cfs May 22 (gage height, 5.98 ft); minimum daily, 29 cfs Aug. 20.

1942–54: Maximum discharge, 1,700 cfs June 7, 1952; maximum gage height, 8.84 ft May 7, 1952; minimum daily discharge, that of Aug. 20, 1954.

Remarks.—Records good except those for periods of no gage-height record, which are fair. 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 area. (See p. 125 for records of combined flow of Jordan River and Surplus Canal). Several diversions below station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	240	171	126	243	*150	*166	336	189	*149	128	117	109
2	221	188	125	253	122	253	325	226	165	122	90	117
3	202	178	131	254	122	272	318	202	205	125	33	126
4	198	166	138	251	123	280	306	166	186	128	46	141
5	198	163	138	254	123	266	312	158	243	126	189	136
6	202	171	134	254	123	283	322	142	296	120	173	130
7	203	168	197	264	123	282	291	173	261	128	120	112
8	200	168	245	277	122	298	304	226	238	122	112	123
9	200	166	230	296	122	312	309	195	238	120	114	123
10	202	170	253	299	195	315	288	182	251	115	91	114
11	198	166	[a] 240	*301	269	309	320	150	254	118	84	93
12	206	160	[a] 230	312	278	298	339	160	234	112	94	85
13	213	152	[a] 240	320	286	288	331	151	214	109	107	115
14	219	150	[a] 250	317	310	318	341	137	234	*106	104	125
15	*224	158	[a] 250	322	*294	*330	*307	154	*250	104	88	*122
16	243	*155	258	326	286	362	296	136	238	104	*88	122
17	205	160	258	291	288	368	222	*141	219	101	91	125
18	184	170	251	206	304	386	178	154	200	133	88	125
19	176	163	*250	174	250	355	162	144	173	147	76	125
20	179	157	253	*168	283	365	149	165	163	157	29	134
21	190	150	246	184	296	381	146	185	166	160	46	142
22	194	142	237	192	288	381	162	375	133	[a] 165	50	150
23	200	141	242	189	264	368	139	278	109	[a] 170	56	164
24	206	141	243	192	301	403	126	219	*109	[a] 170	53	170
25	202	138	242	203	301	427	126	176	122	[a] 174	99	184
26	195	134	240	208	304	402	138	174	126	[a] 180	118	180
27	194	134	253	184	232	386	134	142	164	[a] 190	136	176
28	189	131	232	181	261	336	114	134	181	[a] 180	142	170
29	182	130	254	182	-------	328	142	138	144	168	141	162
30	*181	*125	256	170	-------	344	*126	157	130	*158	133	157
31	179	-------	250	170	-------	*334	-------	154	-------	139	*118	-------
Total	6,225	4,660	6,892	7,437	6,420	10,196	7,109	5,463	5,795	4,279	3,026	4,057
Mean	201	155	222	240	229	329	237	176	193	138	97.6	135
Ac-ft	12,350	9,240	13,670	14,750	12,730	20,220	14,100	10,840	11,490	8,490	6,000	8,050

Calendar year 1953	Max 1,010	Min 125	Mean 454	Ac-ft 328,700
Water year 1953–54	Max 427	Min 29	Mean 196	Ac-ft 141,900

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of records for Jordan River and recorder trace at auxiliary gage.

JORDAN RIVER AT SALT LAKE CITY, UTAH

Location.—Lat 40°44′, long 111°55′, in SW¼SW¼ sec. 14, T. 1 S., R. 1 W., a quarter of a mile downstream from highway bridge on Twenty-first South Street, Salt Lake City, and 2 miles downstream from Mill Creek.

Records available.—December 1942 to September 1954.

Gage.—Water-stage recorder. Datum of gage is 4,220.73 ft above mean sea level, datum of 1929.

Average discharge.—11 years (1943–54), 148 cfs (107,100 acre-ft per year).

Extremes.—Maximum discharge during year, 306 cfs May 22 (gage height, 4.96 ft); minimum, 99 cfs July 13.

Maximum combined discharge during year (Jordan River and Surplus Canal), 724 cfs May 22; minimum daily, 165 cfs Aug. 20.

1942–54: Maximum discharge, 384 cfs June 3, 1944; maximum gage height, 5.75 ft June 26, 1952; no flow May 10, 24, 1952.

Maximum combined discharge (Jordan River and Surplus Canal), 1,820 cfs June 7, 1952; minimum daily, 145 cfs May 18, 1946.

Remarks.—Records good. Flow regulated by gates and pumps at outlet of Utah Lake. Many diversions above station for irrigation, industrial and municipal water supplies. Surplus Canal diverts water 1,000 ft above station (see p. 123). For records of combined flow see following page.

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	174	152	*139*	203	*161	**147*	**211*	155	*130	205	155	149
2	165	163	139	206	139	176	208	166	128	186	151	157
3	158	161	143	207	141	192	206	156	130	173	140	176
4	*157*	149	146	210	136	202	204	144	126	161	150	185
5	157	146	147	213	*131*	213	204	139	148	165	**221*	186
6	161	153	146	**214*	131	214	208	133	201	165	213	182
7	162	152	168	213	131	212	200	144	182	149	189	170
8	161	153	183	198	132	208	207	153	158	133	185	167
9	159	151	177	183	134	198	207	141	159	130	175	165
10	164	154	184	183	177	198	193	139	170	126	161	158
11	172	156	175	*182	206	198	196	125	166	132	157	149
12	184	157	169	169	208	195	199	132	158	126	161	*145*
13	187	161	182	158	215	195	202	133	150	111	161	156
14	190	154	185	162	**231*	203	203	127	161	**108*	157	155
15	*193	144	187	163	*226	*208	*197	*119*	*170	111	147	*149
16	**205*	*148	189	162	223	**230*	176	122	162	112	*141	153
17	187	*166*	190	*153*	222	229	145	*126	150	114	141	162
18	173	*173*	196	123	228	222	133	137	142	132	139	162
19	170	163	*203	*110*	211	213	130	127	141	158	147	172
20	174	163	204	*110	219	216	133	132	129	163	*136*	172
21	184	162	203	123	223	226	133	171	131	170	147	173
22	179	155	200	127	223	225	133	**262*	119	174	152	171
23	168	152	203	124	216	220	131	214	116	180	157	183
24	171	151	203	126	231	226	122	194	**114*	180	154	186
25	167	148	202	133	210	228	123	174	138	183	166	*196*
26	165	147	202	136	201	219	129	174	152	187	163	194
27	162	145	204	162	181	216	125	145	206	**206*	169	186
28	164	141	197	176	199	203	*121*	122	**240*	188	163	173
29	164	140	**206*	177	-------	202	134	125	224	*180	161	165
30	*165	**134*	206	171	-------	205	*129	132	215	175	160	160
31	160	-------	204	170	-------	*201	-------	137	-------	161	*151	-------
Total	5,302	4,594	5,682	5,147	5,286	6,440	5,042	4,600	4,716	4,844	4,970	5,057
Mean	171	153	183	166	189	208	168	148	157	156	160	169
Ac-ft	10,520	9,110	11,270	10,210	10,480	12,770	10,000	9,120	9,350	9,610	9,860	10,030

Calendar year 1953	Max 228	Min 1.9	Mean 132	Ac-ft 95,700
Water year 1953–54	Max 262	Min 108	Mean 169	Ac-ft 122,300

*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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	414	323	265	446	311	*313*	*547*	344	279	333	272	258
2	386	*345*	*264*	459	261	429	533	392	293	308	241	274
3	360	339	274	461	263	464	524	358	335	298	173	302
4	355	315	284	461	259	482	510	310	312	289	196	326
5	355	309	285	467	*254*	479	516	297	391	291	*410*	322
6	363	324	280	468	254	497	530	275	*497*	285	386	312
7	365	320	365	477	254	494	491	317	443	277	309	282
8	361	321	428	475	254	506	511	379	396	255	297	290
9	359	317	407	479	256	510	516	336	397	250	289	288
10	366	324	437	482	372	513	481	321	421	241	252	272
11	370	322	[a] 415	483	475	507	516	275	420	250	241	242
12	390	317	[a] 399	481	486	493	538	292	392	238	255	*230*
13	400	313	[a] 422	478	501	483	533	284	364	220	268	271
14	409	304	[a] 435	479	*541*	521	544	264	395	*214*	261	280
15	417	302	[a] 437	485	520	538	504	*253*	420	215	235	271
16	*448*	303	447	*488*	509	592	472	258	400	216	229	275
17	392	326	448	444	510	597	367	267	369	215	232	287
18	357	343	447	329	532	608	311	291	312	265	227	287
19	346	326	453	284	461	568	292	271	314	305	223	297
20	353	320	457	*278*	502	581	282	297	292	320	*165*	306
21	374	312	449	307	519	607	279	356	297	330	193	315
22	373	297	437	319	511	606	295	*637*	252	[a] 339	202	321
23	368	293	445	313	480	588	270	492	225	[a] 350	213	347
24	377	292	446	318	532	629	248	413	*223*	[a] 350	207	356
25	369	286	444	336	511	*655*	249	350	260	[a] 357	265	*330*
26	360	281	442	344	505	621	267	348	278	[a] 367	281	374
27	356	279	457	346	413	602	259	287	370	[a] *396*	305	362
28	353	272	429	357	460	539	*235*	256	421	[a] 368	305	343
29	346	270	460	359	-------	530	276	263	368	348	302	327
30	346	*259*	*462*	341	-------	549	255	289	345	333	293	317
31	*339*	-------	454	340	-------	535	-------	291	-------	300	269	-------
Total	11,527	9,254	12,574	12,584	11,706	16,636	12,151	10,063	10,511	9,123	7,996	9,114
Mean	372	308	406	406	418	537	405	325	350	294	258	304
Ac-ft	22,860	18,360	24,940	24,960	23,220	33,000	24,100	19,960	20,850	18,100	15,860	18,080

Calendar year 1953	Max 1,120	Min 259	Mean 586	Ac-ft 424,400
Water year 1953–54	Max 655	Min 165	Mean 365	Ac-ft 264,300

[a] No gage-height record on Surplus Canal; discharge estimated on basis of gage-height record for auxiliary gage and records for Jordan River.

SEVIER LAKE BASIN

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.

Drainage area.—260 sq mi, approximately.

Records available.—June 1911 to September 1928, June 1939 to September 1954.

Gage.—Water-stage recorder. Prior to Mar. 16, 1915, staff gages, and Mar. 16, 1915, to Oct. 3, 1949, recorder, at several sites within 2 miles at various datums.

Average discharge.—23 years (1912–13, 1914–16, 1917–18, 1922–23, 1924–27, 1939–54), 128 cfs (92,670 acre-ft per year).

Extremes.—Maximum discharge during year, 410 cfs May 10 (gage height, 2.70 ft); minimum, 44 cfs Oct. 1, but may have been less during period of ice effect.

1911–28, 1939–54: 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 several days in 1912.

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

Revisions (water years).—WSP 960: 1939–40. WSP 1284: 1916.

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	*45*	54	50		51	55	*56*	201	*175*	76	60	51
2	45	54				*53*	66	182	167	76	60	54
3	45	55			b 51	55	74	*167*	156	76	*60	58
4	45	55		b 45		60	88	167	146	77	60	54
5	45	*56*			51	56	110	172	136	85	56	53
6	46	54			53	55	116	204	134	81	55	51
7	46	54		45	b 53	64	98	252	182	76	55	51
8	46	54	b 48		53	70	85	324	*125	72	55	53
9	46	54			53	88	85	359	122	72	55	*53
10	46	54		b 46	54	*109*	77	*381*	118	70	60	51
11	47	53			55	81	72	346	116	70	*61*	53
12	49	53		47	61	b 70	72	*359	111	70	54	*67*
13	49	53		b 47	60	b 65	70	356	109	*72	54	60
14	49	53	(*)	b 47	56	58	83	352	107	70	51	55
15	49	55		47	55	63	109	846	103	70	50	53
16	47	*54	47	b 46	53	64	107	333	98	67	*49*	53
17	49	54	47	46	53	63	111	305	96	69	49	53
18	49	56	47	47	54	b 56	144	296	94	81	50	51
19	49		47	*49	b 54	54	*167	*287	92	*100*	50	51
20	50	b 54	46	47	b 54	53	177	284	88	92	49	53
21	51		46		54	55	182	290	86	76	*51	51
22	54				56	56	188	311	86	70	53	51
23	*58*	54			*66	*61	196	293	*83	67	53	53
24	*56*	*54*		b 48	70	*56*	207	*266*	81	70	*51*	*54
25	56	54			69	56	*215*	243	81	77	53	55
26	*55	54	b 46		*74*	54	209	229	86	86	55	54
27	56	54			b 60	56	201	*220	90	81	54	51
28	58	53		49	b 58	60	196	212	86	72	54	50
29	55	53		49		63	190	204	83	67	54	*49*
30	53	*51*		*50*		61	201	193	*79*	*63*	53	49
31	54			50		54		182		63	51	
Total	1,548	1,618	1,462	1,456	1,583	1,924	3,952	8,316	3,266	2,314	1,675	1,595
Mean	49.9	53.9	47.2	47.0	56.5	62.1	132	268	109	74.6	54.0	53.2
Ac-ft	3,070	3,210	2,900	2,890	3,140	3,820	7,840	16,490	6,480	4,590	3,320	3,160

Calendar year 1953	Max 186	Min 41	Mean 60.6	Ac-ft 43,890
Water year 1953–54	Max 381	Min 45	Mean 84.1	Ac-ft 60,910

Peak discharge (base, 500 cfs)—— No peak above base.

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

SEVIER RIVER NEAR CIRCLEVILLE, UTAH

Location.—Lat 38°06′, long 112°19′, in SW¼ sec. 20, T. 31 S., R. 4 W., 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 1954.

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, and Nov. 21, 1949, to Aug. 6, 1954, water-stage recorder at site 300 ft upstream at datum 1.23 ft higher.

Average discharge.—13 years (1914–22, 1923–24, 1950–54), 194 cfs.

Extremes.—Maximum discharge during year, 292 cfs May 11 (gage height, 3.47 ft); minimum daily, 26 cfs July 3.

1912, 1914–27, 1949–54: Maximum discharge, 1.960 cfs about May 21, 1922 (gage height, 8.6 ft, from high-water mark), from rating curve extended above 1,000 cfs by logarithmic plotting; minimum daily, 26 cfs Aug. 21, 1953, July 3, 1954.

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

Revisions (water years).—WSP 1180: 1922(M). WSP 1284: 1916.

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	47	*85*	118		96	109	107	176	*133*	42	31	*38*
2	49	85	105		*92*	103	112	194	114	39	31	39
3	47	87	116		92	*99*	118	178	105	*26*	31	46
4	49	96	124		107	105	126	159	99	31	*29*	51
5	47	96	114		112	109	139	130	94	42	31	49
6	47	94			107	105	151	**126*	90	42	35	42
7	*44*	92			112	103	160	139	87	44	47	44
8	47	87			112	120	133	157	*85	39	46	57
9	49	90		[b] 90	114	137	128	230	83	31	49	*53
10	49	99	[b] 120		112	147	124	264	78	29	*53*	57
11	52	101			116	*150*	116	**284*	73	34	46	51
12	57	101			120	120	116	257	68	39	43	*63*
13	60	99			133	103	112	262	68	*36	45	60
14	55	99		(*)	130	107	*94	253	70	34	42	52
15	52	101			116	105	92	248	73	36	38	52
16	*52	101	120		109	105	85	248	75	34	37	52
17	52	101	*120	86	105	109	75	230	62	36	39	50
18	55	*109	122	87	*107	*107	*68*	224	57	*94*	41	49
19	60	94	122	92	94	105	85	235	47	83	42	51
20	65		124	101	105	99	112	*221	44	55	*37	52
21	65	[b] 110	124	99	107	103	122	226	42	42	37	47
22	68		102	96	109	109	114	273	36	34	36	50
23	85	126	103	94	130	130	116	267	*34	29	36	*53
24	85	*137*	103	94	*148*	124	130	249	*31*	31	36	54
25	90	128	109	107	143	112	148	233	31	36	34	58
26	92	120		107	135	105	164	205	52	68	35	60
27	87	122		96	132	101	*168*	181	49	55	37	59
28	90	122	[b] 95	90	109	109	161	171	39	55	37	56
29	90	120		96	-------	112	141	162	36	*55	37	53
30	*96*	120		101	-------	118	146	152	36	42	37	58
31	94	-------		101	-------	116	-------	146	-------	36	36	-------
Total	1,977	3,142	3,496	2,887	3,204	3,486	3,663	6,480	1,991	1,329	1,191	1,556
Mean	63.8	105	113	93.1	114	112	122	209	66.4	42.9	38.4	51.9
Ac-ft	3,920	6,230	6,930	5,730	6,360	6,910	7,270	12,850	3,950	2,640	2,360	3,090

Calendar year 1953	Max 331	Min 26	Mean 85.4	Ac-ft 61,800
Water year 1953–54	Max 284	Min 26	Mean 94.3	Ac-ft 68,240

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

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 1954.

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.—40 years, 141 cfs (102,100 acre-ft per year).

Extremes.—Maximum discharge during year, 227 cfs May 22 (gage height, 1.65 ft); minimum daily, 9.8 cfs for several days during summer months.

1914–54: Maximum discharge, about 3,000 cfs (including estimated flow of 360 cfs in overflow channel bypassing station) Mar. 4, 1938 (gage height, 5.20 ft), from rating curve extended above 600 cfs; minimum daily, 4.2 cfs June 29, 30, 1953.

Remarks.—Records good. Many diversions above station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*13*	*81*	141	*118*	151	135	132	74	*52*	12	*13*	*10*
2	13	81	132	126	148	126	126	94	38	12	13	10
3	13	86	135	132	144	126	138	94	31	12	13	10
4	13	88	*148*	132	144	129	135	84	25	12	13	11
5	13	88		123	144	132	148	61	20	13	13	11
6	13	91		126	138	132	151	*43	21	12	11	19
7	13	91		132	144	132	*170*	*87*	20	13	11	22
8	13	86		138	144	141	151	38	19	13	10	30
9	13	91		138	144	154	121	98	*19	13	9.8	*30
10	14	96	[b] 135	126	141	163	118	157	18	13	10	31
11	19	101		121	148	157	109	177	18	13	10	32
12	31	98		123	151	141	98	144	18	13	10	*40*
13	31	98		123	160	126	81	148	18	*14	10	35
14	27	91		*121	157	126	*63	135	18	12	10	38
15	27	88		126	144	129	37	135	17	*10*	10	35
16	*24	96	135	126	132	*128*	28	132	16	11	9.8	32
17	24	109	*138	126	129	123	23	132	15	11		32
18	24	*121	138	135	*129	*135	20	118	15	14		31
19	28	115	144	138	*118*	129	19	126	13	*18*		27
20	37	[b] 120	144	138	126	129	19	126	13	14	(*)	22
21	48	[b] 125	148	138	132	138	18	*118	13	13		13
22	59	[b] 130	129	132	129	151	*16*	184	12	13		10
23	68	144	129	135	148	*177*	18	*209*	*9.8	13	[a] 9.8	*10
24	74	*154*	123	141	*170*	167	34	184	10	13		12
25	81	141	129	*167*	170	154	45	160	11	13		17
26	81	132	135	167	160	138	61	126	12	15		22
27	84	132	135	144	160	129	76	98	12	16		23
28	*88*	141	135	144	141	132	81	86	13	15		25
29	88	135	135	151	-------	141	70	74	13	*15		25
30	88	135	129	151	-------	132	59	63	13	17	9.8	27
31	86	-------	*121*	151	-------	132	-------	61	-------	14	9.8	-------
Total	1,248	3,285	4,188	4,189	4,046	4,279	2,365	3,516	542.8	412	323.6	692
Mean	40.3	110	135	135	144	138	78.8	113	18.1	13.3	10.4	23.1
Ac-ft	2,480	6,520	8,310	8,310	8,030	8,490	4,690	6,970	1,080	817	642	1,370

Calendar year 1953	Max 283	Min 4.2	Mean 73.1	Ac-ft 52,950
Water year 1953–54	Max 209	Min 9.8	Mean 79.7	Ac-ft 57,710

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of 1 discharge measurement and records for other Sevier River stations.

[b] Stage-discharge relation affected by ice.

OTTER CREEK RESERVOIR NEAR ANTIMONY, UTAH

Location.—Lat 38°10'15", long 112°00'00", in NW¼ sec. 28, T. 30 S., R. 2 W., near spillway on right side of dam on Otter Creek, 5 miles northwest of Antimony, and 12 miles east of Kingston.

Records available.—January to September 1914 and October 1945 to September 1954 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, 33,000 acre-ft May 1 (gage height, 27.5 ft); minimum observed, 400 acre-ft Aug. 31, Sept. 2, 10 (gage height, 1.5 ft).

1914–15, 1934–54: 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, 400 acre-ft Aug. 1, Sept. 1, 20, Oct. 1, 1934, Aug. 31, Sept. 2, 10, 1954.

Remarks.—Reservoir was formed in 1898 by a 15-ft 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 33.5 ft. Reservoir stores water from Otter Creek and also water diverted from East Fork Sevier River, for irrigation in Sevier River basin.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,100	8,200	11,610	15,580	20,100	25,320	29,460	33,000	23,700	11,870	4,800	------
2	------	------	------	------	------	------	------	------	------	------	------	400
3	------	------	------	------	------	------	------	------	------	------	------	------
4	------	------	------	------	------	------	------	------	------	------	------	------
5	------	------	------	------	------	------	------	------	------	------	------	------
6	------	------	------	------	------	------	------	------	------	------	------	------
7	------	------	------	------	------	------	------	------	------	------	------	------
8	------	------	------	------	------	------	------	------	------	------	------	------
9	------	------	------	------	------	------	------	------	------	------	------	------
10	------	9,000	12,910	16,900	21,900	26,400	30,800	32,000	18,860	9,300	3,060	400
11	6,500	------	------	------	------	------	------	------	------	------	------	------
12	------	------	------	------	------	------	------	------	------	------	------	------
13	------	------	------	------	------	------	------	------	------	------	------	------
14	------	------	------	------	------	------	------	------	------	------	------	------
15	------	------	------	------	------	------	------	------	------	------	------	------
16	------	------	------	------	------	------	------	------	------	------	------	------
17	------	------	------	------	------	------	------	------	------	------	------	------
18	------	------	------	------	------	------	------	------	------	------	------	------
19	------	------	------	------	------	------	------	------	------	------	------	------
20	7,200	10,100	14,210	18,520	23,700	27,840	32,800	29,100	15,300	7,200	1,600	------
21	------	------	------	------	------	------	------	------	------	------	------	------
22	------	------	------	------	------	------	------	------	------	------	------	------
23	------	------	------	------	------	------	------	------	------	------	------	------
24	------	------	------	------	------	------	------	------	------	------	------	480
25	------	------	------	------	------	------	------	------	------	------	------	------
26	------	------	------	------	------	------	------	------	------	------	------	------
27	------	------	------	------	------	------	------	------	------	------	------	------
28	------	------	------	------	25,140	------	------	------	------	------	------	------
29	------	------	------	------	------	------	------	------	------	------	------	------
30	------	[a]11,470	------	------	------	------	[a]32,980	------	12,000	------	------	600
31	[a] 8,120	------	15,580	19,920	------	29,280	------	[a]24,150	------	[a] 5,000	400	------
(†)	------	------	17.7	20.4	23.3	25.6	------	------	15.0	------	1.5	2.0
(‡)	+1,020	+3,350	+4,110	+4,340	+5,220	+4,140	+3,700	−8,830	−12,150	−7,000	+4,600	+200

†Gage height, in feet, at end of month.
‡Change in contents, in acre-feet.
[a] No gage-height record; contents interpolated.

NOTE.—Change in contents: Calendar year 1953, −22,420 acre-ft; water year 1954, −6,500 acre-ft.

EAST FORK SEVIER RIVER NEAR KINGSTON, UTAH

Location.—Lat 38°12′, long 112°09′, in SW¼NW¼ sec. 13, T. 30 S., R. 3 W., on right bank 1,000 ft downstream from bridge on State Highway 22, 1.7 miles east of Kingston, and 4.1 miles upstream from mouth.

Drainage area.—1,260 sq mi, approximately.

Records available.—March 1913 to September 1954.

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 1,500 ft downstream at different datum.

Average discharge.—41 years, 86.9 cfs (62,910 acre-ft per year).

Extremes.—Maximum discharge during year, 244 cfs May 22 (gage height, 2.09 ft); minimum daily, 11 cfs for several days during winter period, but may have been less.

1913–54: Maximum discharge, 2,030 cfs May 12, 1941 (gage height, 5.05 ft); minimum, 3.8 cfs Jan. 7, 1946.

Remarks.—Records good except those for periods of ice effect or no gage-height record, which are poor. Flow regulated by Otter Creek Reservoir (see p. 129).

Revisions (water years).—WSP 750: 1931–32.

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	*87*	*13*	12		*12*		14	64	*222*	*170*	*114*	42
2		13	12		12		*13*	66	222	168	114	42
3		13			12		13	67	217	168	114	42
4		14			12		13	64	215	166	114	41
5		14			12		13	66	213	168	112	42
6		14			12		13	*63	208	166	110	42
7	[a] 85	14			12		14	*60*	210	166	109	41
8		13		[b] 11	12		13	85	210	166	106	*44*
9		13			12	[a] 14	13	158	*208	164	103	*43
10		13	[b] 12		12		13	156	206	156	103	42
11		13			12		19	153	208	151	101	41
12		13			13		21	*149	206	144	101	41
13		13			13		19	151	206	*144	99	41
14	[a] 14	13		(*)	13		*19	151	204	149	98	41
15		13			13		19	124	199	142	95	
16	*14	13			13		19	154	193	145	89	
17	14	14	*12	[b] 12	13		20	156	193	144	87	
18	14	*14	11		*13	*13	20	153	193	142	81	[a] 35
19	*13*	13	12			13	22	154	191	142	77	
20	14		11			13	24	153	186	144	72	
21	14	[b] 14	11			13	24	181	182	142	*69	
22	15					14	23	*240*	180	137	68	
23	15			[b] 13	[a] 14	16	22	234	*178	134	67	*28
24	15	14				*18*	22	230	178	134	63	29
25	14	14				16	21	227	180	129	[a] 60	35
26	14	14	[b] 11			15	24	224	182	129	[a] 55	39
27	13	13				14	53	222	182	129	49	40
28	13	13		13		14	56	222	180	124	55	29
29	13	13		13	-------	14	62	222	174	118	48	*27*
30	13	13		13	-------	14	*63*	222	*172*	*116	44	27
31	13	-------		12	-------	14	-------	222	-------	*115*	*43*	-------
Total	1,285	403	359	369	363	439	704	4,793	5,898	4,512	2,620	1,119
Mean	41.5	13.4	11.6	11.9	13.0	14.2	23.5	155	197	146	84.5	37.3
Ac-ft	2,550	799	712	732	720	871	1,400	9,510	11,700	8,950	5,200	2,220

Calendar year 1953	Max 318	Min ---	Mean 80.4	Ac-ft 58,230
Water year 1953–54	Max 240	Min ---	Mean 62.6	Ac-ft 45,360

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of 4 discharge measurements, record of gate operation for Otter Creek Reservoir, weather records, and records for nearby streams.

[b] Stage-discharge relation affected by ice.

PIUTE RESERVOIR NEAR MARYSVALE, UTAH

Location.—Lat 38°20′, long 112°12′, in NW¼ sec. 3, T. 29 S., R. 3 W., at Piute Dam 9 miles south of Marysvale.

Drainage area.—2,400 sq mi, approximately.

Records available.—March 1914 to September 1954.

Gage.—Staff gage read once daily to Dec. 31 and generally once every five days Jan. 1 to Sept. 30. Datum of gage is 5,900.8 ft above mean sea level (levels by office of State engineer).

Extremes.—Maximum contents observed during year, 49,810 acre-ft Apr. 11, 12 (gage height, 65.0 ft); minimum observed, 2,020 acre-ft Sept. 1 (gage height, 26.1 ft).

1914–54: Maximum contents, 82,300 acre-ft (by original capacity table) May 28, 1922 (gage height, 76.4 ft); 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 heights 16 ft (approximate bottom of reservoir) and 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.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,300	5,120	13,470	21,790	31,020	39,200	47,560	38,510	38,160	25,140	16,140	2,020
2	6,070	5,270	13,690	------	------	------	------	37,990	37,820	------	------	------
3	5,850	5,340	14,230	------	------	------	------	37,470	37,650	------	------	------
4	5,550	5,480	14,670	------	31,480	39,910	------	36,960	37,470	------	14,340	------
5	5,270	5,550	15,680	22,890	------	------	------	36,460	37,300	22,340	------	2,100
6	4,980	5,700	15,230	------	------	------	------	------	------	------	------	------
7	4,770	5,780	15,340	------	------	------	------	------	------	------	------	------
8	4,570	5,920	15,450	------	------	------	------	------	------	------	------	2,200
9	4,370	6,070	15,570	------	------	------	49,430	------	------	------	------	------
10	4,170	6,300	15,680	24,430	------	------	------	34,150	36,290	19,670	11,680	2,670
11	4,040	6,450	15,790	------	------	------	49,810	------	------	------	------	2,870
12	3,910	6,600	15,910	------	------	------	49,810	------	------	------	------	3,090
13	3,790	6,840	16,140	------	34,640	42,420	46,620	------	------	------	------	3,310
14	3,670	7,070	16,370	------	------	------	49,250	------	------	------	------	3,540
15	3,540	7,310	16,720	------	------	------	48,870	33,040	36,290	17,190	8,630	3,790
16	3,670	7,470	17,070	------	------	------	48,310	------	------	------	------	------
17	3,790	7,710	17,430	------	------	------	47,930	------	------	------	------	------
18	3,850	7,960	17,800	------	------	43,690	47,190	------	------	------	------	------
19	3,850	8,210	18,160	------	36,290	------	46,640	------	------	------	------	------
20	3,910	8,460	18,540	------	------	------	46,260	------	33,510	16,950	5,480	3,600
21	3,980	8,720	18,910	------	------	------	------	------	------	------	5,480	------
22	4,100	9,080	19,280	------	------	------	------	------	------	------	------	------
23	4,170	9,520	19,670	------	------	45,160	------	------	------	------	------	------
24	4,230	10,000	19,930	------	------	------	------	------	------	------	------	------
25	4,370	10,470	20,190	------	------	------	41,700	36,630	------	------	3,030	3,200
26	4,440	10,970	20,450	------	------	46,080	------	------	------	------	------	------
27	4,500	11,470	20,710	------	------	------	------	------	------	------	------	------
28	4,570	11,890	20,980	------	[a]38,910	------	------	------	------	------	------	2,280
29	4,640	12,300	21,120	30,260	------	------	------	------	------	------	------	------
30	4,700	12,720	21,380	------	------	------	29,030	38,160	25,850	------	2,100	[a]2,110
31	4,910	------	21,660	[a]30,770	------	47,380	------	38,330	------	[a]16,210	2,060	------
(†)	31.2	40.2	47.7	------	------	63.7	59.1	58.7	50.7	------	26.2	------
(‡)	−1,620	+7,810	+8,940	+9,110	+8,140	+8,470	−8,350	−700	−12,480	−9,640	−14,150	+50

†Gage height, in feet, at end of month.
‡Change in contents, in acre-feet.
[a] No gage-height record; contents interpolated.

NOTE.—Change in contents: Calendar year 1953, −20,760 acre-ft; water year 1954, −4,420 acre-ft.

SEVIER RIVER BELOW PIUTE DAM, NEAR MARYSVALE, 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 Marysvale.

Drainage area.—2,440 sq mi, approximately.

Records available.—May 1911 to September 1954.

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, water-stage recorder at present site at datum 0.2 ft higher.

Average discharge.—42 years (1912–54), 240 cfs (173,800 acre-ft per year).

Extremes.—Maximum discharge during year, 686 cfs June 23, 24 (gage height, 2.38 ft); minimum daily, 0.7 cfs Apr. 10.

1911–54: Maximum discharge, 2,600 cfs May 23, 24, 1922; practically no flow at times when reservoir gates are closed.

Remarks.—Records good. One small diversion between gage and Piute Reservoir. Flow regulated by Piute Reservoir (see p. 131).

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	224	53	2.9	2.2	*2.6*	*3.4*	3.8	252	300	524	416	83
2	220	57	2.9	*3.0*	2.6	3.5	3.8	139	352	*548*	412	83
3	217	54	3.0	2.0	2.6	3.5	4.0	168	468	520	*448*	79
4	214	54	3.0	2.0	2.8	3.5	4.0	304	464	524	444	67
5	231	53	*3.3*	2.0	2.8	3.5	4.0	348	432	520	428	57
6	*338*	52	2.9	2.0	2.8	3.5	4.0	348	424	508	424	70
7	231	45	2.9	2.2	2.8	3.5	4.2	*376	352	464	400	83
8	234	43	3.0	2.2	2.8	3.7	3.8	376	276	456	400	65
9	224	43	2.9	2.2	2.8	*4.0*	3.4	392	*259	480	412	*39
10	203	44	2.8	2.0	2.9	4.0	.7	*400*	245	516	432	*21*
11	192	44	2.8	2.0	2.9	4.0	21	396	210	516	432	21
12	189	44	2.8	2.0	3.0	4.0	98	396	178	516	428	21
13	189	44	2.8	*2.0	2.9	4.0	166	376	*166*	*464	420	22
14	121	59	2.8	2.0	2.9	4.0	*192	344	206	344	400	21
15	*63	74	2.6	2.0	2.9	4.0	203	276	296	308	388	33
16	*49*	70	2.6	2.1	2.9	4.0	228	270	372	256	368	122
17	57	70	*2.6	2.2	*2.9	4.0	231	259	444	217	364	120
18	68	*70	2.6	2.2	3.2	*4.0	259	234	532	154	384	140
19	74	68	2.6	2.3	3.0	4.0	292	252	552	*142*	416	118
20	74	52	2.6	2.3	3.0	3.8	404	256	569	175	412	63
21	81	42	2.6	2.3	3.0	3.8	460	*252	564	196	*404	74
22	89	4.6	2.4	2.3	3.0	3.8	512	138	592	189	404	104
23	89	4.0	2.4	2.3	3.0	3.8	540	17	614	189	384	*106
24	89	3.8	2.4	2.3	3.0	3.8	*552*	*14*	*672*	189	280	104
25	87	3.8	2.3	2.4	3.2	3.7	544	14	646	175	252	104
26	87	3.7	2.4	2.4	3.2	3.7	524	15	623	142	245	113
27	89	3.4	2.3	2.4	3.2	3.7	540	*16	569	142	223	125
28	89	3.2	*2.0*	2.4	*3.4*	3.7	532	58	548	142	*54*	*145*
29	89	3.0	2.0	2.4	-------	3.7	496	87	*536	172	65	142
30	68	*2.9*	2.0	2.4	-------	3.7	456	170	508	*214	60	140
31	54	-------	2.2	*2.6*	-------	3.8	-------	296	-------	320	81	-------
Total	4,223	1,167.4	81.3	68.1	82.1	117.1	7,285.7	7,239	12,969	10,222	10,680	2,485
Mean	136	38.9	2.62	2.20	2.93	3.78	243	234	432	330	345	82 8
Ac-ft	8,380	2,320	161	135	163	232	14,450	14,360	25,720	20,280	21,180	4,930

Calendar year 1953	Max 672	Min 2.0	Mean 189	Ac-ft 136,600
Water year 1953–54	Max 672	Min 0.7	Mean 155	Ac-ft 112,300

*Discharge measurement made on this day.

SEVIER RIVER ABOVE CLEAR CREEK, NEAR SEVIER, UTAH

Location.—Lat 38°34'20", long 112°15'25", in NW¼NE¼ sec. 5, T. 26 S., R. 4 W., on right bank 0.6 mile upstream from bridge on U. S. Highway 89, 0.7 mile upstream from Clear Creek, and 1 mile south of Sevier.

Drainage area.—2,700 sq mi, approximately.

Records available.—May 1911 to November 1916 (published as Sevier River at Sevier), April 1939 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,560 ft (by barometer). Prior to May 16, 1912, staff gage, and May 16, 1912, to Sept. 30, 1929, water-stage recorder, at site 0.8 mile downstream at different datums (datum lowered 1 ft Mar. 31, 1913).

Average discharge.—19 years (1912–16, 1939–54), 273 cfs (197,600 acre-ft per year).

Extremes.—Maximum discharge during year, 687 cfs June 25 (gage height, 2.88 ft); minimum daily, 14 cfs Feb. 27, Apr. 3, 11.

1911–16, 1939–54 (not including flow of Clear Creek): Maximum discharge, 2,270 cfs May 16, 1941 (gage height, 4.83 ft); minimum, 4.6 cfs Feb. 13, 1952.

Remarks.—Records good except those for periods of ice effect, which are fair. Many diversions above station for irrigation. Flow regulated by Otter Creek and Piute Reservoirs (see p. 129, 131).

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	246	70	20		22	19	16	405	355	529	372	99
2	243	72			22	b 20	16	254	363	554	414	103
3	243	74			22	b 20	*14*	148	449	*559*	427	108
4	240	72			22	20	15	293	514	534	*454*	101
5	243	72			22	18	16	355	490	554	440	78
6	*264*	69			*25*	19	16	380	467	524	427	67
7	264	69			22	19	16	*405	436	500	414	90
8	260	64			21	18	16	418	359	472	401	110
9	260	63			21	18	16	410	324	462	397	74
10	243	63		b 20	20	19	16	431	293	514	427	54
11	233	63			20	19	14	*440	286	534	427	39
12	226	63			20	17	23	*444*	250	534	422	39
13	223	63		(*)	20	20	118	436	223	519	418	40
14	217	63			20	20	163	436	*214*	454	410	39
15	*126	77			20	20	*192	405	282	343	384	*35*
16	82	*38*	*b 20		19	20	217	372	339	316	368	69
17	*74*	*84			*19	*22*	230	376	427	275	355	136
18	78	84			19	20	230	380	500	217	359	141
19	88	80			b 20	20	268	372	549	*189	*376	154
20	93	74			b 20	19	308	397	579	171	392	94
21	93	58			b 20	19	397	418	584	204	388	60
22	101	57			20	19	458	418	*590	220	384	91
23	108	36		b 22	19	22	490	201	632	201	380	*119
24	108	29			18	22	534	138	664	204	335	117
25	103	26			18	21	539	117	*687*	210	275	114
26	103	23			18	19	529	*114	664	183	250	121
27	101	22			*14*	18	524	108	626	166	243	149
28	101	22			18	17	*544*	*103*	584	*160*	181	154
29	101	*21*		24	-------	*16*	524	152	559	171	85	*166*
30	99	22		23	-------	16	486	163	544	189	77	166
31	80	-------		23	-------	17	-------	316	-------	257	84	-------
Total	5,044	1,743	620	650	561	593	6,945	9,805	13,833	10,919	10,766	2,927
Mean	163	58.1	20	21.0	20.0	19.1	232	316	461	352	347	97.6
Ac-ft	10,000	3,460	1,230	1,290	1,110	1,180	13,780	19,450	27,440	21,660	21,350	5,810

Calendar year 1953	Max 681	Min 17	Mean 206	Ac-ft 149,300
Water year 1953–54	Max 687	Min 14	Mean 176	Ac-ft 127,800

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

CLEAR CREEK AT SEVIER, UTAH

Location.—Lat 38°34'55", long 112°15'30" in SW¼NE¼ (revised) 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 1954 in reports of Geological Survey. April 1934 to September 1954 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.—19 years (1912–17, 1940–54), 31.8 cfs (23,020 acre-ft per year).

Extremes.—Maximum discharge during year, 156 cfs May 22 (gage height, 3.42 ft); minimum, 0.8 cfs Aug. 24, 25.

1912–19, 1940–54: Maximum discharge observed, 487 cfs Aug. 7, 1941 (gage height, 4.05 ft, site and datum then in use); no flow Aug. 26, 1913.

Remarks.—Records good. Practically entire flow is diverted above station each year during latter part of irrigation season.

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	1.5	2.6	14	11	15	16	21	29	38	15	1.8	2.0
2	1.5	2.6	13	11	14	13	23	29	39	15	1.8	2.2
3	1.6	2.4	13	13	13	15	26	30	37	11	1.8	2.2
4	1.6	2.6	14	13	14	16	28	33	38	11	2.2	2.2
5	1.6	3.3	10	13	14	15	29	28	43	10	2.7	2.2
6	2.0	4.9	10	14	15	12	33	33	40	8.2	2.0	2.2
7	3.1	5.2	15	13	13	15	24	*42	34	6.9	1.8	2.2
8	1.8	4.9	12	13	14	17	19	52	30	6.3	1.4	3.4
9	1.8	5.2	11	13	15	20	19	67	28	4.7	1.4	2.2
10	1.6	5.5	14	8.9	15	23	20	74	23	2.9	2.2	2.0
11	1.6	5.5	12	11	15	21	20	*70	22	2.2	1.6	2.0
12	1.8	5.5	10	14	16	16	20	72	20	2.2	1.4	2.7
13	1.8	6.1	12	*13	17	16	16	72	20	2.5	1.4	2.5
14	1.8	4.1	12	12	18	16	19	74	22	2.9	1.0	2.0
15	*2.2	6.4	13	14	15	17	*21	76	23	2.7	1.6	2.2
16	2.0	6.6	*14	13	14	19	18	75	23	2.7	1.6	1.8
17	2.2	*2.6	15	13	*15	*19	18	72	25	2.7	1.6	1.8
18	2.2	3.1	14	12	16	16	24	75	26	4.9	1.2	1.8
19	2.2	6.8	13	14	11	17	28	74	26	*11	*1.6	1.8
20	2.4	8.5	14	13	14	17	30	80	27	6.3	1.6	1.6
21	2.6	11	15	12	16	18	33	104	26	4.4	1.4	1.6
22	2.6	14	10	10	17	17	33	146	*27	3.2	1.6	1.6
23	3.3	18	8.2	14	16	20	36	127	24	3.4	2.0	*1.8
24	2.6	17	8.9	14	18	18	37	102	23	3.4	1.6	2.0
25	2.4	16	10	20	18	18	37	*81	24	3.2	1.2	2.2
26	2.0	15	10	15	18	16	35	*74	25	3.6	1.6	2.5
27	2.0	15	12	11	16	19	34	65	24	3.2	1.2	10
28	2.0	15	10	18	15	20	36	54	23	2.9	1.6	7.9
29	2.0	14	10	16	------	21	33	49	21	2.5	1.6	2.2
30	2.2	14	9.7	16	------	22	33	44	18	2.2	1.8	1.8
31	2.4	------	9.7	16	------	20	------	40	------	1.8	1.8	------
Total	64.4	243.4	368.5	413.9	427	544	803	2,038	818	164.9	51.1	76.6
Mean	2.08	8.11	11.9	13.4	15.2	17.5	26.8	65.7	27.3	5.32	1.65	2.55
Ac-ft	128	483	731	821	847	1,080	1,590	4,040	1,620	327	101	152

Calendar year 1953	Max 93	Min 1.2	Mean 17.8	Ac-ft 12,920
Water year 1953–54	Max 146	Min 1.0	Mean 16.5	Ac-ft 11,920

*Discharge measurement made on this day.

SEVIER RIVER NEAR SIGURD, UTAH

Location.—Lat 38° 52′, long 111°57′, in SW¼ sec. 19, T. 22 S., R. 1 W., on left bank 200 ft downstream from bridge, half a mile downstream from Rockyford Dam, 2 miles northeast of Sigurd, and 5 miles upstream from Lost Creek.

Drainage area.—3,340 sq mi, approximately.

Records available.—July to September 1912, July 1914 to September 1954. Prior to 1939 (corrected), published as "near Vermilion."

Gage.—Water-stage recorder. Altitude of gage is 5,180 ft (by barometer). Prior to September 1912, staff gage a quarter of a mile downstream at different datum. July 31, 1914, to Apr. 19, 1917, staff gage, and Apr. 20, 1917, to Oct. 16, 1935, water-stage recorder, at present site at datum 2.00 ft lower.

Average discharge.—40 years (1914–54), 106 cfs (76,740 acre-ft per year).

Extremes.—Maximum discharge during year, 219 cfs Feb. 15 (gage height, 2.32 ft); minimum daily, 0.2 cfs July 3, 9.

1914–54: Maximum discharge, 2,400 cfs May 30, 1922 (gage height, 6.1 ft, present datum), from rating curve extended above 600 cfs; practically no flow (seepage only) when Rockyford Reservoir gates are closed.

Remarks.—Records good above 10 cfs and fair below. Flow regulated by reservoirs. During irrigation season practically the entire flow through Rockyford Dam is diverted above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	*42*	*81*	96	118	105	36	3.2	1.5	0.8	*2.4*	*1.5*
2	5.6	44	82	96	118	103	41	13	1.7	.4	1.0	1.5
3	5.3	44	81	*94*	170	103	*42*	13	1.9	*.2*	*.8*	1.5
4	4.1	44	82	94	*197*	101	40	*14*	1.9	.4	1.3	1.7
5	3.5	44	84	94	186	97	41	13	1.9	.4	1.3	1.5
6	3.8	47	81	94	174	99	40	*13	1.7	.6	.8	1.5
7	2.9	47	81	97	164	97	31	7.4	1.5	.4	.8	1.7
8	*1.9*	44	81	97	152	97	27	7.4	1.5	.4	.8	1.9
9	1.9	45	82	99	143	105	19	4.1	1.5	.2	1.0	*2.7*
10	11	44	86	97	134	105	7.8	3.5	1.5	.4	1.3	2.1
11	22	45	87	96	130	101	9.4	2.9	1.5	.6	1.0	2.1
12	22	45	87	96	128	*106*	11	3.2	1.9	.6	1.0	2.1
13	28	45	90	*96	130	105	*11	2.7	1.7	.6	1.0	2.4
14	28	44	97	96	130	101	10	2.1	1.9	.6	1.0	2.1
15	24	45	97	96	167	101	9.8	2.1	1.9	.6	.8	2.1
16	82	47	*97	97	169	45	8.9	1.9	2.4	.8	.8	2.1
17	*38	57	97	99	*154	*6.3*	7.4	2.1	2.4	1.0	*.8	2.4
18	39	72	97	101	128	7.8	6.7	1.9	1.9	1.0	.8	2.1
19	39	72	99	103	120	8.1	6.7	1.9	1.9	1.0	1.0	2.1
20	37	*72	*103*	103	114	8.1	4.9	1.7	1.9	1.0	1.0	1.9
21	39	72	101	106	112	8.5	2.7	1.5	2.1	*1.0	.8	*1.9
22	43	79	101	106	116	9.4	8.2	4.1	2.1	1.0	1.0	2.1
23	41	86	101	106	110	9.8	2.7	6.7	*2.1	1.3	1.3	2.7
24	40	87	101	105	108	17	2.1	8.1	1.9	.6	1.3	2.7
25	40	*92*	99	106	106	59	*1.5*	*1.3	*2.9*	.8	1.0	2.7
26	40	84	97	110	105	101	1.7	1.3	1.9	1.3	1.0	2.7
27	40	86	96	112	*103*	92	1.5	1.9	1.7	1.5	1.0	2.7
28	45	86	96	116	105	84	1.9	1.9	1.3	1.3	1.3	2.7
29	*46*	82	96	*118*	-------	57	2.4	1.7	*.6*	1.3	1.3	2.7
30	44	81	96	118	-------	38	2.7	1.7	.8	1.9	1.5	2.7
31	43	-------	97	118	-------	37	-------	1.5	-------	*3.2*	1.7	-------
Total	817.4	1,824	2,853	3,162	3,791	2114.0	433.0	145.8	53.4	27.2	33.9	64.6
Mean	26.4	60.8	92.0	102	135	68.2	14.4	4.70	1.78	0.88	1.09	2.15
Ac-ft	1,620	3,620	5,660	6,270	7,520	4,190	859	289	106	54	67	128

Calendar year 1953	Max 166	Min 0.4	Mean 48.9	Ac-ft 35,410
Water year 1953–54	Max 197	Min .2	Mean 42.0	Ac-ft 30,380

*Discharge measurement made on this day.

SALINA CREEK AT SALINA, UTAH

Location.—Lat 38°57′, long 111°52′, in NW¼ sec. 25, T. 21 S., R. 1 W., on right bank 150 ft upstream from U. S. Highway 89 and ¾ mile upstream from mouth.

Drainage area.—298 sq mi.

Records available.—April 1914 to September 1917 (fragmentary), October 1917 to September 1919, November 1942 to September 1954.

Gage.—Water-stage recorder and concrete control. Altitude of gage is 5,140 ft. Prior to Mar. 23, 1915, staff gage at site 150 ft downstream at different datum. Mar. 23, 1915, to Oct. 16, 1917, staff gage, and Oct. 17, 1917, to Sept. 30, 1919, water-stage recorder, at site about a quarter of a mile upstream at different datum.

Average discharge.—13 years (1917–19, 1943–54), 20.6 cfs (14,910 acre-ft per year).

Extremes.—Maximum discharge during year, 41 cfs Jan. 27 (gage height, 1.40 ft); no flow for several days during summer.

1914–19, 1942–54: Maximum discharge, 2,650 cfs July 27, 1953 (gage height, 6.70 ft, from floodmark); no flow at times in 1950–51, 1954.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	*6.4*	2.4		15	11	0.7	1.8	0.8	*0.1*	0.3	*0.1*
2	1.6	4.8	3.2		12	11	.6	1.2	.6	.1	.2	.2
3	1.8	3.2	2.2		12	12	.5	1.4	.5	.1	.4	.4
4	1.2	3.2	*.2*		14	18	.6	1.6	.5	.1	.4	.4
5	1.2	3.2	.2		14	15	.6	1.0	.7	.2	.3	.4
6	1.6	4.1	.3		14	15	*.4*	*1.4	.7	.1	.2	.4
7	1.4	2.4	3.2		14	15	.5	3.4	.4	.5	.3	.6
8	1.4	2.2			18	19	.6	3.2	.5	.4	.2	*.5*
9	1.6	2.4			*20*	*20*	1.0	2.9	*.5*	.4	.2	.4
10	1.8	2.9			17	20	.7	3.4	.4	.5	.4	.3
11	2.3	4.8			15	18	.7	2.9	.4	.2	.3	.4
12	1.1	4.1		(*)	16	9.0	.5	*3.5*	.5	.4	*.1*	.6
13	*.8*	1.4			18	14	*.5	*3.5	.7	.6	.2	*4.1*
14	.8	*.6*		[b]10	20	14	.8	2.9	*1.0*	.4	.4	1.3
15	1.2	.8	(*)		12	16	1.4	1.6	.7	.4	.2	.3
16	1.0	.7			*12	9.5	1.2	.4	.6	.4	.1	.4
17	.8	1.1			12	*1.2	.7	1.0	.7	*2.5*	*.1	.4
18	*1.1	1.1			13	1.0	1.2	1.8	.3	.5	.2	.4
19	1.6	1.0	[b]9.5		7.8	1.1	1.1	*.3*	.4	.4	.1	.4
20	2.7	*.6			13	.8	1.1	.3	.4	.4	.2	.4
21	1.8	.6			13	.8	1.2	.7	.4	*.4	.2	*.4
22	2.2	.7			13	.8	1.0	1.4	.2	.4	.2	
23	2.0	2.0			9.6	1.0	.6	1.2	.3	.2	.1	
24	1.1	5.6			10	.8	.7	1.1	*.1	.2	.2	
25	1.2	6.0			13	.7	1.1	*1.1	*0*	.4	.2	
26	1.2	4.1			11	.7	.8	.7	.1	1.8	.1	[a].4
27	1.2	4.1		17	5.2	.7	.8	.8	.4	1.6	.2	
28	3.2	3.2		*19*	*4.8*	.7	1.4	.8	.2	.6	.3	
29	5.2	2.9		17	-------	.7	*1.6*	.6	.2	.4	.3	
30	6.4	3.8		18	-------	1.2	1.2	1.0	.2	.4	.2	
31	*8.5*	-------		16	-------	3.4	-------	1.8	-------	.2	.1	-------
Total	62.4	84.0	239.7	347	368.4	252.1	25.8	50.7	13.4	15.3	6.9	16.4
Mean	2.01	2.80	7.73	11.2	13.2	8.13	0.86	1.64	0.45	0.49	0.22	0.55
Ac-ft	124	167	475	688	731	500	51	101	27	30	14	33

Calendar year 1953	Max 121	Min 0.2	Mean 12.8	Ac-ft 9,300
Water year 1953–54	Max 20	Min 0	Mean 4.06	Ac-ft 2,940

*Discharge measurement made on this day.

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

[b] Stage-discharge relation affected by ice.

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN TO SEVIER LAKE BASIN

The following 13 ditches and tunnels in Utah, each equipped with a water-stage recorder, divert water from the Colorado River basin to the Sevier Lake basin.

Fairview ditch diverts water from tributaries of San Rafael River and Price River to San Pitch River in Sevier Lake basin. Gage is located in SE¼ sec. 26, T. 13 S., R. 5 E.

Candland ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in NW¼ sec. 1, T. 15 S., R. 5 E.

Coal Fork ditch diverts water from tributary of San Rafael River, to San Pitch River. Gage is located in SW¼ sec. 24, T. 15 S., R. 5 E.

Twin Creek tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SE¼ sec. 35, T. 15 S., R. 5 E.

Spring City tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SE¼ sec. 16, T. 16 S., R. 5 E.

Black Canyon ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SE¼ sec. 10, T. 16 S., R. 5 E.

Cedar Creek tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SE¼ sec. 10, T. 16 S., R. 5 E.

Reeder ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in NW¼ sec. 32, T. 16 S., R. 5 E.

John August ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in NW¼ sec. 35, T. 17 S., R. 4 E.

Madsen ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SW¼ sec. 23, T. 17 S., R. 4 E.

Ephraim tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in NW¼ sec. 24, T. 17 S., R. 4 E.

Larsen tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SE¼ sec. 10, T. 17 S., R. 4 E.

Horseshoe tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SW¼ sec. 2, T. 17 S., R. 4 E.

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN TO SEVIER LAKE BASIN—Continued

Transmountain diversions, in acre-feet, from Colorado River basin to Sevier Lake basin, water year 1953–54

Month	Fairview ditch	Candland ditch	Coal Fork ditch	Twin Creek tunnel	Spring City tunnel
October	0	0	0	0	52
November	0	0	0	0	31
December	0	0	0	0	31
January	0	0	0	0	25
February	0	0	0	0	22
March	0	0	0	0	25
April	0	0	0	0	69
May	49	20	82	97	828
June	559	116	61	45	278
July	390	28	18	2	24
August	1	0	6	0	4
September	1	0	0	0	39
Water year 1953–54	1,000	164	167	144	1,430

Month	Black Canyon ditch	Cedar Creek tunnel	Reeder ditch	John August ditch
October	0	3	0	0
November	0	0	0	0
December	0	0	0	0
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	155	115	15	42
June	57	45	22	117
July	5	16	21	58
August	0	6	7	5
September	0	6	10	2
Water year 1953-54	217	191	75	224

Month	Madsen ditch	Ephraim tunnel	Larsen tunnel	Horseshoe tunnel
October	0	12	0	0
November	0	12	0	0
December	0	6	0	0
January	0	6	0	0
February	0	6	0	0
March	0	12	0	0
April	0	18	0	0
May	3	1,890	460	220
June	1	427	221	123
July	0	58	23	17
August	0	12	0	0
September	0	24	1	2
Water year 1953–54	4	2,480	705	362

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 SW¼ sec. 17, T. 36 S., R. 3 W. Figures of diversion, in acre-feet, for the 1954 water year are as follows: October, 1; May, 726; June, 720; July, 490; August, 104; September, 136; total for the water year, 2,180.

SEVIER RIVER BELOW SAN PITCH RIVER, NEAR GUNNISON, UTAH

Location.—Lat 39°09'00", long 111°52'30", in NE¼ sec. 14, T. 19 S., R. 1 W., on left bank 1,000 ft downstream from San Pitch River and 3 miles west of Gunnison.

Drainage area.—4,880 sq mi, approximately.

Records available.—October 1917 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,900 ft (from topographic map).

Average discharge.—37 years, 227 cfs (164,300 acre-ft per year).

Extremes.—Maximum daily discharge during year, 360 cfs Feb. 17; minimum daily, 34 cfs Aug. 7, 9, 25, Sept. 1.

1917–54: 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 period of 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.

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	*116*	213	230	216	275		*202*	66	*87*	59	45	*54*
2	123	213	232	216	272		180	94	56	58	58	52
3	146	211	232	*211*	267		162	84	*48*	58	46	56
4	156	213	235	216	318		144	76	59	56	38	58
5	146	213	232	216	330	a 240	158	71	60	55	37	64
6	140	213	223	218	321		160	*71	75	56	35	65
7	136	216	228	220	310		152	74	75	54	*54*	63
8	154	216	232	223	304		148	65	75	51	35	61
9	150	213	225	220	299	a 250	125	64	74	43	34	61
10	142	213	225	218	296		114	63	78	*40	35	57
11	173	216	225	*216	293		97	65	72	40	35	61
12	180	218	*220*	216	293	a 290	*84	*61*	71	41	*35	74
13	200	216	223	218	301		56	67	72	42	35	*153*
14	191	213	*225	220	315		52	75	60	43	65	90
15	184	211	237	223	301		55	83	71	41	*97*	60
16	182	*204*	240	225	*330	*285	55	78	60	40	79	69
17	193	204	235	228	a *360*	191	63	76	60	40	*74	83
18	*193	218	232	228	a 330	154	63	72	58	41	74	88
19	195	220	237	235	a 300	*146*	66	66	59	43	75	92
20	202	*218	237	237	a 270	150	63	67	59	92	75	90
21	206	220	*242*	232	a 260	186	60	67	59	*100	74	*85
22	209	225	240	228	a 250	247	60	78	*57	56	75	88
23	*225*	235	230	232		252	60	88	56	67	74	85
24	204	*252*	228	237		254	59	*81	*69	*155*	44	87
25	186	247	228	257		254	63	79	76	88	34	85
26	197	247	225	260	a 240	290	58	71	55	92	37	92
27	195	235	225	252		*321*	57	69	51	91	37	80
28	197	237	225	260		318	55	*140*	50	95	39	85
29	209	232	223	260	-------	313	*41*	98	54	94	43	81
30	220	228	220	264	-------	260	45	88	60	95	41	76
31	216	-------	220	*275*	-------	218	-------	87	-------	76	41	-------
Total	5,566	6,630	7,111	7,177	8,035	7,749	2,757	2,384	1,916	1,982	1,580	2,280
Mean	180	221	229	232	287	250	91.9	76.9	63.9	63.9	51.0	76.0
Ac-ft	11,040	13,150	14,100	14,240	15,940	15,370	5,470	4,730	3,800	3,930	3,130	4,520

Calendar year 1953	Max 494	Min 49	Mean 194	Ac-ft 140,600
Water year 1953–54	Max 360	Min 34	Mean 151	Ac-ft 109,400

*Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of water commissioner's notes and records for station near Sigurd.

SEVIER BRIDGE RESERVOIR NEAR JUAB, UTAH

Location.—Lat 39°22′, long 112°02′, in NW¼ sec. 1, T. 17 S., R. 2 W., at Sevier Bridge Dam, 13 miles southwest of Juab.

Drainage area.—5,120 sq mi, approximately.

Records available.—January 1914 to September 1954.

Gage.—Staff gage below gage height 60 ft and wire-weight gage above, read once daily.

Extremes.—Maximum contents during year, 168,600 acre-ft Apr. 20 (gage height, 72.7 ft); minimum, 34,370 acre-ft Sept. 4–10 (gage height, 37.6 ft).

1914–54: Maximum contents, 251,000 acre-ft Apr. 19, 20, 1922 (gage height, 80.0 ft), from former capacity table; no storage at times during 1927–28, 1930–36, 1951.

Remarks.—Reservoir was formed by a 30-ft earth-fill dam. Storage began about 1904. Dam ultimately raised to 90 ft by June 1916. Capacity, 236,000 acre-ft, between gage heights 6 ft (approximate bottom of outlet tunnel) and 80.0 ft (top of flashboard on spillway). No dead storage. Water is used for irrigation.

Revisions (water years).—WSP 960: 1941.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78,630	90,090	104,000	118,800	133,800	149,800	165,400	153,400	109,800	82,660	59,140	36,050
2	78,930	90,760	104,400	118,800	134,400	150,500	166,200	154,100	109,400	81,100	58,610	35,200
3	79,240	91,100	105,300	119,800	135,000	151,200	166,200	153,400	108,900	79,550	57,560	34,780
4	79,240	91,430	105,800	119,800	135,600	151,200	166,200	152,700	108,900	78,020	-------	34,370
5	79,860	92,100	106,200	120,400	136,300	152,700	167,000	151,200	108,000	76,800	-------	34,370
6	79,860	92,810	107,100	120,900	136,900	152,700	167,000	149,100	107,500	75,590	-------	34,370
7	80,480	93,160	107,100	121,500	137,600	152,700	167,000	147,000	107,500	74,390	-------	34,370
8	80,480	93,510	107,500	122,000	138,200	153,400	167,800	144,900	107,100	72,610	54,430	34,370
9	81,100	93,870	108,000	122,000	138,900	154,100	167,800	142,900	106,600	71,140	53,92	34,370
10	81,100	94,220	108,400	122,000	139,500	154,100	167,800	140,800	106,200	69,690	53,160	34,370
11	81,730	94,980	108,900	122,500	140,200	154,900	167,800	138,900	105,300	67,970	52,150	34,570
12	81,730	95,280	109,400	123,100	140,800	155,600	167,800	136,900	105,300	66,830	51,390	34,570
13	82,350	95,630	109,800	123,700	141,500	155,600	167,800	135,600	104,400	65,710	50,400	34,780
14	82,660	96,020	109,800	124,200	141,500	156,300	167,800	133,800	104,400	64,580	49,660	35,200
15	82,980	96,400	110,800	125,400	142,900	157,100	167,800	132,500	104,000	63,760	48,910	35,200
16	83,620	97,160	111,200	126,000	142,900	157,100	167,800	130,100	103,600	-------	48,430	35,630
17	83,620	97,540	111,700	126,500	144,200	157,800	167,800	128,800	102,700	-------	47,940	35,630
18	84,250	97,920	112,200	126,500	144,200	157,800	167,800	126,500	101,900	61,840	46,980	35,630
19	84,250	98,300	112,600	126,500	145,600	158,600	167,800	125,400	101,100	61,840	46,490	35,630
20	84,880	98,690	113,100	127,100	145,600	158,600	168,600	123,100	99,860	61,300	-------	35,840
21	85,520	99,450	113,600	127,700	147,000	158,600	167,800	120,900	98,690	61,300	-------	36,050
22	85,520	99,450	114,100	128,300	147,000	159,300	167,000	118,800	97,160	61,300	42,260	36,050
23	86,160	100,300	114,600	128,800	147,000	160,100	166,200	117,700	94,930	61,300	41,570	36,050
24	86,810	100,700	115,200	128,800	148,400	160,800	165,400	116,700	92,810	61,840	40,890	36,270
25	87,130	101,100	115,700	130,100	148,400	161,600	163,100	115,700	91,430	61,840	40,220	36,480
26	87,460	101,900	115,700	130,700	149,100	161,600	163,100	114,600	89,420	62,110	39,540	36,480
27	88,100	102,300	116,700	131,300	149,800	162,300	161,600	113,600	87,460	62,380	39,100	36,910
28	88,100	102,700	117,700	131,300	149,800	163,100	159,300	112,600	86,160	61,840	38,660	36,910
29	88,750	103,200	117,700	132,500	-------	163,100	157,100	112,200	85,520	61,300	38,000	37,120
30	89,420	103,600	117,700	132,500	-------	164,700	155,600	111,700	84,250	60,760	37,340	37,340
31	89,760	-------	118,200	133,100	-------	164,700	-------	110,800	-------	60,220	36,910	-------
(†)	58.3	62.0	65.1	67.7	70.2	72.2	71.0	63.6	56.6	48.4	38.8	39.0
(‡)	+10,830	+13,840	+14,600	+14,900	+16,700	+14,900	−9,100	−44,800	−26,550	−24,030	−23,310	+430

†Gage height, in feet, at 8 a.m. on last day of month.
‡Change in contents in acre-feet.

NOTE.—Change in contents: Calendar year 1953, −51,900 acre-ft; water year 1954, −41,590 acre-ft.

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 1954.

Gage.—Water-stage recorder. Rubble masonry control since Apr. 16, 1914. Altitude of gage is 4,940 ft (by barometer). Apr. 8, 1938, to Mar. 31, 1942, at site 1,300 ft upstream at different datum.

Average discharge.—43 years, 247 cfs (178,800 acre-ft per year).

Extremes.—Maximum discharge during year, 1,100 cfs May 6 (gage height, 4.69 ft); minimum daily, 1.5 cfs Sept. 15, 16.

1911–54: 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 p. 140).

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	*58*	7.9	7.1			*6.4*	20	*288*	313	744	453	*444*
2	5.0	7.9	6.4			6.4	16	366	203	783	456	334
3	5.0	7.9	6.4			6.4	*7.1*	594	*192*	800	506	273
4	5.0	*7.1*				6.4	7.9	682	195	716	418	192
5	*4.3*	7.1				6.4	7.9	890	279	668	366	118
6	4.3	7.9				6.4	8.7	1,050	230	660	*176*	93
7	4.3	8.7			[a] 6.5	6.4	9.6	**1,100*	*221	780	247	93
8	4.3	7.9				7.1	9.6	**1,020*	305	*853*	282	*64
9	4.3	7.9				7.1	8.7	958	342	850	385	44
10	4.3	7.9				7.1	9.6	954	342	846	444	44
11	4.3	7.9	[a] 6.5	(*)			9.6	954	282	716	444	42
12	4.3	9.6					9.6	909	247	599	444	42
13	5.0	*13*				[a] 7.1	8.7	884	247	596	418	9.6
14	5.0	13					8.7	940	247	596	400	1.7
15	5.0	12			**7.1*		*8.7	912	345	551	368	*1.5*
16	5.7	*11		[a] 6	7.1	*7.1	8.7	867	403	310	*348	1.5
17	6.4	11			7.1	7.1	8.7	954	400	296	377	31
18	*6.4	9.6	*7.1		7.1	7.1	8.7	1,070	464	264	458	51
19	6.4	7.9	7.1		7.1	6.4	9.6	1,090	557	241	617	51
20	6.4	7.9	7.1		7.1	6.4	66	1,090	706	131	*702	*51
21	6.4	7.9			7.1	7.1	340	990	*814	29	699	51
22	7.1	7.9			7.1	7.1	444	726	934	*5.7	581	53
23	7.1	7.9			7.1	7.9	550	539	*1,000*	5.7	456	53
24	7.1	7.1			6.4	7.9	660	500	996	5.7	363	51
25	7.1	7.1	[a] 6.5		6.4	9.6	638	500	993	5.7	331	27
26	7.1	7.1			7.1	13	599	497	986	*5.0*	334	5.0
27	6.4	7.1			6.4	13	815	494	715	174	334	4.3
28	6.4	7.9			6.4	14	991	*494	*548*	319	334	3.7
29	7.1	7.1			-------	14	*1010*	491	699	374	334	3.2
30	7.9	7.1			-------	16	885	494	748	429	403	3.2
31	7.9	-------			-------	*18*	-------	432	-------	461	447	-------
Total	231.3	255.3	203.7	186	187.6	263.3	7,184.1	23,729	14,953	13,813.8	12,925	2,235.7
Mean	7.46	8.51	6.57	6	6.70	8.49	239	765	498	446	417	74.5
Ac-ft	459	506	404	369	372	522	14,250	47,070	29,660	27,400	25,640	4,430

Calendar year 1953	Max 1,080	Min 4.3	Mean 262	Ac-ft 189,700
Water year 1953–54	Max 1,100	Min 1.5	Mean 209	Ac-ft 151,100

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of 4 discharge measurements, water commissioner's notes, and records for station near Lynndyl.

SEVIER RIVER NEAR LYNNDYL, UTAH

Location.—Lat 39°29′, long 112°24′, in SE¼ sec. 27, T. 15 S., R. 5 W., on right bank 1½ miles downstream from highway bridge and 3½ miles southwest of Lynndyl.

Drainage area.—6,270 sq mi, approximately.

Records available.—April 1914 to October 1919, November 1942 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,660 ft (by barometer).

Average discharge.—16 years (1914–19, 1943–54), 220 cfs (159,300 acre-ft per year).

Extremes.—Maximum discharge recorded during year, 882 cfs May 1 (gage height, 6.48 ft); minimum daily, 17 cfs Feb. 27, 28, Mar. 1.

1914–19, 1942–54: Maximum daily discharge, 1,820 cfs June 9, 1914, based on records at Leamington; minimum recorded, 9.6 cfs Jan. 22, 1945.

Remarks.—Records good except those for periods of ice effect, which are fair. Flow regulated by Sevier Bridge Reservoir (see p. 000). Several diversions for irrigation between reservoir and station. Records of chemical analyses and water temperatures for the water year 1954 are given in WSP 1353.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*133*	27	26			*17*	*20*	848	355	537	459	345
2	131	*26*	26			22	20	401	252	555	462	*352*
3	92	26	25		[b] 20	32	20	*198*	146	578	*474*	315
4	61	26				32	23	403	113	615	524	226
5	57	46				32	36	482	*113*	584	454	211
6	55	60			20	32	33	542	116	519	345	178
7	54	65		[b] 20	20	32	28	793	170	514	234	142
8	53	70			20	32	32	**855*	168	571	198	136
9	52	70			20	37	31	852	248	654	194	135
10	51	69	[b] 25		20	*39*	29	763	347	*656*	209	112
11	51	68			20	39	29	701	347	654	310	110
12	51	65			20	38	29	672	315	591	301	107
13	*45	65			*22*	38	28	651	252	422	298	110
14	31	65			21	37	37	604	250	398	278	108
15	30	70		(*)	21	37	53	604	259	407	252	91
16	29	71			22	38	*50	623	278	393	228	73
17	29	*74	24		21	39	57	568	317	340	175	62
18	30	72	*24		20	38	59	597	301	347	*172*	57
19	30	51	23	[b] 18	*21	30	60	677	308	355	216	78
20	32	40	21		19	*22	60	758	400	305	*352	97
21	35	31	20		18	22	45	804	506	269	499	98
22	35	30			18	21	125	804	*620	*156	*532*	99
23	36	29			18	22	405	675	696	117	484	96
24	36	29			18	23	496	482	761	93	357	*102
25	35	29			18	22	656	388	*765*	87	276	98
26	35	29	[b] 20		18	21	667	362	750	84	269	99
27	34	28		[b] 20	*17*	21	610	324	744	85	265	90
28	34	28			17	21	682	*322	611	*82*	261	60
29	34	28			-------	20	790	338	362	278	257	*51*
30	29	27			-------	22	*850*	359	419	369	250	51
31	*28*	-------			-------	23	-------	386	-------	403	254	-------
Total	1,468	1,414	714	600	549	901	6,060	17,836	11,286	12,018	9,839	3,889
Mean	47.4	47.1	23.0	19.4	19.6	29.1	202	575	376	388	317	130
Ac-ft	2,910	2,800	1,420	1,190	1,090	1,790	12,020	35,380	22,390	23,840	19,520	7,710

Calendar year 1953	Max 836	Min 16	Mean 219	Ac-ft 158,300
Water year 1953–54	Max 855	Min 17	Mean 182	Ac-ft 132,100

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

PAVANT VALLEY

CHALK CREEK NEAR FILLMORE, UTAH

Location.—Lat 38°58′, long 112°18′, in NE¼ sec. 28, T. 21 S., R. 4 W., on right bank 1 mile east of Fillmore and 2¼ miles downstream from South Fork.

Drainage area.—60 sq mi, approximately.

Records available.—May to July 1914, March 1944 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,180 ft (by barometer). May to July 1914, staff gage at site 1¼ miles upstream at different datum.

Average discharge.—10 years (1944–54), 34.5 cfs (24,980 acre-ft per year).

Extremes.—Maximum discharge during year, 99 cfs May 10; minimum daily, 7.0 cfs Sept. 21, 22.

1914, 1944–54: Maximum discharge, 509 cfs May 4, 1952; minimum daily, 4.9 cfs Dec. 9, 1951.

Remarks.—Records good. Records include flow of Fillmore Canal which diverts on left bank at flood-control dam 400 ft upstream. During low-water periods flow is diverted 2 miles upstream and carried in a lined ditch to head of Fillmore Canal. One small irrigation diversion above gage.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*10*	11	10	10	*13*	12	*30*	53	*89*	*14*	9.7	7.4
2	10	11	10	10	12	*11*	31	49	28	14	9.4	8.0
3	11	11	10	10	12	12	31	49	25	14	9.9	8.4
4	11	11	9.6	10	12	12	32	50	25	14	*11*	9.0
5	11	11	8.8	10	12	12	33	55	25	14	10	8.4
6	11	*12*	10	10	12	12	37	64	25	13	9.9	7.8
7	10	11	*12*	10	12	12	38	*76	24	13	9.7	7.8
8	10	11	10	10	12	12	37	87	22	13	9.4	*11*
9	10	11	10	10	12	12	36	92	23	12	9.9	8.8
10	10	11	10	*8.6*	12	12	33	*93	22	12	10	8.0
11	11	11	9.0	11	12	13	34	*87	21	12	9.7	7.8
12	11	11	9.6	9.9	12	12	33	85	20	12	9.2	8.0
13	11	11	10	9.9	12	15	34	82	20	13	9.2	8.4
14	*11	11	10	*10	13	14	39	79	21	12	9.0	7.8
15	11	11	10	10	12	13	*40	74	20	12	8.8	7.4
16	11	11	10	10	12	13	39	70	19	11	8.6	7.6
17	11	*12	10	10	13	14	42	65	18	12	8.6	7.4
18	11	10	*10	10	13	14	47	61	18	12	8.6	7.2
19	11	10	10	11	*10	*14	52	57	17	*11	*8.2	7.2
20	*12*	11	10	11	13	14	55	53	17	11	8.2	7.2
21	12	10	10	11	13	15	58	53	16	11	8.0	*7.0*
22	12	10	9.5	10	12	16	58	58	*16	11	8.2	7.0
23	12	10	*7.6*	10	12	16	58	48	16	11	8.0	*7.4
24	12	10	8.5	12	12	16	59	43	*15*	10	8.0	8.4
25	12	*9.8*	9.1	12	12	16	*60*	41	16	12	7.8	8.8
26	11	10	8.8	11	12	16	59	40	19	14	7.8	8.8
27	11	9.8	10	11	12	16	57	*37	18	12	7.8	8.4
28	11	9.8	9.0	12	12	22	59	35	16	11	7.8	8.2
29	11	10	11	12	-------	27	55	34	16	10	7.6	8.2
30	11	10	10	12	-------	*30*	56	33	15	10	*7.4*	8.2
31	11	-------	10	*13*	-------	30	-------	*31*	-------	*9.9*	7.7	-------
Total	341	319.4	302.5	327.4	340	475	1,332	1,834	602	372.9	273.1	241.0
Mean	11.0	10.6	9.76	10.6	12.1	15.3	44.4	59.2	20.1	12.0	8.81	8.03
Ac-ft	676	634	600	649	674	942	2,640	3,640	1,190	740	542	478

Calendar year 1953	Max 181	Min 7.6	Mean 32.2	Ac-ft 23,290
Water year 1953–54	Max 93	Min 7.0	Mean 18.5	Ac-ft 13,400

*Discharge measurement made on this day.

BEAVER RIVER BASIN

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, 16 miles east of Beaver.

Drainage area.—19.5 sq mi.

Records available.—July 1947 to September 1954.

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.—7 years, 10.5 cfs (7,600 acre-ft per year).

Extremes.—Maximum discharge during year, 42 cfs June 8 (gage height, 2.25 ft); minimum daily, 0.3 cfs May 11, 12.

1947–54: Maximum discharge, 290 cfs Aug. 9, 1947 (gage height, 4.35 ft); minimum, 0.2 cfs May 26, 27, 1951 (gates of Three Creeks Dam 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.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	3.8		*3.0*		2.8	3.7	13	31	7.6	*5.6*	4.8
2	3.5	4.2	[b]3.6	3.0		*2.7*	*3.5*	12	34	7.6	*5.6*	5.0
3	3.5	*4.4*		2.8		2.7	3.5	11	33	7.6	6.0	4.8
4	3.5	4.0	3.7	2.8		2.7	3.5	11	34	7.8	*6.8*	4.6
5	3.4	4.0	[b]3.7	2.8		2.7	3.5	12	36	7.8	*5.8*	4.2
6	3.4	3.7	[b]3.7	2.8		2.8	3.7	14	35	7.3	5.6	4.2
7	3.5		[b]*4.4*	*2.8		2.8	3.7	8.2	36	7.0	5.3	4.4
8	*3.3*	[b]3.7	4.2	2.8		3.2	3.7	3.5	40	6.8	5.3	*5.8*
9	3.3		3.8	2.8		3.5	3.7	3.2	*41*	*6.6	5.6	4.4
10	3.3		3.8	2.6		*3.8*	3.7	.4	40	6.6	5.6	4.2
11	3.5	3.8	3.7	2.6		3.8	3.7	*.3*	*39	6.6	*5.3	4.6
12	3.7	3.8	3.6	2.7		3.5	3.7	.3	38	7.3	5.0	4.6
13	3.7	3.8	3.5		[a]2.7	3.3	3.7	.4	38	7.3	5.3	4.4
14	*3.5	4.0	3.5			3.2	3.7	.4	37	6.8	5.0	4.2
15	3.5	4.2	3.5			3.5	3.7	.4	36	6.8	4.6	4.0
16	3.3	4.0	3.5			3.5	3.7	.4	34	6.8	4.6	4.0
17	3.3	4.0	3.5			3.5	3.7	.4	34	7.6	4.6	4.0
18	3.3		3.5			3.3	3.7	.4	36	*8.4*	4.6	4.0
19	3.7	(*)	3.3			3.3	8.7	*.4	34	8.4	4.6	3.8
20	3.7		3.3			3.5	14	.4	30	6.8	4.4	3.8
21	3.8		3.2	[a]2.6		3.7	*16*	.5	26	6.6	4.4	3.8
22	3.8		*2.8*			3.7	16	.6	19	6.3	4.4	*3.7
23	3.8		2.8			3.7	16	.6	11	6.0	4.4	3.8
24		[b]3.6	3.3			3.7	16	.6	9.0	6.0	4.4	3.7
25	[b]3.8		3.3			3.5	16	7.4	9.0	7.0	4.4	3.8
26			3.2		*2.7	3.5	16	20	10	7.8	*4.2*	3.8
27			3.2		2.8	3.5	15	23	9.4	7.0	4.2	3.7
28	3.8		3.2		2.8	3.5	*15	23	8.4	6.6	4.2	*3.5*
29	*4.0*		3.2		-------	3.5	14	23	8.1	6.3	4.2	3.5
30	3.8		3.0		-------	3.5	14	25	*7.8*	*5.8*	4.2	3.5
31	3.8	-------	3.0		-------	3.7	-------	*29*	-------	5.8	4.2	-------
Total	111.4	113.3	107.2	82.9	75.8	103.6	242.5	244.8	833.7	216.7	152.4	124.6
Mean	3.59	3.78	3.46	2.67	2.71	3.34	8.08	7.90	27.8	6.99	4.92	4.15
Ac-ft	221	225	213	164	150	205	481	486	1,650	430	302	247

Calendar year 1953	Max 28	Min 1.7	Mean 5.59	Ac-ft 4,050
Water year 1953–54	Max 41	Min 0.3	Mean 6.60	Ac-ft 4,770

*Discharge measurement made on this day.

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

[b] Stage-discharge relation affected by ice.

BEAVER RIVER NEAR BEAVER, UTAH

Location.—Lat 38°17′, long 112°34′, in SW¼SW¼ sec. 17, T. 29 S., R. 6 W., on left bank at Fishlake National Forest boundary, three-quarters of a mile downstream from Bakers Canyon and 4¼ miles east of Beaver.

Drainage area.—82 sq mi, approximately.

Records available.—June to September 1906, March 1914 to September 1954.

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.—40 years (1914–54), 55.1 cfs (39,890 acre-ft per year).

Extremes.—Maximum discharge during year, 173 cfs May 9 (gage height, 3.06 ft); minimum daily, 13 cfs Nov. 8, but may have been less during period of ice effect.

1914–54: Maximum discharge, 1,080 cfs July 22, 1936 (gage height, 7.27 ft, site and datum then in use); minimum, 3.0 cfs Dec. 4, 1950, Jan. 12, 1951.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*16*	*23*	16		*15*	18	*18*	66	*86*	32	20	18
2	16	22	*17*	b 15	b 15		21	*56*	86	30	18	23
3	16	18	16		b 15		22	59	84	26	20	25
4	15	16			b 15	b 17	26	59	81	29	25	20
5	15	17		17	17		24	73	83	*35*	20	19
6	15	16		15	15		33	97	81	29	24	17
7	18	14		*16	18	17	36	117	77	27	22	17
8	17	*18*		17	16	18	33	130	79	26	21	*26*
9	17	15	b 15		17	*21*	35	*135*	79	*25	31	20
10	18	18			16	21	38	124	76	25	*33*	*14*
11	17	20		b 14	17	21	33	119	*74	23	*23	17
12	18	18			17	19	33	121	71	25	25	19
13	18	17			18	b 18	34	119	71	24	24	18
14	17	16			18	b 18	48	119	68	25	25	18
15	*17	18	17	15	17	b 18	52	115	66	25	23	16
16	17	18	16	15	17	18	59	111	65	26	22	15
17	17	19	*17	15	17	17	66	119	65	25	22	17
18	17	*18	*17	17	17	b 17	77	121	69	31	21	16
19	18	18	17	18	b 17	17	84	*115	66	32	20	16
20	17	b 17	17	16	b 17	18	88	113	60	24	19	15
21	21	b 17	17	16	17	18	92	121	55	23	17	*15
22	18	b 17		b 15	18	18	93	126	48	24	17	16
23	20	b 17		15	17	19	*95*	97	41	23	*16*	17
24	18	18		15	18	18	93	90	37	21	17	17
25	18	18		17	*19	18	90	95	39	24	17	19
26	18	18	b 15	b 16	18	18	83	101	47	21	16	21
27	18	18		b 15	18	18	83	99	42	26	16	18
28	21	18		*15	b 18	18	*81	95	36	23	16	17
29	23	17		*18*	-------	18	73	92	34	*20*	17	16
30	23	17		15	-------	18	71	88	*32*	20	16	17
31	*24*	-------		17	-------	*b 18	-------	86	-------	21	17	-------
Total	557	526	482	479	474	560	1,714	3,178	1,898	790	640	539
Mean	18.0	17.5	15.5	15.5	16.9	18.1	57.1	103	63.3	25.5	20.6	18.0
Ac-ft	1,100	1,040	956	950	940	1,110	3,400	6,300	3,760	1,570	1,270	1,070

Calendar year 1953	Max 124	Min ---	Mean 30.4	Ac-ft 21,990
Water year 1953–54	Max 135	Min ---	Mean 32.4	Ac-ft 23,470

Peak discharge (base, 250 cfs)----- No peak above base.

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

BEAVER RIVER AT ADAMSVILLE, UTAH

Location.—Lat 38°16′, long 112°48′, in S½ sec. 30, T. 29 S., R. 8 W., on left bank 600 ft downstream from bridge on State Highway 21, a quarter of a mile upstream from Indian Creek, and three-quarters of a mile south of Adamsville.

Drainage area.—272 sq mi.

Records available.—December 1913 to September 1936, October 1937 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 6,000 ft (from topographic map). Prior to Oct. 1, 1937, at site 300 ft upstream at different datum.

Average discharge.—39 years (1914–36, 1937–54), 37.8 cfs (27,370 acre-ft per year).

Extremes.—Maximum discharge during year, 183 cfs Jan. 25 (gage height, 2.56 ft); no flow July 6 to Sept. 1 and many days in September.

1913–36, 1937–54: Maximum discharge, 1,090 cfs July 23, 1941, from rating curve extended above 500 cfs; no flow during summer periods of many years.

Remarks.—Records good except those for periods of no gage-height record, which are fair. No diversion between station and Rockyford Reservoir. Several ditches above station divert practically entire flow during irrigation season to supply Adamsville and Beaver districts.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	*33*	33	49	56	35	*32*	2.5	0.8	*0.4*	0	*0*
2	.7	39	*32*	47	52	33	22	1.3	.8	.3	0	.3
3	.7	*42*	32	a 46	46	36	15	1.0	.9	.1	0	0
4	*.6*	42	33	44	44	38	11	1.7	.8	.1	0	0
5	.6	40	36	44	41		9.3	1.3	1.0	.1	0	.1
6	.9	38	43	36	43		8.6	1.0	1.5	*0*	0	0
7	1.1	36	42	*41	43		9.0	.9	2.5	0	0	.1
8	1.7	34	37	41	43		9.0	.9	1.8	0	0	1.4
9	1.8	33	42	40	48		a 38	8.6	1.8	2.5	*0	0	.5
10	2.0	33	37	36	67			7.5	2.3	1.7	0	0	.3
11	5.1	36	39	38	60			3.7	2.2	*1.5	0	0	0
12	6.4	34	39	35	60			3.0	1.8	1.5	0	0	0
13	5.4	32	38	35	61			2.5	1.5	1.5	0	*0	.1
14	3.2	33	41	37	*74*			2.0	1.2	2.7	0	0	.9
15	*2.7	33	42	*54*	56	39		1.8	1.8	2.2	0	0	.3
16	2.5	33	39	34	49	36		2.0	1.7	2.2	0	0	.3
17	3.2	34	40	34	47	35		3.4	2.5	1.3	0	0	.3
18	2.7	34	*44	35	42	33		2.5	2.3	.9	0	0	0
19	3.7	*35	46	41	36	34		2.5	*2.0	.8	0	0	0
20	9.0	35	*47*	41	41	*31*		1.8	1.7	.7	0	0	0
21	11	35	46	38	50	33		1.5	1.3	.6	0	0	0
22	9.3	38	40	37	52	38		1.1	*16*	.4	0	0	*0
23	*15*	42	40	39	47	*48*		.7	12	.4	0	0	0
24	14	41	39	51	46	42		.6	5.7	.9	0	0	0
25	10	39	38	*106*	*41	42		.4	3.0	.5	0	0	.6
26	9.7	38	38	50	43	44		.4	1.8	1.5	0	0	*3.0*
27	10	38	32	44	37	39		*.3*	1.2	*3.7*	0	0	1.4
28	10	37	38	*44	*55*	37		*.3	1.5	2.0	0	0	1.5
29	9.7	34	39	46	-------	37		.7	1.0	1.3	0	0	1.4
30	9.7	34	a 41	49	-------	34		1.1	.7	1.2	0	0	1.8
31	11	-------	44	50	-------	*37		-------	.8	-------	0	0	-------
Total	174.2	1,075	1,217	1,342	1,360	1,161		164.3	77.9	42.1	1.0	0	14.3
Mean	5.62	35.8	39.3	43.3	48.6	37.5		5.48	2.51	1.40	0.03	0	0.48
Ac-ft	346	2,130	2,410	2,660	2,700	2,300		326	155	84	2.0	0	28

Calendar year 1953	Max 75	Min 0.5	Mean 20.5	Ac-ft 14,800
Water year 1953–54	Max 106	Min 0	Mean 18.2	Ac-ft 13,140

*Discharge measurement or observation of no flow made on this day.
aNo gage-height record; discharge interpolated or estimated on basis of weather records.

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 1954.

Gage.—Staff gage.

Extremes.—Maximum contents observed during year, 13,510 acre-ft Mar. 31 (gage height, 40.5 ft); minimum observed, 1,400 acre-ft Sept. 6 (gage height, 14.5 ft).

1937–54: Maximum contents observed, 23,810 acre-ft Apr. 22, 25, 28, 30, May 1, 1945; no contents Oct. 16, 31, 1939.

Remarks.—Reservoir is formed by earth-fill dam completed in 1914. Capacity, 23,260 acre-ft between gage heights 0.0 ft (bottom of outlet tunnel) and 51.0 ft (spillway crest). Prior to fall of 1937 the spillway crest was at elevation 52.5 ft; capacity, 24,910 acre-ft. Dead storage negligible. Water is used for irrigation in vicinity of Minersville and Milford.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,250	3,830	5,920		9,930	12,700			8,360	5,960	4,080	
2												
3												
4												1,520
5												
6												1,400
7												
8												
9										5,380		
10					10,610							
11												
12												
13				8,360								
14												
15	3,380											
16							13,350	10,270				
17												
18			7,050									
19		5,170										
20												
21					11,490							
22		5,340										1,570
23												
24												
25												
26			7,650									
27												
28					*12,550							
29												
30		*5,860					*11,910		*6,040			*1,630
31	*3,800		*7,850	*9,850		13,510		*8,480		*4,140	1,760	
(†)						40.5					16.0	
(‡)	+560	+2,060	+1,990	+2,000	+2,700	+960	−1,600	−3,430	−2,440	−1,900	−2,380	−130

†Gage height, in feet, at end of month.
‡Change in contents in acre-feet.
* No gage-height record; contents interpolated.

NOTE.—Change in contents: Calendar year 1953, − 7,650 acre-ft; water year 1954, −1,610 acre-ft.

BEAVER RIVER AT ROCKYFORD DAM, NEAR MINERSVILLE, UTAH

Location.—Lat 38°14′, long 112°50′, in NW¼ sec. 11, T. 30 S., R. 9 W., on right bank half a mile downstream from Rockyford Dam and 4¾ miles east of Minersville.

Drainage area.—512 sq mi.

Records available.—December 1913 to September 1954.

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.—39 years (1914–36, 1937–54), 39.7 cfs (28,740 acre-ft per year).

Extremes.—Maximum daily discharge during year, 100 cfs May 17; minimum daily, 1.5 cfs July 5.

1913–54: Maximum discharge, 727 cfs June 10, 1921 (gage height, 3.53 ft); minimum, 0.3 cfs Mar. 19, 20, 1914.

Remarks.—Records good. One small diversion between dam and station. Flow regulated by Rockyford Reservoir (see p. 147). Numerous diversions above reservoir for irrigation and municipal use.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*5.2*	*4.8*	*5.2*	*5.2*	*6.3*	*6.9*	*8.7*	37	56	74	38	*28*
2	5.2	4.8	5.2	5.2	6.3	6.9	8.7	37	50	77	46	28
3	5.2	4.8	5.2	5.2	6.3	6.9	8.7	37	49	*73*	*47*	27
4	5.2	*5.2*	5.2	5.2	6.3	6.9	8.7	*35*	50	32	47	27
5	5.2	5.2	5.2	5.2	6.3	7.5	8.7	42	50	*1.5*	47	27
6	5.2	5.2	5.2	5.2	6.3	7.5	8.7	51	43	42	47	8.8
7	5.2	5.2	5.2	5.2	6.3	7.5	8.7	57	37	64	47	*3.3*
8	5.2	5.2	5.2	5.2	6.3	7.5	8.7	64	20	63	47	3.3
9	5.2	5.2	5.2	5.2	6.3	7.5	8.7	69	*6.9*	*56	47	3.3
10	5.2	5.2	5.2	5.2	6.3	8.1	8.7	72	*26	56	47	3.3
11	5.2	5.2	5.2	5.2	6.3	8.1	8.7	77	44	56	47	3.3
12	5.2	5.2	5.2	5.2	6.3	8.1	8.7	90	51	56	47	3.3
13	5.2	5.2	5.2	5.2	6.3	8.1	8.7	95	50	56	*47	3.6
14	5.2	5.2	5.2	5.2	6.3	8.1	8.7	96	54	56	47	4.0
15	*5.2	5.2	5.2	5.2	6.3	8.1	8.7	98	56	56	47	4.4
16	5.2	5.2	5.2	5.2	6.3	8.1	8.7	98	56	56	47	4.0
17	5.2	5.2	5.2	5.2	6.3	8.1	8.7	*100*	58	56	46	4.4
18	5.2	5.2	*5.2	5.5	*6.9*	8.1	8.7	98	60	47	44	4.4
19	5.2	*5.2	5.2	5.5	6.9	*8.7*	9.3	*98	64	47	44	4.4
20	5.2	5.2	5.2	5.9	6.9	8.7	9.3	96	72	41	43	4.4
21	5.2	5.2	5.2	5.9	6.9	8.7	9.3	88	78	41	42	4.4
22	5.2	5.2	5.2	5.9	6.9	8.7	9.3	82	85	17	41	*4.3
23	5.2	5.2	5.2	5.9	6.9	8.7	9.3	72	*86*	2.9	41	4.0
24	5.2	5.2	5.2	6.3	6.9	8.7	9.3	72	86	3.3	41	4.4
25	5.2	5.2	5.2	*6.9*	*6.9	8.7	9.3	72	86	23	41	4.4
26	5.2	5.2	5.2	5.9	6.9	8.7	9.3	72	86	32	35	4.0
27	5.2	5.2	5.2	5.9	6.9	8.7	25	72	78	32	31	4.0
28	5.2	5.2	5.2	5.9	6.9	8.7	*93	68	70	32	30	4.0
29	5.2	5.2	*5.5*	*5.9	-------	8.7	38	66	70	32	30	4.0
30	5.2	5.2	5.5	5.9	-------	8.7	37	64	72	32	*29*	4.0
31	*4.8*	-------	5.5	5.9	-------	*8.7	-------	60	-------	32	29	-------
Total	160.8	154.8	162.1	171.6	183.0	251.1	369.0	2,235	1,749.9	1,349.7	1,309	240.7
Mean	5.19	5.16	5.23	5.54	6.54	8.10	12.3	72.1	58.3	43.5	42.2	8.02
Ac-ft	319	307	322	340	363	498	732	4,430	3,470	2,680	2,600	477

Calendar year 1953	Max 116	Min 4.8	Mean 35.6	Ac-ft 25,750
Water year 1953–54	Max 100	Min 1.5	Mean 22.8	Ac-ft 16,540

*Discharge measurement made on this day.

MINERSVILLE CANAL AT MINERSVILLE, UTAH

Location.—Lat 38°13′, long 112°56′, in NW¼ sec. 7, T. 30 S., R. 9 W., on left bank 1 mile downstream from point of diversion and 1 mile east of Minersville.

Records available.—June to September 1906 (monthly discharge only), March to October 1914, June 1951 to September 1954.

Gage.—Water-stage recorder and Parshall flume. Altitude of gage is 5,310 ft (by barometer). June 21 to Sept. 21, 1906, staff gage, and Mar. 13 to Oct. 17, 1914, water-stage recorder, at approximately same site at different datum.

Extremes.—1906, 1914, 1951–54: Maximum daily discharge, 63 cfs May 16, 23, June 1, 3, 1952; no flow part of each year.

Remarks.—Records good except those for periods of ice effect or no gage-height record, which are fair. Flow diverted from Beaver River for irrigation in vicinity of Minersville.

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	*1.5*	*1.7*	1.7		*2.0*	*2.1*	1.7	*32*	32	28	30	31
2	1.5	1.7	1.7		2.1	2.1	1.7	33	33	28	30	31
3	1.5	1.7	1.7	[a] 1.5	2.1	2.0	1.5	32	*34*	28	30	32
4	1.5	1.7	1.7		2.1	2.0	1.5	32	34	18	30	32
5	1.5	1.7	*1.8*		2.1	2.0	1.5	33	34	*1.0*	30	*34*
6	1.5	*1.5*	1.3		2.1	2.0	1.5	33	33	14	30	15
7	1.5	1.5	1.7		2.1	2.0	1.8	33	30	30	30	1.8
8	1.5	1.5	*1.8*		2.1	2.0	1.0	32	21	*29	30	1.7
9	1.5	1.5			2.1	2.0	.3	34	*1.2*	30	30	1.5
10	1.5	1.5			2.1	2.0	.2	33	*13	31	30	1.3
11	1.7	1.5			2.1	2.0	.1	33	30	31	30	1.3
12	1.7	1.5			2.1	2.0	.1	33	30	31	*30	*1.0*
13	1.7	1.5	[a] 1.5		2.1	[b] 1.9	*0*	34	30	30	30	1.3
14	1.7	1.5			2.1	[b] 1.8	0	34	30	30	30	1.5
15	*1.7	1.5			2.1	1.8	0	34	30	30	30	1.5
16	1.7	1.5			2.1	1.8	0	*35*	30	30	30	1.5
17	1.7	1.5		[a] 1.7	2.1	1.7	0	34	30	30	30	1.5
18	1.7	1.5	(*)		2.1	1.7	0	34	30	30	30	1.7
19	1.7	*1.6	1.7		2.1	1.7	0	*34	30	30	30	1.7
20	1.7	[b] 1.6	1.8		[b] 2.0	1.7	0	34	30	30	30	1.7
21	1.7	1.7	1.8		*2.3*	1.7	0	34	29	30	30	1.7
22	1.7	1.5	[b] 1.8		2.3	1.8	*0*	35	28	19	30	*1.7
23	*1.8*	1.7			2.3	1.8	0	34	29	2.6	*29*	1.7
24	1.8	1.7			2.3	1.8	0	34	29	1.0	29	1.7
25	1.7	1.7			*2.1	1.8	0	34	29	12	29	1.8
26	1.7	1.7	[a] 1.5		2.1	1.7	0	34	28	30	29	1.8
27	1.7	1.7			2.1	*1.5*	12	34	28	30	30	1.8
28	1.8	1.7			2.1	1.5	*32	34	29	*32*	30	1.8
29	1.5	[b] 1.7		*2.1	-------	1.5	32	34	30	30	30	1.8
30	1.5	[b] 1.7		2.1	-------	1.7	*33*	34	30	31	30	1.8
31	1.7	-------		2.0	-------	*1.7	-------	33	-------	32	*31*	-------
Total	50.6	48.0	48.4	52.8	59.4	56.8	121.9	1,040	854.2	788.6	927	213.6
Mean	1.63	1.60	1.56	1.70	2.12	1.83	4.06	33.5	28.5	25.4	29.9	7.12
Ac-ft	100	95	96	105	118	113	242	2,060	1,690	1,560	1,840	424

Calendar year 1953	Max 40	Min 0	Mean 12.3	Ac-ft 8,900
Water year 1953–54	Max 35	Min 0	Mean 11.7	Ac-ft 8,440

*Discharge measurement made on this day.

[a] No gage-height record; discharge interpolated or estimated on basis of discharge measurements and weather records.

[b] Stage-discharge relation affected by ice.

BEAVER RIVER AT MINERSVILLE, UTAH

Location.—Lat 38°13′, long 112°56′, in NE¼ sec. 12, T. 30 S., R. 10 W., on right bank at Minersville.

Records available.—April 1909 to December 1913, June 1951 to September 1954.

Gage.—Water-stage recorder and concrete control. Altitude of gage is 5,250 ft (from topographic map). Apr. 13, 1909, to Dec. 20, 1913, staff gage at site three-quarters of a mile downstream at different datum.

Average discharge.—7 years, 26.6 cfs (19,260 acre-ft per year).

Extremes.—Maximum discharge during year, 49 cfs May 21 (gage height, 1.07 ft); no flow Apr. 28 to May 2.

1909–13, 1951–54: Maximum discharge observed, 608 cfs Jan. 2, 1910 (gage height, 4.70 ft, site and datum then in use); no flow part of each year 1909–13, 1954.

Remarks.—Records good except those for periods of ice effect, which are fair. Flow regulated by Rockyford Reservoir (see p. 147).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	3.6	3.2		4.9	4.4	4.9	0	13	11	2.7	2.2
2	3.2	3.6	3.6		4.9	4.4	4.9	0	11	14	9.1	2.8
3	3.6	3.6	3.6		4.0	4.4	4.9	.1	8.6	15	9.6	2.8
4	4.0	4.0	4.4	b 2.5	3.6	4.9	5.4	.5	8.6	6.6	10	2.8
5	4.0	4.0			3.6	4.9	6.0	.8	8.6	2.2	12	2.8
6	4.0	4.0			3.6	4.4	6.5	2.2	8.6	4.5	14	4.9
7	4.0	4.0		2.8	4.0	4.4	6.5	4.9	4.0	14	14	4.9
8	3.6	4.0		2.8	4.0	4.4	7.0	15	3.2	*17	14	6.0
9	3.2	4.0		3.2	4.0	4.9	7.0	14	4.4	19	15	4.4
10	3.2	3.6	b 3.0	b 3.0	4.4	4.9	7.0	17	*3.6	17	14	4.0
11	4.4	3.2		b 2.8	4.4	5.4	7.0	22	6.5	17	12	4.0
12	3.6	3.2		3.2	4.4	5.4	7.0	33	12	17	*12	3.6
13	3.6	3.2		3.2	4.4	5.4	7.0	37	13	17	15	3.2
14	3.6	3.6		b 3.2	4.9	5.4	7.5	42	13	15	13	2.8
15	*3.6	3.6		3.6	4.9	6.0	8.0	42	14	12	14	2.2
16	4.0	4.0	3.2	b 3.2	4.9	5.4	8.6	44	17	13	13	2.2
17	4.0	4.0	3.2	b 3.2	4.0	5.4	8.0	44	20	15	13	2.2
18	4.0	4.0	*3.2	4.4	4.4	5.4	8.0	47	20	13	13	2.2
19	4.4	*3.6	3.2	5.4	4.4	5.4	8.0	*46	23	9.6	10	2.2
20	5.4	b 3.2	3.2	4.9	b 4.0	6.0	8.0	44	23	3.7	7.5	2.2
21	5.4	3.2	3.2	4.4	4.0	6.5	8.0	39	25	.3	6.0	2.2
22	5.4	b 3.2		b 4.0	4.4	6.5	7.5	35	34	.3	6.0	2.2
23	6.0	b 3.2		b 4.0	4.4	6.5	7.0	23	37	.4	8.0	*2.2
24	5.4	3.2		5.4	4.4	6.5	7.0	25	37	.7	8.6	2.5
25	5.4	3.2		8.6	*4.4	6.5	2.7	26	35	.6	8.6	2.8
26	4.4	3.2	b 2.5	b 4.5	4.4	6.5	.6	25	35	.5	5.1	2.8
27	3.6	3.2		b 4.5	4.4	6.5	.2	25	27	.3	1.0	2.8
28	3.6	3.2		4.9	4.4	6.5	0	23	20	.3	1.2	2.8
29	3.6	3.2		*4.4	-------	6.5	*0	18	13	.4	1.7	2.8
30	4.0	3.2		4.9	-------	6.5	0	20	9.6	.3	2.5	2.8
31	4.0	-------		4.9	-------	*5.4	-------	16	-------	.2	2.5	-------
Total	128.2	106.0	92.0	118.4	120.5	171.6	170.2	730.5	507.7	256.9	288.1	90.3
Mean	4.14	3.53	2.97	3.82	4.30	5.54	5.67	23.6	16.9	8.29	9.29	3.01
Ac-ft	254	210	182	235	239	340	338	1,450	1,010	510	571	179

Calendar year 1953	Max 60	Min 1.0	Mean 15.7	Ac-ft 11,370
Water year 1953–54	Max 47	Min 0	Mean 7.62	Ac-ft 5,520

*Discharge measurement or observation of no flow made on this day.
b Stage-discharge relation affected by ice.

BEAVER RIVER NEAR MILFORD, UTAH

Location.—Lat 38°28′, long 113°01′, in SW¼ sec. 17, T. 27 S., R. 10 W., on right bank 4 miles north of Milford.

Records available.—July 1951 to September 1954.

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

Extremes.—Maximum discharge during year, 3.8 cfs Mar. 24 (gage height, 0.79 ft); no flow at times.

1951–54: Maximum discharge, 221 cfs June 11, 1952 (gage height, 2.84 ft); no flow at times each year.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0	*0*	*1.1*	0.2	*0.4*	0.3	*0*	0	0	0
2	0	0	0	0	1.0	*.1*	.4	.7	0	0	0	0
3	0	0	0	0	.7	.1	.2	.7	0	0	0	0
4	0	0	0	0	.5	.1	.2	.5	0	0	0	0
5	0	0	0	0	.4	.2	.2	.4	0	0	0	0
6	0	0	0	0	.4	.2	.2	.5	0	0	0	0
7	0	0	0	0	.3	.2	.2	.4	0	0	0	0
8	0	0	0	0	.3	.2	.2	.4	0	*0	0	0
9	0	0	0	0	.3	.2	.2	.3	0	0	0	0
10	0	0	0	*0	.4	.2	*.1*	.2	*0	0	0	0
11	0	0	0		.4	.2	.1	.1	0	0	0	0
12	0	0	0		.4	.3	.2	*0*	*.1*	0	*0	0
13	0	0	0		.4	.5	.2	0	0	0	0	0
14	0	0	0		.4	.7	.2	0	0	0	0	0
15	0	0	0	*0.1	.4	.7	.2	0	0	0	0	0
16	*0	0	0		.4	.6	.2	0	0	0	0	0
17	0	0	0		.2	.5	.2	0	0	0	0	0
18	0	0	*0		.3	.5	.2	*0	0	0	0	0
19	0	0	0	*0	.2	.6	.2	0	0	0	0	0
20	0	*0	0	0	.3	.5	.2	0	0	0	0	0
21	0	0	0	0	.4	.6	.2	0	0	0	0	0
22	0	0	0	0	.4	.9	.2	0	0	0	0	0
23	0	0	0	0	.4	2.4	.2	0	0	0	0	*0
24	0	0	0	.1	.3	*3.8*	.2	0	0	0	0	0
25	0	0	0	.7	*.2	1.8	.2	0	0	0	0	0
26	0	0	0	.7	.2	1.7	.2	0	0	0	0	0
27	0	0	0	.7	.2	1.2	.2	0	0	0	0	0
28	0	0	0	.7	*.1*	.8	*.2	0	0	0	0	0
29	0	0	0	*.8	-------	.6	.1	0	0	0	0	0
30	0	0	0	*1.3*	-------	.5	.1	0	0	0	0	0
31	0	-------	0	1.3	-------	*.4	-------	0	-------	0	0	-------
Total	0	0	0	7.1	11.0	21.0	6.0	4.5	0.1	0	0	0
Mean	0	0	0	0.23	0.39	0.68	0.20	0.15	0.003	0	0	0
Ac-ft	0	0	0	14	22	42	12	8.9	0.2	0	0	0

Calendar year 1953	Max 10	Min 0	Mean 0.40	Ac-ft 291
Water year 1953–54	Max 3.3	Min 0	Mean 0.14	Ac-ft 99

*Discharge measurement or observation of no flow made on this day.
ª No gage-height record; discharge estimated on basis of available recorder trace.

CEDAR CITY VALLEY

COAL CREEK NEAR CEDAR CITY, UTAH

Location.—Lat 37°40'20", long 113°02'05", in NE¼ sec. 13, T. 36 S., R. 11 W., on right bank 300 ft downstream from powerplant and 1.3 miles east of Cedar City.

Records available.—May 1915 to November 1919, May 1935 to September 1954. Records for 1915 to 1919 equivalent if flow of power canal is added.

Gage.—Water-stage recorder. Prior to Mar. 30, 1939, staff gages, and Mar. 30, 1939, to May 14, 1945, water-stage recorder, at several sites about 0.5 mile upstream at various datums. May 15, 1945, to Oct. 10, 1951, and May 4 to July 2, 1952, water-stage recorder at site 2 miles upstream at different datum.

Average discharge.—18 years (1935–37, 1938–54), 32.5 cfs (23,530 acre-ft per year).

Extremes.—Maximum discharge during year, 1,000 cfs July 19 (gage height, 4.70 ft, from floodmark); minimum, 0.8 cfs Dec. 5.

1935–54: Maximum discharge observed, 2,910 cfs July 9, 1936 (gage height, 6.4 ft), rating extended by weir formula; minimum, 0.6 cfs Nov. 16, 1951.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	11	8.5	9.1	12	12	*13*	60	44	22	11	8.5
2	7.6	11	7.6	9.1	11	10	19	68	42	22	12	37
3	*7.3*	11	9.1	9.1	11	12	29	88	39	21	13	18
4	7.6	11	9.1	9.1	12	12	32	123	*37	50	12	10
5	7.6	10	6.5	9.1	13	12	a 35	162	35	a 20	12	9.1
6	7.6	*10	7.3	*9.4	13	12	a *40*	*150*	39	a 18	*11	8.5
7	7.6	9.1	10	9.4	12	13	a 45	*170*	35	*17	10	9.4
8	7.6	8.8	7.9	9.1	13	*16*	a 40	155	31	16	10	10
9	7.6	8.8	7.6	8.5	13	16	a 45	155	28	15	10	9.1
10	7.3	9.1	9.4	*7.2*	11	16	a 45	*155	28	14	*25*	*8.5
11	8.2	9.4	9.1	8.8	*11	12	a 45	146	26	14	10	10
12	11	9.4	9.4	9.1	11	*9.4*	a 50	132	25	15	9.1	*38*
13	9.4	9.7	*10*	8.2	11	11	*a 56	123	*24*	14	*21	*11
14	8.5	9.7	10	8.2	10	11	61	117	25	14	11	9.7
15	8.2	*14*	*10	8.8	10	12	56	108	*23	13	10	9.1
16	8.2	10	*11*	8.5	9.7	12	62	102	23	14	9.7	9.1
17	7.9	10	10	8.5	9.7	11	65	*93	23	15	9.7	9.1
18	7.6	8.5	11	8.5	7.6	10	79	91	23	27	9.4	8.8
19	*7.9	*7.3*	10	8.5	*7.3*	*10	96	91	22	*87*	9.1	8.8
20	9.4	8.2	9.7	8.5	11	10	*96	*97	22	16	9.1	8.5
21	9.7	9.4	8.8	8.2	12	11	109	100	20	a 15	9.4	*8.2*
22	15	9.4	7.6	7.9	14	11	130	122	19	a 15	10	8.2
23	11	12	*4.8*	*8.2	14	12	*151*	91	*18	*a 15	9.1	8.2
24	11	12	7.0	9.1	*18*	12	128	83	18	15	9.1	8.8
25	12	12	8.5	*13*	18	12	117	75	22	21	8.5	9.1
26	15	11	8.8	8.5	*16	11	123	65	*63*	15	8.2	9.1
27	*16*	11	9.1	9.2	12	12	*132	60	43	a 14	*7.9*	8.8
28	16	10	8.5	9.7	12	14	111	56	30	a 13	8.2	8.5
29	13	9.1	9.1	9.7	-------	14	91	53	27	*a *12*	7.9	8.5
30	12	9.4	7.6	9.4	-------	15	*83	50	25	12	*7.9	8.2
31	11	-------	8.5	10	-------	12	-------	*46*	-------	12	8.2	-------
Total	303.4	301.3	271.0	277.6	335.3	375.4	2,184	3,187	879	603	328.5	335.8
Mean	9.79	10.0	8.74	8.95	12.0	12.1	72.8	103	29.3	19.5	10.6	11.2
Ac-ft	602	598	538	551	665	745	4,330	6,320	1,740	1,200	652	666

Calendar year 1953	Max 77	Min 4.3	Mean 17.0	Ac-ft 12,300
Water year 1953–54	Max 170	Min 4.3	Mean 25.7	Ac-ft 18,610

Peak discharge (base, 350 cfs)—May 7 (6:30 p.m.) 357 cfs (2.95 ft); July 4 (7 p.m.) 668 cfs (4.12 ft); July 19 (5 p.m.) 1,000 cfs (4.70 ft).

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

ESCALANTE VALLEY

SANTA CLARA-PINTO DIVERSION NEAR PINTO, UTAH

Location.—Lat 37°28′, long 113°28′, in SW¼ 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 1954 (records of monthly diversions only).

Gage.—Water-stage recorder.

Remarks.—This is a transmountain diversion from a tributary of Santa Clara River in Colorado River basin to Pinto Creek in Escalante Valley.

Monthly diversions, water year 1953–54

	Acre-feet
October	0
November	0
December	0
January	0
February	0
March	.2
April	523
May	548
June	25
July	0
August	0
September	0
Water year	1,100

MINOR BASINS IN NEVADA

BAKER CREEK AT NARROWS, NEAR BAKER, NEV.

Location.—Lat 38°59′, long 114°13′, in sec. 22, T. 13 N., R. 69 E., on left bank half a mile downstream from Pole Canyon, 1 mile downstream from narrows, and 4¾ miles southwest of Baker.

Records available.—December 1947 to September 1954.

Gage.—Water-stage recorder and concrete control. Altitude of gage is 6,800 ft (by barometer).

Average discharge.—6 years (1948–54), 9.12 cfs (6,600 acre-ft per year).

Extremes.—Maximum discharge during year, 86 cfs May 22 (gage height, 2.50 ft); minimum, 0.8 cfs Feb. 19.

1947–54: Maximum discharge, 178 cfs June 7, 1952 (gage height, 2.72 ft); minimum recorded, 0.4 cfs Mar. 11, 1951.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	*3.7*			*1.6*	2.3	**2.4*	18	*27*	*14*	*4.4*	3.3
2	2.4	3.7			1.6	[b]2.0	2.7	16	25	13	4.2	3.5
3	*2.5	3.7			1.7	[b]2.0	2.9	16	25	12	4.4	3.7
4	2.4	3.5			1.7	2.1	3.1	*15*	26	12	4.2	*4.6*
5	2.4	3.5			1.7	2.1	3.5	16	27	11	4.2	3.7
6	*2.3*	3.5			1.7	2.1	3.9	18	24	11	3.9	3.5
7	2.3	3.1			1.7	2.4	3.7	22	22	10	3.9	3.5
8	2.3	3.3			1.7	2.4	3.9	28	20	*9.6	3.7	3.7
9	2.3	3.3			1.9	*3.1*	4.2	31	19	9.3	3.7	3.5
10	2.3	3.5	[b]1.8	[b]1.5	1.9	3.1	4.2	35	*18	9.0	3.7	3.3
11	2.3	3.5			2.0	2.4	4.4	40	17	9.3	3.5	*3.1*
12	2.9	3.5			1.9		4.9	46	15	9.0	*3.5	3.3
13	2.6	3.7			1.9	[b]2.0	5.4	48	15	9.3	3.9	3.3
14	2.4	3.7			1.9		6.6	51	*14*	8.6	3.7	3.1
15	2.3	3.7			1.9		6.9	51	14	7.9	3.7	3.1
16	*2.4	3.7			2.0	2.1	7.2	54	14	7.6	3.9	3.1
17	2.4	3.5	(*)		2.0	2.1	8.6	55	17	7.9	3.7	3.1
18	2.4	[b]2.8			2.0	[b]2.1	10	*56	17	7.9	3.7	3.1
19	3.1	[b]2.3			1.8	[b]2.2	12	62	18	7.9	3.5	3.1
20	*3.5*	*[b]1.8			2.1	2.3	13	66	18	6.6	3.5	3.1
21	2.9	*1.7*		1.4	2.0	2.3	14	*78*	18	6.0	3.7	3.1
22	2.9	2.3		1.4	2.0	2.3	15	75	18	6.0	3.7	3.1
23	3.1	3.3		*1.3*	2.0	2.3	16	58	18	5.7	3.5	*3.1
24	3.1	3.3		1.4	*2.0	2.3	18	50	18	5.7	3.3	3.9
25	3.1	3.3		1.4	2.1	2.1	18	48	17	6.6	3.3	3.7
26	3.1	3.3	[b]1.5	*1.6*	*2.3*	2.3	19	43	19	6.6	3.3	3.3
27	3.5	3.3		1.6	2.1	2.3	19	38	18	6.0	3.3	3.3
28	3.5	3.3		1.6	2.1	2.4	*20*	34	16	5.4	*3.1*	3.1
29	3.5	3.1		1.6	-------	2.4	*18	32	15	5.2	3.1	3.3
30	3.5	3.1		*1.6	-------	2.6	19	30	14	*4.6*	3.1	3.5
31	3.3	-------		1.6	-------	[b]2.4	-------	28	-------	4.6	3.1	-------
Total	85.4	97.0	52.5	46.5	53.3	70.5	289.5	1,258	563	255.3	113.4	101.1
Mean	2.75	3.23	1.69	1.50	1.90	2.27	9.65	40.6	18.8	8.24	3.66	3.37
Ac-ft	169	192	104	92	106	140	574	2,500	1,120	506	225	201

Calendar year 1953	Max 20	Min ---	Mean 3.72	Ac-ft 2,690
Water year 1953–54	Max 78	Min ---	Mean 8.18	Ac-ft 5,930

Peak discharge (base, 20 cfs)------ May 22 (1:45 a.m.) 86 cfs (2.50 ft).

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

LEHMAN CREEK NEAR BAKER, NEV.

Location.—Lat 39°01′, long 114°13′, in sec. 10, T. 13 N., R. 69 E., on left bank 4¾ miles west of Baker. Prior to Oct. 3, 1953, at site 45 ft downstream.

Records available.—December 1947 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 6,730 ft (by barometer). Prior to Oct. 3, 1953, at site 45 ft downstream at same datum.

Average discharge.—6 years (1948–54), 4.94 cfs (3,580 acre-ft per year).

Extremes.—Maximum discharge during year, 21 cfs May 22 (gage height, 3.82 ft); minimum, 0.1 cfs Nov. 20.

1947–54: Maximum discharge, 45 cfs June 2, 1952 (gage height, 1.49 ft); minimum, that of Nov. 20, 1953.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.6		1.5		*0.8*		**1.4*	4.9	*14*	*14*	*6.8*	3.0
2	[a] 1.7				.8		1.5	*4.7*	13	13	6.1	3.2
3	*1.7				.8		1.7	4.7	13	13	6.1	3.0
4	*1.8*				.8	[b] 1.0	1.8	4.7	13	12	6.1	3.5
5	1.5		[b] 1.5	[b] 0.9	.8		2.1	5.2	13	12	5.8	3.0
6	*1.3*				.8		2.2	6.8	13	12	5.8	3.5
7	1.3				.8	1.1	2.2	8.6	12	11	5.8	*3.7*
8	1.3				.8	1.2	2.1	10	12	*11	5.5	3.7
9	1.4	[d] 1.5			.8	1.4	2.1	12	12	11	5.8	3.7
10	1.4		1.7		.8	*1.5*	2.1	13	*12	11	5.5	3.7
11	1.5		1.5		.8	1.3	2.1	15	12	11	4.9	3.7
12	1.8		*1.8*		.8	[b] 1.2	2.2	15	12	11	*4.9	3.5
13	1.6		1.6		.9	[b] 1.1	2.4	16	12	11	4.9	3.0
14	1.5		1.7	[b] .8	1.0	[b] 1.1	2.5	17	12	11	4.7	2.9
15	1.5		1.4		1.0	[b] 1.1	2.7	17	*11*	10	4.7	2.7
16	*1.7		1.2		1.0	1.2	2.5	17	11	9.8	4.4	2.7
17	1.7		*1.1		.9	1.1	2.7	18	11	9.8	4.4	2.7
18	1.6		1.1			1.2	3.0	*17	11	9.4	4.4	2.7
19	1.8	[a] 1.2	1.2			1.2	3.2	17	11	9.8	4.2	*2.5*
20	1.7	(*)	1.2		[b] .9	1.4	3.5	18	11	9.4	3.9	2.5
21		*1.0*		.8		1.3	3.7	*20*	11	9.0	3.9	2.5
22		*1.6*		.8	.9	1.2	3.9	20	11	9.0	3.7	2.5
23		1.6		.7	.9	1.3	4.4	20	12	8.6	3.5	*2.5
24		1.5		.7	*1.0	1.1	4.7	19	12	8.6	3.2	2.9
25		1.4		.7	1.0	1.2	4.9	19	13	9.0	3.2	2.9
26	[d] 1.6	1.4	[b] 1.0	.8	*1.1*	1.2	5.2	18	14	9.0	3.2	2.7
27		1.4		.8	[b] 1.0	1.2	*5.5*	17	14	8.2	3.0	2.7
28		1.3		.8	[b] 1.0	1.3	5.5	16	14	7.9	3.0	2.5
29		1.3		.8	-------	1.3	*5.2	16	14	*7.5*	3.0	2.5
30		1.4		*.8	-------	1.4	5.2	15	14	7.5	3.0	2.5
31		-------		.8	-------	1.3	-------	14	-------	7.5	*2.9*	-------
Total	49.0	43.0	40.0	25.3	24.9	36.9	94.2	435.6	370	314.0	140.3	89.1
Mean	1.58	1.43	1.29	0.82	0.89	1.19	3.14	14.1	12.3	10.1	4.53	2.97
Ac-ft	97	85	79	50	49	73	187	864	734	623	278	177

Calendar year 1953	Max 6.2	Min ---	Mean 2.23	Ac-ft 1,610
Water year 1953–54	Max 20	Min ---	Mean 4.55	Ac-ft 3,300

Peak discharge (base, 10 cfs)------ May 22 (6 a.m.) 21 cfs (3.82 ft); July 13 (7:30 p.m.) 14 cfs (3.69 ft).

*Discharge measurement made on this day.

[a] No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for Baker Creek near Baker.

[b] Stage-discharge relation affected by ice.

[d] Doubtful gage-height record; discharge computed as for footnote "a".

SALTON SEA BASIN

WHITEWATER RIVER AT WHITEWATER, CALIF.

Location.—Lat 33°56'50", long 116°38'20", in NE¼ sec. 2, T. 3 S., R. 3 E., on right bank 1.5 miles north of Whitewater and 3½ miles upstream from San Gorgonio River.

Drainage area.—57.4 sq mi.

Records available.—October 1948 to September 1954.

Gage.—Water-stage recorder. Datum of gage is 1,605.40 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. Feb. 24, 1950, to Sept. 30, 1952, supplementary gage used as base gage.

Average discharge.—6 years, 9.22 cfs; average combined discharge of river and infiltration line, 5 years (1949–54), 11.1 cfs.

Extremes.—Maximum discharge during year, 686 cfs June 25 (gage height, 7.52 ft), from rating curve extended above 30 cfs on basis of slope-area determination of peak flow; minimum daily, 2.2 cfs Feb. 17.

1948–54: Maximum discharge, that of June 25, 1954; minimum daily, 1.1 cfs Jan. 22, 1952.

Maximum discharge known, 42,000 cfs Mar. 2, 1938, from slope-area determination of peak flow, at site 2.5 miles upstream (drainage area, 51.4 sq mi).

Remarks.—Records fair except those for Jan. 20 to July 30, 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. One small diversion for domestic use and one for irrigation are made 2 to 3 miles upstream. California Electric Power Co. diverts out of basin about 15 miles upstream to powerplants in San Gorgonio River basin and thence to an area north of Banning for irrigation; following are records of this diverted flow for water year 1953–54:

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1,570	79	81	75	91	110	120	195	273	160	136	134	115

WHITEWATER RIVER AT WHITEWATER, CALIF.—Continued

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	6.6	5.6	4.4	8.5	7.5	6	*11*	11	a 22	21	*20*
2	8.1	7.9	4.8	5.1	7.5	7.5	7	11	*10*	a 22	21	18
3	7.9	7.9	*4.4*	4.0	6.1	7.5	7	11	10	a 21	*22*	17
4	8.0	7.3	5.6	4.8	6.5	7.5	*8*	11	11	a 20	18	17
5	8.1	6.6	5.2	4.8	7.5	7.5	5	11	12	a 19	18	16
6	7.6	*8.4*	4.9	4.8	7.5	*7.5*	8	11	12	a 18	16	15
7	7.9	8.1	5.3	4.8	7.5	4	9	11	12	a 17	*15*	*14*
8	*7.3*	6.1	5.3	4.8	8	7.5	10	11	12	a *16*	15	14
9	7.6	8.1	5.1	4.8	8	7.5	10	12	12	16	15	14
10	7.3	7.6	4.8	4.8	8	7.5	7.5	13	12	17	16	14
11	8.0	8.1	*6.3*	5.6	8	7	3	13	11	17	16	14
12	8.5	8.1	5.3	7.5	8	7	11	13	11	18	16	14
13	7.9	8.1	5.1	7.0	8	6.5	9.0	14	12	*30*	16	14
14	7.3	7.4	5.6	6.6	*48*	2.5	8.0	14	11	19	16	14
15	7.6	*5.2*	5.8	6.6	5.5	6	*12*	*15*	11	20	16	14
16	8.1	5.6	5.8	6.1	2.4	6	10	13	11	20	17	14
17	7.3	5.2	5.8	6.1	*2.2*	3.4	9.5	13	11	20	17	14
18	8.5	5.6	6.3	6.6	2.5	*2.4*	8.0	11	11	21	18	14
19	*9.0*	6.1	5.1	32	3	3.0	12	12	11	21	18	14
20	8.1	6.6	5.2	10	3.5	3.6	8.5	11	11	21	18	14
21	7.6	6.1	5.8	7.9	3.5	5.6	12	12	11	22	18	14
22	7.6	5.6	6.1	8.5	4	*135*	12	12	11	22	18	14
23	7.9	5.6	6.1	7.5	5	15	12	11	11	22	18	14
24	7.6	5.6	6.3	27	6	7.0	12	11	11	22	18	14
25	7.0	5.6	5.3	*137*	6	a 6	12	11	*100*	22	18	15
26	8.0	5.6	5.8	7.0	7.5	a 5	11	11	a 30	22	18	15
27	8.0	6.1	5.1	*3.6*	7.5	a 5	11	11	a 25	22	18	15
28	7.5	5.6	5.8	4.8	7.5	5	11	12	a 25	22	17	15
29	7.5	5.2	5.6	3.6	-------	5	11	11	a 22	21	16	15
30	7.6	5.6	5.8	5.2	-------	5	11	11	a 22	21	16	15
31	7.3	-------	5.8	9.5	-------	5	-------	11	-------	21	16	-------
Total	241.3	197.2	170.8	362.8	213.2	317.5	278.5	366	493	634	536	445
Mean	7.78	6.57	5.51	11.7	7.61	10.2	9.28	11.8	16.4	20.5	17.3	14.8
Ac-ft	479	391	339	720	423	630	552	726	978	1,260	1,060	883
(†)	19	67	123	123	108	123	119	116	108	110	123	119

Adjusted for infiltration

Ac-ft	498	458	462	843	531	753	671	842	1,090	1,370	1,180	1,000

	Observed				Adjusted
Calendar year 1953	Max 34	Min 4.0	Mean 10.2	Ac-ft 7,360	Ac-ft 8,420
Water year 1953–54	Max 137	Min 2.2	Mean 11.7	Ac-ft 8,440	Ac-ft 9,700

Peak discharge (base, 100 cfs)—Jan. 19 (8 a.m.) 137 cfs (6.47 ft); Jan. 25 (6 a.m.) 592 cfs (7.40 ft); Feb. 13 (11:30 p.m.) 421 cfs (7.14 ft); Mar. 22 (7:30 p.m.) 415 cfs (7.13 ft); June 25 (5 p.m.) 686 cfs (7.52 ft).

†Runoff in acre-feet from infiltration line bypassing station; furnished by Whitewater Mutual Water Co.

a No gage-height record; discharge interpolated or estimated on basis of 2 discharge measurements.

TAHQUITZ CREEK NEAR PALM SPRINGS, CALIF.

Location.—Lat 33°47'40", long 116°33'45", in SW¼ sec. 22, T. 4 S., R. 4 E., on left bank 1.5 miles southwest of Palm Springs and 6.2 miles upstream from mouth.

Records available.—October 1947 to September 1954.

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.—7 years, 2.74 cfs (1,980 acre-ft per year).

Extremes.—Maximum discharge during year, 1,570 cfs Aug. 31 (gage height, 8.45 ft in gage well, 10.0 ft from floodmarks), from rating curve extended above 60 cfs on basis of slope-area determination of peak flow; no flow Oct. 1 to Dec. 22, Aug. 30.

1947–54: Maximum discharge, that of Aug. 31, 1954; no flow during several months of each year.

Remarks.—Records good below 100 cfs and fair above except those for Sept. 1, 2, which are poor. Discharge measurements generally made three times a month.

Revisions (water years).—WSP 1244: 1948, 1951.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	*0*	*0.2*	1.1	1.6	*5.6*	17	*9.8*	*2.2*	0.5	[a]*20*
2	0	0	0	.2	1.0	1.6	5.6	16	8.9	2.1	.6	[a]3
3	0	0	0	.2	.9	1.5	6.2	17	8.7	2.1	.6	2.2
4	0	0	0	.2	.8	1.5	7.0	18	8.4	2.0	.6	1.6
5	0	0	0	.2	.8	*1.4*	8.9	19	7.9	1.9	.5	1.2
6	0	0	0	.2	.8	1.4	9.1	21	7.6	1.8	.4	1.1
7	0	0	0	.2	.8	1.4	9.6	*22*	7.2	1.6	.3	.8
8	0	0	0	.3	.8	1.4	10	22	7.0	1.5	.3	.7
9	0	0	0	.3	.8	1.7	11	22	7.0	1.3	.2	.6
10	0	0	0	.3	.8	2.7	12	22	7.0	1.2	.2	.6
11	0	0	0	.3	.8	2.6	12	21	6.4	1.2	.2	.5
12	0	0	0	.4	.8	2.2	12	22	6.1	1.2	.2	.4
13	0	0	0	.5	2.1	1.9	14	21	5.8	1.7	.2	.4
14	0	0	0	.6	*12*	1.8	15	21	5.5	1.6	.1	.4
15	0	0	0	.5	4.8	1.7	17	21	5.2	1.4	.1	.3
16	0	0	0	.4	3.2	1.7	18	19	5.1	1.5	.1	.3
17	0	0	0	.4	2.6	3.0	20	20	4.7	1.6	.1	.3
18	0	0	0	.4	2.2	2.0	22	20	4.4	1.6	.1	.2
19	0	0	0	1.8	2.0	2.2	*24*	20	4.1	1.8	.1	.2
20	0	0	0	2.6	1.8	2.2	24	20	3.8	1.6	.1	.2
21	0	0	0	1.4	1.6	3.2	24	20	3.6	1.4	.1	*.1*
22	0	0	0	1.1	1.5	*25*	24	18	3.4	1.2	.1	.1
23	0	0	.1	.9	1.4	23	24	16	3.3	1.2	.1	.1
24	0	0	.1	.8	1.4	11	24	15	3.3	1.3	.1	.1
25	0	0	.1	*6.1*	1.4	11	22	14	3.4	1.6	.1	.1
26	0	0	.1	4.5	1.5	7.5	21	13	3.6	1.4	.1	.1
27	0	0	.1	3.0	1.5	6.7	21	12	3.1	1.2	.1	.1
28	0	0	*.2*	2.2	1.6	6.7	21	12	2.8	1.0	.1	.1
29	0	0	.2	1.7	-------	6.1	20	12	2.6	.8	.1	.1
30	0	0	.1	1.4	-------	6.8	19	11	*2.5*	.7	*0*	.1
31	0	-------	.1	1.2	-------	6.0	-------	*10*	-------	*.6*	*30*	-------
Total	0	0	1.1	34.5	52.8	150.5	483.0	554	162.0	45.3	36.4	36.0
Mean	0	0	0.04	1.11	1.89	4.85	16.1	17.9	5.40	1.46	1.17	1.20
Ac-ft	0	0	2.2	68	105	299	958	1,100	321	90	72	71

Calendar year 1953	Max 22	Min 0	Mean 2.13	Ac-ft 1,540
Water year 1953–54	Max 30	Min 0	Mean 4.26	Ac-ft 3,090

Peak discharge (base, 20 cfs)—Mar. 22 (7:30 p.m.) 48 cfs (2.63 ft); Aug. 31 (11:30 p.m.) 1,570 cfs (8.45 ft).

[a] No gage-height record; discharge estimated on basis of probable recession curve.

PALM CANYON CREEK NEAR PALM SPRINGS, CALIF.

Location.—Lat 33°44'55", long 116°32'15", in S½ sec. 11, T. 5 S., R. 4 E., on right bank three-quarters of a mile upstream from Murray Canyon Creek and 6 miles south of Palm Springs.

Drainage area.—94.0 sq mi.

Records available.—January 1930 to January 1942, October 1947 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 700 ft (from topographic map). Prior to Jan. 14, 1942, at datum 0.02 ft higher.

Average discharge.—18 years (1930–41, 1947–54), 5.46 cfs (3,950 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,010 acre-ft per year).

Extremes.—Maximum discharge during year, 358 cfs Mar. 22 (gage height, 3.44 ft); no flow Oct. 1 to Jan. 24, Jan. 30 to Feb. 12, Mar. 4–16, May 5 to Sept. 30.

1930–42, 1947–54: 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 generally made twice a month.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0	*0*	*0*	0.2	*11*	*0.3*	0	0	0	0
2	0	0	0	0	0	.1	9.6	.1	0	0	0	0
3	0	0	0	0	0	.1	8.6	.1	0	0	0	0
4	0	0	0	0	0	*0*	7.7	.1	0	0	0	0
5	0	0	0	0	0	0	7.3	*0*	0	0	0	0
6	0	0	0	0	0	0	6.5	0	0	0	0	0
7	0	0	0	0	0	0	5.8	0	0	0	0	0
8	0	0	0	0	0	0	4.8	0	0	0	0	0
9	0	0	0	0	0	0	4.2	0	0	0	0	0
10	0	0	0	0	0	0	3.4	0	0	0	0	0
11	0	0	0	0	0	0	2.5	0	0	0	0	0
12	0	0	0	0	0	0	1.7	0	0	0	0	0
13	0	0	0	0	.5	0	1.5	0	0	0	0	0
14	0	0	0	0	*36*	0	1.4	0	0	0	0	0
15	0	0	0	0	7.7	0	1.4	0	0	0	0	0
16	0	0	0	0	3.7	0	1.5	0	0	0	0	0
17	0	0	0	0	2.5	2.8	1.3	0	0	0	0	0
18	0	0	0	0	1.5	1.3	1.0	0	0	0	0	0
19	0	0	0	0	1.3	.8	.9	0	0	0	0	0
20	0	0	0	0	1.2	1.3	.8	0	0	0	0	0
21	0	0	0	0	.9	4.2	.8	0	0	0	0	0
22	0	0	0	0	.7	*156*	.6	0	0	0	0	0
23	0	0	0	0	.6	58	.5	0	0	0	0	0
24	0	0	0	0	.5	21	.5	0	0	0	0	0
25	0	0	0	*2.8*	.4	51	.5	0	0	0	0	0
26	0	0	0	1.4	.3	18	.4	0	0	0	0	0
27	0	0	0	.6	.2	10	.5	0	0	0	0	0
28	0	0	0	.3	.2	8.1	.5	0	0	0	0	0
29	0	0	0	.1	-------	7.3	.4	0	0	0	0	0
30	0	0	0	0	-------	14	.4	0	0	0	0	0
31	0	-------	0	0	-------	13	-------	0	-------	0	0	-------
Total	0	0	0	5.2	58.2	367.2	88.0	0.6	0	0	0	0
Mean	0	0	0	0.17	2.08	11.8	2.93	0.02	0	0	0	0
Ac-ft	0	0	0	10	115	728	175	1.2	0	0	0	0

Calendar year 1953	Max 17	Min 0	Mean 0.45	Ac-ft 323
Water year 1953–54	Max 156	Min 0	Mean 1.42	Ac-ft 1,030

Peak discharge (base, 100 cfs)—Feb. 14 (1:30 a.m.) 114 cfs (2.62 ft); Mar. 22 (2:30 p.m.) 358 cfs (3.44 ft); Mar. 25 (6 a.m.) 124 cfs (2.67 ft).

ANDREAS CREEK NEAR PALM SPRINGS, CALIF.

Location.—Lat 33°45'35", long 116°32'55", in SE¼ sec. 3, T. 5 S., R. 4 E., on left bank at Indian Service diversion dam, 0.9 mile upstream from mouth and 5.4 miles south of Palm Springs.

Drainage area.—8.78 sq mi.

Records available.—October 1948 to September 1954.

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.—6 years, 2.14 cfs (1,550 acre-ft per year).

Extremes.—Maximum discharge during year, 1,960 cfs Aug. 31 (gage height, 7.11 ft), from rating curve extended above 80 cfs on basis of slope-area determination of peak flow; minimum daily, 0.6 cfs Oct. 1, 7–11.

1948–54: Maximum discharge, that of Aug. 31, 1954; minimum daily, 0.3 cfs for many days during 1950–51.

Remarks.—Records good below 10 cfs, fair between 10 and 100 cfs, and poor above. One small diversion for domestic use about 1 mile above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0.6*	1.0	*1.2*	*1.5*	2.7	2.5	6.4	*4.3*	1.8	1.2	*1.1*	[a] *25*
2	*.7	1.0	*1.2	1.5	2.5	2.5	6.1	4.1	1.8	*1.2	1.2	*2.9
3	.7	1.1	1.4	1.5	2.5	2.5	6.4	3.7	1.8	1.4	*1.2	2.5
4	.7	1.1	*1.6*	1.5	*2.5	2.5	6.7	3.5	1.8	1.1	1.2	2.4
5	.7	*1.0	1.5	*1.5	2.5	*2.4*	*7.3*	*3.5	1.8	*1.0*	1.2	2.2
6	.7	1.0	1.4	1.5	2.4	2.5	7.0	3.3	1.9	1.0	1.2	2.2
7	.6	1.0	1.4	1.6	2.2	2.5	6.7	3.3	1.9	1.0	1.2	2.0
8	.6	1.0	1.2	1.6	2.0	2.5	*6.7	3.3	1.9	1.1	1.2	1.9
9	.6	*.9*	1.2	1.6	2.0	*2.5	6.7	3.3	*2.1*	1.2	1.2	1.9
10	.6	.9	1.2	1.8	2.0	2.9	6.7	3.3	2.0	1.2	1.1	1.9
11	.6	1.0	1.2	1.8	*2.0	2.7	6.7	3.1	1.9	1.2	1.2	2.0
12	.7	1.0	1.2	2.4	*1.9*	2.5	6.7	*2.9	1.9	1.2	*1.1	1.9
13	.8	1.1	1.2	2.2	8.9	2.4	6.4	2.5	1.9	1.5	1.4	1.8
14	.8	1.4	1.2	1.9	*21	2.4	6.4	2.5	2.0	1.5	1.2	1.5
15	.8	*1.6*	1.2	1.8	8.2	2.4	6.4	2.5	2.0	*1.4	1.2	1.5
16	.8	1.4	1.4	1.8	5.8	2.4	*6.4	2.2	2.0	*1.6*	1.2	1.5
17	.8	*1.2	1.4	1.8	4.8	4.3	6.4	2.4	2.0	1.6	1.2	1.5
18	.8	1.2	1.4	1.8	4.1	*2.9	6.4	2.4	1.9	1.6	1.4	1.5
19	.8	1.2	1.4	5.6	3.7	2.9	6.4	2.5	1.6	1.6	1.5	1.5
20	.8	1.4	1.4	4.3	3.5	3.7	5.8	2.5	1.5	1.4	1.5	*1.5
21	.9	1.2	1.4	2.4	3.3	4.8	5.6	2.5	1.5	1.4	1.5	1.4
22	*.9	1.2	1.4	2.0	2.9	*43*	5.3	2.4	*1.5	1.5	1.4	1.4
23	1.0	1.2	*1.4	1.9	2.7	25	5.3	2.2	1.8	1.4	1.2	1.5
24	*1.1*	1.2	1.4	2.7	2.7	*12	5.3	2.0	1.9	1.6	*1.2	1.5
25	1.1	1.2	1.4	*19*	*2.9	13	5.0	2.1	2.0	1.6	1.1	1.5
26	1.1	1.2	1.4	5.3	2.9	9.3	4.8	*2.2	2.0	1.5	1.1	1.5
27	1.1	1.2	1.4	*3.5	2.9	7.9	*4.8	2.4	1.8	1.4	1.2	1.4
28	1.0	1.2	1.2	3.1	2.9	7.3	4.5	2.4	1.5	*1.1	1.2	*1.2*
29	1.0	1.2	1.2	2.9	-------	7.0	4.5	2.0	1.4	1.0	1.2	*1.2
30	1.0	1.2	1.4	2.7	-------	*8.5	*4.3*	2.0	*1.2*	1.2	1.2	1.2
31	1.0	-------	1.5	2.7	-------	7.0	-------	*1.8*	-------	1.2	*63	-------
Total	25.4	34.5	41.4	89.2	110.4	198.7	180.1	85.1	54.1	40.9	100.0	74.9
Mean	0.82	1.15	1.34	2.88	3.94	6.41	6.00	2.75	1.80	1.32	3.23	2.50
Ac-ft	50	68	82	177	219	394	357	169	107	81	198	149

Calendar year 1953	Max 10	Min 0.4	Mean 1.79	Ac-ft 1,300
Water year 1953–54	Max 63	Min 0.6	Mean 2.83	Ac-ft 2,050

Peak discharge (base, 30 cfs)—Jan. 25 (9 a.m., 10 a.m., 11:30 a.m.) 32 cfs (2.19 ft); Feb. 13 (11:30 p.m.) 46 cfs (2.36 ft); Mar. 22 (4:30 p.m.) 77 cfs (2.70 ft); Aug. 31 (11:30 p.m.) 1,960 cfs (7.11 ft).

*Discharge measurement made on this day.
[a] No gage-height record; discharge estimated on basis of probable recession curve.

COYOTE CREEK NEAR BORREGO SPRINGS, CALIF.

Location.—Lat 33°22'30", long 116°25'25", in SE¼ sec. 23, T. 9 S., R. 5 E., on right bank 800 ft upstream from Box Canyon and 9 miles northwest of Borrego Springs.

Records available.—November 1950 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 1,250 ft (from topographic map).

Extremes.—Maximum discharge during year, 2,020 cfs Aug. 31 (gage height, 8.05 ft, in gage well, 9.7 ft, from floodmarks), from rating curve extended above 3 cfs on basis of slope-area determination of peak flow; minimum daily, 1.6 cfs for several days in June, July.

1950–54: 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, 1.4 cfs Aug. 11–17, 1953.

Remarks.—Records good except those above 5 cfs and those for periods of no gage-height record, which are poor. Discharge measurements generally made twice a month.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.8*	2.2	2.4	2.6	2.8	2.7	2.7	*2.1*	*1.6*	*1.6*	1.8	[a] *10*
2	1.8	2.2	2.6	*2.4*	2.8	2.7	2.7	2.0	1.6	1.6	1.8	[a] 5
3	1.8	2.2	2.4	2.6	*3.0*	2.7	2.8	2.0	1.6	1.8	1.8	[a] 4
4	1.8	2.3	2.6	2.6	3.0	2.7	2.8	1.9	1.6	1.7	1.8	[a] 4
5	1.8	2.3	2.4	2.4	3.0	*2.6*	2.8	1.9	1.7	1.7	*1.7*	[a] 4
6	1.8	2.2	2.4	2.6	3.0	2.6	*3.0*	1.8	1.7	1.7	1.7	[a] 3
7	1.8	2.2	2.4	2.6	3.0	2.7	2.8	1.8	1.6	1.7	1.7	[a] 3
8	1.8	2.2	*2.3*	2.7	3.0	2.7	2.8	1.8	1.7	1.7	1.7	[a] 3
9	1.8	2.2	2.4	2.7	2.8	2.7	2.7	1.8	*1.8*	1.7	1.7	[a] 3
10	1.8	2.2	2.4	2.7	2.8	2.8	2.7	1.8	1.8	1.7	1.7	2.4
11	1.9	2.2	2.6	2.7	2.8	3.0	2.6	1.8	1.7	1.7	1.7	2.3
12	1.9	2.2	2.6	2.8	2.8	3.1	2.4	1.8	1.7	1.7	1.7	2.1
13	1.9	*2.1*	2.6	2.8	2.8	3.1	2.3	1.8	1.8	1.7	1.7	2.0
14	1.9	2.2	2.6	2.7	2.8	3.1	2.1	1.8	1.8	1.7	1.7	1.8
15	1.9	2.3	2.6	2.7	2.8	3.1	2.1	2.0	1.7	1.7	1.7	*1.7*
16	2.1	2.3	2.7	2.7	*2.7*	3.2	*2.0*	2.0	1.7	1.7	1.7	1.7
17	2.1	2.3	2.7	2.7	2.8	3.5	2.0	1.9	1.7	1.7	1.7	1.7
18	2.1	2.4	*2.8*	2.7	2.8	3.2	2.0	1.8	1.7	1.8	1.7	1.7
19	2.1	2.4	2.8	*3.1*	2.8	3.2	2.0	1.8	1.7	1.7	1.7	1.7
20	2.2	2.6	2.8	3.1	2.8	3.2	2.0	1.9	1.7	1.7	1.7	1.7
21	2.2	2.8	2.8	2.7	2.7	3.2	2.0	1.9	1.6	1.7	1.7	1.7
22	*2.4*	*3.0*	2.8	2.7	2.7	*5.9*	2.0	1.9	1.6	1.7	1.7	1.7
23	2.3	3.0	2.8	2.8	2.7	4.0	2.0	1.8	1.6	1.8	1.7	1.7
24	2.3	2.8	2.8	2.7	2.7	3.2	2.0	1.8	1.6	2.1	1.7	1.7
25	2.3	2.4	2.8	2.8	2.7	3.2	2.0	1.8	1.7	*4.1*	1.7	1.7
26	2.3	2.7	2.7	2.7	2.7	2.8	2.0	1.8	1.6	2.6	1.8	1.7
27	2.3	2.7	2.7	2.8	2.7	2.7	2.0	1.8	1.7	2.2	1.9	[a] 2
28	2.3	2.6	2.7	2.7	2.7	2.6	2.1	*1.7*	1.7	2.1	1.9	[a] 2
29	2.2	2.6	2.6	2.7	-------	2.6	2.1	1.7	1.7	1.8	1.9	[a] 2
30	2.2	2.6	2.6	2.8	-------	2.6	2.1	1.7	1.6	1.8	1.9	[a] 2
31	2.2	-------	2.6	2.8	-------	2.7	-------	1.7	-------	1.7	*95*	-------
Total	63.1	72.4	81.0	84.1	78.7	94.1	69.6	57.1	50.3	57.6	147.3	78.0
Mean	2.04	2.41	2.61	2.71	2.81	3.04	2.32	1.84	1.68	1.86	4.75	2.60
Ac-ft	125	144	161	167	156	187	138	113	100	114	292	155

Calendar year 1953	Max 3.6	Min 1.4	Mean 2.27	Ac-ft 1,650
Water year 1953–54	Max 95	Min 1.6	Mean 2.56	Ac-ft 1,850

Peak discharge (base, 50 cfs)—— Aug. 31 (7 p.m.) 2,020 cfs (8.05 ft).

[a] No gage-height record; discharge interpolated or estimated on basis of probable recession curve.

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 1954.

Gage.—Water-stage recorder. Altitude of gage is 1,200 ft (from topographic map).

Extremes.—Maximum discharge during year, 15 cfs Mar. 22 (gage height, 1.91 ft); no flow Oct. 1 to Dec. 29, May 23 to Sept. 30.

1950–54: Maximum discharge, 50 cfs Jan. 18, 1952 (gage height, 2.68 ft), from rating curve extended above 10 cfs on basis of slope-area determination at gage height 2.60 ft; no flow during several months each year.

Remarks.—Records good. Discharge measurements generally made twice a month.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	*0*	*0.1*	0.7	0.6	*2.3*	*0.6*	0	0	0	0
2	0	0	0	.1	.7	.5	1.9	.5	0	0	0	0
3	0	0	0	.1	.7	.5	1.7	.4	0	0	0	0
4	0	0	0	.1	.7	.4	1.4	.3	0	0	0	0
5	0	0	0	.1	.7	*.3*	1.3	.3	0	0	0	0
6	0	0	0	.2	.7	.3	1.2	.3	0	0	0	0
7	0	0	0	.2	.7	.3	1.1	.3	0	0	0	0
8	0	0	0	.2	.7	.3	1.1	.2	0	0	0	0
9	0	0	0	.2	.7	.3	.9	.2	0	0	0	0
10	0	0	0	.2	.7	.4	.9	.2	0	0	0	0
11	0	0	0	.3	.7	.4	.9	.2	0	0	0	0
12	0	0	0	.3	.7	.4	.8	.2	0	0	0	0
13	0	0	0	.5	.9	.4	.7	.2	0	0	0	0
14	0	0	0	.5	*2.7*	.4	.7	.2	0	0	0	0
15	0	0	0	.4	1.9	.4	.7	.1	0	0	0	0
16	0	0	0	.4	1.2	.4	.7	.1	0	0	0	0
17	0	0	0	.4	.9	1.6	*.6*	.1	0	0	0	0
18	0	0	0	.4	.9	1.2	.6	.1	0	0	0	0
19	0	0	0	1.6	.9	1.2	.6	.1	0	0	0	0
20	0	0	0	*4.4*	.8	1.3	.6	.1	0	0	0	0
21	0	0	0	2.3	.7	2.1	.6	.1	0	0	0	0
22	0	0	0	1.7	.7	7.8	.6	.1	0	0	0	0
23	0	0	0	1.2	.7	*8.3*	.6	*0*	0	0	0	0
24	0	0	0	1.2	.7	4.2	.6	0	0	0	0	0
25	0	0	0	2.6	.7	7.7	.6	0	0	0	0	0
26	0	0	0	1.7	.7	5.6	.6	0	0	0	0	0
27	0	0	0	1.1	*.6*	4.1	.6	0	0	0	0	0
28	0	0	0	.9	.6	3.2	.6	0	0	0	0	0
29	0	0	0	.9	-------	2.8	.6	0	0	0	0	0
30	0	0	*.1*	.8	-------	3.5	.6	0	0	0	0	0
31	0	-------	.1	.7	-------	3.1	-------	0	-------	0	0	-------
Total	0	0	0.2	25.8	24.0	64.0	26.7	4.9	0	0	0	0
Mean	0	0	0.01	0.83	0.86	2.06	0.89	0.16	0	0	0	0
Ac-ft	0	0	0.4	51	48	127	53	9.7	0	0	0	0

Calendar year 1953	Max 2.4	Min 0	Mean 0.33	Ac-ft 238
Water year 1953–54	Max 8.3	Min 0	Mean 0.40	Ac-ft 289

Peak discharge (base, 15 cfs)—— Mar. 22 (6:30 p.m.) 15 cfs (1.91 ft).

MOJAVE RIVER BASIN

DEEP CREEK NEAR HESPERIA, CALIF.

Location.—Lat 34°20'30", long 117°13'40", in SE¼ sec. 18, T. 3 N., R. 3 W., 0.5 mile upstream from West Fork Mojave River and 8 miles southeast of Hesperia.

Drainage area.—137 sq mi.

Records available.—December 1929 to September 1954.

Gage.—Water-stage recorder and broad-crested weir. Altitude of gage is 3,050 ft (from topographic map). Prior to Apr. 21, 1938, at same site at different datum. Apr. 21 to Dec. 10, 1938, at site 0.5 mile downstream at different datum.

Average discharge.—24 years (1930–54), 56.8 cfs (41,120 acre-ft per year).

Extremes.—Maximum discharge during year, 7,340 cfs Jan. 25 (gage height, 6.67 ft), from rating curve extended above 3,400 cfs on basis of slope-area determination of peak flow; minimum daily, 0.4 cfs Sept. 28.

1929–54: 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 between 9 and 11 cfs, which are fair. Slight regulation by Lake Arrowhead. Hesperia Water Co.'s canal diverts 2½ miles above station for irrigation and domestic use. For combined discharge, see p. 164.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	*0.8*	1.8	*5.7*	56	40	196	*65*	*6.4*	2.1	0.9	1.4
2	.7	.9	1.8	6.6	57	34	200	57	5.7	1.9	.8	1.3
3	.7	.9	*1.5*	6.6	51	32	224	51	5.5	2.0	.8	1.3
4	.7	.9	1.7	6.6	45	30	234	50	4.6	2.4	1.0	1.3
5	.7	1.0	1.8	6.4	35	29	291	50	4.2	2.1	.9	1.4
6	.7	1.0	1.7	6.6	30	27	308	48	4.7	2.0	1.0	*1.6*
7	.7	1.1	1.8	6.8	29	24	308	45	4.4	1.8	1.0	1.6
8	.7	1.2	1.9	6.8	30	24	*313*	42	4.4	1.8	1.0	1.6
9	.7	1.2	2.0	6.8	30	26	308	41	4.7	2.4	1.9	1.5
10	.7	1.1	1.7	6.2	27	35	274	42	5.3	*2.8*	1.9	1.5
11	.7	1.2	1.6	6.2	26	34	264	36	5.1	2.6	*2.2*	1.5
12	.8	1.3	1.7	8.5	*25*	27	229	33	4.7	2.5	2.2	1.5
13	.9	1.3	1.7	9.4	133	21	224	30	4.4	2.5	2.2	1.4
14	.9	1.4	1.7	8.3	*984*	20	205	28	4.2	2.6	2.1	.9
15	1.0	*2.0*	1.7	8.1	196	*19*	200	26	3.7	2.5	2.1	.9
16	1.0	1.9	1.7	7.9	130	19	196	29	3.7	2.4	1.7	1.0
17	*1.1*	1.7	1.7	7.7	98	30	188	25	3.4	2.5	1.3	1.0
18	1.1	1.5	1.7	8.1	103	35	179	22	2.5	2.8	1.2	.8
19	1.0	1.5	1.7	210	81	34	162	21	2.4	2.2	1.1	.7
20	1.0	1.5	1.7	123	68	68	148	18	2.4	2.1	1.1	.6
21	1.0	1.5	2.5	54	63	363	134	18	2.0	2.0	1.1	.5
22	1.0	1.5	5.5	27	61	*1,220*	121	17	*1.6*	1.8	1.1	.5
23	1.0	1.4	5.5	21	61	866	118	16	1.6	1.6	1.0	.5
24	1.0	1.4	5.3	123	61	238	109	15	1.6	1.4	1.0	.5
25	1.0	1.5	5.1	*$400*	61	196	93	11	1.7	1.7	1.0	.5
26	1.0	1.5	5.5	233	57	162	86	9.7	2.0	1.5	1.0	.6
27	.8	1.5	*6.2*	103	53	159	81	9.7	2.1	1.3	1.0	.6
28	.7	1.6	6.1	68	47	183	78	9.6	1.9	1.3	1.0	.4
29	.7	1.6	5.9	53	-------	188	74	9.6	1.7	1.2	1.0	.5
30	.8	1.6	5.9	45	-------	258	*66*	9.3	1.9	1.1	1.0	.5
31	.8	-------	5.5	47	-------	200	-------	7.7	-------	*1.0*	1.1	-------
Total	26.4	40.5	93.6	4636.3	2,638	4,641	5,611	891.6	104.5	61.9	39.7	29.9
Mean	0.85	1.35	3.02	150	94.2	150	187	28.8	3.48	2.00	1.28	1.00
Ac-ft	52	80	186	9,200	5,230	9,210	11,130	1,770	207	123	79	59

Calendar year 1953	Max 109	Min 0.7	Mean 7.67	Ac-ft 5,560
Water year 1953–54	Max 3,400	Min 0.4	Mean 51.5	Ac-ft 37,330

Peak discharge (base, 400 cfs)—Jan. 19 (11 a.m.) 551 cfs (3.04 ft); Jan. 25 (5 a.m.) 7,340 cfs (6.67 ft); Feb. 14 (1:30 a.m.) 2,960 cfs (4.77 ft); Mar. 22 (9:30 p.m.) 4,720 cfs (5.57 ft).

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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	*2.5*	4.4	*5.7*	56	45	197	*75*	*16*	*9.5*	3.9	*7.2*
2	1.4	2.6	4.6	6.6	57	41	201	67	15	8.8	*3.7*	7.2
3	1.4	2.8	4.5	6.6	51	39	225	61	14	8.6	3.9	6.8
4	1.4	2.8	4.7	6.6	45	36	236	60	14	8.4	4.4	6.4
5	1.3	2.9	*4.0*	6.4	36	35	296	60	14	7.6	5.3	5.4
6	1.3	3.1	5.3	6.6	32	34	315	58	14	7.5	6.3	5.8
7	1.3	3.4	5.2	6.8	31	32	314	56	14	7.2	6.3	5.8
8	1.3	3.5	5.2	6.8	31	32	*319*	52	14	7.0	5.7	5.8
9	1.3	3.9	*5.6*	6.8	31	*34*	315	*51*	14	7.7	6.0	5.7
10	*1.2*	3.7	5.6	6.2	28	44	283	52	15	7.0	5.9	5.7
11	1.3	3.7	5.4	6.2	26	42	274	46	14	6.3	5.9	5.6
12	1.4	3.6	5.4	8.5	*25*	35	239	43	14	5.7	6.2	5.6
13	1.6	3.5	5.4	9.4	134	30	234	40	14	6.2	6.3	6.4
14	1.6	3.8	5.5	8.3	*925*	29	216	38	14	7.4	6.3	6.3
15	1.8	5.2	5.6	8.1	196	*27*	211	35	13	7.3	6.4	6.3
16	1.8	*6.1*	5.6	7.9	130	28	206	37	12	6.7	*6.8*	6.4
17	1.6	5.0	5.4	7.7	98	36	199	33	12	6.2	6.7	5.1
18	1.6	4.4	5.5	8.1	103	38	190	30	10	6.1	6.6	2.0
19	1.8	4.5	5.6	210	81	37	172	29	9.9	6.0	6.4	1.7
20	2.0	4.7	5.4	123	68	71	158	27	9.1	5.5	6.5	1.4
21	2.1	4.8	4.5	54	63	366	144	28	8.6	5.0	6.6	*1.2*
22	2.2	4.7	5.5	27	61	*1,220*	132	26	8.0	4.9	6.6	1.2
23	2.3	4.4	5.5	21	62	866	129	25	7.5	5.5	6.2	1.2
24	2.5	4.4	5.3	123	62	238	120	23	*7.1*	7.5	6.2	1.2
25	2.5	4.4	5.1	*3400*	62	196	103	20	7.2	7.8	6.1	1.2
26	*2.7*	4.3	5.5	233	58	162	96	19	11	7.5	6.4	1.2
27	2.6	4.2	*6.2*	103	54	160	91	19	9.6	6.6	6.4	1.4
28	2.4	4.5	6.1	68	48	184	88	18	8.0	7.1	6.3	1.2
29	2.4	4.5	5.9	53	-------	189	85	18	8.3	6.0	6.0	1.4
30	2.5	4.3	5.9	45	-------	259	*77*	18	9.6	5.1	5.7	1.4
31	2.5	-------	5.5	47	-------	201	-------	*17*	-------	*4.4*	6.1	-------
Total	56.7	120.2	164.9	4636.3	2,654	4,786	5,865	1,181	350.9	210.1	184.1	121.2
Mean	1.83	4.01	5.32	150	94.8	154	196	38.1	11.7	6.78	5.94	4.04
Ac-ft	112	238	327	9,200	5,260	9,490	11,630	2,340	696	417	365	240

Calendar year 1953	Max 109	Min 1.2	Mean 12.9	Ac-ft 9,350
Water year 1953–54	Max 3,400	Min 1.2	Mean 55.7	Ac-ft 40,320

WEST FORK MOJAVE RIVER NEAR HESPERIA, CALIF.

Location.—Lat 34°20'20", long 117°14'35", in SE¼ sec. 13, T. 3 N., R. 4 W., on left bank at highway bridge, 0.5 mile upstream from confluence with Deep Creek and 7 miles southeast of Hesperia.

Drainage area.—74.8 sq mi.

Records available.—January 1930 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 3,050 ft (from topographic map).

Average discharge.—24 years, 30.1 cfs (21,790 acre-ft per year); median of yearly mean discharges, 16 cfs (11,580 acre-ft per year).

Extremes.—Maximum discharge during year, 2,440 cfs Jan. 25 (gage height, 5.90 ft); no flow during several months.

1930–54: 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. Water diverted from Lake Gregory above station for domestic use and fire protection. One small diversion for irrigation above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0*	*0*	0	*0*	22	12	*173*	*18*	*0.1*	0	0	0
2	0	0	0	0	16	*11	134	15	*0*	0	0	0
3	0	0	0	0	12	9.9	113	15	0	0	0	0
4	0	0	0	0	*9.9	8.4	100	14	0	0	0	0
5	*0	0	0	0	7.9	8.4	96	14	0	0	0	0
6	0	*0	0	0	6.6	8.4	93	*14	0	0	0	0
7	0	0	0	0	5.4	8.4	79	14	*0	0	0	*0
8	0	0	0	0	4.8	8.4	*64	14	0	0	0	0
9	0	0	0	0	3.8	*8.4	60	13	.1	0	0	0
10	0	0	*0	0	*2.5	8.9	55	12	.1	0	0	0
11	0	0	0	0	1.7	8.9	50	11	0	0	0	0
12	0	0	0	0	*1.4*	8.4	49	10	0	0	0	0
13	0	0	0	0	125	7.9	47	8.9	0	0	*0	0
14	0	0	0	0	*438*	7.4	44	7.0	0	*0	0	0
15	0	0	0	*0	151	*7.0*	*42	6.6	0	0	0	0
16	0	0	0	0	96	*12	39	6.2	0	0	0	0
17	0	0	0	0	68	38	36	4.4	0	0	0	0
18	0	0	0	0	67	19	34	3.8	*0	0	0	0
19	0	*0	0	*227	*50	17	36	3.0	0	0	0	0
20	0	0	0	*152	37	104	33	*1.9	0	0	0	0
21	0	0	0	40	33	378	*24	1.4	0	0	0	0
22	0	0	0	26	30	*631*	24	1.1	0	0	0	0
23	0	0	0	20	24	*433	24	.7	0	0	0	0
24	0	*0	0	147	22	254	24	.3	*0	0	0	0
25	0	0	0	*953*	19	301	22	*.3	0	0	0	0
26	0	0	0	173	17	184	*20*	.2	0	0	*0	0
27	0	0	0	85	15	152	20	*.1*	0	0	0	0
28	0	0	*0	*55	14	141	24	.1	0	*0	0	0
29	0	0	0	42	-------	143	20	.1	0	0	0	0
30	0	0	0	32	-------	*446	20	.1	0	0	0	0
31	0	-------	0	27	-------	230	-------	.1	-------	0	0	-------
Total	0	0	0	1,979	1300.0	3514.8	1,599	210.3	0.3	0	0	0
Mean	0	0	0	63.8	46.4	113	53.3	6.78	0.01	0	0	0
Ac-ft	0	0	0	3,930	2,580	6,970	3,170	417	0.6	0	0	0

Calendar year 1953	Max 60	Min 0	Mean 2.48	Ac-ft 1,800
Water year 1953–54	Max 953	Min 0	Mean 23.6	Ac-ft 17,070

Peak discharge (base, 500 cfs)—Jan. 19 (9:30 p.m.) 505 cfs (3.34 ft); Jan. 25 (5:30 a.m.) 2,440 cfs (5.90 ft); Feb. 14 (12:30 a.m.) 1,200 cfs (4.65 ft); Mar. 22 (9 p.m.) 1,010 cfs (4.55 ft); Mar. 30 (6:30 a.m.) 778 cfs (4.19 ft).

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

MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CALIF.

Location.—Lat 34°34'25", long 117°19'10", in SW¼SE¼ sec. 29, T. 6 N., R. 4 W., on left bank 500 ft upstream from U. S. Highway 66, 3 miles northwest of Victorville.

Drainage area.—530 sq mi.

Records available.—February 1899 to July 1906, November 1930 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 2,650 ft (from topographic map). February 1899 to July 31, 1906, staff gage, and Nov. 12, 1930, to Sept. 30, 1936, water-stage recorder, at site 3 miles upstream at different datum. Oct. 1, 1936, to Mar. 1, 1938, water-stage recorder at present site at datum 2.00 ft higher.

Average discharge.—23 years (1931–54), 78.2 cfs (56,610 acre-ft per year).

Extremes.—Maximum discharge during year, 1,980 cfs Mar. 23 (gage height, 4.44 ft); minimum daily, 15 cfs Aug. 27, Sept. 6.

1930–54: Maximum discharge, 70,600 cfs Mar. 2, 1938 (gage height, 18.7 ft, present datum); 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).

Discharge, in cubic feet per second, water year October 1, 1953 to September 30, 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	*32*	38	35	46	44	190	30	23	*23*	17	19
2	25	84	*40*	35	46	44	150	*36*	26	21	16	19
3	26	34	40	35	45	44	147	36	23	22	17	19
4	26	33	39	*34*	45	44	150	36	25	20	*21*	17
5	25	35	39	36	44	42	176	36	25	20	20	16
6	25	36	39	36	44	42	*219*	35	25	18	18	*15*
7	24	36	40	35	42	42	201	34	[a]25	19	19	16
8	25	35	40	36	42	40	190	33	[a]25	19	17	17
9	24	36	40	38	42	41	190	30	[a]25	19	19	16
10	*23*	*39*	40	39	41	41	169	29	[a]25	20	19	16
11	23	36	40	38	41	*33*	144	30	[a]25	20	19	16
12	24	36	39	42	40	34	118	28	[a]25	20	19	16
13	24	38	39	49	40	36	112	29	[a]25	20	19	19
14	25	35	39	42	*57*	33	112	29	[a]25	20	19	17
15	26	35	39	42	41	35	112	30	[a]25	19	19	20
16	26	35	38	39	39	41	100	29	[a]25	20	18	*24*
17	25	33	*35*	38	38	44	91	26	[a]25	22	17	23
18	25	33	35	39	*36*	45	81	26	[a]26	20	19	20
19	26	35	35	62	39	46	63	26	27	19	17	23
20	25	35	35	46	39	46	55	26	23	19	16	20
21	26	38	*36*	39	41	46	45	26	20	20	17	23
22	26	38	39	36	39	110	36	29	20	19	18	20
23	26	38	36	36	41	*824*	*32*	28	19	18	16	23
24	27	38	36	35	41	270	34	28	18	22	17	21
25	28	39	36	*394*	42	197	35	27	*44*	21	18	23
26	29	39	36	105	42	139	34	*24*	*17*	20	16	24
27	*33*	39	36	61	41	91	35	24	23	*17*	*15*	21
28	28	38	36	55	41	95	36	24	21	18	18	21
29	32	38	36	51	-------	109	38	24	18	18	16	18
30	32	39	36	49	-------	297	35	26	20	17	16	20
31	33	-------	36	46	-------	316	-------	26	-------	17	19	-------
Total	816	1,085	1,168	1,703	1,175	3,311	3,130	900	718	607	551	582
Mean	26.3	36.2	37.7	54.9	42.0	107	104	29.0	23.9	19.6	17.8	19.4
Ac-ft	1,620	2,150	2,320	3,380	2,330	6,570	6,210	1,790	1,420	1,200	1,090	*1,150*

Calendar year 1953	Max 42	Min 16	Mean 30.2	Ac-ft 21,870
Water year 1953–54	Max 824	Min 15	Mean 43.1	Ac-ft 31,230

Peak discharge (base, 200 cfs)—Jan. 25 (2 p.m.) 1,410 cfs (4.17 ft); Mar. 23 (4 a.m.) 1,980 cfs (4.44 ft); Mar. 25 (1 p.m.) 264 cfs (2.84 ft); Mar. 30 (5:30 p.m.) 624 cfs (3.43 ft); June 25 (4:30 p.m.) 648 cfs (3.36 ft).

[a] No gage-height record; discharge interpolated or estimated on basis of recorded range in stage.

MOJAVE RIVER AT BARSTOW, CALIF.

Location.—Lat 34°54'25", long 117°01'20", in SW¼SE¼ sec. 31, T. 10 N., R. 1 W., on left bank 75 ft upstream from bridge on U. S. Highway 91 at Barstow.

Records available.—October 1930 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is about 2,090 ft (from topographic map).

Average discharge.—24 years, 32.1 cfs (23,240 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.—No flow during year.

1930–54: 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 above station for irrigation of about 2,000 acres.

MOJAVE RIVER AT AFTON, CALIF.

Location.—Lat 35°02'15", long 116°23'00", in SE¼ 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 1954.

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, at site 1 mile downstream at different datum.

Extremes.—Maximum discharge during year, 16 cfs July 17 (gage height, 2.53 ft); minimum daily, 0.7 cfs July 29–31, Aug. 8–16, 24, 25.

1929–32, 1952–54: 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.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.0*	*1.5*	*1.6*	1.7	*1.7*	*1.6*	*1.6*	*1.4*	0.9	1.1	*0.8*	*0.8*
2	1.1	1.5	1.6	1.7	1.7	*1.6	1.6	1.4	.9	1.1	.8	.8
3	1.1	*1.5	1.6	1.7	1.7	1.6	1.6	1.4	.9	1.0	.8	.8
4	1.1	1.5	1.6	1.7	1.7	1.6	1.6	1.4	*.8*	1.0	.8	.8
5	1.1	1.5	1.6	*1.7	1.7	1.7	1.6	1.3	.9	1.0	.8	.8
6	*1.1	1.5	1.6	1.7	1.7	1.8	1.6	*1.2	.9	1.0	.8	.8
7	1.1	1.5	1.6	1.8	1.6	1.8	1.6	1.2	.9	.9	.8	.8
8	1.1	1.5	1.6	1.8	1.6	1.8	1.6	1.2	*.9	.9	*.7*	.8
9	1.1	1.5	1.6	1.8	1.6	1.8	1.6	1.2	1.0	.9	.7	.8
10	1.1	*1.6*	1.6	1.8	1.6	*2.0*	1.6	1.2	1.0	.9	.7	*.8
11	1.1	1.6	1.6	1.8	1.6	2.0	1.6	1.2	1.0	.9	.7	.8
12	1.2	1.6	*1.7*	*2.0*	1.7	2.0	1.6	1.2	1.0	1.3	*.7	.8
13	1.2	1.6	1.7	2.0	1.7	1.8	1.5	1.2	1.0	1.4	.7	.9
14	1.2	1.6	1.7	1.8	1.7	1.8	1.5	1.2	1.0	*1.1	.7	.9
15	1.2	1.6	1.7	1.8	1.6	1.8	1.5	1.2	.9	1.0	.7	*1.0*
16	1.2	1.6	1.7	1.7	1.6	1.8	1.5	1.2	.9	1.0	.7	1.0
17	1.2	1.6	1.7	1.7	1.6	1.8	1.5	1.2	.9	*2.2*	.8	1.0
18	1.2	1.6	1.7	1.7	1.6	1.8	1.5	1.2	.9	1.0	.8	1.0
19	1.2	1.6	1.7	2.0	1.6	1.8	1.4	1.1	.9	.9	.8	1.0
20	1.2	1.6	1.7	1.8	1.6	1.8	1.4	1.1	.9	.8	.8	.9
21	1.3	1.6	1.7	1.7	1.6	1.8	1.4	1.0	.9	.8	.8	.8
22	1.3	1.6	1.7	1.7	1.6	2.0	1.4	1.0	.9	.8	.8	.8
23	1.3	1.6	1.7	1.7	*1.5*	1.8	1.4	1.0	.9	.8	.8	.8
24	*1.4*	1.6	1.7	1.7	1.5	1.7	1.5	1.0	1.0	1.3	.7	.8
25	1.4	1.6	1.7	*1.6*	1.5	1.7	1.4	1.0	1.0	1.0	.7	.9
26	1.4	1.6	1.7	1.7	1.5	1.7	1.4	1.0	*1.1*	.9	.8	.9
27	1.4	1.6	1.7	*1.7	1.5	1.7	1.4	1.0	1.1	.9	.8	.9
28	1.4	1.6	1.7	1.7	1.6	1.7	1.4	1.0	1.1	.8	.8	.8
29	1.4	1.6	1.7	1.7	-------	1.7	1.4	*.9*	1.1	.7	.8	.8
30	1.4	*1.6	1.7	1.7	-------	*1.7	*1.3*	.9	1.1	.7	.8	.9
31	1.4	-------	1.7	1.7	-------	1.7	-------	.9	-------	.7	.8	-------
Total	37.9	47.1	51.6	54.3	45.2	54.9	45.0	35.4	28.7	30.8	23.7	25.7
Mean	1.22	1.57	1.66	1.75	1.61	1.77	1.50	1.14	0.96	0.99	0.76	0.86
Ac-ft	75	93	102	108	90	109	89	70	57	61	47	51

Calendar year 1953	Max 4.6	Min 0.7	Mean 1.37	Ac-ft 989
Water year 1953–54	Max 2.2	Min 0.7	Mean 1.32	Ac-ft 952

*Discharge measurement made on this day.

ANTELOPE VALLEY

ROCK CREEK NEAR VALYERMO, CALIF.

Location.—Lat 34°25'10", long 117°50'25", in NE¼ sec. 20, T. 4 N., R. 9 W., on left bank 0.1 mile upstream from Punchbowl Canyon, 0.9 mile south of Valyermo.

Drainage area.—23.0 sq mi.

Records available.—January 1923 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,050 ft (from topographic map). Prior to May 4, 1938, at same site at different datums. May 4, 1938, to Jan. 26, 1939, at site 600 ft downstream (below Punchbowl Creek) at different datum.

Average discharge.—30 years (1923–37, 1938–54), 15.1 cfs (10,930 acre-ft per year).

Extremes.—Maximum discharge during year, 320 cfs Jan. 25 (gage height, 3.39 ft); minimum daily, 1.8 cfs Oct. 29 to Nov. 3.

1923–54: 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 that for Jan. 26, which is fair. Discharge measurements generally made once a week.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*2.3*	*1.8*	*2.3*	2.6	9.1	11	*19*	*19*	9.1	*8.6*	7.0	6.4
2	2.3	1.8	2.3	2.6	9.1	11	21	17	9.1	8.6	7.0	6.0
3	2.3	1.8	2.3	2.6	9.1	10	25	16	9.1	8.6	*7.4*	6.0
4	2.3	2.0	2.3	2.6	9.1	9.7	28	16	9.1	8.6	7.0	6.0
5	2.3	2.3	2.3	2.6	9.1	9.1	36	16	9.1	8.6	7.0	6.4
6	2.3	2.6	2.3	*2.6*	9.1	9.1	42	16	9.1	8.6	7.0	6.4
7	2.3	2.6	2.3	*2.3*	*8.6*	*8.6*	39	16	9.1	8.6	6.4	*7.0*
8	2.3	2.6	2.3	2.3	8.6	8.6	37	16	9.1	8.6	6.4	7.0
9	2.3	2.3	2.3	2.3	8.6	8.6	37	*16*	*9.7*	8.6	*6.0*	7.0
10	2.3	2.3	2.3	2.6	8.6	9.1	36	16	9.7	8.6	6.0	6.4
11	2.3	2.3	2.3	2.6	9.1	9.1	34	15	9.7	8.6	*6.0*	6.4
12	2.0	2.3	2.3	2.8	9.1	8.6	34	14	9.1	8.6	6.0	6.0
13	2.0	2.3	2.3	3.1	25	8.6	34	14	9.1	8.6	6.0	6.0
14	2.3	*3.1*	*2.6*	2.8	*36*	8.6	36	13	9.1	8.6	*5.6*	6.0
15	2.3	2.6	2.6	2.8	21	8.6	36	12	9.1	8.6	5.6	6.0
16	2.3	2.3	2.6	3.1	17	9.7	39	12	9.1	8.6	5.6	6.0
17	2.3	2.3	2.6	3.4	16	9.7	*45*	12	9.1	8.6	5.6	6.0
18	2.3	2.3	2.6	3.7	15	9.1	45	12	8.6	8.6	5.6	6.0
19	2.3	2.3	2.6	15	14	9.1	40	12	8.6	8.6	6.0	6.0
20	2.3	2.3	2.6	9.1	14	12	33	12	8.6	8.6	6.0	6.0
21	2.3	2.3	2.6	6.4	13	13	29	12	8.6	8.0	6.0	5.6
22	2.3	2.3	2.6	5.6	13	15	27	12	8.6	8.0	6.0	5.6
23	2.3	2.3	2.6	5.2	13	*20*	27	11	*8.0*	8.6	5.6	5.6
24	2.3	2.3	2.6	25	13	17	25	9.7	8.0	8.6	5.6	5.6
25	2.0	2.3	2.6	*150*	13	16	24	9.7	8.6	8.6	5.6	5.6
26	2.0	2.3	2.6	[a] 25	12	15	23	*9.1*	8.6	8.0	5.6	5.6
27	2.0	2.3	2.6	9.7	12	15	23	9.1	8.6	8.0	5.6	5.6
28	2.0	2.3	2.6	9.1	11	18	23	9.1	8.6	8.0	5.6	5.2
29	*1.8*	2.3	2.6	9.1	-------	19	21	9.1	8.6	7.4	5.6	5.2
30	1.8	2.3	2.6	9.1	-------	20	20	9.1	8.6	*7.0*	5.6	*4.8*
31	1.8	-------	2.6	9.1	-------	17	-------	9.1	-------	7.0	6.0	-------
Total	68.0	69.2	76.7	336.8	365.2	372.9	938	401.0	267.1	259.2	188.0	179.4
Mean	2.19	2.31	2.47	10.9	13.0	12.0	31.3	12.9	8.90	8.36	6.06	5.98
Ac-ft	135	137	152	668	724	740	1,860	795	530	514	373	356

Calendar year 1953	Max 14	Min 1.8	Mean 5.00	Ac-ft 3,620
Water year 1953–54	Max 150	Min 1.8	Mean 9.65	Ac-ft 6,980

Peak discharge (base, 50 cfs)—— Jan. 25 (1:30 a.m.) 320 cfs (3.39 ft); Feb. 13 (7:30 p.m.) 73 cfs (2.58 ft).

[a] No gage-height record; discharge estimated on basis of probable recession curve.

LITTLE ROCK CREEK NEAR LITTLE ROCK, CALIF.

Location.—Lat 34°27'50", long 118°01'05", in SW¼SW¼NE¼ sec. 3, T. 4 N., R. 11 W., on right bank 0.3 mile 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 1954.

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.—22 years (1930–37, 1939–54), 18.3 cfs (13,250 acre-ft per year); median of yearly mean discharges, 9.6 cfs (6,950 acre-ft per year).

Extremes.—Maximum discharge during year, 655 cfs Jan. 25 (gage height, 6.44 ft); no flow Oct. 1 to Nov. 6, Sept. 11–30.

1930–54: Maximum discharge, 17,000 cfs (estimated) Mar. 2, 1938; no flow during periods in most years.

Cooperation.—Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	*0*	*1.6*	*2.0*	21	18	51	*18*	*5.2*	*1.5*	*0.5*	*0.1*
2	0	0	1.6	2.0	20	17	58	17	5.0	1.4	.4	.1
3	0	0	1.6	2.0	18	16	63	16	5.0	1.4	.3	.1
4	0	0	1.7	2.0	16	16	69	15	4.8	1.3	.3	.1
5	0	0	*2.0*	2.0	16	15	*78*	14	5.0	1.2	.4	.1
6	0	0	1.9	2.0	14	*14*	78	14	5.0	1.0	.4	.1
7	0	.1	1.9	2.0	13	14	68	13	4.8	1.0	.4	.1
8	0	.1	1.9	2.0	12	14	64	12	4.8	1.0	.4	.1
9	0	.2	1.8	2.0	12	15	63	12	5.0	.9	.4	.1
10	0	.3	1.8	2.0	*11*	18	58	12	5.2	.9	.3	.1
11	0	.4	1.7	2.0	11	17	53	11	5.0	.8	.2	*0*
12	0	.6	1.7	2.1	11	16	51	10	4.7	.8	.3	0
13	0	.6	1.8	3.2	39	15	51	9.5	4.7	.8	.3	0
14	0	1.1	1.8	2.9	*93*	14	51	9.2	4.5	.8	.2	0
15	0	*4.2*	1.8	2.9	49	14	53	9.0	4.3	.9	*.1*	0
16	0	3.2	1.8	2.9	39	15	52	9.0	4.2	1.0	.1	0
17	0	2.1	1.8	2.9	36	17	52	8.2	3.9	1.0	.2	0
18	0	1.8	1.8	3.6	36	14	50	7.9	3.7	.9	.1	0
19	0	1.5	1.9	78	30	14	46	7.7	3.5	.9	.1	0
20	0	1.6	1.9	46	27	19	40	7.5	3.3	.9	.1	0
21	0	1.6	1.9	23	26	27	35	7.0	3.1	.8	.1	0
22	0	1.6	1.9	15	26	45	32	7.0	2.8	.8	.1	0
23	0	1.6	1.9	12	26	*65*	29	6.4	2.6	.8	.1	0
24	0	1.6	1.9	37	26	41	27	6.1	2.4	.9	.1	0
25	0	1.5	1.9	*328*	24	35	24	5.9	2.2	1.0	.1	0
26	0	1.5	1.9	75	22	30	23	5.7	2.4	1.0	.1	0
27	0	1.5	2.0	40	21	35	22	5.5	2.2	.9	.1	0
28	0	1.5	2.0	27	20	51	21	5.5	2.2	.8	.1	0
29	0	1.6	2.0	24	-------	55	21	5.4	2.1	.7	.1	0
30	0	1.6	2.0	22	-------	56	*20*	5.4	*1.8*	*.6*	.1	0
31	0	-------	2.0	21	-------	49	-------	*5.2*	-------	.6	.1	-------
Total	0	33.4	57.2	790.5	715	801	1,403	297.1	115.4	29.3	6.6	1.0
Mean	0	1.11	1.85	25.5	25.5	25.8	46.8	9.58	3.85	0.95	0.21	0.03
Ac-ft	0	66	113	1,570	1,420	1,590	2,780	589	229	58	13	2.0

Calendar year 1953	Max 33	Min 0	Mean 3.45	Ac-ft 2,500
Water year 1953–54	Max 328	Min 0	Mean 11.6	Ac-ft 8,430

MONO LAKE BASIN

MONO LAKE NEAR MONO LAKE, CALIF.

Location.—Lat 38°00′, long 119°08′, in NE¼ sec. 31, T. 2 N., R. 26 E., on west bank, 1 mile south of Mono Lake post office.

Records available.—June 1912 to September 1954. Records prior to September 1934 are published in WSP 765.

Gage.—Staff gage. Datum of gage is 6,410.73 ft above mean sea level, datum of 1929. Gage readings have been reduced to elevations above mean sea level.

Extremes.—1912–54: Maximum elevation observed, 6,428.1 ft July 18, 1919; minimum observed, 6,405.32 ft Sept. 24, 1954.

Cooperation.—Gage-height record furnished by city of Los Angeles.

Revisions (water years).—WSP 1284: 1952.

Elevation, in feet, water year October 1953 to September 1954

Date	Elevation	Date	Elevation
Oct. 1	6,407.60	Mar. 18	6,407.17
8	6,407.55	25	6,407.21
16	6,407.42	Apr. 2	6,407.23
23	6,407.37	7	6,407.19
29	6,407.37	15	6,407.17
Nov. 6	6,407.36	22	6,407.17
13	6,407.30	30	6,407.18
16	6,407.23	May 6	6,407.09
19	6,407.21	14	6,407.06
25	6,407.14	21	6,407.01
Dec. 3	6,407.10	27	6,406.93
11	6,407.10	June 2	6,406.87
17	6,407.10	10	6,406.73
23	6,407.06	16	6,406.69
31	6,407.01	25	6,406.68
Jan. 6	6,407.05	July 1	6,406.60
8	6,407.00	8	6,406.47
15	6,406.76	15	6,406.43
19	6,406.96	22	6,406.37
21	6,406.94	30	6,406.30
27	6,407.10	Aug. 6	6,406.20
Feb. 4	6,407.08	13	6,406.07
11	6,407.08	20	6,405.93
19	6,407.14	27	6,405.75
26	6,407.22	Sept. 3	6,405.66
Mar. 4	6,407.19	10	6,405.56
12	6,407.26	17	6,405.43
		24	6,405.32

WALKER LAKE BASIN

WALKER LAKE NEAR HAWTHORNE, NEV.

Location.—Lat 38°35′, long 118°42′, in NE¼NE¼ sec. 2, T. 8 N., R. 29 E., 3 miles northwest of Hawthorne.

Records available.—August 1928 to September 1954. Occasional readings prior to August 1928.

Gage.—Benchmark at United States Naval Depot, 4,053.41 ft above mean sea level, adjustment of 1912.

Extremes.—1928–54: Maximum elevation observed, 4,051.8 ft Mar. 13, 1928 (Indian Service); minimum observed, 3,994.21 ft Sept. 30, 1954.

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 1953 to September 1954

Date	Elevation	Date	Elevation
Apr. 15	3,996.50	Aug. 2	3,995.47
May 13	3,996.41	Sept. 7	3,994.73
June 30	3,995.80	Sept. 30	3,994.21

BRIDGEPORT RESERVOIR NEAR BRIDGEPORT, CALIF.

Location.—Lat 38°19'30", long 119°12'50", in SE¼ sec. 34, T. 6 N., R. 25 E., at Bridgeport Dam on East Walker River, 4½ miles north of Bridgeport.

Drainage area.—362 sq mi.

Records available.—October 1931 to September 1954 in reports of Geological Survey. March 1926 to September 1954 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, 41,440 acre-ft Mar. 17 (elevation, 6,459.63 ft); minimum contents observed, 3,510 acre-ft Sept. 30 (elevation, 6,436.12 ft).

1926-54: Maximum contents, 44,580 acre-ft June 12, 1938 (elevation, 6,460.7 ft); no contents during fall of 1929, 1930.

Remarks.—Reservoir is formed by earth-fill, rock-faced dam. Storage began Dec. 8, 1923. Dam completed in November 1924. Capacity, 42,460 acre-ft between elevations 6,412 ft (sill of outlet gate) and 6,460 ft (crest of spillway). No dead storage. Water is used for irrigation by Walker River Irrigation District.

Cooperation.—Elevations and capacity table furnished by Walker River Irrigation District.

Revisions (water years).—WSP 1180: 1949.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20,440	21,800	25,760	28,930	32,460	36,500	40,710	36,630	30,610	24,990	14,210	6,720
2	20,160	21,990	25,870	29,040	32,590	36,630	40,710	36,360	30,360	24,560	13,920	6,420
3	20,070	22,090	25,870	29,160	32,710	36,760	40,850	35,960	30,120	24,140	13,650	6,200
4	19,980	22,290	25,980	29,160	32,840	36,900	40,710	35,700	29,880	23,720	13,310	5,880
5	19,800	22,380	26,200	29,280	32,970	37,040	40,710	35,300	29,520	23,410	13,040	5,720
6	19,800	22,480	26,200	29,400	33,090	37,180	40,710	35,040	29,280	23,000	12,770	5,480
7	19,700	22,680	26,420	29,520	33,090	37,460	40,420	34,770	28,820	22,580	12,440	5,220
8	19,700	22,790	26,420	29,640	33,220	37,590	40,120	34,510	28,470	22,090	12,190	5,000
9	19,700	22,890	26,530	29,640	33,350	38,150	40,120	34,240	28,120	21,600	11,880	4,780
10	19,700	23,100	26,640	29,760	33,480	39,540	39,830	33,860	27,900	21,210	11,630	4,610
11	19,700	23,200	26,860	29,880	33,600	40,120	39,690	33,480	27,660	20,910	11,380	4,450
12	19,700	23,410	26,980	30,000	33,730	40,420	39,540	33,220	27,550	20,720	11,080	4,280
13	19,700	23,520	27,090	30,000	33,980	40,560	39,540	32,970	27,440	20,250	10,910	4,120
14	19,700	23,520	27,200	30,120	34,240	40,850	39,540	32,710	27,440	19,800	10,670	3,960
15	19,700	23,720	27,320	30,240	34,380	41,150	39,400	32,460	27,320	19,420	10,380	3,870
16	19,700	23,930	27,440	30,240	34,640	41,290	39,400	32,330	27,320	19,060	10,140	3,780
17	19,800	24,040	27,550	30,360	34,900	41,440	39,400	32,200	27,200	18,610	9,980	3,720
18	19,880	24,140	27,660	30,490	35,040	41,290	39,260	32,080	27,090	18,260	9,700	3,660
19	19,980	24,240	27,780	30,610	35,170	41,150	39,260	31,950	27,090	17,920	9,540	3,630
20	20,070	24,450	27,900	30,730	35,170	41,000	39,260	32,080	27,090	17,580	9,320	3,570
21	20,160	24,450	28,010	30,850	35,440	41,000	39,260	32,200	27,090	17,230	9,160	3,570
22	20,070	24,560	28,120	30,970	35,570	40,850	39,120	32,200	26,980	16,820	8,950	3,600
23	20,340	24,770	28,240	31,090	35,700	40,710	38,980	32,200	26,860	16,500	8,740	3,600
24	20,440	24,880	-------	31,330	35,830	40,710	38,710	32,200	26,860	16,190	8,540	3,600
25	20,720	-------	-------	31,570	35,960	40,560	38,430	32,330	26,860	15,950	8,340	3,600
26	20,720	-------	28,470	31,820	36,100	40,420	38,290	32,080	26,750	15,710	8,130	3,570
27	20,910	-------	28,470	31,820	36,230	40,420	38,010	31,950	26,420	15,550	7,890	3,570
28	21,110	25,430	28,580	31,950	36,360	40,270	37,730	31,700	26,200	14,730	7,550	3,540
29	21,210	25,540	28,700	32,080	-------	40,420	37,320	31,570	25,870	14,950	7,360	3,540
30	21,400	25,430	28,820	32,200	-------	40,560	37,040	31,210	25,430	14,730	7,170	3,510
31	21,600	-------	28,820	32,330	-------	40,560	-------	30,970	-------	14,430	6,990	-------
(†)	6451.48	6453.37	6454.86	6456.30	6457.87	6459.36	6458.10	6455.75	6453.37	6447.32	6440.86	6436.12
(‡)	+980	+3,830	+3,390	+3,510	+4,030	+4,200	−3,520	−6,070	−5,540	−11000	−7,440	−3,480

†Elevation, in feet, at end of month.
‡Change in contents in acre-feet.

NOTE.—Change in contents: Calendar year 1953, −6,480 acre-ft; water year 1954, −17,110 acre-ft.

EAST WALKER RIVER NEAR BRIDGEPORT, CALIF.

Location.—Lat 38°19'40", long 119°12'50", in SW¼NE¼ sec. 34, T. 6 N., R. 25 E., 1,500 ft downstream from Bridgeport Reservoir, 5 miles north of Bridgeport.

Drainage area.—362 sq mi.

Records available.—July 1911 to September 1914 (gage heights only), October 1921 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 6,400 ft (from topographic map). July 1911 to September 1914, 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.—31 years (1922–24, 1925–54), 130 cfs (94,120 acre-ft per year).

Extremes.—Maximum discharge during year, 328 cfs June 4 (gage height, 1.91 ft); minimum, 1.6 cfs June 16, caused by temporary shutdown at Bridgeport Dam.

1921–54: Maximum discharge, 1,240 cfs Jan. 22, 1943; maximum gage height, 4.95 ft Jan. 22, 1943 (top of surge); minimum daily discharge, 0.5 cfs Dec. 31, 1949, to Feb. 17, 1950, Feb. 22 to Mar. 3, 1950.

Remarks.—Records excellent except those below 50 cfs, which are good. Flow regulated by Bridgeport Reservoir (see p. 173).

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	*154*	*10*	*8.0*	5.8	*5.8*	*6.4*	*175	243	292	310	*197*	*175*
2	154	9.7	*8.0	*5.8	5.8	6.4	190	*235*	289	310	197	175
3	139	*8.6	7.5	5.8	5.8	6.4	194	240	289	310	197	172
4	132	8.6	7.5	5.8	5.8	6.4	194	249	267	301	197	159
5	111	8.6	7.2	5.8	5.8	6.4	194	249	295	292	197	147
6	101	9.2	6.8	5.8	5.8	6.4	194	260	295	292	194	147
7	82	9.2	6.8	*6.1*	5.8	6.4	187	*280	295	304	194	150
8	66	9.2	6.8	6.1	5.8	6.8	184	280	257	*316*	194	150
9	*66	8.6	6.8	6.1	5.8	7.2	184	280	235	289	180	139
10	66	8.0	6.8	6.1	5.8	6.8	184	277	235	196	*163	*124
11	66	8.0	6.8	6.1	5.8	6.8	184	277	218	216	161	124
12	66	8.0	6.8	6.1	5.8	11	166	277	177	232	154	124
13	66	8.0	6.8	6.1	6.1	19	*130*	272	152	274	143	122
14	66	8.0	6.8	*5.0*	6.1	23	143	263	141	289	141	109
15	66	8.0	7.2	5.0	6.1	42	152	245	132	289	141	95
16	56	7.2	7.2	5.4	6.1	70	152	277	*117	286	141	80
17	42	*6.8*	7.2	5.4	6.1	122	154	277	130	266	*139*	61
18	43	7.2	7.2	5.4	6.1	156	154	277	130	254	139	61
19	43	7.2	7.2	5.8	6.1	156	154	277	130	251	139	61
20	43	7.2	7.2	5.8	*6.4*	156	170	277	130	232	139	52
21	43	6.8	7.2	5.8	6.4	156	184	272	147	210	139	*36*
22	37	6.8	6.1	5.8	6.4	156	197	260	172	210	139	36
23	19	6.8	*5.8*	5.8	6.4	156	218	260	172	*210	139	36
24	11	7.2	5.8	5.8	*6.4	156	218	260	194	210	145	41
25	11	7.2	5.8	5.8	6.4	156	218	257	210	210	154	50
26	11	7.2	5.8	5.8	6.4	156	240	266	243	210	154	50
27	10	7.5	5.8	5.4	6.4	156	*251*	251	272	210	154	50
28	*9.7*	8.0	5.8	5.4	6.4	156	251	272	272	210	154	49
29	9.7	8.0	5.8	5.4	-------	156	251	283	292	200	152	49
30	9.7	8.0	5.8	*5.4	-------	156	251	*295*	*310*	*184*	152	50
31	10	-------	5.8	5.4	-------	*168*	-------	292	-------	192	159	-------
Total	1,809.1	238.8	208.1	177.1	169.9	2,555.4	5,718	8,280	6,490	7,765	4,988	2,874
Mean	58.4	7.96	6.71	5.71	6.07	82.4	191	267	216	250	161	95.8
Ac-ft	3,590	474	413	351	337	5,070	11,340	16,420	12,870	15,400	9,890	5,700

Calendar year 1953	Max 454	Min 5.8	Mean 133	Ac-ft 96,310
Water year 1953–54	Max 316	Min 5.0	Mean 113	Ac-ft 81,860

*Discharge measurement made on this day.

EAST WALKER RIVER ABOVE STROSNIDER DITCH, NEAR MASON, NEV.

Location.—Lat 38°49′, long 119°03′, in sec. 14, T. 11 N., R. 26 E., on left bank 0.9 mile upstream from head of Strosnider ditch, 12 miles southeast of Mason, and 13½ miles southeast of Yerington.

Records available.—January 1947 to September 1954.

Gage.—Water-stage recorder. Datum of gage is 4,574.66 ft above mean sea level, datum of 1929.

Average discharge.—7 years (1947–54), 127 cfs (91,940 acre-ft per year).

Extremes.—Maximum discharge during year, 259 cfs June 8 (gage height, 2.38 ft); minimum daily, 19 cfs Feb. 9.

1947–54: Maximum discharge, 1,400 cfs July 14, 1952 (gage height, 6.21 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. 173).

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	135	*37*	33	b 28	27	22	133	207	248	222	144	*111
2	135	37	32	b *32*	27	21	135	198	250	228	148	*122*
3	*137*	36	32	29	26	21	135	*196*	250	226	158	116
4	137	35	33	30	25	*20*	138	201	248	228	154	116
5	133	34	*35*	28	24	20	137	207	230	230	154	115
6	127	34	29	28	24	20	122	207	254	224	158	108
7	120	34	32	29	25	21	125	220	*257*	226	*160*	106
8	115	34	33	32	20	21	125	232	254	228	158	109
9	108	34	*30	b 28	*19*	20	122	232	237	*237*	158	111
10	101	*34	32	b 25	23	25	122	243	215	217	156	108
11	94	35	30	25	23	29	125	243	207	164	146	101
12	91	35	29	28	23	28	125	241	198	160	144	97
13	89	34	29	32	25	24	118	239	180	166	140	99
14	86	*33*	28	28	*30*	24	*104*	232	156	198	129	97
15	84	33	28	26	28	29	104	224	144	232	127	97
16	83	33	29	27	24	35	124	213	135	226	125	91
17	81	34	29	27	22	49	129	230	129	224	125	86
18	80	34	29	26	23	77	129	230	124	220	122	75
19	77	33	28	*25	21	115	129	237	122	205	120	70
20	74	33	28	26	20	124	122	239	120	198	115	67
21	72	34	28	28	20	124	135	237	*115*	172	111	64
22	70	33	b 27	*24*	20	124	146	234	118	154	109	57
23	68	34	b 25	25	21	129	150	228	133	152	109	53
24	67	33	b 24	27	21	129	170	226	135	152	108	50
25	61	33	b *23*	30	21	*127	178	224	*140	152	*106*	47
26	54	33	b 24	32	21	127	182	222	158	158	113	45
27	49	33	b 26	25	22	125	*194	*226	182	*156	116	45
28	47	33	b 29	25	*23	125	198	222	207	152	115	*44
29	44	33	b 27	30	-------	*131*	196	234	196	144	113	44
30	42	33	b 25	28	-------	129	*203*	239	207	144	111	45
31	*41*	-------	b 25	27	-------	129	-------	*252*	-------	*142*	109	-------
Total	2,702	1,018	891	860	648	2,144	4,255	7,015	5,549	5,937	4,061	2,496
Mean	87.2	33.9	28.7	27.7	23.1	69.2	142	226	185	192	131	83.2
Ac-ft	5,360	2,020	1,770	1,710	1,290	4,250	8,440	13,910	11,010	11,780	8,050	4,950

Calendar year 1953	Max 390	Min 23	Mean 128	Ac-ft 92,570
Water year 1953–54	Max 257	Min 19	Mean 103	Ac-ft 74,540

*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 1954.

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.—10 years (1944–54), 49.7 cfs (35,980 acre-ft per year).

Extremes.—Maximum discharge during year, 259 cfs May 19, 20 (gage height, 1.88 ft); minimum not determined, occurred during period of ice effect.

1910, 1944–54: Maximum discharge recorded, 660 cfs Feb. 2, 1945 (gage height 2.69 ft), from rating curve extended above 270 cfs on basis of velocity-area study and slope-area determination; maximum gage height recorded, 3.63 ft Jan. 3, 1945 (backwater from ice); minimum discharge recorded, 4.9 cfs Nov. 17, 1948.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*18*	*20*	*[b] 18*	[b] *15*	[b] 15	[b] 17	**23*	*47*	*90	**62*	*23*	*14
2	18	20	[b] 17	*[b] 15	[b] 15	[b] *16*	*24*	50	97	*56*	22	14
3	19	20	[b] 17	[b] 14	[b] 15	[b] 16	27	55	104	55	21	*16*
4	19	20	[b] 16	[b] 14	[b] 16	17	36	65	97	58	20	15
5	19	*19	[b] 16	[b] 14	[b] 16	17	42	78	86	55	19	15
6	19	*17*	[b] 16	[b] 14	[b] 16	17	38	86	78	50	21	15
7	19	18	[b] 17	[b] 14	[b] 16	18	38	92	78	47	21	15
8	*19	17	[b] 17	[b] 14	[b] 16	51	39	116	78	47	20	15
9	19	18	[b] 17	[b] 14	[b] 16	*126*	37	108	78	46	20	14
10	19	19	[b] 17	[b] 14	[b] *17*	48	36	97	70	45	20	14
11	19	17	[b] 17	[b] 14	17	34	37	104	67	40	19	14
12	19	18	[b] 17	[b] 14	17	[b] 31	*42*	104	67	38	19	14
13	19	17	[b] 17	[b] *13*	[b] 17	[b] 30	47	104	*63*	40	16	14
14	19	18	[b] 17	[b] 13	[b] 17	[b] 28	55	113	68	49	12	13
15	19	[b] 18	[b] 17	[b] 13	[b] 16	[b] 27	58	118	67	49	12	13
16	19	[b] 17	17	[b] 13	[b] 15	25	67	124	68	39	*11*	13
17	18	[b] 17	[b] 17	[b] 13	[b] *14*	[b] 25	72	137	76	35	11	13
18	21	[b] 18	[b] 17	[b] 14	[b] 14	[b] 24	72	152	78	33	15	13
19	21	[b] 18	17	[b] 14	[b] 14	[b] 24	72	187	86	32	17	13
20	22	[b] 18	16	[b] 14	[b] 14	[b] 23	68	*215*	102	30	17	13
21	20	[b] 19	[b] 16	[b] 14	[b] 14	23	68	*184	106	27	17	13
22	20	[b] 19	[b] 16	[b] 14	[b] 16	24	74	140	106	28	17	*12*
23	*23*	19	[b] 15	14	[b] 16	22	*76*	129	*108*	28	16	13
24	22	18	[b] *14*	[b] 14	*[b] 17	21	74	121	108	31	16	14
25	21	19	[b] 14	[b] 14	[b] 17	[b] 21	72	111	99	34	16	13
26	20	18	[b] 14	[b] 14	17	[b] 21	68	102	90	32	16	13
27	21	18	[b] 14	[b] 14	[b] 17	[b] 22	70	99	78	27	16	13
28	21	17	[b] 15	14	[b] 17	23	65	102	70	26	15	12
29	21	18	[b] 15	14	-------	21	56	99	68	24	15	12
30	20	17	[b] 15	*[b] 14	-------	23	53	90	67	*23	14	12
31	20	-------	[b] 15	[b] 15	-------	23	-------	90	-------	23	14	-------
Total	613	546	500	432	444	858	1,606	3,419	2,498	1,209	528	407
Mean	19.8	18.2	16.1	13.9	15.9	27.7	53.5	110	83.3	39.0	17.0	13.6
Ac-ft	1,220	1,080	992	857	881	1,700	3,190	6,780	4,950	2,400	1,050	807

Calendar year 1953	Max 246	Min 14	Mean 48.2	Ac-ft 34,880
Water year 1953–54	Max 215	Min 11	Mean 35.8	Ac-ft 25,910

Peak discharge (base, 200 cfs)—— May 19 (10:30 p.m.) 259 cfs (1.88 ft).

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

WEST WALKER RIVER BELOW EAST FORK, NEAR COLEVILLE, CALIF.

Location.—Lat 38°22'45", long 119°27'00", in SE¼ sec. 9, T. 6 N., R. 23 E., on left bank 75 ft downstream from East Fork, 200 ft upstream from bridge on U. S. Highway 395, and 13 miles southeast of Coleville.

Drainage area.—182 sq mi.

Records available.—April 1938 to September 1954.

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.—16 years, 257 cfs (186,100 acre-ft per year).

Extremes.—Maximum discharge during year, 1,710 cfs May 19 (gage height, 4.60 ft); minimum, 16 cfs Dec. 21.

1938–54: Maximum discharge, 6,220 cfs Nov. 20, 1950 (gage height, 8.10 ft), from rating curve extended above 1,900 cfs on basis of slope-area determination of peak flow; minimum, 4.0 cfs Nov. 18, 1948, result of freezeup.

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

Revisions (water years).—WSP 880: 1917 (runoff in acre-feet).

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	52	48	*38	b 38	b 44	61	*84	305	*544	*366	91	*50
2	50	48	35	*b 37	b 44	60	89	321	598	327	89	52
3	50	*47	b 38	b 36	b 46	63	109	416	709	324	86	52
4	50	45	b 38	b 38	b 48	64	135	527	667	330	81	52
5	48	43	b 38	b 38	b 48	65	156	646	489	321	78	53
6	47	40	b 42	b 40	b 46	70	147	743	394	270	75	53
7	47	39	47	37	b 46	72	144	790	359	257	73	53
8	46	42	b 48	b 37	b 49	174	156	974	359	249	66	53
9	45	42	48	b 38	50	434	153	995	346	238	60	50
10	43	44	44	b 38	48	226	156	704	308	221	58	48
11	45	43	b 44	b 37	50	164	166	766	311	214	59	46
12	46	44	b 43	34	49	147	190	796	330	200	55	47
13	46	42	b 43	b 35	33	132	224	778	330	200	54	45
14	45	47	b 45	b 35	b 42	123	285	839	356	200	60	38
15	44	43	45	33	b 45	118	327	905	423	279	63	38
16	44	46	43	34	b 48	113	401	852	485	226	63	45
17	43	46	42	33	b 45	110	498	1,040	540	190	59	45
18	48	44	41	36	b 45	101	535	1,200	502	169	57	46
19	51	b 45	41	b 37	b 48	100	548	1,360	514	160	54	46
20	53	45	41	b 37	b 50	96	535	1,480	607	147	51	45
21	52	b 48	b 31	b 37	b 59	92	557	*1,280	715	132	48	44
22	48	50	b 35	b 38	b 59	89	598	852	720	120	49	42
23	55	45	b 38	37	b 59	88	651	732	715	115	50	42
24	53	48	b 40	33	*b 61	84	646	738	698	118	48	42
25	52	47	b 40	b 39	64	82	617	682	622	169	46	41
26	52	47	b 40	b 38	63	78	584	584	548	196	48	38
27	52	47	b 42	b 40	60	82	579	557	461	151	54	35
28	51	45	b 40	40	59	88	461	598	405	126	55	33
29	51	45	b 42	40	-------	84	390	632	390	110	54	33
30	49	45	b 39	*b 42	-------	86	*353	548	387	*101	51	32
31	49	-------	b 42	b 44	-------	84	-------	527	-------	98	50	-------
Total	1,507	1,350	1,273	1,156	1,408	3,430	10,474	24,167	14,832	6,324	1,885	1,339
Mean	48.6	45.0	41.1	37.3	50.3	111	349	780	494	204	60.8	44.6
Ac-ft	2,990	2,680	2,520	2,290	2,790	6,800	20,770	47,930	29,420	12,540	3,740	2,660

Calendar year 1953	Max 1,680	Min 31	Mean 242	Ac-ft 175,500
Water year 1953–54	Max 1,480	Min 31	Mean 189	Ac-ft 137,100

Peak discharge (base, 1,120 cfs)—— May 8 (11 p.m.) 1,340 cfs (4.13 ft); May 19 (12 p.m.) 1,710 cfs (4.60 ft).

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

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 1954.

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, 56,960 acre-ft May 25 (elevation, 5,003.91 ft); minimum, 4,520 acre-ft Sept. 30 (elevation, 4,975.22 ft).

1931–54: Maximum contents observed, 60,240 acre-ft June 30, 1941 (elevation, 5,005.35 ft); minimum observed, 505 acre-ft Oct. 22–25, 1931 (elevation, 4,972.63 ft).

Remarks.—Topaz Reservoir, formerly known as Alkali Lake, was formed by the diversion of water from West Walker River through a feeder canal and the construction of an outlet tunnel through a low saddle in rim of lake. Storage began Jan. 30, 1922. Usable capacity, 59,440 acre-ft between elevations 4,972.3 ft (lowest practical elevation for diversion through tunnel, bottom of outlet tunnel at elevation 4,970 ft) and 5,005 ft (3 ft below top of levee). Capacity of reservoir increased from about 45,000 acre-ft to 59,440 acre-ft in October 1937 by an earth-fill, rock-faced levee at south end. Water is used for irrigation in Walker River Irrigation District.

Cooperation.—Elevations furnished by Walker River Irrigation District.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21,270	21,300	25,480	-------	35,670	40,550	50,200	49,290	55,380	51,720	29,830	12,030
2	21,050	-------	-------	-------	-------	-------	-------	49,010	55,160	51,130	29,390	11,480
3	20,850	-------	-------	-------	-------	-------	-------	48,670	54,950	50,520	28,900	10,950
4	-------	-------	25,840	-------	-------	-------	-------	48,470	55,220	49,830	28,450	10,400
5	20,440	-------	-------	-------	36,500	41,430	-------	48,450	55,000	49,140	27,840	9,870
6	20,260	21,830	-------	-------	-------	-------	-------	48,470	54,780	48,320	27,230	9,360
7	20,190	-------	-------	-------	-------	-------	51,310	48,670	54,550	47,450	26,610	9,070
8	20,140	-------	-------	31,140	-------	-------	-------	48,900	54,240	46,560	26,070	8,880
9	20,160	-------	-------	-------	-------	-------	51,480	49,180	53,950	45,820	25,550	8,620
10	20,090	-------	-------	-------	-------	-------	51,420	49,700	53,710	44,990	25,000	8,350
11	-------	-------	27,160	-------	-------	-------	51,350	49,790	53,570	44,070	24,470	8,100
12	19,910	-------	-------	-------	-------	44,530	51,260	49,940	53,460	43,170	23,910	-------
13	19,840	22,800	-------	-------	36,120	-------	51,220	50,090	53,370	42,280	23,310	7,720
14	-------	-------	-------	-------	-------	-------	51,220	50,310	53,490	41,430	22,750	7,480
15	-------	-------	-------	32,390	-------	-------	-------	50,570	53,550	40,510	22,200	7,240
16	19,740	-------	-------	-------	-------	-------	50,890	50,830	53,570	39,830	21,590	7,020
17	-------	-------	-------	-------	-------	-------	50,810	51,370	53,600	39,130	20,950	6,800
18	-------	-------	28,380	-------	-------	-------	50,740	52,010	53,620	38,470	20,290	6,580
19	-------	-------	-------	-------	37,980	46,690	50,960	53,000	53,620	37,860	19,800	6,370
20	-------	23,720	-------	-------	-------	-------	50,960	54,020	53,660	-------	19,130	6,330
21	-------	-------	-------	-------	-------	-------	50,810	55,200	53,730	36,330	18,500	6,260
22	-------	-------	-------	33,310	-------	-------	50,590	56,190	54,000	35,620	17,850	6,150
23	19,960	-------	-------	-------	38,900	-------	50,500	56,710	54,040	34,870	17,220	5,930
24	-------	-------	29,090	-------	-------	-------	50,520	56,910	54,240	34,160	16,590	5,320
25	-------	-------	-------	-------	-------	-------	50,570	56,960	54,280	33,470	15,910	5,080
26	-------	-------	-------	-------	39,910	48,710	50,590	56,870	54,200	32,870	15,300	-------
27	-------	24,800	-------	-------	-------	-------	50,500	56,660	53,930	32,420	14,680	4,830
28	-------	-------	-------	-------	*40,340	-------	50,350	56,440	53,640	31,850	14,150	4,690
29	-------	-------	-------	35,190	-------	-------	50,070	-------	53,150	31,350	13,580	4,600
30	20,900	*25,310	-------	-------	-------	-------	49,590	55,900	52,420	30,840	13,140	4,520
31	*21,100	-------	30,080	*35,510	-------	*49,950	-------	55,630	-------	30,310	12,600	-------
(†)	-------	-------	4990.63	-------	-------	-------	5000.58	5003.32	5001.88	4990.76	4980.29	4975.22
(‡)	−440	+4,210	+4,770	+5,430	+4,830	+9,610	−360	+6,040	−3,210	−22110	−17710	−8,080

†Elevation, in feet, at end of month.
‡Change in contents in acre-feet.
* No elevation record; contents interpolated.

NOTE.—Change in contents: Calendar year 1953, −10,770 acre-ft; water year 1954, −17,020 acre-ft.

WEST WALKER RIVER NEAR HUDSON, NEV.

Location.—Lat 38°49′, long 119°14′, in SW¼ sec. 18, T. 11 N., R. 25 E., on left bank half a mile upstream from Wilson Canyon and 3 miles southeast of Hudson.

Drainage area.—964 sq mi.

Records available.—August 1914 to March 1925, January 1947 to September 1954. 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 2½ miles upstream at different datum. May 1921 to March 1925, water-stage recorder at approximately same site at different datum.

Average discharge.—17 years (1914–24, 1947–54), 201 cfs (145,500 acre-ft per year).

Extremes.—Maximum discharge during year, 522 cfs May 10 (gage height, 2.52 ft); minimum, 34 cfs Mar. 8, 9.

1914–25, 1947–54: Maximum discharge, 2,530 cfs June 7, 1922 (gage height, 6.35 ft, site and datum then in use); minimum daily, 13 cfs Aug. 7 to Sept. 21, 1920.

Records.—Records good. Flow regulated by off-channel storage in Topaz Reservoir since 1922 (see p. 178). Many diversions above station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	108	54	54	b 50	41	37	39	275	333	*348*	194	*147
2	108	54	54	b *51*	41	36	39	279	*364*	321	187	156
3	108	54	56	51	39	36	39	*263*	348	309	174	141
4	108	56	58	51	38	*35*	39	272	364	306	153	147
5	111	56	*60*	51	37	35	38	298	344	329	171	156
6	*116*	54	58	51	38	35	38	348	306	336	162	*159*
7	104	*54*	56	51	38	35	37	340	275	340	159	153
8	96	53	54	b 51	37	35	*36*	348	283	325	159	104
9	80	53	*54	b 50	37	35	65	411	302	279	153	89
10	72	*53	54	b 49	37	38	111	422	306	260	144	104
11	68	54	54	b 49	37	*53*	119	348	272	287	*133*	87
12	70	54	53	b 47	*36*	b 46	119	356	238	302	136	80
13	72	53	53	b 46	47	46	116	368	242	283	133	74
14	78	*51*	53	45	*53*	45	124	340	238	283	141	78
15	74	51	53	43	46	43	162	360	*218*	287	141	83
16	74	51	53	42	45	41	197	376	221	272	147	78
17	76	51	53	41	43	41	194	391	224	246	153	74
18	78	51	53	41	45	39	184	*426*	232	242	168	74
19	87	51	53	*39	45	41	190	403	249	246	162	76
20	96	54	53	39	43	41	210	407	235	232	165	78
21	87	54	53	b 39	42	42	302	395	275	204	174	78
22	70	54	b 51	41	41	42	*321*	348	306	207	190	76
23	74	56	b 50	43	41	46	321	302	325	207	*207*	74
24	74	*60*	b *49*	50	39	47	317	313	325	207	200	68
25	68	60	b 51	51	39	*46	309	344	*352	210	190	*65*
26	67	60	b 51	b 47	37	46	294	348	344	235	194	65
27	63	56	b 51	46	37	45	*309	*317	336	*232	194	70
28	61	58	b 51	b 45	*37	43	313	333	348	232	174	*70
29	60	56	b 51	b 45	-------	42	302	395	360	218	171	70
30	58	56	b 51	b 43	-------	42	302	368	360	*200*	156	67
31	*54*	-------	b 50	43	-------	41	-------	329	-------	218	156	-------
Total	2,520	1,632	1,648	1,431	1,141	1,275	5,186	10,828	8,925	8,203	5,141	2,839
Mean	81.3	54.4	53.2	46.2	40.8	41.1	173	349	298	265	166	94.6
Ac-ft	5,000	3,240	3,270	2,840	2,260	2,530	10,290	21,480	17,700	16,270	10,200	5,630

Calendar year 1953	Max 1,260	Min 42	Mean 181	Ac-ft 130,800
Water year 1953–54	Max 426	Min 35	Mean 139	Ac-ft 100,700

Peak discharge (base, 500 cfs)..... May 10 (12:30 a.m.) 522 cfs (2.52 ft).

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

HUMBOLDT-CARSON SINK BASIN

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.

Drainage area.—20 sq mi, approximately.

Records available.—December 1946 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 6,500 ft (from topographic map). Prior to Aug. 3, 1954, at site 150 ft upstream at different datum.

Average discharge.—7 years (1947–54), 46.6 cfs (33,740 acre-ft per year).

Extremes.—Maximum discharge during year, 347 cfs May 8; maximum gage height, 2.93 ft Mar. 9; minimum discharge not determined.

1946–54: Maximum discharge, 1,260 cfs Nov. 20, 1950 (gage height, 7.95 ft), from rating curve extended above 350 cfs; minimum daily, 1.0 cfs Nov. 14, 1952.

Remarks.—Records good before Aug. 5, fair after, except those for Oct. 5–22, which are poor. Flow partly regulated by three small reservoirs (total capacity, about 1,700 acre-ft).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*14*	5.9	4.6	4.6	3.9	11	*15*	108	90	44	24	*18*
2	14	*7.8*	4.3	4.3	4.3	*9.7*	17	114	93	43	40	10
3	10	7.4	4.6	*4.6	5.0	9.7	18	137	*95*	42	[a]30	3.0
4	2.0	6.4	*3.0*	4.6	5.0	10	24	161	81	41	24	2.8
5		5.5	4.3	4.3	5.5	11	26	182	69	40	*30	2.8
6		4.3	5.5	4.3	5.9	11	25	200	[a]65	39	*56*	4.2
7		*3.9*	5.9	4.3	5.9	11	26	222	*61	38	54	7.9
8		4.6	5.9	4.0	6.4	68	26	*264*	59	36	49	3.7
9		4.6	5.9	4.0	6.9	*154*	28	227	55	35	47	3.0
10		7.4	5.9	3.5	*6.4	60	31	213	55	38	38	2.8
11	[e]1.5	6.9	6.4	3.5	6.4	40	40	221	55	50	20	2.8
12		6.9	5.9	3.5	5.9	30	55	213	57	60	18	2.8
13		5.9	6.4	3.5	*2.8*	28	69	218	[a]58	63	18	2.8
14		4.6	*6.9*	3.5	5.0	[a]27	92	224	[a]59	*72*	17	2.8
15		5.9	6.9	3.5	5.5	[a]26	106	213	[a]60	69	16	2.8
16		7.4	*6.9	3.2	5.0	[a]25	130	230	[a]63	68	16	2.8
17		5.5	6.9	*2.8	4.3	[a]24	148	235	[a]65	66	14	2.8
18	[e]2.0	4.3	6.4	3.5	5.0	[a]23	155	*252	[a]67	64	14	2.8
19	[e]2.5	3.9	6.9	3.2	4.6	[a]22	152	261	[a]68	63	13	2.8
20	[e]5.0	4.6	6.4	3.2	5.0	[a]21	151	259	[a]70	*55	12	2.8
21	[e]3.5	5.0	3.9	3.2	6.4	[a]20	*152	200	[a]72	28	11	*2.6*
22	[e]2.0	5.9	3.9	3.2	6.9	[a]19	162	168	[a]72	26	8.6	*2.6
23	3.9	*6.4	5.0	4.6	8.3	[a]18	*178*	154	*70	25	*5.8	2.8
24	3.2	7.4	5.0	3.5	9.7	[a]17	178	145	69	27	5.6	2.8
25	3.5	7.4	4.3	*5.0*	*11*	[a]17	167	126	63	31	4.5	2.8
26	5.0	7.4	3.9	4.3	10	*16	166	108	58	29	3.9	2.8
27	5.9	7.4	5.0	3.9	9.7	16	155	106	*53	26	3.7	2.6
28	5.9	6.9	5.5	3.5	9.7	16	131	108	50	24	3.2	2.6
29	5.5	6.9	5.0	3.5	-------	16	126	106	47	21	3.0	2.8
30	*4.3	6.4	3.9	3.5	-------	15	117	*93*	*46*	21	*2.8*	2.8
31	5.5	-------	4.3	3.9	-------	15	-------	93	-------	*20*	13	-------
Total	117.2	180.8	164.6	118.0	176.4	806.4	2,866	5,561	1,945	1,304	615.1	113.4
Mean	3.78	6.03	5.31	3.81	6.30	26.0	95.5	179	64.8	42.1	19.8	3.78
Ac-ft	232	359	326	234	350	1,600	5,680	11,030	3,860	2,590	1,220	225

Calendar year 1953	Max 264	Min ---	Mean 44.5	Ac-ft 32,200
Water year 1953–54	Max 264	Min ---	Mean 38.3	Ac-ft 27,710

Peak discharge (base, 190 cfs)----- Mar. 9 (3 a.m.) 268 cfs (2.93 ft); Apr. 22 (7 p.m.) 208 cfs (2.25 ft); May 8 (5 p.m.) 347 cfs (2.69 ft); May 20 (5 p.m.) 340 cfs (2.65 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. [e] Stage-discharge relation indefinite; discharge estimated on basis of recorded graph and weather records.

MARKLEEVILLE CREEK ABOVE GROVER HOT SPRINGS, NEAR MARKLEEVILLE, CALIF.

Location.—Lat 38°42′, long 119°51′, in SE¼NE¼ sec. 23, T. 10 N., R. 19 E., on 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 1954.

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.—8 years, 27.5 cfs (19,910 acre-ft per year).

Extremes.—Maximum discharge during year, 302 cfs May 8 (gage height, 5.21 ft); minimum daily, 0.5 cfs Sept. 16–30.

1946–54: Maximum discharge, 1,740 cfs Nov. 20, 1950 (gage height, 8.49 ft), from rating curve extended above 330 cfs on basis of slope-area determination of peak flow; minimum, 0.2 cfs Aug. 20, 23, Sept. 1–5, Oct. 13–16, 1949.

Remarks.—Records fair.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.0*	*1.8*	2.0	2.0	*3.3*	*12*	*16*	48	*40*	*12*	*1.0*	*0.6*
2	1.0	1.8	2.0	*1.9*	3.4	12	16	55	39	10	1.0	.6
3	1.0	1.8	*1.9*	*2.0	3.6	12	18	77	40	10	1.0	.6
4	1.0	1.8	*1.9	2.0	3.8	12	19	111	36	9.0	1.0	.6
5	1.0	1.8	2.0	2.1	3.8	12	22	135	32	9.0	*1.0	.6
6	1.0	1.9	2.1	2.2	3.9	13	21	149	28	8.0	1.0	.6
7	1.0	1.9	2.2	2.4	3.9	13	20	165	*28	8.0	1.0	*.6
8	1.1	1.9	*2.3	2.3	3.9	33	21	*203	29	7.0	1.0	.6
9	1.1	1.9	2.3	2.3	3.9	*111	21	164	28	7.0	1.0	.6
10	1.1	2.4	2.3	2.3	4.1	43	22	*135	25	6.0	1.0	.6
11	1.1	2.2	2.3	2.4	4.3	29	23	143	24	6.0	.9	.6
12	1.1	2.0	2.3	2.4	4.7	*24	*28	135	27	5.0	.9	.6
13	*1.1	2.0	2.3	2.4	4.8	22	35	137	26	5.0	.9	.6
14	1.1	*4.0*	2.4	2.6	5.9	20	44	145	26	4.0	.9	.6
15	1.1	*2.9	*3.7*	2.6	7.7	19	52	137	26	4.0	.9	.6
16	1.1	2.9	*2.7	2.4	7.7	22	67	141	28	3.0	.8	*.5*
17	1.1	2.8	2.6	2.7	8.2	25	87	147	26	3.0	.8	.5
18	*2.5*	2.6	2.4	2.7	8.2	21	110	153	24	2.0	.8	.5
19	2.2	2.6	2.4	2.6	8.2	20	116	*153	24	2.0	.8	.5
20	2.1	2.5	2.4	2.4	8.2	19	112	155	25	*1.7	.8	.5
21	2.0	2.4	2.4	2.6	9.0	18	120	111	25	1.7	.7	.5
22	1.9	2.3	2.4	2.8	9.2	17	133	*83	24	1.7	.7	*.5
23	*1.8	*2.2	2.3	*5.2*	9.7	16	145	76	*23	1.7	*.7	.5
24	1.8	2.2	2.4	4.1	11	16	*149*	74	22	1.7	.7	.5
25	1.8	2.2	2.2	3.4	11	15	140	61	20	2.5	.7	.5
26	1.8	2.2	2.3	*3.2	*12*	15	136	54	18	2.0	.7	.5
27	1.8	2.1	2.2	3.0	12	16	118	50	17	1.8	.7	.5
28	1.8	2.1	2.1	3.0	12	17	81	49	15	1.8	.7	.5
29	1.8	2.1	2.2	3.0	-------	16	69	*47*	14	1.6	.7	.5
30	*1.8	2.1	2.0	3.2	-------	16	59	42	*13*	1.4	.7	.5
31	1.8	-------	1.9	3.2	-------	16	-------	*41*	-------	*1.2*	.7	-------
Total	44.9	67.4	69.9	83.4	191.4	672	2,020	3,376	772	140.8	26.2	16.5
Mean	1.45	2.25	2.25	2.69	6.84	21.7	67.3	109	25.7	4.54	0.85	0.55
Ac-ft	89	134	139	165	380	1,330	4,010	6,700	1,530	279	52	33

Calendar year 1953	Max 182	Min 0.9	Mean 25.5	Ac-ft 18,450
Water year 1953–54	Max 203	Min 0.5	Mean 20.5	Ac-ft 14,840

Peak discharge (base, 175 cfs)—Apr. 24 (7:30 p.m.) 189 cfs (4.55 ft); May 8 (6:30 p.m.) 302 cfs (5.21 ft); May 20 (7 p.m.) 198 cfs (4.62 ft).

*Discharge measurement made on this day.

NOTE.—Backwater from beaver dams Oct. 1 to Dec. 7, July 4 to Sept. 30; discharge estimated on basis of 15 discharge measurements, weather records, and records for nearby streams.

EAST FORK CARSON RIVER NEAR GARDNERVILLE, NEV.

Location.—Lat 38°51'30", long 119°41'50", in NE¼ sec. 2, T. 11 N., R. 20 E., on left bank 2 miles east of Mud Lake Reservoir, 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 1954.

Gage.—Water-stage recorder. Prior to May 19, 1939, staff gages at several sites within 2 miles of present site at various datums.

Average discharge.—27 years, 405 cfs (293,200 acre-ft per year).

Extremes.—Maximum discharge during year, 2,730 cfs Mar. 9 (gage height, 4.65 ft); minimum, 41 cfs Sept. 12.

1890–93, 1900–1906, 1908–10, 1917, 1924–29, 1935–37, 1939–54: Maximum discharge, 12,100 cfs Nov. 21, 1950 (gage height, 9.66 ft), from rating curve extended above 6,000 cfs on basis of slope-area determination of peak flow; minimum observed, 8 cfs Dec. 4–10, 19–23, 1904.

Remarks.—Records good. Diversions for irrigation above station.

Revisions (water years).—WSP 1060: Drainage area. WSP 1214: 1938(M), 1942–43(M), 1945(M).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	86	83	b 70	b 86	175	*232*	619	619	*260*	88	*77*
2	77	86	72	72	b 86	162	241	606	606	241	98	75
3	83	90	79	81	b 85	162	260	762	*645*	226	100	63
4	77	86	*94*	79	b 85	*159*	301	936	632	214	96	60
5	74	84	*58*	79	b *84*	164	378	1,100	532	200	94	62
6	72	83	90	81	b 84	175	344	1,210	458	186	115	63
7	70	79	92	84	b 85	175	318	1,280	425	*175	*126*	67
8	68	81	79	63	b 86	360	333	1,460	434	177	121	68
9	67	81	92	b *62*	b 86	*2,140*	329	1,440	425	177	*115	*65
10	*65*	81	90	b 73	b 96	1,030	340	1,120	378	164	106	60
11	67	92	81	b 88	108	*600	348	1,170	382	177	96	47
12	*70	86	b 81	81	119	429	403	1,170	391	177	88	*41*
13	74	*84	86	74	144	359	488	1,130	407	172	84	44
14	72	*98*	92	b 73	110	329	658	1,180	374	188	84	44
15	74	98	94	b 72	96	315	730	1,230	399	186	86	44
16	74	92	94	75	119	294	866	1,180	407	177	104	44
17	74	94	*94	81	140	277	1,050	1,300	439	170	102	44
18	79	83	92	*72	121	248	1,130	*1,390	412	164	100	44
19	94	*77*	90	b 71	*108	244	1,150	1,490	416	157	96	44
20	90	b 82	94	b 70	119	241	1,090	*1,500*	439	152	92	46
21	92	83	81	68	130	232	*1,110	1,340	478	137	90	46
22	86	96	68	81	135	217	1,170	1,030	478	152	84	46
23	90	94	63	130	140	223	*1,270*	915	453	147	74	46
24	*96*	92	b 68	*142*	154	208	1,260	901	*434	152	68	47
25	94	94	b 72	92	164	197	1,190	838	403	183	68	48
26	96	94	b 78	75	*180*	202	1,120	756	363	177	79	47
27	96	92	b 84	92	175	241	1,140	704	333	157	88	47
28	96	88	b 76	96	167	273	901	697	315	126	77	46
29	96	90	b 75	94	-------	264	803	704	301	108	70	44
30	92	88	b 71	94	-------	248	736	664	*267*	98	67	46
31	88	-------	b 70	88	-------	232	-------	*600*	-------	*92*	*63*	-------
Total	2,526	2,634	2,533	2,560	3,292	10,575	21,689	32,422	13,045	5,269	2,819	1,565
Mean	81.5	87.8	81.7	82.6	118	341	723	1,046	435	170	90.9	52.2
Ac-ft	5,010	5,220	5,020	5,080	6,530	20,980	43,020	64,310	25,870	10,450	5,590	3,100

Calendar year 1953	Max 1,870	Min 58	Mean 348	Ac-ft 251,900
Water year 1953–54	Max 2,140	Min 41	Mean 277	Ac-ft 200,200

Peak discharge (base, 1,300 cfs)—Mar. 9 (7 a.m.) 2,730 cfs (4.65 ft); Apr. 23 (2 a.m.) 1,430 cfs (3.46 ft); May 9 (12:30 a.m.) 1,930 cfs (3.96 ft); May 20 (1 a.m.) 1,740 cfs (3.79 ft).

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

WEST FORK CARSON RIVER AT WOODFORDS, CALIF.

Location.—Lat 38°46'00", long 119°50'00", in SE¼SW¼ sec. 34, T. 11 N., R. 19 E., on left bank 0.3 mile downstream from bridge on State Highway 8, 0.8 mile west of Woodfords, and 3¾ miles downstream from Willow Creek.

Drainage area.—66 sq mi, approximately.

Records available.—October 1900 to May 1907, 1910–11 (fragmentary), October 1938 to September 1954. April 1890 to March 1892, June 1907 to September 1920 (except portions of 1910–11) at site 0.7 mile downstream; records not equivalent.

Gage.—Water-stage recorder. Altitude of gage is 5,760 ft (from river-profile map). Prior to Oct. 1, 1938, staff gage at about same site at different datum.

Average discharge.—18 years (1901–3, 1905–6, 1939–54), 114 cfs.

Extremes.—Maximum discharge during year, 701 cfs Apr. 22 (gage height, 3.88 ft); minimum, 12 cfs Sept. 10.

1900–1907, 1910–11, 1938–54: Maximum discharge, 4,730 cfs Nov. 20, 1950 (gage height, 8.35 ft, from high-water marks), from rating curve extended above 1,000 cfs; minimum (1900–1907, 1938–54), 8.4 cfs Nov. 21, 1948.

Remarks.—Records good. One small diversion above station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	29	28	22	25	31	*52*	215	114	48	18	*21*
2	26	30	25	22	25	*30*	52	232	110	46	24	20
3	27	31	27	22	25	31	56	273	*116*	43	36	18
4	27	29	*22*	25	24	31	66	312	116	41	37	15
5	26	29	26	24	25	32	76	350	102	48	35	14
6	26	*28*	*31*	24	25	33	76	365	88	53	33	14
7	*25*	28	27	23	25	33	76	386	78	50	31	**13*
8	25	28	29	21	25	58	84	*443*	82	51	28	13
9	25	28	31	21	25	*174*	88	398	89	*76*	19	13
10	25	29	30	21	25	174	98	*301	79	74	22	13
11	25	33	28	24	26	*108	107	306	*72	60	22	14
12	25	32	29	24	25	112	*135	294	71	34	23	15
13	*25	*32	29	24	*22*	103	174	273	82	31	*17	15
14	25	*55*	29	23	24	96	222	273	75	33	16	15
15	25	32	30	*20*	27	90	254	282	78	*37	15	15
16	25	32	30	21	26	78	318	278	77	36	*14*	15
17	25	31	29	22	25	70	395	301	78	35	14	15
18	28	28	*29	*22	23	63	455	314	74	34	14	15
19	31	28	31	23	*26	61	446	325	74	38	32	15
20	32	29	31	23	25	57	440	306	75	49	*40*	15
21	32	29	25	23	26	55	452	258	80	52	35	15
22	29	32	22	23	26	54	491	202	79	49	31	15
23	31	31	22	*27*	28	53	*505*	175	79	46	19	15
24	31	35	22	24	29	51	498	177	78	42	15	15
25	31	33	22	24	29	49	461	168	74	33	14	15
26	32	31	24	25	*31*	49	428	147	63	25	14	15
27	*33*	31	28	24	31	51	410	138	61	24	14	15
28	32	30	24	24	31	53	299	136	59	21	14	15
29	32	30	24	25	-------	55	273	132	53	20	14	15
30	31	30	22	24	-------	52	250	123	*49*	19	18	15
31	30	-------	22	25	-------	50	-------	*114*	-------	*18*	22	-------
Total	868	913	828	719	729	2,037	7,737	7,997	2,405	1,266	700	453
Mean	28.0	30.4	26.7	23.2	26.0	65.7	258	258	80.2	40.8	22.6	15.1
Ac-ft	1,720	1,810	1,640	1,430	1,450	4,040	15,350	15,860	4,770	2,510	1,390	899

Calendar year 1953	Max 649	Min 22	Mean 107	Ac-ft 77,560
Water year 1953–54	Max 505	Min 13	Mean 73.0	Ac-ft 52,870

Peak discharge (base, 500 cfs)..... Apr. 22 (9 p.m.) 701 cfs (3.88 ft); May 8 (10 p.m.) 600 cfs (3.65 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 1954.

Gage.—Water-stage recorder and sharp-crested weir. Altitude of gage is 4,700 ft (from river-profile map).

Average discharge.—6 years, 6.62 cfs (4,790 acre-ft per year).

Extremes.—Maximum discharge during year, 26 cfs Mar. 9 (gage height, 1.00 ft); minimum, 1.7 cfs Aug. 18, 19, 23, 24, 30.

1948–54: Maximum discharge, 56 cfs Dec. 3, 1950 (gage height, 1.95 ft); minimum, 1.0 cfs Aug. 4, 5, 6, 20, 1949.

Remarks.—Records good. Four small diversions for irrigation of about 150 acres of hay meadows and pasture above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.1	*4.0*	*4.8*	*5.3*	6.6	7.2	7.2	*5.8*	2.9	*2.6*	*2.2*	2.2
2	3.1	4.0	4.8	5.3	6.6	6.9	7.2	5.3	2.9	2.6	2.0	*2.0*
3	**2.9*	4.0	5.8	5.3	6.4	*6.6*	7.4	5.3	2.9	2.4	2.0	2.0
4	3.1	4.0	6.6	5.3	6.4	6.6	7.4	5.3	2.9	2.4	2.2	2.2
5	3.1	4.0	5.5	5.3	6.4	6.6	8.0	5.5	3.1	2.4	2.2	2.2
6	3.1	**4.0*	6.1	5.3	*6.1*	6.6	8.0	5.3	3.3	2.4	2.2	2.2
7	3.1	4.0	6.6	*5.5*	6.1	6.6	8.0	5.3	3.1	2.4	2.2	2.2
8	3.3	4.0	6.1	**5.5*	6.1	9.0	8.0	5.3	3.3	2.4	2.2	2.2
9	3.1	4.2	*6.9*	5.5	6.1	*19*	**8.0*	5.3	3.5	2.3	2.0	2.2
10	3.5	4.2	**6.1*	5.3	6.1	**13*	7.4	5.3	3.5	2.3	**2.0*	2.2
11	3.5	4.2	5.8	5.5	6.1	10	7.4	**5.0*	3.3	2.3	2.0	2.2
12	3.7	4.2	5.8	5.3	**7.2*	9.7	8.4	5.0	3.5	2.3	2.0	*2.3*
13	3.7	4.4	5.8	5.5	8.4	8.7	8.7	4.8	*3.7*	2.3	2.0	2.3
14	4.0	4.4	6.1	5.5	7.4	8.4	9.4	4.6	3.3	2.3	2.0	2.3
15	4.0	4.4	6.1	5.3	6.9	8.4	9.4	4.4	3.1	2.4	2.0	**2.3*
16	4.0	4.4	5.8	5.5	6.9	8.0	9.0	3.7	3.1	2.2	2.0	2.3
17	4.0	4.6	5.8	5.8	7.2	7.7	*9.7*	3.7	3.1	2.2	2.0	2.3
18	*4.8*	4.6	5.8	5.8	6.9	7.7	9.7	3.5	3.1	2.2	*1.8*	2.3
19	4.4	5.0	6.1	5.8	7.2	7.7	9.4	3.3	2.9	2.2	1.8	2.3
20	4.4	5.0	5.8	5.5	7.4	7.7	8.7	3.3	2.9	*2.0*	2.0	2.3
21	4.4	*5.3*	5.8	5.5	8.0	8.0	8.0	3.3	2.8	2.0	2.0	2.3
22	4.4	5.3	5.5	6.4	8.4	7.7	8.0	3.3	*2.6*	2.2	2.0	*2.3*
23	4.6	5.0	5.3	*15*	8.4	7.7	8.0	3.3	2.6	2.0	2.0	2.3
24	4.4	*5.3*	*5.5*	8.0	*8.7*	7.7	*8.0*	3.1	2.6	2.2	2.0	2.3
25	4.4	5.0	5.3	6.9	8.7	8.0	7.7	3.1	2.6	2.2	2.0	2.3
26	4.4	5.0	5.5	6.6	8.4	7.7	7.2	3.1	2.6	2.3	2.0	2.2
27	4.4	5.0	5.3	6.6	7.7	7.7	6.9	3.1	2.6	2.2	2.0	2.2
28	4.0	5.0	5.3	6.9	7.4	7.7	6.4	3.1	2.6	2.2	2.0	2.2
29	4.0	5.0	5.3	7.4	-------	8.0	*6.1*	*2.9*	**2.6*	2.2	2.0	2.2
30	4.0	4.8	5.3	7.2	-------	7.7	6.4	2.9	2.6	2.2	2.0	2.2
31	4.0	-------	5.3	6.9	-------	7.2	-------	2.9	-------	2.2	2.0	-------
Total	118.9	136.3	177.6	192.5	200.2	257.2	239.1	129.1	89.6	70.5	62.8	67.0
Mean	3.84	4.54	5.73	6.21	7.15	8.30	7.97	4.16	2.99	2.27	2.03	2.23
Ac-ft	236	270	352	382	397	510	474	256	178	140	125	133

Calendar year 1953	Max 25	Min 2.9	Mean 6.77	Ac-ft 4,900
Water year 1953–54	Max 19	Min 1.8	Mean 4.77	Ac-ft 3,450

Peak discharge (base, 15 cfs)—— Jan. 23 (7:30 p.m.) 20 cfs (0.82 ft); Mar. 9 (2:30 a.m.) 26 cfs (1.00 ft).

*Discharge measurement made on this day.

CARSON RIVER NEAR CARSON CITY, NEV.

Location.—Lat 39°06'30", long 119°42'30", in NW¼ sec. 2, T. 14 N., R. 20 E., on right bank 2 miles downstream from Clear Creek, 2¼ 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 1954.

Gage.—Water-stage recorder. Datum of gage is 4,621.48 ft above mean sea level, datum of 1929.

Average discharge.—15 years, 413 cfs (299,000 acre-ft per year).

Extremes.—Maximum discharge during year, 1,970 cfs Mar. 10 (gage height, 4.21 ft); minimum, 12 cfs Sept. 6.

1939–54: Maximum discharge, 15,500 cfs Nov. 22, 1950 (gage height, 11.40 ft), from rating curve extended above 6,000 cfs on basis of computation of peak flow over dam; minimum daily, 4 cfs Aug. 17, 1939.

Remarks.—Records good. Many diversions above station for irrigation. Flow slightly regulated by several small reservoirs on tributaries.

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	*53*	*125*	157	136	181	261	356	656	*420*	*71*	*34*	15
2	64	125	153	151	176	261	356	598	365	70	31	15
3	59	126	151	155	169	*253	356	656	338	55	28	*16
4	61	125	176	167	162	250	365	704	333	54	25	16
5	72	126	*184*	157	*157*	*246*	395	881	299	41	27	17
6	77	126	155	146	157	253	450	1,080	291	43	*27	14
7	70	128	171	149	159	261	425	1,100	299	42	24	*18*
8	66	130	174	142	157	261	*375	1,230	303	37	22	16
9	62	134	159	132	157	979	365	*1,480*	338	33	20	15
10	62	138	*169*	*126*	*159*	**1,890*	*351*	1,380	299	26	17	*15*
11	60	138	162	144	159	1,120	360	*1,160	287	34	20	14
12	54	151	153	159	159	770	380	1,120	295	37	19	15
13	56	155	155	153	220	662	425	1,050	315	34	17	15
14	53	151	159	140	346	598	505	*993*	299	37	15	15
15	*56	155	167	149	279	560	668	1,030	243	33	16	15
16	53	*164	174	157	230	516	752	1,030	176	30	18	15
17	72	162	171	157	264	475	916	1,070	189	30	16	18
18	80	164	171	162	*375*	425	1,120	1,180	192	27	15	20
19	90	155	169	151	342	395	1,260	1,290	169	28	*14*	20
20	97	159	167	153	275	390	1,200	1,390	153	24	15	20
21	100	174	164	151	261	390	1,090	1,330	164	24	14	20
22	110	171	153	153	246	375	1,100	1,160	186	22	19	17
23	115	*176*	136	192	239	385	1,160	972	181	22	16	16
24	115	171	*125*	*333*	239	405	1,210	881	184	*18*	18	16
25	115	169	132	283	253	395	*1,290*	*806	171	24	17	20
26	117	169	132	203	268	380	1,270	604	146	39	18	19
27	*154*	164	142	174	275	375	1,160	548	123	38	15	19
28	130	157	149	*230	268	400	1,050	521	*107	38	15	19
29	128	157	144	261	------	400	842	450	97	40	14	19
30	130	159	142	224	------	390	722	*446*	*86*	41	14	*21*
31	128	------	*134	197	------	370	------	455	------	36	14	------
Total	2,639	4,504	4,850	5,387	6,332	15,031	22,274	29,250	7,048	1,128	594	505
Mean	85.1	150	156	174	226	485	742	944	235	36.4	19.2	16.8
Ac-ft	5,230	8,930	9,620	10,680	12,560	29,810	44,180	58,020	13,980	2,240	1,180	1,000

Calendar year 1953	Max 1,900	Min 29	Mean 383	Ac-ft 277,500
Water year 1953–54	Max 1,830	Min 13	Mean 273	Ac-ft 197,400

Peak discharge (base, 1,600 cfs)—— Mar. 10 (5 a.m.) 1,970 cfs (4.21 ft); May 9 (7 p.m.) 1,640 cfs (3.83 ft).

*Discharge measurement made on this day.

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 1954.

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 7¾ miles upstream at different datum. Apr. 25, 1924, to Dec. 31, 1933, water-stage recorder at site 8 miles upstream at different datum.

Average discharge.—43 years, 369 cfs (267,100 acre-ft per year).

Extremes.—Maximum daily discharge during year, 1,500 cfs Mar. 10; no flow Oct. 1–4, July 1 to Sept. 30.

1911–54: Maximum daily discharge, 7,850 cfs Nov. 23, 1950; no flow during some periods in nearly every year since 1923.

Remarks.—Several diversions above station for irrigation, including diversions for irrigation of 720 acres between present site and site used prior to Jan. 1, 1934. Practically entire flow is diverted during late irrigation season.

Cooperation.—Records of daily discharge furnished by Truckee-Carson Irrigation District.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0*	*130*	*130*	144	206	297	350	668	*896*	0	0	0
2	0	*92*	130	175	195	289	343	601	385	0	0	0
3	0	92	130	175	191	273	343	482	358	0	0	0
4	0	93	143	144	183	*257*	343	512	354	0	0	0
5	6	93	143	148	179	257	346	549	339	0	0	0
6	11	92	143	152	168	261	370	675	320	0	0	0
7	16	93	152	152	164	257	393	888	296	0	0	0
8	19	93	*152*	140	164	281	378	1,000	300	0	0	0
9	26	93	143	136	*160*	623	350	1,090	331	0	0	0
10	29	94	148	132	164	*1,500*	339	1,220	366	0	0	0
11	29	95	156	*117*	168	1,270	*327*	*1,360*	354	0	0	0
12	29	96	161	117	168	808	335	1,220	335	0	0	0
13	31	97	165	132	179	638	343	1,130	323	0	0	0
14	30	100	174	140	253	564	374	1,060	320	0	0	0
15	27	102	174	144	320	*505*	428	1,030	*312*	*0*	*0*	*0*
16	24	102	174	144	288	475	571	1,050	242	0	0	0
17	25	103	174	148	253	435	660	1,090	238	0	0	0
18	26	103	152	148	292	416	848	1,050	222	0	0	0
19	33	103	170	152	*358*	378	1,050	1,070	199	0	0	0
20	42	103	165	152	331	370	1,120	1,180	140	0	0	0
21	*52*	103	165	148	*300*	362	1,030	*1,270*	125	0	*0*	*0*
22	58	103	170	148	288	362	936	1,190	93	0	0	0
23	65	104	*178*	148	273	362	976	1,030	101	0	0	0
24	74	106	165	168	269	396	1,040	904	90	0	0	0
25	78	107	156	230	273	396	1,110	808	86	0	0	0
26	78	108	148	*265*	284	385	*1,180*	720	30	0	0	0
27	81	113	152	249	300	385	1,100	557	25	0	0	0
28	85	121	165	226	304	381	1,030	520	20	0	0	*0*
29	88	126	161	210	-------	389	928	468	15	0	0	0
30	*90*	130	152	230	-------	396	768	416	*10*	0	0	0
31	90	-------	148	238	-------	396	-------	*408*	-------	0	0	-------
Total	1,242	3,090	4,839	5,152	6,675	14,364	19,709	27,216	6,725	0	0	0
Mean	40.1	103	156	166	238	463	657	878	224	0	0	0
Ac-ft	2,460	6,130	9,600	10,220	13,240	28,490	39,090	53,980	13,340	0	0	0

Calendar year 1953	Max 1,440	Min 0	Mean 323	Ac-ft 233,600
Water year 1953–54	Max 1,500	Min 0	Mean 244	Ac-ft 176,600

HUMBOLT RIVER BASIN

MARYS RIVER ABOVE HOT SPRINGS, NEAR DEETH, NEV.

Location.—Lat 41°15′, long 115°17′, in NE¼SE¼ sec. 24, T. 39 N., R. 59 E., 1 mile upstream from Hot Springs Creek and 13 miles north of Deeth.

Drainage area.—415 sq mi.

Records available.—October 1943 to September 1954. Published as "below Hot Springs Creek, near Deeth" prior to October 1950.

Gage.—Water-stage recorder. Altitude of gage is 5,500 ft (from river-profile map). Prior to Nov. 3, 1950, at site 1¼ miles downstream at different datum.

Average discharge.—11 years, 63.1 cfs (45,680 acre-ft per year).

Extremes.—Maximum discharge during year, 128 cfs Apr. 29 (gage height, 2.04 ft); minimum, 0.2 cfs Aug. 26, 30.

1943–54: Maximum discharge, 1,250 cfs Apr. 29, 1952 (gage height, 6.57 ft); minimum, 0.1 cfs Sept. 5, 1950.

Remarks.—Records good except those for periods of ice effect or backwater from beaver dam, which are fair. Several diversions above station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0.9*	*3.3*	13	*11*	b *18*	32	*40	*98*	20	10	• *3.7*	*0.4*
2	.9	3.3	*12	11	b 19	*30	*39*	85	20	10	• 3.5	.4
3	.9	*4.0	12	12	b 20	*28*	40	77	20	19	• 3.2	.4
4	1.0	4.4	13	11	21	29	41	67	19	*21*	• 2.9	.5
5	1.2	5.2	b 12	11	21	30	42	59	18	18	• 2.5	.5
6	1.2	6.6	13	12	21	31	46	43	19	15	• 2.2	.5
7	1.2	5.7	14	13	22	31	51	42	19	14	• 1.8	.6
8	*1.4	6.3	b 12	b 12	24	36	51	44	19	12	• 1.4	.6
9	1.4	6.6	14	b 11	b 24	42	50	49	21	11	• 1.0	.6
10	1.4	6.6	b 14	b 12	27	76	50	*58*	36	12	• .8	.5
11	1.5	7.5	b 13	12	33	*91*	48	*74	*89*	10	• .6	.5
12	1.6	6.9	b 12	12	36	58	48	85	34	8.5	*.6	.6
13	1.7	7.2	b 12	b 11	36	b 57	50	85	27	*7.2	.5	.6
14	1.7	7.8	b 12	12	*58*	b 57	58	87	28	6.3	.5	.5
15	1.8	8.1	b 12	12	35	56	59	81	*30	6.3	.5	.4
16	2.0	7.8	12	12	35	57	65	75	28	6.1	.4	.6
17	2.1	8.1	13	13	38	54	65	73	24	5.5	.4	.6
18	2.1	8.4	13	b 12	35	48	67	68	21	5.5	.4	.6
19	2.3	8.1	14	*b 12	30	44	76	67	19	6.6	.4	.6
20	2.3	7.8	*16*	b 11	31	47	74	76	18	6.3	.4	.7
21	2.3	7.8	b 14	b 12	29	46	73	75	17	5.8	.5	.7
22	2.5	8.4	b 13	13	31	42	67	76	16	5.5	.5	.7
23	2.7	8.7	b 12	14	32	43	*62	70	14	5.0	.5	.7
24	*3.3*	9.4	b 11	14	31	45	62	*63	13	5.0	.4	.8
25	3.3	11	b 11	b 13	32	45	74	48	12	4.8	.5	.8
26	2.9	12	b *10*	b 14	34	45	89	37	13	5.8	.5	.8
27	3.1	*14*	b 11	14	36	47	93	29	15	5.5	.5	*.8
28	3.1	14	b 11	14	34	48	114	28	15	5.3	.5	.8
29	3.1	13	b 11	16	-------	48	*122*	27	13	5.0	.4	.9
30	3.3	13	b 11	16	-------	45	110	23	*11*	5.0	.5	*1.2*
31	3.3	-------	b 11	b *17*	-------	44	-------	*21*	-------	• *4.2*	.4	-------
Total	63.5	241.0	384	392	823	1,432	1,926	1,890	618	267.2	32.9	18.9
Mean	2.05	8.03	12.4	12.6	29.4	46.2	64.2	61.0	20.6	8.62	1.06	0.63
Ac-ft	126	478	762	778	1,630	2,840	3,820	3,750	1,230	530	65	37

Calendar year 1953	Max 392	Min ---	Mean 59.2	Ac-ft 42,580
Water year 1953–54	Max 122	Min 0.4	Mean 22.2	Ac-ft 16,050

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

*Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
• Stage-discharge relation affected by backwater from beaver dam.

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 1954.

Gage.—Water-stage recorder. Altitude of gage is 6,240 ft (from topographic map). May 1915 to June 1923, staff gages at various sites nearby at different datums.

Average discharge.—17 years (1915–16, 1917–22, 1943–54), 43.5 cfs.

Extremes.—Maximum discharge during year, 235 cfs May 19; minimum, 1.7 cfs Nov. 19. 1915–23, 1943–54: Maximum discharge recorded, 588 cfs July 6, 1950, but may have been exceeded by that of June 1917 when gage washed out; minimum, 1 cfs Jan. 24, 1918.

Remarks.—Records good except those for periods of ice effect, which are fair. Records include flow of McDermott ditch, which diverts about 200 ft upstream from gage. Elko-Lamoille powerplant diverts about 6 miles upstream but flow is returned to channel at powerplant 300 ft upstream from station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	4.8	3.9	3.8	*4.2*	*5.5*	*7.0*	48	77	*58*	*11*	*4.0*
2	4.4	4.8	3.9	3.6	4.2	[b]5.2	7.7	*46*	79	55	11	4.0
3	4.4	*5.0*	3.9	3.6	4.2	[b]*5.0*	7.7	50	87	52	9.9	3.8
4	4.4	4.8	3.9	3.8	4.2	5.2	8.1	62	98	49	9.7	3.8
5	4.3	4.8	4.1	3.8	4.2	*5.2*	*8.1	79	93	48	9.4	3.8
6	4.1	4.8	4.1	3.8	4.2	5.2	8.4	98	76	45	9.4	3.8
7	4.0	4.5	4.1	3.8	4.2	5.2	8.1	116	67	41	9.0	3.6
8	4.1	4.3	4.1	*3.8*	4.4	*5.7	8.1	136	62	38	8.7	3.8
9	4.1	4.3	*4.1	[b]3.6	4.7	*3.0*	8.4	153	59	35	8.4	3.6
10	4.1	4.3	3.9	[b]*3.5*	4.9	7.3	8.3	149	55	32	7.9	3.4
11	*3.9*	4.3	3.7	3.6	4.7	6.9	8.3	153	54	31	7.9	3.4
12	3.9	4.3	4.1	3.6	5.2	6.9	8.7	156	*52*	29	7.6	3.4
13	4.1	4.3	4.1	3.8	5.2	[b]6.9	9.3	*160	*51*	29	7.2	3.4
14	4.1	4.3	4.1	3.8	5.2	[b]6.6	11	166	52	29	7.2	3.4
15	4.1	4.5	4.3	3.8	5.2	6.9	11	*169	51	27	6.6	*3.2*
16	4.1	4.3	4.5	4.0	5.2	6.6	13	179	*69	*25	6.5	3.4
17	4.1	4.5	4.5	4.0	5.2	6.6	15	189	71	24	6.2	3.4
18	4.1	3.9	4.5	4.0	4.9	6.9	18	194	76	22	5.9	3.4
19	4.8	*3.5*	4.5	4.0	[b]4.7	6.9	23	203	84	20	5.7	3.4
20	4.3	4.1	*4.8*	*3.8	4.9	7.3	31	*209	96	19	5.4	3.2
21	4.3	3.7	4.3	[b]3.8	5.2	6.9	36	190	105	17	5.7	3.2
22	4.4	3.9	[b]3.5	3.8	5.2	6.9	*42*	147	112	16	5.7	3.2
23	4.4	4.1	[b]*3.3*	*4.2*	5.2	7.3	51	131	115	15	*5.4	3.4
24	*5.0*	4.3	[b]3.6	4.2	5.2	6.9	59	134	108	14	5.0	3.4
25	4.4	4.1	4.1	[b]4.1	5.2	6.9	*62*	*128	99	14	4.9	3.4
26	*4.5	4.1	4.1	[b]4.0	*5.5*	6.9	59	112	*137*	14	4.9	3.2
27	4.3	3.9	3.9	4.2	4.9	6.9	*60	104	103	14	4.7	3.2
28	4.5	3.9	4.1	4.2	5.2	6.9	61	97	79	13	4.4	3.2
29	4.5	3.9	3.9	4.2	-------	6.9	56	96	69	12	*4.2*	3.2
30	4.5	4.1	[b]3.6	4.2	-------	6.9	52	87	63	*11*	4.2	3.4
31	4.5	-------	3.7	4.2	-------	6.6	-------	79	-------	11	*4.0*	-------
Total	133.1	128.4	125.2	120.6	135.4	202.0	766.2	4,020	2,399	859	213.7	104.0
Mean	4.29	4.28	4.04	3.89	4.84	6.52	25.5	130	80.0	27.7	6.89	3.47
Ac-ft	264	255	248	239	269	401	1,520	7,970	4,760	1,700	424	206

Calendar year 1953	Max 268	Min 2.8	Mean 36.3	Ac-ft 26,310
Water year 1953–54	Max 209	Min 3.2	Mean 25.2	Ac-ft 18,260

Peak discharge (base, 310 cfs)—— No peak above base.

*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 SE¼ sec. 13, T. 38 N., R. 57 E., on right bank 16 miles north of Halleck and 26 miles upstream from mouth.

Drainage area.—830 sq mi, approximately.

Records available.—November 1913 to September 1921, October 1943 to September 1954.

Gage.—Water-stage recorder. Datum of gage is 5,368 ft above mean sea level (U.S.G.S. plane-table benchmark). November 1913 to September 1921 at site a quarter of a mile upstream at different datum.

Average discharge.—16 years (1914–19, 1943–54), 72.4 cfs (52,420 acre-ft per year).

Extremes.—Maximum discharge during year, 106 cfs Mar. 10 (gage height, 3.26 ft); minimum, 1.9 cfs Aug. 17.

1913–21, 1943–54: 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 or no gage-height record, which are fair. Many diversions above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*9.5*	16	20		[b]*21*	[b]45	*47	37	17	*5.6*	3.5	*3.3*
2	9.5	16	(*)		[b]22	*43	46	34	17	5.3	3.3	4.0
3	9.5	*17	[b]19	[b]18	[b]23	*40*	47	32	16	[a]5.2	3.1	3.8
4	9.5	18			[b]23	40	49	30	16	[a]5.0	2.9	3.5
5	9.8	17			[b]24	40	49	29	15	[a]5.0	2.9	3.8
6	10	17	[b]20	[b]19	[b]25	40	51	28	15	[a]5.0	3.1	3.5
7	11	16	[b]21	[b]19	[b]26	43	*52*	27	14	[a]4.8	3.1	3.8
8	*11	15	[b]19	[b]18	[b]29	47	52	26	14	[a]4.5	*3.8*	3.8
9	11	16	[b]21	[b]17	[b]32	59	49	24	14	[a]4.2	3.3	3.8
10	11	16	[b]21	[b]18	36	*98*	47	24	14	[a]3.9	3.1	3.5
11	11	16	[b]20	[b]18	40	76	44	*33	*20*	[a]3.7	3.1	3.8
12	11	16		[b]18	53	53	43	38	17	[a]3.5	*2.8	3.8
13	11	16	[b]19	[b]16	*56*	54	43	*39*	20	*3.2	2.6	4.4
14	11	16			50	53	46	38	19	2.9	2.8	5.1
15	11	16			[b]46	52	47	38	*17	2.9	2.8	5.3
16	11	16	[b]20	[b]17	[b]44	55	46	39	16	*2.6*	2.6	5.3
17	12	16	[b]20		[b]45	53	44	38	14	2.6	*2.5*	5.6
18	13	[b]15	[b]22		[b]48	49	42	36	12	2.8	2.3	5.6
19	14	[b]*14*	[b]24	(*)	[b]42	44	42	36	11	3.1	2.6	5.9
20	14	[b]14	[b]*26*	[b]*15*	[b]42	50	42	38	11	2.9	2.6	5.9
21	14	[b]15	[b]25	[b]16	[b]41	49	42	37	9.1	2.9	2.8	5.9
22	15	[b]17	[b]23	[b]17	43	46	38	36	9.5	3.1	2.4	5.9
23	15	[b]18	[b]20	[b]18	46	48	*34	38	8.4	3.5	2.4	6.2
24	*16*	20		[b]18	48	52	34	39	[a]8.2	3.1	2.9	6.5
25	16	21		[b]17	51	52	33	36	[a]8.0	3.3	2.9	*7.5*
26	16	*23*		[b]18	53	53	32	30	9.1	5.1	3.1	6.8
27	16	22	[b]18	[b]18	52	55	*30*	20	9.1	5.1	2.9	*6.5
28	16	22		[b]18	50	56	35	20	6.8	4.4	2.8	5.9
29	16	20		[b]19	-------	57	40	20	6.5	4.4	2.9	6.2
30	16	20		[b]19	-------	55	41	19	*5.9*	4.4	3.1	6.8
31	16	-------		[b]*20*	-------	50	-------	*18*	-------	3.8	3.3	-------
Total	392.8	517	618	548	1,111	1,601	1,287	977	389.6	121.8	90.1	151.7
Mean	12.7	17.2	19.9	17.7	39.7	51.6	42.9	31.5	13.0	3.93	2.91	5.06
Ac-ft	779	1,030	1,230	1,090	2,200	3,180	2,550	1,940	773	242	179	301

Calendar year 1953	Max 775	Min 4.7	Mean 66.3	Ac-ft 48,040
Water year 1953–54	Max 92	Min 2.3	Mean 21.4	Ac-ft 15,490

Peak discharge (base, 170 cfs)—— No peak above base.

*Discharge measurement made on this day.
[a] No gage-height record, discharge estimated on basis of records for nearby streams.
[b] Stage-discharge relation affected by ice.

HUMBOLDT RIVER NEAR ELKO, NEV.

Location.—Lat 40°56′, long 115°38′, in SE¼NW¼ 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 1954.

Gage.—Water-stage recorder. Datum of gage is 5,142.32 ft above mean sea level, datum of 1929. Prior to Nov. 8, 1944, staff gage at site 11 miles downstream at different datum.

Average discharge.—15 years (1897–1902, 1944–54), 237 cfs (171,600 acre-ft per year).

Extremes.—Maximum discharge during year, 337 cfs Mar. 12 (gage height, 3.07 ft); minimum, 0.3 cfs Aug. 15.

1895–1902, 1944–54: 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 or no gage-height record, which are fair. Diversions above station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*6.4*	17	*41*	[b]*22*	[b]*48*	162	*183*	[a]74	*30*	5.3	*0.4*	*0.6*
2	6.8	17	37	[b]25	[b]52	151	*180	73	25	*6.0*	.4	.6
3	6.4	*18	(*)	[b]27	[b]56	*142	172	[a]70	23	6.0	.4	.7
4	6.8	18		[b]27	[b]60	137	168	[a]66	20	5.6	.4	.6
5	7.6	19		27	[b]62	*132*	164	*63	18	5.0	.4	.6
6	7.2	21		[b]27	[b]62	132	162	64	17	4.0	.4	.6
7	7.6	19		[b]27	[b]65	132	157	58	15	3.4	.4	.7
8	7.6	19	[b]26	[b]26	[b]70	137	155	47	13	3.1	.4	.8
9	*8.5	18		[b]25	[b]78	153	151	44	12	2.6	.4	.8
10	8.1	18		[b]24	[b]85	187	135	42	14	2.4	.5	.8
11	9.0	18		[b]23	94	*237*	137	*40*	11	2.6	.4	.8
12	9.0	18		[b]23	112	211	133	41	11	3.1	.5	.7
13	9.0	18		[b]24	132	176	128	41	9.5	3.7	.6	.8
14	9.5	19		[b]25	144	182	125	45	9.5	*3.1	.6	.7
15	10	19	[b]27	26	151	182	126	43	11	2.6	.4	1.0
16	9.5	19	[b]30	[b]28	161	180	137	44	11	1.8	*.4	.8
17	10	18	[b]32	[b]30	172	187	133	48	10	1.6	.5	.8
18	11	18	[b]34	[b]35	170	174	120	60	10	1.3	.5	.8
19	13	*15*	[b]35	[b]38	142	166	113	78	9.0	1.3	.5	.8
20	12	15	[b]36	*[b]38	155	170	112	88	8.5	1.1	.5	.8
21	12	21	[b]28	[b]38	159	185	100	102	7.6	.8	.6	1.1
22	13	28	[b]22	39	159	191	[a]90	118	7.2	.8	.6	1.1
23	14	84	[b]18	40	164	191	[a]85	*130*	6.4	.8	.6	1.1
24	*17*	33	[b]17	40	174	204	[a]80	130	6.4	.7	.5	1.0
25	16	35	[b]*16*	[b]40	180	211	[a]75	116	6.8	.8	*.9*	1.1
26	17	39	[b]17	[b]40	*185*	213	64	96	8.1	.7	.4	*1.3*
27	17	41	[b]17	[b]41	182	213	[a]60	*81	7.6	.6	.5	1.0
28	17	41	[b]18	42	172	217	*56*	64	7.2	.5	.7	1.0
29	17	41	[b]18	45	-------	220	[a]80	55	6.0	.5	.6	1.0
30	17	*42*	[b]18	[b]*48*	-------	217	[a]76	49	*5.6*	.5	.5	1.0
31	16	-------	[b]19	[b]46	-------	206	-------	41	-------	.4	.5	-------
Total	348.0	716	792	1,006	3,446	5,598	3,667	2,106	356.4	72.7	15.4	25.5
Mean	11.2	23.9	25.5	32.5	123	181	122	67.9	11.9	2.35	0.50	0.85
Ac-ft	690	1,420	1,570	2,000	6,840	11,100	7,270	4,180	707	144	31	51

Calendar year 1953	Max 940	Min 1.2	Mean 157	Ac-ft 113,800
Water year 1953–54	Max 237	Min 0.4	Mean 49.7	Ac-ft 36,000

Peak discharge (base, 550 cfs)—— No peak above base.

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

SOUTH FORK HUMBOLDT RIVER NEAR LEE, NEV.

Location.—Lat 40°34′, long 115°33′, in SE¼ sec. 16, T. 31 N., R. 57 E., on left bank 400 ft downstream from Kleckner Creek and 2½ miles east of Lee.

Drainage area.—54 sq mi, approximately.

Records available.—February 1945 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,970 ft (from topographic map).

Average discharge.—9 years, 70.1 cfs (50,750 acre-ft per year).

Extremes.—Maximum discharge during year, 357 cfs May 19 (gage height, 2.64 ft); minimum, 3.2 cfs Nov. 19, but may have been less during period of ice effect.

1945–54: Maximum discharge, 935 cfs May 27, 1951 (gage height, 3.81 ft); minimum, 2.5 cfs Nov. 9, 1952.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.5	7.8	8.6	b 9.0	7.0	b 15	20	92	127	69	8.2	5.2
2	6.2	8.6	9.6	8.2	b 7	b 14	22	89	123	61	8.2	6.6
3	6.6	11	9.6	8.2	b 7	b 13	25	90	125	56	9.1	5.8
4	6.6	*9.6	*9.6	8.2	b 8	*b 14	28	101	132	54	8.6	5.5
5	6.2	10	10	7.8	b 8	b 14	31	125	132	50	8.2	5.2
6	5.8	10	10	7.8	b 9	15	32	147	117	45	7.4	4.8
7	5.5	9.1	10	7.8	b 9	15	*29	173	*107	41	7.4	4.8
8	5.2	9.6	b 11	b 8	b 10	19	30	204	101	39	7.8	5.2
9	4.8	9.1	11	b 7.5	b 11	25	30	235	99	35	7.8	4.8
10	5.5	9.6	b 9.5	b 7.5	12	24	31	235	96	32	8.2	4.5
11	5.8	10	b 8	7.4	12	19	32	238	90	31	8.6	4.5
12	6.2	9.6	b 8.5	7.4	12	b 19	36	*251	89	27	7.8	4.5
13	5.8	9.1	b 9	7.4	13	b 18	39	259	83	25	7.4	4.5
14	*5.8	8.6	b 9	7.4	b 12	b 18	45	265	82	24	7.4	4.2
15	6.6	8.6	9.1	7.4	12	b 19	50	267	80	*24	6.2	4.2
16	6.6	8.2	9.6	7.4	12	19	56	278	92	22	6.2	4.5
17	6.6	9.1	9.6	7.4	12	19	69	295	94	21	7.4	4.5
18	6.6	7.0	9.6	7.4	12	b 18	79	*304	98	20	*7.0	4.5
19	8.6	b 4.8	9.6	7.4	b 11	b 19	83	310	105	18	6.2	4.5
20	7.8	9.1	9.6	b 7	b 12	19	89	319	113	17	6.6	4.5
21	7.4	8.2	b 9	b 7	b 13	19	96	295	121	16	7.0	4.2
22	7.4	8.6	b 8	7.0	14	b 18	103	254	123	16	7.4	4.2
23	8.6	9.6	b 8	*7.0	14	20	109	225	123	15	6.6	4.5
24	10	12	b 7.5	7.0	15	21	111	214	117	14	6.2	4.5
25	9.1	11	b 7.5	b 6.5	16	20	115	207	111	15	6.6	4.5
26	8.6	9.6	b 8	b 6.5	16	20	109	*190	145	15	6.6	4.2
27	9.1	9.6	b 8.6	b 7	b 15	21	*111	170	121	14	6.2	4.2
28	9.6	9.1	b 8.6	7.0	b 15	21	113	156	99	12	5.5	4.2
29	9.6	8.6	b 8.2	7.4	-------	20	103	150	87	10	5.5	4.5
30	9.1	8.6	b 8	7.4	-------	20	101	143	79	9.6	5.2	4.8
31	7.4	-------	b 8	7.0	-------	19	-------	134	-------	9.6	4.8	-------
Total	220.2	273.4	279.9	230.4	326.0	574	1,927	6,415	3,211	857.2	219.3	140.6
Mean	7.10	9.11	9.03	7.43	11.6	18.5	64.2	207	107	27.7	7.07	4.69
Ac-ft	437	542	555	457	647	1,140	3,820	12,720	6,370	1,700	435	279

Calendar year 1953	Max 542	Min 4.8	Mean 67.0	Ac-ft 48,470
Water year 1953–54	Max 319	Min 4.2	Mean 40.2	Ac-ft 29,100

Peak discharge (base, 450 cfs)..... No peak above base.

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

HUNTINGTON CREEK NEAR LEE, NEV.

Location (revised).—Lat 40°33′, long 115°43′, in SW¼ sec. 19, T. 31 N., R. 56 E., on right bank 5½ miles upstream from mouth and 6 miles west of Lee.

Records available.—December 1948 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,315 ft revised (from river-profile map).

Average discharge.—5 years (1949–54), 38.9 cfs (28,160 acre-ft per year).

Extremes.—Maximum discharge during year, 37 cfs Mar. 25 (gage height, 1.67 ft); minimum, 0.8 cfs Aug. 20 (gage height, 0.97 ft).

1948–54: 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, that of Aug. 20, 1954.

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

Revisions (water years).—WSP 1244: 1949 (M). The mean discharge for water year 1953 has been revised to 20.3 cfs, superseding erroneous figure published in WSP 1284.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*3.7*	6.1	[b]7.0		12	25	26	19	7.7	*3.7*	*1.8*	*1.4*
2	3.7	5.7			[b]*11*	23	25	17	7.3	3.5	1.8	1.6
3	3.7	7.7			[b]11	22	25	15	7.3	3.5	1.8	1.7
4	4.0	6.7	(*)		[b]12	*21	25	12	7.3	2.6	1.7	1.6
5	4.2	6.4			[b]12	22	26	10	7.0	3.0	1.8	1.6
6	4.2	6.7			[b]12	22	*28*	*10	7.7	2.8	1.8	1.6
7	4.2	6.1		[b]8	[b]12	22	*28	8.7	*8.3	2.6	1.8	1.6
8	4.2	5.7			[b]13	24	27	8.0	8.3	2.4	1.7	1.6
9	4.2	5.7	[b]7		[b]15	27	26	7.3	11	2.3	1.6	1.6
10	4.2	5.7			[b]17	28	23	7.0	17	3.0	1.6	1.6
11	4.4	5.7			20	28	21	7.0	*18*	3.7	1.6	1.4
12	4.4	5.7			20	24	18	5.7	17	3.3	1.6	1.7
13	4.4	5.7			25	24	17	5.4	13	3.0	1.4	1.7
14	4.4	5.7		[b]8.5	28	24	18	*5.1*	12	2.6	1.4	1.7
15	4.4	5.7			28	24	17	5.1	10	*2.8	1.4	1.6
16	4.6	6.4			28	24	15	5.4	8.3	2.8	1.3	1.7
17	4.6	6.7	[b]7.2		30	24	13	5.4	7.0	2.6	1.3	1.7
18	4.9	5.7	[b]7.8		*34*	[b]23	13	5.1	6.1	2.5	*1.3	1.7
19	6.7	[b]*5.0*	[b]8.5		[b]26	26	16	7.0	5.4	2.5	1.2	1.7
20	5.1	[b]5.6	[b]9.5	[b]9	27	29	17	9.5	4.9	2.3	*.9*	1.7
21	4.9	[b]6.1	*9.9*		30	31	17	12	4.6	2.1	1.0	1.8
22	5.4	6.7	[b]9		32	30	15	17	4.2	2.3	1.0	2.0
23	5.4	7.3		(*)	32	32	14	*20*	4.0	2.3	1.2	2.0
24	7.0	*9.1*			33	34	15	20	*3.7*	2.3	1.1	2.1
25	*7.3*	9.1			32	34	13	18	3.7	2.3	1.2	2.3
26	7.0	7.7			31	*35*	12	13	6.8	2.5	1.4	2.3
27	*7.3	7.3	[b]8	[b]10	27	34	*11*	10	7.7	2.5	1.4	2.3
28	6.4	7.0			26	33	21	8.7	6.1	2.5	1.3	*2.6*
29	6.1	6.7			-------	31	26	8.0	4.6	2.1	1.4	2.5
30	5.7	7.0		[b]11	-------	30	21	7.7	4.2	*2.0*	1.4	2.6
31	6.4	-------		*12*	-------	28	-------	7.7	-------	2.0	1.4	-------
Total	157.1	194.4	235.9	274.5	636	838	589	316.8	240.2	82.4	44.6	55.0
Mean	5.07	6.48	7.61	8.85	22.7	27.0	19.6	10.2	8.00	2.66	1.44	1.83
Ac-ft	312	386	468	544	1,260	1,660	1,170	628	476	163	88	109

Calendar year 1953	Max 125	Min 2.4	Mean 19.2	Ac-ft 13,900
Water year 1953–54	Max 35	Min 0.9	Mean 10.0	Ac-ft 7,270

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

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

SOUTH FORK HUMBOLDT RIVER ABOVE DIXIE CREEK, NEAR ELKO, NEV.

Location.—Lat 40°41'05", long 115°48'45", in NW¼SW¼ sec. 5, T. 32 N., R. 55 E., 1½ miles upstream from Dixie Creek and 10½ miles south of Elko.

Records available.—December 1948 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,140 ft (from topographic map).

Average discharge.—5 years (1949–54), 116 cfs (83,980 acre-ft per year).

Extremes.—Maximum discharge during year, 343 cfs May 21 (gage height, 3.73 ft); minimum, 0.6 cfs Sept. 11 (gage height, 1.73 ft).

1948–54: Maximum discharge, 1,700 cfs Apr. 29, 1952 (gage height, 5.46 ft); minimum, that of Sept. 11, 1954.

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

Revisions (water years).—WSP 1284 1952(M).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	19	23		b *27*	52	61	115	124	*57*	*5.1*	0.8
2	6.4	19	b 22		b 30	b 45	*60*	99	115	53	4.8	.9
3	6.4	21	b 22		b 33	b *44*	60	*84*	109	48	4.3	.9
4	7.5	23	b 22		b 36	*49	60	84	105	42	3.6	.8
5	8.0	22			b 38	49	62	84	103	38	3.3	.8
6	8.4	23			b 41	48	64	*103	105	35	2.9	.8
7	8.0	23			b 43	49	*67	120	97	30	2.7	.8
8	8.0	22	(*)		b 45	52	67	140	86	27	2.5	.9
9	8.4	21			b 48	58	66	173	89	19	2.4	.9
10	8.4	21			b 50	64	62	201	101	16	2.0	.8
11	8.8	21			b 52	61	60	204	103	14	2.2	.7
12	8.8	21			55	b 52	60	226	93	13	2.2	.7
13	8.8	21			58	b 53	60	239	82	13	1.8	.8
14	8.4	20		b 20	64	55	64	*242	77	11	1.6	.8
15	7.5	20			64	57	70	248	77	11	1.5	.8
16	*4.0*	20			62	55	73	245	77	10	1.4	.9
17	5.4	21	b 21		64	55	73	266	73	9.3	1.5	1.0
18	8.0	21			b *67*	b 48	78	284	68	8.8	*1.4	1.0
19	13	b *17*			b 55	58	80	295	68	8.8	1.3	1.0
20	13	b 19			b 52	66	78	299	68	8.4	1.3	1.2
21	12	21			b 61	66	84	*318*	72	7.5	1.3	1.4
22	12	23			64	64	87	276	82	6.8	1.3	1.4
23	12	27		(*)	64	73	91	248	*78	6.4	1.3	1.5
24	14	*29*			66	75	93	229	67	5.8	1.1	1.8
25	14	29			64	73	93	*216	*61*	*5.1*	1.0	1.9
26	14	28			64	73	87	201	128	5.4	1.0	2.0
27	*16	26			55	*80*	87	181	*150*	*6.4	1.0	2.0
28	*17*	24			54	77	126	160	93	6.1	.9	2.0
29	17	22		b 22	-------	73	*135*	145	77	5.1	.9	2.2
30	16	23		b 24	-------	70	126	138	66	5.8	.8	*2.4*
31	17	-------		b 25	-------	64	-------	131	-------	5.8	.8	-------
Total	323.0	667	656	631	1,476	1,858	2,334	5,994	2,694	538.5	61.2	35.9
Mean	10.4	22.2	21.2	20.4	52.7	59.9	77.8	193	89.8	17.4	1.97	1.20
Ac-ft	641	1,320	1,300	1,250	2,930	3,690	4,630	11,890	5,340	1,070	121	71

Calendar year 1953	Max 676	Min 4.0	Mean 83.9	Ac-ft 60,740
Water year 1953–54	Max 318	Min 0.7	Mean 47.3	Ac-ft 34,250

Peak discharge (base, 400 cfs)..... No peak above base.

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

SOUTH FORK HUMBOLDT RIVER NEAR ELKO, NEV.

Location.—Lat 40°43'15", long 115°49'50", in NW¼ sec. 30, T. 33 N., R. 55 E., on right bank, 9 miles upstream from mouth and 10 miles southwest of Elko.

Drainage area.—1,150 sq mi, approximately.

Records available.—August 1896 to September 1922, October 1923 to September 1932, October 1936 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,100 ft. Prior to November 1913, staff gages at sites about 1 mile upstream at various datums. November 1913 to February 1927 water-stage recorder near present site at different datum. March 1927 to September 1932 staff gage at site 1 mile upstream at different datum.

Average discharge.—46 years, 129 cfs (93,390 acre-ft per year).

Extremes.—Maximum discharge during year, 358 cfs May 21 (gage height, 2.65 ft); no flow Aug. 10 to Sept. 30.

1896–1922, 1923–32, 1936–54: Maximum discharge, 2,400 cfs Jan. 26, 1914, from rating curve extended above 1,200 cfs; no flow Aug. 10 to Sept. 30, 1954.

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

Revisions (water years).—WSP 1090: 1932.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	*15*	22		[b]*23*	46	*54*	106	109	*54*	*2.4*	0
2	3.2	15	21		[b]24	[b]42	54	96	*100	52	1.8	0
3	3.2	16			[b]27	[b]*41*	54	*83*	94	49	.9	0
4	3.6	*19			[b]29	42	56	82	88	44	.7	0
5	5.0	18			[b]31	42	*57	84	86	42	.2	0
6	5.5	20			[b]33	42	59	94	84	41	.2	0
7	5.0	20			[b]37	42	62	*106	80	35	.1	0
8	5.0	20	(*)		[b]40	*44	61	120	69	34	.1	0
9	5.0	19			[b]43	47	61	152	75	24	.1	0
10	5.0	19			[b]46	49	62	179	90	18	*0*	0
11	5.5	20			[b]48	49	61	188	88	14	0	0
12	5.5	20			[b]51	[b]47	59	206	80	14	0	0
13	*5.5	20			[b]54	[b]46	59	226	66	12	0	0
14	5.0	19			[b]56	49	62	*236	*62	9.7	0	0
15	4.0	19		[b]19	[b]57	49	66	246	62	9.7	0	0
16	1.8	20	[b]20		[b]58	49	71	246	62	8.9	0	0
17	*.9*	20			[b]*59*	49	69	264	61	7.6	0	0
18	3.6	19			[b]55	[b]46	71	281	*57*	6.5	0	0
19	8.2	[b]16			[b]51	49	75	300	*57*	6.5	0	0
20	11	[b]18			[b]48	*54*	73	304	*59*	6.0	0	0
21	8.9	[b]20			[b]*52*	*56*	*75*	*330*	62	5.0	0	0
22	8.9	[b]22			*52*	*54*	78	292	69	4.0	0	0
23	8.9	26			*52*	*59*	84	253	69	3.6	*0	0
24	11	*27*			*52*	61	86	226	61	3.2	0	0
25	12	27			*52*	61	86	206	*56*	3.2	0	0
26	12	27			*52*	61	84	188	118	3.2	0	0
27	13	26			47	*66*	82	165	*139*	3.6	0	0
28	*14*	23			47	64	106	146	86	4.0	0	0
29	14	22			-------	62	*120*	129	71	*2.8*	0	0
30	13	22		*[b]20	-------	59	109	122	61	*2.8	0	0
31	13	-------		[b]21	-------	56	-------	115	-------	3.2	0	-------
Total	223.8	614	623	592	1,276	1,583	2,156	5,770	2,321	526.5	6.5	0
Mean	7.22	20.5	20.1	19.1	45.6	51.1	71.9	186	77.4	17.0	0.21	0
Ac-ft	444	1,220	1,240	1,170	2,530	3,140	4,280	11,440	4,600	1,040	13	0

Calendar year 1953	Max 693	Min 0.9	Mean 81.1	Ac-ft 58,750
Water year 1953–54	Max 330	Min 0	Mean 43.0	Ac-ft 31,120

Peak discharge (base, 410 cfs)—— No peak above base.

*Discharge measurement or observation of no flow made on this day.
[b] Stage-discharge relation affected by ice.

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, 5 miles upstream from Susie Creek and 5½ miles east of Carlin.

Drainage area.—4,310 sq mi, approximately.

Records available.—October 1943 to September 1954.

Gage.—Water-stage recorder. Datum of gage is 4,931.91 ft.

Average discharge.—11 years, 360 cfs (260,600 acre-ft per year).

Extremes.—Maximum discharge during year, 308 cfs Mar. 28 (gage height, 2.37 ft); minimum, 0.3 cfs Sept. 10 (gage height, 0.32 ft).

1943–54: Maximum discharge, 5,220 cfs May 1, 1952 (gage height, 9.35 ft); minimum, that of Sept. 10, 1954.

High water of February 1943 reached a stage of 9.8 ft (discharge, 5,900 cfs, by slope-area determination of peak flow).

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*7.6*	29	59	*40*	*81*	226	*290*	163	120	*48*	*6.0*	*0.8*
2	8.5	34	61	51	86	218	*274	144	*126*	47	5.6	.8
3	8.0	33	*59	54	92	*208	260	128	*111	47	4.8	.7
4	12	37	62	54	94	200	245	120	100	40	4.0	.6
5	14	*40	59	54	97	193	234	*115	89	40	3.4	.6
6	14	38	62	53	95	188	234	*111*	92	35	3.2	.5
7	15	39	59	53	102	*184*	229	120	86	33	3.0	.4
8	15	40	58	47	106	188	229	128	79	29	2.8	.5
9	*14	38	59	47	115	198	218	146	78	27	2.6	.5
10	15	39	66	45	115	208	213	179	82	26	2.6	.4
11	14	29	60	45	124	221	203	191	79	23	2.6	.4
12	14	22	56	46	140	237	196	196	70	21	2.8	.4
13	15	25	56	47	150	265	196	*216	62	21	3.0	.4
14	14	23	57	48	170	254	196	218	54	*19	3.0	.4
15	13	*12*	59	50	188	237	196	218	48	18	2.8	.5
16	14	16	61	52	193	234	196	213	52	16	2.6	.5
17	13	22	61	57	203	240	*203*	216	50	16	*2.2	.5
18	13	27	64	*58	226	248	208	234	47	16	2.0	.5
19	16	32	66	[b]58	216	242	208	248	42	14	1.9	.5
20	17	34	68	[b]54	200	257	193	257	44	12	1.8	.5
21	19	36	*71*	[b]54	203	257	188	*271*	42	12	1.9	.5
22	19	40	62	[b]56	210	251	184	271	42	11	2.0	.5
23	19	45	48	[b]60	213	265	179	237	44	9.5	2.2	.5
24	20	46	*33*	[b]58	213	280	175	216	45	8.5	2.0	.6
25	20	49	33	[b]56	221	280	175	198	*41*	8.5	2.0	.6
26	20	53	35	[b]65	226	286	161	191	42	8.5	2.0	.5
27	21	54	37	[b]67	*234*	305	*155*	175	87	8.0	1.7	.5
28	26	54	37	[b]71	226	*308*	168	161	69	7.6	1.5	.5
29	26	*57*	36	[b]*83*	-------	302	186	132	50	7.2	1.3	.5
30	27	57	35	82	-------	299	177	128	45	*6.8*	1.1	.6
31	*32*	-------	35	79	-------	293	-------	124	-------	7.2	*1.0*	-------
Total	515.1	1,100	1,674	1,744	4,539	7,572	6,169	5,665	2,018	642.8	81.4	15.7
Mean	16.6	36.7	54.0	56.3	162	244	206	183	67.3	20.7	2.63	0.52
Ac-ft	1,020	2,180	3,320	3,460	9,000	15,020	12,240	11,240	4,000	1,270	161	31

Calendar year 1953	Max 1,430	Min 6.8	Mean 217	Ac-ft 157,000
Water year 1953–54	Max 308	Min 0.4	Mean 86.9	Ac-ft 62,940

Peak discharge (base, 900 cfs)..... No peak above base.

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

NOTE.—No gage-height record Dec. 8 to Jan. 18 (stage-discharge relation affected by ice during part of period); discharge estimated on basis of weather records and records for nearby stations.

HUMBOLDT RIVER AT PALISADE, NEV.

Location.—Lat 40°36'25", long 116°12'05", in SE¼SE¼ 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 1954.

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 at various datums.

Average discharge.—46 years (1903–6, 1911–54), 366 cfs (265,000 acre-ft per year).

Extremes.—Maximum discharge during year, 338 cfs Mar. 29 (gage height, 3.00 ft); minimum, 8.2 cfs Sept. 10, 11.

1902–6, 1911–54: Maximum discharge, 6,250 cfs Feb. 26, 1943 (gage height, 9.92 ft); minimum, 2 cfs Aug. 25–28, 1931.

Remarks.—Records excellent except those for periods of ice effect, which are good Diversion above station for irrigation of about 150,000 acres of hay and pasture land

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*20*	50	*80	b *50*	*106*	*239	*311*	146	*123	*62*	*17*	10
2	21	51	80	b 65	106	233	305	139	*128*	60	17	10
3	21	56	81	68	112	222	287	128	123	58	17	10
4	21	55	83	68	117	215	275	117	110	56	16	9.5
5	23	58	76	68	119	208	263	108	104	53	16	9.5
6	27	62	76	67	123	200	260	*100*	97	51	15	9.5
7	29	60	b 76	67	125	*195*	260	102	100	50	14	9.5
8	30	60	b 76	b 63	128	200	254	106	93	47	14	9.5
9	30	61	78	b 60	134	212	245	110	91	45	13	9.5
10	33	61	37	b 60	141	225	239	137	93	42	13	*8.8*
11	34	60	b 74	b 63	150	236	228	162	91	40	13	8.8
12	34	50	b 72	65	165	245	222	170	83	40	13	9.5
13	34	47	b 72	b 61	178	275	218	195	72	37	13	9.5
14	34	47	b 73	67	192	278	218	205	67	36	13	9.5
15	34	45	b 76	65	212	260	210	200	63	32	13	9.5
16	36	*34*	80	67	220	254	205	200	62	29	12	9.5
17	36	40	80	72	228	260	205	*198	53	29	13	9.5
18	37	42	83	72	242	263	210	215	56	28	12	11
19	40	43	85	74	*248*	269	195	230	53	27	12	12
20	40	45	87	b 71	228	284	175	242	48	24	13	12
21	40	47	*93*	72	218	284	158	254	47	23	12	12
22	42	58	b 80	80	230	278	158	*272*	*45*	22	11	12
23	42	63	b 60	80	233	290	153	242	60	21	11	13
24	43	67	*b *40*	93	230	308	153	220	60	20	11	13
25	43	68	b 40	b 85	236	308	155	198	56	19	12	*14*
26	42	70	b 42	b 76	242	311	146	180	58	19	12	12
27	42	74	b 45	b 85	245	320	*128*	165	62	19	11	12
28	45	74	b 45	93	242	*330*	123	153	100	*19	11	*12
29	*47*	76	b 44	*102	-------	330	*141	141	68	18	11	12
30	*47	*78*	b 42	*108*	-------	327	168	128	*63	*17*	*11	12
31	47	-------	b 42	106	-------	*317	-------	125	-------	17	*10*	-------
Total	1,094	1,702	2,148	2,293	5,150	8,176	6,263	5,288	2,334	1,060	402	320.6
Mean	35.3	56.7	69.3	74.0	184	264	209	171	77.8	34.2	13.0	10.7
Ac-ft	2,170	3,380	4,260	4,550	10,210	16,220	12,420	10,490	4,630	2,100	797	636

Calendar year 1953	Max 1,440	Min 20	Mean 239	Ac-ft 173,400
Water year 1953–54	Max 330	Min 8.8	Mean 99.3	Ac-ft 71,860

Peak discharge (base, 560 cfs)—— No peak above base.

*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 NW¼SE¼ sec. 1, T. 31 N., R. 51 E., on right bank 1¼ miles upstream from mouth and 1½ miles southeast of Palisade.

Records available.—November 1902 to December 1904 (gage heights only), January 1912 to September 1914, January 1946 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,900 ft (from topographic map). Prior to Jan. 1, 1946, staff gages half a mile downstream at different datums. Jan. 1 to July 18, 1946, water-stage recorder 1,000 ft downstream at different datum.

Average discharge.—10 years (1912–14, 1946–54), 15.2 cfs (11,000 acre-ft per year).

Extremes.—Maximum discharge during year, 23 cfs Feb. 14 (gage height, 1.56 ft); no flow for several days in May, June, July, and August.

1912–14, 1946–54: 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 several days during 1951, 1953, 1954.

Remarks.—Records good except those for periods of ice effect or below 3 cfs, which are fair. Diversions above station for irrigation.

Revisions (water years).—WSP 1120: 1946 (calendar year mean).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*2.7*	*6.5*	**11*		12	*10	*7.0*	0.3	*0	*2.1*	*0*	*0*
2	2.8	7.4	11	[b]5	12	[b]8.9	6.8	.3	0	1.3	0	.1
3	2.9	8.5	[b]10		12	[b]9.3	6.8	.3	0	*0*	.1	.2
4	2.9	8.9	9.7	5.2	13	8.1	6.5	.3	0	.2	.2	.2
5	2.9	8.1	[b]9.5	5.5	12	8.1	6.0	.3	0	.4	.2	.2
6	2.9	8.5	[b]9.5	[b]6	13	8.1	4.8	.4	.2	.4	.2	.3
7	3.0	7.8	10	[b]6	14	*6.2*	4.5	*.5*	.2	.4	.2	.3
8	3.2	7.8	[b]9		14	7.4	4.4	.5	.2	.2	*.3*	.3
9	3.2	7.8	9.3		14	8.5	3.2	.5	.2	.1	.3	.4
10	3.2	8.5	[b]10	[b]5.5	15	8.5	2.5	.4	.2	0	.2	.4
11	3.4	8.5	[b]9		15	8.9	2.1	.2	.2	0	0	.5
12	3.4	8.1		[b]5.2	17	[b]8.5	1.8	.2	.2	0	0	.4
13	3.4	8.1		[b]5	19	[b]8.5	1.6	.3	.1	0	0	.3
14	3.4	8.1		5.5	*22*	[b]8.9	1.5	.3	0	.1	0	.3
15	3.8	8.1	[b]8	6.0	18	8.5	1.2	.4	0	.1	0	.2
16	3.8	8.9		7.0	15	7.0	1.1	.4	0	.1	0	.5
17	3.9	9.3		9.3	15	7.0	1.0	.5	0	0	0	1.6
18	4.2	8.9	8.5	*[b]9.3	16	[b]6.7	.9	.5	.1	0	0	1.6
19	4.8	[b]7.0	10	8.9	[b]13	7.4	.8	.5	.1	0	0	1.6
20	4.8	7.8	10	[b]8.5	15	9.7	.7	.5	.2	0	0	1.7
21	4.5	7.8	10	[b]8.5	14	11	.5	.4	.2	0	0	2.0
22	4.4	8.9	[b]9	8.5	14	11	.4	.1	.2	0	0	2.1
23	4.8	9.7	[b]7	13	13	13	.3	.1	.2	0	0	2.2
24	6.2	*12*	[b]7	*15*	13	*14*	.3	.1	.2	0	0	2.3
25	6.0	10	[b]6	[b]9	13	12	*.2*	.1	.3	0	0	2.5
26	6.2	9.7	[b]6	[b]9	13	13	.2	*0*	1.2	.1	0	2.7
27	6.2	9.7	[b]7	[b]9	9.3	13	.2	0	1.6	.1	0	2.8
28	6.5	8.9	[b]7	9.3	7.8	12	.3	0	1.6	*.1	0	*3.0
29	6.8	9.7	[b]6	10	-------	10	*.3	0	1.7	.1	0	*3.5*
30	*7.0	10	[b]6	11	-------	9.3	.3	0	*1.9	0	*0	3.3
31	6.8	-------	[b]5	11	-------	*7.8	-------	0	-------	0	0	-------
Total	134.0	259.0	260.5	237.7	393.1	290.3	68.2	8.4	11.0	5.8	1.7	37.3
Mean	4.32	8.63	8.40	7.67	14.0	9.36	2.27	0.27	0.37	0.19	0.05	1.24
Ac-ft	266	514	517	471	780	576	135	17	22	12	3.4	74

Calendar year 1953	Max 22	Min 0	Mean 5.63	Ac-ft 4,070
Water year 1953–54	Max 22	Min 0	Mean 4.68	Ac-ft 3,390

Peak discharge (base, 50 cfs)—— No peak above base.

*Discharge measurement or observation of no flow made on this day.
[b] Stage-discharge relation affected by ice.

HUMBOLDT RIVER NEAR ARGENTA, NEV.

Location.—Lat 40°40′, long 116°40′, in NW¼ sec. 2, T. 32 N., R. 47 E., on left bank 2½ miles east of Argenta and 15½ miles east of Battle Mountain.

Records available.—February 1946 to September 1954.

Gage.—Water-stage recorder.

Average discharge.—8 years, 310 cfs (224,400 acre-ft per year).

Extremes.—Maximum discharge during year, 315 cfs Mar. 29 (gage height, 4.14 ft); minimum daily, 0.3 cfs Aug. 12 to Sept. 30.

1946–54: Maximum daily discharge, 5,700 cfs May 2, 1952; minimum daily, that of Aug. 12 to Sept. 30, 1954.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	*24*	62	b 59	106	211	*300*	135	*76*	*50*	*0.5*	0.3
2	1.3	27	64	b 62	*103*	213	295	135	76	50	.5	.3
3	1.3	29	67	b 64	105	209	288	126	73	49	.5	.3
4	1.3	31	73	b 64	108	203	280	121	69	47	.5	.3
5	1.3	33	79	b 64	112	*199	266	114	61	40	.5	.3
6	*1.2*	33	76	b 63	114	195	256	106	58	35	.5	.3
7	1.2	37	71	b 62	118	191	249	99	53	30	.4	.3
8	1.3	40	b 68	b 60	121	*189*	*247	95	46	25	.4	.3
9	1.3	40	71	b *58*	124	193	231	96	45	21	.4	.3
10	1.3	43	79	61	126	197	218	96	46	19	.4	.3
11	1.3	43	b 71	59	134	209	211	105	45	17	.4	.3
12	1.5	*42	b 70	b 62	139	215	203	116	43	19	*.5*	.3
13	1.5	42	b 71	b 63	154	213	195	129	40	17	.3	.3
14	1.5	37	*b 74	72	167	235	189	135	38	14	.3	.3
15	1.5	34	b 77	76	180	244	185	152	34	12	.3	.3
16	1.5	34	b 79	72	191	242	176	151	34	9	.3	.3
17	3.1	32	b 80	b 68	197	244	172	*146	*32	6	.3	.3
18	6.1	29	b 81	b 64	199	242	168	142	31	3.5	.3	.3
19	*8.6	30	83	b 68	209	244	172	142	29	3	*.3	.3
20	11	31	*87*	b 72	*218*	256	165	149	25	2.5	.3	.3
21	13	38	87	b 76	211	266	149	154	22	2	.3	.3
22	14	40	b 82	b 81	203	268	129	168	22	1.6	.3	.3
23	15	42	b 74	86	205	266	116	*178*	22	1.5	.3	.3
24	17	45	b 64	86	207	278	112	168	18	1.4	.3	.3
25	18	48	b *64*	*b 83	207	290	*108*	158	*16*	1.2	.3	.3
26	19	50	b 54	b 85	209	292	108	142	17	1.0	.3	.3
27	21	51	b 60	b 86	211	292	109	123	19	.9	.3	.3
28	20	54	b 60	98	213	300	120	114	20	.8	.3	.3
29	20	58	b 58	103	-------	*310*	110	103	27	*.6	.3	.3
30	21	*59*	b 56	98	-------	310	114	96	49	.6	.3	.3
31	*23*	-------	b 56	*105*	-------	308	-------	*88*	-------	.6	.3	-------
Total	251.4	1,176	2,188	2,280	4,591	7,524	5,641	3,982	1,186	481.2	11.0	9.0
Mean	8.11	39.2	70.6	73.5	164	243	188	128	39.5	15.5	0.35	0.30
Ac-ft	499	2,330	4,340	4,520	9,110	14,920	11,190	7,900	2,350	954	22	18

Calendar year 1953	Max 1,100	Min 1.2	Mean 204	Ac-ft 147,500
Water year 1953–54	Max 310	Min 0.3	Mean 80.3	Ac-ft 58,150

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

NOTE.—No gage-height record June 30 to July 28; discharge estimated on basis of records for other Humboldt River stations.

ROCK CREEK NEAR BATTLE MOUNTAIN, NEV.

Location.—Lat 40°51′, long 116°36′, in NE¼ sec. 17, T. 34 N., R. 48 E., on left bank at mouth of canyon, 22 miles northeast of Battle Mountain.

Records available.—March 1918 to September 1925 (fragmentary October 1923 to September 1925), March 1927 to May 1929, January 1946 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,600 ft. Prior to Jan. 3, 1946, at different datum.

Average discharge.—13 years (1918–23, 1946–54), 33.6 cfs (24,330 acre-ft per year).

Extremes.—Maximum discharge during year, 38 cfs Mar. 11 (gage height, 1.21 ft); no flow June 24–26, June 28 to Sept. 30.

1918–25, 1927–29, 1946–54: Maximum discharge, 3,000 cfs Apr. 7, 1952 (gage height, 5.60 ft); no flow at times during July, August, September, and October nearly every year.

Remarks.—Records good. Several irrigation diversions in valleys upstream. Station is above all diversions in Boulder Flat and is below all tributaries. Flow slightly affected by small reservoir in Squaw Valley, 30 miles upstream.

Revisions (water years).—WSP 1214: 1950(M).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	*0.8*	1.3	*0.6*	*3.9*	5.9	11	*5.4*	0.3	0	0	0
2	.4	.9	1.2	.6	4.0	5.2	9.8	3.7	.4	0	0	0
3	.5	1.0	1.2	.6	4.2	*4.2*	9.5	2.5	.4	0	0	0
4	.7	1.1	*1.5*	.7	4.4	5.4	9.2	1.9	.4	0	0	0
5	.7	1.0	1.4	.8	4.4	*5.4	9.8	1.4	.3	0	0	0
6	.7	1.0	1.4	.8	4.4	4.9	12	1.3	.3	0	0	0
7	.7	1.0	1.4	.8	4.0	5.4	16	2.0	.4	0	0	0
8	.8	.9	1.2	.8	4.2	5.9	*18	1.3	.4	0	0	0
9	.8	.9	1.2	.8	4.7	6.4	17	1.0	*.5	0	0	0
10	.8	.9	1.1	.8	4.7	11	16	.8	*1.3*	0	0	0
11	.8	.9	1.0	.8	7.2	*24*	15	.8	1.3	0	0	0
12	.8	*.9	.9	.8	6.1	15	17	.8	.9	0	0	0
13	.8	.9	.9	.8	6.9	11	*20*	.8	.7	0	0	0
14	.8	.9	*.9	.9	6.6	11	17	.6	.6	0	0	0
15	.9	.8	1.0	.9	10	13	19	.6	.5	0	0	0
16	.9	.8	1.1	1.2	12	13	16	.6	.5	0	0	0
17	.8	.9	1.2	1.2	*13*	13	12	.6	.4	0	0	0
18	.9	.8	1.4	1.2	8.5	10	9.2	.5	.4	0	0	0
19	*1.1	.8	1.4	1.2	4	12	12	.4	.4	0	*0	0
20	1.0	.8	1.4	1.2	6.9	9.2	16	.4	.3	0	0	0
21	.8	1.2	1.3	1.2	5.9	11	13	.4	.2	0	0	0
22	.8	1.2	.9	1.3	4.2	11	13	.4	.1	0	0	0
23	.8	1.3	.8	1.8	6.9	11	13	.4	.1	0	0	0
24	1.1	*1.4*	.8	1.6	6.9	9.8	12	.4	*0*	0	0	0
25	1.0	1.4	.8	*1.4	6.6	11	8.5	.4	0	0	0	0
26	.9	1.2	.7	1.4	6.1	11	*7.6*	.4	0	0	0	0
27	.8	1.1	.8	1.8	5.6	9.8	9.2	.4	.1	0	0	0
28	.8	1.1	.8	2.4	7.6	12	18	.4	0	0	0	0
29	.8	1.1	.7	*3.4*	-------	15	12	.4	0	0	0	0
30	.8	1.2	*.6*	3.4	-------	13	*9.2	*.3*	0	*0	0	0
31	.8	-------	.6	3.4	-------	13	-------	.4	-------	0	0	-------
Total	24.8	30.2	32.9	40.6	173.9	318.5	397.0	31.7	11.2	0	0	0
Mean	0.80	1.01	1.06	1.31	6.21	10.3	13.2	1.02	0.37	0	0	0
Ac-ft	49	60	65	81	345	632	787	63	22	0	0	0

Calendar year 1953	Max 69	Min 0	Mean 8.58	Ac-ft 6,210
Water year 1953–54	Max 24	Min 0	Mean 2.91	Ac-ft 2,100

Peak discharge (base, 75 cfs)..... No peak above base.

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

HUMBOLDT RIVER AT BATTLE MOUNTAIN, NEV.

Location.—Lat 40°39′, long 116°56′, in SE¼ sec. 8, T. 32 N., R. 45 E., on left bank 1 mile northeast of Battle Mountain. Reese River, when flowing, enters Humboldt River several miles below station.

Records available.—May 1896 to December 1897, March 1921 to April 1924, January 1946 to September 1954.

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.—9 years (1921–22, 1946–54), 314 cfs (227,300 acre-ft per year).

Extremes.—Maximum discharge during year, 304 cfs Mar. 30 (gage height, 3.85 ft); minimum daily, 0.1 cfs for several days in August and September.

1921–24, 1946–54: 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 or no gage-height record, 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	*20*	58	[b] *61*	*100*	207	*294*	108	*72*	25	*0.7*	*0.1*
2	.4	22	*59*	[b] 62	101	203	288	122	66	*26*	.7	.1
3	.4	24	61	[b] 64	101	203	282	117	63	26	.6	.1
4	.4	25	66	[b] 66	102	200	274	112	60	26	.6	.1
5	.4	28	67	[b] 67	103	*192	262	109	56	26	.5	.1
6	.4	29	69	[b] 68	106	187	254	102	55	23	.6	.1
7	.4	31	72	[b] 68	107	181	246	79	57	21	.5	.1
8	.3	34	62	[b] 66	108	179	*243	74	33	20	.4	.1
9	*.2*	37	72	[b] 64	114	*178*	250	*67*	37	[a] 18	.3	.1
10	.2	37	73	[b] 62	122	182	221	69	40	[a] 16	.3	.1
11	*.2*	42	[b] 65	[b] 62	*123*	*194*	*214*	72	39	[a] 14	.3	.1
12	.3	*41	[b] 62	[b] 66	148	200	207	78	35	[a] 16	.3	.1
13	.3	40	[b] 63	[b] 64	143	198	197	88	33	[a] 14	.3	*.2*
14	.3	40	*[b] 63	[b] 67	153	210	190	93	31	[a] 12	.3	.2
15	.2	37	[b] 66	72	165	228	186	103	30	[a] 9.5	.3	.2
16	.2	34	[b] 73	74	178	231	178	109	29	[a] 7.0	.2	.2
17	.2	34	[b] 75	[b] 71	184	228	170	*100	*29	[a] 5.0	.3	.2
18	.2	33	[b] 77	[b] 66	189	230	166	99	29	3.2	.3	.2
19	*.2	31	[b] 80	[b] 64	195	233	162	99	31	2.5	*.2	.1
20	.2	32	82	[b] 68	*207*	244	164	98	32	2.1	.2	.1
21	2.3	34	*83*	[b] 73	205	254	152	103	29	1.8	.2	.2
22	8.6	38	[b] 78	81	200	258	134	112	22	1.6	.2	.2
23	9.9	39	[b] 72	88	195	258	117	129	*18*	1.4	.2	.1
24	12	43	[b] 68	87	198	264	108	127	[a] 18	1.3	.2	.1
25	14	45	[b] 61	*[b] 82	197	274	105	121	[a] 19	1.2	.2	.1
26	15	48	[b] *54*	[b] 83	198	282	*100*	*158*	19	[a] 1.0	.2	.1
27	16	49	[b] 54	[b] 85	200	280	101	118	19	[a] .9	.2	.1
28	17	49	[b] 59	88	203	288	109	100	19	[a] .8	*.1*	.1
29	17	55	[b] 60	*106*	-------	296	108	90	20	*[a] .7	.1	.1
30	17	*56*	[b] *58*	[b] 99	-------	*300*	*105*	84	*20*	*.6*	.1	.1
31	*18*	-------	[b] 60	[b] 100	-------	296	-------	81	-------	.6	.1	-------
Total	152.6	1,107	2,072	2,294	4,345	7,158	5,587	3,101	1,060	324.2	9.7	3.8
Mean	4.92	36.9	66.8	74.0	155	231	186	100	35.3	10.5	0.31	0.13
Ac-ft	303	2,200	4,110	4,550	8,620	14,200	11,080	6,150	2,100	643	19	7.5

Calendar year 1953	Max 880	Min 0.2	Mean 181	Ac-ft 131,000
Water year 1953–54	Max 300	Min 0.1	Mean 74.6	Ac-ft 53,980

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

REESE RIVER NEAR IONE, NEV.

Location.—Lat 38°51′, long 117°28′, in sec. 4, T. 11 N., R. 40 E., on right bank 2½ miles upstream from Indian Creek, 8 miles southeast of Ione, and 58 miles southwest of Austin.

Drainage area.—44 sq mi, approximately.

Records available.—August 1951 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 7,350 ft (from topographic map).

Extremes.—Maximum discharge during year, 27 cfs Apr. 5 (gage height, 1.20 ft); maximum gage height, 1.21 ft Apr. 3 (backwater from temporary obstruction); minimum daily discharge, 0.8 cfs Aug. 31, but may have been less during period of ice effect.

1951–54: Maximum discharge, 266 cfs Apr. 28, 1952 (gage height, 3.07 ft), from rating curve extended above 190 cfs by logarithmic plotting; minimum daily recorded, 0.7 cfs Sept. 16, 1951.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.1*	2.2	[b]1.0	1.6	2.3	[b]2.7	[b]*4.0*	14	10	*4.3*	*1.4*	*0.9*
2	1.2	2.2	[b].9	1.8	2.3	[b]2.7	6.3	15	10	4.1	1.3	*1.3*
3	1.4	2.2	[b]1.2	*2.5*	2.3	[b]2.8	9.0	15	9.3	3.8	1.2	1.3
4	1.4	2.2	[b]1.4	2.2	2.3	[b]2.7	12	15	8.7	3.6	1.1	1.1
5	1.4	2.0	[b]1.4	2.0	*2.3	[b]2.7	16	15	9.3	3.6	1.1	1.0
6	1.4	2.0	1.7	1.9	2.3	[b]3.1	15	15	9.0	3.4	1.3	1.0
7	1.4	1.6	1.9	1.8	2.4	[b]3.2	12	16	8.7	3.2	1.2	1.1
8	1.4	1.7	1.9	*1.5*	2.5	4.3	14	17	8.7	3.2	1.1	1.1
9	1.4	1.6	2.2	1.5	2.5	*5.2*	13	18	11	3.1	1.1	1.0
10	1.4	1.7	2.0	1.5	2.8	4.6	13	*19*	*12*	3.0	1.2	.9
11	1.5	1.8	1.7	1.5	2.5	[b]*2.4*	13	19	11	2.8	1.0	.9
12	1.6	1.9	2.0	1.6	2.4	[b]2.4	14	19	9.3	2.7	1.0	.9
13	1.6	2.0	2.0	1.7	2.4	[b]3.1	17	19	9.0	2.5	1.0	1.0
14	1.5	2.2	2.0	1.8	*1.9*	[b]3.8	18	19	7.8	2.8	1.0	*.9
15	1.6	2.2	*2.3*	1.9	2.2	[b]4.1	19	19	7.6	3.0	1.0	.9
16	1.6	2.0	2.2	2.0	2.7	[b]2.5	20	18	7.0	2.7	1.2	1.0
17	1.6	2.2	1.9	1.9	[b]2.2	[b]3.0	21	18	6.5	2.7	1.1	1.0
18	1.7	1.4	1.8	1.8	[b]2.2	*[b]2.5	*22*	*18	6.3	3.1	1.1	1.0
19	2.2	[b].9	[b]1.8	1.7	[b]2.3	[b]4.1	21	18	6.0	3.2	1.0	1.0
20	2.2	[b]1.3	[b]1.7	1.8	[b]2.5	[b]3.6	*20	18	5.8	3.6	1.0	1.0
21	1.8	[b]1.6	[b]1.3	1.9	[b]2.5	[b]3.4	19	17	5.2	2.7	1.1	1.0
22	1.8	[b]1.9	[b]1.1	2.0	[b]3.0	[b]2.8	19	17	5.0	2.5	1.1	1.0
23	1.8	[b]2.1	[b]1.1	1.9	[b]3.4	[b]3.6	19	16	4.6	2.3	1.1	1.0
24	2.0	*2.7*	1.4	1.8	[b]3.2	[b]3.2	18	15	4.6	2.0	1.0	1.1
25	2.0	*2.4	1.6	1.5	[b]*3.6*	[b]2.7	17	15	*4.5	2.3	1.0	1.2
26	*2.0	2.3	1.7	1.6	[b]3.2	[b]3.1	16	14	5.2	2.8	1.3	1.1
27	2.2	2.4	1.8	1.7	[b]3.1	[b]3.1	17	14	6.0	2.3	1.2	1.1
28	2.2	2.2	1.7	1.9	[b]3.0	[b]3.1	19	13	5.2	1.9	1.1	1.1
29	*2.3*	1.9	1.6	2.0	-------	[b]4.5	17	12	4.5	1.7	1.0	1.0
30	2.2	2.2	*1.6	2.1	-------	[b]4.8	18	12	*4.3*	*1.6	.9	1.1
31	2.2	-------	1.4	2.2	-------	[b]3.8	-------	*11*	-------	*1.4*	.8	-------
Total	53.1	59.0	51.3	56.6	72.3	103.6	478.3	500	222.1	87.9	34.0	31.0
Mean	1.71	1.97	1.65	1.83	2.58	3.34	15.9	16.1	7.40	2.84	1.10	1.03
Ac-ft	105	117	102	112	143	205	949	992	441	174	67	61

Calendar year 1953	Max 20	Min 0.8	Mean 5.19	Ac-ft 3,760
Water year 1953–54	Max 22	Min 0.8	Mean 4.79	Ac-ft 3,470

Peak discharge (base, 130 cfs)_____ No peak above base.

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

NOTE.—No gage-height record Jan. 9 to Feb. 5; discharge estimated on basis of weather records and 1 discharge measurement.

HUMBOLDT RIVER NEAR VALMY, NEV.

Location.—Lat 40°48′, long 117°04′, in NE¼NW¼ sec. 30, T. 34 N., R. 44 E., on left bank 3½ miles east of Valmy and 13 miles northwest of Battle Mountain.
Records available.—March 1950 to September 1954.
Gage.—Water-stage recorder. Altitude of gage is 4,440 ft (from topographic map).
Extremes.—Maximum discharge during year 273 cfs Mar. 31 (gage height, 3.09 ft); no flow Oct. 1–28, July 22 to Sept. 30.

1950–54: Maximum daily discharge, 5,800 cfs May 5, 6, 1952; no flow most years for periods during late summer.

Remarks.—Records good except those for periods of ice effect, no gage-height record, or backwater from debris on control, which are fair. Diversions above station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0*	° *17*	54	ᵇ *60*	ᵇ 95	191	*271*	ᵃ 120	*81*	14	0	0
2	0	° 19	55	60	ᵇ 97	198	269	ᵃ 125	72	16	0	0
3	0	° 21	57	62	ᵇ 95	195	263	ᵃ 125	66	*20*	0	0
4	0	° 23	62	66	ᵇ *93*	195	259	ᵃ 115	62	20	0	0
5	0	° 24	66	66	93	193	253	ᵃ 105	60	20	0	0
6	0	° 26	66	66	93	189	245	ᵃ 100	57	19	0	0
7	0	° 28	68	66	95	187	237	ᵃ 90	55	17	0	0
8	0	° 31	ᵇ 64	64	95	184	233	ᵃ 76	*57	14	0	0
9	0	° 33	66	60	95	182	229	ᵃ 70	41	12	0	0
10	0	° 35	70	60	97	*181	223	ᵃ *62*	42	11	0	0
11	0	° 36	ᵇ 66	60	107	182	215	ᵃ 64	41	10	0	0
12	0	° 38	ᵇ 54	60	107	187	208	68	40	12	0	0
13	0	° 38	ᵇ *52*	60	132	191	*204	75	36	9.8	0	0
14	0	° 37	ᵇ 57	66	134	193	198	83	35	7.6	0	0
15	0	° 35	ᵇ 58	68	142	200	191	90	32	5.6	0	0
16	0	*° 34	ᵇ 64	75	150	212	187	97	30	3.4	0	0
17	0	33	ᵇ 70	77	164	217	180	102	28	2.0	0	0
18	0	32	ᵇ 83	68	166	212	175	97	28	1.1	0	0
19	0	31	*88*	60	171	215	171	*93	28	.5	0	0
20	*0	30	83	64	175	219	168	93	29	*.2	0	0
21	0	30	*80	66	184	225	168	93	30	.1	0	0
22	0	32	ᵇ 77	75	184	231	159	100	30	*0*	0	*0
23	0	36	ᵇ 71	83	180	235	144	110	24	0	0	0
24	0	40	ᵇ 62	85	180	237	130	*127*	16	0	0	0
25	0	41	ᵇ 58	79	182	241	124	122	14	0	*0	0
26	0	42	ᵇ 55	*75	182	251	120	112	*13*	0	0	0
27	0	47	ᵇ 54	77	182	255	*114*	110	14	0	0	0
28	0	48	ᵇ 59	90	*187*	255	122	105	14	0	0	0
29	13	48	ᵇ 59	93	-------	261	132	93	14	0	0	0
30	° 15	*58*	ᵇ 58	95	-------	*271*	122	90	14	0	0	0
31	° *16*	-------	ᵇ 58	ᵇ *95*	-------	271	-------	83	-------	0	0	-------
Total	44	1,017	1,994	2,201	3,857	6,656	5,714	2,995	1,103	215.3	0	0
Mean	1.42	33.9	64.3	71.0	138	215	190	96.6	36.8	6.95	0	0
Ac-ft	87	2,020	3,960	4,370	7,650	13,200	11,330	5,940	2,190	427	0	0

Calendar year 1953	Max 727	Min 0	Mean 170	Ac-ft 123,000
Water year 1953–54	Max 271	Min 0	Mean 70.7	Ac-ft 51,170

*Discharge measurement or observation of no flow made on this day.
ᵃ No gage-height record; discharge estimated on basis of records for nearby stations.
ᵇ Stage-discharge relation affected by ice.
° Backwater from debris on control.

HUMBOLDT RIVER AT COMUS, NEV.

Location.—Lat 41°00′, long 117°19′, in SE¼ sec. 14, T. 36 N., R. 41 E., on left bank at Comus section house of Southern Pacific Railroad, 9 miles northeast of Golconda and 32 miles northwest of Battle Mountain.

Records available.—September 1917 to June 1923, May 1925 to May 1926, February 1946 to September 1954.

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.—13 years (1917–22, 1946–54), 272 cfs (196,900 acre-ft per year).

Extremes.—Maximum discharge during year, 268 cfs Mar. 30 (gage height, 3.77 ft); no flow for several days in October, November, and August.

1917–23, 1925–26, 1946–54: Maximum discharge, 5,860 cfs May 6, 1952 (gage height, 11.52 ft); no flow during periods in 1918–20, 1953, 1954.

Remarks.—Records good except those for periods of ice effect or backwater from beaver dam, which are fair. Diversions above station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0.1*	*0*	*34*	b *53*	b 89	174	*258*	75	57	0.3	*0.1*	0.1
2	.1	0	37	b 54	b 90	177	258	68	*58*	.2	.1	.1
3	.1	0	39	b 55	b 89	180	256	69	52	.2	.1	.1
4	.1	0	44	b 55	b *88*	179	252	76	46	.4	.1	.1
5	.1	.1	45	b 56	b 88	179	249	73	46	.4	.1	.1
6	.1	.1	46	b 55	b 88	177	245	71	45	*.8*	.1	.1
7	.1	0	53	b 54	90	174	239	68	41	.8	.1	.1
8	.1	.1	b 51	b 54	90	172	232	66	*40	.5	.1	.1
9	.1	.1	51	b 54	92	*169*	229	62	41	.4	.1	.1
10	.1	.1	53	b 54	93	*169	221	51	38	.3	*0*	.1
11	.1	.2	b 51	b 54	98	170	218	47	32	.2	0	.1
12	.1	9.0	b 49	b 54	104	172	207	*46*	31	.2	0	.1
13	.1	12	b 46	b 55	106	175	*202	62	29	.2	0	.1
14	.1	16	b *50*	b 56	126	180	196	56	26	.2	.1	.1
15	*0*	17	b 52	b 58	126	182	189	60	25	.2	.1	.1
16	0	*19	55	66	133	189	170	62	23	*.1*	.1	.1
17	0	21	57	b 62	142	203	155	66	20	.1	.1	.1
18	0	20	66	b 60	149	205	150	72	19	.1	.1	.1
19	0	b 17	73	b 56	152	205	150	*68	17	.1	.1	.1
20	*0	20	79	b 54	155	209	144	65	13	**.1	.1	.1
21	0	19	*b *80*	b 58	164	212	144	65	12	.1	.1	.1
22	0	19	b 76	64	170	220	137	64	9	.1	.1	**.1
23	0	19	b 70	69	172	227	129	82	7.5	.1	.1	.1
24	0	20	b 64	71	170	230	117	*104*	6.0	.1	.1	.1
25	0	23	b 59	b *75*	*175*	232	110	98	5.4	.1	**.1	.1
26	0	25	b 54	*b 72	174	236	100	85	3.3	.1	.1	.1
27	0	26	b 52	b 70	170	241	96	76	2.4	.1	.1	.1
28	0	28	b 50	72	174	247	83	75	1.5	.1	.1	.1
29	0	30	b 51	76	-------	249	*75*	72	1.0	.1	.1	.1
30	0	*32*	b 52	b 79	-------	*254*	82	64	*.4*	.1	0	.1
31	0	-------	b *52*	b *88*	-------	254	-------	*60*	-------	.1	.1	-------
Total	1.4	392.7	1,691	1,913	3,557	6,242	5,293	2,128	747.5	6.9	2.6	3.0
Mean	0.05	13.1	54.5	61.7	127	201	176	68.6	24.9	0.23	0.08	0.10
Ac-ft	2.8	779	3,350	3,790	7,060	12,380	10,500	4,220	1,480	14	5.2	6.0

Calendar year 1953	Max 618	Min 0	Mean 149	Ac-ft 107,800
Water year 1953–54	Max 258	Min 0	Mean 60.2	Ac-ft 43,590

Peak discharge (base, 330 cfs)_____ No peak above base.

*Discharge measurement or observation of no flow made on this day.
**Field estimate made on this day.
b Stage-discharge relation affected by ice.

NOTE.—Backwater from beaver dam Oct. 7 to Nov. 11.

LITTLE HUMBOLDT RIVER NEAR PARADISE VALLEY, NEV.

Location.—Lat 41°25′, long 117°22′, in SE¼ sec. 20, T. 41 N., R. 41 E., on right bank 3½ miles downstream from Bullshead Ranch and 9½ miles southeast of Paradise Valley.

Drainage area.—1,030 sq mi, approximately.

Records available.—October 1921 to June 1928 (fragmentary), October 1943 to September 1954.

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.—11 years (1943–54), 25.3 cfs (18,320 acre-ft per year).

Extremes.—Maximum discharge during year, 19 cfs Apr. 21, 22 (gage height, 1.76 ft); minimum, 4.5 cfs Aug. 12.

1921–28, 1943–54: Maximum discharge, 1,100 cfs Feb. 2, 1952 (gage height, 7.71 ft); minimum, that of Aug. 12, 1954.

Remarks.—Records good. Bullshead Ranch diverts water for irrigation above station. Station is above all diversions in Paradise Valley.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*6.1*	*6.6*	6.6	*5.6*	*8.1*	11	13	*18*	7.1	*7.1*	6.1	*6.1*
2	6.1	6.6	6.6	5.6	8.1	11	13	17	*6.6*	7.1	6.1	6.1
3	6.1	6.6	*7.1*	6.1	8.1	*10*	12	17	6.6	6.6	6.1	6.1
4	6.1	7.1	7.1	6.1	8.1	10	*11*	17	6.6	6.6	6.1	6.1
5	6.1	7.1	6.6	6.1	8.1	10	11	17	6.6	6.6	6.1	6.1
6	6.1	6.6	6.6	6.1	8.1	10	11	16	6.6	*6.1*	6.1	6.1
7	6.1	7.1	6.6	6.1	8.1	10	11	15	6.6	6.1	6.1	6.1
8	6.6	7.1	6.6	6.6	8.1	11	11	15	6.6	6.1	6.1	*6.6*
9	*6.6*	*6.6*	*6.6*	*6.6*	8.1	11	13	15	*6.6*	6.1	*5.6*	6.6
10	6.6	6.6	6.6	6.1	8.1	12	14	15	6.6	6.6	*5.0*	6.6
11	6.6	6.6	6.6	6.1	8.1	13	14	15	7.1	6.6	5.6	6.6
12	6.6	6.6	6.6	6.1	9.4	*14	14	15	*8.1*	6.6	5.0	6.6
13	6.1	6.6	6.6	6.1	11	13	14	15	7.6	6.6	5.0	6.6
14	6.6	7.1	6.6	6.1	11	13	13	15	8.1	6.6	5.6	6.6
15	6.6	7.1	6.6	6.1	11	14	*13	14	7.6	7.1	5.6	6.6
16	6.6	7.1	6.6	7.1	12	*17*	14	14	7.6	6.6	5.6	6.6
17	6.1	7.1	6.6	6.6	*13*	17	16	13	7.1	6.6	5.6	6.6
18	6.1	*6.6	6.6	7.1	13	16	16	13	7.1	6.6	5.6	6.6
19	6.6	6.6	7.1	6.6	11	16	17	12	*7.1	7.1	5.6	6.6
20	6.6	6.6	7.1	6.6	10	15	17	11	7.1	6.6	5.6	6.6
21	*6.6*	*6.6*	7.1	*6.6*	10	14	*18*	*11	*6.6*	*6.6*	6.1	*6.6*
22	*6.1	6.6	6.6	7.1	11	14	18	9.4	6.6	*6.6	5.6	6.6
23	6.1	6.6	*6.6	7.6	10	14	17	9.4	6.6	6.6	5.6	6.6
24	6.6	7.1	6.6	7.6	10	14	17	8.7	6.6	6.6	6.1	*6.6
25	*7.1*	6.6	6.1	7.1	10	14	17	8.7	6.6	6.6	6.1	6.6
26	6.1	6.6	6.1	7.1	11	14	17	8.7	6.6	6.6	6.1	6.6
27	6.1	6.6	6.1	7.1	11	14	17	8.1	6.6	6.6	*6.6	6.6
28	6.1	6.6	6.1	*7.6	11	14	*17	8.1	6.6	6.6	6.6	6.6
29	6.1	6.6	6.1	7.6	------	14	17	7.6	6.6	6.1	6.6	6.6
30	7.1	*7.6*	6.1	7.6	------	13	18	7.6	6.6	6.1	6.1	6.6
31	6.6	------	*5.6*	*8.1*	------	13	------	*7.1*	------	6.1	6.1	------
Total	197.6	203.5	203.1	206.6	274.5	406	441	393.4	207.0	203.1	181.8	194.5
Mean	6.37	6.78	6.55	6.66	9.80	13.1	14.7	12.7	6.90	6.55	5.86	6.48
Ac-ft	392	404	403	410	544	805	875	780	411	403	361	386

Calendar year 1953	Max 56	Min 5.6	Mean 13.9	Ac-ft 10,040
Water year 1953–54	Max 18	Min 5.0	Mean 8.53	Ac-ft 6,170

Peak discharge (base, 35 cfs)—— No peak above base.

*Discharge measurement made on this day.

MARTIN CREEK NEAR PARADISE VALLEY, NEV.

Location.—Lat 41°32'00", long 117°25'40", in NW¼SW¼ sec. 12, T. 42 N., R. 40 E., on left bank (revised) 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 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,700 ft (from extension of river-profile map). Prior to Oct. 28, 1938, at site 100 ft upstream at different datum. Oct. 28, 1938, to Feb. 25, 1943, at site 90 ft downstream at datum 0.53 ft lower.

Average discharge.—32 years (1921–26, 1927–54), 29.5 cfs (21,360 acre-ft per year).

Extremes.—Maximum discharge during year, 177 cfs Mar. 9 (gage height, 2.71 ft); minimum, 3.7 cfs Aug. 2, 3, 4.

1921–54: Maximum discharge, 9,000 cfs Jan. 21, 1943 (gage height, 11.1 ft, datum then in use), by slope-area determination of peak flow; minimum, 1.8 cfs Feb. 6, 1945.

Remarks.—Records good. No diversion above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*5.2*	*6.6*	8.6	7.0	9.5	12	*14*	25	15	*7.0*	*4.0*	*5.2*
2	5.2	6.6	8.2	7.0	8.8	*11*	14	25	14	7.0	4.0	5.2
3	5.2	6.6	8.2	7.4	*8.3*	11	14	24	14	6.6	4.0	5.6
4	5.2	6.6	8.6	8.2	8.9	12	14	23	12	6.3	4.0	5.6
5	5.2	7.8	8.6	7.8	9.1	12	18	25	13	5.9	4.0	5.6
6	5.2	7.4	8.6	7.8	9.5	12	22	28	14	5.2	4.3	5.6
7	5.2	7.4	8.6	8.6	9.5	12	21	30	14	4.9	4.3	5.6
8	5.2	7.4	7.8	7.4	9.9	19	20	32	12	4.9	4.3	5.6
9	5.6	7.4	9.5	6.6	10	*112*	19	35	14	4.9	4.0	5.6
10	5.6	7.4	8.2	7.4	10	53	18	*38*	*18*	4.9	4.3	5.6
11	5.6	7.4	6.3	7.8	12	29	18	36	17	4.6	4.6	5.2
12	5.6	7.4	7.8	8.2	12	*23	19	35	14	4.6	4.6	5.2
13	5.9	7.4	7.8	7.0	*17*	20	20	34	14	4.6	4.3	5.2
14	5.9	7.8	8.2	7.8	15	20	23	32	14	4.6	4.6	5.2
15	5.9	7.8	8.6	8.6	13	19	*25	32	13	4.9	4.6	5.2
16	5.9	7.8	9.5	9.1	12	18	25	32	14	4.6	4.9	5.2
17	5.9	8.2	8.6	9.5	12	17	28	31	14	4.6	4.9	5.6
18	5.9	*8.2	9.1	8.2	12	12	32	30	12	4.6	4.9	*5.9*
19	6.3	7.0	9.5	8.2	9.5	17	33	30	*12	4.6	4.9	5.9
20	6.3	8.6	*10*	7.8	12	15	30	28	11	4.6	4.9	5.6
21	6.3	8.2	8.2	7.4	12	14	30	*26	10	4.3	5.2	5.6
22	*6.3	9.1	6.9	10	12	12	30	25	10	*4.6	5.2	5.6
23	6.3	9.5	*5.6	*12*	12	14	30	22	9.1	4.6	5.2	5.6
24	6.3	*10*	6.3	10	12	14	31	21	8.6	4.3	5.2	*5.6
25	5.9	9.5	6.6	7.8	14	15	*34*	19	8.2	4.3	5.6	5.2
26	5.9	9.1	7.0	*5.9*	14	14	33	19	7.8	4.3	*5.9*	5.2
27	6.3	9.1	8.2	10	12	14	33	17	7.8	4.3	*5.9	5.2
28	*6.6*	8.6	6.3	*10	12	14	*31	17	7.4	4.3	5.6	5.6
29	6.6	8.2	7.4	10	-------	14	29	17	7.4	*4.0*	5.2	5.6
30	6.6	8.6	6.6	10	-------	14	28	17	*7.0*	4.0	5.2	5.6
31	6.6	-------	6.6	10	-------	13	-------	*15*	-------	4.0	5.2	-------
Total	181.7	238.7	246.0	260.5	320.0	608	736	820	358.3	150.9	147.8	164.2
Mean	5.86	7.96	7.94	8.40	11.4	19.6	24.5	26.5	11.9	4.87	4.77	5.47
Ac-ft	360	473	488	517	635	1,210	1,460	1,630	711	299	293	326

Calendar year 1953	Max 153	Min 4.9	Mean 25.5	Ac-ft 18,450
Water year 1953–54	Max 112	Min 4.0	Mean 11.6	Ac-ft 8,400

Peak discharge (base, 100 cfs)..... Mar. 9 (10 a.m.) 177 cfs (2.71 ft).

*Discharge measurement made on this day.

HUMBOLDT RIVER NEAR ROSE CREEK, NEV.

Location.—Lat 40°52′, long 118°00′, in NW¼ sec. 36, T. 35 N., R. 35 E., on right bank 5½ miles southwest of Rose Creek and 15½ miles southwest of Winnemucca.

Records available.—April 1948 to September 1954.

Gage.—Water-stage recorder.

Average discharge.—6 years, 273 cfs (197,600 acre-ft per year).

Extremes.—Maximum discharge during year, 278 cfs Apr. 3 (gage height, 2.79 ft); minimum, 10 cfs Aug. 30.

1948–54: Maximum discharge, 5,810 cfs May 8, 1952 (gage height, 11.41 ft); minimum, 6.5 cfs Sept. 2, 1949.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	30	48	b 72	92	169	201	48	34	15	13	11
2	32	32	42	b 73	93	171	241	55	32	15	12	11
3	32	32	44	b 74	100	171	271	48	31	14	12	11
4	32	32	47	76	99	171	248	42	30	14	12	21
5	32	32	49	78	103	173	220	39	28	14	13	15
6	31	31	49	79	104	174	203	35	27	14	13	14
7	31	31	50	78	104	176	187	32	26	14	13	13
8	31	31	52	b 74	107	178	191	31	25	14	13	13
9	31	31	53	b 72	111	178	182	30	*24	*14	13	13
10	30	31	55	b 70	113	174	178	29	23	14	13	12
11	31	31	b 57	74	114	174	180	28	23	14	13	12
12	30	31	58	73	114	*173	162	27	22	14	13	12
13	31	31	58	b 70	115	171	*162	26	21	13	13	12
14	31	31	61	b 72	118	171	167	26	21	13	13	12
15	32	31	61	74	120	171	154	25	20	13	13	12
16	31	30	61	79	121	174	146	25	20	13	13	12
17	31	31	62	78	124	178	122	25	*19	13	13	12
18	32	*30	64	76	128	178	107	28	18	13	13	12
19	32	30	65	76	133	180	101	*35	18	13	13	12
20	32	32	65	b 75	136	183	83	50	17	13	13	12
21	32	33	66	b 70	139	185	70	45	16	13	12	12
22	*32	36	92	73	142	182	67	52	16	13	12	*12
23	31	36	*b 83	80	147	171	65	53	15	*13	12	12
24	31	39	b 80	88	160	180	60	51	15	13	12	12
25	31	42	b 78	85	169	187	47	49	15	13	*12	12
26	32	42	b 78	b 80	166	185	40	45	15	13	12	13
27	32	42	80	76	167	183	41	39	15	13	12	13
28	30	41	b 76	*78	167	176	40	38	15	13	12	12
29	28	41	b 73	93	-------	183	40	38	15	13	11	12
30	28	42	b 70	93	-------	191	40	38	15	13	11	12
31	28	-------	b 71	89	-------	197	-------	35	-------	13	11	-------
Total	962	1,015	1,942	2,398	3,506	5,508	4,016	1,167	631	417	386	376
Mean	31.0	33.8	62.6	77.4	125	178	134	37.6	21.0	13.5	12.5	12.5
Ac-ft	1,910	2,010	3,850	4,760	6,950	10,920	7,970	2,310	1,250	827	766	746

Calendar year 1953	Max 632	Min 28	Mean 158	Ac-ft 114,200
Water year 1953–54	Max 271	Min 11	Mean 61.2	Ac-ft 44,270

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

NOTE.—No gage-height record May 7–19, June 1 to July 22; discharge estimated on basis of 4 discharge measurements and records for station near Imlay.

HUMBOLDT-LOVELOCK IRRIGATION, LIGHT & POWER CO.'S FEEDER CANAL NEAR IMLAY, NEV.

Location.—Lat 40°40′, long 118°12′, in NE¼ sec. 1, T. 32 N., R. 33 E., on left bank 3 miles northwest of Imlay and 9 miles downstream from headgates.

Records available.—October 1946 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,170 ft (from topographic map).

Extremes.—No flow for entire year.

1946–54: Maximum discharge, 117 cfs Apr. 25, 1952 (gage height, 3.69 ft); no flow for long periods.

Remarks.—No flow since June 17, 1953. Observations of no flow generally made monthly. Figures for 1953 calendar year are as follows: Maximum daily discharge, 109 cfs; minimum, no flow; runoff, 15,550 acre-ft. This canal diverts water from Humboldt River in NW¼ sec. 29, T. 33 N., R. 35 E., for storage in Taylor-Pitt Reservoir near Humboldt. Water is released during irrigation season, about 3 miles west of Humboldt, and conveyed through Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal to Rye Patch Reservoir, from which it is later released and carried in natural river channel to Lovelock district for irrigation.

HUMBOLDT RIVER NEAR IMLAY, NEV.

Location.—Lat 40°41'30", long 118°12'10", in SE¼ sec. 25, T. 33 N., R. 33 E., on right bank 1 mile upstream from old Calahan Dam and 4 miles northwest of Imlay.

Drainage area.—13,500 sq mi, approximately.

Records available.—June 1935 to September 1941, April 1945 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,130 ft (from topographic map). Prior to Apr. 28, 1945, at site 1 mile downstream at different datum.

Average discharge.—15 years, 164 cfs (118,700 acre-ft per year).

Extremes.—Maximum discharge during year, 276 cfs Apr. 4 (gage height, 3.26 ft); no flow July 25 to Aug. 13.

1935–41, 1945–54: Maximum discharge, 6,080 cfs May 9, 1952 (gage height, 12.15 ft); no flow at times in several years.

Remarks.—Records good except those for periods of ice effect, which are fair. Humboldt-Lovelock Irrigation, Light & Power Co.'s feeder canal diverts water from river above station to Pitt-Taylor Reservoir. 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 during 1954 water year. Flow affected by many other diversions above station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*29*	*30*	*42*	71	87	*161*	196	45	*22*	*3.5*	*0*	*6.8*
2	29	30	43	71	86	163	201	45	22	3.0	0	6.8
3	30	32	44	72	*84*	166	238	*52*	21	2.3	0	6.8
4	30	34	48	74	91	166	*270*	40	20	2.1	0	6.8
5	30	33	50	78	89	164	251	36	19	1.8	0	7.4
6	34	33	49	82	92	167	229	32	19	1.6	0	*14*
7	31	33	50	*86	93	168	209	30	18	1.4	0	12
8	31	32	51	82	94	170	192	29	18	1.4	0	11
9	31	32	52	74	*98	176	192	28	18	1.3	0	10
10	33	32	54	70	102	176	182	27	18	1.4	0	10
11	*35*	32	53	72	106	178	176	26	17	1.4	0	8.9
12	32	32	49	72	107	179	176	24	17	1.3	0	8.9
13	30	32	54	70	106	*176	164	24	16	1.1	0	8.9
14	31	32	57	72	109	172	161	24	16	2.1	.1	8.9
15	32	32	59	74	109	172	*163	22	15	3.0	3.9	8.9
16	32	32	60	76	112	170	150	22	15	2.8	4.8	9.3
17	32	32	61	78	114	178	140	21	15	1.4	4.8	9.3
18	32	32	62	77	116	179	122	*20*	14	.9	5.4	9.3
19	32	31	64	74	120	184	103	20	13	.8	5.4	9.6
20	*33	32	64	72	125	184	88	20	14	.4	5.1	9.6
21	32	35	64	*68*	129	185	74	21	7.7	.3	5.4	9.6
22	32	36	61	71	130	187	57	23	7.1	.1	5.7	9.6
23	33	37	*84*	76	134	185	49	24	6.6	.1	6.0	9.3
24	32	37	79	81	138	176	47	27	4.4	.1	6.3	9.6
25	32	39	77	81	150	182	45	*29	3.5	*0*	6.3	9.6
26	32	40	77	78	159	188	43	31	*3.2*	0	7.1	10
27	32	*42*	77	76	159	185	*42*	26	3.5	0	6.8	9.6
28	32	*42	77	78	*161*	184	42	24	3.5	*0	*7.7*	9.6
29	31	42	76	79	-------	178	45	24	3.5	0	7.7	9.6
30	31	42	73	86	-------	184	45	22	*3.5	0	7.1	10
31	30	-------	70	*90*	-------	*190*	-------	23	-------	0	*6.8	-------
Total	978	1,032	1,881	2,361	3,200	5,473	4,092	861	393.5	35.6	102.4	279.7
Mean	31.5	34.4	60.7	76.2	114	177	136	27.8	13.1	1.15	3.30	9.32
Ac-ft	1,940	2,050	3,730	4,680	6,350	10,860	8,120	1,710	780	71	203	555

Calendar year 1953	Max 534	Min 27	Mean 126	Ac-ft 91,420
Water year 1953–54	Max 270	Min 0	Mean 56.7	Ac-ft 41,050

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

NOTE.—Stage-discharge relation affected by ice Dec. 13–16, Dec. 23 to Jan. 23, Jan. 26–28.

RYE PATCH RESERVOIR NEAR RYE PATCH, NEV.

Location.—Lat 40°28'15", long 118°18'20", in NE¼ sec. 18, T. 30 N., R. 33 E., at control works at left end of Rye Patch Dam, 2 miles northwest of Rye Patch.

Drainage area.—13,700 sq mi, approximately.

Records available.—February 1936 to September 1954.

Gage.—Mercury indicating gage. Datum of gage is at mean sea level (Southern Pacific Railroad datum).

Extremes.—Maximum contents during year, 95,860 acre-ft Mar. 20–22, 25, Mar. 28 to Apr. 2 (elevation, 4,124.20 ft); minimum observed, 8 acre-ft Sept. 5 (elevation, 4,073.60 ft).

1936–54: Maximum contents, 196,900 acre-ft Apr. 9, 1946 (elevation, 4,134.62 ft); minimum observed, that of Sept. 5, 1954.

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 ft (sill of trash-rack structure) and 4,133.0 ft (top of spillway gates). Dead storage negligible. Elevation of spillway (gate sill) is 4,116 ft. Water is used for irrigation on Humboldt project.

Cooperation.—Records of daily elevation furnished by Pershing County Water Conservation District of Nevada.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82,420	78,390	77,690	80,570	84,640	89,980	95,860	81,310	52,130	36,010	13,390	1,110
2	82,420	78,390	77,690	80,570	85,010	89,980	95,860	80,200	51,080	35,360	13,110	376
3	82,050	78,390	78,040	80,570	85,010	90,360	95,460	79,460	50,300	34,550	12,900	11
4	81,680	78,390	78,040	80,570	85,380	90,750	95,460	78,390	49,770	33,570	12,710	9
5	81,310	78,390	78,040	80,940	85,380	90,750	95,460	77,340	49,510	32,470	12,590	8
6	81,310	78,390	78,040	80,940	85,750	91,140	95,050	76,280	49,250	31,560	12,460	138
7	81,310	78,390	78,040	81,310	85,750	91,140	95,050	75,580	48,990	30,030	12,400	245
8	80,940	78,390	78,040	81,310	85,750	91,530	95,050	74,530	48,730	28,890	12,270	286
9	80,570	78,390	78,390	81,680	86,120	91,920	94,650	73,470	47,750	27,610	12,080	341
10	80,200	78,040	78,390	81,680	86,120	92,300	94,650	72,770	48,200	26,520	11,830	411
11	79,460	78,040	78,390	82,050	85,750	92,690	94,650	72,060	48,200	25,200	11,590	472
12	78,740	78,040	78,390	82,050	85,750	93,080	94,240	71,400	48,200	24,170	11,310	527
13	78,390	78,040	78,390	*82,420	85,750	93,080	93,850	70,400	47,980	23,200	10,860	592
14	78,390	78,040	78,740	*82,420	86,120	93,850	93,460	68,740	47,750	22,100	10,420	651
15	78,040	77,690	78,740	*82,420	86,490	93,850	93,080	67,750	47,290	20,980	10,020	689
16	78,390	77,690	78,740	*82,790	87,260	94,240	93,080	67,080	47,290	19,980	9,560	759
17	78,390	77,690	78,740	*82,790	87,260	94,650	92,690	66,090	46,840	19,050	9,140	794
18	78,390	77,690	78,740	*82,790	87,650	95,050	92,300	65,110	45,930	18,340	8,620	847
19	78,390	77,690	79,100	*82,790	87,650	95,460	91,920	63,870	45,470	17,650	8,230	887
20	78,390	77,690	79,100	*83,160	87,650	95,860	91,140	62,940	44,560	17,020	7,710	929
21	78,390	77,690	79,100	*83,160	88,040	95,860	90,750	61,690	43,650	16,560	7,090	970
22	78,390	77,690	79,100	*83,160	88,040	95,860	89,980	61,070	43,270	16,100	6,700	1,020
23	78,390	77,690	79,460	*83,160	88,430	*95,460	87,650	60,140	42,880	15,690	6,240	1,060
24	78,390	77,690	79,460	83,530	88,820	95,460	86,490	59,200	42,500	15,120	5,710	1,100
25	78,390	77,690	79,830	83,530	89,200	95,860	86,490	58,630	41,920	14,800	5,260	1,150
26	78,390	77,690	79,830	83,530	89,200	95,460	85,380	57,470	40,380	14,560	4,710	1,200
27	78,390	77,690	79,830	83,900	89,590	95,460	84,640	56,320	40,380	14,320	4,200	1,230
28	78,390	77,690	79,830	83,900	89,590	95,860	83,530	55,750	39,620	14,110	3,670	1,280
29	78,390	77,690	80,200	84,270	-------	95,860	82,790	55,170	38,240	13,890	3,090	1,320
30	78,390	77,690	80,200	84,270	-------	95,860	82,050	54,300	37,030	13,820	2,410	1,350
31	78,390	-------	80,200	84,640	-------	95,860	-------	53,180	-------	13,680	1,780	-------
(†)	4121.90	4121.80	4122.15	4122.75	4123.40	4124.20	4122.40	4117.95	4114.20	4104.50	4088.60	4087.15
(‡)	−4,770	−700	+2,510	+4,440	+4,950	+6,270	−13810	−28870	−16150	−23350	−11900	−430

†Elevation, in feet, at end of month.
‡Change in contents, in acre-feet.
* Elevation affected by wind; contents interpolated.

NOTE.—Change in contents: Calendar year 1953, −53,700 acre-ft; water year 1954, −81,810 acre-ft.

HUMBOLDT RIVER NEAR RYE PATCH, NEV.

Location.—Lat 40°27'33", long 118°18'30", in NE¼ sec. 18, T. 30 N., R. 33 E., 1,000 ft downstream from Rye Patch Dam and 1½ miles northwest of Rye Patch.

Drainage area.—13,700 sq mi, approximately.

Records available.—January 1896 to December 1909, September 1910 to September 1922, September 1924 to September 1932 (fragmentary), October 1935 to September 1941, October 1943 to September 1954.

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.—40 years, 209 cfs (151,300 acre-ft per year).

Extremes.—Maximum discharge during year, 584 cfs July 7 (gage height, 3.69 ft); minimum daily, 0.3 cfs Sept. 30.

1896–1922, 1924–32, 1935–41, 1943–54: Maximum discharge, 4,720 cfs May 11, 12, 1952 (gage height, 10.26 ft); practically no flow at times during most years.

Remarks.—Records good. Flow completely regulated by Rye Patch Reservoir (see p. 209). Many diversions above station for irrigation. Records of chemical analyses and water temperatures for the water year 1954 are given in WSP 1353.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	115	42	13	2.5	2.3	2.5	157	447	231	413	85	297
2	114	35	13	2.7	2.3	2.5	171	430	247	408	85	198
3	119	35	13	2.7	2.5	2.7	173	430	252	410	66	45
4	139	35	13	2.7	2.5	2.5	203	458	240	433	72	84
5	130	35	13	2.7	2.5	2.5	203	455	238	463	82	23
6	119	35	13	2.7	2.5	2.7	188	447	226	492	74	.8
7	169	35	13	*2.5	2.5	2.7	167	421	217	572	71	.7
8	206	35	13	2.5	2.5	2.7	199	427	163	578	93	1.0
9	224	35	13	2.5	*2.7	2.7	222	435	82	539	105	1.0
10	231	35	12	2.5	2.5	2.7	224	403	80	512	110	1.0
11	235	35	13	2.3	2.7	2.7	257	447	40	495	134	1.0
12	243	35	13	2.2	2.7	2.7	280	463	45	495	173	1.1
13	215	35	34	2.5	2.7	*2.5	304	466	87	492	197	.8
14	161	35	47	2.5	2.7	2.5	325	447	112	492	197	.8
15	54	35	31	2.5	2.7	2.7	*307	435	149	472	212	.8
16	3.3	28	31	2.5	2.5	2.7	300	463	173	444	217	1.0
17	2.8	12	31	2.5	2.5	2.7	297	475	203	378	215	1.0
18	2.8	13	32	2.3	2.5	2.7	333	455	206	307	203	1.0
19	2.7	13	32	2.3	2.5	2.7	362	447	201	290	212	.7
20	*2.7	13	31	2.3	2.5	2.7	370	455	201	274	222	.7
21	2.5	13	31	2.5	2.5	46	372	463	212	235	219	
22	2.2	14	31	2.5	2.5	188	424	444	284	228	231	.6
23	2.5	13	17	2.5	2.5	182	478	366	300	190	238	
24	2.5	13	2.8	2.5	2.5	178	489	352	320	145	233	
25	2.5	13	2.8	2.5	2.5	161	489	*375	372	123	243	.5
26	2.5	13	2.8	2.7	2.5	159	495	444	427	143	247	
27	2.5	13	2.5	2.5	2.7	180	504	419	408	126	252	
28	2.5	*13	2.7	2.5	2.7	167	447	354	408	*90	255	.4
29	2.5	13	2.7	2.3	-------	136	441	328	421	80	300	
30	2.5	13	2.7	2.3	-------	136	447	300	*413	80	310	.3
31	38	-------	2.7	2.3	-------	136	-------	225	-------	76	*302	-------
Total	2,551.0	742	524.7	77.0	71.2	1,715.8	9,628	12,976	6,908	10,480	5,655	615.2
Mean	82.3	24.7	16.9	2.48	2.54	55.3	321	419	230	338	182	20.5
Ac-ft	5,060	1,470	1,040	153	141	3,400	19,100	25,740	13,700	20,790	11,220	1,220

Calendar year 1953	Max 570	Min 2.2	Mean 184	Ac-ft 133,000
Water year 1953–54	Max 578	Min 0.3	Mean 142	Ac-ft 103,000

*Discharge measurement made on this day.

NOTE.—No gage-height record Sept. 19–30; discharge estimated on basis of field observations.

HUMBOLDT RIVER NEAR LOVELOCK, NEV.

Location.—Lat 40°03′, long 118°28′, in NE¼ sec. 11, T. 25 N., R. 31 E., on right bank 900 ft below breached dam of Lovelock Land and Development Co. and 9 miles south of Lovelock.

Drainage area.—14,200 sq mi, approximately.

Records available.—February 1912 to September 1927, June 1950 to September 1954.

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 13, 1950, to Nov. 13, 1951, water-stage recorder at site 300 ft upstream at same datum.

Extremes.—Maximum discharge during year, 188 cfs Aug. 24 (gage height, 3.28 ft); minimum recorded, 0.1 cfs Aug. 23.

1912–27, 1950–54: Maximum discharge, 3,540 cfs May 19, 1952 (gage height, 9.36 ft); no flow for several months during many years prior to construction of Rye Patch Dam.

Remarks.—Records good except those for periods of no gage-height record, which are poor. Flow regulated by Rye Patch Reservoir since Feb. 20, 1936 (see p. 209) and irrigation in Lovelock Valley.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	5.6	5.8	10		9.4	3.6	13	6.5	*2.0*	5.8	3.1
2	6.6	6.3	5.8	11		9.0	3.3	*26*	4.8	4.0	5.3	3.0
3	3.6	*7.0*	6.1	9.8		9.0	7.6	22	4.8	4.3	4.5	4.0
4	9.4	6.6	7.6	6.6		9.0	2.8	19	10	4.3	4.5	*4.5*
5	21	7.0	6.3	7.0	ª8.0	9.0	4.3	13	9.4	4.3	4.5	2.2
6	26	6.6	5.8	*14*		8.4	4.5	7.5	8.0	3.8	4.0	3.0
7	14	6.3	6.1	*14		8.4	5.3	3.0	11	4.3	1.6	3.0
8	16	6.1	6.1			8.4	7.4	4.0	14	6.8	1.5	2.0
9	19	6.3	6.3		*10	9.0	14	3.3	26	4.0	2.0	3.3
10	4.0	6.1	6.1		10	8.0	18	5.6	*39*	4.5	4.5	4.5
11	3.3	5.6	6.4	ª7.0	10	8.0	13	10	23	14	9.4	4.3
12	3.3	5.6	ª5.6		9.0	6.6	9.8	3.0	11	*29*	10	4.0
13	15	5.6	ª5.6		9.8	*1.8	12	1.6	4.3	20	10	2.6
14	*29*	5.8	5.8		10	ª*.6*	11	2.3	3.7	7.0	9.4	2.4
15	7.0	4.5	7.3		11	ª1.0	*10	4.0	11	7.3	8.4	*1.6*
16	6.3	*1.8*	*4.0*		14	4.3	8.9	2.0	11	27	8.0	2.1
17	2.8	4.0	4.8		23	5.6	12	1.9	6.4	7.3	8.4	3.8
18	2.6	3.6	5.0		*25*	5.6	2.6	3.1	9.0	4.5	8.0	3.8
19	2.6	4.6	5.8		22	5.6	6.5	6.6	18	3.6	7.3	3.0
20	*2.2	4.8	5.8		21	5.6	7.9	2.2	18	3.3	5.3	2.6
21	1.5	4.0	5.3		19	5.0	2.2	*1.6*	16	4.0	5.0	2.8
22	ª1.1	4.5	6.3		16	1.5	*2.0*	2.6	20	3.3	2.5	3.8
23	ª*.8*	5.0	6.4	ª8.0	14	1.0	13	7.6	15	4.8	*.8*	3.8
24	ª4.0	5.0	8.5		11	7.4	18	16	5.0	9.6	*63*	3.3
25	8.0	5.3	*10*		13	29	8.4	*4.6	3.6	13	5.8	3.1
26	7.6	5.6	8.8		12	*31*	9.8	2.3	4.3	23	5.3	3.1
27	7.0	5.8	8.7		9.4	12	6.8	16	10	21	3.8	3.1
28	6.3	*6.1	8.6		9.4	13	23	19	5.6	*4.5	2.6	3.1
29	5.8	6.1	9.5		-------	11	3.6	12	*3.0*	3.3	5.3	3.1
30	5.6	6.1	10		-------	8.0	*31*	9.0	*3.0	5.3	5.8	3.3
31	5.6	-------	9.3		-------	4.5	-------	14	-------	7.6	*3.1	-------
Total	254.6	163.3	209.5	256.4	342.6	255.7	282.3	257.8	334.4	264.7	225.4	95.3
Mean	8.21	5.44	6.76	8.27	12.2	8.25	9.41	8.32	11.1	8.54	7.27	3.18
Ac-ft	505	324	416	509	680	507	560	511	663	525	447	189

Calendar year 1953	Max 56	Min 0.8	Mean 14.1	Ac-ft 10,190
Water year 1953–54	Max 63	Min 0.6	Mean 8.06	Ac-ft 5,840

*Discharge measurement made on this day.
ª No gage-height record; discharge estimated on basis of weather records and records for Humboldt River near Rye Patch.

PYRAMID AND WINNEMUCCA LAKES BASIN

PYRAMID LAKE NEAR NIXON, NEV.

Location.—Lat 39°50'30", long 119°28'00", in SE¼SE¼ sec. 24, T. 23 N., R. 22 E., at southwest corner of concrete bridge No. 296 B, 150 ft southwest of milepost 297, 6 miles west of Nixon, and 11.5 miles south along Southern Pacific Railroad from station at Sutcliffe.

Records available.—1867 to 1925 (occasional elevations in some years), June 1926 to September 1954.

Gage.—Benchmark N-21 of U. S. Coast and Geodetic Survey at elevation of 3,940.04 ft above mean sea level, datum of 1929. Prior to January 1934, elevations were determined from benchmark No. 1 of General Land Office, referred to general adjustment of 1912 (to convert these records to the datum of 1929, add 0.56 ft).

Extremes.—1926–54: Maximum elevation observed, 3,848.5 ft, June 1926; minimum observed, 3,801.43 ft Nov. 15, 1950.

Elevation, in feet, water year October 1953 to September 1954

Oct. 24	3,808.20	Feb. 27	3,807.30
Nov. 21	3,807.93	Apr. 1	3,807.35
Dec. 26	3,807.64	June 10	3,807.05
Jan. 27	3,807.42	July 28	3,806.56

TRUCKEE RIVER NEAR TRUCKEE, CALIF.

Location.—Lat 39°17'30", long 120°12'30", in SW¼NE¼ sec. 28, T. 17 N., R. 16 E., on left bank 1.4 miles upstream from Donner Creek and 2.5 miles southwest of Truckee.

Drainage area.—548 sq mi.

Records available.—December 1944 to September 1954.

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

Average discharge.—9 years (1945–54), 362 cfs (262,100 acre-ft per year).

Extremes.—Maximum discharge during year, 1,540 cfs Mar. 9 (gage height, 3.88 ft); minimum, 89 cfs June 11.

1944–54: Maximum discharge, 6,480 cfs Nov. 20, 1950 (gage height, 7.62 ft), from rating curve extended above 2,300 cfs on basis of slope-area determination of peak flow; minimum, 11 cfs Jan. 27, 1948.

Remarks.—Records good. Flow regulated by Lake Tahoe Reservoir (operating capacity, about 730,000 acre-ft).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	298	*306*	*316*	*298*	*113*	293	*152*	221	149	149	*398*	*431*
2	298	316	316	293	113	293	154	221	149	146	398	*455*
3	298	316	316	293	113	302	163	232	157	143	403	455
4	298	311	316	293	*113	320	178	267	146	143	403	455
5	*293*	*311	316	*252	113	320	271	306	129	140	403	455
6	293	311	316	118	113	320	228	340	113	140	403	455
7	293	306	316	116	116	320	172	392	108	137	403	455
8	293	306	316	113	118	527	172	*443*	106	135	403	455
9	293	306	311	111	118	*1,160*	169	376	99	135	408	449
10	293	311	298	111	121	564	169	325	96	132	408	449
11	293	311	*298	108	183	355	178	330	*94*	129	408	449
12	293	311	298	108	239	288	200	316	113	126	408	455
13	293	311	298	108	247	255	224	*302	111	126	408	455
14	*293	*385*	298	108	232	228	263	306	111	126	408	455
15	293	316	298	*103*	224	214	*275*	311	116	124	408	455
16	293	316	298	108	224	*200	*302	330	124	124	414	455
17	298	311	298	121	232	184	360	376	116	*121*	414	455
18	*316*	311	298	116	228	*175*	381	398	116	121	414	455
19	306	311	302	108	224	166	370	403	129	121	414	455
20	302	311	302	108	224	163	355	350	135	262	414	449
21	302	311	302	108	221	157	365	275	137	*408*	*420*	449
22	298	311	298	108	224	154	392	232	*137	*408	420	449
23	298	316	*293*	146	228	154	392	218	132	408	414	449
24	298	325	298	135	235	152	381	210	124	408	414	455
25	298	320	293	121	239	*146*	360	194	116	408	414	455
26	298	320	293	118	243	146	350	181	124	408	*414	455
27	293	320	298	116	247	149	*408*	172	*160*	408	414	*455
28	293	320	298	113	*251*	152	330	175	157	403	420	455
29	293	320	298	113	-------	152	288	169	152	403	420	455
30	293	320	298	113	-------	152	263	157	152	403	420	455
31	298	-------	298	113	-------	149	-------	*152*	-------	403	414	-------
Total	9,192	9,417	9,392	4,398	5,296	8,310	8,265	8,680	3,808	7,248	12,724	13,584
Mean	297	314	303	142	189	268	276	280	127	234	410	453
Ac-ft	18,230	18,680	18,630	8,720	10,500	16,480	16,390	17,220	7,550	14,380	25,240	26,940

Calendar year 1953	Max 1,880	Min 48	Mean 411	Ac-ft 297,700
Water year 1953–54	Max 1,160	Min 94	Mean 275	Ac-ft 199,000

*Discharge measurement made on this day.

PROSSER CREEK NEAR BOCA, CALIF.

Location.—Lat 39° 22′, long 120°07′, in NW¼ sec. 32, T. 18 N., R. 17 E., on left bank a quarter of a mile upstream from mouth and 2 miles southwest of Boca.

Drainage area.—51 sq mi, approximately.

Records available.—April 1889 to November 1890, October 1902 to June 1903 (gage heights only), June 1954 to September 1954.

Gage.—Water-stage recorder. Datum of gage is 5,574.66 ft above mean sea level (levels by Bureau of Reclamation). April 1889 to November 1890 and October 1902 to June 1903, staff gages at same site at different datums.

Extremes.—Maximum discharge during year, 1,150 cfs Mar. 9 (gage height, 5.18 ft); minimum, 4.6 cfs Jan. 17 (flow dammed by snow).

1951–54: Maximum discharge, that of Mar. 9, 1954; maximum gage height, 5.71 ft Jan. 9, 1953 (backwater from ice); minimum discharge, that of Jan. 17, 1954.

Maximum discharge known, 4,320 cfs Nov. 20, 1950 (gage height, 9.0 ft, present datum, from floodmarks), from rating curve extended above 1,100 cfs.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*12*	*14*	22	20	32	52	*66*	160	103	*46*	*10*	7.4
2	12	16	22	20	*31*	50	76	156	100	43	9.3	7.0
3	12	16	23	21	31	*49*	91	179	*108*	41	8.9	*6.7*
4	13	15	*18*	21	33	52	120	187	104	39	8.5	6.7
5	12	15	21	21	35	55	221	230	89	36	8.5	6.7
6	12	17	22	21	36	61	179	239	76	34	8.5	7.0
7	12	17	20	21	33	61	162	262	69	32	8.9	7.4
8	12	17	23	21	32	157	169	*298*	71	30	8.5	7.4
9	12	17	*25*	20	32	*776*	158	280	68	28	7.8	7.4
10	12	17	24	19	32	434	152	225	62	26	7.8	7.0
11	15	32	24	18	32	*221	160	227	61	25	7.8	7.0
12	14	29	24	17	31	165	175	*225	72	24	7.8	7.4
13	13	29	24	16	31	134	193	210	69	22	7.4	7.4
14	13	39	24	16	31	118	219	208	*70	21	7.8	7.8
15	13	32	24	14	32	108	230	216	80	20	8.1	*9.3*
16	13	27	24	14	32	95	*252	230	93	*19	8.1	9.3
17	13	28	24	*15*	34	83	287	252	84	17	*8.1	8.5
18	19	21	24	16	35	72	308	262	75	16	8.1	8.5
19	*22*	21	25	20	36	71	300	264	75	15	7.8	8.5
20	18	22	*35*	25	37	65	285	241	80	14	7.8	8.1
21	*16	23	26	30	36	64	280	189	86	14	7.8	7.8
22	15	25	25	35	*37	60	298	152	90	14	7.8	7.8
23	15	31	25	*50*	36	60	300	139	85	13	7.4	7.8
24	15	*40	23	42	39	56	282	145	76	13	*7.0*	8.1
25	14	36	22	39	41	52	264	134	68	13	7.0	7.8
26	14	30	22	38	46	52	255	121	63	14	7.8	7.8
27	14	27	21	34	*52*	58	*513*	116	58	13	9.7	*8.1
28	14	25	*20	*34	52	63	241	115	53	12	8.9	7.8
29	14	*25*	20	34	-------	64	210	116	*49*	11	8.1	8.1
30	14	24	20	32	-------	62	199	103	49	*10*	7.8	8.1
31	14	-------	20	32	-------	62	-------	*99*	-------	10	7.4	-------
Total	433	727	716	774	997	3,532	6,445	5,980	2,286	685	252.2	231.7
Mean	14.0	24.2	23.1	25.0	35.6	114	215	193	76.2	22.1	8.14	7.72
Ac-ft	859	1,440	1,420	1,540	1,980	7,010	12,780	11,860	4,530	1,360	500	460

Calendar year 1953	Max 604	Min 12	Mean 94.4	Ac-ft 68,340
Water year 1953–54	Max 776	Min 6.7	Mean 63.2	Ac-ft 45,740

Peak discharge (base, 300 cfs)—Mar. 9 (2:30 p.m.) 1,150 cfs (5.18 ft); Apr. 22 (11:30 p.m.) 381 cfs (3.46 ft); May 9 (1 a.m.) 384 cfs (3.47 ft); May 19 (1:30 a.m.) 319 cfs (3.24 ft).

*Discharge measurement made on this day.

NOTE.—Stage-discharge relation affected by ice Nov. 18–21, Dec. 5, 6, 8, 10–17, Dec. 21 to Feb. 21.

LITTLE TRUCKEE RIVER NEAR HOBART MILLS, CALIF.

Location.—Lat 39°30″, long 120°16″, in sec. 14, T. 19 N., R. 15 E., on right bank half a mile upstream from Independence Creek and 7½ miles northwest of Hobart Mills.

Drainage area.—33 sq mi, approximately.

Records available.—December 1946 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 6,330 ft (from topographic map).

Average discharge.—7 years (1947–54), 94.6 cfs (68,490 acre-ft per year).

Extremes.—Maximum discharge during year, 695 cfs May 8 (gage height 4.20 ft), from rating curve extended above 440 cfs by logarithmic plotting; minimum, 1.7 cfs Sept. 14.

1946–54: 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, which are fair. One transmountain diversion to Sierra Valley above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	*8.7*	16	[b]10	[b]15	[b]*17*	54	238	*109*	*5.2*	2.3	3.6
2	7.7	9.0	15	[b]10	[b]15	[b]17	54	234	105	5.0	*2.1*	3.6
3	7.4	9.3	16	10	[b]14	[b]18	*53*	269	98	4.7	2.1	3.4
4	7.4	8.7	16	12	[b]14	[b]18	60	296	89	4.7	4.2	3.4
5	7.4	*8.7	[b]16	*14	[b]14	[b]18	89	374	73	4.7	*6.3*	3.6
6	7.1	9.6	[b]15	12	[b]13	20	84	412	67	4.3	6.3	3.6
7	7.1	9.0	[b]15	12	[b]13	23	78	473	49	4.0	6.0	3.6
8	7.1	9.6	[b]16	[b]12	[b]13	40	81	*567*	44	3.8	5.6	3.6
9	*6.8*	9.9	17	[b]14	[b]*12*	212	81	541	40	3.6	5.2	3.6
10	7.7	13	*16	[b]15	[b]12	*222*	85	412	26	3.6	5.0	3.4
11	9.6	18	[b]15	14	*13	153	92	400	21	3.6	5.0	3.4
12	8.7	18	[b]14	12	13	134	110	376	26	3.4	5.0	3.4
13	8.0	18	[b]14	[b]13	[b]14	134	130	*349	26	3.4	4.7	3.4
14	*7.7	26	[b]14	13	[b]14	141	166	335	26	3.4	4.7	*1.9*
15	8.0	18	14	*8.6*	[b]14	132	196	335	30	3.4	5.0	2.3
16	8.0	18	14	11	[b]14	114	250	349	32	3.1	5.0	2.5
17	8.0	20	14	[b]12	[b]14	108	317	391	28	2.9	5.0	3.8
18	12	18	13	[b]14	[b]16	104	374	424	22	2.9	4.7	3.6
19	*14*	16	16	[b]16	[b]16	93	400	430	19	2.9	4.5	3.6
20	12	18	*21*	[b]20	[b]16	88	403	391	21	2.7	4.7	4.3
21	11	19	[b]20	[b]23	[b]17	80	418	*298	26	2.7	4.5	4.3
22	10	18	[b]17	23	[b]*18*	78	454	229	*29	*2.7	4.3	4.3
23	10	23	[b]15	*30*	[b]18	72	*483	201	22	2.7	4.3	4.3
24	9.9	*30*	15	27	[b]18	68	448	190	15	2.5	4.0	*4.5*
25	9.6	24	[b]14	29	[b]18	69	421	172	10	2.5	4.0	4.5
26	9.3	22	[b]13	[b]25	18	68	415	146	8.2	2.5	*4.5	4.3
27	9.3	20	12	21	[b]18	63	483	132	7.1	2.5	4.7	*4.3
28	9.3	18	[b]13	18	[b]18	63	368	127	6.3	2.3	4.5	2.3
29	9.3	18	[b]12	17	-------	*58	319	125	*5.6*	*2.1*	4.0	2.3
30	9.0	18	[b]12	[b]16	-------	54	296	105	5.6	2.1	4.0	3.8
31	8.7	-------	[b]*11*	[b]15	-------	58	-------	*93*	-------	2.1	3.8	-------
Total	274.5	493.5	461	498.6	422	2,537	7,262	9,414	1,085.8	102.0	140.0	106.5
Mean	8.85	16.4	14.9	16.1	15.1	81.8	242	304	36.2	3.29	4.52	3.55
Ac-ft	544	979	914	989	837	5,030	14,400	18,670	2,150	202	278	211

Calendar year 1953	Max 795	Min 3.0	Mean 104	Ac-ft 75,130
Water year 1953–54	Max 567	Min 1.9	Mean 62.5	Ac-ft 45,200

Peak discharge (base, 500 cfs)—Apr. 22 (10 p.m.) 563 cfs (3.86 ft); May 8 (12 p.m.) 695 cfs (4.20 ft).

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

SAGEHEN CREEK NEAR TRUCKEE, CALIF.

Location.—Lat 39°25'50", long 120°14'10", in NE¼NE¼ 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 1954.

Gage.—Water-stage recorder. 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, 72 cfs Apr. 22 (gage height, 2.21 ft), from rating curve extended above 27 cfs on basis of logarithmic plotting; maximum gage height, 2.50 ft Mar. 2 (backwater from ice); minimum discharge, 1.3 cfs Aug. 24.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	[a] 2.9	[a] *3.2*	[a] 3.6	*2.8*	*3.3*	4.2	[b] *6.0*	28	10	*3.4*	1.9	*1.7*
2	2.9	[a] 3.2	3.8	2.8	3.3	[b] *4.0*	6.1	29	9.5	3.3	1.9	1.7
3	2.9	[a] 3.2	*3.4	2.8	3.3	4.0	7.2	28	9.3	3.2	1.8	1.7
4	2.9	[a] 3.3	3.8	2.9	3.4	4.2	9.8	30	9.3	[a] 3.2	1.9	1.7
5	2.9	[a] 3.3	3.4	2.9	3.3	4.5	19	32	*11*	[a] 3.1	1.9	1.7
6	2.9	[a] 3.3	3.4	3.0	3.3	4.9	15	32	10	[a] 3.1	2.0	1.7
7	2.9	3.3	[b] 3.4	3.0	3.3	4.7	15	32	8.8	[a] 2.9	1.9	1.7
8	*2.8*	[a] 3.8	[b] 3.4	[b] 3.0	3.3	13	16	*36*	8.8	[a] 2.8	1.9	1.7
9	[a] 2.9	[a] 4.3	3.4	[b] 3.0	3.4	*59*	17	34	9.0	[a] 2.8	1.8	1.7
10	[a] 3.0	4.7	3.4	3.0	3.4	30	19	32	8.6	[a] 2.7	1.8	1.7
11	3.2	[a] 4.4	[b] 3.4	3.0	3.4	[b] 20	20	30	7.8	[a] 2.6	1.8	1.8
12	3.0	[a] 4.0	[b] 3.4	3.0	3.8	[b] 16	*24	28	8.1	[a] 2.6	1.8	1.8
13	[a] 3.0	3.6	[b] 3.4	[b] 3.0	*2.9*	[b] 12	28	27	7.6	*2.5	1.8	1.8
14	3.0	*5.1*	3.4	3.0	6.6	[b] 10	33	26	7.0	2.5	1.8	1.8
15	[a] 3.0	4.0	3.6	[b] 3.3	[b] 3.5	9.3	36	*25	7.0	2.5	1.9	1.8
16	3.0	3.6	3.8	3.6	3.4	8.6	41	24	7.0	2.4	1.9	1.8
17	3.0	3.8	3.8	*12*	[b] 3.5	8.1	45	25	6.1	2.3	1.9	*[a] 1.9
18	*5.5*	[a] 3.6	3.6	9.6	[b] 3.5	[b] 7.5	48	25	5.9	2.3	1.8	[a] *2*
19	3.8	[a] 3.6	3.9	3.8	[b] 3.5	6.8	48	25	5.7	2.1	1.8	[a] 2
20	3.3	3.4	4.0	3.2	3.6	[b] 6.5	47	23	5.4	2.2	1.9	[a] 2
21	[a] 3.3	[a] 3.6	[b] 4.0	3.0	3.8	6.1	48	20	5.2	2.2	1.9	[a] 2
22	[a] 3.3	3.9	[b] 3.5	3.2	3.8	[b] 6.0	50	19	4.9	2.2	1.8	[a] 2
23	[a] 3.3	3.6	[b] 3.5	8.5	3.9	5.9	48	18	4.6	2.1	*1.7*	[a] 2
24	[a] 3.2	4.0	3.2	5.7	4.0	5.7	45	16	4.4	2.1	1.7	[a] 2
25	[a] 3.2	[a] 4.0	[b] 3.2	4.0	4.2	[b] 6.0	43	15	4.3	2.2	1.7	[a] 2
26	[a] 3.2	[a] 3.5	[b] 3.1	*3.8	4.5	[b] 6.0	41	14	4.1	2.3	*2.1*	[a] 2
27	3.2	[a] 3.5	*3.0*	*3.4	4.5	6.1	*52*	13	4.0	2.1	2.1	[a] 2
28	[a] 3.2	3.2	[b] 3.2	3.4	4.2	6.1	40	*13	3.8	*2.0*	1.9	[a] 2
29	3.2	[a] 3.3	3.4	3.4	-------	6.1	36	12	3.7	2.0	1.8	[a] 2
30	3.2	3.4	4.0	3.4	-------	5.7	33	*11*	*3.6*	2.0	1.8	[a] 2
31	[a] 3.2	-------	*4.2*	3.3	-------	5.9	-------	11	-------	2.0	1.8	-------
Total	98.3	110.7	109.6	121.8	110.9	302.9	936.1	733	204.5	77.7	57.5	55.7
Mean	3.17	3.69	3.54	3.93	3.96	9.77	31.2	23.6	6.82	2.51	1.85	1.86
Ac-ft	195	220	217	242	220	601	1,860	1,450	406	154	114	110

Caleudar year 1953	Max ___	Min ___	Mean ___
Water year 1953-54	Max 59	Min 1.7	Mean 8.00

Ac-ft ____
Ac-ft 5,790

Peak discharge (base, 50 cfs)_____ Mar. 9 (10 a.m.) 71 cfs (2.20 ft); Apr. 22 (5 p.m.) 72 cfs (2.21 ft); Apr. 27 (12 m.) 66 cfs (2.14 ft).

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

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 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,440 ft (from topographic map). July 1906 to September 1919, staff gage at site 1 mile upstream at different datum.

Average discharge.—20 years, 839 cfs (607,400 acre-ft per year).

Extremes.—Maximum discharge during year, 3,700 cfs Mar. 9 (gage height, 6.74 ft); minimum, 91 cfs June 25.

1906–19, 1947–54: Maximum discharge, 19,900 cfs Nov. 21, 1950, 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 excellent. Flow regulated by Lake Tahoe, Boca Reservoir, Donner and Independence Lakes, and by several powerplants. Many diversions above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	272	*382*	423	400	396	480	*510	500	204	*197*	138	157
2	276	400	423	405	400	490	520	418	175	194	135	166
3	272	405	432	410	396	490	545	441	157	172	140	163
4	269	400	*455*	418	396	510	565	392	172	148	*132*	157
5	269	405	428	410	*392*	*520	772	550	157	140	142	160
6	261	410	432	423	396	535	716	727	145	138	138	163
7	*253*	396	450	410	392	550	580	886	128	142	140	163
8	280	396	423	382	392	630	550	1,080	148	140	140	163
9	276	414	441	*378*	392	*2,720*	550	*1,180*	201	135	140	169
10	288	423	423	396	396	1,970	515	1,100	197	122	*160*	163
11	296	432	414	396	400	982	*495*	1,160	181	120	135	*154*
12	288	428	414	392	414	710	510	*1,140	178	118	138	166
13	288	441	410	392	*505*	610	505	989	*210*	*116*	138	*172
14	312	470	418	396	423	595	585	928	*181	120	142	163
15	332	*495*	423	405	418	600	610	880	194	140	140	169
16	324	465	423	414	432	560	625	880	207	*145	132	178
17	324	465	423	436	470	500	694	1,010	185	140	140	185
18	356	460	423	414	450	*460*	904	1,120	148	132	*151	178
19	*396*	446	418	423	423	465	*975*	1,160	135	135	145	185
20	374	475	432	418	428	495	892	1,120	140	142	138	197
21	356	460	428	423	423	515	832	916	142	135	145	197
22	*356	460	414	432	423	515	844	650	135	135	145	191
23	356	441	405	*540*	423	525	892	535	125	138	145	191
24	344	*455	410	495	428	505	850	490	112	142	148	197
25	336	460	410	446	436	505	802	428	*101*	148	145	204
26	352	428	405	382	460	490	744	332	107	172	154	*218*
27	392	423	418	396	455	500	820	288	140	172	154	218
28	387	423	418	*414	446	510	808	246	151	140	148	201
29	382	432	*410	405	-------	545	620	238	163	132	148	201
30	382	432	*396*	400	-------	560	590	218	169	135	145	210
31	378	-------	396	396	-------	525	-------	*201	-------	132	148	-------
Total	10,027	13,022	13,038	12,847	11,805	20,567	20,420	22,203	4,788	4,417	4,429	5,399
Mean	323	434	421	414	422	663	681	716	160	142	143	180
Ac-ft	19,890	25,830	25,860	25,480	23,410	40,790	40,500	44,040	9,500	8,760	8,780	10,710

Calendar year 1953	Max 3,160	Min 214	Mean 743	Ac-ft 538,100
Water year 1953–54	Max 2,720	Min 101	Mean 392	Ac-ft 283,600

Peak discharge (base, 1,600 cfs)—Mar. 9 (4:30 p.m.) 3,700 cfs (6.74 ft).

*Discharge measurement made on this day.

FRANKTOWN CREEK AT FRANKTOWN, NEV.

Location.—Lat 39°16′, long 119°51′, in sec. 9, T. 16 N., R. 19 E., on right bank half a mile west of Franktown and 3 miles upstream from Washoe Lake.

Drainage area.—14 sq mi, approximately.

Records available.—April 1948 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 5,200 ft. Gage destroyed by flood Dec. 3 or 4, 1950; replaced May 21, 1951, at same site at different datum.

Average discharge.—5 years (1948–50, 1951–54), 15.1 cfs (10,930 acre-ft per year).

Extremes.—Maximum discharge during year, 130 cfs Mar. 9 (gage height, 3.09 ft), from rating curve extended above 85 cfs by logarithmic plotting; minimum, 0.2 cfs Dec. 4 (flow dammed by snowslide).

1948–54: Maximum discharge, 800 cfs Dec. 3 or 4, 1950, by slope-area determination; minimum, 0.2 cfs Feb. 7–9, 1949, Dec. 4, 1953 (flow dammed by snowslide).

Remarks.—Records good except those above 35 cfs and those for period of no gage-height record, which are poor. During summer, flow sometimes supplemented by diversion from North Creek, a tributary to Lake Tahoe.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*5.8*	5.8	6.1	[b]5.2	8.6	12	*11*	*25*	15	*8.2*	2.0	1.7
2	4.6	6.4	6.1	[b]5.8	8.6	*12	13	22	14	7.4	1.7	*1.6*
3	5.5	6.4	5.8	[b]4.9	8.6	11	17	22	14	6.4	*1.6*	1.7
4	6.1	5.8	[a]*4.0*	7.0	8.2	12	21	21	13	5.5	1.7	1.7
5	5.2	6.1	[a]5.0	7.4	8.2	13	30	22	*14	5.5	2.0	1.9
6	4.9	6.7	[a]6.0	7.4	8.2	13	22	22	13	*4.9	*2.4	1.9
7	4.6	6.4	[a]6.0	5.2	8.2	13	20	22	12	4.6	2.4	2.0
8	4.6	6.4	[a]6.0	6.4	8.6	44	18	22	13	4.3	2.2	2.2
9	4.3	6.4	[a]6.0	*5.5*	9.4	*84*	*18	22	15	4.0	1.9	2.2
10	4.9	7.0	[a]6.0	7.0	10	*26	18	20	*16*	3.8	1.9	1.9
11	6.1	6.7	[a]6.2	6.7	11	20	20	*20	14	3.6	1.9	2.4
12	6.1	6.7	[a]6.4	6.4	11	17	21	20	16	3.8	1.9	2.6
13	5.5	6.7	[a]6.6	6.1	*6.7*	15	24	18	16	3.0	2.0	2.6
14	5.8	7.4	[a]6.8	6.1	9.0	15	26	18	14	3.2	2.2	2.4
15	*6.4	6.7	[a]7.0	6.1	9.4	15	25	17	13	3.4	2.4	2.6
16	6.1	*6.7	[a]7.2	6.1	*9.4	11	26	16	13	2.8	2.4	2.6
17	5.8	5.2	[a]7.5	*3.6*	*12*	10	*27	16	12	2.4	2.2	2.6
18	*0.4*	4.6	[a]8.5	5.8	11	12	28	15	11	2.2	2.0	2.6
19	8.2	*4.3*	*11	6.7	11	9.8	27	14	11	2.2	1.9	2.4
20	8.2	6.7	10	7.0	11	9.8	26	16	11	*3.0*	2.0	2.4
21	8.2	7.8	7.4	6.7	11	9.8	25	15	11	2.4	2.4	2.2
22	8.2	8.6	[b]5.2	*7.4	11	9.4	26	13	10	2.4	2.4	2.0
23	8.2	*9.0*	[b]5.5	11	11	9.4	24	15	9.8	2.4	1.9	2.6
24	8.2	9.0	7.4	*13*	11	7.4	24	18	9.8	2.4	1.7	*2.6
25	8.2	8.2	5.2	10	11	9.8	22	15	9.4	2.4	2.0	2.4
26	8.2	8.2	5.8	9.0	12	10	22	14	9.4	2.6	*2.6*	2.4
27	7.0	7.8	7.4	7.8	12	11	*35*	13	9.0	2.4	*2.6	2.2
28	5.8	7.4	[b]5.2	8.2	12	12	26	13	9.0	2.4	2.4	2.0
29	5.5	7.4	[b]6.1	8.6	-------	11	24	13	*8.2	2.0	2.2	2.4
30	6.1	7.4	[b]4.3	9.0	-------	9.8	25	*18	8.2	2.2	2.0	*2.8
31	5.8	-------	[b]5.2	9.0	-------	10	-------	13	-------	2.0	2.0	-------
Total	195.5	205.9	198.9	222.1	279.1	484.2	691	544	363.8	108.8	64.9	67.6
Mean	6.31	6.86	6.42	7.16	9.97	15.6	23.0	17.5	12.1	8.51	2.09	2.25
Ac-ft	388	408	395	441	554	960	1,370	1,080	722	216	129	134

Calendar year 1953	Max 87	Min 3.4	Mean 15.4	Ac-ft 11,170
Water year 1953–54	Max 84	Min 1.6	Mean 9.39	Ac-ft 6,800

Peak discharge (base, 50 cfs)..... Mar. 9 (4 a.m.) 130 cfs (3.09 ft); Apr. 27 (4:30 p.m.) 61 cfs (2.52 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.

BLACK ROCK DESERT BASIN

McDERMITT CREEK NEAR McDERMITT, NEV.

Location.—Lat 41°58′, long 117°50′, in SE¼SE¼ sec. 8, T. 47 N., R. 37 E., on left bank 6½ miles southwest of McDermitt.

Records available.—October 1948 to September 1954.

Gage.—Water-stage recorder and concrete control.

Average discharge.—6 years, 33.4 cfs (24,180 acre-ft per year).

Extremes.—Maximum discharge during year, 322 cfs Mar. 9 (gage height, 3.73 ft); no flow for part of day Aug. 12, result of temporary storage upstream.

1948–54: Maximum discharge, 1,240 cfs Apr. 26, 1952 (gage height, 6.83 ft), from rating curve extended above 600 cfs; minimum, that of Aug. 12, 1954 (minimum natural flow, 0.5 cfs Jan. 13, 1949).

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

Revisions (water years).—WSP 1214: 1949–50(P).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*2.5*	5.6	8.0	*6.0*	b 11	18	*15*	25	*15*	3.0	1.4	1.0
2	2.5	5.6	8.0	b 7	b *10*	b 13	15	23	13	3.0	1.4	.9
3	2.8	5.6	8.0	8.5	b 10	b 12	16	24	11	2.8	1.2	.9
4	3.0	6.0	8.0	8.5	b 10	b *11*	17	25	9.8	2.7	1.2	.8
5	3.2	6.0	6.0	8.0	b 11	13	20	23	10	2.4	1.4	.9
6	3.2	6.0	8.0	8.0	b 11	13	24	19	11	2.8	*1.8*	.9
7	3.4	6.0	8.0	8.5	b 10	15	23	23	11	*6.0*	1.8	.9
8	3.4	5.3	6.4	b *7.5*	b 10	*15*	23	24	11	6.0	1.5	1.0
9	3.4	5.6	8.5	b 7	b 10	*206*	21	28	11	6.0	1.2	1.0
10	3.4	6.0	b 6	6.8	b 12	118	21	*38*	13	5.6	1.0	1.0
11	3.6	6.0	*5.3*	6.8	14	*62	22	33	11	5.3	1.0	1.0
12	3.8	6.8	b 6	b 6.5	17	50	23	30	11	5.0	*.9*	1.1
13	4.1	6.0	6.0	b 6.5	22	38	24	32	13	4.4	1.0	1.2
14	4.1	6.0	b 8	7.6	21	33	*30	30	12	4.6	1.0	1.2
15	4.4	6.0	b 8	8.0	16	29	29	28	11	4.6	1.0	1.3
16	4.4	6.0	b 8.5	8.9	16	25	30	28	13	4.4	1.0	1.3
17	4.4	*6.0	b 8	b 9	15	25	28	25	12	3.6	1.1	1.4
18	5.0	6.0	b 9	b 8.5	14	19	23	24	*10	3.2	1.1	1.5
19	5.3	*4.1*	9.8	8.5	b 9	24	32	23	8.5	3.0	1.0	1.6
20	5.3	5.3	*11*	b 8.5	15	23	*33*	*22	6.8	2.8	1.2	1.7
21	*5.3	6.4	b 8	b 8.5	15	20	28	23	*5.6*	*2.8	1.3	1.6
22	5.3	6.8	*b 6	8.9	15	19	26	22	5.3	2.8	1.4	1.6
23	5.3	8.5	b 7	9.8	17	22	23	20	4.4	2.8	1.2	*1.6
24	*5.6*	*11*	b 7	b 12	20	21	24	18	3.8	2.8	1.0	1.6
25	5.6	11	b 7	b 9	23	23	27	17	3.2	2.7	1.0	1.7
26	5.3	9.4	b 7	b 9	*24*	20	27	17	2.8	2.5	*1.4	1.7
27	5.6	8.5	b 7.5	*9.4	19	19	24	17	2.8	2.5	1.6	2.0
28	5.6	8.0	b 7	10	18	19	*33	15	2.8	2.4	1.5	2.4
29	5.6	7.6	b 7	*17*	-------	19	29	15	*2.7*	2.0	1.4	2.4
30	5.3	8.0	b 6	b 15	-------	16	28	15	2.8	1.7	1.2	*3.8*
31	*5.3*	-------	b 6	*13*	-------	14	-------	*14*	-------	*1.5*	1.0	-------
Total	135.0	201.1	230.0	276.2	415	974	738	720	260.3	107.7	38.2	42.0
Mean	4.35	6.70	7.42	8.91	14.8	31.4	24.6	23.2	8.68	3.47	1.23	1.40
Ac-ft	268	399	456	548	823	1,930	1,460	1,430	516	214	76	83

Calendar year 1953	Max 277	Min 2.1	Mean 29.1	Ac-ft 21,080
Water year 1953–54	Max 206	Min 0.8	Mean 11.3	Ac-ft 8,200

Peak discharge (base, 150 cfs)..... Mar. 9 (9 a.m.) 322 cfs (3.73 ft).

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

EAST FORK QUINN RIVER NEAR McDERMITT, NEV.

Location.—Lat 41°59′, long 117°35′, in sec. 9, T. 47 N., R. 39 E., on right bank 1 mile downstream from South Fork and 7 miles east of McDermitt.

Records available.—October 1948 to September 1954.

Gage.—Water-stage recorder.

Average discharge.—6 years, 28.3 cfs (20,490 acre-ft per year).

Extremes.—Maximum discharge during year, 88 cfs Apr. 4 (gage height, 4.12 ft); minimum not determined.

1948–54: Maximum discharge, 940 cfs Apr. 6, 1952 (gage height, 6.63 ft); minimum observed, 0.4 cfs Aug. 18, 1951.

Remarks.—Records good except those affected by backwater from beaver dams, which are fair.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0.9*	4.4	7.6	4.4	6.6	8.0	*17*	*18*	6.3	*4.1*		
2	1.3	4.6	7.0	3.4	*6.8*	*5.7*	18	17	5.7	4.1		
3	1.3	4.6	6.6	2.7	7.0	5.7	22	16	5.1	4.1		
4	1.3	4.6	6.3	3.2	7.6	5.7	*51*	15	5.1	4.1		
5	1.3	4.6	3.9	2.9	8.2	5.7	41	15	*6.6*	3.9		
6	1.3	4.6	2.9	*2.3*	9.4	6.3	33	15	6.3	3.9		
7	1.1	4.6	1.8	2.3	11	7.6	30	14	6.0	3.7		
8	1.1	4.6	*1.6*	2.5	11	16	28	14	5.4	3.2		
9	1.1	4.4	2.5	2.3	11	*67*	26	14	5.7	2.5		
10	1.3	4.4	3.2	3.9	11	36	25	15	6.3	1.6		
11	1.3	4.4	1.8	3.7	13	*23	24	14	6.0	1.6		0.8
12	1.4	4.4	3.7	3.7	14	18	24	13	6.0	1.6		
13	1.3	4.4	4.6	2.5	*25*	17	26	12	6.0	1.4		
14	1.3	4.4	5.4	4.1	23	18	*29	11	6.0	1.4		
15	1.6	4.0	7.0	4.1	18	18	26	11	6.3	.9	0.9	
16	1.6	3.8	7.3	4.1	15	17	25	11	6.6	.9		
17	1.6	*3.5	7.3	4.6	15	17	26	9.8	6.0	.9		
18	1.6	3.4	7.9	3.7	15	14	28	9.0	*5.7	.9		
19	1.8	*3.0*	8.6	4.1	11	16	27	8.2	5.4	.9		
20	1.8	3.4	*10*	3.2	12	15	25	*7.6	5.1			
21	*2.2	4.0	8.0	3.9	11	14	23	7.6	4.6	(*)		
22	2.3	5.0	*6.3	5.4	11	13	22	7.6	4.4			
23	2.5	8.0		5.7	13	14	21	7.0	4.4			*.9
24	2.5	*11*		5.4	14	15	21	7.0	*4.1*			1.1
25	2.7	9.0		2.7	15	16	20	7.0	4.1	.8		1.3
26	2.9	8.6	6	3.4	15	16	20	7.0	4.1		(*)	1.4
27	2.9	8.2		*5.7	11	17	20	6.6	4.1			1.6
28	3.2	7.9		4.9	9.0	17	*19	*6.8*	4.1			1.7
29	3.4	7.6		*7.3*	-------	18	18	6.3	4.1			2.0
30	3.7	7.6	5	7.3	-------	18	18	6.6	4.1			*2.2*
31	*3.9*	-------		5.4	-------	16	-------	6.3	-------			-------
Total	59.5	161.0	172.3	124.8	349.1	510.7	753	334.9	159.7	55.3	27.9	29.8
Mean	1.92	5.37	5.56	4.03	12.5	16.5	25.1	10 8	5.32	1.78	0.9	0.99
Ac-ft	118	319	342	248	692	1,010	1,490	664	317	110	55	59

Calendar year 1953	Max 122	Min 0.8	Mean 14.5	Ac-ft 10,510
Water year 1953–54	Max 67	Min ---	Mean 7.50	Ac-ft 5,420

Peak discharge (base, 100 cfs)----- No peak above base.

*Discharge measurement made on this day.

NOTE.—Backwater from beaver dams Oct. 26 to Mar. 8, June 7 to Sept. 30.

QUINN RIVER NEAR McDERMITT, NEV.

Location.—Lat 41°37′, long 117°48′, in SW¼ sec. 15, T. 45 N., R. 37 E., on left bank 1½ miles upstream from Flat Creek and 15½ miles south of McDermitt.

Records available.—October 1948 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,240 ft (from river-profile map).

Average discharge.—6 years, 37.2 cfs (26,930 acre-ft per year).

Extremes.—Maximum discharge during year, 1.5 cfs Mar. 25 (gage height, 0.45 ft); minimum daily, 0.3 cfs several days in July and August.

1948–54: Maximum discharge, 1,580 cfs Apr. 27, 1952 (gage height, 8.39 ft); minimum, 0.2 cfs Dec. 22, 1948.

Remarks.—Records good. Several diversions above station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	1.0	0.8	0.8	0.9	1.0	1.0	1.2	1.0	0.5	0.3	0.4
2	.9	1.0	.8	.8	.9	1.0	1.0	1.2	1.0	.6	.3	.4
3	.9	1.0	.8	.8	1.0	1.0	1.0	1.2	1.0	.5	.3	.5
4	.9	.9	.8	.8	1.0	1.0	1.0	1.1	.9	.5	.3	.5
5	.9	.8	.8	.8	1.0	1.0	1.0	1.0	.9	.5	.4	.5
6	.9	.8	.8	.8	1.0	1.0	1.0	1.0	.9	.5	.4	.6
7	.9	.8	.8	.8	.9	1.0	.9	.9	.8	.5	.4	.5
8	.9	.8	.8	.8	.9	1.0	.9	.9	.8	.4	.4	.5
9	.9	.8	.8	.8	.9	1.0	1.0	.9	.8	.4	.4	.5
10	.9	.8	.8	.9	.9	1.0	1.0	1.0	.9	.5	.4	.5
11	1.0	.8	.8	.9	1.0	*1.1	1.0	.9	.8	.5	.4	.5
12	1.0	.8	.8	.9	.9	1.0	1.0	.8	.7	.5	.4	.4
13	1.0	.8	.8	.8	1.0	1.0	1.0	.8	.7	.5	.4	.4
14	1.0	.8	.8	.8	.9	1.0	*1.0	.8	.8	.5	.4	.4
15	1.0	.8	.8	.8	.9	1.0	1.0	.9	.7	.5	.4	.4
16	.9	.8	.8	.8	.9	1.0	.9	.9	.7	.4	.4	.4
17	.9	*.9	.8	.8	.9	1.1	.9	.9	.7	.4	.5	.4
18	1.0	.8	.8	.8	1.0	1.1	1.0	.8	*.7	.5	.4	.4
19	1.0	.8	.8	.8	1.0	1.0	1.0	.8	.7	.5	.3	.4
20	1.0	.8	.8	.8	1.0	1.1	1.0	*.9	.8	.5	.3	.4
21	*.9	.8	.8	.8	1.0	1.2	.9	.8	.8	*.4	.4	.4
22	.8	.8	*.8	.8	1.0	1.2	.9	.8	.8	.4	.5	.5
23	.8	.9	.8	.8	1.0	1.2	1.0	.8	.8	.4	.4	*.6
24	.8	.8	.8	.8	1.0	1.2	1.0	.8	.8	.4	.5	.5
25	.8	.8	.8	.8	1.0	1.4	1.0	.8	.7	.4	.5	.5
26	.9	.8	.8	.8	1.0	1.4	1.0	.8	.7	.4	*.5	.5
27	.9	.8	.8	*.9	1.0	1.4	1.0	.8	.7	.4	.5	.5
28	.9	.8	.8	.9	1.0	1.3	1.0	.8	.7	.4	.4	.5
29	.9	.8	.8	1.0	-------	1.3	1.0	.8	.6	.4	.4	.5
30	.9	.8	.8	1.0	-------	1.2	1.2	.8	.6	.3	.4	.5
31	.9	-------	.8	.9	-------	1.1	-------	.9	-------	.3	.4	-------
Total	28.3	24.9	24.8	25.8	26.9	34.3	29.6	27.8	23.5	13.9	12.4	14.0
Mean	0.91	0.83	0.80	0.83	0.96	1.11	0.99	0.90	0.78	0.45	0.40	0.47
Ac-ft	56	49	49	51	53	68	59	55	47	28	25	28

Calendar year 1953	Max 161	Min 0.6	Mean 13.7	Ac-ft 9,940
Water year 1953–54	Max 1.4	Min 0.3	Mean 0.78	Ac-ft 568

Peak discharge (base, 100 cfs)..... No peak above base.

*Discharge measurement made on this day.

HONEY LAKE BASIN

SUSAN RIVER AT SUSANVILLE, CALIF.

Location.—Lat 40°25′, long 120°40′, in NE¼ sec. 31, T. 30 N., R. 12 E., on left bank 0.5 mile west of Susanville and 1.1 miles upstream from Piute Creek.

Drainage area.—192 sq mi.

Records available.—June 1900 to December 1905 (gage heights only, 1902), March to May 1913, February 1917 to June 1921, October 1950 to September 1954.

Gage.—Water-stage recorder. Prior to Oct. 1, 1950, staff gages at several sites in vicinity of old powerplant about 0.9 mile upstream at various datums.

Average discharge.—7 years (1917–20, 1950–54), 85.4 cfs (61,800 acre-ft per year).

Extremes.—Maximum discharge during year, 1,620 cfs Mar. 9 (gage height, 4.89 ft), from rating curve extended above 680 cfs; minimum, 3.4 cfs Sept. 3.

1900–1905, 1913, 1917–21, 1950–54: Maximum discharge, 2,590 cfs Jan. 9, 1953 (gage height, 5.50 ft), from rating curve extended above 850 cfs by logarithmic plotting; minimum, 0.8 cfs Aug. 10, 1918.

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). Diversions for irrigation of about 1,400 acres above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*6.9	8.6	17	b 15	40	70	95	292	50	79	103	5.1
2	6.9	9.3	17	b 15	43	63	105	273	50	128	102	4.7
3	7.2	13	17	16	43	59	200	264	47	128	108	4.2
4	7.4	11	22	15	42	61	315	261	45	128	119	3.9
5	7.4	11	18	15	40	65	478	258	51	132	121	4.0
6	7.4	12	18	15	39	73	392	292	50	134	122	4.2
7	7.2	11	19	18	40	79	*298	292	45	134	121	4.0
8	7.2	11	17	b 18	40	334	261	289	47	132	119	4.0
9	7.2	11	18	b 15	40	1,080	235	279	58	132	117	3.9
10	8.4	12	18	17	44	676	224	264	50	130	117	3.6
11	9.8	18	16	15	47	333	218	252	45	130	117	3.6
12	8.8	19	16	16	181	224	229	240	42	128	115	3.7
13	8.6	28	b 16	15	116	175	276	*229	44	128	112	3.8
14	7.9	40	b 16	b 15	71	146	312	190	38	126	103	4.0
15	8.1	28	16	15	54	130	295	148	38	126	89	5.8
16	8.1	21	16	16	49	121	308	108	40	122	42	4.6
17	7.9	21	16	17	88	105	343	89	32	126	20	5.2
18	13	18	17	20	83	*94	355	84	29	126	14	4.8
19	15	*17	17	21	62	89	344	78	25	126	11	4.6
20	11	17	29	18	59	81	319	90	23	126	*9.2	4.6
21	9.3	17	22	*25	67	78	298	102	21	138	8.4	4.3
22	9.1	22	18	18	75	72	286	103	*20	140	7.7	4.2
23	8.8	40	b 18	37	79	69	286	97	17	138	6.8	4.3
24	8.8	47	19	47	89	70	286	89	18	*132	6.2	*4.6
25	8.8	31	16	b 35	95	70	267	86	17	126	6.2	4.4
26	8.6	24	b 16	b 32	93	69	243	81	16	122	6.8	4.3
27	8.6	21	17	25	78	76	292	73	16	117	7.0	4.2
28	8.6	19	15	*25	73	79	276	69	15	112	6.6	4.0
29	8.6	18	b 15	39	-------	84	261	58	14	110	5.8	4.2
30	8.6	17	b 15	38	-------	82	264	54	14	106	5.6	4.6
31	8.6	-------	b 15	39	-------	86	-------	51	-------	105	5.2	-------
Total	267.8	592.9	542	682	1,820	4,893	8,366	5,135	1,017	3,867	1,853.5	129.4
Mean	8.64	19.8	17.5	22.0	65.0	158	279	166	33.9	125	59.8	4.31
Ac-ft	531	1,180	1,080	1,350	3,610	9,710	16,590	10,190	2,020	7,670	3,680	257

Calendar year 1953	Max 1,530	Min 6.5	Mean 93.1	Ac-ft 67,430
Water year 1953–54	Max 1,080	Min 3.6	Mean 79.9	Ac-ft 57,870

Peak discharge (base, 300 cfs)—— Mar. 9 (6 a.m.) 1,620 cfs (4.89 ft); Apr. 5 (4 a.m.) 510 cfs (3.61 ft); Apr. 17 (10 p.m.) 404 cfs (3.36 ft); Apr. 27 (2 to 6 p.m.) 337 cfs (3.18 ft).

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

WILLOW CREEK NEAR SUSANVILLE, CALIF.

Location.—Lat 40°29′, long 120°32′, in NW¼ sec. 5, T. 30 N., R. 13 E., on left bank 4 miles upstream from Peters Valley Creek and 8 miles northeast of Susanville.

Drainage area.—92.5 sq mi, excluding Eagle Lake basin.

Records available.—October 1950 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,500 ft (from base map).

Extremes.—Maximum discharge during year, 72 cfs Feb. 18 (gage height, 2.96 ft); minimum, 9.4 cfs Aug. 6.

1950–54: Maximum discharge, 626 cfs Apr. 6, 1952 (gage height, 5.32 ft), from rating curve extended above 420 cfs; minimum, 8.1 cfs Nov. 16, 1951.

Remarks.—Records good. Diversions for irrigation of about 5,200 acres above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*12	22	27	24	25	27	30	12	10	9.7	10	10
2	12	23	27	23	23	26	28	12	10	9.7	9.9	11
3	12	24	28	24	23	26	28	12	10	9.7	9.7	11
4	12	24	28	24	22	26	29	12	10	9.7	9.7	11
5	12	25	28	24	21	26	29	12	10	9.9	9.7	11
6	13	25	27	23	21	26	*26	11	10	9.9	9.6	11
7	14	25	27	18	20	23	19	11	10	10	9.7	11
8	14	25	28	15	20	24	15	11	10	10	9.7	11
9	14	25	28	14	20	51	14	11	10	10	9.7	11
10	14	25	28	13	20	63	13	11	10	10	9.9	11
11	14	26	27	13	20	50	13	11	10	10	9.9	11
12	14	27	27	13	26	41	13	11	10	10	10	11
13	14	28	26	13	40	40	13	*10	11	10	9.9	11
14	14	28	26	12	44	37	14	10	10	10	9.9	11
15	14	29	26	12	39	36	13	10	10	10	9.9	11
16	14	29	26	13	36	35	13	10	10	10	9.9	11
17	14	30	26	14	47	36	13	9.9	10	10	9.9	11
18	15	28	26	13	61	*33	13	9.9	10	10	10	11
19	16	*29	26	14	55	33	12	9.9	10	10	9.9	11
20	18	30	26	*14	47	32	12	10	9.9	10	*10	11
21	17	30	26	14	48	33	11	10	10	10	10	11
22	17	30	24	14	44	32	11	10	*10	10	10	11
23	18	30	24	21	38	32	11	10	10	10	10	11
24	18	30	25	32	35	32	11	10	10	*10	10	*11
25	18	30	24	37	32	37	11	10	9.9	10	10	11
26	20	29	25	27	30	37	11	10	9.9	10	10	11
27	21	28	25	26	28	33	12	10	9.9	10	10	11
28	22	28	24	28	28	32	13	10	9.9	10	10	11
29	22	28	24	32	-------	32	13	10	9.9	10	10	11
30	22	28	24	32	-------	32	13	10	9.9	10	10	11
31	22	-------	24	30	-------	31	-------	10	-------	10	10	-------
Total	493	818	807	626	913	1,054	477	326.7	300.3	308.6	306.9	329
Mean	15.9	27.3	26.0	20.2	32.6	34.0	15.9	10.5	10.0	9.95	9.90	11.0
Ac-ft	978	1,620	1,600	1,240	1,810	2,090	946	648	596	612	609	653

Calendar year 1953	Max 371	Min 11	Mean 24.6	Ac-ft 17,800
Water year 1953–54	Max 63	Min 9.6	Mean 18.5	Ac-ft 13,400

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

*Discharge measurement made on this day.

EAGLE LAKE BASIN

PINE CREEK NEAR WESTWOOD, CALIF.

Location.—Lat 40°35′, long 121°06′, in SE¼ sec. 5, T. 31 N., R. 8 E., on right bank 1 mile southwest of Bogard Guard Station and 19 miles north of Westwood.

Drainage area.—22.6 sq mi.

Records available.—October 1950 to September 1954.

Gage.—Water-stage recorder and concrete control. Altitude of gage is 5,700 ft (from topographic map).

Extremes.—Maximum discharge during year, 96 cfs May 8 (gage height, 3.68 ft); minimum daily, 0.7 cfs Jan. 16–18.

1950–54: Maximum discharge, 154 cfs May 26, 1952 (gage height, 3.91 ft), from rating curve extended above 90 cfs; minimum daily, 0.5 cfs Dec. 1–3, 1952.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.9	1.7	1.7	1.6	1.8	1.2	1.6	31	12	5.0	2.2	1.2
2	1.6	1.9	2.2	1.6	1.3	1.1	2.0	33	12	5.0	2.2	1.2
3	1.7	2.6	2.0	1.6	1.2	1.1	3.5	38	11	5.0	2.0	1.2
4	1.7	2.0	1.7	2.2	1.2	1.1	6.0	43	12	4.7	2.2	1.5
5	1.6	2.2	2.2	1.7	1.2	1.1	9.0	48	13	4.7	2.4	1.5
6	1.5	2.4	2.4	1.2	1.2	1.2	7.0	53	12	4.4	2.4	1.3
7	1.5	2.0	1.6	1.0	1.1	1.3	*5.6	59	11	4.4	2.4	1.2
8	1.3	2.4	1.6	1.0	1.1	2.2	5.9	68	11	4.4	2.2	1.3
9	1.3	1.9	1.7	1.0	1.1	5.8	5.9	66	12	4.4	2.0	1.1
10	1.6	3.1	1.7	1.0	1.1	4.1	6.3	59	11	4.1	1.9	1.2
11	2.4	4.7	1.6	1.0	1.1	3.0	7.0	59	9.8	4.1	1.9	1.3
12	1.7	5.9	1.6	1.0	1.1	2.2	7.7	55	9.4	3.8	1.7	1.3
13	1.5	5.3	1.6	1.0	1.2	1.9	9.8	50	9.4	3.6	1.7	1.2
14	1.3	14	1.6	1.0	1.1	1.7	11	*50	8.5	3.6	2.0	1.2
15	1.3	5.3	1.7	1.0	1.1	1.6	12	50	8.5	3.3	2.0	1.7
16	1.2	3.8	1.6	.7	1.1	1.5	16	45	8.9	3.1	2.0	1.5
17	1.1	3.6	1.7	.7	1.1	1.4	20	45	7.7	3.1	1.7	8.0
18	4.4	3.8	1.7	.7	1.1	1.4	25	42	7.3	3.1	1.6	1.6
19	3.6	*2.6	1.9	.8	1.0	1.3	25	39	7.0	2.9	1.6	1.5
20	2.2	2.4	8.1	.8	1.1	1.2	27	35	6.6	2.9	*1.7	1.2
21	1.7	2.9	2.4	.9	1.1	1.2	28	29	6.3	2.6	1.7	1.1
22	1.7	3.1	1.5	1.0	1.1	1.2	30	25	*5.9	2.4	1.5	1.0
23	1.6	7.3	1.4	1.0	1.1	1.2	33	22	5.9	2.6	1.3	1.1
24	1.6	5.3	1.6	1.2	1.1	1.2	39	20	5.3	2.9	1.3	1.1
25	1.6	3.1	1.5	1.3	1.2	1.1	46	19	5.3	3.1	1.6	1.2
26	1.6	2.6	1.6	1.6	1.2	1.1	50	18	5.3	2.9	2.2	1.2
27	1.7	2.4	1.7	1.7	1.2	1.2	50	16	5.0	2.4	1.9	1.1
28	1.7	2.0	1.6	1.7	1.2	1.2	45	15	5.0	2.4	1.7	1.0
29	1.7	2.0	1.6	*1.9	-------	1.2	45	15	5.0	2.4	1.5	1.0
30	1.7	2.0	1.6	1.9	-------	1.2	36	14	5.0	2.2	1.2	1.1
31	1.7	-------	1.5	1.6	-------	1.3	-------	13	-------	2.4	1.3	-------
Total	54.7	106.3	54.9	38.4	32.0	50.0	615.2	1,174	254.1	107.9	57.0	38.1
Mean	1.76	3.54	1.77	1.24	1.14	1.61	20.5	37.9	8.47	3.48	1.84	1.27
Ac-ft	108	211	109	76	63	99	1,220	2,330	504	214	113	76

Calendar year 1953	Max 62	Min 1.1	Mean 8.04	Ac-ft 5,820
Water year 1953–54	Max 68	Min 0.7	Mean 7.08	Ac-ft 5,120

Peak discharge (base, 35 cfs)—Apr. 25 (6 p.m.) 57 cfs (3.49 ft); May 8 (7 p.m.) 96 cfs (3.68 ft).

*Discharge measurement made on this day.

NOTE.—Stage-discharge relation affected by ice Dec. 8–14, Dec. 23 to Jan. 2, Mar. 11–13. No gage-height record Mar. 14 to Apr 6; discharge estimated on basis of weather records and records for Butt Creek above Almanor-Butt Creek tunnel near Prattville, in Sacramento River basin.

WARNER LAKES BASIN

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, September 1940 to September 1954.

Gage.—Water-stage recorder and concrete control. Datum of gage is 4,560.43 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to June 30, 1922, staff gage or water-stage recorder at site three-quarters of a mile downstream at various datums. Sept. 21, 1940, to Nov. 30, 1944, water-stage recorder at site 1½ miles upstream at different datum. Mar. 12, 1945, to June 28, 1952, water-stage recorder at site 70 ft upstream at datum 2.9 ft higher.

Average discharge.—19 years (1910–15, 1918–19. 1940–44, 1945–54), 49.1 cfs.

Extremes.—Maximum discharge during year, 1,730 cfs Mar. 9 (gage height, 8.32 ft); minimum, 1.7 cfs Dec. 28 (gage height, 0.88 ft).

1910–16, 1917–19, 1921–22, 1940–54: Maximum discharge, 3,000 cfs Dec. 27, 1942 (gage height, 4.28 ft, site and datum then in use), from rating curve extended above 400 cfs by logarithmic plotting; minimum, 0.9 cfs Aug. 19, 23, 24, 1942.

Remarks.—Records good except those for period of backwater from diversion dam, which are fair, and those for periods of ice effect, which are poor. Diversions for irrigation of 240 acres above station.

Revisions (water years).—WSP 1090: 1945.

TWENTYMILE CREEK NEAR ADEL, OREG.—Continued

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*3.7*	*5.2*	8.6	[b]7.5	210	172	*108*	47	*36*	*33*	3.1	2.8
2	4.0	5.6	8.2	[b]7	198	86	90	47	30	20	*2.8*	2.8
3	4.2	6.1	8.6	6.5	206	42	67	52	29	10	2.8	2.8
4	4.2	6.1	9.0	6.5	199	*27*	75	59	31	11	3.4	3.1
5	4.2	5.6	8.6	6.9	157	30	97	64	32	8.6	*3.7*	*3.1
6	*4.2	5.6	8.2	6.9	106	68	75	64	32	*9.0	3.7	2.8
7	4.5	5.6	9.0	6.9	188	123	72	70	30	7.3	3.7	2.8
8	4.2	8.2	9.0	6.1	182	401	58	81	31	5.2	3.1	2.8
9	4.2	6.1	9.0	6.9	118	*1,000*	45	*91	30	4.8	3.1	2.8
10	4.2	6.1	9.0	[b]6.5	55	302	*54*	82	30	4.5	3.1	*2.6*
11	4.5	*6.5	*[b]9	6.1	26	240	34	82	27	4.2	3.1	2.6
12	4.8	6.5	[b]8.5	[b]*6*	252	214	*35	81	26	4.2	3.1	2.8
13	4.5	11	7.7	*[b]6	242	204	38	79	27	3.7	3.1	3.1
14	4.5	7.3	7.7	[b]6	168	188	43	81	25	*3.1*	3.1	3.1
15	4.2	6.9	7.7	6.1	58	196	43	82	*26	3.4	3.1	3.4
16	4.2	6.1	8.2	7.3	*16*	200	43	84	30	3.4	3.1	3.7
17	4.2	8.2	8.2	8.6	23	190	48	84	26	3.4	3.4	*4.0*
18	4.5	5.6	8.2	[b]8	20	178	56	82	24	3.4	3.1	4.0
19	4.8	6.1	33	[b]8	*26	172	61	82	23	3.1	3.1	4.0
20	4.5	6.5	*246*	7.7	78	168	54	81	22	3.1	3.4	4.0
21	4.5	6.1	43	[b]7	246	175	54	74	20	3.4	3.4	3.7
22	4.5	7.3	[b]9	6.5	288	175	54	56	19	3.4	3.1	*3.7
23	4.5	12	[b]8.5	[b]6.5	332	187	54	50	18	3.1	3.1	3.7
24	4.5	*20*	[b]8	[b]6.5	*564*	190	61	47	18	3.1	3.1	3.7
25	4.8	12	[b]7.5	[b]6	310	178	67	47	16	3.1	3.1	3.7
26	*5.2*	16	[b]7	[b]10	262	170	64	43	16	3.1	3.7	3.4
27	5.2	9.6	[b]6.5	16	192	152	71	38	14	3.4	3.7	3.1
28	5.2	8.6	[b]*6*	108	202	133	67	*54*	14	3.4	3.4	3.1
29	5.2	14	[b]7	*368*	-------	128	*61	37	13	3.4	3.4	3.4
30	5.2	9.0	[b]7.5	260	-------	118	54	37	*12*	3.4	3.1	3.7
31	5.2	-------	[b]8	202	-------	104	-------	34	-------	3.4	3.1	-------
Total	140.3	245.5	549.4	1,134.0	4,724	5,911	1,783	1,972	727	184.6	100.3	98.3
Mean	4.53	8.18	17.7	36.6	169	191	59.4	63.6	24.2	5.95	3.24	3.28
Ac-ft	278	487	1,090	2,250	9,370	11,720	3,540	3,910	1,440	366	199	195

Calendar year 1953	Max 1,510	Min 3.7	Mean 64.7	Ac-ft 46,810
Water year 1953–54	Max 1,000	Min 2.6	Mean 48.1	Ac-ft 34,840

Peak discharge (base, 400 cfs)—— Jan. 29 (9 p.m.) 480 cfs (4.20 ft); Feb. 23 (9 p.m.) 564 cfs (4.62 ft); Mar. 9 (6 a.m.) 1,730 cfs (8.32 ft).

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

NOTE.—Backwater from diversion dam Mar. 26 to July 5.

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 1954.

Gage.—Water-stage recorder. Datum of gage is 5,472.41 ft above mean sea level (Oregon State Highway Department construction survey benchmark). Sept. 11, 1912, to May 9, 1915, water-stage recorder or staff gage at site 500 ft upstream at different datum.

Average discharge.—6 years (1912–14, 1950–54), 50.6 cfs (36,630 acre-ft per year).

Extremes.—Maximum discharge during year, 492 cfs Mar. 9 (gage height, 3.82 ft); minimum, 4.0 cfs Sept. 19.

1912–14, 1949–54: Maximum discharge, 660 cfs Apr. 28, 1952 (gage height, 4.24 ft); minimum, 2 cfs Sept. 17–23, 1913.

Remarks.—Records good except those for periods of ice effect, which are poor. Diversions for irrigation of about 1,200 acres above station.

Revisions.—WSP 410: Drainage area.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9	*5.8*	17	b 8.5	37	52	*46*	*136*	40	*14*	4.9	4.5
2	6.1	6.5	14	b 9	36	51	57	134	34	14	4.7	4.5
3	6.1	6.8	b 14	b 8.5	34	b 50	72	125	29	13	4.7	*4.4*
4	5.9	6.8	b 14	8.0	35	49	160	124	42	12	4.9	4.4
5	5.9	6.8	13	b 9	33	52	*315*	122	48	12	*5.7*	*4.5
6	5.9	7.5	12	b 10	33	54	258	116	41	11	5.5	4.4
7	6.1	7.5	b 12	10	34	60	198	112	34	10	5.1	4.4
8	*5.9	8.0	12	b 10	35	154	182	110	40	10	4.7	4.4
9	5.9	9.4	13	b 11	36	*378*	157	*121	47	9.0	4.7	4.4
10	6.1	9.4	b 13	10	35	332	156	120	*62*	8.8	4.7	4.4
11	*7.5*	12	b 13	10	31	224	157	101	42	8.5	4.5	4.4
12	7.0	11	b 13	b 11	41	164	163	91	37	8.2	*4.5	4.5
13	6.5	12	b 13	b 10	41	136	197	81	35	7.8	*4.4*	4.5
14	6.1	10	b 12	11	b 32	117	232	73	32	7.5	4.5	4.9
15	5.7	11	13	9.7	b 30	101	219	67	33	7.2	4.7	5.1
16	5.5	9.4	*b 14	10	29	90	*228	62	38	7.2	4.9	5.3
17	4.9	9.4	b 15	b 9.5	28	75	258	58	30	6.8	4.7	5.5
18	5.3	8.0	15	b 9	b *24*	65	282	54	25	6.3	4.5	5.5
19	5.9	*9.0	27	b 8.5	*b 31	58	266	50	22	6.1	4.5	5.5
20	5.1	8.5	*73*	b 8	33	*59	242	47	22	5.9	5.5	5.1
21	4.7	9.4	59	b 9	48	49	240	45	19	5.7	5.3	5.1
22	*4.5*	11	b 40	b 10	b 53	47	232	40	17	5.7	4.9	*5.1
23	4.5	38	b 30	*b 9	b 52	46	228	38	16	5.7	4.9	5.3
24	4.5	*73*	b 24	b 8	b 56	48	224	36	16	5.7	4.5	5.3
25	4.5	64	b 16	b 7	b *59*	45	222	38	*15	5.7	4.5	*5.7*
26	4.5	44	b 14	b 10	59	46	211	38	15	5.7	5.5	5.3
27	4.9	33	b 14	22	55	49	248	35	14	5.7	5.7	5.1
28	4.9	27	b 12	31	51	48	240	*32*	14	5.5	5.3	5.1
29	4.9	21	b 12	38	-------	49	193	45	*13*	*5.1*	5.1	5.1
30	4.9	22	b 10	*42*	-------	*42*	*160	48	13	5.1	4.9	5.3
31	5.1	-------	b *9*	40	-------	44	-------	41	-------	5.1	4.5	-------
Total	171.2	516.7	582	416.7	1,101	2,834	6,043	2,340	875	246.0	151.4	147.0
Mean	5.52	17.2	18.8	13.4	39.3	91.4	201	75.5	29.2	7.94	4.88	4.90
Ac-ft	340	1,020	1,150	827	2,180	5,620	11,990	4,640	1,740	488	300	292

Calendar year 1953	Max 355	Min 4.5	Mean 55.6	Ac-ft 40,280
Water year 1953–54	Max 378	Min 4.4	Mean 42.3	Ac-ft 30,590

Peak discharge (base, 200 cfs)—Mar. 9 (9 p.m.) 492 cfs (3.82 ft); Apr. 5 (4 to 6 a.m.) 332 cfs (3.27 ft); Apr. 18 (1 to 2 a.m.) 332 cfs (3.27 ft).

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

DRAKE CREEK NEAR ADEL, OREG.

Location.—Lat 42°12′, long 120°00′, near center of sec. 9, T. 39 S., R. 23 E., on left bank 400 ft downstream from highway bridge, 700 ft downstream from Parsnip Creek, 1 mile upstream from mouth, and 6½ miles west of Adel.

Drainage area.—47 sq mi, approximately.

Records available.—March to May 1915, December 1922 to May 1923, December 1949 to September 1954.

Gage.—Water-stage recorder. Datum of gage is 5,076.42 ft. Prior to May 9, 1923, staff gage at highway bridge at different datum. Dec. 16, 1949, to June 21, 1951, water-stage recorder at site 900 ft upstream at different datum.

Extremes.—Maximum discharge during year, 178 cfs Feb. 21 (gage height, 2.01 ft); minimum, 3.1 cfs Jan. 17 (gage height, 0.53 ft).

1915, 1922–23, 1949–54: Maximum discharge, 866 cfs Apr. 5, 1952 (gage height, 3.58 ft), from rating curve extended above 160 cfs; minimum, 2.2 cfs Dec. 24, 1952.

Remarks.—Records good except those for periods of ice effect, which are poor. Diversions for irrigation of about 620 acres above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*6.6*	6.6	6.3	5.9	12	11	7.8	6.6	6.8	5.9	6.3	5.6
2	6.6	7.1	6.6	5.6	17	9.4	*7.1*	6.6	6.1	5.4	6.3	5.6
3	6.6	6.8	6.8	5.4	30	8.4	7.1	6.6	5.9	5.4	6.3	5.6
4	6.6	6.8	6.8	5.6	41	8.1	8.7	*15*	6.1	5.4	6.8	5.6
5	6.6	6.8	6.3	5.9	36	*7.8*	*16*	8.7	6.3	*5.2*	*7.4*	*5.6
6	*6.6	6.8	6.1	5.9	32	8.1	14	6.8	6.6	5.2	7.1	5.6
7	6.6	6.8	[b]6.5	5.9	37	9.0	13	6.8	6.3	5.2	6.8	5.6
8	6.6	6.8	[b]6.5	5.9	34	13	13	6.8	*7.8*	5.4	6.6	*5.4*
9	6.6	6.8	6.8	[b]5.8	26	*68*	10	*7.8	7.4	5.4	6.6	5.4
10	6.8	6.8	[b]6.5	5.6	21	48	8.7	8.1	6.7	5.4	6.6	5.4
11	7.1	6.8	[b]*5.6*	5.6	23	16	8.1	7.1	6.3	5.2	6.6	5.4
12	6.8	6.8	[b]6	4.7	58	13	8.4	6.8	6.1	5.2	*6.8	5.6
13	6.8	6.8	[b]6	[b]4.5	25	9.7	8.7	6.3	6.3	5.2	6.6	5.4
14	6.6	6.8	[b]6	[b]4.8	14	9.7	9.0	6.6	6.3	5.2	6.8	5.4
15	6.8	6.6	6.1	[b]5	9.0	9.4	9.0	6.3	6.6	5.2	6.8	5.6
16	6.6	6.8	6.3	5.4	7.8	9.7	8.4	*5.9*	6.6	5.2	6.8	5.6
17	6.8	6.6	6.3	5.6	7.8	9.0	8.7	5.9	6.1	5.2	6.6	*5.9*
18	*7.4*	[b]6.8	6.6	[b]5	*6.8*	8.1	9.7	5.9	6.1	5.2	6.6	5.9
19	7.1	*6.3	9.0	[b]4.8	*8.7	8.1	10	8.7	6.1	5.2	6.6	5.6
20	6.8	6.8	*11*	[b]4.5	9.7	7.8	9.7	9.4	6.1	5.2	6.6	5.4
21	6.6	6.8	7.4	[b]5	54	8.4	9.4	9.4	5.9	5.2	6.8	5.4
22	6.6	7.4	[b]7	5.6	55	8.4	9.0	9.0	5.9	5.2	6.3	*5.6
23	6.8	*9.0*	[b]6.5	6.1	68	8.4	9.0	8.7	5.9	5.2	6.1	5.6
24	6.8	8.4	6.3	[b]5	77	8.4	8.1	6.3	5.6	5.4	6.1	5.4
25	6.8	7.1	[b]6	[b]*4*	58	8.1	7.4	6.1	*5.6	5.4	6.1	5.6
26	6.8	6.6	[b]6	[b]5	41	7.8	7.4	6.1	5.4	5.6	6.1	5.6
27	*6.6*	*6.6*	[b]6	[b]*8*	*18*	*9.4*	*8.7*	*5.9*	*5.4*	*6.3*	*5.9*	*5.6*
28	6.6	*6.3*	[b]6	13	13	9.0	8.4	5.9	5.4	6.1	5.9	5.6
29	6.6	6.3	5.9	*24*	-------	8.7	*7.4	6.8	*5.2*	6.1	5.9	5.6
30	6.6	6.3	[b]5.5	21	-------	8.1	7.1	6.8	5.6	6.1	*5.6*	5.6
31	6.6	-------	[b]6	15	-------	8.1	-------	6.3	-------	6.1	5.6	-------
Total	203.4	206.5	202.6	219.1	839.8	384.1	277.0	226.0	184.0	168.6	199.5	166.8
Mean	6.72	6.88	6.54	7.07	30.0	12.4	9.23	7.29	6.13	5.44	6.44	5.56
Ac-ft	413	410	402	435	1,670	762	549	448	365	334	396	331

Calendar year 1953	Max 147	Min 5	Mean 13.0	Ac-ft 9,410
Water year 1953–54	Max 77	Min 4	Mean 8.99	Ac-ft 6,520

Peak discharge (base, 150 cfs)—— Feb. 21 (6:30 p.m.) 178 cfs (2.01 ft).

*Discharge measurement made on this day. [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 1954 in reports of Geological Survey. September 1922 to September 1923 and October 1929 to September 1941 in reports of State engineer.

Gage.—Water-stage recorder. Datum of gage is 4,966.7 ft above mean sea level (Oregon State Highway Department construction survey benchmark). Prior to Dec. 21, 1922, staff gage at same site and datum.

Average discharge.—26 years (1922–23, 1929–54), 114 cfs (82,530 acre-ft per year).

Extremes.—Maximum discharge during year, 1,140 cfs Mar. 10 (gage height, 4.32 ft); minimum, 12 cfs Aug. 11–16, 19, 25 (gage height, 0.56 ft).

1922–23, 1929–54: Maximum discharge, 5,030 cfs Dec. 11, 1937 (gage height, 7.5 ft, from floodmark), from rating curve extended above 1,200 cfs on basis of velocity-area studies; minimum, 1.7 cfs July 20, 27–29, 1934.

Remarks.—Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 5,500 acres above station.

DEEP CREEK ABOVE ADEL, OREG.—Continued

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	*19*	*36*	53	41	115	141	*132*	391	186	*72*	13	16
2	20	29	47	42	110	119	146	376	141	70	13	15
3	21	34	50	35	110	*113*	156	364	126	55	13	15
4	21	31	44	33	110	113	298	391	148	46	13	15
5	21	28	48	39	110	121	638	414	184	40	14	*15
6	*21	31	*31*	40	110	137	537	418	176	30	15	15
7	20	30	31	40	110	148	424	424	152	27	14	15
8	21	30	b 35	38	115	321	379	446	158	27	14	15
9	20	31	b 40	b 38	120	*962*	331	**484*	*192*	26	13	15
10	20	31	b 45	38	110	842	319	463	188	26	13	*14*
11	26	35	b 45	36	100	513	322	442	162	24	*13*	14
12	26	33	b 45	b 35	130	382	355	418	143	23	*12	14
13	24	37	b 45	b 32	120	316	400	382	143	21	12	15
14	24	34	48	b 30	110	289	509	376	136	20	12	15
15	23	31	46	28	100	272	480	367	129	18	12	18
16	23	30	*45	*27*	98	250	*502	361	186	18	12	*21*
17	23	29	44	31	92	215	573	358	152	16	13	19
18	25	28	48	b 35	90	182	638	355	130	16	13	19
19	*31*	*27	73	b 32	*101	176	638	346	116	14	13	18
20	29	29	*245*	b 30	*86*	158	577	337	110	14	14	17
21	28	29	137	b 30	162	154	577	310	100	*13*	14	16
22	26	38	104	33	186	141	573	278	88	13	14	*16
23	26	102	b 90	32	207	141	577	252	80	13	14	17
24	26	*220*	b 80	b 30	*240*	148	577	225	77	13	13	17
25	26	170	b 70	28	228	136	593	204	*72	13	13	17
26	27	116	b 60	35	212	136	577	208	70	13	14	18
27	27	90	49	50	160	145	*652*	188	68	14	*17*	16
28	27	77	45	80	146	148	652	*174*	61	14	17	16
29	27	62	b 42	120	-------	154	*537	186	54	14	16	16
30	26	60	b 40	*130*	-------	136	463	215	*53*	13	15	17
31	25	-------	b 40	120	-------	134	-------	184	-------	13	14	-------
Total	749	1,578	1,865	1,388	3,688	7,343	14,132	10,337	3,781	749	421	486
Mean	24.2	52.6	60.2	44.8	132	237	471	333	126	24.2	13.6	16.2
Ac-ft	1,490	3,130	3,700	2,750	7,320	14,560	28,030	20,500	7,500	1,490	835	964

Calendar year 1953	Max 1,330	Min 18	Mean 177	Ac-ft 128,300
Water year 1953–54	Max 962	Min 12	Mean 127	Ac-ft 92,270

Peak discharge (base, 600 cfs)—— Mar. 10 (1 a.m.) 1,140 cfs (4.32 ft); Apr. 5 (6 to 8 a.m.) 695 cfs (3.55 ft); Apr. 19 (5 to 7 a.m.) 720 cfs (3.60 ft); Apr. 28 (1 to 3 a.m.) 725 cfs (3.61 ft).

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

NOTE.—No gage-height record Dec. 15, Jan. 25 to Feb. 18; discharge estimated on basis of weather records, recorded range in stage, and records for Twentymile Creek near Adel and Camas Creek near Lakeview.

HONEY CREEK NEAR PLUSH, OREG.

Location.—Lat 42°25′, long 119°55′, in NW¼ sec. 29, T. 36 S., R. 24 E., on right bank 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 1954 in reports of Geological Survey. April 1930 to September 1949 in reports or files of State engineer.

Gage.—Water-stage recorder. Datum of gage is 4,538.00 ft above mean sea level, datum of 1929. Prior to Feb. 23, 1910, staff gage at wagon bridge at Plush at different datum. Feb. 24, 1910, to Jan. 12, 1912, and Mar. 19 to June 30, 1922, staff gage, Jan. 13, 1912, to May 16, 1915, and Apr. 7 to Aug. 31, 1921, water-stage recorder, at site half a mile upstream from present site at different datums.

Average discharge.—24 years (1910–14, 1930–41, 1945–54), 25.8 cfs.

Extremes.—Maximum discharge during year, 251 cfs Apr. 5 (gage height, 3.86 ft); minimum, 0.4 cfs Aug. 25–27.

1909–15, 1921–22, 1930–54: 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 fair except those for periods of ice effect, which are poor. About 2,300 acres irrigated above station.

Revisions.—WSP 410: Drainage area.

HONEY CREEK NEAR PLUSH, OREG.—Continued

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	*1.2*	*2.2*	6.9	4.9	*30*	16	*29*	99	46	*14*	1.4	*0.6*
2	1.2	2.9	6.6	5.2	30	*14*	29	103	38	13	1.1	.6
3	1.3	3.3	6.9	4.1	28	14	29	94	32	11	.9	.6
4	1.4	2.9	6.6	5.5	26	15	57	90	29	10	1.0	.6
5	*1.5*	2.7	*6.3*	*5.5*	*23*	14	*211*	*96*	44	9.2	1.3	*.6
6	*1.5	3.4	5.5	5.8	20	16	163	96	48	8.6	*1.3*	.7
7	1.5	3.6	4.6	5.2	17	16	122	98	44	8.0	1.6	.8
8	1.4	2.9	*5.8*	4.9	16	25	98	*96*	47	7.2	1.2	.8
9	1.4	2.5	6.3	4.6	15	106	94	*108	*54*	6.8	1.0	.8
10	1.5	3.1	6.0	*5.5*	15	*142*	94	*128*	*52*	7.2	.9	.8
11	1.8	*4.4	*6.0	5.2	16	84	94	105	53	6.0	.8	.9
12	2.0	4.6	*6.3*	3.6	26	65	94	95	44	*5.5*	.8	.9
13	2.2	4.6	*5.5*	*6.6	22	50	105	89	38	4.8	.8	.9
14	2.2	4.4	6.3	6.0	16	47	141	80	36	4.2	.8	.9
15	1.9	4.1	6.6	4.6	12	48	*119	80	*26	4.0	.8	.8
16	1.8	3.8	6.6	4.1	11	44	122	78	31	3.5	.8	.8
17	1.8	4.1	6.6	6.0	13	38	150	78	25	3.2	1.1	.8
18	1.9	3.6	8.0	*3.3	*10*	30	186	77	20	3.0	1.1	.8
19	2.4	3.6	9.3	[b]*3.2*	10	34	178	75	19	2.7	.8	.8
20	*2.5*	4.9	*28*	[b]3	12	30	148	75	17	2.6	.7	.8
21	2.4	4.9	13	[b]*3*	18	30	144	73	15	2.6	.7	.8
22	2.2	5.8	6.3	[b]*3.5*	19	24	141	70	13	2.7	.7	*1.2
23	2.2	9.0	[b]6	[b]*3.2*	*19	*26	147	60	12	2.6	.6	1.2
24	2.2	*18*	[b]*5.5*	[b]*3*	24	30	137	*53	15	2.4	.6	1.1
25	2.2	9.7	5.2	[b]*2.5*	24	25	130	55	14	2.2	.5	1.0
26	2.2	8.6	[b]*5.5*	[b]*3*	24	27	125	59	14	2.1	*.4*	.9
27	2.2	8.3	[b]*5.5*	[b]*4*	16	34	130	50	12	2.0	.5	.9
28	2.2	8.6	4.9	5.2	17	42	138	*43*	10	1.8	.7	.9
29	2.4	8.3	4.1	12	-------	41	*120	50	8.9	1.6	.9	.9
30	2.2	6.9	*3.1*	26	-------	30	110	66	*8.6*	1.5	.8	1.1
31	2.0	-------	3.8	*38*	-------	31	-------	43	-------	*1.4*	.7	-------
Total	58.8	154.7	213.6	194.2	529	1,188	3,585	2,462	865.5	157.4	27.8	25.3
Mean	1.90	5.16	6.89	6.26	18.9	38.3	120	79.4	28.8	5.08	0.90	0.84
Ac-ft	117	307	424	385	1,050	2,360	7,110	4,880	1,720	312	55	50

Calendar year 1953	Max 344	Min 0.8	Mean 35.0	Ac-ft 25,330
Water year 1953–54	Max 211	Min 0.4	Mean 25.9	Ac-ft 18,770

Peak discharge (base, 200 cfs)..... Mar. 10 (3:30 a.m.) 218 cfs (3.56 ft); Apr. 5 (9:30 a.m.) 251 cfs (3.86 ft); Apr. 18 (6 a.m.) 218 cfs (3.56 ft).

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

ABERT LAKE BASIN

CHEWAUCAN RIVER ABOVE CONN DITCH, NEAR PAISLEY, OREG.

Location.—Lat 42°41′, long 120°35′, in SW¼ sec. 27, T. 33 S., R. 18 E., on right bank at footbridge 20 ft downstream from former powerplant of Paisley Electric Co., 700 ft upstream from diversion dam of Conn ditch, a quarter of a mile downstream from Mill Creek, and 2½ miles west of Paisley.

Drainage area.—275 sq mi.

Records available.—April 1912 to September 1921, May 1924 to September 1954.

Gage.—Water-stage recorder. Datum of gage is 4,504.9 ft above mean sea level (river-profile survey). Apr. 3 to July 13, 1912, reference point at present site at different datum. Nov. 6, 1912, to Sept. 30, 1914, staff gage, and Oct. 1, 1914, to Sept. 30, 1921, water-stage recorder, at various sites half a mile upstream at various datums.

Average discharge.—39 years (1912–21, 1924–54), 130 cfs (94,120 acre-ft per year).

Extremes.—Maximum discharge during year, 1,460 cfs Mar. 9 (gage height, 4.56 ft); minimum, 32 cfs Nov. 18 (gage height, 1.58 ft).

1912–21, 1924–54: Maximum discharge, 1,680 cfs Dec. 11, 1937 (gage height, 4.93 ft); no flow part of each day Dec. 7, 1929, Dec. 12, 1932 (result of freezeup).

Remarks.—Records good except those for periods of ice effect, which are poor. Diversions for irrigation of about 2,500 acres above station.

Revisions.—WSP 860: Drainage area.

CHEWANCAN RIVER ABOVE CONN DITCH, NEAR PAISLEY, OREG.—Continued

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	42	46	68	b 50	97	170	*170*	722	*323*	*140*	43	41
2	47	51	68	b 50	105	150	190	680	295	124	41	*39*
3	45	52	68	55	97	*140*	242	716	284	111	41	39
4	*44*	*47*	66	64	97	152	*402*	734	306	105	42	*40*
5	44	46	68	64	96	172	668	817	320	98	47	46
6	42	48	59	58	*95*	201	555	866	306	93	46	*42
7	*41*	47	*42*	65	95	228	415	936	267	92	43	41
8	*41	47	b *50*	*60*	97	*596*	*425*	*998*	302	*89*	*39*	41
9	41	47	b 55	52	98	*1,160*	398	*1,020*	295	87	39	41
10	42	46	b 55	b 50	98	838	362	*982	302	82	*38*	39
11	51	51	48	b 50	105	485	390	966	250	77	38	41
12	46	51	b 55	46	*150*	*366*	*445*	936	236	76	*39*	*43*
13	45	59	b 60	46	140	302	*550	887	232	73	38	42
14	44	52	64	b 45	127	278	650	845	219	70	38	41
15	43	50	*64	b 45	118	270	638	845	250	65	40	42
16	43	48	63	46	114	246	710	838	260	64	42	*47*
17	43	50	55	52	116	219	838	838	219	61	42	45
18	59	*36*	66	45	109	198	966	831	210	58	41	45
19	*71*	b 40	*96*	b 45	107	190	936	824	198	56	41	43
20	52	b 45	*188*	b 40	118	175	866	796	192	55	*58*	42
21	50	48	95	b 45	148	162	845	728	188	55	47	41
22	46	66	60	b 50	162	145	859	644	180	*57	44	*40
23	46	206	55	52	185	162	901	584	175	57	*43	42
24	46	*216*	b 55	b 45	198	165	936	540	170	56	42	42
25	46	146	*56*	b *35*	201	145	*958*	520	165	53	47	41
26	47	111	57	b 40	*207*	158	936	465	158	53	51	41
27	46	94	b 55	52	*178	168	*990*	406	150	51	49	40
28	46	84	b 50	57	172	185	*966	378	143	49	49	39
29	46	78	b *50*	90	-------	185	901	420	*136*	46	47	40
30	46	75	45	114	-------	152	824	386	138	45	43	41
31	46	-------	b 45	*116*	-------	165	-------	*350*	-------	*44*	42	-------
Total	1,437	2,083	1,981	1,724	3,632	8,328	19,932	22,498	6,869	2,242	1,334	1,247
Mean	46.4	69.4	63.9	55.6	130	269	664	726	229	72.3	43.0	41.6
Ac-ft	2,850	4,130	3,930	3,420	7,200	16,520	39,530	44,620	13,620	4,450	2,650	2,470

Calendar year 1953	Max 1,160	Min 86	Mean 221	Ac-ft 160,300
Water year 1953–54	Max 1,160	Min 35	Mean 201	Ac-ft 145,400

Peak discharge (base, 500 cfs)—Mar. 9 (8 to 9 p.m.) 1,460 cfs (4.56 ft); Apr. 5 (10 p.m.) 824 cfs (3.82 ft); Apr. 18 (5 a.m.) 1,030 cfs (4.10 ft); May 9 (7 to 10 a.m.) 1,040 cfs (4.11 ft).

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

SUMMER LAKE BASIN

ANA RIVER NEAR SUMMER LAKE, OREG.

Location.—Lat 43°00′, long 120°45′, in SE¼ sec. 6, T. 30 S., R. 17 E., on left bank 300 ft downstream from diversion dam and 2 miles northeast of Summer Lake.

Records available.—June 1951 to September 1954 in reports of Geological Survey. October 1929 to September 1939 (river only) and May to September 1928, 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, 80 ft downstream at different datum.

Average discharge.—6 years (1930-32, 1935-36, 1951–54), 92.1 cfs.

Extremes.—Maximum discharge during year, 101 cfs Oct. 3; minimum daily, 54 cfs May 5.

1929–39, 1951–54: 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. All records presented herein 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.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*85*	*89*	*90*	*93*	*96*	*96*	*96*	71	**83*	82	83	79
2	85	89	90	93	96	96	96	72	83	*92*	83	78
3	92	89	90	93	96	96	96	72	83	87	82	79
4	*99*	89	90	93	96	96	95	64	83	82	80	79
5	96	90	90	93	96	96	95	*54*	83	83	79	80
6	96	90	90	93	96	96	93	71	83	84	80	**80*
7	94	90	90	93	96	96	93	80	83	85	81	79
8	94	90	90	95	96	96	93	77	83	85	81	80
9	**94*	90	90	95	96	96	93	80	83	85	81	81
10	94	90	90	95	**96*	96	93	**86*	83	*76*	81	81
11	93	90	90	95	96	*95*	93	84	82	78	80	81
12	93	90	90	95	96	95	93	79	*81*	87	77	80
13	93	90	90	95	96	95	93	77	82	91	80	79
14	93	90	90	95	96	95	92	79	83	87	80	80
15	93	90	90	95	96	95	92	80	83	86	82	79
16	93	90	90	95	96	95	92	80	83	84	**84*	79
17	92	90	90	95	96	95	92	80	83	84	83	79
18	91	90	90	95	96	95	92	80	83	84	83	81
19	91	89	90	*96*	96	95	92	80	83	84	83	80
20	90	89	90	96	96	95	92	79	83	82	83	**79*
21	90	90	90	96	96	95	92	76	83	81	82	76
22	90	*91*	90	96	96	95	**92*	81	83	81	81	82
23	90	91	90	96	*95*	95	92	81	83	81	84	*84*
24	90	90	**90*	96	95	**95*	92	81	83	82	84	82
25	90	**90*	90	96	95	95	92	82	83	82	83	82
26	89	90	90	96	95	96	**92*	82	83	82	83	80
27	89	90	92	96	95	96	82	82	82	83	83	78
28	89	90	*93*	96	95	96	*65*	82	82	84	83	76
29	89	90	93	96	-------	96	67	83	82	88	83	*75*
30	89	90	93	96	-------	96	70	84	82	86	81	75
31	89	-------	93	96	-------	96	-------	84	-------	83	81	-------
Total	2,835	2,696	2,804	2,944	2,682	2,961	2,702	2,423	2,482	2,601	2,534	2,383
Mean	91.5	89.9	90.5	95.0	95.8	95.5	90.1	78.2	82.7	83.9	81.7	79.4
Ac-ft	5,620	5,350	5,560	5,840	5,320	5,870	5,360	4,810	4,920	5,160	5,030	4,730

Calendar year 1953	Max 107	Min 38	Mean 87.3	Ac-ft 63,170
Water year 1953–54	Max 99	Min 54	Mean 87.8	Ac-ft 63,570

*Discharge measurement made on this day.

NOTE.—No flow in Summer Lake Canal Oct. 6 to May 4.

SILVER LAKE BASIN

SILVER CREEK NEAR SILVER LAKE, OREG.

Location.—Lat 43°07′, long 121°04′, in SW¼ sec. 28, T. 28 S., R. 14 E., on right bank 1½ miles downstream from diversion dam of Silver Lake Irrigation District, 1½ miles southwest of town of Silver Lake, and 3 miles upstream from Bridge Creek.

Drainage area.—221 sq mi.

Records available.—January 1905 to March 1907, January 1909 to September 1954.

Gage.—Water-stage recorder and concrete control. Prior to May 24, 1932, staff gages or water-stage recorder at practically same location at datum 1.00 ft higher, or staff gages at diversion dam outlets 1½ miles upsteam at different datum.

Average discharge.—42 years, including Silver Lake Canal, 26.4 cfs (19,110 acre-ft per year).

Extremes.—Maximum discharge during year, 434 cfs Apr. 23 (gage height, 5.17 ft); minimum, 7.4 cfs sometime during period Nov. 12–25.

1905–7, 1909–54: Maximum discharge, 1,800 cfs Mar. 20, 1907 (gage height, 10.08 ft, present datum); no flow at times in 1931, 1932, 1934, 1937.

Remarks.—Records good except those for periods of ice effect or no gage-height record, which are poor. Flow regulated by reservoir above diversion dam 1½ miles above station and by Thompson Valley Reservoir 11 miles above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*14*	8.1	12	12	b 21	b 26	*66*	*302*	**64*	*55*	*22*	*16*
2	13	8.1	11	12	a 20	b 25	66	284	60	55	21	16
3	13	8.1	11	b 13	a 18	b 25	82	264	58	55	21	16
4	13	7.7	11	13	a *16*	b *24*	124	254	51	53	21	16
5	*13	7.7	10	12	a 16	24	198	253	47	51	21	16
6	12	7.7	10	12	a 16	25	228	251	46	51	21	*15
7	12	7.7	9.4	12	a 16	31	213	249	*48*	50	21	15
8	12	7.7	9.4	12	a 16	49	226	246	43	50	21	15
9	12	7.7	9.4	11	a 16	130	240	237	44	49	21	15
10	12	7.7	9.4	12	16	*202*	236	*228	46	49	21	15
11	12	7.7	b *9*	12	16	143	240	218	43	49	21	15
12	12	7.7	9.0	b 12	20	121	256	209	43	48	21	15
13	12	a *7.5*	9.0	b 11	25	114	267	203	43	47	21	14
14	11	a 7.5	9.0	11	b 25	102	300	196	43	47	21	14
15	11	a 7.5	9.0	12	b 23	97	312	186	.43	47	21	14
16	11	a 7.5	9.0	14	b 22	94	331	179	46	46	*21	14
17	10	a 7.5	9.0	16	22	92	351	174	47	46	21	14
18	10	a 7.5	9.0	b 14	b 22	87	381	168	46	44	20	14
19	10	a 7.5	9.4	b 12	b 22	83	408	157	46	34	20	14
20	10	a 7.5	18	b 10	22	78	418	146	45	20	20	*14
21	9.8	a 8	*20*	b 12	26	75	418	138	44	18	20	14
22	9.4	a 10	b 16	15	b 31	72	*420	130	48	16	20	14
23	9.4	a 15	b 14	b 12	b 30	68	*424*	120	55	16	19	14
24	9.0	a *25*	*13	b 10	33	*68	416	108	56	15	19	14
25	8.5	*22	b 13	b *9*	*35*	66	394	98	57	*14*	19	14
26	8.5	19	13	b 10	34	64	*358	90	57	17	18	14
27	8.5	16	13	14	b 30	66	353	85	56	21	18	*13*
28	8.5	14	14	16	29	71	349	79	55	22	18	13
29	8.5	14	13	18	-------	72	335	78	55	22	18	13
30	*8.1*	13	b 13	20	-------	68	319	75	55	22	*17*	13
31	8.1	-------	12	b *22*	-------	66	-------	*69*	-------	22	17	-------
Total	331.3	309.6	356.0	403	638	2,328	8,729	5.474	1,485	1,151	621	433
Mean	10.7	10.3	11.5	13.0	22.8	75.1	291	177	49.5	37.1	20.0	14.4
Ac-ft	657	614	706	799	1,270	4,620	17,310	10,860	2,950	2,280	1,230	859

Calendar year 1953	Max 220	Min 6.4	Mean 47.0	Ac-ft 34,020
Water year 1953–54	Max 424	Min 7.5	Mean 61.0	Ac-ft 44,160

*Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of record for Chewaucan River near Paisley.

b Stage-discharge relation affected by ice.

MALHEUR AND HARNEY LAKES BASIN

SILVIES RIVER NEAR BURNS, OREG.

Location.—Lat 43°43′, long 119°11′, in NW¼ sec. 31, T. 21 S., R. 30 E., on left bank 1 mile downstream from dam site for proposed lower Silvies Reservoir, 5 miles downstream from Emigrant Creek, and 11 miles northwest of Burns.

Drainage area.—934 sq mi.

Records available.—May 1903 to July 1906, December 1908 to September 1954.

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 1¾ miles downstream at different datum. Oct. 2, 1941, to Oct. 3, 1951, water-stage recorder at site 400 ft downstream at present datum.

Average discharge.—41 years (1903–5, 1909–12, 1917–21, 1922–54), 158 cfs.

Extremes.—Maximum discharge during year not determined, occurred Mar. 10; minimum, 7.4 cfs Aug. 30.

1903–6, 1908–54: 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, which are poor. Diversions for irrigation above station primarily with floodwater.

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	*19*	38	74	68	133	223	236	*410*	122	*84*	11	11
2	19	39	70	65	132	191	*233*	388	117	31	10	10
3	22	38	68	65	117	191	235	370	106	28	9.2	10
4	22	38	67	64	112	190	*261	349	101	24	8.9	*9.6*
5	22	38	67	65	115	*187*	354	328	109	22	8.9	10
6	*22	37	66	66	110	197	495	305	123	20	10	10
7	22	37	*57*	65	*109*	213	534	289	121	20	10	9.5
8	22	38	61	b 60	117	258	581	258	*111	19	8.9	9.5
9	22	38	68	b 55	124	443	575	241	115	18	8.9	9.5
10	23	37	80	b 60	126	*800*	522	237	118	17	8.6	9.5
11	24	37	69	b 60	131	743	513	236	113	16	*8.3	9.5
12	25	38	b 65	*b 55	146	701	522	226	103	16	8.0	9.5
13	26	38	b 70	b 50	*446*	589	550	209	106	18	8.3	9.5
14	26	38	67	b 60	307	508	691	190	110	16	8.0	9.5
15	27	38	64	b 65	238	457	722	173	120	*17	8.0	9.5
16	28	37	62	b 60	206	418	723	169	*143*	18	7.7	9.5
17	28	*36*	b 60	b 55	202	404	742	160	131	19	8.0	10
18	30	*36	61	b 50	207	356	*750*	150	119	18	7.7	11
19	34	36	66	b 45	185	337	747	137	108	16	8.3	*12*
20	36	40	83	b *40*	185	335	715	126	96	16	10	11
21	34	36	92	b 50	242	826	687	116	83	16	12	11
22	36	38	*96*	b 55	196	318	644	113	71	16	*13*	11
23	35	79	83	b 55	205	311	609	108	57	15	11	11
24	36	91	b 80	b 50	*244	309	569	102	52	14	9.5	12
25	37	87	b 75	b 45	268	297	527	*98*	42	14	9.2	12
26	*39*	*94*	75	b 50	274	287	480	*101	36	14	*11	12
27	39	90	81	b 60	241	271	467	101	34	17	11	11
28	38	90	b 75	82	238	270	474	98	31	14	11	11
29	38	82	b 70	94	-------	267	467	101	*26*	13	10	11
30	39	81	b 60	*142*	-------	257	440	111	28	12	8.9	12
31	38	-------	64	136	-------	245	-------	106	-------	*11*	11	-------
Total	908	1,520	2,196	1,992	5,356	10,899	16,065	6,106	2,752	554	294.3	313.5
Mean	29.3	50.7	70.8	64.3	191	352	536	197	91.7	17.9	9.49	10.4
Ac-ft	1,800	3,010	4,360	3,950	10,620	21,620	31,860	12,110	5,460	1,100	584	622

Calendar year 1953	Max 1,770	Min 17	Mean 258	Ac-ft 186,900
Water year 1953–54	Max 800	Min 7.7	Mean 134	Ac-ft 97,100

*Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OREG.

Location.—Lat 42°47′, long 118°52′, in NW¼ sec. 20, T. 32 S., R. 32½ E., on left bank 1½ miles upstream from upper diversions for Malheur Migratory Waterfowl Refuge, 2 miles downstream from Fish Creek, and 3½ miles southeast of Frenchglen.

Drainage area.—180 sq mi, approximately.

Records available.—December 1937 to September 1954 in reports of Geological Survey. May 1910 to September 1921 (published as "near Diamond") and July 1929 to September 1930 in reports of State engineer.

Gage.—Water-stage recorder and concrete control. Datum of gage is 4,254 ft above mean sea level (surveys of U. S. Fish and Wildlife Service). Prior to December 1937, staff gages at several sites downstream at various datums.

Average discharge.—24 years (1911–13, 1914–16, 1917–21, 1938–54), 126 cfs.

Extremes.—Maximum discharge during year, 1,240 cfs Mar. 9 (gage height, 4.61 ft); minimum, 17 cfs Jan. 25 (gage height, 1.76 ft).

1910–21, 1937–54: 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 (ice jam upstream) Jan. 14, 1940.

Remarks.—Records excellent except those for periods of ice effect, which are fair, and those for period of no gage-height record, which are poor.

Revisions.—WSP 330: Drainage area (former site). WSP 860: Drainage area.

DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OREG.—Continued

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*43*	44	45	52	88	70	150	178	155	*106*	42	37
2	44	46	47	46	75	*64*	140	175	135	102	41	*36*
3	45	47	48	45	83	67	130	172	130	96	41	36
4	44	45	47	47	88	66	169	184	142	94	42	37
5	44	45	50	47	85	66	163	220	140	94	42	37
6	43	45	50	47	80	70	148	244	138	90	*43*	37
7	43	44	[b] 42	47	83	70	130	276	130	85	42	37
8	43	44	[b] 45	44	85	122	125	318	140	80	42	37
9	43	44	50	[b] 40	82	*588*	118	330	130	78	41	37
10	43	43	[b] 45	[b] 44	76	214	*112*	283	178	76	40	36
11	46	43	[b] 42	45	98	172	115	310	169	76	40	36
12	46	43	[b] 45	42	*202*	137	[a] 120	326	169	73	40	37
13	*45	44	47	*42	122	130	[a] 140	318	169	70	40	38
14	44	43	48	50	108	128	[a] 170	322	163	68	40	37
15	45	43	48	43	85	122	[a] 170	344	187	*67	40	40
16	45	44	50	44	73	118	[a] 180	352	*220*	66	41	*42*
17	44	45	53	[b] 40	82	106	[a] 210	352	181	61	41	40
18	45	42	64	[b] 40	87	96	[a] 250	352	169	56	40	40
19	*43*	*44	181	[b] 40	76	104	[a] 240	*375*	166	53	40	39
20	46	47	*321*	[b] 36	100	98	[a] 230	375	169	51	41	39
21	45	[b] *40*	94	[b] 40	152	104	*234	310	199	51	42	38
22	45	54	[b] 44	46	96	115	234	244	193	50	42	37
23	45	*56*	[b] 42	47	83	145	238	220	205	48	41	39
24	45	54	[b] 42	[b] 38	92	184	238	214	193	47	39	38
25	45	54	42	[b] *50*	*87	189	238	*211	172	46	*40	38
26	45	50	52	[b] 40	83	238	234	178	163	46	41	37
27	45	48	56	51	*70*	217	*252*	150	145	46	42	37
28	45	47	51	53	73	320	238	*140*	122	44	40	36
29	44	46	47	*240*	-------	238	211	150	115	43	39	37
30	44	46	[b] *56*	158	-------	152	199	152	*110*	*42*	38	38
31	44	-------	[b] 44	108	-------	142	-------	158	-------	42	*37*	-------
Total	1,381	1,380	1,918	1,732	2,594	4,652	5,526	7,933	4,797	2,047	1,260	1,130
Mean	44.5	46.0	61.9	55.9	92.6	150	184	256	160	66.0	40.6	37.7
Ac-ft	2,740	2,740	3,800	3,440	5,150	9,230	10,960	15,730	9,510	4,060	2,500	2,240

Calendar year 1953	Max 1,650	Min 36	Mean 127	Ac-ft 91,820
Water year 1953-54	Max 588	Min 30	Mean 99.6	Ac-ft 72,100

Peak discharge (base, 650 cfs)..... Mar. 9 (4:30 a.m.) 1,240 cfs (4.61 ft).

*Discharge measurement made on this day.
[a] No gage-height record; discharge estimated on basis of weather records and records for Bridge Creek near Frenchglen.
[b] Stage-discharge relation affected by ice.

BRIDGE CREEK NEAR FRENCHGLEN, OREG.

Location.—Lat 42°50′, long 118°51′, in NW¼ sec. 33, T. 31 S., R. 32½ E., on right bank at mouth of canyon, 1,000 ft upstream from road crossing and 3½ miles northeast of Frenchglen.

Drainage area.—30 sq mi, approximately.

Records available.—March 1911 to September 1916, December 1937 to September 1954.

Gage.—Water-stage recorder and concrete control. Datum of gage is 4,184.93 ft. Mar. 18, 1911, to Sept. 30, 1916, staff gage half a mile upstream at different datum. Dec. 21, 1937, to May 17, 1938, staff gage 1,000 ft downstream at different datum. May 18, 1938, to Aug. 22, 1939, staff gage at present site and datum.

Average discharge.—20 years (1912–16, 1938–54), 14.2 cfs (10,280 acre-ft per year).

Extremes.—Maximum discharge during year, 91 cfs June 10 (gage height, 1.77 ft); minimum, 9.5 cfs Mar. 8.

1911–16, 1937–54: Maximum discharge, 415 cfs 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.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	15	15	12	11	10	17	18	11	11	11	12
2	13	13	13	12	11	10	20	19	11	11	12	12
3	13	13	13	12	11	10	24	17	11	11	12	12
4	13	13	12	12	11	9.9	24	17	11	11	12	12
5	13	13	12	12	11	9.9	24	16	11	11	12	12
6	13	13	13	12	11	9.9	23	16	11	11	12	12
7	13	13	13	12	11	9.9	20	16	11	11	12	12
8	13	13	12	12	11	10	19	16	11	11	12	12
9	13	13	12	12	11	14	19	16	11	11	12	12
10	13	13	13	12	11	13	17	16	30	11	12	12
11	13	13	13	12	11	12	17	15	14	11	12	12
12	13	13	12	12	11	11	17	15	12	11	12	12
13	*13	13	12	*12	11	11	18	14	12	11	12	12
14	13	13	12	12	11	11	22	14	11	11	12	12
15	13	13	13	12	11	11	22	14	11	*11	12	12
16	13	13	13	12	11	11	22	14	12	11	12	12
17	13	13	13	12	11	11	24	13	11	11	12	12
18	13	13	13	12	11	11	25	13	11	11	12	12
19	13	*13	13	12	11	12	24	13	11	11	12	12
20	13	13	13	12	11	11	24	13	11	11	12	12
21	13	13	13	12	11	11	*23	13	10	11	15	12
22	13	13	13	12	11	12	22	13	10	11	13	12
23	13	13	13	12	10	14	22	13	10	11	13	12
24	13	13	13	12	11	17	21	18	10	11	13	12
25	13	12	13	12	*11	17	21	*12	10	11	*13	12
26	13	13	12	12	11	21	21	12	11	11	13	12
27	13	13	12	12	10	19	22	12	11	11	12	12
28	13	13	12	12	10	21	23	12	11	11	12	12
29	13	13	12	20	-------	21	21	12	11	11	12	12
30	13	13	12	14	-------	17	21	12	11	11	12	12
31	13	-------	12	12	-------	16	-------	12	-------	11	12	-------
Total	403	388	390	382	305	404.6	639	440	350	341	377	360
Mean	13.0	12.9	12.6	12.3	10.9	13.1	21.3	14.2	11.7	11.0	12.2	12.0
Ac-ft	799	770	774	758	605	803	1,270	873	694	676	748	714

Calendar year 1953	Max 77	Min 12	Mean 14.6	Ac-ft 10,570
Water year 1953–54	Max 30	Min 9.9	Mean 13.1	Ac-ft 9,480

Peak discharge (base, 30 cfs)..... Mar. 26 (6 p.m.) 32 cfs (1.32 ft); Apr. 3 (7:30 p.m.) 53 cfs (1.50 ft); June 10 (9 a.m.) 91 cfs (1.77 ft).

*Discharge measurement made on this day.

SILVER CREEK NEAR RILEY, OREG.

Location.—Lat 43°41′, long 119°39′, in E½ sec. 1, T. 22 S., R. 25 E., on right bank 0.4 mile downstream from Rough Creek, 1.4 miles upstream from Nicoll Creek, and 14 miles northwest of Riley.

Drainage area.—228 sq mi.

Records available.—June 1951 to September 1954.

Gage.—Water-stage recorder. Altitude of gage is 4,450 ft (by barometer).

Extremes.—Maximum discharge during year, 403 cfs Mar. 10 (gage height, 4.17 ft); minimum, 1.5 cfs Aug. 11, 12.

1951–54: Maximum discharge, 1,300 cfs Apr. 6, 1952 (gage height, 6.65 ft); minimum, 0.9 cfs Sept. 13, 1951.

Remarks.—Records good except those for periods of ice effect, which are fair. Diversions above station for irrigation of about 500 acres.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	5.2	8.6	b8.5	20	75	61	*63*	18	*9.6*	2.1	1.8
2	4.5	5.2	8.6	b*8*	16	66	*60*	61	16	8.8	1.9	1.7
3	4.7	5.2	9.1	b9	b13	68	62	55	14	7.8	1.8	1.7
4	4.4	5.2	b9	b9	b*12*	65	79	51	15	6.8	1.9	1.7
5	4.4	5.2	*10*	b10	b12	63	141	47	20	6.2	2.1	1.7
6	4.4	5.4	9.1	b10	b13	64	188	43	*26*	5.7	2.3	1.8
7	4.4	5.4	b8	b11	b15	65	180	40	23	5.4	2.2	1.7
8	4.2	5.2	b*7.5*	b10	b25	99	192	38	23	5.4	1.9	1.8
9	*4.0*	5.2	b8.5	b9.5	b25	260	186	38	22	5.4	1.7	1.8
10	4.4	5.2	b8	b11	b24	*364*	169	41	23	5.2	1.7	1.7
11	5.1	5.2	b7.5	b10	b44	277	169	36	20	5.2	*1.6*	*1.6*
12	*5.1	5.4	b8	*b9	b65	226	180	32	18	4.9	1.6	1.7
13	4.9	5.4	b8	b10	b60	194	230	30	18	4.4	1.6	1.8
14	4.7	5.4	b8.5	13	52	171	*272*	28	17	4.2	1.6	1.9
15	4.7	5.2	b8.5	13	47	151	238	26	19	4.0	1.7	1.9
16	4.7	5.2	8.9	12	56	184	220	25	20	*3.8	1.9	2.3
17	4.7	5.6	b8.5	11	53	120	214	22	17	3.6	2.1	2.8
18	5.4	*b*4.6*	8.9	b10	b46	96	204	20	15	3.2	1.9	*3.1*
19	*7.6*	b5.0	10	b9	b44	95	178	19	14	3.1	2.2	2.8
20	6.8	b5.0	b10	b10	45	86	*156	18	13	2.9	*4.4*	2.4
21	5.4	b4.6	b8.5	b11	53	82	139	18	12	2.9	4.0	2.3
22	5.2	7.6	b8	b12	46	74	123	17	11	3.1	3.5	2.3
23	5.1	*16*	b8.5	b11	53	71	114	17	10	3.1	2.8	2.3
24	4.9	14	b9	b10	*66	76	100	*16*	9.6	2.9	2.4	2.3
25	5.1	11	b8	b9	85	65	92	*17	8.8	2.8	2.3	2.3
26	5.1	10	b8.5	b10	*90*	68	82	18	8.4	2.6	*2.4	2.2
27	5.1	13	b9	b13	82	65	86	17	8.4	2.4	2.6	2.1
28	5.1	12	b8.5	b15	84	65	90	16	8.4	2.3	2.6	1.9
29	5.1	9.7	b8	b*90*	-------	64	74	16	*8.1*	2.3	2.3	2.2
30	4.9	8.9	b7.5	42	-------	*55*	70	21	8.4	2.2	2.1	2.3
31	4.9	-------	b8	29	-------	61	-------	18	-------	*2.1*	1.9	-------
Total	152.7	211.2	264.7	455.0	1,246	3,485	4,349	924	464.1	134.3	69.1	61.9
Mean	4.93	7.04	8.54	14.7	44.5	112	145	29.8	15.5	4.33	2.23	2.06
Ac-ft	303	419	525	902	2,470	6,910	8,630	1,830	921	266	137	123

Calendar year 1953	Max 382	Min 4.0	Mean 53.3	Ac-ft 38,610
Water year 1953–54	Max 364	Min 1.6	Mean 32.4	Ac-ft 23,440

Peak discharge (base, 350 cfs)..... Mar. 10 (4 a.m.) 403 cfs (4.17 ft).

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

ALVORD LAKE BASIN

TROUT CREEK NEAR DENIO, OREG.

Location.—Lat 42°10′, long 118°28′, in SW¼ sec. 26, T. 39 S., R. 36 E., on right bank 0.4 mile upstream from bridge 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 1954.

Gage.—Water-stage recorder. Datum of gage is 4,351.59 ft. Mar. 25, 1911, to Mar. 31, 1912, staff gage 0.4 mile downstream at different datum. Apr. 28, 1922, to June 14, 1932, recorder 10 ft upstream at datum 0.50 ft higher.

Average discharge.—23 years (1922–23, 1932–54), 14.9 cfs (10,790 acre-ft per year).

Extremes.—Maximum discharge during year, 35 cfs Apr. 19 (gage height, 2.52 ft); minimum, 2.2 cfs Aug. 13.

1911–12, 1922–23, 1925–54: Maximum discharge, 343 cfs Aug. 1, 1933 (gage height, 5.26 ft), from rating curve extended above 125 cfs; probably no flow at times.

Remarks.—Records fair except those for periods of ice effect, which are poor. Diversions for irrigation of about 800 acres above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*4.8*	5.7	7.0	7.6	6.8	7.2	*11*	15	11	4.3	*3.0*	2.7
2	4.6	5.7	6.8	b7.5	6.6	*5.5*	11	15	11	4.3	2.9	2.6
3	5.0	5.9	7.2	7.2	5.9	6.3	11	15	9.0	4.4	2.8	2.6
4	5.2	5.9	7.4	8.2	6.1	6.8	11	17	9.6	4.3	2.8	2.7
5	5.4	5.7	7.2	7.6	6.1	7.0	13	19	11	4.0	3.0	2.8
6	5.2	5.7	7.0	7.2	6.3	7.4	*14	22	11	4.2	2.9	2.7
7	*5.5	*5.5*	6.3	7.2	5.9	7.2	14	22	10	4.3	2.9	2.6
8	5.2	5.7	b6	6.1	6.1	7.2	14	24	9.9	5.2	2.7	2.7
9	5.2	5.7	b7	b6	6.1	15	13	26	9.0	*6.1*	2.5	2.8
10	5.0	5.7	b6	b6.5	7.2	*17*	13	*30*	9.0	6.1	2.4	2.7
11	5.2	6.1	b*5.5*	b6	7.0	13	14	29	9.0	5.7	2.4	2.6
12	5.5	6.1	b6.5	b5	7.2	13	14	28	9.6	5.5	2.4	2.6
13	5.5	6.8	7.4	b6	7.4	13	14	27	10	5.2	*2.5*	2.6
14	5.4	6.6	7.4	*b8	7.4	13	18	27	9.3	5.2	2.4	*2.5*
15	5.7	6.6	7.4	7.0	7.0	13	20	29	11	5.0	2.6	2.8
16	5.5	6.8	7.2	7.0	7.2	12	22	29	*13*	4.6	2.4	2.9
17	5.7	7.0	7.4	7.6	7.0	12	26	28	11	4.3	2.4	2.7
18	5.9	5.9	7.9	4.8	6.3	9.9	31	26	9.3	4.0	2.5	2.7
19	*7.2*	*5.9	9.0	b4.5	*5.4*	12	*34*	25	8.5	3.9	2.4	2.8
20	6.3	7.2	*9.3*	b4	7.9	11	30	24	8.2	4.4	*2.6	3.0
21	6.1	6.8	7.9	b5	7.2	10	27	21	7.9	4.3	2.8	2.9
22	6.1	7.4	b7	b6	7.0	9.9	25	18	7.6	4.3	2.8	2.9
23	6.3	7.9	6.3	b5	6.8	10	24	17	6.1	3.8	2.8	2.9
24	6.3	*9.6*	7.0	b4	7.0	10	24	*16	5.9	3.7	2.6	3.0
25	6.6	8.8	b6.5	b*5.5*	7.2	11	22	16	5.2	3.7	*2.6	3.0
26	6.3	7.9	b7	4.4	7.6	10	19	14	5.0	3.7	2.7	2.9
27	6.1	7.4	b7.5	7.0	6.6	10	21	*12*	*4.4*	3.8	2.9	2.8
28	6.1	7.2	8.2	*9.3*	*8.2*	11	19	13	4.8	3.3	2.9	2.8
29	6.1	7.0	b7.5	8.5	-------	11	15	15	5.0	3.1	2.8	3.0
30	5.9	6.8	b7	7.6	-------	10	15	15	5.0	*3.0	2.8	*3.1
31	5.9	-------	b7	6.8	-------	11	-------	13	-------	3.0	2.8	-------
Total	176.2	199.0	221.8	198.1	190.5	322.4	559	647	256.3	134.7	82.8	83.4
Mean	5.68	6.63	7.15	6.39	6.80	10.4	18.6	20.9	8.54	4.35	2.67	2.78
Ac-ft	349	395	440	393	378	639	1,110	1,280	508	267	164	165

Calendar year 1953	Max 152	Min 3.8	Mean 19.2	Ac-ft 13,910
Water year 1953–54	Max 34	Min 2.3	Mean 8.41	Ac-ft 6,090

Peak discharge (base, 50 cfs)..... No peak above base.

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

MISCELLANEOUS DISCHARGE MEASUREMENTS

Measurements of streamflow in the Great Basin made at points other than regular gaging stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements when correlated with the simultaneous discharge of a nearby stream where continuous records are available will give a picture of the low-flow potentiality of the stream. For many sites measurements have been made in other years.

Miscellaneous discharge measurements in the Great Basin during water year October 1953 to September 1954

Date	Stream	Tributary to or diverting from—	Locality	Discharge (cfs)
		Great Salt Lake basin		
June 18	Birch Creek	Woodruff Creek	NE¼ sec. 24, T. 9 N., R. 5 E., 1 mile upstream from Birch Creek Dam, 1½ miles upstream from Allen Creek, and 8½ miles southwest of Woodruff, Utah.	3.8
May 7	Kennedy ditch	Big Creek	NE¼NE¼ sec. 11, T. 10 N., R. 6 E., 3½ miles southwest of Randolph, Utah.	8.4
27	do	do	do	8.8
July 6	do	do	do	4.9
May 7	Big ditch	do	NW¼SE¼ sec. 1, T. 10 N., R. 6 E., 3 miles southwest of Randolph, Utah.	12.7
27	do	do	do	12.6
July 6	do	do	do	9.5
May 7	Spring Hollow	Randolph Creek	E½ sec. 28, T. 11 N., R. 6 E., 4 miles west of Randolph, Utah.	4.1
7	Randolph Creek	Bear River	SW¼ sec. 24, T. 11 N., R. 6 E., 600 ft below Randolph Dam (Randolph Creek) and 2¼ miles northwest of Randolph, Utah.	7.4
27	do	do	do	5.4
July 6	do	do	do	5.3
May 7	Middle Creek	Randolph Creek	SW¼ sec. 24, T. 11 N., R. 6 E., 700 ft below Randolph Dam (Randolph Creek) and 2¼ miles northwest of Randolph, Utah.	4.6
Oct. 28	South Fork Otter Creek	Otter Creek	SW¼ sec. 10, T. 11 N., R. 6 E., 1¾ miles upstream from Middle Fork Otter Creek and 4½ miles northwest of Randolph, Utah.	4.3
Nov. 17	do	do	do	4.6
Dec. 16	do	do	do	3.8
Feb. 15	do	do	do	4.1
Mar. 25	do	do	do	4.3
Apr. 14	do	do	do	4.7
21	do	do	do	4.1
May 6	do	do	do	4.0
21	do	do	do	4.3
June 17	do	do	do	4.2
July 13	do	do	do	4.1
28	do	do	do	3.8
Aug. 26	do	do	do	4.1
Sept. 27	do	do	do	4.0
Oct. 28	Middle Fork Otter Creek	do	SW¼ sec. 3, T. 11 N., R. 6 E., 1½ miles upstream from South Fork Otter Creek and 5 miles northwest of Randolph, Utah.	4.6
Nov. 17	do	do	do	4.4
Dec. 18	do	do	do	4.1
Feb. 15	do	do	do	4.6
Mar. 25	do	do	do	4.5
Apr. 14	do	do	do	3.4
21	do	do	do	4.7
May 6	do	do	do	4.5
21	do	do	do	4.7
June 17	do	do	do	4.4
July 13	do	do	do	4.4
July 28	do	do	do	3.8
Aug. 26	do	do	do	3.9
Sept. 27	do	do	do	4.3

Miscellaneous discharge measurements in the Great Basin during water year October 1953 to September 1954—Continued

Date	Stream	Tributary to or diverting from—	Locality	Discharge (cfs)
		Great Salt Lake basin—Continued		
Oct. 28	North Fork Otter Creek	Otter Creek—Continued.	NE¼ sec. 3, T. 11 N., R. 6 E., 2 miles upstream from mouth and 5¼ miles northwest of Randolph, Utah.	4.2
Nov. 17	do	do	do	3.8
Dec. 18	do	do	do	3.8
Feb. 15	do	do	do	3.6
Mar. 25	do	do	do	4.0
Apr. 14	do	do	do	4.0
21	do	do	do	4.0
May 6	do	do	do	3.8
21	do	do	do	4.4
June 17	do	do	do	4.0
July 13	do	do	do	3.8
28	do	do	do	4.1
Aug. 26	do	do	do	4.2
Sept. 27	do	do	do	3.5
July 15	Twin Creek	Bear River	SE¼ sec. 4, T. 21 N., R. 118 W., ¾ mile upstream from Rock Creek at Nuggett, Wyo.	0
June 10	Sucker Springs	do	NW¼NE¼ sec. 26, T. 22 N., R. 120 W., ¾ mile downstream from head and 15.5 miles south of Cokeville, Wyo.	*1.0
16	do	do	do	*2.0
23	do	do	do	1.1
July 7	do	do	do	*1.0
15	do	do	do	*1.0
Aug. 10	do	do	do	0
24	do	do	do	0
July 13	Sublette Creek	do	NE¼NE¼ sec. 29, T. 24 N., R. 119 W., at mouth and 3 miles south of Cokeville, Wyo.	*2.0
13	Second Spring above Collett Creek Branch Smiths Fork.	do	SW¼SE¼ sec. 8, T. 24 N., R. 119 W., 1 mile south of Cokeville, Wyo.	10.0
13	First Spring above Collett Creek Branch Smiths Fork.	do	do	8.8
13	Collett Creek Branch Smiths Fork.	do	NE¼SW¼ sec. 8, T. 24 N., R. 119 W., at mouth 200 ft downstream from railroad bridge and ½ mile south of Cokeville, Wyo.	23.3
13	Bear River	Great Salt Lake	SE¼NE¼ sec. 7, T. 24 N., R. 119 W., at road bridge ¾ mile southwest of Cokeville, Wyo.	109
13	South Branch Smiths Fork	Bear River	NW¼SW¼ sec. 6, T. 24 N., R. 119 W., at mouth 1¼ miles northwest of Cokeville, Wyo.	4.3
13	Smiths Fork	do	SE¼NW¼ sec. 6, T. 24 N., R. 119 W., at mouth 1¼ miles northwest of Cokeville, Wyo.	16.1
13	South Fork Ryan Creek (Branch Smiths Fork).	do	NW¼NW¼ sec. 6, T. 24 N., R. 119 W., at mouth 1¼ miles northwest of Cokeville, Wyo.	7.6
13	Ryan Creek (Branch Smiths Fork).	do	NW¼NW¼ sec. 6, T. 24 N., R. 119 W., ¼ mile upstream from mouth and 1¾ miles northwest of Cokeville, Wyo.	7.7
12	Dry Creek	Thomas Fork	SE¼ sec. 3, T. 12 S., R. 46 E., at road bridge 3 miles north of Geneva, Idaho.	*2.0
12	Spring Hollow	do	NE¼ sec. 10, T. 12 S., R. 46 E., at road bridge 3 miles north of Geneva, Idaho.	0
12	Geneva Canal	do	SW¼ sec. 11, T. 12 S., R. 46 E., 2½ miles north of Geneva, Idaho.	0
12	Taylor Canal	do	NW¼ sec. 14, T. 12 S., R. 46 E., 2 miles north of Geneva, Idaho.	0
12	Boehme Canal	do	NW¼ sec. 14, T. 12 S., R. 46 E., 2 miles north of Geneva, Idaho.	0
12	Blechert Canal	do	SW¼ sec. 26, T. 12 S., R. 46 E., at road bridge 600 ft downstream from head and 1 mile southeast of Geneva, Idaho.	5.6
12	Preuss Creek	do	SE¼ sec. 9, T. 12 S., R. 46 E., at road bridge below diversions, 2½ miles northwest of Geneva, Idaho.	*1.0
12	Northside ditch	Preuss Creek	NW¼ sec. 10, T. 12 S., R. 46 E., at road bridge 1,000 ft downstream from head and 2½ miles northwest of Geneva, Idaho.	*.6

*Field estimate.

Miscellaneous discharge measurements in the Great Basin during water year October 1953 to September 1954—Continued

Date	Stream	Tributary to or diverting from—	Locality	Discharge (cfs)
		Great Salt Lake basin—Continued		
July 12	Southside ditch	Preuss Creek	SE¼ sec. 9, T. 12 S., R. 46 E., 800 ft downstream from head and 2½ miles northwest of Geneva, Idaho.	1.7
12	Circle Canal	Thomas Fork	SE¼ sec. 10, T. 13 S., R. 46 E., at first road bridge downstream from head, 2½ miles northeast of Raymond, Idaho.	1.8
12	Gardner Canal	do	SW¼ sec. 16, T. 13 S., R. 46E., 1,600 ft downstream from head and 1¾ miles northwest of Raymond, Idaho.	0
12	Hart Canal	do	SW¼ sec. 27, T. 13 S., R. 46 E., at road bridge, 1 mile southwest of Raymond, Idaho.	3.1
12	Bagley Canal	do	SW¼ sec. 28, T. 13 S., R. 46 E., at road bridge, 1¾ miles southwest of Raymond, Idaho.	7.0
12	Francis Canal	Raymond Creek	SW¼ sec. 1, T. 26 N., R. 120 W., in Wyoming at 3-way dividing weir, 1¼ miles southeast of Raymond, Idaho.	.8
12	Etcheverry Canal	do	do	2.2
12	Jensen Bro's Canal	do	do	1.8
12	Dalton Canal	Thomas Fork	NE¼SE¼ sec. 9, T. 14 S., R. 46 E., in Idaho, 50 ft downstream from head and 1½ miles northwest of Border, Wyo.	5.1
12	Thomas Fork	Bear River	NE¼SE¼ sec. 9, T. 14 S., R. 46 E., in Idaho, immediately downstream from Dalton Canal and 1½ miles northwest of Border, Wyo.	21.5
13	Dingle irrigation canal	do	SW¼NW¼ sec. 17, T. 14 S., R. 45 E., ¼ mile downstream from head and 2¼ miles southeast of Dingle, Idaho.	31.9
13	Ream-Crockett Canal	do	NW¼NW¼ sec. 17, T. 14 S., R. 45 E., ½ mile downstream from head and 2¼ miles southeast of Dingle, Idaho.	45.2
13	Black Otter and Peg Leg Canal.	do	NW¼SW¼ sec. 8, T. 14 S., R. 45 E., ½ mile downstream from head and 2 miles east of Dingle, Idaho.	46.7
13	Montpelier-Preston Canal	do	SE¼SW¼ sec. 6, T. 14 S., R. 45 E., 1 mile downstream from head and 1½ miles northeast of Dingle, Idaho.	48.3
13	Kent-Lorocco Canal	do	NW¼NE¼ sec. 2, T. 14 S., R. 44 E., ½ mile downstream from head and 1½ miles northwest of Dingle, Idaho.	16.6
23	North extension of Last Chance Canal.	Last Chance Canal	NW¼SW¼ sec. 31, T. 9 S., R. 41 E., 300 ft downstream from head and 1¾ miles northeast of Grace, Idaho.	101
28	do	do	do	84.5
Aug. 25	Logan, Hyde Park and Smithfield Canal.	Logan River	SE¼SW¼ sec. 25, T. 12 N., R. 1 E., 1½ miles downstream from head and 2½ miles east of Logan, Utah.	24.2
Sept. 30	Logan River	Little Bear River	NE¼NW¼ sec. 36, T. 12 N., R. 1 E., at cableway, 2,000 ft upstream from State dam and 2½ miles east of Logan, Utah.	108
30	do	do	SW¼NW¼ sec. 36, T. 12 N., R. 1 E., 350 ft downstream from State dam and 2¼ miles east of Logan, Utah.	101
June 30	Hyrum City powerplant tailrace.	Blacksmith Fork	SE¼ sec. 2, T. 10 N., R. 2 E., 100 ft downstream from powerplant, 1 mile upstream from Left Fork of Blacksmith Fork, and 8½ miles east of Hyrum, Utah.	68.8
Oct. 30	Malad River	Bear River	Sec. 10, T. 14 S., R. 35 E., at springs at flow line, 1 mile upstream from dam on Samaria Reservoir No. 2, 5¾ miles northwest of Malad City, Idaho, and 8¾ miles upstream from Little Malad River.	10.1
Jan. 16	do	do	do	10.8
Feb. 20	do	do	do	13.5
Mar. 26	do	do	do	11.9
Apr. 22	do	do	do	12.6
May 28	do	do	do	12.4
June 16	do	do	do	11.0
July 21	do	do	do	9.97
Aug. 23	do	do	do	11.3
Sept. 26	do	do	do	9.74
Aug. 17	Unnamed spring	Currant Creek	SE¼ sec. 26, T. 10 S., R. 1 W., 2.7 miles south of Goshen, Utah.	1.70

Miscellaneous discharge measurements in the Great Basin during water year October 1953 to September 1954—Continued

Date	Stream	Tributary to or diverting from—	Locality	Discharge (cfs)
		Sevier Lake basin, Utah		
Oct. 26	Duck Creek Spring	Duck Creek	Sec. 12, T. 38 S., R. 8 W., 18 miles southwest of Hatch.	1.65
27	Upper Asay Spring	Asay Creek	Sec. 33, T. 37 S., R. 6 W., 9 miles southwest of Hatch.	2.38
27	Lower Asay Spring	do	do	14.6
27	West Fork Asay Spring	West Fork Asay Creek	Sec. 19, T. 37 S., R. 6 W., 9 miles southwest of Hatch.	.39
26	Mammoth Spring	Mammoth Creek	Sec. 5, T. 37 S., R. 7 W., 13 miles west of Hatch.	3.85
26	Blue Spring	Deer Creek	Sec. 8, T. 36 S., R. 7 W., 14 miles northwest of Hatch.	3.90
Nov. 20	San Pitch River	Sevier River	NW¼NW¼ sec. 20, T. 19 S., R. 1 E., at bridge on Highway 89 at Gunnison.	No flow
Dec. 15	do	do	do	1.17
Jan. 12	do	do	do	9.41
Oct. 1	Pine Creek	Drains to Pavant Valley.	Sec. 15, T. 22 S., R. 4 W., 4 miles southeast of Fillmore.	.06
14	do	do	do	.11
1	Meadow Creek	do	Sec. 17, T. 22 S., R. 4 W., 4 miles east of Meadow.	2.15
14	do	do	do	1.78
1	Corn Creek	do	Sec. 35, T. 23 S., R. 5 W., 4 miles southeast of Kanosh.	7.68
14	do	do	do	9.08
Sept. 10	Unnamed spring	Coal Creek	NE¼ sec. 18, T. 36 S., R. 10 W., 2.5 miles east of Cedar City.	.41
10	Coal Creek	Drains to Cedar City Valley.	NW¼ sec. 18, T. 36 S., R. 10 W., 2 miles east of Cedar City.	7.97
		Warner Lakes basin, Oreg.		
Oct. 18	Parsnip Springs	Camas Creek	At mouth, below gaging station on Camas Creek, 18 miles east of Lakeview.	1.12
Apr. 30	do	do	do	1.62
Sept. 22	do	do	do	1.79
		Abert Lake basin, Oreg.		
Apr. 28	Chewaucan River	Abert Lake	At highway crossing, 4 miles north of Valley Falls.	808
		Silver Lake basin, Oreg.		
Apr. 30	Unnamed stream	Silver Lake	At mouth, 6 miles east of town of Silver Lake.	379
		Malheur and Harney Lakes basin, Oreg.		
Aug. 26	Donner und Blitzen River	Malheur Lake	At former gaging station near Voltage	96.5
		Alvord Lake basin, Oreg.		
Oct. 6	Wildhorse Creek	Alvord Lake	NE¼SE¼ sec. 34, T. 34 S., R. 33 E., at former gaging station near Andrews.	1.33
May 14	West Branch Wildhorse Creek	Wildhorse Creek	NE¼SW¼ sec. 2, T. 35 S., R. 33 E., 4½ miles north of Andrews.	27.2
14	do	do	SW¼NE¼ sec. 11, T. 35 S., R. 33 E., at road crossing 4 miles north of Andrews.	22.6
14	do	do	NW¼NE¼ sec. 23, T. 35 S., R. 33 E., 2 miles northeast of Andrews.	19.5

Miscellaneous discharge measurements in the Great Basin during water year October 1953 to September 1954—Continued

Date	Stream	Tributary to or diverting from—	Locality	Discharge (cfs)
		Alvord Lake basin, Oreg.—Continued		
May 14	East Branch Wildhorse Creek.	Wildhorse Creek	NE¼SW¼ sec. 2, T. 35 S., R. 33 E., 4½ miles north of Andrews.	17.1
14	do	do	SE¼NE¼ sec. 11, T. 35 S., R. 33 E., at road crossing 4 miles north of Andrews.	14.6
14	do	do	NW¼NW¼ sec. 24, T. 35 S., R. 33 E., 2 miles northeast of Andrews.	13.9
5	Wildhorse Creek	Alvord Lake	SE¼SW¼ sec. 26, T. 35 S., R. 33 E., about 1 mile east of Andrews.	11.7
14	do	do	do	29.3

*Field estimate.

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