

Compilation of Records of Surface Waters of the United States, October 1950 to September 1960

Part 10. The Great Basin

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1734



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Prepared under the direction of E. L. HENDRICKS, Chief, Surface Water Branch

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UNITED STATES DEPARTMENT OF THE INTERIOR

STEWART L. UDALL, *Secretary*

GEOLOGICAL SURVEY

Thomas B. Nolan, *Director*

PREFACE

This report contains summaries of streamflow records in the Great Basin. It was prepared by the United States Geological Survey in the Water Resources Division, L. B. Leopold, chief, under the general direction of E. L. Hendricks, chief, Surface Water Branch, and F. J. Flynn, chief, Reports Section.

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

Walter Hofmann.....	Menlo Park, Calif.
K. N. Phillips.....	Portland, Oreg.
W. I. Travis.....	Boise, Idaho
M. T. Wilson, succeeded by E. E. Harris, Carson City, for Nevada.....	Salt Lake City, Utah
W. N. Jibson (project engineer)	Logan, Utah

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COMPILATION OF RECORDS OF SURFACE WATERS OF THE GREAT BASIN 1951-60

PURPOSE AND SCOPE

This volume is one of a series of reports presenting monthly and yearly summaries of streamflow and reservoir data collected by the Geological Survey during the period October 1, 1950, to September 30, 1960. Included with these data are some records furnished by other Federal, State, and private agencies. This series of reports is a condensation of the detailed streamflow information presented in the annual series of reports known as "Surface Water Supply of the United States" for each of the years 1951 through 1960. The area covered by this report is The Great Basin.

The purpose of the present series of reports is to make available in summarized form all of the surface-water records collected October 1, 1950, to September 30, 1960, and to continue the series of reports known as Water-Supply Papers 1301-19 and 1372 which summarized all surface-water records through September 30, 1950. The present series of reports includes corrections of errors which have been found in the earlier series. Also included are some records collected prior to October 1, 1950, that were omitted from the 1950 compilation series.

The Geological Survey collected the records mainly in cooperation with State, municipal, and other Federal agencies, and published them in detail in the series of annual reports known as "Surface Water Supply of the United States." Some records furnished by other agencies have been included in the annual reports and in the present series of reports; such records are identified in the station description.

The data presented consist of records of discharge of streams and contents of reservoirs summarized on a monthly and yearly basis. Results of miscellaneous discharge measurements and, in general, stage records have been excluded. Also included is a map of the area showing the location of each station (pl. 1). The reports of the present series are generally similar in the type of data they contain and in the form of presentation; moreover, they conform in style with the earlier series of compilation reports so that the entire record for any station up to September 30, 1960, is available in one or two volumes.

All records compiled for these summary reports were examined for major errors. A few revisions were made and the revised figures, noted as such, are included. Some previously unpublished information is included, as well as a few estimates of discharge that were made to fill short gaps in an otherwise complete period of record.

DESCRIPTION OF DATA

The gaging-station records are arranged in downstream order. The order used in this report is the same as that adopted for use in the annual series of reports on surface-water supply beginning with the water year 1951. 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 indentation in

the listing of gaging stations in the table of contents 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.

As an added means of identification, each station was assigned a number which is shown on the index map and which is a part of the station name in the heading of the description in the text. The numbers are assigned in downstream order in each part (see explanation of "parts" under the heading "Publications," p. 4) beginning with the most upstream station. The numbers are not consecutive because gaps are left to allow for new stations that may be established.

The data presented for most of the gaging stations comprise a description of the station, a table of monthly discharge in cubic feet per second, a table of monthly discharge in acre-feet, and a yearly summary table. The station description gives the name of the river basin, the station number and name, the location, drainage area, records available, types and datums of gages, average discharge, extremes of discharge, general remarks concerning the data, and a credit statement if records were furnished by another agency.

The location of the gaging station and the drainage area are obtained from the best available maps. When more than one site was used during water years 1951-60 and the difference in drainage areas is significant, the area for the latest site is shown first followed by the areas for other sites in chronological order. In some instances drainage-area figures have not been obtained because of the lack of suitable maps or because the boundaries cannot be defined or the effective drainage area determined.

The paragraph "Records available" lists all periods for which there are published records generally equivalent to those at the present site. If equivalent records have been published under another station name, that fact is also noted.

The gage described first is the present gage or the one used most recently. Information is then given in chronological order for all gages used earlier, giving changes in location, type of gage, or datum. The location or datum of all earlier gages is given with reference to the present or most recently used gage. The datum of the gage is the elevation of the zero of the gage above mean sea level. Where information as to datum is not available, the altitude of the gage is given.

The average discharge for a station is the average of all complete water years and is published only if there are five or more complete water years of record. The years used to determine the average are not necessarily consecutive. The average discharge is not published for some stations because of extensive changes in diversion or storage, or other water development, that have occurred upstream.

In general, the momentary maximum and minimum discharges and stages for the entire period of record are published in the "Extremes" paragraph. These are qualified if necessary according to the types of gage used and the completeness of the record. Maximum and minimum discharges at nonrecording gaging stations are qualified as "observed" unless determined from a graph drawn through actual gage heights which approximates the actual hydrograph.

Under "Remarks" information is given on factors which affect the basin runoff characteristics. These include upstream regulation, diversion, and utilization--a history of

changes in these items during the period 1951-60 is given when known. Also, references are made to the records of storage or diversion upstream and to records concerning quality of water, if published.

When discharge records are furnished by another agency, credit is given under "Cooperation."

The streamflow data summarized in this report generally are contained in two monthly tables and one yearly table. The first monthly table is a tabulation of monthly and yearly mean discharges in cubic feet per second. These figures represent discharge passing the station; they are unadjusted for storage or diversion upstream unless otherwise specified under "Remarks" for the individual station. Each monthly figures is the mean flow for the entire month; generally no record for part of a month is tabulated. Likewise, each yearly figure is the mean flow for a full year, and no figure is shown for a partial year. Usually the months are arranged on a water-year basis. Exceptions to this rule are made in connection with seasonal records wherein the months are grouped to give a complete season for each calendar year.

The second monthly table is a tabulation of monthly and yearly discharge in acre-feet.

The third table contains a yearly summary of the streamflow data. The column headed "WSP" lists the number of the water-supply paper in which the figures of daily and monthly discharge are published. If a part of the record has been revised and the revision published, then reference is made to both the original report and the one containing the revised record; if the daily discharge record for the entire year has been republished to include the revisions, then only the later report is listed. However, there is no reference in this column for revisions published for the first time in this report, as the corresponding revised figures of daily discharge will be published in a water-supply paper which will contain daily records for the period 1961-65. For some stations the third table is omitted; however, the report containing records for any particular year can generally be found by referring to the table given on page 6.

In the third table the momentary maximum discharge for each water year and the date of its occurrence is given if known. For nonrecording gage records, momentary maximums were obtained from graphs drawn through the gage readings. The momentary maximum discharge, however obtained, is not qualified in any way if it is believed to be representative of the absolute maximum for the water year.

The minimum daily discharge for each water year is listed if known. Other data listed in this table are the annual mean discharge and discharge in acre-feet for both the water year and the calendar year. The figures listed for the water year are the same as those given in the yearly columns of the preceding tables.

Most canal and diversion records are given in a single table. There are some records for large canals, however, that are published in the same detail as those for streams. Records of reservoirs also are given in a single table which shows the contents at the end of each month.

Revised figures of discharge for water years 1951-60 are not so indicated if they have been published in an annual report, but are noted as "Revised" if they have not been published in an annual report. Revised daily figures which have not been published in annual reports will be published in the water-supply paper containing records for water years 1961-65, except for special cases involving only a few figures which are included in this series of reports. Figures that represent corrections of typographical or computational

errors whereas no figures of daily discharge have been revised or changed are indicated as "corrected" in this report. Estimates of discharge made to complete months or years for this report are noted as estimates and as "not previously published."

Revisions or corrections of records published in WSP 1314 are included in this report.

Records for some stations in the area covered by this report, previously published by the Geological Survey in the 1951-60 annual series of reports, are omitted from this compilation. In general, the records for such stations either did not measure streamflow, total diversions, or return flow and were considered not important enough to warrant publication in this report. These stations are listed in the following table:

Previously published records that are not compiled in this report

Station number	Station name	Period of record
255	Diversions from Bear River between Woodruff and Randolph gaging stations, Utah.	1951-56
260	B. Q. Westside Canal at Kennedy Ranch near Randolph, Utah.....	1951-54
870	Mink Creek Canal near Mink Creek, Idaho.....	1951-52
880	Twin Lakes Canal near Mink Creek, Idaho.....	1951-52
885	Preston-Riverdale & Mink Creek Canal near Mink Creek.....	1951-52
940	Cub River-Worm Creek Canal near Preston, Idaho.....	1951-52
950	Preston-Whitney Canal near Preston, Idaho.....	1951-52
955	Cub River Canal near Preston, Idaho.....	1951-52

1/ Used to adjust mainstream records.

PUBLICATIONS

This series of reports comprises 20 volumes of water-supply papers (WSP) as numbered below. The "Part" numbers and the areas covered are the same as those used for the annual series of reports on surface water supply of the United States since 1951. The boundaries of the parts are indicated in figure 1.

Numbers of water-supply papers for 1960 series of compilation reports

WSP	Part	Area
1721	1-A	North Atlantic slope basins, Maine to Connecticut.
1722	1-B	North Atlantic slope basins, New York to York River.
1723	2-A	South Atlantic slope basins, James River to Savannah River.
1724	2-B	South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River.
1725	3-A	Ohio River basin except Cumberland and Tennessee River basins.
1726	3-B	Cumberland and Tennessee River basins.
1727	4	St. Lawrence River basin.
1728	5	Hudson Bay and upper Mississippi River basins.
1729	6-A	Missouri River basin above Sioux City, Iowa.
1730	6-B	Missouri River basin below Sioux City, Iowa.
1731	7	Lower Mississippi River basin.
1732	8	Western Gulf of Mexico basins.
1733	9	Colorado River basin.
1734	10	The Great Basin.
1735	11	Pacific slope basins in California.
1736	12	Pacific slope basins in Washington and upper Columbia River basin.
1737	13	Snake River basin.
1738	14	Pacific slope basins in Oregon and lower Columbia River basin.
1739	-	Hawaii.
1740	-	Alaska.

Records prior to September 30, 1950, were summarized in a series of water-supply papers as listed below. Each of these volumes contains a list of the annual reports from which data prior to 1951 were summarized.

Numbers of water-supply papers for 1950 series of compilation reports

WSP	Part	WSP	Part	WSP	Part
1301	1-A	1308	5	1315-A	11-B
1302	1-B	1309	6-A	1315-B	11-A
1303	2-A	1310	6-B	1316	12
1304	2-B	1311	7	1317	13
1305	3-A	1312	8	1318	14
1306	3-B	1313	9	1319	Hawaii
1307	4	1314	10	1372	Alaska

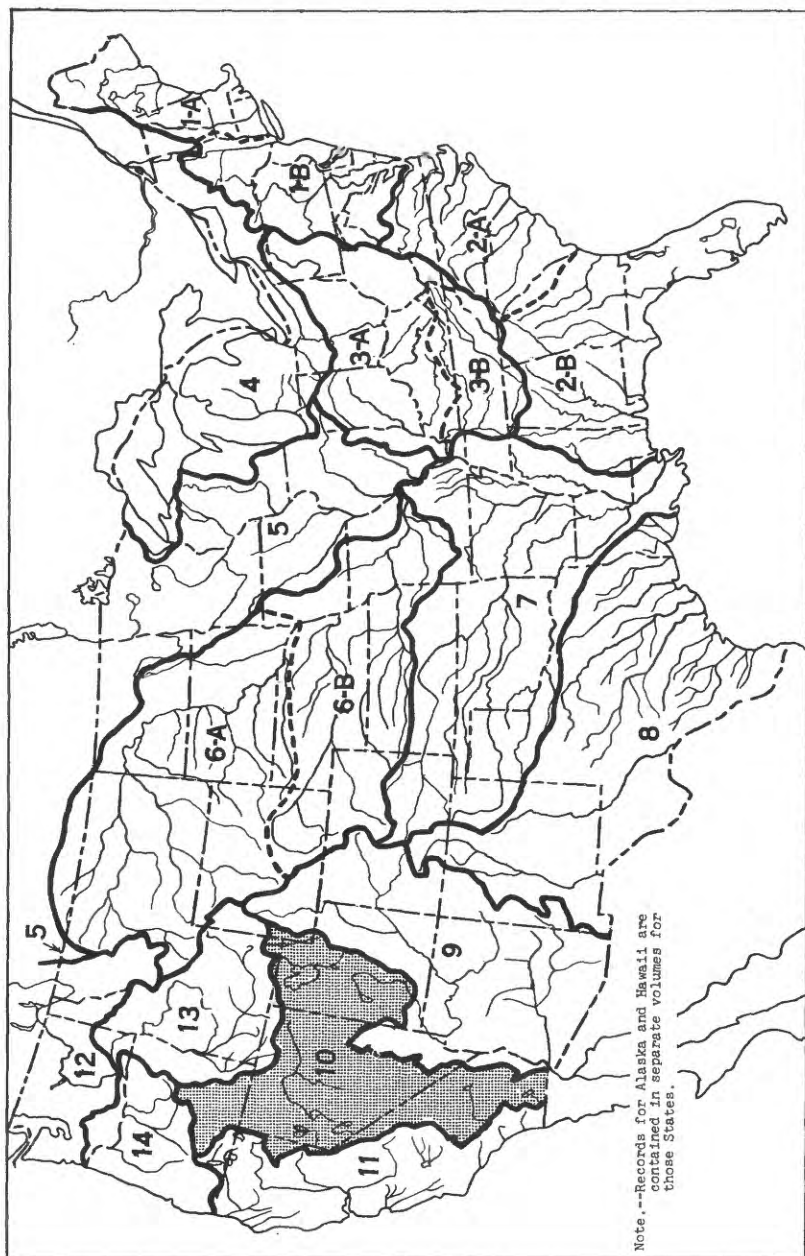


Figure 1.--Map of conterminous United States showing areas covered by 18 of the 20 volumes on surface water supply. The area covered by this report is shaded.

This report is summarized from the following 10 annual reports which contain records of daily discharge for each of the water years from 1951 to 1960.

Annual water-supply papers, Part 10, 1951-60

Water year	WSP	Water year	WSP
1951	1214	1956	1444
1952	1244	1957	1514
1953	1284	1958	1564
1954	1344	1959	1634
1955	1394	1960	1714

In addition to the customary records of discharge collected during the systematic operation of gaging stations, there is much additional hydrologic information available, both published and unpublished.

Lists of flood reports and other special reports are contained in the introductory pages of each of the annual reports listed above.

Records for many stations have been analyzed by an electronic computer to give: the number of days in each year that the discharge was between selected limits (duration tables); the lowest and highest mean discharges for selected numbers of consecutive days in each year; and other statistical summaries.

Data on low flow or peak flows or both are available for many sites other than gaging stations.

Specific information on unpublished data available can be obtained by writing directly to the district engineer for the State in which the site or gaging station is located.

HYDROLOGIC CONDITIONS

Streamflow, a residual of precipitation after other demands have been met, varies considerably from year to year and from place to place. Figure 2 shows yearly discharge for three widely-separated gaging stations in The Great Basin. The pattern of yearly runoff shown by these streams is generally representative of hydrologic conditions in their parts of the report area. Water supplies in The Great Basin decreased during the 1951-60 period. At the gaging station West Fork Mojave River near Hisperia, Calif., there was no flow in the entire 1951 water year and only 2 days of flow in the 1960 water year. These were the driest years during the 49-year period of record.

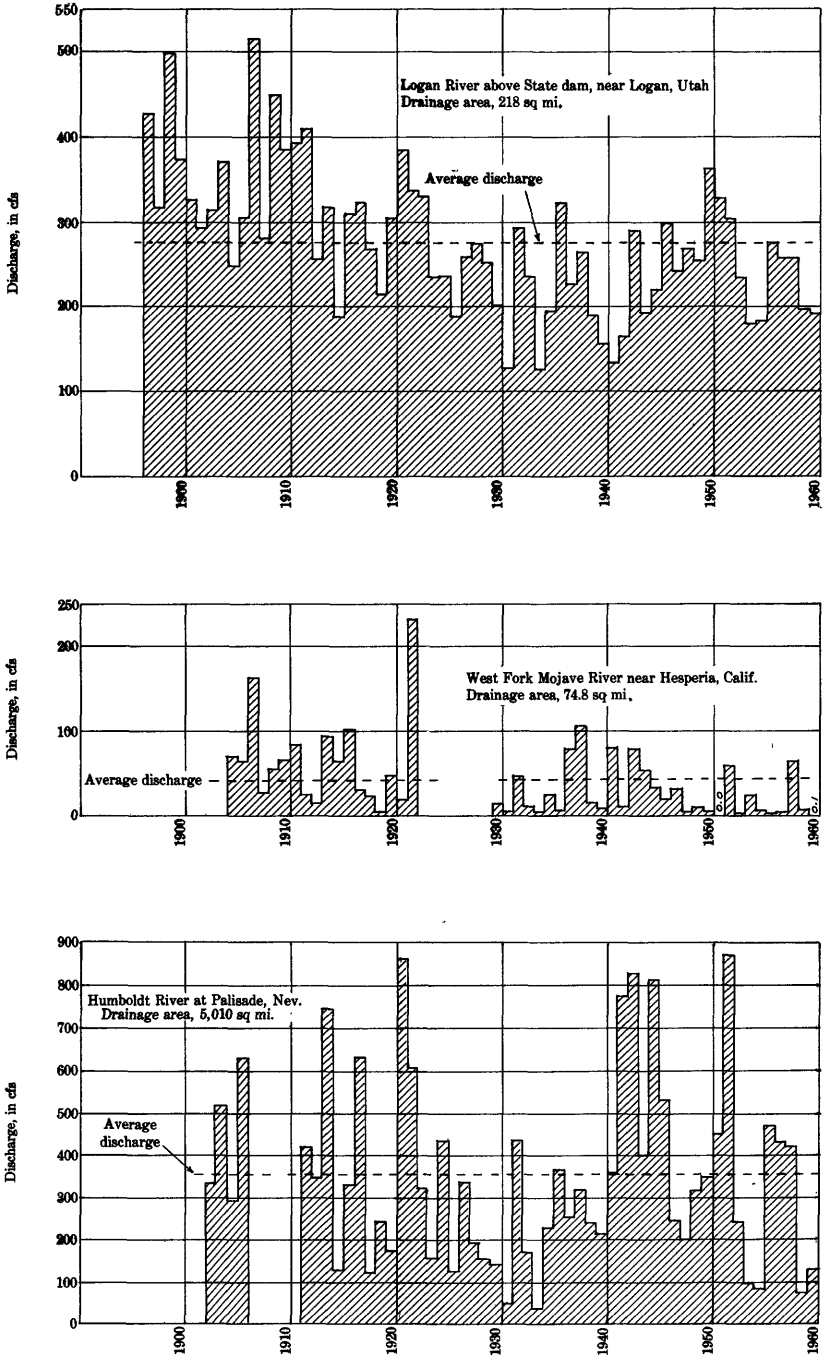


Figure 2.—Yearly discharge at three representative gaging stations.

GAGING STATION RECORDS

GREAT SALT LAKE BASIN

100. Great Salt Lake, Utah

Location.--Lat 40°44'05", long 112°12'45", 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.

Records available.--September 1875 to December 1899, October 1902 to September 1960.

Records for October 1902 to September 1912 and diagram showing fluctuations of lake from 1851-1950, published in WSP 1314.

Gage.--Water-stage recorder at Boat Harbor since October 1938 at datum 4,186.9 ft above mean sea level, datum of 1929. Prior to October 1938, staff gages at sites and datums as follows: September 1875 to October 1877 at Black Rock at datum 4,208.4 ft above mean sea level, November 1877 to November 1879 at Farmington Bay at datum 4,206.9 ft above mean sea level, November 1879 to April 1881 near Black Rock at datum 4,203.1 ft above mean sea level, April 1881 to December 1899 at Garfield Landing at datum 4,198.5 ft above mean sea level, and July 1903 to October 1938 at Saltair at datum 4,196.9 ft above mean sea level. Staff gage at Midlake October 1902 to September 1956 at datum 4,197.9 ft above mean sea level, datum of 1929.

Extremes.--1875-99, 1902-60: Maximum elevation observed, 4,210.9 ft June 30, 1876; minimum, 4,193.60 ft Sept. 15, 1960.

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

Remarks.--To compensate for wind effect and seiches, elevation given for the gage are taken from a mean slope line defined by several days' gage-height graph preceding and following 12:01 a.m. for the first of each month. Wind effects may cause substantial changes in elevation which are not shown in the published elevations.

Correction.--In WSP 1314, the elevations for April, June, July and August 1924 are listed in error: they should be 204.9, 205.1, 204.7, 204.5, and 204.0, respectively.

Elevation, in feet, on or near first day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	197.55	197.6	197.9	198.3	198.5	198.95	199.2	199.45	199.9	199.55	199.15	198.85
1952	198.45	198.35	198.55	198.8	199.2	199.5	200.05	200.6	200.95	200.75	200.4	199.9
1953	199.55	199.4	199.35	199.6	200.05	200.2	200.3	200.5	200.55	200.5	200.0	199.35
1954	198.95	198.75	198.75	198.8	199.05	199.15	199.3	199.35	199.05	198.85	198.35	197.7
1955	197.35	197.15	197.25	197.3	197.45	197.6	197.85	198.05	197.95	197.8	197.3	196.95
1956	196.55	196.4	196.45	196.85	197.3	197.5	197.6	197.75	197.85	197.5	197.05	196.35
1957	196.0	195.9	195.9	196.15	196.3	196.55	196.75	197.0	197.45	197.4	196.95	196.3
1958	196.0	195.85	195.95	196.15	196.35	196.8	196.95	197.4	197.4	196.95	196.35	195.9
1959	195.5	195.25	195.3	195.5	195.75	195.95	196.0	196.05	195.95	195.7	195.3	194.8
1960	194.5	194.4	194.3	194.5	194.65	194.85	195.3	195.3	195.15	194.75	194.25	193.65

Note.--Add 4,000 ft to obtain elevation above mean sea level, datum of 1929.

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

Location.--Lat 40°55', long 110°49', in NW $\frac{1}{4}$ sec.16, T.2 N., R.10 E., in Utah, on left bank 300 ft downstream from road bridge, three-quarters of a mile downstream from head, and 25 miles south of Evanston.

Records available.--November 1941 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--18 years (1942-60), 5.15 cfs (3,730 acre-ft per year).

Extremes.--1941-60: Maximum daily discharge, 42 cfs June 15, 1956, June 16-19, 1960; no flow during winter and at other times each year except 1958.

Remarks.--Canal diverts from East Fork Bear River for irrigation of about 2,600 acres in Hilliard Flat area in Wyoming.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.22	0	0	0	0	0	0.06	3.39	18.3	24.1	18.5	7.77	6.07
1952	8.87	0.54	0	0	0	0	0	0	22.8	27.9	17.0	10.6	7.33
1953	2.48	0	0	0	0	0	0	0	14.3	19.3	10.5	4.54	4.29
1954	3.16	0	0	0	0	0	.90	17.8	16.9	20.5	9.13	9.17	6.52
1955	6.94	1.51	0	0	0	0	0	5.41	22.9	19.6	8.04	13.1	6.48
1956	11.7	0	0	0	0	0	0	0	25.5	26.8	17.2	8.99	7.55
1957	8.62	0	0	0	0	0	0	1.12	5.33	23.3	12.0	8.56	4.96
1958	5.01	1.58	0	.25	.2	.2	.37	11.8	26.7	8.71	6.50	3.61	5.39
1959	6.40	1.78	0	0	0	0	2.45	15.9	29.6	20.5	4.97	8.15	7.51
1960	1.37	.25	0	0	0	0	0	6.61	31.9	13.0	2.32	5.57	5.06

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	13	0	0	0	0	0	4	208	1,090	1,480	1,140	462	4,400
1952	546	32	0	0	0	0	0	0	1,350	1,710	1,040	630	5,310
1953	153	0	0	0	0	0	0	0	850	1,190	648	270	3,110
1954	194	0	0	0	0	0	54	1,090	1,010	1,260	562	545	4,720
1955	427	90	0	0	0	0	0	333	1,360	1,210	494	778	4,690
1956	718	0	0	0	0	0	0	0	1,520	1,850	1,060	535	5,480
1957	530	0	0	0	0	0	0	69	317	1,430	738	509	3,590
1958	308	35	31	15	11	12	22	728	1,590	535	399	215	3,900
1959	394	106	0	0	0	0	146	979	1,760	1,260	306	485	5,440
1960	84	15	0	0	0	0	0	407	1,900	798	143	331	3,680

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	4.92	3,560	
1951	1214	31	July 7, 8, 1951	0	6.07	4,400	6.85	4,980	
1952	1244	39	June 15, 20, 1952	0	7.33	5,310	6.74	4,880	
1953	1284	33	June 24, 1953	0	4.29	3,110	4.35	3,150	
1954	1344	39	May 20, 21, 1954	0	6.52	4,720	6.96	5,040	
1955	1394	38	June 20, 22, 1955	0	6.48	4,690	6.76	4,890	
1956	1444	42	June 15, 1956	0	7.55	5,480	7.29	5,300	
1957	1514	36	July 7, 1957	0	4.96	3,590	4.75	3,440	
1958	1564	36	June 17, 19, 1958	-	5.39	3,900	5.56	4,030	
1959	1634	33	(a)	0	7.51	5,440	6.96	5,040	
1960	1714	42	June 16-19, 1960	0	5.06	3,680	-	-	

a June 23-25, 29-30, 1959.

115. Bear River near Utah-Wyoming State line

Location.--Lat 40°58', long 110°51', in SE $\frac{1}{4}$ sec.30, T.3 N., R.10 E., on left bank just downstream from West Fork, 2.8 miles upstream from Utah-Wyoming State line.

Drainage area.--176 sq mi.

Records available.--July 1942 to September 1960.

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

Average discharge.--18 years (1942-60), 185 cfs (133,900 acre-ft per year).

Extremes.--1942-60: Maximum discharge, 2,800 cfs June 6, 1957 (gage height, 4.27 ft); minimum determined, 16 cfs Apr. 11, 1951, Nov. 5, 1954, Nov. 1, 1955, Oct. 30, 1956.

Remarks.--Two diversions above station for irrigation of about 200 acres above and 2,600 acres below station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	59.0	60.3	50.6	44.8	44.1	38.9	99.3	630	853	354	133	48.0	202
1952	80.5	57.0	51.5	43.5	44.1	44.3	151	995	1,210	365	131	67.2	270
1953	51.8	45.0	45.2	42.3	41.9	45.1	86.7	291	1,172	263	94.4	31.6	184
1954	34.7	42.2	39.0	38	40	40.6	129	556	263	99.5	37.5	37.0	114
1955	32.0	32.5	33.0	31.6	31.0	30.9	56.4	609	556	110	62.9	33.8	135
1956	32.6	34.5	39.6	35.0	31.9	38.6	116	856	856	154	44.7	23.9	189
1957	33.8	36.9	35.6	32.7	32.8	34.4	48.2	421	1,440	549	107	50.7	235
1958	53.2	49.9	47.0	40.3	41.5	41.2	63.0	739	673	112	38.3	36.2	162
1959	30.8	37.5	39.8	37.1	35.8	36.7	78.8	365	927	204	54.1	38.0	157
1960	88.2	61.2	27.7	32.1	35.1	38.5	140	479	644	117	40.7	29.4	144

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,830	3,590	3,110	2,760	2,450	2,390	5,910	39,740	50,740	21,760	8,170	2,850	146,100
1952	4,950	3,390	3,160	2,680	2,540	2,720	9,010	61,180	72,030	22,440	8,060	4,000	196,100
1953	3,180	2,680	2,780	2,600	2,330	2,770	5,160	17,890	69,740	16,200	5,800	1,880	135,000
1954	2,140	2,510	2,400	2,340	2,220	2,500	7,660	34,160	15,670	6,120	2,300	2,200	82,220
1955	1,970	1,930	2,030	1,950	1,720	1,900	3,360	37,470	33,100	6,740	3,870	2,010	98,050
1956	2,010	2,050	2,430	2,150	1,830	2,370	6,900	52,640	50,910	9,460	2,750	1,420	136,900
1957	2,080	2,200	2,190	2,010	1,820	2,110	2,870	25,890	85,670	33,760	6,550	3,010	170,200
1958	3,270	2,970	2,890	2,480	2,310	2,530	3,750	45,430	40,060	6,890	2,350	2,160	117,100
1959	1,900	2,250	2,450	2,280	1,990	2,260	4,690	22,440	55,150	12,580	3,330	2,260	113,500
1960	5,420	3,640	1,700	1,970	1,900	2,370	8,360	29,470	38,330	7,160	2,510	1,750	104,600

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	231	167,000
1951	-	-	-	-	-	-	203	147,300
1952	1214	1,970	May 27, 1951	-	202	146,100	266	195,300
1953	1284	2,340	June 7, 1952	-	184	133,000	182	131,400
1954	1344	2,750	June 14, 1953	25	114	82,220	112	81,100
1955	1394	1,220	May 22, 1954	-	135	98,050	136	98,610
1956	1444	1,430	June 9, 1955	-	189	136,900	189	136,900
1957	1514	1,940	June 1, 1956	-	235	170,200	239	172,800
1958	1564	2,800	June 6, 1957	-	162	117,100	158	114,500
1959	1634	1,920	May 28, 1958	30	157	113,500	163	117,700
1960	1714	1,850	June 16, 1959	24	144	104,600	-	-
			June 3, 1960	18				

120. 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 south of Evanston, Wyo.

Drainage area--59 sq mi, approximately.

Records available--October 1949 to September 1960.

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

Average discharge--11 years (1949-60), 32.9 cfs (23,820 acre-ft per year).

Extremes--1949-60: Maximum discharge, 690 cfs June 7, 1957 (gage height, 4.39 ft); minimum, 0.9 cfs Nov. 11, 1951, result of freezeup.

Remarks--Three small diversions for irrigation of hay meadows above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.9	14.4	10.9	9.1	10.3	10.5	35.2	142	114	23.8	14.0	7.30	33.6
1952	17.4	10.6	10.7	9.7	8.3	9.23	64.2	243	194	30.1	13.2	9.42	51.7
1953	7.31	7.13	9.46	9.08	8.41	11.1	25.8	76.3	191	22.4	11.3	4.74	31.9
1954	6.84	9.26	8.31	8.0	9.0	8.71	37.9	99.3	25.9	7.02	3.87	4.93	19.2
1955	5.75	6.49	5.55	5.34	5.5	5.97	13.5	113	58.7	9.05	7.48	5.28	20.3
1956	6.57	7.69	10.4	8.13	7.48	10.6	44.6	175	83.4	10.2	6.67	4.57	31.4
1957	6.62	7.54	7.16	6.32	6.79	7.67	14.3	126	329	56.4	13.7	8.92	49.1
1958	12.1	11.2	10.6	9.88	8.69	8.41	19.5	168	59.5	6.19	4.01	3.76	27.0
1959	5.89	7.20	6.81	7.15	8.11	8.56	24.8	84.3	145	25.8	6.89	8.18	28.2
1960	14.7	9.40	6.25	7.18	7.87	12.8	48.2	119	81.7	9.64	4.55	5.05	27.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	667	858	668	559	571	643	2,090	8,730	6,790	1,460	859	434	24,330
1952	1,070	629	659	595	480	567	3,820	14,960	11,530	1,850	811	561	37,530
1953	450	424	582	559	467	685	1,540	4,690	11,350	1,380	696	282	23,100
1954	420	551	511	492	500	536	2,250	6,110	1,540	431	238	293	13,670
1955	354	386	341	328	305	367	802	6,960	3,490	557	460	314	14,660
1956	404	458	641	500	430	652	2,650	10,780	4,960	627	410	272	22,780
1957	407	449	440	389	377	472	853	7,760	19,580	3,470	845	531	35,570
1958	747	669	652	608	482	517	1,160	10,310	3,540	381	247	224	19,540
1959	362	428	419	440	451	527	1,470	5,180	8,600	1,590	424	487	20,380
1960	904	559	384	441	452	788	2,870	7,310	4,860	593	280	300	19,740

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	43.0	31,150
1951	1214	483	May 27, 1951	-	33.6	24,330	33.8	24,490
1952	1244	626	May 3, 1952	-	51.7	37,530	50.5	36,630
1953	1284	566	June 13, 1953	4.0	31.9	23,100	31.9	23,130
1954	1344	227	May 9, 1954	2.7	19.2	13,670	18.6	13,470
1955	1394	266	May 13, 1955	-	20.3	14,660	20.8	15,090
1956	1444	646	May 22, 1956	4.0	31.4	22,780	31.1	22,580
1957	1514	690	June 7, 1957	-	49.1	35,570	50.2	36,340
1958	1564	450	May 21, 1958	1.9	27.0	19,540	25.8	18,680
1959	1634	363	June 7, 1959	4.0	28.2	20,380	29.0	21,020
1960	1714	377	May 12, 1960	2.4	27.2	19,740	-	-

140. Bear River above Sulphur Creek, near Evanston, Wyo.

Location.--Lat 41°08', long 110°53', in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.6, T.13 N., R.119 W., on right bank 2 miles upstream from Myers bridge, 5 $\frac{1}{2}$ miles upstream from Sulphur Creek, and 9 $\frac{1}{2}$ miles southeast of Evanston.

Drainage area.--282 sq mi.

Records available.--October 1946 to September 1956.

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.--10 years (1946-56), 202 cfs (146,200 acre-ft per year).

Extremes.--1946-56: Maximum discharge, 2,970 cfs June 14, 1953 (gage height, 5.73 ft, site and datum then in use); minimum, 3.6 cfs Sept. 19, 1956.

Remarks.--Diversions for irrigation of about 19,000 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	53.2	78.7	80.8	54.8	54.1	62.9	221	738	850	235	124	44.0	217
1952	118	75.4	67.7	68.3	68.3	68	390	1,250	1,220	280	103	48.9	313
1953	37.4	37.9	51.6	60	57.3	98.3	156	362	1,180	147	44.9	8.48	186
1954	16.9	49.3	50.7	50	55	58.2	190	567	177	21.4	9.70	9.85	105
1955	27.2	28.6	41.2	40.3	40.3	43	102	593	457	30.9	18.3	14.8	120
1956	24.0	45.7	89.4	73.2	64.0	98.7	181	999	796	58.5	14.9	10.5	205
1957													
1958													
1959													
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,270	4,680	4,970	3,370	3,000	3,870	13,140	45,360	50,560	14,470	7,610	2,620	156,900
1952	7,270	4,490	4,160	4,200	3,930	4,180	22,600	77,160	72,860	17,210	6,330	2,910	227,300
1953	2,300	2,260	3,170	3,690	3,180	6,040	9,250	22,280	70,190	9,040	2,760	504	134,600
1954	1,040	2,930	3,120	3,070	3,050	3,580	11,530	34,850	10,510	1,320	596	586	75,980
1955	1,670	1,700	2,530	2,480	2,240	2,640	6,100	36,440	27,170	1,900	1,120	879	86,870
1956	1,480	2,720	5,500	4,500	3,680	6,070	10,750	61,440	47,340	3,600	918	626	148,600
1957												-	-
1958												-	-
1959												-	-
1960												-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	261	189,200
1951	1214	2,030	May 29, 1951	-	217	156,900	221	159,900
1952	1244	2,220	June 7, 1952	36	313	227,300	302	219,100
1953	1284	2,970	June 14, 1953	6.0	186	134,600	185	134,000
1954	1344	1,330	May 22, 1954	5.6	105	75,980	103	74,790
1955	1394	1,280	June 9, 1955	4.4	120	86,870	125	90,670
1956	1444	2,120	May 23, 1956	4.5	205	148,600	-	-
1957								
1958								
1959								
1960								

157. Sulphur Creek above reservoir, near Evanston, Wyo.

Location.--Lat 41°09', long 110°48', in SW $\frac{1}{4}$ sec.35, T.14 N., R.119 W., on right bank $1\frac{1}{2}$ miles downstream from Willow Creek, $\frac{2}{3}$ miles upstream from Sulphur Creek Dam, and $1\frac{1}{2}$ miles southeast of Evanston.

Drainage area.--64 sq mi, approximately.

Records available.--December 1957 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 7,170 ft (from river-profile map).

Extremes.--1957-60: Maximum discharge, 560 cfs Apr. 18, 1958 (gage height, 5.07 ft), from rating curve extended above 100 cfs by logarithmic plotting; no flow at times in each year.

Remarks.--Several diversions for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	*0.3	*0.8	2.89	3.01	3.45	4.33	36.9	33.6	5.33	0.24	0	0.04	*7.57
1959	.25	.52	.65	.8	1.12	2.59	28.0	15.5	28.5	6.28	.03	.18	7.01
1960	.48	.49	.49	1.5	2	39.3	15.6	18.5	13.4	.81	.10	.06	7.77

* Not previously published; estimated on basis of weather records and flow characteristics.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	*18	*48	178	185	191	266	2,190	2,060	317	15	0	2.4	*5,470
1959	15	31	40	49	62	159	1,670	954	1,700	386	2.0	11	5,080
1960	29	29	30	92	115	2,420	931	1,140	800	50	6.3	3.6	5,650

* Not previously published; estimated on basis of weather records and flow characteristics.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1958	1564	560	Apr. 18, 1958	0	*7.57	*5,470	7.35		5,310
1959	1634	436	Apr. 5, 1959	0	7.01	5,080	7.02		5,080
1960	1714	499	Mar. 26, 1960	0	7.77	5,650	-		-

* Not previously published.

159. Sulphur Creek below reservoir, near Evanston, Wyo.

Location.--Lat 41°09', long 110°49', in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.14 N., R.119 W., on left bank 6.3 miles upstream from mouth and $10\frac{1}{2}$ miles southeast of Evanston.

Drainage area.--68 sq mi, approximately.

Records available.--March 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 7,110 ft (from river-profile map).

Extremes.--1958-60: Maximum discharge, 164 cfs June 29, 1959 (gage height, 3.67 ft); no flow at times in each year.

Remarks.--Flow regulated by Sulphur Creek Reservoir (capacity, 4,600 acre-ft) completed December 1957.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	0	10.8	29.7	6.12	37.5	25.3	7.61	-
1959	0.56	0.63	0.59	0.08	0	0	0	5.0	31.9	12.2	29.6	14.9	7.99
1960	2.09	3.24	2.60	1.74	0	1.04	18.2	14.2	26.9	47.1	15.7	10.0	11.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	0	640	1,830	364	2,310	1,560	453	-
1959	35	37	36	5.0	0	0	0	307	1,900	752	1,820	889	5,780
1960	128	193	160	107	0	64	1,080	871	1,600	2,900	968	595	8,670

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1958	1564	82	July 14, 1958	0	-	-	-	-	-
1959	1634	164	June 29, 1959	0	7.99	5,780	8.50		6,150
1960	1714	79	June 9, 1960	0	11.9	8,670	-		-

160. Sulphur Creek near Evanston, Wyo.

Location.--Lat 41°10', long 110°52', in SE $\frac{1}{4}$ sec.29, T.14 N., R.119 W., on left bank 4.8 miles upstream from mouth and 9 miles southeast of Evanston.

Drainage area.--80.5 sq mi.

Records available.--April 1942 to September 1959. Fragmentary prior to July 1942.

Gage.--Water-stage recorder. Altitude of gage is 7,070 ft (from river-profile map). Prior to June 16, 1948, at datum 2.00 ft higher. June 16, 1948, to Aug. 21, 1952, at datum 1.00 ft higher.

Average discharge.--17 years (1942-59), 22.1 cfs (16,000 acre-ft per year).

Extremes.--1942-59: Maximum discharge, 1,220 cfs Apr. 23, 1952; maximum gage height, 6.01 ft Apr. 21, 1948, present datum; no flow Sept. 10, 1949.

Remarks.--Several diversions for irrigation above station. Flow regulated by Sulphur Creek Reservoir (capacity, about 4,600 acre-ft) since December 1957.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.64	7.16	7.15	3.55	7.58	11.9	96.5	58.6	35.0	26.6	12.4	2.04	22.5
1952	10.5	7.04	7.3	7.7	8.84	9.85	242	193	58.7	29.1	16.4	1.58	49.3
1953	1.12	1.82	2.34	5.35	6.43	32.1	38.1	42.2	39.2	8.43	11.1	1.16	15.8
1954	3.93	7.90	8.34	8.0	10	14.3	49.9	23.3	34.3	3.29	1.25	.88	13.7
1955	1.14	2.90	2.57	2.69	2.65	3.15	65.1	33.6	31.6	2.65	1.67	.87	12.5
1956	1.21	3.73	17.5	10.5	8.48	41.6	36.4	60.5	11.0	4.35	3.51	.72	16.7
1957	1.10	1.70	2.36	2.08	10.4	21.8	98.2	98.5	136	36.7	3.90	1.87	34.5
1958	4.71	8.34	4.45	4.05	4.73	3.05	29.1	35.7	11.4	36.9	28.5	7.50	14.8
1959	1.05	1.43	1.3	1.2	1.2	2.16	7.16	11.3	61.2	23.5	51.7	16.1	13.3
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	101	426	440	218	421	730	5,740	3,600	2,080	1,640	764	121	16,280
1952	646	419	450	472	509	606	14,400	11,890	3,490	1,790	1,010	94	35,780
1953	69	108	144	329	357	1,980	2,270	2,600	2,330	518	680	69	11,450
1954	242	470	513	492	555	881	2,970	1,430	2,040	202	77	53	9,920
1955	70	173	158	165	147	194	3,870	2,070	1,880	163	103	52	9,040
1956	75	222	1,080	645	488	2,560	2,170	3,720	652	286	216	43	12,140
1957	68	101	145	128	577	1,340	5,840	6,060	8,080	2,250	240	111	24,940
1958	290	496	274	249	263	187	1,730	2,070	879	2,270	1,750	446	10,700
1959	65	85	80	74	67	133	426	693	3,640	1,440	1,950	960	9,610
1960													

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	35.0	25,360
1951	1214	534	Apr. 6, 1951	-	22.5	16,280	23.3	18,830
1952	1244	1,220	Apr. 23, 1952	1.0	49.3	35,780	47.6	34,580
1953	1284	196	May 20, 1953	-	15.8	11,450	17.1	12,360
1954	1344	253	Apr. 5, 1954	.6	13.7	9,920	12.6	9,100
1955	1394	467	Apr. 16, 1955	.4	12.5	9,040	13.8	10,020
1956	1444	678	Mar. 26, 1956	.5	16.7	12,140	15.3	11,070
1957	1514	539	June 16, 1957	.5	34.5	24,940	35.5	25,690
1958	1564	199	Apr. 17, 1958	.6	14.8	10,700	13.6	9,670
1959	1634	617	June 29, 1959	.6	13.3	9,610	-	-
1960								

170. Yellow Creek near Evanston, Wyo.

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

Drainage area.--80 sq mi, approximately.

Records available.--October 1944 to September 1945, October 1949 to September 1960. Records for February 1943 to September 1944 at site $1\frac{1}{2}$ miles downstream not equivalent, but would be equivalent by adding flow of Wright No. 2 and Cook Canals, in reports on Bear River Hydrometric Data, 1944 (Geological Survey open-file report).

Gage.--Water-stage recorder. Altitude of gage is 6,920 ft (from river-profile map). Oct. 1, 1944, to Sept. 30, 1945, at site 500 ft upstream, at different datums.

Average discharge.--12 years (1944-45, 1949-60), 9.32 cfs (6,750 acre-ft per year).

Extremes.--1944-45, 1949-60: Maximum discharge, 477 cfs Apr. 28, 1952 (gage height, 7.04 ft); no flow at times.

Remarks.--One small diversion for irrigation of hay meadows above station. Flow regulated by Barker Reservoir (capacity, 162 acre-ft) completed in fall of 1959.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.54	4.24	4.14	2.39	5.25	6.31	51.2	43.5	16.4	1.65	0.24	0	11.4
1952	.79	.91	1.0	1.0	1.0	1.87	101	164	27.2	6.25	2.39	1.19	25.8
1953	1.39	1.55	1.66	3.18	3.77	13.4	14.0	24.5	16.9	.11	0	0	6.72
1954	0	0	0	0	.46	2.94	12.7	8.67	1.34	.01	0	0	2.18
1955	0	0	0	0	0	0	12.5	22.7	3.91	.09	.10	0	3.29
1956	0	0	3.76	2.0	1.5	8.92	22.1	39.4	4.54	0	0	0	6.89
1957	0	0	0	0	.46	2.04	14.7	57.6	39.8	2.29	.25	0	9.80
1958	0	0	0	0	0	1.84	13.3	26.9	1.78	.39	0	0	3.71
1959	0	0	0	0	0	1.11	17.0	17.0	3.37	.51	0	0	3.25
1960	0	0	0	0	0	31.8	7.83	21.2	2.40	.68	0	0	5.39

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	95	252	254	147	292	388	3,040	2,680	975	102	15	0	8,240
1952	48	54	61	61	58	115	6,030	10,060	1,620	384	147	71	18,720
1953	85	92	102	195	209	823	834	1,500	1,010	6.7	0	0	4,860
1954	0	0	0	0	26	181	758	533	80	.4	0	0	1,580
1955	0	0	0	0	0	0	743	1,400	233	5.6	6.1	0	2,390
1956	0	0	231	123	86	548	1,320	2,420	270	0	0	0	5,000
1957	0	0	0	0	26	126	877	3,540	2,370	141	15	0	7,100
1958	0	0	0	0	0	113	793	1,650	106	24	0	0	2,690
1959	0	0	0	0	0	68	1,010	1,040	200	31	0	0	2,350
1960	0	0	0	0	0	1,960	466	1,300	143	42	0	0	3,910

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	25.0	18,110	
1951	1214	126	Apr. 8, 1951	0	11.4	8,240	10.8	7,810	
1952	1244	477	Apr. 28, 1952	0	25.8	18,720	25.9	18,820	
1953	1284	58	May 20, 1953	0	6.72	4,860	6.33	4,580	
1954	1344	26	Apr. 14, 1954	0	2.18	1,580	2.18	1,580	
1955	1394	58	May 11, 1955	0	3.29	2,390	3.61	2,620	
1956	1444	68	May 7, 1956	0	6.89	5,000	6.57	4,770	
1957	1514	147	May 20, 1957	0	9.80	7,100	9.80	7,100	
1958	1564	53	May 21, 1958	0	3.71	2,690	3.71	2,690	
1959	1634	110	Apr. 5, 1959	0	3.25	2,350	3.25	2,350	
1960	1714	305	Mar. 23, 1960	0	5.39	3,910	-	-	

190. 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 1956. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 6,610 ft (from river-profile map). Prior to Sept. 28, 1926, staff gage at same site and datum.

Average discharge.--43 years (1913-56), 234 cfs (169,400 acre-ft per year).

Extremes.--1913-56: Maximum discharge observed, 3,690 cfs June 14, 1921 (gage height, 6.35 ft), from rating curve extended above 2,700 cfs; no flow at times.

Remarks.--Diversions for irrigation of about 31,000 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	54.0	102	106	66.5	82.9	125	637	873	867	201	112	33.0	272
1952	125	96.4	92.9	96.6	100	100	889	1,770	1,380	250	104	42.4	420
1953	36.3	42.5	60.8	70	68.4	159	262	381	1,125	84.5	29.4	2.69	193
1954	4.70	51.1	60.1	60	65	116	261	492	145	7.80	.30	0	105
1955	5.21	23.1	43.5	43.3	43.2	45.0	232	567	414	5.90	5.68	1.14	119
1956	9.90	45.2	126	102	89.0	232	272	1,030	706	27.9	1.98	.21	221
1957													
1958													
1959													
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,320	6,090	6,500	4,090	4,600	7,690	37,290	53,680	51,610	12,360	6,900	1,960	196,700
1952	7,710	5,740	5,710	5,940	5,770	6,160	52,890	108,900	82,140	15,380	6,380	2,520	305,200
1953	2,230	2,530	3,740	4,300	3,800	9,760	15,570	23,430	66,930	5,200	1,810	160	139,500
1954	289	3,040	3,690	3,690	3,610	7,130	15,520	30,240	8,610	479	19	0	76,320
1955	320	1,370	2,680	2,660	2,400	2,770	13,800	34,890	24,640	363	349	68	86,310
1956	609	2,690	7,770	6,290	5,120	14,270	16,210	63,480	42,000	1,710	122	13	160,300
1957													
1958													
1959													
1960													

Yearly discharge, in cubic feet per second

Water discharge, in cubic feet per second								
Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	345	249,900
1951	1214	2,160	May 30, 1951	19	272	196,700	276	200,000
1952	1244	2,840	May 4, 1952	28	420	305,200	406	294,600
1953	1284	2,440	June 14, 1953	1.4	193	139,500	191	138,000
1954	1344	1,270	May 22, 1954	0	105	76,320	102	73,670
1955	1394	1,100	June 9, 1955	0	119	86,310	128	93,010
1956	1444	2,130	May 23, 1956	0	221	160,300	-	--
1957								
1958								
1959								
1960								

195. Chapman Canal at State line, near Evanston, Wyo.

Location.--Lat 41°24', long 111°02', in SE $\frac{1}{4}$ sec.36, T.17 N., R.121 W., on right bank at highway bridge, 6 $\frac{1}{2}$ miles downstream from headgates and 10 miles northwest of Evanston.

Records available.--April 1942 to September 1960 (prior to October 1944, irrigation seasons only). Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 6,570 ft (from river-profile map). Prior to Oct. 11, 1946, staff gage at same site and datum.

Average discharge.--16 years (1944-60), 17.7 cfs (12,810 acre-ft per year).

Extremes.--1942-60: Maximum daily discharge observed, 129 cfs Apr. 14, 1946; no flow at times in each year.

Remarks.--Canal diverts water from Bear River in NW $\frac{1}{4}$ sec.36, T.16 N., R.121 W. Many diversions above station for irrigation in Wyoming. Flow at station is for storage in Neponset Reservoir, Utah, and irrigation in Salaratus basin, Utah.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.34	20.8	28.5	0	6.36	22.0	3.83	35.7	55.9	23.8	0.11	0	16.7
1952	.10	12.3	0	0	0	0	14.4	55.0	85.3	34.9	6.12	.03	17.3
1953	0	7.74	0	0	.7	43.7	42.1	41.8	82.6	23.5	13.5	.01	21.3
1954	1.98	25.0	5.71	0	.4	38.2	37.0	56.1	31.4	1.82	0	0	16.5
1955	1.79	10.1	6.38	0	0	22.4	78.2	59.6	64.5	.38	1.29	.03	20.4
1956	1.65	10.1	.14	0	0	16.0	34.4	49.4	68.1	8.64	0	0	15.6
1957	3.94	18.9	0	0	1.29	27.3	33.1	27.0	75.0	67.4	18.7	2.78	23.1
1958	.38	2.53	0	0	0	7.4	47.2	44.8	69.4	3.98	0	0	14.6
1959	0	16.5	22.1	1.6	0	10.9	75.8	63.6	86.0	20.1	6.63	14.7	26.5
1960	52.2	.70	.38	0	0	11.3	48.0	60.9	60.8	5.12	0	0	20.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	144	1,240	1,750	0	353	1,350	228	2,190	3,330	1,460	7	0	12,050
1952	6	753	0	0	0	0	858	3,580	5,080	2,150	376	2	12,590
1953	0	461	0	0	40	2,690	2,510	2,570	4,920	1,440	831	.6	15,470
1954	122	1,490	351	0	20	2,350	2,200	3,450	1,870	112	0	0	11,960
1955	110	603	392	0	0	1,380	4,660	3,670	3,840	23	80	2.0	14,760
1956	102	599	8.3	0	0	984	2,050	3,040	4,050	531	0	0	11,360
1957	242	1,120	0	0	71	1,680	1,970	1,660	4,520	4,150	1,150	165	16,730
1958	23	151	0	0	0	452	2,810	2,750	4,130	245	0	0	10,560
1959	0	981	1,360	99	0	669	4,510	3,910	5,120	1,230	408	874	19,160
1960	3,210	42	23	0	0	697	2,860	3,740	3,620	315	0	0	14,510

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	138	-	10,020
1951	1214	83	May 13, 1951	0	16.7	12,050	13.3	-	9,660
1952	1244	122	June 27, 1952	0	17.3	12,590	17.0	-	12,310
1953	1284	100	June 19, 1953	0	21.3	15,470	23.4	-	16,960
1954	1344	86	May 13, 1954	0	16.5	11,960	15.3	-	11,110
1955	1394	124	May 2, 1955	0	20.4	14,760	19.8	-	14,360
1956	1444	90	June 10, 1956	0	15.6	11,360	16.6	-	12,020
1957	1514	114	July 13, 1957	0	23.1	16,730	21.5	-	15,540
1958	1564	123	May 25, 1958	0	14.6	10,560	17.6	-	12,730
1959	1634	104	June 16, 1959	0	26.5	19,160	27.8	-	20,100
1960	1714	114	May 12, 13, 1960	0	20.0	14,510	-	-	-

205. Bear River near Woodruff, Utah

Location.--Lat 41°31'25", long 111°01'00", in SW $\frac{1}{4}$ sec.20, T.18 N., R.120 W., in Wyoming, on left bank 2.8 miles upstream from Wyoming-Utah State line and 7.6 miles east of Woodruff.

Drainage area.--870 sq mi, approximately.

Records available.--October 1941 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--19 years (1941-60), 205 cfs (148,400 acre-ft per year).

Extremes.--1941-60: 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 in each year 1942-49, 1954-60.

Remarks.--Divisions for irrigation of about 45,000 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	51.6	80.8	82.1	71.5	82.9	139	635	794	845	175	114	34.3	259
1952	121	81.5	92.9	97.7	103	101	987	1,727	1,206	198	99.0	37.3	404
1953	37.0	37.7	66.6	75	73.4	103	219	334	1,043	58.3	14.6	6.69	171
1954	3.12	22.9	59.6	65	69.6	80.6	210	399	90.3	10.6	.63	0	84.5
1955	1.03	7.11	29.4	43	43.2	25.6	160	467	345	6.89	2.21	0	94.3
1956	3.47	33.8	127	97.3	84.0	236	250	938	627	21.4	.93	0	201
1957	.15	22.9	44.7	41.0	52.3	82.7	282	696	1,646	378	24.9	11.2	273
1958	31.4	66.0	68.2	60.8	76.1	94.4	203	777	339	11.4	.12	0	144
1959	1.14	3.91	8.5	26.9	41.1	76.0	175	333	656	99.3	6.42	14.0	120
1960	58.9	79.6	32.7	38.7	49.1	293	217	395	389	3.80	1.40	.23	130

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	5,180	4,810	5,050	4,390	4,600	8,530	37,780	48,840	50,260	10,740	7,000	2,040	187,200
1952	7,450	4,850	5,710	6,010	5,950	6,210	58,710	106,200	71,760	12,190	6,090	2,220	293,400
1953	2,270	2,240	4,100	5,610	4,080	6,350	13,040	20,540	62,090	3,590	898	41	123,800
1954	192	1,360	5,670	4,000	3,870	4,980	12,520	24,520	5,380	654	38	0	61,160
1955	63	423	1,800	2,640	2,400	1,580	9,510	28,740	20,530	424	136	0	68,250
1956	214	2,010	7,800	5,980	4,830	14,500	14,880	57,080	37,330	1,310	57	0	146,000
1957	8.9	1,360	2,750	2,520	2,910	5,080	16,780	42,800	97,960	23,260	1,530	666	197,600
1958	1,930	3,930	4,200	3,740	4,220	5,800	12,110	47,760	20,150	702	7.3	0	104,500
1959	70	233	526	1,660	2,280	4,680	10,390	20,480	39,010	6,100	395	832	86,660
1960	5,620	4,740	2,010	2,380	2,830	18,010	12,920	24,280	23,150	234	86	13	94,270

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	341	-	246,700
1951	1214	2,090	May 31, 1951	18	259	187,200	265	-	192,200
1952	1244	3,010	Apr. 28, 1952	23	404	293,400	391	-	284,000
1953	1284	2,350	June 16, 1953	.1	171	123,800	166	-	120,500
1954	1344	1,060	May 23, 1954	0	84.5	61,160	80.4	-	58,230
1955	1394	898	May 26, 1955	0	94.3	68,250	105	-	75,980
1956	1444	1,750	May 25, 1956	0	201	146,000	193	-	140,100
1957	1514	2,380	June 15, 1957	0	273	197,600	281	-	203,600
1958	1564	1,460	May 29, 1958	0	144	104,500	132	-	95,320
1959	1634	1,550	June 30, 1959	0	120	86,660	133	-	96,200
1960	1714	1,040	May 14, 1960	0	130	94,270	-	-	-

210. Woodruff Creek near Woodruff, Utah

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

Drainage area.--65 sq mi, approximately.

Records available.--October 1937 to September 1943, October 1949 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 6,600 ft (from topographic map). Prior to June 21, 1939, staff gage half a mile downstream at different datum. June 21, 1939, to Sept. 30, 1943, water-stage recorder at site $1\frac{1}{2}$ miles upstream at different datum.

Average discharge.--17 years (1937-43, 1949-60), 26.6 cfs (19,260 acre-ft per year).

Extremes.--1937-43, 1949-60: Maximum discharge, 528 cfs May 25, 1950 (gage height, 5.72 ft); minimum observed, 1.3 cfs Aug. 1, 1940.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	14.8	19.8	14.6	11.4	15.9	14.7	70.3	213	76.7	27.0	17.2	15.4	42.8
1952	16.4	12.0	11.9	10.3	10.9	11.4	64.9	270	114	30.4	19.5	16.0	49.1
1953	15.0	12.2	12.2	13.4	10.0	14.9	27.6	70.2	106	20.3	11.1	8.71	26.8
1954	10.2	10.9	9.40	8.98	10.5	15.2	43.0	73.1	20.6	11.3	8.38	7.96	19.2
1955	12.3	10.1	8.68	7.44	7.98	8.63	27.4	122	47.6	14.9	10.4	9.60	24.1
1956	10.1	10.5	27.3	16.1	13.3	25.3	81.7	196	46.8	17.0	11.2	10.6	36.2
1957	14.7	10.4	9.32	8.02	9.80	14.6	29.0	128	107	21.4	12.1	10.6	31.4
1958	12.6	12.1	10.2	9.30	13.6	13.5	28.2	151	35.8	13.3	8.49	8.54	26.5
1959	8.17	9.26	9.17	8.47	9.08	13.0	28.2	57.3	30.6	10.8	8.13	9.68	16.9
1960	9.13	9.97	8.69	7.74	7.99	16.6	31.5	78.9	19.2	9.52	5.92	6.40	17.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	908	1,180	897	700	885	904	4,190	13,110	4,570	1,660	1,060	916	30,980
1952	1,010	712	730	631	629	702	3,860	16,610	6,780	1,870	1,200	954	35,690
1953	924	724	748	825	556	914	1,840	4,320	6,330	1,250	680	518	19,430
1954	625	647	578	552	585	937	2,560	4,490	1,220	697	515	474	13,880
1955	760	604	534	457	443	531	1,630	7,520	2,840	914	638	571	17,440
1956	622	622	1,680	988	764	1,550	4,860	11,460	2,790	1,040	688	630	27,690
1957	908	621	573	493	544	899	1,720	7,900	6,390	1,310	746	633	22,740
1958	774	720	628	572	757	827	1,680	9,270	2,130	817	522	508	19,200
1959	502	551	564	521	504	798	1,680	3,520	1,920	664	500	576	12,200
1960	561	593	535	476	460	1,020	1,890	4,850	1,140	566	364	361	12,850

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	53.8	38,920	
1951	1214	365	May 23, 1951	-	42.8	30,980	42.0	30,450	
1952	1244	460	May 30, 1952	-	49.1	35,690	49.1	35,630	
1953	1294	205	June 11, 1953	7.0	26.8	19,430	26.1	18,980	
1954	1344	157	July 18, 1954	-	19.2	13,880	19.2	13,930	
1955	1394	240	May 22, 1955	6.5	24.1	17,440	25.5	18,470	
1956	1444	327	May 20, 1956	9.0	38.2	27,690	37.0	26,870	
1957	1514	276	June 3, 1957	-	31.4	22,740	31.4	22,760	
1958	1564	329	May 21, 1958	7.4	26.5	19,200	25.8	18,700	
1959	1634	126	May 14, 1959	6.1	16.9	12,200	17.0	12,270	
1960	1714	234	May 13, 1960	5.3	17.7	12,850	-	-	

215. Birch Creek near Woodruff, Utah

Location.--Lat 41°30'00", long 111°17'30", in NE $\frac{1}{4}$ sec.20, T.9 N., R.6 E., on left bank a quarter of a mile downstream from tributary, 2 miles upstream from mouth, and 7 miles southwest of Woodruff.

Drainage area.--17 sq mi, approximately.

Records available.--October 1949 to September 1956.

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

Average discharge.--7 years (1949-56), 7.79 cfs (5,640 acre-ft per year).

Extremes.--1949-56: Maximum discharge, 172 cfs May 22, 1950 (gage height, 3.73 ft); no flow Aug. 26 to Nov. 4, 1954, part of each day Sept. 21, 25, 1956.

Remarks.--No diversion above station. Flow regulated by Birch Creek Reservoir (capacity, 2,260 acre-ft) completed in November 1951.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.34	1.91	2.10	1.93	2.62	3.70	28.4	53.9	17.2	3.77	1.51	0.86	9.80
1952	1.29	1.17	.60	.37	.4	.5	6.36	44.2	21.9	18.1	12.6	.48	9.06
1953	.43	.41	.4	.58	.71	.94	1.71	7.33	15.3	19.6	17.2	.76	5.49
1954	.34	.32	.41	.43	.35	.61	3.06	3.75	5.12	19.1	7.63	0	3.46
1955	0	.37	.2	.2	.3	.4	2.12	9.05	4.16	23.2	14.4	.53	4.64
1956	.52	.39	.93	1.15	1.0	2.37	9.12	36.1	14.6	25.7	13.4	.10	8.86
1957													
1958													
1959													
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	83	114	129	119	146	227	1,570	3,310	1,020	232	93	51	7,090
1952	79	70	37	23	23	31	379	2,720	1,300	1,110	775	29	6,580
1953	26	25	25	36	39	58	102	451	910	1,200	1,060	45	3,980
1954	21	19	25	26	19	38	182	231	304	1,170	369	0	2,500
1955	0	22	12	12	17	25	126	557	248	1,450	884	32	3,360
1956	32	23	57	70	58	146	542	2,220	868	1,580	824	6.1	6,430
1957													
1958													
1959													
1960													

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	13.3	9,650
1951	1214	79	May 12, 1951	-	9.80	7,090	9.61	6,950
1952	1244	102	May 16, 1952	-	9.06	6,580	8.90	6,470
1953	1284	36	May 29, 1953	-	5.49	3,980	5.48	3,970
1954	1344	a22	July 1-6, 1954	0	3.46	2,500	3.42	2,470
1955	1394	a31	July 10, 1955	0	4.64	3,360	4.75	3,440
1956	1444	a58	May 9, 10, 1956	.1	8.86	6,430	-	-
1957								
1958								
1959								
1960								

a Maximum daily.

230. Big Creek near Randolph, Utah

Location.--Lat 41°37', long 111°15', in SE $\frac{1}{4}$ sec.10, T.10 N., R.6 E., on left bank 3 $\frac{1}{2}$ miles downstream from main forks and 4 $\frac{1}{2}$ miles southwest of Randolph.

Drainage area.--52.2 sq mi.

Records available.--October 1949 to September 1960. March 1939 to September 1944 (fragmentary), at site a quarter of a mile downstream, records equivalent except for a few short periods each irrigation season.

Gage.--Water-stage recorder. Altitude of gage is 6,390 ft (from topographic map). Oct. 1, 1949, to Sept. 9, 1959, at site 100 ft downstream at different datum.

Average discharge.--11 years (1949-60), 19.0 cfs (13,760 acre-ft per year).

Extremes.--1949-60: Maximum discharge, 337 cfs July 11, 1957 (gage height, 3.75 ft); minimum, 1.6 cfs Mar. 12, 1951 (ice jam upstream).

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	24.7	22.8	20.0	13.5	14.7	14.2	42.3	75.5	45.3	36.9	30.6	27.1	30.7
1952	26.3	22.6	17.7	12.8	12.0	12.3	25.2	95.4	62.2	38.6	30.4	28.4	32.1
1953	26.0	21.2	18.6	18.3	13.2	15.1	16.0	26.7	32.6	24.3	20.4	16.9	20.8
1954	14.6	13.0	10.4	9.52	10.3	11.4	14.2	20.4	16.4	12.1	9.10	8.21	12.5
1955	7.55	7.21	6.68	6.34	5.95	6.42	7.50	23.0	16.1	10.7	8.81	7.51	9.51
1956	7.20	7.33	10.3	9.23	8.12	13.7	33.7	47.4	33.3	25.2	19.8	17.0	19.4
1957	15.7	12.7	10.7	8.52	10.6	10.9	12.0	39.6	34.0	25.5	20.9	18.1	18.3
1958	15.7	14.1	12.5	11	10.9	9.51	12.5	38.3	28.4	18.3	15.0	13.1	16.7
1959	11.9	11.6	11.0	10.2	11.1	13.4	17.6	15.5	12.4	10.1	7.74	8.56	11.7
1960	7.75	7.23	7	6.5	6.72	10.7	9.81	8.81	7.05	5.55	5.20	5.58	7.33

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,520	1,350	1,230	831	817	876	2,520	4,640	2,690	2,270	1,880	1,610	22,230
1952	1,620	1,350	1,090	789	692	756	1,500	5,870	3,700	2,370	1,870	1,690	23,300
1953	1,600	1,260	1,140	1,130	736	930	954	1,640	1,940	1,500	1,260	1,010	15,100
1954	897	774	639	585	571	702	843	1,250	976	742	559	489	9,030
1955	464	429	411	390	330	395	446	1,410	960	657	542	447	6,880
1956	443	436	636	567	467	843	2,010	2,920	1,980	1,550	1,220	1,010	14,080
1957	966	757	660	524	589	672	714	2,440	2,020	1,570	1,290	1,080	13,280
1958	964	841	768	676	605	585	746	2,360	1,690	1,130	924	781	12,070
1959	734	690	675	625	617	823	1,050	950	738	619	476	497	8,490
1960	477	430	430	400	387	660	584	542	420	341	320	332	5,320

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	32.1	23,260
1951	1214	131	Mar. 21, 1951	-	30.7	22,230	30.7	22,130
1952	1244	128	May 7, 1952	-	32.1	23,300	32.0	23,240
1953	1284	45	May 30, 1953	-	20.8	15,100	18.5	13,410
1954	1344	49	July 18, 1954	-	12.5	9,030	11.1	8,020
1955	1394	36	May 14, 1955	-	9.51	6,880	9.80	7,090
1956	1444	74	Apr. 28, 1956	-	19.4	14,080	20.6	14,950
1957	1514	337	July 11, 1957	-	18.3	13,280	18.6	15,470
1958	1564	56	May 22, 1958	-	18.7	12,070	16.0	11,600
1959	1634	54	Apr. 2, 1959	6.9	11.7	8,490	10.7	7,750
1960	1714	135	Mar. 18, 1960	4.8	7.33	5,320	-	-

240. Randolph Creek near Randolph, Utah

Location.--Lat 41°40'30", long 111°14'00", in SW $\frac{1}{4}$ 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 2 $\frac{1}{2}$ miles west of Randolph.

Drainage area.--30.3 sq mi.

Records available.--October 1949 to September 1956.

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

Average discharge.--7 years (1949-56), 4.59 cfs (3,320 acre-ft per year).

Extremes.--1949-56: Maximum discharge, 65 cfs Mar. 24, 1956, from rating curve extended above 10 cfs by logarithmic plotting; minimum, 0.5 cfs Aug. 14, 1953.

Remarks.--Diversions for irrigation of about 500 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	5.53	5.93	5.74	4.96	5.55	6.99	6.86	4.60	6.02	4.75	4.68	5.19	5.56
1952	5.75	5.68	5.36	4.69	5.50	5.36	6.49	3.58	5.91	5.07	4.25	4.49	5.17
1953	4.92	5.36	5.61	5.90	5.61	5.59	4.66	4.01	4.09	3.10	2.79	2.74	4.53
1954	3.27	3.45	4.18	4.86	5.13	5.53	2.54	4.95	3.63	2.91	3.93	3.59	4.00
1955	2.51	3.70	5.01	4.72	4.56	4.55	4.33	4.18	3.43	3.81	3.12	2.91	3.90
1956	1.85	4.77	5.18	4.67	4.49	7.71	3.64	4.69	4.11	4.04	3.21	3.10	4.29
1957													
1958													
1959													
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	340	353	353	305	308	430	408	283	358	292	288	309	4,030
1952	354	338	330	289	317	330	386	220	352	312	261	267	3,760
1953	302	319	345	363	312	344	277	246	243	191	172	163	3,280
1954	201	205	257	299	285	340	151	304	216	179	241	214	2,890
1955	154	220	308	290	253	280	258	257	204	234	192	173	2,820
1956	114	284	318	287	258	474	217	289	245	249	198	184	3,120
1957													
1958													
1959													
1960													

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	5.10	3,890
1951	1214	32	Mar. 21, 1951	2.1	5.56	4,030	5.53	4,000
1952	1244	10	Apr. 17, 1952	1.0	5.17	3,760	5.10	3,700
1953	1284	10	May 16, 1953	.6	4.53	3,280	4.11	2,970
1954	1344	10	Mar. 9, 1954	1.1	4.00	2,890	4.02	2,910
1955	1394	8.9	Apr. 8, 1955	1.4	3.90	2,820	3.95	2,860
1956	1444	65	Mar. 24, 1956	1.3	4.29	3,120	-	-
1957								
1958								
1959								
1960								

265. Bear River near Randolph, Utah

Location.--Lat 41°48', long 111°06', in SE 1/4 sec. 7, T.12 N., R.8 E., on left bank 3.5 miles upstream from Twin Creek, 4.8 miles upstream from Utah-Wyoming State line, and 11 miles northeast of Randolph.

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

Records available.--October 1943 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--17 years (1943-60), 188 cfs (136,100 acre-ft per year).

Extremes.--1943-60: Maximum discharge, 2,660 cfs May 8, 1952 (gage height, 8.80 ft); minimum, 4.5 cfs Sept. 30, 1960.

Remarks.--Diversions for irrigation of about 96,000 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	103	130	151	110	148	242	778	609	710	150	150	67.6	278
1952	145	144	129	129	133	135	993	844	1,072	254	140	73.5	433
1953	61.7	70.9	94.4	129	140	164	212	64.7	704	73.7	56.8	13.9	148
1954	22.4	38.5	69.9	79.5	102	168	142	53.6	35.4	9.92	7.81	6.65	61.0
1955	10.2	14.9	29.6	40.3	41.1	32.5	140	72.0	156	29.2	30.1	12.8	50.5
1956	7.27	25.8	124	153	122	488	287	659	536	44.9	23.3	8.92	206
1957	15.8	41.3	55.6	54.0	85.4	162	191	438	1,263	383	64.5	11.4	230
1958	32.2	92.4	92.6	86.4	113	156	228	292	180	15.3	11.5	5.99	109
1959	8.11	17.9	21.4	36.7	55.7	119	175	52.5	189	118	28.2	20.7	69.9
1960	56.5	98.5	48.9	56.9	69.1	290	180	57.2	113	31.0	9.83	5.35	84.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6,320	7,720	9,270	6,760	8,190	14,900	46,290	37,450	42,250	9,200	9,240	4,020	200,600
1952	8,930	8,580	7,910	7,920	7,680	8,290	59,100	13,400	63,770	15,640	8,600	4,370	314,200
1953	3,790	4,220	5,800	7,910	7,780	10,080	12,610	3,980	41,890	4,530	3,490	825	106,900
1954	1,380	2,290	4,300	4,890	5,670	10,300	8,430	3,290	2,100	610	480	396	44,140
1955	628	889	1,820	2,480	2,280	2,000	8,300	4,430	9,310	1,790	1,850	764	36,540
1956	447	1,540	7,600	9,400	6,170	30,010	17,070	40,530	31,890	2,780	1,440	531	149,400
1957	849	2,460	3,420	3,320	4,630	9,980	11,350	26,930	75,170	23,530	3,970	677	166,300
1958	1,980	5,500	5,690	5,310	6,300	9,570	13,550	17,930	10,730	940	705	356	78,560
1959	499	1,070	1,310	2,260	3,090	7,300	10,390	3,230	11,230	7,270	1,740	1,230	50,620
1960	3,480	5,860	3,000	3,500	3,980	17,860	10,720	3,510	6,720	1,910	604	318	61,460

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	367	265,000
1951	1214	1,880	June 3, 1951	55	278	200,600	281	203,700
1952	1244	2,660	May 8, 1952	61	433	314,200	417	302,600
1953	1284	1,690	June 19, 1953	12	148	106,900	140	101,100
1954	1344	258	Apr. 9, 1954	6.4	61.0	44,140	54.6	39,500
1955	1394	348	Apr. 19, 1955	5.8	50.5	36,540	59.1	42,790
1956	1444	2,350	Mar. 23, 1956	6.1	206	149,400	202	146,500
1957	1514	2,040	June 15, 1957	6.4	230	166,300	239	172,700
1958	1564	717	May 31, 1958	5.4	109	78,560	94.3	68,270
1959	1634	525	July 2, 1959	5.1	69.9	50,620	83.0	60,080
1960	1714	753	Mar. 27, 1960	4.8	84.7	61,460	-	-

270. Twin Creek at Sage, Wyo.

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

Drainage area.--246 sq mi.

Records available.--April 1943 to September 1960.

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.--17 years (1943-60), 18.7 cfs (13,540 acre-ft per year).

Extremes.--1943-60: Maximum discharge, 649 cfs Mar. 18, 1947 (gage height, 6.08 ft); minimum, 0.6 cfs Mar. 18, 1953, result of freezeup.

Remarks.--Divisions for irrigation of about 1,100 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	12.7	16.7	10.8	8.0	10.8	72.5	119	52.7	26.3	11.3	7.50	7.52	29.7
1952	10.0	8.73	6.9	6.7	7.3	9.4	102	104	44.1	22.9	15.5	12.6	29.2
1953	9.04	9.63	9.0	10.7	10.5	28.4	18.0	9.94	7.19	5.69	2.33	3.51	10.0
1954	4.89	5.81	5.47	5.35	6.91	9.58	21.4	7.99	6.90	4.07	2.74	2.80	6.97
1955	3.91	6.19	4.14	4.34	4.55	5.45	39.5	22.4	21.7	6.84	4.49	3.23	10.5
1956	4.44	6.65	21.4	12.1	8.16	101	41.2	34.8	12.8	6.44	4.79	3.31	21.5
1957	6.56	6.28	6.03	5.32	9.82	12.1	18.5	29.2	16.1	7.34	4.41	4.73	10.5
1958	5.96	7.52	5.66	4.64	7.50	9.06	51.1	40.7	17.1	6.43	5.85	5.73	13.9
1959	6.36	7.71	7.68	7.18	7.46	18.2	51.3	16.3	6.26	4.97	6.33	10.6	12.5
1960	7.09	8.74	6.15	5	5.74	77.7	21.5	9.77	7.60	5.01	3.70	2.43	13.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	781	996	663	492	599	4,460	7,090	3,240	1,560	697	461	447	21,490
1952	617	520	426	411	422	575	6,070	6,420	2,620	1,410	950	751	21,190
1953	556	573	553	657	585	1,620	1,070	611	428	227	174	209	7,260
1954	300	346	336	329	384	589	1,270	491	411	250	168	167	5,040
1955	241	368	254	267	253	335	2,350	1,370	1,290	420	276	192	7,620
1956	273	396	1,320	746	469	6,190	2,450	2,140	760	396	295	197	15,630
1957	403	374	371	327	545	741	1,100	1,790	960	451	271	281	7,610
1958	367	447	348	285	417	557	3,040	2,500	1,020	395	360	341	10,080
1959	391	459	472	440	415	1,120	3,050	1,000	372	306	389	633	9,050
1960	436	520	378	307	330	4,780	1,280	601	452	308	228	145	9,760

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	40.2	29,130
1951	1214	477	Mar. 21, 1951	-	29.7	21,490	28.5	20,610
1952	1244	359	Apr. 21, 1952	-	29.2	21,190	29.4	21,310
1953	1284	65	Mar. 27, 1953	1.0	10.0	7,260	9.06	6,560
1954	1344	69	Apr. 6, 1954	1.2	6.97	5,040	6.80	4,920
1955	1394	117	Apr. 15, 1955	1.0	10.5	7,620	12.1	8,740
1956	1444	584	Mar. 24, 1956	2.8	21.5	15,630	20.4	14,790
1957	1514	56	May 25, 1957	2.6	10.5	7,610	10.5	7,630
1958	1564	230	Apr. 19, 1958	3.9	13.9	10,080	14.1	10,240
1959	1634	275	Apr. 3, 1959	3.5	12.5	9,050	12.5	9,060
1960	1714	422	Mar. 26, 1960	1.6	13.4	9,760	-	-

285. Bear River below Pixley Dam, near Cokeville, Wyo.

Location.--Lat 41°56'20", long 110°59'05", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.25, T.23 N., R.120 W., 800 ft down-stream from Pixley Dam, 11 miles south of Cokeville, and 17.5 miles downstream from Twin Creek.

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

Records available.--October 1941 to November 1943 (published as Bear River near Cokeville), October 1952 to September 1956, May 1958 to September 1960 (irrigation seasons only).
Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 6,185 ft (from river-profile map).
Oct. 31, 1941, to Nov. 30, 1943, at site 200 ft downstream at different datum.

Average discharge.--6 years (1941-43, 1952-56), 137 cfs (99,180 acre-ft per year).

Extremes.--1941-43, 1952-56, 1958-60: Maximum daily discharge, 2,300 cfs Mar. 25, 1956;
minimum daily recorded, 2.6 cfs June 23-27, June 29 to July 1, 1960.

Remarks.--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.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	84.7	99.7	113	149	160	209	223	27.2	576	101	71.8	28.9	153
1954	36.3	52.9	76.7	84.5	110	189	144	10.3	6.45	8.12	10.8	11.5	61.4
1955	20.6	26.0	36.6	48.3	48.8	41.3	142	12.9	91.2	46.2	43.9	26.0	48.4
1956	21.3	38.3	132	170	122	575	394	469	516	80.0	38.3	9.83	214
1957	-	-	-	-	-	-	-	-	148	35.1	18.2	3.62	-
1958	-	-	-	-	-	-	-	14.2	55.1	148	42.9	36.8	-
1959	-	-	-	-	-	-	-	12.1	5.59	54.2	21.1	16.5	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	5,210	5,930	6,930	9,140	8,890	12,840	13,250	1,670	34,280	6,220	4,420	1,720	110,500
1954	2,230	3,150	4,720	5,200	6,120	11,820	8,560	858	384	499	665	682	44,470
1955	1,270	1,550	2,250	2,970	2,710	2,540	8,470	792	5,430	2,840	2,700	1,550	35,070
1956	1,310	2,280	8,140	10,430	7,030	35,370	23,430	28,830	30,730	4,920	2,360	585	155,400
1957	-	-	-	-	-	-	-	-	8,820	2,160	1,120	215	-
1958	-	-	-	-	-	-	-	-	8,820	2,160	1,120	215	-
1959	-	-	-	-	-	-	-	874	5,280	9,070	2,640	2,190	-
1960	-	-	-	-	-	-	-	746	332	3,330	1,300	980	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-
1953	1284	1,220	June 21, 1953	12	153	110,500	142	102,500
1954	1344	282	Apr. 9, 1954	5.2	61.4	44,470	54.5	39,440
1955	1394	382	June 5, 1955	8.6	48.4	35,070	57.8	41,730
1956	1444	a2,300	Mar. 25, 1956	6.1	214	155,400	-	-
1957	-	-	-	-	-	-	-	-
1958	1564	a591	June 2, 1958	b2.8	-	-	-	-
1959	1634	a377	July 7, 1959	b8.6	-	-	-	-
1960	1714	-	-	b2.6	-	-	-	-

a Maximum daily.

b Minimum recorded.

BEAR RIVER BASIN

295. Bear River above Sublette Creek, near Cokeville, Wyo.

Location.--Lat 42°02'20", long 110°57'05", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.24 N., R.119 W., on left bank 1,500 ft upstream from Sublette Creek and $3\frac{1}{4}$ miles south of Cokeville.

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

Records available.--April 1948 to September 1955.

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

Average discharge.--7 years (1948-55), 248 cfs (179,500 acre-ft per year).

Extremes.--1948-55: Maximum discharge, 2,620 cfs May 10, 1952 (gage height, 9.90 ft); minimum, 10 cfs July 8, 1954.

Remarks.--Diversions for irrigation of about 109,000 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	128	167	168	120	163	308	971	620	768	242	182	89.5	327
1952	170	168	147	144	152	162	979	2,060	1,120	367	171	96.7	479
1953	83.3	98.8	113	149	160	208	232	62.3	679	129	79.8	34.5	168
1954	40.6	58.2	77.4	84.4	106	202	160	29.1	27.5	23.2	19.1	19.6	70.3
1955	29.3	32.6	40.4	50.8	51.1	50.5	186	48.5	181	76.4	50.9	32.8	68.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7,860	9,940	10,330	7,380	9,040	18,940	57,790	38,090	45,730	14,860	11,180	5,320	236,500
1952	10,430	10,020	9,040	8,850	8,740	9,980	58,260	128,900	66,690	22,540	10,530	5,750	347,700
1953	5,120	5,880	6,930	9,140	8,890	12,800	13,790	3,830	40,420	7,940	4,910	2,050	121,700
1954	2,500	3,460	4,760	5,190	5,900	12,410	9,520	1,790	1,640	1,430	1,170	1,160	50,930
1955	1,800	1,940	2,460	3,120	2,840	3,100	11,050	2,990	10,760	4,700	3,130	1,950	49,860

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	434	314,500
1951	1214	1,790	June 6, 1951	75	327	236,500	329	237,800
1952	1244	2,620	May 10, 1952	80	479	347,700	463	336,200
1953	1284	1,350	June 22, 1953	29	168	121,700	158	114,500
1954	1344	292	Apr. 9, 1954	13	70.3	50,930	64.1	46,430
1955	1394	508	June 5, 1955	20	68.9	49,860	-	-

320. Smiths Fork near Border, Wyo.

Location.--Lat 42°17', long 110°52', in NW $\frac{1}{4}$ sec.33, T 27 N., R.118 W., on left bank $\frac{1}{4}$ 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 1960.

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

Average discharge.--18 years (1942-60), 193 cfs (139,700 acre-ft per year).

Extremes.--1942-60: Maximum discharge, 1,500 cfs June 7, 1957 (gage height, 4.56 ft); minimum recorded, 35 cfs Mar. 21, 1955, result of freezeup.

Remarks.--One diversion for irrigation of about 200 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	100	85.9	72.5	67.3	69.1	63.5	295	820	693	351	187	120	244
1952	103	82.6	76.8	65	58.9	58.0	225	763	597	251	145	102	211
1953	85.6	74.2	69.0	67.2	60.7	61.5	133	282	658	307	153	99.4	171
1954	80.9	72.0	67.4	60.2	61.2	58.9	141	523	362	215	124	96.3	156
1955	82.8	71.4	64.6	60.6	55	52.8	84.1	343	436	211	126	89.3	140
1956	78.3	71.7	78.6	70.4	63.8	66.6	327	809	817	296	154	107	245
1957	95.7	80.7	71.7	66.8	61.7	59.4	87.7	697	936	407	191	125	241
1958	100	85.3	78.3	73	70	66.0	90.5	691	603	232	131	101	194
1959	82.5	77.7	69.9	67.1	61.4	60.4	111	297	475	220	125	95.9	145
1960	97.5	83.8	72.6	59.3	61.1	65.1	180	418	394	177	112	91.4	151

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6,150	5,110	4,460	4,140	3,840	3,910	17,540	50,390	41,230	21,600	11,520	7,130	177,000
1952	6,350	4,920	4,720	4,000	3,390	3,570	13,410	46,890	35,520	15,460	8,900	6,040	153,200
1953	5,140	4,420	4,240	4,130	3,370	3,780	7,900	17,360	39,160	18,880	9,410	5,910	123,700
1954	4,980	4,290	4,150	3,700	3,400	3,620	8,380	32,130	21,520	13,230	7,610	5,750	112,700
1955	5,090	4,250	3,970	3,730	3,050	3,250	5,000	21,110	25,950	12,950	7,780	5,310	101,400
1956	4,810	4,260	4,830	4,330	3,670	4,100	19,440	49,770	48,620	18,220	9,470	6,340	177,900
1957	5,760	4,800	4,410	4,110	3,430	3,650	5,220	42,880	55,690	25,000	11,770	7,460	174,200
1958	6,150	5,070	4,810	4,490	3,890	4,060	5,390	42,470	35,880	14,290	8,050	5,980	140,500
1959	5,070	4,630	4,300	4,130	3,410	3,710	6,600	18,260	28,270	13,510	7,680	5,710	105,300
1960	5,990	4,990	4,460	3,640	3,520	4,000	10,700	25,710	23,450	10,870	6,870	5,440	109,600

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	247	179,000
1951	1214	1,360	May 29, 1951	-	244	177,000	245	177,300
1952	1244	1970	May 8, 1952	-	211	153,200	208	151,000
1953	1284	988	June 15, 1953	53	171	123,700	170	123,300
1954	1344	832	May 22, 1954	-	156	112,700	156	112,600
1955	1394	587	June 10, 1955	-	140	101,400	141	102,000
1956	1444	1,260	June 2, 1956	-	245	177,900	246	178,900
1957	1514	1,500	June 7, 1957	-	241	174,200	242	175,200
1958	1564	1,150	May 28, 1958	-	194	140,500	191	138,500
1959	1634	697	June 16, 1959	57	145	105,300	147	106,700
1960	1714	710	May 13, 1960	52	151	109,600	-	-

† Corrected.

350. Smiths Fork at Cokeville, Wyo.

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

Drainage area--275 sq mi.

Records available--April 1942 to September 1952.

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

Average discharge--10 years (1942-52), 200 cfs (144,800 acre-ft per year).

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

Remarks--Diversions above station for irrigation of about 4,000 acres above and about 5,000 acres below station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	111	106	97.4	94.0	98.2	92.9	374	907	637	238	121	123	251
1952	122	108	101	90	83.4	85	298	933	506	163	63.7	77.2	220

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6,840	6,330	5,990	5,780	5,450	5,710	22,230	55,780	37,890	14,640	7,470	7,340	181,400
1952	7,500	6,410	6,220	5,530	4,800	5,230	17,740	57,370	30,090	10,040	3,920	4,590	159,400

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	266	183,000
1951	1214	1,280	May 29, 1951	80	251	181,400	252	182,400
1952	1244	1,320	May 4, 1952	-	220	159,400	-	-

380. Bear River below Smiths Fork, near Cokeville, Wyo.

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

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

Records available.--April 1954 to September 1960.

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

Average discharge.--6 years (1954-60), 340 cfs (246,100 acre-ft per year).

Extremes.--1954-60: Maximum discharge, 3,780 cfs Mar. 26, 1956 (gage height, 7.54 ft); minimum, 68 cfs Sept. 12, 1954.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	-	-	-	-	-	-	-	466	251	169	91.2	79.9	-
1955	107	131	121	115	128	138	362	391	543	190	132	103	205
1956	124	135	211	247	194	792	917	1,366	1,420	305	152	104	497
1957	139	164	159	149	187	341	376	1,218	2,146	854	220	155	509
1958	176	222	206	185	232	315	474	957	742	222	129	98.3	330
1959	116	145	154	145	163	272	444	301	465	332	141	135	234
1960	201	225	170	147	151	494	502	438	401	213	116	101	263

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	6,570	7,790	7,410	7,090	7,130	8,480	21,560	29,910	14,950	10,410	5,610	4,760	-
1955								24,020	32,290	11,680	8,090	6,150	148,300
1956	7,600	8,050	12,980	15,210	11,160	48,710	54,570	84,000	84,480	18,740	9,330	6,180	361,000
1957	8,540	9,750	9,790	9,180	10,410	20,950	22,580	74,910	127,700	52,500	13,520	9,220	368,800
1958	10,800	13,190	12,670	11,400	12,910	19,370	28,180	58,820	44,150	13,660	7,950	5,850	239,000
1959	7,130	8,650	9,470	8,910	9,070	16,720	26,440	18,500	27,670	20,440	8,670	8,050	169,700
1960	12,380	13,370	10,480	9,050	8,710	30,370	29,880	26,960	23,870	13,080	7,110	6,030	191,300

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954	1344	673	May 11, 1954	-	-	-	-	-
1955	1394	880	June 6, 1955	79	205	148,300	214	155,100
1956	1444	3,780	Mar. 26, 1956	85	497	361,000	497	360,500
1957	1514	2,570	June 22, 1957	102	509	368,800	521	377,400
1958	1564	1,660	June 2, 1958	87	330	239,000	314	227,500
1959	1634	931	Apr. 6, 1959	89	234	169,700	250	180,700
1960	1714	1,600	Mar. 25, 1960	84	263	191,300	-	-

BEAR RIVER BASIN

395. Bear River at Border, Wyo.

Location.--Lat 42°11', long 111°03', in NE¹/₄ sec.15, T.14 S., R.46 E., in Idaho, on left bank a quarter of a mile west of Wyoming-Idaho State line, half a mile west of Border, and 2.1 miles upstream from Thomas Fork.

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

Records available.--October 1937 to September 1960.

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

Average discharge.--23 years (1937-60), 396 cfs (286,700 acre-ft per year).

Extremes.--1937-60: Maximum discharge, 3,680 cfs May 11, 1952 (gage height, 8.89 ft); minimum daily, 30 cfs Aug. 18-22, 1940.

Remarks.--Diversions for irrigation of about 124,000 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	284	319	285	229	316	479	1,513	1,547	1,435	526	358	254	629
1952	319	285	260	250	279	289	1,282	3,158	1,651	582	274	212	738
1953	212	213	221	268	286	343	431	318	1,184	332	186	106	341
1954	126	180	181	182	227	329	389	436	222	146	104	76.4	217
1955	119	143	135	127	140	149	363	345	470	182	140	109	202
1956	143	150	226	269	212	794	968	1,374	1,432	292	166	107	511
1957	156	180	171	159	195	355	389	1,228	2,132	873	251	178	521
1958	179	229	212	195	244	320	501	976	686	203	138	99.4	332
1959	117	155	162	152	171	269	451	284	577	317	150	134	228
1960	208	233	181	155	161	472	514	408	320	193	111	89.2	254

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	17,460	18,990	17,550	14,060	17,570	29,450	90,030	95,130	85,360	32,310	22,040	15,130	455,100
1952	19,610	16,970	16,000	15,370	16,030	17,760	76,280	194,200	98,230	35,790	16,820	12,610	535,700
1953	13,050	12,800	13,610	16,460	15,890	21,070	25,620	19,520	70,460	20,410	11,540	6,320	246,800
1954	7,720	10,720	11,130	11,210	12,620	20,230	23,160	26,800	13,230	8,970	6,400	4,550	156,700
1955	7,300	8,520	8,330	7,800	7,760	9,170	21,590	21,210	27,980	11,180	8,610	6,490	145,900
1956	8,790	8,940	13,890	16,560	12,170	48,790	57,600	84,470	85,230	17,950	10,210	6,390	371,000
1957	9,610	10,720	10,490	9,770	10,840	21,730	23,170	75,530	126,900	53,680	14,180	10,620	377,200
1958	10,990	13,610	13,010	12,000	13,560	19,650	29,830	59,990	40,830	12,450	8,480	5,920	240,300
1959	7,220	9,220	9,950	9,370	9,500	16,510	26,860	17,440	22,460	19,520	9,240	7,990	165,300
1960	12,800	13,860	11,150	9,530	9,230	29,020	30,580	25,090	19,030	11,890	6,820	5,310	184,300

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	741	536,300
1951	1214	2,300	June 7, 1951	200	629	455,100	627	453,700
1952	1244	3,680	May 11, 1952	191	738	535,700	720	522,600
1953	1284	1,860	June 22, 1953	98	341	246,800	327	236,900
1954	1344	630	May 11, 1954	65	217	156,700	209	151,300
1955	1394	753	June 6, 1955	89	202	145,900	212	153,400
1956	1444	3,620	Mar. 27, 1956	90	511	371,000	510	370,200
1957	1514	2,630	June 22, 1957	113	521	377,200	530	364,000
1958	1564	1,520	June 2, 1958	85	332	240,300	316	229,100
1959	1634	924	Apr. 6, 1959	88	228	165,300	244	176,700
1960	1714	1,410	Mar. 26, 1960	75	254	184,300	-	-

400. Thomas Fork near Geneva, Idaho

Location.--Lat 42°23'30", long 110°59'00", in NE $\frac{1}{4}$ sec.28, T.28 N., R.119 W., on right bank 0.8 mile upstream from Salt Creek, 3.7 miles east of Wyoming-Idaho State line, and 5.4 miles northeast of Geneva Post Office.

Drainage area.--45.3 sq mi.

Records available.--October 1939 to September 1951. Monthly discharge only for October 1939, published in WSP 1314.

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

Average discharge.--12 years (1939-51), 16.1 cfs (11,660 acre-ft per year).

Extremes.--1939-51: Maximum discharge, 418 cfs May 18, 1950 (gage height, 4.25 ft), from rating curve extended above 240 cfs; minimum daily, 1.3 cfs Nov. 13, 23, 1940.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.13	7.25	4.57	4.36	4.33	4.41	80.6	132	43.5	16.8	9.05	5.79	26.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	377	431	281	268	240	271	4,790	8,100	2,590	1,020	556	344	19,270

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	30.8	22,280
1951	1214	224	Apr. 29, 1951	3.1	26.6	19,270	-	-

405. Salt Creek near Geneva, Idaho

Location.--Lat 42°24'00", long 110°59'30", in NW $\frac{1}{4}$ sec.21, T.28 N., R.119 W., in Wyoming, on left bank 800 ft upstream from bridge on U. S. Highway 89, 1,000 ft upstream from mouth, 3.0 miles east of Wyoming-Idaho State line, and $4\frac{1}{4}$ miles northeast of Geneva Post Office.

Drainage area.--37.6 sq mi.

Records available.--October 1939 to September 1951. Monthly discharge only for October 1939, published in WSP 1314.

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

Average discharge.--12 years (1939-51), 19.0 cfs (13,760 acre-ft per year).

Extremes.--1939-51: Maximum discharge, 382 cfs May 18, 1950 (gage height, 5.02 ft); minimum, 0.5 cfs Aug. 18, 1940.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.46	6.75	4.35	4.19	4.11	4.14	67.1	134	39.9	15.6	8.79	5.78	25.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	397	402	267	257	228	254	3,990	8,230	2,380	960	541	344	18,250

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	32.1	23,220
1951	1214	243	May 7, 1951	2.4	25.2	18,250	-	-

BEAR RIVER BASIN

410. Thomas Fork near Wyoming-Idaho State line

Location.--Lat 42°24'10", long 111°01'30", in SE¼NW¼ sec.19, T.28 N., R.119 W., in Wyoming, on right bank 1.3 miles upstream from State line, 1.5 miles downstream from Giraffe Creek, and 3½ miles northeast of Geneva, Idaho.

Drainage area.--113 sq mi.

Records available.--October 1949 to September 1960.

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

Average discharge.--11 years (1949-60), 52.1 cfs (37,720 acre-ft per year).

Extremes.--1949-60: Maximum discharge, 869 cfs May 18, 1950 (gage height, 5.55 ft, site and datum then in use); minimum, 2.6 cfs Mar. 2, 1956, result of freezeup.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	25.3	24.2	18.8	17.4	18.1	18.0	196	351	114	47.9	30.7	22.1	73.7
1952	23.6	17.4	17.9	16.3	15.2	15.0	138	366	94.5	42.3	24.4	18.0	65.9
1953	16.6	14.0	13.5	14.1	12.8	17.7	65.6	119	96.3	37.6	19.6	12.4	36.6
1954	13.1	15.3	13.1	12.6	12.9	14.5	71.8	116	47.2	21.9	11.5	8.74	29.9
1955	9.77	10.1	10.4	9.43	9.0	9.10	27.0	71.8	77.4	27.7	14.4	10.7	23.9
1956	11.5	13.6	29.3	18.7	14.9	23.8	301	311	100	40.1	23.6	18.6	75.6
1957	18.0	15.1	14.6	14.5	14.6	15.0	59.6	403	152	54.4	27.4	20.2	67.8
1958	19.6	19.5	19.4	18.4	17.4	17.5	51.2	271	91.4	38.6	21.6	17.5	50.6
1959	16.4	16.8	16.2	14.3	13.9	15.5	50.4	87.9	44.3	20.7	14.1	12.7	27.0
1960	14.1	11.8	9.69	10.2	10.2	16.8	92.0	116	47.0	21.5	13.1	11.8	31.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,430	1,440	1,150	1,070	1,000	1,110	11,640	21,590	8,780	2,950	1,890	1,310	53,360
1952	1,450	1,040	1,100	1,000	875	924	8,190	22,470	5,630	2,600	1,500	1,070	47,850
1953	1,020	831	831	867	710	1,090	3,910	7,290	5,730	2,310	1,200	736	26,520
1954	807	910	803	776	716	889	4,270	7,100	2,810	1,350	704	520	21,660
1955	601	602	642	580	500	559	1,610	4,420	4,610	1,700	883	636	17,340
1956	704	807	1,800	1,150	855	1,470	17,930	19,130	5,970	2,470	1,450	1,110	54,850
1957	1,110	899	897	891	809	922	3,540	24,750	9,020	3,350	1,680	1,200	49,080
1958	1,200	1,160	1,190	1,130	964	1,070	3,050	16,680	5,440	2,370	1,330	1,040	36,620
1959	1,010	1,000	996	881	774	954	3,000	5,410	2,640	1,270	869	758	19,560
1960	869	705	596	629	584	1,040	5,480	7,110	2,800	1,320	805	700	22,640

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	92.3	66,830
1951	1214	a620	May 7, 1951	14	73.7	53,360	73.1	52,930
1952	1244	848	May 4, 1952	-	65.9	47,850	64.7	46,940
1953	1284	171	Apr. 27, 1953	11	36.6	26,520	36.4	26,360
1954	1344	200	May 7, 1954	8.1	29.9	21,660	29.0	20,980
1955	1394	152	May 8, 1955	8.0	23.9	17,340	26.0	18,810
1956	1444	634	Apr. 24, 1956	10	75.6	54,850	75.0	54,440
1957	1514	766	May 19, 1957	-	67.8	49,080	68.7	49,710
1958	1564	417	May 12, 1958	15	50.6	36,620	49.8	36,080
1959	1634	157	May 2, 1959	8.8	27.0	19,560	25.9	18,730
1960	1714	268	Apr. 9, 1960	8.0	31.2	22,640	-	-

a Maximum daily.

425. Thomas Fork near Raymond, Idaho

Location.--Lat 42°16', long 111°05', in SE $\frac{1}{4}$ sec.28, T.13 S., R.46 E., on left bank at J. W. Mumford Ranch, 1 $\frac{1}{2}$ miles southwest of Raymond.

Drainage area.--202 sq mi.

Records available.--May 1942 to September 1952.

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

Average discharge.--10 years (1942-52), 60.6 cfs (43,870 acre-ft per year).

Extremes.--1942-52: Maximum discharge, 1,070 cfs May 19, 1950 (gage height, 7.62 ft); minimum, 1.2 cfs Sept. 28, 1952.

Remarks.--Diversions above station for irrigation of about 10,000 acres above and below station. One diversion below station for irrigation of about 300 acres.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	24.0	30.5	26.1	22.5	22.5	21.3	231	389	133	35.7	29.5	23.4	82.6
1952	25.7	23.5	22.6	20.9	18.1	18.8	125	430	76.0	31.2	24.5	7.84	69.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,480	1,820	1,600	1,380	1,250	1,310	13,750	23,890	7,900	2,190	1,810	1,390	59,770
1952	1,580	1,400	1,390	1,290	1,040	1,160	7,440	26,450	4,520	1,920	1,500	467	50,160

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	80,990
1951	1214	522	May 9, 1951	19	82.6	59,770	81.8	59,240
1952	1244	890	May 5, 1952	1.2	69.1	50,160	112	-

440. Bear River at Harer, Idaho

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

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

Records available.--June 1913 to September 1960. Monthly discharge only October 1916 to September 1918, published in WSP 1314.

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.--47 years (1913-60), 511 cfs (369,900 acre-ft per year).

Extremes.--1913-60: Maximum discharge, 4,440 cfs May 7, 1952 (gage height, 11.04 ft); minimum daily, 26 cfs Aug. 21-27, 1934.

Remarks.--Diversions above station for irrigation of about 140,000 acres.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	341	374	333	253	378	564	1,882	2,027	1,697	619	410	300	765
1952	365	329	272	284	302	312	1,367	3,665	1,831	684	517	256	834
1953	262	264	241	282	302	404	535	436	1,259	435	250	135	400
1954	155	217	193	197	236	360	475	525	295	199	129	95.2	257
1955	141	168	154	140	147	161	446	399	528	230	170	124	234
1956	167	174	244	309	216	801	1,316	1,725	1,574	368	202	134	602
1957	185	198	182	170	193	397	542	1,586	2,285	991	281	212	603
1958	216	258	238	210	265	365	646	1,238	869	257	161	124	404
1959	145	195	185	163	186	303	557	363	407	370	176	147	266
1960	236	250	180	167	175	478	658	515	360	217	119	109	269

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	20,980	22,240	20,480	15,530	21,010	34,680	12,000	24,600	101,000	38,060	25,240	17,820	553,700
1952	22,470	19,560	16,750	17,470	17,370	19,160	81,340	225,300	109,000	42,040	19,500	15,230	605,200
1953	16,110	15,680	14,830	17,340	16,790	24,820	31,860	26,800	74,930	26,770	15,350	8,045	289,300
1954	9,520	12,910	11,890	12,130	13,120	22,110	28,290	32,260	17,610	12,260	7,950	5,730	185,800
1955	8,690	9,990	9,440	8,620	8,180	9,930	26,550	24,500	31,420	14,160	10,450	7,350	169,300
1956	10,290	10,370	15,000	19,000	12,420	49,230	78,310	106,000	93,650	22,610	12,450	8,000	437,300
1957	11,390	11,810	11,210	10,460	10,710	24,410	32,270	97,520	136,000	60,900	17,280	12,630	436,600
1958	13,270	15,340	14,630	12,900	14,740	22,460	38,410	76,130	51,710	15,800	9,920	7,400	292,700
1959	8,930	11,600	11,370	10,020	10,350	18,660	33,160	22,330	24,200	22,740	10,820	8,740	192,900
1960	14,490	14,890	11,080	10,290	10,070	29,380	39,170	31,680	21,410	13,320	7,320	6,470	209,600

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	910
1951	1214	2,500	June 8, 1951	224	765	553,700	758
1952	1244	4,440	May 7, 1952	220	834	605,200	817
1953	1284	1,880	June 23, 1953	127	400	289,300	383
1954	1344	680	May 14, 1954	82	257	185,600	248
1955	1394	919	Apr. 15, 1955	108	234	169,300	244
1956	1444	3,810	Mar. 28, 1956	105	602	437,300	601
1957	1514	2,640	June 23, 1957	144	603	436,600	615
1958	1564	1,700	June 2, 1958	106	404	292,700	399
1959	1634	1,100	Apr. 6, 1959	112	266	192,900	278
1960	1714	1,320	Mar. 27, 1960	91	289	209,600	-

a Maximum daily.

460. Rainbow inlet canal near Dingle, Idaho

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

Records available.--January 1922 to September 1960. Monthly discharge prior to October 1945, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 5,950 ft (from topographic map). Prior to Oct. 1, 1923, at site 300 ft downstream at different datum. Oct. 1, 1923, to Oct. 27, 1944, at site half a mile downstream at different datum.

Average discharge.--38 years (1922-60), 299 cfs (216,500 acre-ft per year).

Extremes.--1922-60: Maximum discharge, 4,180 cfs May 7, 1952 (gage height, 8.62 ft); minimum daily, 1 cfs for several days in 1931, 1934, 1940, 1948.

Remarks.--Canal diverts from Bear River at Stewart Dam in NE $\frac{1}{4}$ sec.34, T 13 S., R 44 E., for storage in Bear Lake. At times flow in canal is augmented by surplus water from Black Otter Slough entering at the station and by seepage and wastage from irrigation lands on both sides of canal.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	296	326	283	219	323	468	1,783	1,821	203	443	362	210	645
1952	304	291	254	248	276	286	1,319	3,266	386	511	229	160	713
1953	195	204	197	229	244	361	453	173	738	191	155	31	263
1954	95.6	156	148	155	188	334	437	187	12.9	35.1	35.6	12.3	149
1955	76.6	133	87.4	97.9	110	123	386	191	124	43.6	90.5	27.8	124
1956	124	111	171	222	145	640	1,246	1,390	126	173	116	15.7	456
1957	84.3	140	120	98.4	122	350	483	1,385	798	796	175	86.9	471
1958	131	198	177	158	205	292	584	1,002	390	102	75.0	16.1	278
1959	76.7	124	115	102	123	239	512	143	32.0	148	78.2	59.2	146
1960	202	209	138	114	125	435	627	277	22.3	50.6	39.0	15.4	188

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	18,210	19,380	17,390	13,440	17,950	28,790	106,100	112,000	71,600	27,220	22,230	12,510	466,800
1952	18,720	17,330	15,630	15,230	15,890	17,610	78,470	200,800	82,480	31,440	14,080	9,510	517,200
1953	11,970	12,120	12,100	14,070	13,570	22,220	26,930	10,620	43,900	11,770	9,550	1,840	190,700
1954	5,880	9,300	9,130	9,550	10,450	20,520	26,010	11,510	768	2,160	2,190	732	108,200
1955	4,710	7,930	5,370	6,020	6,130	7,540	22,980	11,770	7,390	2,680	5,570	1,650	89,740
1956	7,630	6,630	10,480	13,620	8,320	39,340	74,140	85,450	67,020	10,650	7,130	935	331,300
1957	5,180	8,360	7,350	6,050	6,800	21,520	28,750	85,190	107,000	48,960	10,760	5,170	341,100
1958	8,030	11,800	10,880	9,720	11,380	17,960	34,730	61,590	232,000	6,290	4,610	960	201,200
1959	4,710	7,400	7,040	6,250	6,840	14,700	30,440	8,790	1,900	9,100	4,810	3,520	105,500
1960	12,440	12,440	8,500	7,010	7,220	26,770	37,320	17,010	1,320	3,110	2,400	914	136,500

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	783
1951	1214	2,120	Apr. 2, 1951	142	645	466,800	640
1952	1244	4,180	May 7, 1952	135	713	517,200	651
1953	1284	1,340	June 24, 1953	16	263	190,700	247
1954	1344	585	Mar. 19, 1954	11	149	108,200	141
1955	1394	798	Apr. 15, 1955	13	124	89,740	133
1956	1444	3,380	Mar. 30, 1956	6.5	456	331,300	451
1957	1514	2,190	June 24, 1957	7.7	471	341,100	485
1958	1564	1,280	May 19, 1958	13	278	201,200	262
1959	1634	1,040	Apr. 6, 1959	12	146	105,500	165
1960	1714	1,770	Mar. 27, 1960	11	188	136,500	-

465. Bear River below Stewart Dam, near Montpelier, Idaho

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

Drainage area.--2,820 sq mi, approximately.

Records available.--January 1922 to September 1960. Monthly discharge only prior to October 1945, published in WSP 1314.

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

Average discharge.--38 years (1922-60), 63.9 cfs (46,260 acre-ft per year).

Extremes.--1922-60: Maximum daily discharge, 3,050 cfs June 3, 1923; no flow July 15, 1956.

Remarks.--Water diverted at Stewart Dam through Rainbow inlet canal for storage and regulation in Bear Lake. Many diversions for irrigation above station.

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

Correction.--In WSP 1314, the annual mean for 1944 was inadvertently rounded to 70 cfs; it should be 70.4 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	23.5	23.3	23.5	22.7	24.4	23.8	23.1	26.9	34.3	21.9	19.5	17.7	23.7
1952	18.4	17.8	16.8	14.6	14.2	15.9	19.4	29.9	30.7	18.7	15.2	14.1	18.6
1953	15.0	13.3	15.4	16.8	17.9	16.9	15.1	29.9	9.8	12.5	9.9	9.6	14.3
1954	13.9	14.4	15.5	16.0	16.5	22.5	11.4	14.4	9.4	12.5	12.3	6.4	13.8
1955	10.6	10.5	5.6	6.4	7.0	8.7	13.2	16.4	12.3	13.8	24.6	10.1	11.6
1956	15.9	17.1	18.4	22.7	20.5	24.8	20.6	23.7	29.8	18.1	10.7	26.8	20.7
1957	57.2	21.3	18.5	18.5	18.5	23.5	27.3	31.3	31.3	21.8	18.7	19.4	25.7
1958	19.6	20.7	18.2	8.55	11.5	13.2	14.5	19.9	26.3	17.7	18.5	12.1	16.8
1959	15.5	21.3	19.1	17.6	18.4	19.6	8.63	12.9	18.2	28.0	24.6	15.0	18.3
1960	10.7	8.11	6.51	9.15	8.36	10.9	6.39	9.31	9.45	15.4	20.0	9.84	10.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,440	1,390	1,440	1,590	1,350	1,460	1,380	1,650	2,040	1,340	1,200	1,060	17,140
1952	1,010	1,060	1,030	899	819	976	1,150	1,840	1,830	1,150	932	841	13,500
1953	922	791	948	1,040	996	1,040	899	1,220	585	766	607	569	10,380
1954	857	857	950	984	914	1,380	678	883	557	766	754	383	9,960
1955	653	627	343	391	391	534	787	1,010	732	849	1,510	601	8,430
1956	980	1,020	1,130	1,400	1,180	1,530	1,220	1,460	1,780	1,110	661	1,590	15,060
1957	3,510	1,270	1,140	1,140	1,030	1,440	1,620	1,930	1,860	1,340	1,150	1,150	18,580
1958	1,210	1,230	1,120	526	638	811	861	1,220	1,570	1,090	1,130	721	12,130
1959	956	1,270	1,170	1,080	1,020	1,200	514	790	1,080	1,720	1,510	893	13,200
1960	659	483	400	563	481	671	380	572	563	944	1,230	586	7,530

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	34.1	24,690
1951	1214	42	June 26, 1951	16	23.7	17,140	22.1	15,980
1952	1244	37	July 1, 1952	12	18.6	13,500	18.0	13,100
1953	1264	33	May 9, 1953	6	14.3	10,380	14.3	10,380
1954	1344	a28	Mar. 27, 1954	4	13.8	9,960	12.3	8,920
1955	1394	29	May 12, 1955	3	11.6	8,430	13.7	9,940
1956	1444	a54	Sept. 9, 1956	0	20.7	15,060	24.6	17,850
1957	1514	a128	Oct. 14, 1956	16	25.7	18,580	22.4	16,220
1958	1564	a31	July 4, 1958	6.2	16.8	12,130	16.5	11,960
1959	1634	35	Mar. 11, 1959	4.7	18.3	13,200	15.7	11,350
1960	1714	50	Mar. 28, 1960	.7	10.4	7,530	-	-

a Maximum daily.

475. Montpelier Creek at irrigators weir, near Montpelier, Idaho

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

Drainage area.--50.9 sq mi.

Records available.--October 1942 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--18 years (1942-60), 21.4 cfs (15,490 acre-ft per year).

Extremes.--1942-60: Maximum discharge, 224 cfs May 18, 1950 (gage height, 2.91 ft); minimum, 0.7 cfs Dec. 24, 1960, result of freezeup.

Remarks.--One small diversion above station for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	15.5	15.4	13.0	11.1	12.0	11.0	83.3	101	58.9	31.8	22.3	16.6	32.7
1952	15.5	13.2	11.9	9.47	9.82	8.40	42.7	102	51.1	26.0	16.7	13.5	26.7
1953	12.0	9.70	9.31	9.34	8.30	11.1	29.8	37.4	38.5	19.2	11.0	8.15	17.0
1954	8.81	9.48	7.29	7.21	7.18	8.34	23.2	29.3	20.9	12.2	7.99	7.73	12.5
1955	7.66	7.22	5.83	5.70	5.5	5.40	13.9	23.5	33.7	15.5	9.32	7.14	11.7
1956	7.50	7.66	9.70	9.46	6.79	9.09	64.2	81.8	45.5	20.5	12.1	9.75	23.7
1957	9.72	8.47	8.60	7.35	7.36	8.09	21.9	85.2	61.7	27.7	16.5	13.7	23.1
1958	11.6	10.3	9.63	8.25	8.48	8.59	23.2	84.4	45.0	21.1	13.4	11.3	21.4
1959	10.3	9.78	9.50	7.71	7.20	8.04	24.8	27.4	20.8	12.4	8.95	9.46	13.0
1960	9.36	7.74	5.78	5.69	6.12	9.08	37.2	29.1	20.3	11.4	8.25	7.91	13.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	950	918	799	682	684	674	4,950	6,190	3,500	1,980	1,370	986	23,640
1952	952	783	734	582	585	518	2,540	6,260	3,040	1,800	1,030	803	19,400
1953	738	577	573	574	461	681	1,770	2,300	2,290	1,180	679	485	12,310
1954	542	564	448	443	398	513	1,380	1,800	1,250	752	492	460	9,040
1955	471	429	358	350	305	332	825	1,450	2,010	956	573	425	8,480
1956	461	456	596	582	391	559	3,820	5,030	2,710	1,260	745	580	17,190
1957	598	504	529	452	409	497	1,310	5,240	3,670	1,700	1,020	817	16,750
1958	712	616	592	507	471	528	1,380	5,190	2,680	1,300	823	674	15,470
1959	633	582	584	474	400	494	1,470	1,680	1,240	780	550	563	9,430
1960	575	461	356	350	352	559	2,210	1,790	1,210	700	508	470	9,540

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	40.8	29,520
1951	1214	134	Apr. 29, 1951	9.1	32.7	23,640	32.4	23,440
1952	1244	184	May 4, 1952	6	26.7	19,400	25.9	18,820
1953	1284	64	Apr. 28, 1953	6.7	17.0	12,310	16.5	11,970
1954	1344	49	Apr. 24, 1954	5.6	12.5	9,040	12.1	8,750
1955	1394	54	June 4, 1955	3.5	11.7	8,480	12.1	8,740
1956	1444	124	Apr. 24, 1956	5.1	23.7	17,190	23.8	17,310
1957	1514	113	May 19, 1957	6.0	23.1	16,750	23.5	17,040
1958	1564	107	May 12, 1958	6.6	21.4	15,470	21.2	15,350
1959	1634	44	Apr. 27, 1959	6.1	13.0	9,430	12.5	9,020
1960	1714	91	Apr. 7, 1960	3.5	13.1	9,540	-	-

555. Bear Lake at Lifton, near St. Charles, Idaho

Location.--Lat 42°07'20", long 111°19'20", in NE $\frac{1}{4}$ sec.16, T.15 S., R.44 E., in Lifton pumping plant of Utah Power & Light Co., 3 $\frac{1}{2}$ miles east of St. Charles.

Drainage area.--435 sq mi, approximately (does not include Mud Lake drainage).

Records available.--October 1903 to June 1906 (gage heights only), January 1921 to September 1960. Monthly contents only for some periods, published in WSP 1314. Published as Bear Lake at Fish Haven 1903-6.

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

Extremes.--1921-60: Maximum contents, 1,423,000 acre-ft June 10, 1923 (gage height, 23.68 ft); no usable contents Nov. 9-19, 1935 (gage height, 2.00 ft, lower limit of pumps).

Remarks.--Outflow regulated by gates and pumps at Bear Lake and by gates in dike at north end of Mud Lake. Inflow to lake augmented by water diverted from Bear River through Rainbow inlet canal and Dingle inlet canal, which empty into Mud Lake. 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 (lower limit of pumps) and 23.65 ft (present feasible upper limit of storage with existing facilities). Storage water used for irrigation and power development. Figures given herein represent usable contents.

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

Contents, in thousands of acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	1,180	1,160	1,124	1,077	1,060	1,043	1,148	1,295	1,328	1,268	1,195	1,104
1952	1,078	1,058	1,026	989.9	968.6	954.9	1,033	1,251	1,291	1,257	1,187	1,117
1953	1,063	1,035	1,010	1,007	1,004	1,015	1,030	1,028	1,054	989.9	913.9	866.2
1954	856.0	858.7	861.4	868.9	892.0	925.5	959.0	942.5	900.9	827.7	747.3	702.0
1955	690.1	691.5	694.8	704.7	728.6	753.3	790.8	801.6	804.9	716.6	675.6	619.2
1956	617.2	608.0	627.0	675.6	690.8	724.0	822.3	935.0	998.2	926.2	849.2	805.6
1957	798.2	800.2	804.9	828.4	850.5	894.7	946.0	1,054	1,158	1,135	1,054	1,004
1958	967.9	968.6	978.2	983.7	1,005	1,044	1,103	1,164	1,194	1,115	1,049	982.3
1959	960.4	962.4	976.8	987.8	1,004	1,025	1,067	1,079	1,057	989.9	946.0	907.1
1960	911.1	914.5	917.3	927.5	954.2	992.0	1,038	1,050	983.0	903.0	806.9	771.4

595. Bear Lake outlet canal near Paris, Idaho

Location.--Lat 42°13'00", long 111°20'30", in SW $\frac{1}{4}$ sec.8, T.14 S., R.44 E., on right bank 2,000 ft downstream from headgates (at dike) and 3 miles southeast of Paris.

Records available.--January 1922 to September 1960. Monthly discharge only prior to October 1945, published in WSP 1314.

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

Average discharge.--38 years (1922-60), 340 cfs (246,100 acre-ft per year).

Extremes.--1922-60: Maximum daily discharge, 1,870 cfs Aug. 8, 1924; minimum daily, 1 cfs for many days in 1937, 1954, 1959.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,008	789	989	1,112	943	880	82.9	27.0	1,035	1,491	1,480	1,227	923
1952	617	649	899	982	952	789	182	165	918	1,045	1,253	1,002	788
1953	617	458	658	465	547	338	297	522	454	1,168	809	496	571
1954	12.4	2.4	2.0	1.2	1.0	1.0	1.0	529	602	1,070	867	439	297
1955	60.6	12.0	2.5	2.0	2.0	2.0	2.0	163	248	1,147	580	572	233
1956	54.4	111	13.7	12.4	14.0	14.0	53.6	74.4	315	1,022	842	351	241
1957	52.5	13.9	55.5	20	20	11.8	7.3	6	133	1,124	1,211	586	273
1958	274	262	69.5	252	113	8.4	6.3	41.3	405	1,055	958	543	337
1959	188	45.6	23.3	2.0	2.0	2.0	2.0	151	494	925	660	368	241
1960	11.7	8.9	8.0	8.0	7.1	5.7	4.5	347	1,058	1,267	972	224	328

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	61,950	46,940	60,790	68,380	52,350	54,100	4,930	1,660	61,580	91,660	91,000	73,010	668,400
1952	37,930	38,640	55,280	60,380	54,770	48,530	10,840	10,140	54,610	64,480	77,060	59,620	572,300
1953	37,920	27,230	40,460	28,580	30,380	20,780	17,680	32,100	27,010	71,680	49,750	29,520	413,100
1954	764	145	123	71	56	61	60	32,540	35,840	65,770	53,300	26,120	214,800
1955	3,730	714	155	123	111	123	119	9,990	14,780	70,520	34,440	34,070	168,900
1956	3,340	6,590	841	762	805	861	3,190	4,570	18,740	62,860	51,790	20,880	175,200
1957	3,230	825	3,420	1,230	1,110	728	432	369	7,900	69,110	74,470	34,680	197,700
1958	16,830	16,770	4,280	15,490	6,290	502	375	2,540	24,100	65,110	58,770	32,680	243,700
1959	11,530	2,710	1,430	123	111	123	119	9,290	29,390	57,100	40,560	21,750	174,200
1960	722	532	492	492	411	353	268	21,330	62,950	77,930	59,770	13,200	238,400

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	767	555,100	
1951	1214	1,550	July 21, 1951	27	923	668,400	871	630,500	
1952	1244	1,440	Aug. 23, 1952	16	788	572,300	752	546,000	
1953	1284	1,280	July 20, 1953	16	571	413,100	426	308,500	
1954	1344	1,300	July 8, 1954	1	297	214,800	302	218,400	
1955	1394	1,370	July 21-23, 1955	2	233	168,900	242	175,000	
1956	1444	1,200	July 19, 1956	4	241	175,200	237	171,900	
1957	1514	1,900	July 26, 1957	6	273	197,700	315	228,100	
1958	1564	1,330	July 17, 1958	5	337	243,700	306	221,500	
1959	1634	1,340	July 25, 26, 1959	1	241	174,200	221	160,300	
1960	1714	1,360	July 21, 22, 1960	4	328	238,400	-	-	

685. 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 1921 to September 1954. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge--33 years (1921-54), 563 cfs (392,400 acre-ft per year).

Extremes--1921-54: Maximum daily discharge, 3,840 cfs June 10, 1923, minimum daily, 23 cfs Mar. 14-17, 1936.

Remarks--Many diversions above station for irrigation. Flow regulated by Bear Lake.

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

Correction--In WSP 1314, the annual mean and runoff in acre-feet for 1945 are listed in error; they should be 266 cfs and 192,900 acre-ft, respectively. The average discharge for the period 1921-50 was listed in error; it should be 532 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,130	916	1,117	1,232	1,087	1,035	671	447	1,312	1,637	1,538	1,282	1,117
1952	733	764	975	1,036	1,032	908	760	648	1,168	1,193	1,254	1,048	960
1953	681	569	776	627	671	543	483	681	723	1,332	838	539	707
1954	65.0	83.7	87.3	78.7	92.8	162	174	601	705	1,125	858	481	378

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	69,470	54,490	68,660	75,740	60,380	63,650	39,950	27,510	78,100	100,700	94,590	76,310	809,600
1952	45,100	45,440	59,970	63,710	59,380	55,850	45,240	39,820	69,480	73,330	77,100	62,240	696,700
1953	41,870	33,870	47,720	38,580	37,280	33,370	28,720	41,860	43,020	81,920	51,540	32,070	511,800
1954	4,000	4,980	5,370	4,840	5,160	9,950	10,370	36,940	41,940	69,190	52,610	28,620	274,000

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	1,032	746,900
1951	1214	1,740	July 9, 1951	303	1,117	809,600	1,060	767,400
1952	1244	1,580	June 25, 1952	372	960	696,700	922	669,600
1953	1284	1,550	July 9, 1953	195	707	511,800	556	402,700
1954	1344	1,400	July 8, 1954	57	378	274,000	-	-

690. Georgetown Creek near Georgetown, Idaho

Location.--Lat 42°30', long 111°19', in NE $\frac{1}{4}$ 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), October 1939 to September 1956. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--19 years (1911-12, 1913-14, 1939-56), 31.7 cfs (22,950 acre-ft per year).

Extremes.--1911-14, 1939-56: Maximum discharge observed, 162 cfs June 8, 1912, caused by failure of power dam gates; minimum daily, 18 cfs for many days February to May 1941.

Remarks.--No diversion above station. At one time a small storage reservoir was operated about $1\frac{1}{2}$ miles above station but dam is now breached and no longer operative.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	39.8	37.9	34.9	32.2	30.1	28.1	29.9	55.3	52.7	44.4	42.3	39.4	39.0
1952	36.6	34.5	33.1	30.8	28.7	27.2	28.9	55.1	49.0	42.3	38.7	35.6	36.7
1953	35.0	31.7	30.2	28.5	28.0	27.1	26.3	29.9	38.5	35.5	33.2	31.1	31.3
1954	29.3	27.0	25.5	24.8	24.0	24.2	24.8	30.6	32.1	31.1	29.8	28.3	27.6
1955	26.7	26.0	24.5	22.0	20.9	21.2	21.5	25.1	34.2	33.5	30.8	29.0	26.3
1956	28.0	25.1	26.4	23.6	23.0	23.1	28.2	53.5	49.9	38.9	34.7	34.0	32.4
1957													
1958													
1959													
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,450	2,280	2,150	1,980	1,670	1,730	1,780	3,400	3,140	2,730	2,600	2,350	28,240
1952	2,250	2,050	2,030	1,890	1,650	1,670	1,720	3,390	2,920	2,600	2,380	2,120	26,870
1953	2,150	1,880	1,850	1,750	1,560	1,670	1,560	1,840	2,290	2,180	2,040	1,850	22,620
1954	1,800	1,610	1,570	1,530	1,330	1,490	1,470	1,880	1,910	1,910	1,830	1,680	20,010
1955	1,640	1,550	1,510	1,350	1,160	1,300	1,280	1,540	2,040	2,060	1,890	1,720	19,040
1956	1,720	1,490	1,620	1,450	1,320	1,420	1,680	3,290	2,970	2,390	2,130	2,020	23,500
1957													
1958													
1959													
1960													

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	41.4	29,960
1951	1214	75	May 28, 1951	28	39.0	28,240	38.3	27,710
1952	1244	60	May 15, 1952	26	36.7	26,670	36.1	26,220
1953	1284	42	June 15, 1953	26	31.3	22,620	30.0	21,720
1954	1344	39	Oct. 31, 1953	24	27.6	20,010	27.3	19,730
1955	1394	37	June 13, 1955	20	26.3	19,040	26.5	19,170
1956	1444	69	May 24, 1956	23	32.4	23,500	-	-
1957								
1958								
1959								
1960								

750. Bear River at Soda Springs, Idaho

Location.--Lat 42°36'50", long 111°35'00", in NW $\frac{1}{4}$ 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.--3,970 sq mi, approximately.

Records available.--May to September 1896, May, June 1898, October 1953 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,760 ft (from topographic map). May 25 to Oct. 2, 1896, May 22 to July 1, 1898, staff gage at different datum.

Average discharge.--7 years (1953-60), 487 cfs (352,600 acre-ft per year).

Extremes.--1896, 1898, 1950-60: Maximum discharge, 6,380 cfs June 9, 15, 1896 (gage height, 8.40 ft, datum then in use); minimum daily, 80 cfs Nov. 13, 14, 1955.

Remarks.--Many diversions for irrigation above station. 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.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	147	163	153	144	162	259	330	700	777	1,142	877	525	451
1955	167	142	123	118	119	111	392	420	576	1,232	652	646	393
1956	186	242	271	257	194	348	690	742	712	1,117	904	454	511
1957	236	182	206	137	192	300	545	777	803	1,273	1,307	735	561
1958	474	443	265	376	346	235	664	653	758	1,178	1,012	646	589
1959	326	214	220	151	149	238	382	403	622	1,069	768	475	420
1960	166	135	115	111	114	246	447	552	1,199	1,369	1,045	296	485

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	9,030	9,680	9,440	8,870	9,000	15,920	19,660	43,010	46,210	70,210	53,950	31,250	326,200
1955	10,260	8,470	7,580	7,240	6,610	6,840	23,330	25,830	34,260	75,760	40,080	38,470	284,700
1956	11,440	14,420	16,650	15,830	11,140	21,380	41,040	45,640	42,370	68,680	55,570	27,030	371,200
1957	14,530	10,810	12,690	8,410	10,680	18,460	32,430	47,750	47,780	78,280	80,380	43,710	405,900
1958	29,140	26,340	16,300	23,110	19,200	14,470	39,510	40,140	45,110	72,430	62,240	38,420	426,400
1959	20,060	12,750	13,500	9,310	8,260	14,620	22,750	24,750	37,030	65,740	47,240	28,290	304,300
1960	10,200	8,020	7,060	6,850	6,580	15,140	26,580	33,950	71,370	84,200	64,260	17,590	351,800

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954	1344	1,410	Feb. 9, 1954	100	451	326,200	448	324,400
1955	1394	1,450	July 13, 1955	88	393	284,700	416	300,900
1956	1444	1,340	Apr. 27, 1956	80	511	371,200	505	366,700
1957	1514	1,570	Feb. 26, 1957	100	561	405,900	607	439,700
1958	1564	1,370	July 18, 1958	135	589	426,400	554	400,900
1959	1634	al,400	July 27, 1959	100	420	304,300	391	283,500
1960	1714	1,440	July 12, 1960	87	485	351,800	-	-

a Maximum daily.

795. Bear River at Alexander, Idaho

Location.--Lat 42°38'45", long 111°41'55", 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.--4,050 sq mi, approximately.

Records available.--March 1911 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--49 years (1911-60), 768 cfs (556,000 acre-ft per year).

Extremes.--1911-60: Maximum discharge observed, 4,740 cfs Mar. 31, 1911; maximum gage height, 15.95 ft Dec. 11, 1919 (backwater from ice); minimum discharge, 28 cfs at times when reservoir gates were closed.

Remarks.--Flow regulated by Bear Lake Reservoir and Soda hydroelectric plant.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,397	1,169	1,374	1,360	1,285	1,339	1,144	937	1,434	1,636	1,578	1,433	1,343
1952	944	938	1,109	1,255	1,179	1,182	1,179	1,115	1,296	1,267	1,376	1,191	1,169
1953	831	695	943	858	846	800	772	842	872	1,285	898	623	857
1954	194	245	244	228	249	394	428	753	836	1,138	922	577	520
1955	204	194	221	211	261	209	579	342	627	1,273	726	682	461
1956	239	315	363	344	285	474	818	829	724	1,185	944	531	589
1957	269	263	279	236	277	462	691	878	837	1,301	1,290	815	636
1958	581	565	356	485	478	415	845	713	745	1,229	1,024	759	684
1959	354	301	309	233	264	360	469	432	662	1,097	801	530	486
1960	241	208	183	190	205	443	482	629	1,204	1,303	1,013	332	538

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	85,920	69,540	84,460	84,600	71,390	82,310	68,090	57,630	85,350	100,600	97,010	85,250	972,200
1952	59,070	55,830	68,180	77,160	67,810	72,700	70,180	58,540	77,140	77,910	84,610	70,850	849,000
1953	51,100	41,350	58,000	52,780	46,990	49,210	45,920	51,740	51,860	79,000	55,220	37,060	620,200
1954	11,940	14,570	15,030	14,000	13,800	24,230	25,480	46,270	49,740	69,980	56,700	34,360	376,100
1955	12,520	11,560	13,580	12,970	14,480	12,850	34,480	21,040	37,320	77,670	44,620	40,610	333,700
1956	14,670	18,770	22,340	21,160	16,380	29,130	48,640	50,990	43,110	72,880	58,050	31,600	427,700
1957	16,530	15,660	17,170	14,530	15,390	28,390	41,140	53,960	49,800	79,990	79,310	48,490	460,400
1958	35,730	33,620	21,870	29,810	26,550	25,520	50,310	43,820	44,330	75,590	62,950	45,170	495,300
1959	21,790	17,920	18,990	14,340	14,640	22,160	27,900	26,540	39,360	67,430	49,250	31,540	351,900
1960	14,790	12,370	11,250	11,690	11,790	27,250	28,660	38,660	71,620	80,130	62,270	19,750	390,200

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	1,295	937,900	
1951	1214	1,810	June 16, 1951	356	1,343	972,200	1,263	914,300	
1952	1244	1,750	June 20, 1952	366	1,169	849,000	1,126	817,400	
1953	1284	1,380	July 7, 1953	281	857	620,200	706	511,300	
1954	1344	1,440	July 12, 1954	123	520	376,100	514	372,200	
1955	1394	1,530	July 11, 1955	141	461	333,700	486	351,800	
1956	1444	1,360	July 26, 1956	121	589	427,700	580	421,300	
1957	1514	1,770	July 24, 25, 1957	135	636	460,400	694	502,200	
1958	1564	1,390	July 11, 1958	190	684	495,300	639	462,800	
1959	1634	1,330	(a)	149	486	351,900	458	331,600	
1960	1714	1,380	July 14, 1960	138	538	390,200	-	-	

a July 29, 30, Aug. 1, 2, 1959.

845. Cottonwood Creek near Cleveland, Idaho

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

Drainage area--61.7 sq mi.

Records available--November 1938 to September 1960.

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--21 years (1939-60), 29.4 cfs (21,280 acre-ft per year).

Extremes--1938-60: Maximum discharge, 773 cfs Apr. 27, 1952 (gage height, 3.83 ft); minimum observed, 0.5 cfs Aug. 17, 1940.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	11.4	15.7	12.6	8.98	14.2	22.1	179	97.0	13.9	6.49	8.34	3.82	32.7
1952	8.76	9.82	10.8	10.4	11.0	12.5	223	205	28.9	8.29	6.06	6.14	44.8
1953	5.05	8.31	10.4	12.5	11.2	28.5	66.5	47.9	33.6	5.54	2.41	1.53	19.4
1954	4.29	7.12	8.62	9.95	10.4	18.8	66.0	18.8	7.89	2.77	2.40	2.66	13.3
1955	4.24	6.24	5.39	6.11	6.36	7.70	39.6	68.4	33.9	5.31	5.11	3.05	16.0
1956	3.01	6.10	17.7	17.4	14.2	46.2	153	69.4	10.7	4.82	4.80	2.13	29.0
1957	6.29	7.57	8.25	8.57	11.7	19.5	78.7	214	43.1	8.47	6.87	5.20	35.1
1958	6.49	8.09	13.0	11.1	13.9	21.6	141	155	12.0	6.89	3.99	3.77	33.1
1959	4.32	6.98	11.0	10.3	10.7	19.5	95.3	34.4	8.30	4.06	2.00	5.66	17.5
1960	8.43	7.18	6.52	8.23	9.30	26.3	110	34.7	7.43	2.62	1.42	2.07	18.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	699	936	772	552	787	1,360	10,660	5,960	828	399	513	228	23,690
1952	539	584	666	641	635	772	13,290	12,460	1,720	510	373	365	32,560
1953	310	495	641	772	623	1,760	3,960	2,950	2,000	341	148	91	14,090
1954	264	424	530	612	576	1,160	3,930	1,160	469	171	148	158	9,600
1955	260	371	332	376	353	473	2,360	4,210	2,020	326	314	182	11,580
1956	185	363	1,090	1,070	817	2,840	9,100	4,270	637	297	295	127	21,090
1957	387	451	507	527	652	1,200	4,680	13,150	2,570	521	422	310	25,380
1958	399	481	800	683	773	1,330	8,370	9,540	712	424	245	225	23,980
1959	265	416	676	633	592	1,200	5,550	2,120	494	250	123	337	12,660
1960	518	427	401	506	535	1,620	6,550	2,130	442	161	87	123	11,370

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	53.4	38,620
1951	1214	346	Apr. 8, 1951	3.3	32.7	23,690	31.9	23,080
1952	1244	773	Apr. 27, 1952	3.3	44.8	32,560	44.4	32,210
1953	1284	189	Apr. 28, 1953	.8	19.4	14,090	19.1	13,860
1954	1344	133	Apr. 28, 1954	1.0	13.3	9,600	12.9	9,350
1955	1394	205	June 3, 1955	2.4	16.0	11,580	16.9	12,250
1956	1444	260	Apr. 22, 1956	1.5	29.0	21,090	28.6	20,800
1957	1514	521	May 19, 1957	2.1	35.1	25,380	35.5	25,710
1958	1564	505	Apr. 18, 1958	2.8	33.1	23,980	32.7	23,660
1959	1634	406	Apr. 5, 1959	1.6	17.5	12,660	17.5	12,640
1960	1714	489	Apr. 6, 1960	1.2	18.6	11,370	-	-

865. 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 downstream from tailrace of Oneida plant and 6 miles south of Cleveland.

Drainage area.--4,400 sq mi, approximately.

Records available.--October 1921 to September 1960. Monthly discharge only prior to October 1945, published in WSP 1314.

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

Average discharge.--39 years (1921-60), 792 cfs (573,400 acre-ft per year).

Extremes.--1921-60: Maximum daily discharge, 5,480 cfs May 8, 1922; minimum daily, 15 cfs May 3, 4, 1925.

Remarks.--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.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,683	1,445	1,657	1,632	1,598	1,653	1,748	1,207	1,228	1,394	1,502	1,522	1,522
1952	1,223	1,176	1,334	1,491	1,411	1,403	1,834	1,646	1,070	1,176	1,277	1,267	1,359
1953	1,081	917	1,249	1,102	1,115	1,030	1,019	831	781	1,056	984	713	980
1954	379	419	447	393	437	616	700	640	703	979	926	674	611
1955	386	394	365	364	397	383	804	437	440	1,101	644	722	537
1956	393	524	652	567	468	725	1,187	891	477	952	901	591	695
1957	397	380	485	467	511	730	1,010	1,403	699	1,013	1,213	863	767
1958	783	790	598	684	745	676	1,265	937	522	1,006	1,049	842	825
1959	538	509	537	444	492	602	759	389	490	805	754	605	576
1960	427	398	379	374	390	702	802	588	909	1,113	994	467	630

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	103,500	86,000	101,900	100,300	88,730	101,700	104,000	74,210	72,950	85,730	92,340	90,540	1,102,000
1952	75,200	69,980	82,000	91,700	81,180	86,240	109,100	101,200	63,690	72,290	78,490	75,420	986,500
1953	66,490	54,540	76,820	67,780	61,930	63,330	60,620	51,100	46,470	64,950	53,130	42,410	709,600
1954	23,330	24,960	27,480	24,140	24,280	37,850	41,650	39,350	41,860	60,190	56,920	40,080	442,100
1955	23,750	23,450	22,470	22,370	22,050	23,570	47,840	26,890	26,190	67,710	39,620	42,970	388,900
1956	24,180	31,160	40,120	34,880	26,900	44,600	70,650	54,810	28,360	58,530	55,390	35,150	504,700
1957	24,410	22,620	29,850	29,730	26,360	44,910	60,070	86,260	41,590	62,270	74,570	51,330	555,000
1958	48,160	46,980	36,780	42,030	41,400	41,560	75,300	57,610	31,090	61,880	64,480	50,100	597,400
1959	33,080	30,270	33,030	27,320	27,330	37,090	45,140	23,910	29,150	49,500	45,140	35,890	416,800
1960	26,280	23,660	23,320	22,980	22,420	43,170	47,740	36,150	54,070	68,420	61,150	27,790	457,200

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Maximum day		Minimum day	Mean	Acre-feet	Mean		Acre-feet	
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	-	-
1951	1214	2,350	June 30, 1951	145	1,522	1,102,000	1,499	1,085,000		
1952	1244	2,650	May 5, 1952	205	1,359	986,500	1,433	1,039,000		
1953	1284	1,810	Oct. 6, 1952	28	980	709,600	812	587,500		
1954	1344	1,750	July 7, 1954	30	611	442,100	602	436,000		
1955	1394	1,870	July 10, 1955	44	537	388,900	573	414,700		
1956	1444	1,690	Mar. 26, 1956	74	695	504,700	670	486,200		
1957	1514	2,300	May 20, 1957	40	767	555,000	843	610,000		
1958	1564	2,160	Apr. 17, 1958	29	825	597,400	776	561,800		
1959	1634	1,350	Apr. 5, 1959	165	576	416,800	544	393,700		
1960	1714	1,430	July 11, 1960	200	630	457,200	-	-		

875. Mink Creek below Dry Fork, near Mink Creek, Idaho

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

Drainage area.--19.3 sq mi.

Records available.--April 1947 to September 1952, October 1955 to September 1960.

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

Average discharge.--10 years (1947-52, 1955-60), 76.0 cfs (55,020 acre-ft per year).

Extremes.--1947-52, 1955-60: Maximum discharge, 600 cfs May 29, 1948; maximum gage height, 3.97 ft June 7, 1957; minimum discharge, 5.3 cfs Sept. 28, 1960.

Remarks.--Mink Creek Canal began diverting above station in June 1950. Diversion is routed through Glendale Reservoir in Worm Creek basin for irrigation near Preston. Two other diversions above station for irrigation of about 1,000 acres above and below station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	49.5	42.9	39.2	35.8	41.1	39.5	118	283	191	66.4	32.1	24.5	80.4
1952	44.1	39.2	35.2	32.7	29.6	30.3	99.0	305	271	67.0	32.5	23.5	84.1
1953													
1954													
1955													
1956	33.3	32.7	40.5	39.2	32.5	45.2	108	302	198	48.3	27.0	22.0	77.5
1957	33.1	35.0	32.1	27.9	29.0	36.4	54.2	228	339	91.3	32.8	21.2	80.1
1958	46.8	42.4	36.7	31.9	33.8	38.2	70.5	277	208	46.4	24.2	17.9	73.0
1959	40.3	38.1	35.0	31.3	30.3	33.5	58.2	125	144	33.0	18.9	15.2	50.2
1960	31.4	33.4	30.6	27.6	26.4	35.4	73.9	171	93.5	21.4	16.1	14.1	47.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,050	2,550	2,410	2,200	2,280	2,430	7,000	17,420	11,340	4,080	1,970	1,460	58,190
1952	2,710	2,330	2,160	2,010	1,700	1,860	5,890	18,750	16,120	4,120	2,000	1,400	61,050
1953													
1954													
1955													
1956	2,050	1,950	2,490	2,410	1,870	2,780	6,440	18,600	11,790	2,970	1,660	1,310	56,320
1957	2,040	2,080	1,970	1,720	1,610	2,240	3,230	14,010	20,190	5,610	2,020	1,260	57,980
1958	2,880	2,520	2,260	1,960	1,880	2,350	4,200	17,050	12,350	2,850	1,490	1,070	52,860
1959	2,480	2,270	2,150	1,930	1,680	2,060	3,460	7,710	8,550	2,030	1,160	902	36,380
1960	1,930	1,990	1,880	1,700	1,520	2,160	4,400	10,500	5,560	1,320	990	837	34,810

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	106	76,630
1951	1214	461	May 27, 1951	22	80.4	58,190	79.3	57,380
1952	1244	438	June 3, 1952	20	84.1	61,050	-	-
1953								
1954								
1955								
1956	1444	506	May 25, 1956	20	77.5	56,320	77.0	55,920
1957	1514	472	June 7, 1957	16	80.1	57,980	82.2	59,550
1958	1564	511	May 28, 1958	-	73.0	52,860	71.9	52,100
1959	1634	245	June 7, 1959	13	50.2	36,380	48.7	35,280
1960	1714	298	May 13, 1960	6.2	47.9	34,810	-	-

895. Mink Creek near Mink Creek, Idaho

Location.--Lat 42°12', long 111°46', in SE $\frac{1}{4}$ sec.15, T.14 S., R.40 E., on left bank 1,000 ft upstream from Bear Hollow, $1\frac{1}{4}$ miles upstream from mouth, and 3 miles southwest of town of Mink Creek.

Drainage area.--58.7 sq mi.

Records available.--April 1943 to September 1952.

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

Average discharge.--9 years (1943-52), 51.9 cfs (37,570 acre-ft per year).

Extremes.--1943-52: Maximum daily discharge, 427 cfs June 2, 1950; minimum daily, 0.7 cfs for many days in August and September 1944.

Remarks.--Diversions above station for storage and irrigation of 21,500 acres above and below station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	5.10	54.1	51.9	46.5	51.4	4.95	93.8	241	63.1	4.04	3.16	2.37	51.8
1952	4.05	21.0	42.5	42.2	41.2	29.8	158	260	134	5.70	3.96	4.03	62.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	313	3,220	3,190	2,860	2,860	305	5,580	14,820	3,750	249	194	141	37,480
1952	249	1,250	2,610	2,590	2,370	1,830	9,370	16,000	8,000	350	243	240	45,100

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	77.2	55,900
1951	1214	331	May 12, 1951	1.7	51.8	37,480	48.2	34,870
1952	1244	a334	May 5, 1952	2.6	62.2	45,100	-	-

a Maximum daily.

905. Bear River near Preston, Idaho

Location.--Lat 42°10', long 111°51', in NW $\frac{1}{4}$ sec.36, T.14 S., R.39 E., on left bank 600 ft downstream from headgates of West Cache Canal, 5 miles downstream from Mink Creek, 5 miles north of Preston, and $\frac{5}{8}$ miles upstream from Battle Creek.

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

Records available.--October 1889 to December 1916, January to September 1917 (gage heights only), January 1944 to September 1960. Prior to 1903, published as "at Battlecreek." Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--17 years (1943-60), 823 cfs (595,800 acre-ft per year).

Extremes.--1889-1917: 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 not determined.

1943-60: Maximum discharge, 4,420 cfs Apr. 17, 1950 (gage height, 5.61 ft); minimum, 0.6 cfs June 14, 1949; minimum daily, 9.5 cfs July 6, 1957.

Remarks.--Station is below all irrigation diversions from Bear River in Idaho except Cub River pumps in SE $\frac{1}{4}$ sec.20, T.16 S., R.39 E. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,663	1,574	1,717	1,667	1,662	1,666	1,805	1,566	1,064	1,191	1,340	1,374	1,507
1952	1,197	1,168	1,385	1,540	1,389	1,377	1,856	1,768	1,011	973	1,095	1,110	1,331
1953	962	835	1,224	1,123	1,105	1,026	1,006	753	752	847	878	548	905
1954	319	409	467	420	456	611	680	495	521	782	754	543	539
1955	342	370	382	403	449	388	841	430	402	910	519	604	503
1956	400	542	720	618	539	768	1,274	1,051	413	801	753	485	698
1957	374	382	509	481	554	714	1,016	1,546	772	830	1,069	763	753
1958	755	811	652	748	805	694	1,323	1,016	421	818	886	745	806
1959	509	504	576	465	485	598	736	305	325	627	583	515	519
1960	464	387	396	413	401	723	613	541	755	332	848	349	586

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	102,200	93,680	105,600	102,500	92,280	102,500	107,400	84,020	63,330	73,250	82,360	81,750	1,091,000
1952	73,590	69,530	85,130	94,710	79,870	84,660	116,400	108,700	60,160	59,800	67,350	66,060	966,000
1953	59,160	49,730	75,240	69,070	61,390	63,080	59,860	46,320	44,750	52,060	41,700	32,630	655,000
1954	19,610	24,330	28,700	25,810	25,330	37,540	40,440	30,440	30,990	48,080	46,380	32,330	390,000
1955	21,010	22,010	23,480	24,760	24,850	23,860	50,070	26,470	23,920	55,970	31,920	35,950	364,400
1956	24,570	32,260	44,260	38,010	30,990	47,210	75,820	64,650	24,570	49,260	46,310	28,870	506,800
1957	23,010	22,740	31,300	29,600	30,750	43,900	60,470	95,070	45,960	51,030	65,710	45,390	544,900
1958	46,410	48,270	40,090	45,970	44,610	42,650	78,730	62,490	25,050	50,290	54,470	44,320	583,400
1959	31,290	30,020	35,430	28,610	26,930	36,740	43,820	18,750	19,360	38,570	35,870	30,640	376,000
1960	28,540	23,050	24,360	25,390	23,050	44,440	48,360	33,270	44,940	57,310	52,140	20,750	425,600

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	1,525	1,104,000	
1951	1214	3,130	Dec. 28, 1950	218	1,507	1,091,000	1,406	1,018,000	
1952	1244	3,990	May 5, 1952	287	1,331	966,000	1,270	921,800	
1953	1284	3,020	Dec. 19, 1952	79	905	655,000	751	543,500	
1954	1344	2,920	Jan. 27, 1954	50	539	390,000	530	383,800	
1955	1394	2,990	Apr. 14, 1955	25	503	364,400	551	399,000	
1956	1444	3,160	May 21, 1956	171	698	506,800	665	482,700	
1957	1514	3,450	May 20, 1957	9.5	753	544,900	832	602,600	
1958	1564	3,060	Apr. 12, 1958	128	606	583,400	753	545,300	
1959	1634	2,710	Apr. 4.5, 1959	105	519	376,000	491	355,200	
1960	1714	a2,960	Aug. 10, 1960	93	586	425,600	-	-	

a Maximum recorded.

930. Cub River near Preston, Idaho

Location.--Lat 42°08', long 111°41', in SW $\frac{1}{4}$ sec.5, T.15 S., R.41 E., on right bank 0.2 mile upstream from headgates of Cub River-Worm Creek Canal, 0.7 mile upstream from forest boundary, and 10 miles east of Preston.

Drainage area.--19.4 sq mi.

Records available.--March 1940 to September 1952, October 1955 to September 1960.

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

Average discharge.--17 years (1940-52, 1955-60), 84.8 cfs (61,390 acre-ft per year).

Extremes.--1940-52, 1955-60: Maximum discharge, 715 cfs June 7, 1957 (gage height, 3.39 ft); maximum gage height, 3.83 ft June 2, 1943; minimum discharge, 11 cfs Jan. 22, 1951.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	34.7	30.2	26.7	25.9	28.9	27.3	130	355	287	93.8	50.9	37.2	94.2
1952	31.1	26.6	21.7	19.6	18.9	18.9	101	386	322	87.2	47.7	32.3	92.8
1953													
1954													
1955													
1956	24.7	21.9	29.1	30.0	21.3	32.9	114	373	270	72.9	43.5	31.2	88.8
1957	27.1	23.4	20.7	18.2	21.1	27.4	51.0	262	434	130	52.3	37.4	92.1
1958	29.0	24.0	22.2	20.3	23.1	25.9	58.4	377	271	74.5	42.5	32.3	83.7
1959	26.9	24.0	21.6	19.2	18.3	22.1	52.9	194	267	71.3	38.6	30.2	65.6
1960	31.1	27.2	21.8	18.4	17.8	28.9	80.5	259	162	52.3	33.2	27.5	63.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,130	1,800	1,640	1,590	1,610	1,680	7,730	21,830	17,090	5,770	3,130	2,220	68,220
1952	1,910	1,580	1,340	1,210	1,080	1,160	5,980	23,740	19,170	5,360	2,930	1,920	67,390
1953													
1954													
1955													
1956	1,520	1,300	1,790	1,840	1,220	2,030	6,780	22,940	16,050	4,480	2,670	1,860	64,480
1957	1,670	1,390	1,270	1,120	1,170	1,690	3,030	16,130	25,800	7,980	3,220	2,230	66,700
1958	1,780	1,430	1,360	1,250	1,280	1,590	3,470	23,180	16,120	4,580	2,610	1,920	60,570
1959	1,650	1,430	1,330	1,180	1,020	1,360	3,150	11,950	15,880	4,380	2,370	1,800	47,500
1960	1,910	1,620	1,340	1,130	1,020	1,780	4,790	15,950	9,630	3,220	2,040	1,630	46,060

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	-
1951	1214	633	May 26, 1951	22	94.2	68,220	117	85,010
1952	1244	571	May 30, 1952	18	92.8	67,390	93.2	67,480
1953							-	-
1954								
1955								
1956	1444	695	May 25, 1956	19	88.8	64,480	88.4	64,200
1957	1514	715	June 7, 1957	17	92.1	66,700	92.5	66,940
1958	1564	692	May 25, 1958	19	83.7	60,570	83.5	60,410
1959	1634	415	June 7, 1959	18	65.6	47,500	66.3	47,960
1960	1714	505	May 13, 1960	17	63.4	46,060	-	-

960. Cub River above Maple Creek, near Franklin, Idaho

Location.--Lat 42°03', long 111°47', in SW $\frac{1}{4}$ sec.9, T.16 S., R.40 E., on left bank $1\frac{1}{2}$ miles upstream from Maple Creek and $2\frac{1}{2}$ miles north of Franklin.

Drainage area.--53.7 sq mi.

Records available.--March 1940 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,500 ft (from topographic map). Prior to Aug. 9, 1941, staff gage at same site and datum. Aug. 9, 1941, to June 29, 1951, water-stage recorder at datum 1.0 ft higher.

Average discharge.--12 years (1940-52), 63.9 cfs.

Extremes.--1940-52: Maximum discharge, 740 cfs May 25, 1950 (gage height, 4.80 ft, present datum); minimum daily, 0.6 cfs Sept. 16, 1948.

Remarks.--Natural flow of stream affected by transmountain diversion, diversions for irrigation, and return flow from irrigated areas.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	20.4	16.6	34.0	34.3	51.9	39.5	170	359	59.4	4.30	5.49	4.40	66.8
1952	20.7	10.4	27.2	31.1	30.9	35.2	213	336	115	4.65	5.72	4.64	69.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,260	987	2,090	2,110	2,880	2,430	10,100	22,090	3,540	264	337	262	48,350
1952	1,280	622	1,670	1,910	1,780	2,170	12,700	20,650	6,870	286	352	276	50,570

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	95.7	69,320
1951	1214	629	May 26, 1951	3.2	66.8	48,350	65.7	47,580
1952	1244	582	May 5, 1952	2.9	69.6	50,570	-	-

965. Maple Creek near Franklin, Idaho

Location.--Lat 42°02'30", long 111°45'00", in NW $\frac{1}{4}$ sec.14, T.16 S., R.40 E., on left bank 30 ft downstream from Deep Creek and 3 miles east of Franklin.

Drainage area.--21.2 sq mi.

Records available.--April 1946 to September 1952.

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

Average discharge.--6 years (1946-52), 22.1 cfs (16,000 acre-ft per year).

Extremes.--1946-52: Maximum discharge, 315 cfs May 18, 1950 (gage height, 3.15 ft); minimum, 0.6 cfs Nov. 15, 1951.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.19	2.71	3.78	2.82	11.1	11.5	73.0	89.6	24.4	6.20	2.71	1.46	19.3
1952	1.75	1.46	1.48	1.54	1.93	4.44	95.2	109	33.6	6.11	2.29	1.28	21.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	134	161	232	173	614	708	4,340	5,510	1,450	381	167	87	13,960
1952	108	87	91	95	111	273	5,660	6,730	2,000	375	141	76	15,750

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	31.7	22,950
1951	1214	179	May 27, 1951	1.2	19.3	13,960	19.0	13,710
1952	1244	228	Apr. 27, 1952	.8	21.7	15,750	-	-

990. High Creek near Richmond, Utah

Location.--Lat 41°59', long 111°45', in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.5, T.14 N., R.2 E., on right bank at Forest Boundary, 2 miles downstream from North Fork and 5 miles northeast of Richmond.

Drainage area.--16.2 sq mi.

Records available.--April to September 1944, April to September 1945 (monthly discharge only, published in WSP 1314), April 1946 to September 1952.

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

Average discharge.--6 years (1946-52), 33.1 cfs (23,960 acre-ft per year).

Extremes.--1944-52: Maximum discharge, 250 cfs May 24, 1950 (gage height, 2.31 ft); minimum observed, 2.6 cfs Jan. 5, 1950, result of ice jams upstream.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.4	10.2	9.75	7.51	12.1	11.2	51.4	117	75.1	31.5	16.6	10.5	30.3
1952	8.06	7.62	6.81	6.22	6.92	9.60	55.2	124	94.6	30.5	16.4	10.7	31.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	658	610	600	462	674	687	3,060	7,180	4,470	1,940	1,020	626	21,970
1952	496	453	419	383	398	590	3,280	7,650	5,630	1,870	1,010	639	22,820

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	43.2	31,260
1951	1214	211	May 28, 1951	6.0	30.3	21,970	29.7	21,490
1952	1244	186	May 3, 1952	-	31.4	22,820	-	-

1060. Little Bear River near Paradise, Utah

Location.--Lat 41°35'25", long 111°51'10", in SE $\frac{1}{4}$ sec.20, T.10 N., R.1 E., on right bank 1 mile upstream from backwater of Hyrum Reservoir, 2 miles northwest of Paradise, and 5 miles downstream from East Fork.

Drainage area.--203 sq mi.

Records available.--January 1937 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--23 years (1937-60), 85.3 cfs (61,750 acre-ft per year).

Extremes.--1937-60: Maximum discharge, 1,830 cfs Dec. 23, 1955 (gage height, 6.03 ft); minimum, 4 cfs Aug. 14, 1940.

Remarks.--Divisions above station for irrigation of about 400 acres above and 2,400 acres below station. No diversion between station and Hyrum Reservoir.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	62.4	77.5	82.3	69.0	112	105	353	340	77.4	29.1	29.1	29.3	114
1952	58.0	65.4	67.0	59.9	61.4	73.2	500	551	123	39.5	30.6	28.1	138
1953	45.3	57.2	62.5	65.9	60.5	94.1	173	166	158	26.1	19.3	16.6	78.4
1954	28.9	52.1	52.1	55.2	55.1	84.3	193	79.9	27.0	16.3	13.6	13.6	55.7
1955	31.7	44.0	38.0	41.7	44.2	59.6	235	302	64.9	19.3	15.7	18.1	76.2
1956	31.5	48.0	160	119	79.0	156	288	231	55.9	22.8	17.3	16.1	102
1957	29.9	52.2	54.4	50.8	93.9	95.2	197	345	132	26.8	19.7	22.3	93.2
1958	44.1	51.6	54.4	53.4	79.4	103	245	323	57.1	23.3	17.8	21.8	89.5
1959	27.3	48.6	54.1	53.5	53.6	77.3	160	79.4	26.6	14.7	13.1	22.4	52.4
1960	36.5	36.7	37.6	39.8	45.0	104	203	116	26.0	15.1	13.2	13.9	57.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,840	4,610	5,060	4,240	6,210	6,450	21,010	20,910	4,610	1,790	1,790	1,740	82,260
1952	3,570	3,890	4,120	3,680	3,530	4,500	29,760	35,880	7,340	2,430	1,880	1,670	100,200
1953	2,660	3,410	3,840	4,050	3,560	5,790	10,320	10,180	9,370	1,600	1,190	990	56,760
1954	1,780	3,100	3,200	3,390	3,060	5,180	11,480	4,920	1,610	1,000	829	809	40,360
1955	1,950	2,620	2,340	2,560	2,450	3,660	13,960	18,540	3,860	1,180	964	1,080	55,160
1956	1,930	2,850	9,840	7,300	4,540	9,590	17,140	14,170	3,320	1,400	1,060	956	74,100
1957	1,840	3,100	3,340	3,120	5,210	5,850	11,720	21,240	7,840	1,650	1,210	1,330	67,450
1958	2,710	3,070	3,340	3,250	4,410	6,340	14,560	19,640	3,400	1,450	1,090	1,300	64,770
1959	1,680	2,890	3,330	3,290	2,980	4,750	9,530	4,880	1,580	904	807	1,330	37,950
1960	2,250	2,150	2,310	2,450	2,590	6,420	12,090	7,130	1,550	930	809	827	41,540

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	135	97,550
1951	1214	647	Apr. 29, 1951	24	114	82,260	111	80,330
1952	1244	1,390	Apr. 27, 1952	25	138	100,200	136	98,580
1953	1284	601	May 29, 1953	14	78.4	56,760	75.9	54,930
1954	1344	413	Apr. 14, 1954	11	55.7	40,360	54.1	39,190
1955	1394	780	Apr. 17, 1955	12	76.2	55,160	86.9	62,870
1956	1444	1,830	Dec. 23, 1955	14	102	74,100	93.4	67,760
1957	1514	864	May 19, 1957	17	93.2	67,450	94.3	68,230
1958	1564	707	Apr. 20, 1958	17	89.5	64,770	87.8	63,550
1959	1634	438	Apr. 27, 1959	12	52.4	37,950	50.8	36,790
1960	1714	504	Apr. 9, 1960	12	57.2	41,540	-	-

1070. Hyrum Reservoir near Hyrum, Utah

Location--Lat 41°37'30", long 111°52'30", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.7, T.10 N., R.1 E., at Hyrum Dam on Little Bear River, 1 mile southwest of Hyrum.

Drainage area--220 sq mi.

Records available--October 1938 to September 1960.

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

Extremes--1938-60: Maximum contents observed, 16,100 acre-ft June 12, 13, 1953 (elevation, 4,673.7 ft); no contents Oct. 16 to about Dec. 12, 1957.

Remarks--Reservoir is formed by earth-fill dam; storage began in 1935. Usable capacity, 15,280 acre-ft between elevations 4,629.6 (sill of outlet canal) and 4,672 ft (top of spillway gates). Dead storage, 3,405 acre-ft (below elevation 4,629.6 ft, sill of outlet canal). Elevation of spillway crest, 4,660 ft. Water used for irrigation on Hyrum project. Figures given herein represent usable contents; those published in annual reports prior to 1946 represent total contents.

Cooperation--Capacity table furnished by Bureau of Reclamation. Elevations furnished by Superintendent of Hyrum Dam.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	10,160	10,350	10,260	10,260	10,260	10,260	10,920	15,380	12,210	8,580	6,680	5,540
1952	8,420	10,350	10,440	10,440	10,440	10,810	13,400	15,390	13,440	11,760	9,080	7,700
1953	10,240	10,400	12,300	15,040	13,540	15,760	15,470	15,810	14,200	9,290	5,360	2,960
1954	3,740	6,720	9,790	10,440	10,570	13,780	15,280	13,450	10,090	5,760	2,570	1,430
1955	2,570	5,180	7,700	10,220	10,310	12,170	15,280	15,470	13,310	8,260	4,940	3,140
1956	4,460	7,150	11,450	10,740	10,570	11,490	15,570	15,660	12,350	8,460	5,250	3,670
1957	4,600	7,280	10,390	10,440	11,360	11,970	15,290	15,570	14,950	9,710	5,570	3,610
1958	0	0	2,110	5,360	9,960	12,170	11,490	15,420	12,210	7,740	4,770	3,800
1959	4,000	5,860	9,840	10,480	10,650	12,900	15,710	14,670	10,700	7,030	3,740	3,420
1960	4,580	6,310	8,630	10,350	10,480	12,940	15,570	14,150	9,080	4,900	1,670	610

1075. Little Bear River near Hyrum, Utah

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

Drainage area.--222 sq mi.

Records available.--October 1938 to September 1960.

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.--22 years (1938-60), 60.7 cfs (43,940 acre-ft per year).

Extremes.--1938-60: Maximum discharge, 986 cfs Apr. 30, 1952 (gage height, 4.54 ft); minimum daily, 0.2 cfs Oct. 9-11, 26-30, 1955, Nov. 27-30, 1959.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4.44	73.6	80.4	69.6	122	122	357	251	31.2	3.39	8.59	8.08	93.7
1952	5.43	25.3	71.3	68.6	67.4	74.2	477	475	42.2	4.64	5.62	10.9	111
1953	4.70	49.9	35.7	34.5	83.3	61.7	172	136	128	2.63	2.28	1.90	58.9
1954	.81	1.19	2.42	46.6	61.5	34.3	184	35.8	2.42	1.58	1.13	1.20	30.6
1955	.89	1.29	1.48	3.22	47.1	29.7	189	251	35.6	1.33	1.15	1.05	46.8
1956	1.75	1.41	94.9	142	85.6	137	213	196	14.4	1.94	1.50	1.04	74.4
1957	5.39	.65	10.3	54.8	102	91.2	150	351	94.5	1.55	1.24	10.1	72.6
1958	152	31.6	1.46	1.62	2.30	73.5	263	178	7.78	1.16	1.26	.91	59.8
1959	1.01	1.66	2.09	46.3	56.5	21.6	113	44.8	1.34	1.52	1.67	.63	24.0
1960	4.39	2.00	2.14	21.4	49.4	65.8	178	82.2	1.35	.76	1.10	.88	33.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	273	4,380	4,940	4,280	6,760	7,510	21,220	15,420	1,850	208	528	481	67,850
1952	334	1,560	4,390	4,220	3,880	4,560	28,370	29,190	2,510	285	345	650	80,290
1953	289	2,970	2,200	2,120	4,630	3,790	10,250	6,370	7,600	174	140	113	42,650
1954	50	71	149	2,870	3,420	2,110	10,940	2,200	144	97	70	71	22,190
1955	55	77	91	198	2,610	1,830	11,260	15,460	2,120	82	71	62	33,920
1956	108	84	5,830	8,730	4,920	8,430	12,680	12,070	854	119	92	62	53,980
1957	331	38	630	3,370	5,680	5,610	8,940	21,550	5,620	96	77	600	52,540
1958	9,380	1,880	90	100	128	4,520	15,630	10,930	463	72	78	54	43,320
1959	62	99	128	2,840	3,140	1,330	6,720	2,750	80	93	103	37	17,380
1960	270	119	132	1,310	2,840	4,020	10,610	5,050	80	47	67	52	24,600

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	112	81,370
1951	1214	524	May 13, 1951	1.4	93.7	67,850	89.1	64,540
1952	1244	986	Apr. 30, 1952	1.4	111	80,290	109	79,470
1953	1284	333	Apr. 24, 1953	1.3	58.9	42,650	51.7	37,460
1954	1344	288	Apr. 17, 1954	.5	30.6	22,190	30.6	22,140
1955	1394	533	May 2, 1955	.6	46.8	33,920	54.9	39,720
1956	1444	453	Dec. 26, 1955	.2	74.4	53,980	67.5	48,960
1957	1514	559	May 23, 1957	.3	72.6	52,540	86.9	62,890
1958	1564	492	Apr. 22, 1958	.8	59.8	43,320	44.6	32,260
1959	1634	280	Apr. 27, 1959	.4	24.0	17,380	24.3	17,610
1960	1714	335	Apr. 11, 1960	.2	33.9	24,600	-	-

1080. Utah Power & Light Co.'s tailrace near Logan, Utah

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

Records available.--May 1913 to September 1960.

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

Average discharge.--47 years (1913-60), 112 cfs (81,080 acre-ft per year).

Extremes.--1913-60: Maximum daily discharge, 206 cfs Apr. 24, 1956; no flow for periods in several years.

Remarks.--Flow regulated by powerplant above station. Power canal diverts water from right bank of Logan River in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.29, T.12 N., R.2 E. Water returned to river 125 ft below gaging station on Logan River above State dam.

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

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	11,250	9,740	8,820	7,620	5,800	6,590	9,860	10,570	11,310	11,580	11,180	9,150	113,400
1952	10,090	8,350	7,420	6,510	5,560	5,910	9,260	11,620	11,110	11,680	10,170	9,040	108,700
1953	9,030	7,750	6,900	6,660	5,440	6,000	8,350	12,000	10,830	11,840	9,820	7,400	102,000
1954	6,780	6,720	6,170	5,800	4,870	5,640	8,350	11,700	10,790	8,600	6,130	5,010	86,560
1955	5,610	5,060	4,460	4,150	3,610	4,060	5,930	12,150	11,450	10,520	6,850	5,390	79,240
1956	6,340	5,500	5,560	6,510	4,840	5,720	9,880	11,780	11,310	11,650	9,510	6,760	95,360
1957	6,780	6,370	5,880	5,360	4,920	6,080	8,280	12,090	11,410	11,660	10,350	7,160	96,520
1958	7,050	6,850	6,480	5,610	5,120	5,840	6,270	11,440	11,550	11,700	9,010	8,600	95,430
1959	6,700	6,380	5,930	5,020	4,530	5,030	9,620	11,250	10,610	10,440	6,800	5,720	87,930
1960	6,840	5,880	5,290	4,680	4,230	4,870	10,320	11,280	10,650	8,900	5,930	5,220	84,070

1085. Logan, Hyde Park & Smithfield Canal near Logan, Utah

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

Records available.--June 1904 to September 1923 (fragmentary), October 1923 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder in flume. Prior to May 29, 1924, water-stage recorder or staff gages at several sites within 1 mile of present site at different datums.

Average discharge.--37 years (1923-60), 28.5 cfs (20,630 acre-ft per year).

Extremes.--1923-60: Maximum daily discharge, 136 cfs May 30, 31, 1930; no flow at times in most years.

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

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	347	280	406	350	94	42	858	1,080	6,970	6,400	3,040	2,360	22,210
1952	489	303	440	449	343	346	56	3,850	6,090	6,030	3,370	1,830	23,600
1953	740	496	549	396	290	213	588	2,490	4,370	5,870	2,670	1,780	20,450
1954	788	166	364	299	219	791	330	6,360	4,200	2,430	1,670	1,070	18,980
1955	223	175	178	239	298	264	22	3,190	5,570	3,140	1,960	1,170	16,430
1956	109	148	269	369	318	881	210	4,100	5,560	4,220	2,080	1,560	20,030
1957	782	377	332	301	250	103	41	1,070	4,820	6,120	2,340	1,730	18,270
1958	494	388	345	358	331	273	1.8	4,630	5,240	4,290	2,270	1,840	20,440
1959	845	441	232	232	186	179	480	4,720	5,840	3,040	2,020	1,370	19,590
1960	216	363	306	439	342	251	43	4,460	5,420	2,340	1,980	1,450	17,630

1090. Logan River above State dam, near Logan, Utah

Location.--Lat 41°44'40", long 111°47'00", in NE $\frac{1}{4}$ sec.36, T.12 N., R.1 E., on right bank at Logan plant of Utah Power & Light Co., 125 ft upstream from tailrace, half a mile upstream from State dam, and 2 $\frac{1}{2}$ miles east of Logan.

Drainage area.--218 sq mi.

Records available.--June 1896 to September 1960. Published as Logan River near Logan prior to 1913. Records since May 1913 equivalent to earlier records if records for Utah Power & Light Co.'s tailrace near Logan are added. Monthly discharge only for some periods, published in WSP 1314.

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 various sites within half a mile downstream, below confluence of tailrace, at different datums. May 7 to Sept. 30, 1913, water-stage recorder at present site at different datums and Oct. 1, 1913, to Sept. 3, 1938, at datum about 2.3 ft lower than present datum.

Average discharge.--47 years (1913-60), 105 cfs (76,020 acre-ft per year). Average combined discharge of Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal, 64 years (1896-1960), 278 cfs (201,300 acre-ft per year).

Extremes.--1913-60: 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.

1896-1960: Maximum combined discharge observed (Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal), 2,480 cfs May 24, 1907; minimum daily, 50 cfs Jan. 21, 1935.

Remarks.--Logan, Hyde Park & Smithfield Canal diverts 1.3 miles above station. Utah Power & Light Co.'s tailrace diverts 1.8 miles above station and reenters 125 ft below. Records herein show flow in river combined with that of Logan, Hyde Park & Smithfield Canal (see preceding station) and Utah Power & Light Co.'s tailrace (see p. 55). Combined flow excludes Logan City culinary pipeline and one small irrigation diversion from power flume that siphons across canyon 400 ft upstream from station.

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

Combined monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	204	185	161	139	146	143	458	842	776	403	262	208	328
1952	188	163	142	128	117	115	337	865	772	368	246	198	303
1953	172	151	135	127	116	121	196	352	704	357	220	171	235
1954	149	137	118	111	104	111	211	460	293	197	143	119	180
1955	108	101	88.8	86.5	83.1	82.7	135	483	479	245	168	131	183
1956	120	109	144	130	110	133	380	801	703	308	204	162	276
1957	144	128	116	106	108	118	185	550	835	383	223	175	256
1958	158	139	124	109	112	114	215	768	654	287	201	165	255
1959	139	129	115	102	100	106	212	418	503	242	169	141	198
1960	137	118	103	96.1	92.0	122	271	490	380	205	152	130	192

Combined monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	12,560	11,040	9,880	8,570	8,090	8,800	27,260	51,750	46,150	24,790	16,140	12,380	237,400
1952	11,560	9,720	8,710	7,900	6,740	7,080	20,040	53,190	45,960	22,500	15,130	11,800	220,300
1953	10,580	8,980	8,280	7,830	6,450	7,450	11,660	21,640	41,880	21,980	13,500	10,170	170,400
1954	9,160	8,140	7,260	6,830	5,760	6,800	12,530	28,260	17,430	12,140	8,800	7,090	130,200
1955	6,640	6,000	5,460	5,320	4,610	5,090	8,040	29,680	28,500	15,090	10,220	7,780	132,400
1956	7,370	6,490	8,860	8,010	6,300	8,860	22,630	49,230	41,860	18,920	12,580	9,620	200,000
1957	8,870	7,640	7,130	6,530	5,990	7,230	11,020	33,790	49,690	23,570	13,720	10,410	185,600
1958	9,740	8,260	7,630	6,730	6,210	6,990	12,800	47,220	38,940	17,630	12,370	9,810	184,300
1959	8,580	7,690	7,060	6,270	5,560	6,510	12,600	25,700	29,940	14,910	10,420	8,400	143,600
1960	8,450	7,030	6,360	5,910	5,290	7,510	16,150	30,120	22,580	12,600	9,330	7,770	139,100

Combined yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	373	270,300
1951	1214	a1,350	May 28, 1951	117	328	237,400	323	233,900
1952	1244	a1,060	May 30, 1952	105	303	220,300	301	218,200
1953	1284	a949	June 15, 1953	98	235	170,400	231	167,100
1954	1344	a607	May 22, 1954	95	180	130,200	171	123,700
1955	1394	a770	May 22, 1955	69	183	132,400	189	137,000
1956	1444	a1,220	May 25, 1956	91	276	200,000	277	201,000
1957	1514	1,240	June 6, 1957	92	256	185,600	259	187,600
1958	1564	1,300	May 27, 1958	99	255	184,300	251	182,000
1959	1634	801	June 9, 1959	72	198	143,600	196	142,200
1960	1714	819	May 13, 1960	77	192	139,100	-	-

a Maximum daily.

1135. Blacksmith Fork above Utah Power & Light Co.'s dam, near Hyrum, Utah

Location.--Lat 41°37'20", long 111°44'25", in NE $\frac{1}{4}$ sec.8, T.10 N., R.2 E., on right bank three-quarters of a mile upstream from diversion dam, 3 $\frac{1}{4}$ miles upstream from powerplant of Utah Power & Light Co., and 6 miles east of Hyrum.

Drainage area.--260 sq mi.

Records available.--October 1913 to September 1960. Monthly discharge only for October 1913, published in WSP 1314.

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

Average discharge.--47 years (1913-60), 125 cfs (90,500 acre-ft per year).

Extremes.--1913-60: Maximum discharge, 1,620 cfs May 15, 1917 (gage height, 6.5 ft, from floodmarks, site and datum then in use), from rating curve extended above 800 cfs; minimum daily, 29 cfs Jan. 3, 1935.

Remarks.--A few small diversions for irrigation of about 200 acres above station. Low flow may be slightly regulated by powerplant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	135	129	121	105	121	115	404	424	235	178	160	141	189
1952	130	117	108	98.4	92.6	98.5	409	604	276	197	166	143	204
1953	133	120	108	106	99.2	105	147	183	186	121	104	94.6	126
1954	89.4	87.6	84.1	82.2	79.1	91.5	173	139	98.6	83.8	76.8	72.0	96.4
1955	68.9	67.5	63.6	66.2	65.1	65.6	130	246	125	92.9	83.9	77.1	96.2
1956	75.8	72.7	111	11.5	93.5	124	342	314	181	139	119	106	150
1957	99.2	95.0	88.8	82.0	120	109	176	335	221	148	126	114	141
1958	111	102	97.2	89.1	95.8	101	187	338	155	122	109	98.7	134
1959	98.3	94.2	85.5	81.6	79.1	91.9	145	128	98.3	82.5	79.6	76.9	95.2
1960	77.1	72.1	66.0	71.4	66.0	101	171	157	105	83.2	72.4	65.3	92.3

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	8,320	7,690	7,460	6,480	6,710	7,050	24,010	26,060	13,990	10,920	9,810	8,390	136,900
1952	8,020	6,950	6,830	6,050	5,330	6,080	24,350	37,160	16,410	12,110	10,230	8,520	147,800
1953	8,150	7,150	6,870	6,510	5,510	6,430	8,740	11,260	11,040	7,470	6,400	5,630	90,960
1954	5,490	5,210	5,170	5,050	4,400	5,630	10,280	8,560	5,870	5,160	4,720	4,290	69,800
1955	4,240	4,010	3,910	4,070	3,610	4,030	7,720	15,140	7,440	5,710	5,160	4,590	69,630
1956	4,660	4,330	6,830	7,080	5,380	7,600	20,380	19,290	10,770	8,580	7,340	6,300	108,500
1957	6,100	5,650	5,460	5,040	5,380	6,690	10,490	20,580	13,140	9,100	7,730	6,760	102,100
1958	6,810	6,070	5,980	5,480	5,320	6,200	11,120	20,760	9,240	7,500	6,780	5,880	97,080
1959	6,050	5,610	5,280	5,020	4,390	5,650	8,650	7,890	5,850	5,070	4,900	4,570	86,910
1960	4,740	4,290	4,060	4,390	3,800	6,180	10,160	9,680	6,260	5,110	4,450	3,890	67,010

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	201	145,600
1951	1214	622	Apr. 20, 1951	82	189	136,900	186	135,000
1952	1244	1,400	May 4, 1952	79	204	147,800	204	149,200
1953	1264	309	May 20, 1953	90	128	90,960	117	84,860
1954	1344	317	Apr. 18, 1954	66	98.4	69,800	91.3	66,120
1955	1394	457	May 7, 1955	50	98.2	69,630	101	73,290
1956	1444	572	Dec. 4, 1955	55	150	108,500	151	109,900
1957	1514	466	May 19, 1957	69	141	102,100	143	103,800
1958	1564	515	May 6, 1958	85	134	97,080	131	95,140
1959	1634	281	Apr. 26, 1959	71	95.2	68,910	89.9	65,080
1960	1714	318	Apr. 10, 1960	62	92.3	67,010	-	-

1170. Hammond (East Side) Canal near Collinston, Utah

Location.--Lat 41°50', long 112°03', in SE $\frac{1}{4}$ sec.27, T.13 N., R.2 W., on right bank 3,600 ft downstream from Cutler Dam and 4 miles north of Collinston.

Records available.--June 1912 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Prior to 1915, published as Hammond ditch near Collinston.

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

Average discharge.--48 years (1912-60), 50.3 cfs (36,420 acre-ft per year).

Extremes.--1912-60: Maximum daily discharge, 182 cfs June 28, July 1, 1932, June 27, 28, 1933, May 17, 1960; no flow at times in each year.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	27.0	0.20	0	0	0	0	14.8	47.6	149	145	133	103	51.9
1952	33.6	2.35	0	0	0	0	0	102	141	149	148	107	57.3
1953	47.7	1.53	0	0	0	0	0	69.2	105	161	152	123	55.3
1954	49.4	0	0	0	0	0	11.1	147	148	157	156	104	64.9
1955	35.2	8.96	.03	0	0	0	0	96.0	118	163	141	109	56.3
1956	44.3	.59	0	0	0	0	10.6	91.6	155	162	156	111	61.2
1957	48.6	7.13	0	0	0	0	0	24.0	118	159	156	118	52.9
1958	38.0	6.56	1.06	0	0	0	0	114	159	156	156	112	62.4
1959	50.9	9.15	0	0	0	0	0	119	152	157	142	88.7	60.4
1960	24.0	11.8	0	0	0	0	0	123	164	164	154	114	63.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,660	12	0	0	0	0	881	2,930	8,860	8,900	8,150	6,150	37,540
1952	2,070	140	0	0	0	0	0	6,260	8,410	9,190	9,120	6,390	41,580
1953	2,940	91	0	0	0	0	0	4,260	6,230	9,900	9,340	7,300	40,060
1954	3,040	0	0	0	0	0	662	9,050	8,810	9,690	9,560	6,200	47,000
1955	2,170	533	1.6	0	0	0	0	5,900	7,010	10,030	8,640	6,460	40,740
1956	2,720	35	0	0	0	0	631	5,650	9,210	9,980	9,580	6,590	44,400
1957	2,990	424	0	0	0	0	0	1,470	7,040	9,760	9,580	7,040	38,300
1958	2,330	391	65	0	0	0	0	7,010	9,490	9,600	9,580	6,670	45,140
1959	3,130	545	0	0	0	0	0	7,330	9,040	9,620	8,760	5,280	43,700
1960	1,480	700	0	0	0	0	0	7,540	9,760	10,080	9,460	6,780	45,800

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	51.5	37,280
1951	1214	163	June 24,25,1951	0	51.9	37,540	52.6	38,080
1952	1244	163	July 15,16,1952	0	57.3	41,580	58.4	42,400
1953	1284	189	July 3-8, 1953	0	55.3	40,060	55.3	40,070
1954	1344	180	June 26, 1954	0	64.9	47,000	64.4	46,670
1955	1394	172	July 18,19,1955	0	56.3	40,740	56.4	40,800
1956	1444	172	(a)	0	61.2	44,400	62.1	45,060
1957	1514	167	July 5-7, 1957	0	52.9	38,300	52.0	37,680
1958	1564	175	June 24-26,1958	0	62.4	45,140	63.6	46,020
1959	1634	174	May 21, 1959	0	60.4	43,700	58.3	42,210
1960	1714	182	May 17, 1960	0	63.1	45,800	-	-

a June 28, July 2, 14, 1956.

1175. West Side Canal near Collinston, Utah

Location.--Lat 41°50', long 112°04', in SW $\frac{1}{4}$ sec.27, T.13 N., R.2 W., on left bank 4,200 ft downstream from Cutler Dam and 4 miles north of Collinston.

Records available.--June 1912 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--48 years (1912-60), 234 cfs (169,400 acre-ft per year).

Extremes.--1912-60: Maximum daily discharge, 751 cfs June 24, 25, 1959; no flow for periods in every year except 1914.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	151	59.5	23.6	6.0	5.0	1.3	54.7	213	676	618	543	482	237
1952	198	58.7	21.6	18	18	2.32	0	432	611	618	584	504	256
1953	293	74.5	17.5	32.4	23.5	3.29	0	327	543	659	613	531	261
1954	244	91.1	35.7	28	26.2	.5	29.9	622	581	635	638	435	283
1955	179	85.0	51.7	25.2	16.6	7.56	0	343	499	685	575	519	251
1956	218	88.5	24.9	19.2	17	11.8	0	445	667	661	662	534	282
1957	266	72.9	51.9	30.4	22.7	6.35	0	105	532	682	667	511	247
1958	232	86.3	46.7	23.5	22	5.32	0	477	692	642	619	496	280
1959	271	101	14.0	19.3	21.9	.9	0	494	668	643	617	435	276
1960	163	93.0	47.8	36.6	23.6	10.5	0	500	707	696	686	566	295

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	9,260	3,540	1,450	369	278	79	3,250	13,130	40,220	38,010	33,370	28,700	171,700
1952	12,190	3,490	1,350	1,110	1,040	143	0	26,540	36,350	38,050	35,930	29,970	186,100
1953	18,020	4,440	1,070	1,990	1,310	202	0	20,080	32,280	40,510	37,710	31,570	189,200
1954	15,020	5,420	2,190	1,720	1,460	28	1,780	38,270	34,550	39,050	39,240	25,910	204,600
1955	11,030	5,060	3,180	1,550	924	452	0	21,100	29,710	42,140	35,340	30,910	181,400
1956	13,580	5,260	1,530	1,180	978	728	0	27,390	40,890	40,640	40,680	31,790	204,400
1957	16,480	4,340	3,190	1,870	1,260	391	0	6,440	31,630	41,960	41,010	30,380	179,000
1958	14,250	5,140	2,870	1,440	1,220	327	0	29,310	41,160	39,470	38,040	29,540	202,800
1959	16,680	6,010	859	1,180	1,220	58	0	30,360	39,770	39,560	37,920	25,900	199,500
1960	10,030	5,540	2,940	2,250	1,360	647	0	30,730	42,060	42,820	42,190	33,680	214,200

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	231	167,300
1951	1214	717	June 7, 1951	0	237	171,700	241	174,400
1952	1244	723	June 19, 1952	0	256	186,100	265	182,600
1953	1284	747	June 22, 1953	0	281	189,200	260	188,300
1954	1344	748	May 13, 20, 1954	0	283	204,600	278	201,300
1955	1394	720	July 20, 1955	0	251	181,400	252	182,300
1956	1444	732	June 20, 1956	0	282	204,400	287	208,300
1957	1514	738	June 27, 1957	0	247	179,000	245	177,200
1958	1564	732	(a)	0	280	202,800	282	204,100
1959	1634	751	June 24-25, 1959	0	276	199,500	269	194,500
1960	1714	742	June 25-26, 1960	0	295	214,200	-	-

a June 25, July 1-2, 1958.

1180. 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.--June 1889 to September 1960. Published as "at Collinston" prior to 1900. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 4,276.13 ft above mean sea level (levels by Bureau of Reclamation). Prior to Nov. 8, 1913, staff gage and Nov. 8, 1913, to Sept. 10, 1936, water-stage recorder, at site three-quarters of a mile downstream at different datums.

Extremes.--1889-1960: Maximum discharge observed, 11,600 cfs June 7-10, 1909 (gage height, 7.70 ft, site and datum then in use); minimum daily, 10 cfs Aug. 4-12, 18-23, 1905; practically no flow at 12 p.m. Aug. 5, 1920.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,503	2,364	2,620	2,511	3,015	2,878	3,601	3,685	1,527	788	1,314	1,315	2,323
1952	1,763	1,836	2,023	2,247	2,161	2,338	5,195	4,456	791	811	680	1,070	2,215
1953	1,351	1,547	1,846	1,970	1,921	1,799	2,055	1,542	1,780	71.2	167	177	1,347
1954	573	957	958	1,025	1,200	1,367	1,535	331	217	45.5	34.7	267	705
1955	570	760	764	874	870	1,379	1,932	1,437	776	32.9	78.7	225	806
1956	619	1,006	1,714	1,811	1,233	1,908	2,659	2,485	544	76.3	140	156	1,197
1957	648	904	1,098	1,079	1,567	1,752	2,153	3,532	161	120	448	647	1,339
1958	1,292	1,364	1,211	1,211	1,832	1,604	2,687	2,214	281	68.0	374	562	1,220
1959	685	1,057	1,142	1,077	1,268	1,186	1,676	401	68.6	35.5	24.6	308	741
1960	769	757	771	836	940	1,813	1,959	789	22.5	18.4	23.4	72.7	730

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	141,600	140,700	161,100	154,400	167,500	177,000	214,300	226,600	90,880	48,440	80,810	78,270	1,682,000
1952	108,400	109,300	124,400	138,100	124,300	147,500	509,100	272,800	106,600	49,900	54,140	63,670	1,608,000
1953	83,050	92,050	113,500	121,100	106,700	110,600	122,300	94,820	105,900	4,580	10,240	10,510	975,200
1954	35,210	56,960	58,930	63,030	66,650	84,070	91,320	20,330	12,890	2,800	2,130	15,890	510,200
1955	35,020	45,200	46,950	53,740	48,300	84,810	115,000	88,340	46,200	2,020	4,840	13,380	583,800
1956	39,060	59,830	105,400	111,400	70,920	117,300	158,200	152,800	32,390	4,690	8,630	9,290	868,900
1957	39,830	58,810	67,510	66,360	87,020	107,000	128,100	217,200	28,600	7,370	27,530	38,480	969,500
1958	79,450	81,360	74,450	74,460	101,600	98,650	159,900	136,100	16,700	4,180	22,970	33,430	883,300
1959	41,970	62,890	70,210	66,200	71,580	72,920	99,750	24,660	4,080	2,180	1,510	18,310	536,300
1960	47,260	45,060	47,410	51,520	54,070	111,500	116,600	48,480	1,340	1,130	1,440	4,320	530,100

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	2,513	1,819,000
1951	1214	5,410	Feb. 11, 1951	41	2,323	1,682,000	2,183	1,580,000
1952	1244	7,020	May 1, 1952	31	2,215	1,608,000	2,142	1,555,000
1953	1284	a3,510	June 10, 1953	22	1,347	975,200	1,157	837,600
1954	1344	a2,210	Apr. 10, 1954	30	705	510,200	672	486,700
1955	1394	a2,880	May 10, 1955	26	806	583,800	911	659,900
1956	1444	a3,820	Dec. 28, 1955	27	1,197	868,900	1,139	826,800
1957	1514	4,920	May 23, 1957	21	1,339	969,500	1,441	1,043,000
1958	1564	3,820	Apr. 23, 1958	20	1,220	883,300	1,137	823,300
1959	1634	3,640	Apr. 16, 1959	20	741	536,300	692	500,900
1960	1714	3,780	Jan. 22, 1960	16	730	530,100	-	-

a Maximum daily.

1190. Little Malad River above Elkhorn Reservoir, near Malad City, Idaho

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

Drainage area.--120 sq mi, approximately.

Records available.--August 1911 to August 1913 (published as "near Malad"), October 1931 to September 1932, October 1940 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and Cippoletti weir. Altitude of gage is 5,050 ft (by barometer). Prior to Dec. 5, 1940, staff gages at different datums.

Average discharge.--22 years (1911-12, 1931-32, 1940-60), 17.2 cfs (12,450 acre-ft per year).

Extremes.--1911-13, 1931-32, 1940-60: Maximum discharge, 351 cfs July 24, 1955 (gage height, 3.63 ft), from rating curve extended above 70 cfs on basis of computation of peak flow by weir formula; minimum, 6.8 cfs Aug. 19, 1948, Jan. 3, 1951; minimum gage height, 0.31 ft Aug. 19, 1948.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	17.1	17.6	17.9	15.6	18.7	20.7	26.7	23.9	18.6	17.7	17.0	14.9	18.9
1952	15.9	15.9	17.3	17.8	18.0	18.4	31.1	34.2	22.8	20.1	18.6	17.7	20.7
1953	17.8	17.6	18.1	19.8	19.8	22.1	20.2	20.9	20.0	17.4	14.8	13.9	18.5
1954	15.0	16.3	17.0	17.5	17.0	18.2	17.9	16.4	15.0	14.7	14.3	13.3	16.0
1955	14.5	14.0	13.5	14.0	14.7	17.3	17.1	15.6	15.2	17.7	16.0	12.8	15.2
1956	12.4	12.4	14.4	15.3	14.2	20.0	19.2	16.4	13.6	12.8	13.2	12.9	14.7
1957	13.9	13.8	14.4	13.1	40.7	18.2	16.1	18.8	15.8	13.5	13.8	13.4	17.0
1958	13.9	13.9	14.9	14.5	21.9	20.9	20.8	19.7	14.9	14.4	14.2	15.4	16.6
1959	14.4	13.7	13.5	13.2	15.2	22.8	20.5	18.1	16.1	13.6	13.2	14.5	15.7
1960	14.4	13.9	13.8	12.8	13.4	18.5	17.8	13.8	13.2	15.6	12.9	12.1	14.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,050	1,050	1,100	1,020	1,040	1,270	1,590	1,470	1,110	1,090	1,050	887	13,730
1952	980	946	1,060	1,090	1,040	1,130	1,850	2,100	1,360	1,240	1,150	1,060	15,010
1953	1,090	1,050	1,110	1,220	1,100	1,360	1,200	1,290	1,190	1,070	912	827	13,420
1954	922	972	1,040	1,080	946	1,120	1,060	1,010	891	906	877	789	11,610
1955	889	831	831	861	815	1,060	1,020	962	904	1,090	984	764	11,010
1956	760	740	885	940	815	1,230	1,140	1,010	811	785	811	768	10,700
1957	857	823	883	803	2,260	1,120	956	1,160	940	833	847	799	12,280
1958	857	825	914	891	1,210	1,280	1,240	1,210	889	883	871	916	11,990
1959	887	815	829	811	847	1,400	1,220	1,110	956	837	813	863	11,390
1960	887	827	847	785	772	1,130	1,060	851	783	960	791	720	10,410

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	20.4	14,790
1951	1214	78	Aug. 4, 1951	14	18.9	13,730	18.7	13,510
1952	1244	70	July 30, 1952	14	20.7	15,010	21.0	15,270
1953	1284	32	Jan. 18, 1953	13	18.5	13,420	18.1	13,100
1954	1344	95	June 27, 1954	12	16.0	11,610	15.5	11,230
1955	1394	351	July 24, 1955	12	15.2	11,010	15.0	10,840
1956	1444	91	Mar. 24, 1956	11	14.7	10,700	15.0	10,870
1957	1514	259	Feb. 23, 1957	11	17.0	12,280	17.0	12,310
1958	1564	118	Mar. 21, 1958	12	16.6	11,990	16.5	11,920
1959	1634	56	Mar. 17, 1959	11	15.7	11,390	15.8	11,420
1960	1714	255	July 31, 1960	12	14.4	10,410	-	-

1200. Little Malad River below Elkhorn Reservoir, near Malad City, Idaho

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

Drainage area.--153 sq mi.

Records available.--December 1940 to January 1953.

Gage.--Water-stage recorder. Altitude of gage is 4,970 ft (by barometer). Prior to Sept. 6, 1941, at site 50 ft upstream at datum 4.36 ft higher.

Average discharge.--11 years (1941-52), 13.2 cfs (9,560 acre-ft per year).

Extremes.--1940-53: Maximum discharge, 113 cfs Aug. 23, 1946, from computation of flow over weir 50 ft upstream; maximum gage height, 4.72 ft Apr. 22, 1952; no flow at times during most years.

Remarks.--Flow regulated by Elkhorn Reservoir. Diversions above station for irrigation of about 400 acres.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	11.4	5.57	1.35	1.50	2.18	2.61	10.1	22.4	18.7	16.7	16.2	14.7	10.2
1952	13.7	15.3	8.10	7.31	6.90	7.92	14.6	28.3	21.4	19.8	17.8	17.0	14.7
1953	17.5	17.2	17.9	-	-	-	-	-	-	-	-	-	-

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	703	213	83	92	121	161	599	1,380	1,110	1,030	998	875	7,360
1952	844	790	498	449	397	487	868	1,740	1,270	1,220	1,100	1,010	10,670
1953	1,080	1,030	1,100	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	10.3	7,420	-
1951	1214	106	Oct. 21, 1951	0.7	10.2	7,360	11.7	8,500	-
1952	1244	54	Apr. 22, 1952	4.1	14.7	10,670	16.2	11,750	-
1953	1284	-	-	-	-	-	-	-	-

1205. Little Malad River below Sand Ridge damsite, near Malad City, Idaho

Location.--Lat 42°12', long 112°20', in SE¼ sec.14, T.14 S., R.35 E., on right bank 0.6 mile below proposed Sand Ridge damsite, 1½ miles below unnamed tributary, 3½ miles west of Malad City, and 9 miles downstream from Elkhorn Reservoir.

Drainage area.--223 sq mi.

Records available.--October 1945 to June 1951. Published as "near Malad" prior to 1949.

Gage.--Water-stage recorder. Altitude of gage is 4,560 ft (by barometer).

Average discharge.--5 years (1945-50), 5.08 cfs (3,680 acre-ft per year).

Extremes.--1945-51: Maximum discharge, 240 cfs Feb. 22, 1948 (gage height, 9.6 ft, from floodmark), by submerged orifice method; minimum recorded, 0.1 cfs Sept. 7, 1947, Oct. 17-23, 1950; minimum gage height observed, 1.48 ft Dec. 22, 1950, Jan. 1, 1951.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.18	0.60	0.26	0.20	2.08	1.33	2.38	2.48	-	-	-	-	-

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	11	36	16	12	115	82	142	152	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	1180	-	-	-	-	-	1.11	804	-
1951	1214	a8.0	Feb. 10, 1951	-	-	-	-	-	-

a Maximum daily.

1225. Devil Creek above Campbell Creek, near Malad City, Idaho

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

Drainage area.--13 sq mi, approximately.

Records available.--October 1938 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Published as "near Malad" prior to 1949.

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.--22 years (1938-60), 9.48 cfs (6,860 acre-ft per year).

Extremes.--1938-60: Maximum discharge observed, 160 cfs Apr. 2, 1943, from rating curve extended above 130 cfs on basis of logarithmic plotting; maximum gage height, 2.38 ft Apr. 19, 1952, site and datum then in use; minimum discharge recorded, 1.6 cfs Jan. 13, 1950 (gage height, 0.43 ft, site and datum then in use); minimum daily, 1.8 cfs Nov. 3-5, 1949.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.3	9.57	10.0	8.88	8.99	10.7	27.9	18.7	11.0	9.51	9.11	8.99	12.0
1952	10.1	9.95	10.0	9.82	10.6	11.2	46.4	23.8	13.4	9.38	9.29	8.01	14.3
1953	8.61	8.85	7.74	7.99	10.2	12.6	11.9	11.3	12.0	8.65	6.92	7.33	9.50
1954	7.63	7.40	7.63	6.92	7.61	7.85	8.69	8.46	7.14	5.50	5.40	5.49	7.14
1955	5.85	6.99	6.51	5.86	5.38	7.11	7.16	7.78	6.73	5.36	4.93	5.06	6.23
1956	5.31	6.26	5.97	6.22	4.89	9.33	10.6	9.64	6.35	5.29	4.80	4.86	6.63
1957	5.22	5.32	5.57	5.23	6.90	6.33	7.21	17.4	11.0	7.07	6.28	6.00	7.47
1958	6.37	6.85	6.55	5.99	7.00	9.67	16.9	16.6	9.62	7.00	6.27	6.04	8.74
1959	5.75	5.48	5.94	6.45	6.20	8.11	9.17	8.09	6.63	5.20	5.90	5.63	6.55
1960	5.08	4.98	5.22	5.64	5.52	6.85	8.15	7.55	6.33	4.89	4.40	4.44	5.75

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	636	570	615	546	499	659	1,680	1,150	657	585	560	535	8,670
1952	618	592	615	604	611	688	2,760	1,470	795	577	571	476	10,380
1953	529	527	476	492	568	776	706	696	715	532	425	436	6,880
1954	469	441	469	426	423	483	517	520	425	338	332	327	5,170
1955	360	416	400	360	299	437	426	479	401	330	303	301	4,510
1956	327	372	367	383	281	574	632	593	378	325	295	289	4,820
1957	321	316	343	322	383	389	429	1,070	652	435	386	357	5,400
1958	392	407	403	369	389	595	1,010	1,020	572	431	385	359	6,330
1959	353	326	365	396	345	498	546	497	395	320	363	335	4,740
1960	312	296	321	347	317	421	485	464	377	300	270	264	4,170

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	13.2	-	9,560
1951	1214	81	Apr. 5, 1951	6.8	12.0	8,670	12.0	-	8,680
1952	1244	158	Apr. 19, 1952	5.3	14.3	10,380	13.9	-	10,080
1953	1284	25	Apr. 28, 1953	6.0	9.50	6,880	9.29	-	6,720
1954	1344	24	Mar. 9, 1954	4.6	7.14	5,170	6.86	-	4,970
1955	1394	27	Aug. 26, 1955	4.3	6.23	4,510	6.08	-	4,400
1956	1444	142	May 24, 1956	3.6	6.63	4,820	6.52	-	4,730
1957	1514	95	May 19, 1957	3.2	7.47	5,400	7.77	-	5,620
1958	1564	34	Apr. 15, 1958	4.3	8.74	6,330	8.52	-	6,170
1959	1634	30	Apr. 2, 1959	3.1	6.55	4,740	6.39	-	4,620
1960	1714	31	Apr. 3, 1960	3.6	5.75	4,170	-	-	-

1230. Devil Creek above Evans dividers, near Malad City, Idaho

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

Drainage area.--36 sq mi, approximately.

Records available.--October 1940 to December 1943, April 1946 to January 1953. Monthly discharge only for some periods, published in WSP 1314. Published as "near Malad" prior to 1949.

Gage.--Water-stage recorder. Altitude of gage is 4,900 ft (by barometer). Prior to June 11, 1942, at site 400 ft downstream at datum about 0.13 ft higher. June 11, 1942, to Dec. 14, 1943, at present site at datum about 0.2 ft higher. Apr. 23 to Dec. 12, 1946, at site 200 ft downstream at present datum.

Average discharge.--9 years (1940-43, 1946-52), 14.4 cfs (10,430 acre-ft per year).

Extremes.--1940-43, 1946-53: Maximum discharge, 261 cfs Apr. 19, 1952 (gage height, 5.79 ft); minimum, 0.9 cfs Nov. 7, 1949 (gage height, 1.18 ft).

Remarks.--Diversions for irrigation of 600 to 800 acres above station. Stream receives part of flow of Birch Creek above station. Malad powerplant and its small reservoir on Birch Creek cause slight diurnal fluctuations.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	11.5	12.3	13.1	12.5	13.9	16.7	43.2	25.2	14.2	8.83	8.48	7.88	15.6
1952	11.0	11.4	12.1	11.0	11.7	12.7	76.7	40.0	16.6	11.4	8.85	6.59	19.1
1953	9.40	10.6	9.86	11.1	-	-	-	-	-	-	-	-	-

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	709	734	807	771	772	1,030	2,570	1,550	847	543	521	469	11,320
1952	676	678	746	674	674	781	4,560	2,460	990	701	544	392	13,880
1953	578	632	606	684	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Water year ending Sept. 30									Calendar year	
Year	WSP	Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet		
		Discharge	Date							
1950	-	-	-	-	-	-	17.8	12,910		
1951	1214	112	Apr. 5, 1951	6.1	15.6	11,320	15.4	11,170		
1952	1244	261	Apr. 19, 1952	5.6	19.1	13,880	18.7	13,590		
1953	1284	-	-	-	-	-	-	-		

1255. Malad River at Woodruff, Idaho

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

Drainage area--485 sq mi, approximately.

Records available--November 1938 to September 1960.

Gage--Staff gage. Altitude of gage is 4,355 ft (by barometer). Prior to Mar. 6, 1951, staff gage at site 300 ft downstream at datum 0.27 ft lower.

Average discharge--21 years (1939-60), 61.7 cfs (44,670 acre-ft per year).

Extremes--1938-60: 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, 3.0 cfs July 16, 1960 (gage height, 1.38 ft).

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	48.1	84.4	112	74.9	167	161	124	95.6	28.6	28.3	26.5	29.2	81.1
1952	55.7	83.6	80.0	93.5	99.7	133	280	89.6	32.6	33.4	40.3	25.6	86.7
1953	37.6	80.0	98.0	150	121	104	83.2	47.9	40.8	26.3	21.8	21.2	69.0
1954	30.7	48.7	57.1	59.7	96.2	95.0	54.6	32.4	24.9	23.0	20.5	21.2	46.7
1955	27.5	42.2	53.3	48.7	53.6	93.9	101	50.3	41.7	20.0	23.2	22.2	48.0
1956	27.2	57.3	76.7	79.9	60.2	122	67.1	40.7	22.7	18.3	18.5	17.7	50.8
1957	22.0	36.3	49.1	40.1	81.7	87.7	67.8	80.6	28.3	19.0	18.2	22.1	45.8
1958	25.6	40.9	55.2	44.8	113	112	103	37.9	19.4	17.5	17.2	18.9	50.0
1959	24.1	36.2	47.9	41.5	77.3	61.0	54.2	36.2	21.0	18.5	18.4	17.7	37.7
1960	27.4	27.4	36.9	40.4	48.9	118	51.5	24.1	16.9	11.7	16.6	16.2	36.3

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,960	5,020	6,910	4,600	9,270	9,910	7,350	5,880	1,700	1,740	1,630	1,740	58,710
1952	3,500	4,970	4,920	5,750	5,730	8,170	16,670	5,450	1,940	2,050	2,480	1,530	62,960
1953	2,510	4,760	6,030	3,210	6,730	6,360	4,950	2,940	2,430	1,610	1,340	1,260	49,930
1954	1,890	2,900	3,510	3,670	5,350	5,840	3,250	1,990	1,480	1,420	1,260	1,260	33,820
1955	1,690	2,510	3,270	2,990	2,980	5,780	5,980	3,090	2,480	1,230	1,420	1,320	34,740
1956	1,670	3,410	4,720	4,910	3,460	7,520	3,990	2,510	1,350	1,120	1,140	1,050	36,850
1957	1,350	2,160	3,020	2,460	4,540	5,390	4,040	4,960	1,680	1,170	1,120	1,310	33,200
1958	1,590	2,440	3,390	2,750	6,270	6,900	6,120	2,330	1,150	1,080	1,060	1,120	36,200
1959	1,480	2,270	2,940	2,540	4,290	3,750	3,230	2,230	1,250	1,140	1,130	1,060	27,310
1960	1,680	1,630	2,270	2,480	2,810	7,230	3,070	1,480	1,000	719	1,020	962	26,350

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	81.6	59,110
1951	1214	490	Feb. 10, 1951	23	81.1	58,710	78.8	57,010
1952	1244	389	Apr. 7, 1952	21	86.7	62,960	86.6	62,870
1953	1284	312	Jan. 20, 1953	20	69.0	49,930	62.4	45,150
1954	1344	223	Mar. 10, 1954	19	46.7	33,820	45.6	32,990
1955	1394	180	Mar. 12, 1955	17	48.0	34,740	51.2	37,070
1956	1444	185	(b)	16	50.8	36,850	46.3	33,580
1957	1514	206	May 21, 1957	17	45.8	33,200	47.1	34,090
1958	1564	238	Feb. 26, 1958	15	50.0	36,200	49.0	35,470
1959	1654	172	Feb. 23, 1959	17	37.7	27,310	36.2	26,200
1960	1714	a250	Mar. 10, 1960	3.0	36.3	26,350	-	-

a Maximum daily.

b Mar. 11, 13, 21, 1956.

BEAR RIVER BASIN

1260. Bear River near Corinne, Utah

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

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

Records available.--October 1949 to September 1957.

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

Average discharge.--8 years (1949-57), 1,687 cfs (1,221,000 acre-ft per year).

Extremes.--1949-57: Maximum discharge, 7,200 cfs May 3, 1952 (gage height, 14.69 ft); maximum gage height, 14.83 ft Feb. 11, 1951; minimum discharge, 86 cfs Aug. 18, 1953; minimum daily, 90 cfs Aug. 18, 1953.

Remarks.--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.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,388	2,524	2,708	2,669	3,507	3,062	3,809	3,955	1,673	915	1,455	1,439	2,502
1952	1,936	2,083	2,164	2,423	2,407	2,604	5,697	4,869	2,033	945	1,012	1,203	2,445
1953	1,478	1,768	1,975	2,242	2,035	1,898	2,125	1,708	1,990	178	258	254	1,487
1954	711	1,128	1,124	1,191	1,305	1,508	1,750	505	355	123	113	345	842
1955	716	929	903	1,040	1,025	1,568	2,146	1,593	959	118	169	277	950
1956	745	1,149	1,807	2,122	1,383	2,025	2,783	2,643	752	125	228	255	1,335
1957	761	1,088	1,252	1,218	1,636	2,032	2,227	3,600	2,436	216	462	720	1,469
1958													
1959													
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	146,800	150,200	166,500	164,100	194,800	188,300	226,700	243,200	99,570	56,240	89,450	85,600	1,811,000
1952	119,000	123,900	133,100	149,000	138,400	160,100	339,000	299,400	121,000	58,120	62,240	71,600	1,775,000
1953	90,860	105,200	121,500	137,900	113,000	116,700	126,400	104,900	118,400	10,920	15,860	15,120	1,077,000
1954	43,690	67,130	69,100	73,220	72,490	92,750	104,200	31,040	21,140	7,540	6,970	20,510	609,800
1955	44,010	55,270	55,520	63,970	56,910	96,400	127,700	97,970	55,870	7,280	10,380	16,490	687,800
1956	45,820	68,370	111,100	130,500	79,540	124,500	165,600	162,500	44,720	7,690	14,000	15,150	969,500
1957	46,820	64,750	76,990	74,880	90,840	124,900	132,500	221,300	145,000	13,270	29,620	42,910	1,064,000
1958													
1959													
1960													

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	2,705	1,958,000
1951	1214	7,180	Feb. 11, 1951	203	2,502	1,811,000	2,369	1,715,000
1952	1244	7,200	May 3, 1952	183	2,445	1,775,000	2,364	1,716,000
1953	1284	3,510	June 11, 1953	90	1,487	1,077,000	1,287	939,100
1954	1344	2,570	Apr. 16, 1954	103	842	609,800	807	584,700
1955	1394	2,850	Apr. 20, 1955	101	950	687,800	1,047	758,300
1956	1444	4,130	Dec. 29, 1955	101	1,335	969,500	1,285	932,800
1957	1514	5,080	May 26, 1957	137	1,469	1,064,000	-	-
1958								
1959								
1960								

1264. Box Elder Creek at Mantua, Utah

Location.--Lat 41°28'58", long 111°56'49", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.9 N., R.1 W., on left bank 0.2 mile downstream from Plume Hollow, 0.3 mile upstream from Dunns Hollow, 1 mile south of Mantua, and 1.3 miles upstream from Big Creek.

Drainage area.--14.0 sq mi.

Records available.--April 1959 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,230 ft (from topographic map).

Extremes.--1959-60: Maximum discharge, 34 cfs Apr. 9, 1960 (gage height, 1.53 ft); no flow for many days.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	-	-	-	-	-	3.35	11.9	1.41	0.04	0	0.01	0.14	-
1960	0.07	0.02	0.01	0	0	0.95	11.9	9.71	.81	.23	.13	.10	1.99

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	-	-	-	-	-	-	199	87	2.4	0	0.6	8.1	-
1960	4.2	1.4	0.6	0	0	58	708	597	48	14	7.7	6.0	1,440

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1959	1714	25	Apr. 26, 1959	0	-	-	-	-
1960	1714	34	Apr. 9, 1960	0	1.99	1,440	-	-

1285. Weber River near Oakley, Utah

Location.--Lat 40°44'10", long 111°14'45", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.1 S., R.6 E., on right bank 1.4 miles downstream from South Fork, 2.6 miles upstream from Weber-Provo diversion canal, and $3\frac{1}{4}$ miles northeast of Oakley.

Drainage area.--163 sq mi.

Records available.--October 1904 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--56 years (1904-60), 222 cfs (160,700 acre-ft per year).

Extremes.--1904-60: Maximum discharge observed, 4,170 cfs June 13, 1921 (gage height, 9.0 ft, site and datum then in use), from rating curve extended above 2,000 cfs by logarithmic plotting; minimum recorded, 16 cfs Mar. 12, 1941.

Remarks.--Several small diversions for irrigation above station. Flow slightly regulated by several small lakes on headwaters and a small reservoir on Smith and Morehouse Creek. Total capacity of all reservoirs, about 3,200 acre-ft.

Correction.--In WSP 1314, the runoff in acre-feet for April 1948 is listed in error; it should be 9,100 acre-ft.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	82.9	85.2	74.5	67.7	71.3	66.4	213	714	975	295	145	87.7	240
1952	107	77.2	64.0	56.8	50.0	56.0	260	1,125	1,228	311	152	105	299
1953	86.9	63.7	50.0	51.6	51.2	60.8	128	304	1,097	218	126	65.9	191
1954	56.8	55.3	50	51	54	50	181	617	287	135	73.6	62.9	140
1955	51.3	50.4	45	45	45	40	84.3	662	567	141	91.9	65.5	158
1956	57.7	57.3	72.3	67.7	52.0	74.2	250	905	912	167	97.4	70.0	232
1957	61.2	55.0	40.0	41.8	48.7	52.4	88.9	486	1,322	414	140	92.0	237
1958	73.3	62.6	55.0	50.5	58.4	57.3	105	785	596	125	79.3	59.2	176
1959	49.9	54.1	52.0	47.9	44.6	53.2	127	372	714	160	75.8	59.8	151
1960	99.5	75.3	50.3	45.8	42.7	65.3	189	527	539	123	59.2	44.9	155

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	5,100	5,070	4,580	4,170	3,960	4,080	12,700	43,880	58,020	18,120	8,920	5,220	173,800
1952	6,600	4,600	3,930	3,490	2,880	3,440	15,470	69,160	73,080	19,100	9,350	6,220	217,500
1953	5,350	3,790	3,070	3,180	2,850	3,740	7,620	18,710	65,280	13,400	7,720	3,920	138,600
1954	3,490	3,290	3,070	3,130	2,980	3,070	10,750	37,930	17,060	8,320	4,530	3,740	101,400
1955	3,150	3,000	2,770	2,770	2,500	2,460	5,020	40,690	33,750	8,690	5,650	3,900	114,400
1956	3,550	3,410	4,450	4,160	2,990	4,560	14,870	55,640	54,270	10,270	5,990	4,170	168,300
1957	3,760	3,270	2,480	2,570	2,710	3,220	5,290	29,860	78,690	25,430	8,630	5,470	171,400
1958	4,500	3,720	3,380	3,100	3,240	3,520	6,240	48,250	35,480	7,680	4,880	3,520	127,500
1959	3,070	3,220	3,200	2,950	2,480	3,270	7,530	22,880	42,500	9,860	4,660	3,560	109,200
1960	6,120	4,480	3,090	2,820	2,460	4,010	11,260	32,430	32,090	7,560	3,640	2,670	112,600

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	277	200,800
1951	1214	2,510	May 29, 1951	50	240	173,800	241	174,200
1952	1244	2,280	June 7, 1952	-	299	217,300	295	214,400
1953	1284	2,540	June 14, 1953	-	191	138,600	188	136,300
1954	1344	1,260	May 21, 1954	-	140	101,400	139	100,400
1955	1394	1,550	June 9, 1955	-	158	114,400	161	116,800
1956	1444	1,940	June 2, 1956	-	232	168,300	229	166,400
1957	1514	2,560	June 7, 1957	-	237	171,400	240	173,500
1958	1564	1,740	May 27, 1958	-	176	127,500	173	125,400
1959	1633	1,290	June 16, 1959	35	151	109,200	157	113,400
1960	1714	1,350	June 3, 1960	35	155	112,600	-	-

1290. Weber-Provo diversion canal at Oakley, Utah

Location.--Lat 40°42'30", long 111°16'30", in NW $\frac{1}{4}$ 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 1931 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder with Parshall flume or Cippoletti weir. Altitude of gage is 6,500 ft (from topographic map).

Extremes.--1931-60: Maximum daily discharge, 913 cfs May 21, 1956; no water diverted from Weber River for several months in each year.

Remarks.--Canal diverts water from Weber River in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.21, T.1 S., R.6 E., for irrigation and water supply in Jordan River basin. Figures given herein represent water diverted from main stem of Weber River, some of which may return to Weber River through seepage. For records at outlet of canal see page 112.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	0	16.4	88.5	1.05	0	8.95
1952	0	0	0	0	0	0	0	0	0	56.0	0	0	4.7
1953	0	0	0	0	0	0	0	145	498	43.0	0	0	56.9
1954	0	24.1	38.4	32.0	0	0	69.0	113	2.23	0	0	0	23.4
1955	0	14.4	25.0	31.5	28.0	29.2	65.3	232	196	0	0	0	51.8
1956	0	23.7	53.3	50.6	40.6	46.5	165	439	300	16.4	0	0	94.6
1957	0	14.2	34.0	30.0	4.36	10.9	53.2	322	653	117	0	0	103
1958	8.63	38.4	4.61	0	0	0	89.0	477	210	0	0	0	69.2
1959	0	22.9	26.7	27.0	29.8	32.9	84.5	203	125	0	0	0	46.0
1960	25.3	58.2	22.2	23.3	21.2	35.7	119	238	111	0	0	0	52.8

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	0	974	5,440	64	0	6,480
1952	0	0	0	0	0	0	0	0	0	3,440	0	0	3,440
1953	0	0	0	0	0	0	0	8,990	29,660	2,640	0	0	41,200
1954	0	1,440	2,360	1,970	0	0	4,100	6,950	133	0	0	0	16,950
1955	0	857	1,540	1,940	1,560	1,790	3,890	14,290	11,650	0	0	0	37,520
1956	0	1,410	3,280	3,110	2,330	2,860	9,840	27,000	17,850	1,010	0	0	68,690
1957	0	847	2,090	1,840	242	669	3,170	19,810	38,860	7,220	0	0	74,750
1958	531	2,170	284	0	0	0	5,300	29,330	12,480	0	0	0	50,100
1959	0	1,360	1,640	1,660	1,660	2,030	5,030	12,460	7,440	0	0	0	33,280
1960	1,560	2,280	1,370	1,430	1,220	2,200	7,080	14,610	6,590	0	0	0	38,340

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	8.44	6,110	
1951	1214	246	July 4, 1951	0	8.95	6,480	8.95	6,480	
1952	1244	152	July 10, 1952	0	4.7	3,440	4.7	3,440	
1953	1284	697	June 12, 1953	0	56.9	41,200	62.2	45,000	
1954	1344	316	(a)	0	23.4	16,950	21.5	15,550	
1955	1394	880	June 9, 1955	0	51.8	37,520	55.0	39,810	
1956	1444	913	May 21, 1956	0	94.6	68,690	92.2	66,940	
1957	1514	889	June 3, 1957	0	103	74,750	103	74,800	
1958	1564	822	May 24, 1958	0	69.2	50,100	69.2	50,110	
1959	1634	556	June 3, 1959	0	46.0	33,280	49.0	35,490	
1960	1714	716	May 13, 1960	0	52.8	38,340	-	-	

a May 12, 13, 14, 1954.

1293. Weber River near Peca, Utah

Location.--Lat 40°45'10", long 111°22'20", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.10, T.1 S., R.5 E., on left bank 60 ft downstream from bridge on U. S. Highway 189, 2.4 miles north of Peca, and 3.2 miles upstream from Wanship Dam.

Drainage area.--285 sq mi, approximately.

Records available.--May 1957 to September 1960.

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

Extremes.--1957-60: Maximum discharge, 2,110 cfs June 7, 1957 (gage height, 3.37 ft); minimum recorded, 28 cfs Dec. 29, 1959.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	289	739	261	124	116	-
1958	101	103	114	81.9	126	135	155	410	333	80.8	66.6	63.0	147
1959	59.7	70.8	69.4	56.9	54.9	102	102	143	561	125	75.5	76.7	124
1960	108	83.5	57.7	51.3	46.8	87.6	104	248	370	64.7	53.1	50.3	110

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	17,770	43,980	17,290	7,630	6,890	-
1958	6,180	6,130	7,010	5,040	6,980	8,280	9,240	25,230	19,790	4,970	4,100	3,750	106,700
1959	3,670	4,210	4,270	3,500	3,050	6,260	6,040	8,810	33,370	7,700	4,640	4,570	90,090
1960	6,620	4,970	3,550	3,150	2,690	5,390	6,210	15,250	21,990	3,980	3,260	2,990	80,050

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1957	1514	2,110	June 7, 1957	-	-	-	-	-	-
1958	1564	1,230	June 8, 1958	147	106,700	137	99,530		
1959	1634	1,250	June 16, 1959	42	90,090	129	95,080		
1960	1714	932	June 2, 1960	37	110	80,050	-	-	-

1294. Rockport Reservoir near Wanship, Utah

Location.--Lat 40°47'30", long 111°24'15", in SE $\frac{1}{4}$ sec.29, T.1 N., R.5 E., in powerhouse on downstream side of dam 1.2 miles south of Wanship and $1\frac{1}{4}$ miles upstream from Silver Creek.

Drainage area.--320 sq mi, approximately.

Records available.--February 1957 to September 1960.

Gage.--Mercury gage in powerhouse. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Extremes.--1957-60: Maximum contents observed, 59,260 acre-ft July 1, 1957 (elevation, 6,035.5 ft); minimum observed since storage began, 152 acre-ft Sept. 10, 15, 1959 (elevation, 5,931.2 ft).

Remarks.--Reservoir is formed by earth-fill rock-faced dam; storage began in the fall of 1956; dam completed March 1957. Usable capacity, 60,860 acre-ft between elevations 5,930 (bottom of outlet tunnel) and 6,037 ft (top of spillway) above mean sea level. Dead storage, 1,260 acre-ft below elevation 5,930 ft. Figures given herein represent usable contents. Water is used for irrigation and domestic and industrial purposes.

Cooperation.--Records, not previously published by Geological Survey, furnished by Weber River Water Commission.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1957	-	-	-	-	6,670	400	5,130	21,640	a58,730	a57,810	54,910	50,110
1958	47,500	a49,810	a41,460	40,180	38,540	36,740	21,430	33,170	a38,320	a34,980	27,170	13,320
1959	a13,380	a13,380	a12,440	a10,980	11,220	a11,260	12,340	16,920	29,580	14,510	2,900	a531
1960	a5,340	a8,560	a10,440	a12,210	a13,970	a18,080	a20,840	a27,460	a28,680	a20,460	a11,450	a10,600

a Contents interpolated.

1295. Weber River near Wanship, Utah

Location.--Lat 40°47'30", long 111°24'15", in center of sec.29, T.1 N., R.5 E., on left bank an eighth of a mile downstream from Wanship Dam, 1.2 miles south of Wanship and 1½ miles upstream from Silver Creek.

Drainage area.--320 sq mi, approximately.

Records available.--October 1950 to September 1955, April 1957 to September 1960.

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

Average discharge.--8 years (1950-55, 1957-60), 190 cfs (137,500 acre-ft per year).

Extremes.--1950-55, 1957-60: Maximum discharge, 2,340 cfs May 30, 1951 (gage height, 4.73 ft, site and datum then in use); minimum daily, 0.1 cfs Nov. 17-22, 1957.

Remarks.--Many diversions above station for irrigation. Flow regulated by Rockport Reservoir, formed by Wanship Dam, completed in 1957 (usable capacity, 60,000 acre-ft). Records do not include water diverted from Weber River basin through Weber-Provo diversion canal (see p. 69).

Cooperation.--Records for October 1958 to September 1960, not previously published by Geological Survey, furnished by Weber River Water Commissioner.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	106	149	150	115	128	148	325	847	889	168	133	86.1	271
1952	137	142	119	112	101	112	683	1,448	1,265	231	151	123	385
1953	102	114	110	117	100	155	172	191	590	117	112	67.5	162
1954	65.5	85.9	75.3	88.5	118	137	154	406	236	90.9	61.9	63.7	132
1955	57.5	71.2	58	57	56.9	65.2	131	462	318	95.6	86.3	55.9	127
1956	-	-	-	-	-	-	-	42.3	137	285	159	180	-
1957	-	-	-	-	-	-	-	230	253	120	179	288	203
1958	137	60.6	258	131	160	188	440	230	253	120	179	288	203
1959	53.1	67.8	83.2	91.8	62.7	110	91.6	75.7	322	344	252	109	138
1960	25.2	35.7	33.1	31.2	33.0	71.9	70.1	132	354	188	183	53.8	101

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6,510	8,890	9,230	7,060	7,120	9,110	19,360	52,090	52,920	10,310	8,180	5,120	195,900
1952	8,440	8,450	7,510	6,870	5,800	6,910	40,630	89,020	75,270	14,180	9,280	7,330	279,500
1953	6,250	6,800	6,760	7,210	5,580	9,550	10,200	11,730	35,110	7,220	6,860	4,010	117,300
1954	4,030	5,110	4,630	5,440	6,570	8,440	9,180	24,960	14,040	5,590	3,810	3,790	95,590
1955	3,530	4,230	3,570	3,500	3,160	4,010	7,610	28,490	18,920	5,880	5,310	3,530	91,740
1956	-	-	-	-	-	-	-	2,600	8,130	17,490	9,790	10,710	-
1957	-	-	-	-	-	-	-	2,600	8,130	17,490	9,790	10,710	-
1958	8,410	3,610	15,880	8,080	8,880	11,550	26,180	14,170	15,030	7,360	11,020	17,140	147,300
1959	3,260	4,030	5,120	5,650	3,480	1,770	5,450	4,040	19,130	21,120	15,500	6,490	100,000
1960	1,550	2,120	2,040	1,920	1,900	4,420	4,160	8,100	21,090	11,530	11,280	3,200	73,310

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	-
1951	1214	2,340	May 30, 1951	75	271	195,900	270	195,500
1952	1244	2,240	May 5, 1952	76	385	279,500	379	275,100
1953	1284	1,830	June 14, 1953	52	162	117,300	154	111,200
1954	1344	1,280	May 22, 1954	41	132	95,590	129	95,150
1955	1394	1,320	May 23, 1955	30	127	91,740	-	-
1956	-	-	-	-	-	-	-	-
1957	1514	578	July 3, 1957	-	-	-	-	-
1958	1564	749	Apr. 15-18, 1958	.1	203	147,300	182	131,800
1959	(a)	b602	June 27, 28, 1959	23	138	100,000	129	93,340
1960	(a)	b518	May 29, 30, 1960	22	101	73,310	-	-

a From reports of Weber River Water Commissioner.

b Maximum daily.

1305. Weber River near Coalville, Utah

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

Drainage area--438 sq mi.

Records available--April 1927 to September 1960.

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--29 years (1931-60), 196 cfs (141,900 acre-ft per year), since completion of Weber-Provo diversion canal.

Extremes--1927-60: Maximum discharge, 2,190 cfs May 6, 1952; maximum gage height, 5.08 ft May 29, 1951 (present datum); minimum discharge, 6 cfs Sept. 20, 1934.

Remarks--Many diversions above station for irrigation. No diversion between station and Echo Reservoir. Records do not include water diverted from Weber River basin through Weber-Provo diversion canal (see p. 69). Flow slightly regulated by several small reservoirs above station, and since Apr. 1, 1957, by Rockport Reservoir (usable capacity, 60,000 acre-ft).

Correction--In WSP 1314, the runoff in acre-feet for February 1932 is listed in error; it should be 5,180 acre-ft.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	124	180	174	130	156	186	411	866	889	163	138	78.9	291
1952	156	167	142	136	118	134	866	1,529	1,313	211	148	131	422
1953	112	137	131	150	119	181	206	206	556	90.3	103	61.9	171
1954	75.2	107	91.6	103	131	157	173	366	220	80.2	48.9	57.1	134
1955	62.4	82.1	67.4	64	62	69.1	175	401	298	81.3	81.9	53.9	125
1956	72.7	112	153	95.3	70.0	131	187	453	512	78.0	72.4	38.2	165
1957	71.0	80.8	63.6	20.0	108	265	77.9	73.4	119	274	145	184	124
1958	146	84.9	259	142	177	211	501	253	223	89.7	147	277	209
1959	52.1	85.1	91.1	93.8	67.8	129	113	44.3	313	351	242	116	142
1960	40.3	41.4	38.5	38.8	46.8	108	90.9	90.4	289	151	170	43.6	95.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7,650	10,700	10,670	7,980	8,640	11,450	24,430	53,230	52,870	10,030	8,490	4,700	210,800
1952	9,560	9,920	8,710	8,390	6,760	8,250	52,710	94,000	78,100	12,990	9,130	7,770	306,300
1953	6,900	8,170	8,060	9,240	6,630	11,140	12,270	12,690	33,200	5,550	6,330	3,690	123,900
1954	4,620	6,370	5,630	6,350	7,260	9,640	10,280	22,500	13,070	4,930	3,010	3,400	97,060
1955	3,840	4,890	4,140	3,940	3,440	4,250	10,440	24,680	17,720	5,000	5,030	3,210	90,580
1956	4,470	6,680	9,420	5,860	4,030	8,070	11,140	27,850	30,470	4,800	4,450	2,270	119,500
1957	4,370	4,810	3,910	1,230	5,970	16,280	4,640	4,510	7,080	16,840	8,910	10,970	89,520
1958	9,120	5,050	15,900	8,710	9,840	12,960	29,820	15,550	13,260	5,520	9,020	16,470	151,200
1959	3,200	5,060	5,600	5,770	3,760	7,930	6,710	2,720	18,610	21,580	14,890	6,910	102,700
1960	2,480	2,460	2,250	2,370	2,690	6,640	5,410	5,560	17,220	9,270	10,440	2,580	69,380

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Maximum						
1950	-	-	-	-	-	-	-	-	-
1951	1214	2,110	May 29, 1951	70	291	210,800	285	206,700	-
1952	1244	2,190	May 6, 1952	78	422	306,300	415	301,200	-
1953	1284	1,510	June 14, 1953	45	171	123,900	162	117,400	-
1954	1344	1,200	May 22, 1954	36	134	97,060	129	93,310	-
1955	1394	956	May 24, 1955	28	125	90,580	136	98,280	-
1956	1444	1,180	May 25, 1956	30	165	119,500	154	112,030	-
1957	1514	960	Oct. 20, 1956	13	124	89,520	147	106,500	-
1958	1564	930	Apr. 18, 1958	24	209	151,200	187	135,000	-
1959	1634	708	June 28, 1959	13	142	102,700	133	96,070	-
1960	1714	458	June 7, 1960	16	95.6	69,380	-	-	-

1310. Chalk Creek at Coalville, Utah

Location--Lat 40°55'10", long 111°24'00", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.8, T.2 N., R.5 E., on left bank 100 ft downstream from bridge on U. S. Highway 189 in Coalville and a third of a mile upstream from mouth.

Drainage area--253 sq mi.

Records available--November 1904, March to November 1905, April 1927 to September 1960.

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--33 years (1927-60), 58.2 cfs (42,140 acre-ft per year).

Extremes--1927-60: Maximum discharge, 1,540 cfs Apr. 28, 1952 (gage height, 4.67 ft); minimum, less than 1 cfs for several days in 1934.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	29.4	30.1	26.3	23.7	35.6	32.5	144	317	154	51.4	36.4	14.0	74.7
1952	25.8	20.2	19.6	22.7	21.4	24.5	290	686	290	75.9	34.5	31.1	129
1953	17.3	19.9	21.1	24.7	21.6	30.5	59.5	133	199	36.9	22.8	14.9	50.1
1954	14.2	23.0	17.5	16.9	17.3	23.2	55.8	85.5	39.1	16.7	8.07	13.4	27.6
1955	10.0	14.0	12.1	15.1	15.0	19.2	41.1	169	61.3	14.3	10.8	10.0	32.8
1956	11.8	20.1	27.7	24.0	17.7	39.7	106	303	99.4	24.4	23.4	15.1	59.6
1957	11.4	18.4	19.3	17.5	29.9	26.3	62.9	329	355	74.6	31.4	25.8	85.5
1958	22.5	23.6	23.1	21.4	26.5	26.6	68.7	188	41.4	10.3	8.60	5.98	39.1
1959	5.89	14.0	14.2	12.2	14.7	18.9	62.0	102	64.5	21.2	9.72	18.9	29.8
1960	18.7	13.5	11.9	13.7	17.4	61.2	64.7	129	43.1	9.21	6.32	7.67	34.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,800	1,790	1,620	1,460	1,980	2,000	8,580	19,490	9,160	3,160	2,240	835	54,100
1952	1,590	1,200	1,210	1,400	1,230	1,510	17,270	42,200	17,280	4,670	2,120	1,850	93,530
1953	1,060	1,190	1,300	1,520	1,200	1,880	3,540	8,170	11,830	2,270	1,400	889	36,250
1954	871	1,370	1,070	1,040	962	1,430	3,320	5,260	2,320	1,020	496	795	19,950
1955	615	830	743	930	833	1,180	2,440	10,370	3,650	878	662	598	23,730
1956	724	1,190	1,700	1,470	1,020	2,440	6,310	18,640	5,910	1,500	1,440	897	43,240
1957	700	1,100	1,190	1,080	1,860	1,620	3,740	20,210	21,130	4,590	1,930	1,530	60,480
1958	1,380	1,400	1,420	1,310	1,470	1,630	4,090	11,570	2,460	636	541	356	28,260
1959	362	830	870	751	817	1,160	3,690	6,240	3,840	1,300	597	1,120	21,580
1960	1,150	801	730	843	1,000	4,990	3,850	7,900	2,570	566	389	456	25,240

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	123	89,160
1951	1214	568	May 29, 1951	7.2	74.7	54,100	75.0	52,880
1952	1244	1,540	Apr. 28, 1952	9.8	129	93,530	128	93,080
1953	1284	390	June 11, 1953	9.8	50.1	36,250	49.7	36,010
1954	1344	164	May 10, 1954	6.8	27.6	19,950	26.0	18,830
1955	1394	349	May 8, 1955	5.4	32.8	23,730	34.7	25,160
1956	1444	603	May 22, 1956	8.6	59.6	43,240	58.9	42,620
1957	1514	822	May 19, 1957	8.6	83.5	60,480	85.2	61,690
1958	1564	304	May 12, 1958	5.0	39.1	28,260	36.1	26,120
1959	1634	277	Apr. 4, 1959	4.2	29.8	21,580	30.7	22,200
1960	1714	386	Mar. 27, 1960	4.2	34.8	25,240	-	-

1315. Echo Reservoir at Echo, Utah

Location.--Lat 40°57'50", long 111°26'00", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.3 N., R.5 E., near outlet works at left end of Echo Dam, 1 mile southeast of Echo.

Drainage area.--732 sq mi.

Records available.--October 1930 to September 1960.

Gage.--Staff gage. 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.--1930-60: Maximum contents, 74,540 acre-ft June 16-20, 1956 (elevation, 5,560.4 ft); no storage Sept. 12 to Dec. 3, 1931, Sept. 24 to Nov. 2, 1934, Oct. 12 to Nov. 21, 1944, Oct. 1 to Nov. 15, 1954.

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

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	38,450	42,670	44,730	43,690	45,190	48,160	55,410	69,290	74,240	58,280	49,990	38,400
1952	38,400	38,820	38,720	38,290	35,080	13,320	53,490	64,650	73,940	61,630	46,960	39,680
1953	38,720	38,610	38,820	40,230	40,120	46,250	62,440	73,560	72,400	51,970	32,710	16,020
1954	13,200	18,110	25,150	30,140	30,520	36,620	49,010	53,110	45,660	27,060	8,910	876
1955	0	3,590	8,910	14,270	18,790	27,150	41,330	65,900	66,040	36,520	14,010	4,160
1956	4,230	12,890	24,890	33,400	31,270	36,820	53,870	73,800	68,580	40,010	17,160	8,510
1957	8,600	10,050	16,300	19,240	24,380	36,520	43,690	66,880	73,500	55,920	29,770	22,070
1958	26,440	27,060	34,280	35,700	40,010	44,040	51,100	69,150	60,550	28,670	8,560	11,940
1959	8,860	10,370	16,020	22,640	27,950	38,180	48,520	39,040	31,460	27,590	15,950	7,410
1960	11,540	15,330	19,240	22,960	26,970	40,780	51,970	48,650	45,430	25,490	12,710	5,760

1320. Weber River at Echo, Utah

Location.--Lat 40°57'55", long 111°26'10", in SE 1/4 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 1960.

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.--33 years (1927-60), 268 cfs (194,000 acre-ft per year).

Extremes.--1927-60: Maximum discharge, 3,060 cfs May 13, 1952 (gage height, 7.34 ft); minimum daily, 0.3 cfs Nov. 18-29, 1954, Jan. 18-24, Nov. 4-6, 1955.

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

Cooperation.--Records for October 1958 to September 1960, not previously published by Geological Survey, furnished by Weber River Water Commissioner.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	177	150	170	174	177	197	469	935	976	486	304	286	376
1952	191	183	178	173	214	506	499	2,158	1,492	502	404	280	566
1953	147	173	161	164	149	113	1.61	198	844	463	442	342	267
1954	139	59.1	6.15	55.2	151	90.7	26.5	415	397	390	330	205	189
1955	85.3	58.9	.44	.44	.64	.87	1.12	185	416	588	450	229	169
1956	92.3	1.76	.65	18.0	125	98.1	5.13	450	749	589	453	202	232
1957	95.7	81.8	1.19	1.35	63.7	131	31.3	51.5	382	650	577	328	200
1958	103	113	179	143	130	179	455	146	426	628	495	237	271
1959	113	91.0	33.6	22.9	4.35	4.46	4.74	322	509	441	447	300	192
1960	7.64	.55	.55	.55	.50	.60	3.26	302	402	489	420	177	151

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10,870	8,980	10,460	10,680	9,810	12,140	27,900	57,490	58,080	29,900	18,720	16,990	272,000
1952	11,730	10,890	10,930	10,610	12,300	31,090	29,700	132,700	88,790	30,880	24,840	16,650	411,100
1953	9,020	10,320	9,880	10,100	8,280	6,940	96	12,200	50,210	28,500	27,180	20,370	195,100
1954	8,560	3,520	378	3,400	8,380	5,580	1,570	25,530	23,600	23,980	20,280	12,090	136,800
1955	5,240	3,510	27	26	36	54	67	11,400	24,750	36,130	27,640	15,620	122,500
1956	5,670	105	40	1,100	7,190	6,030	305	27,660	44,550	36,250	27,880	11,990	168,800
1957	5,760	4,870	73	83	3,540	8,070	1,860	3,170	22,710	39,980	35,470	19,490	145,100
1958	6,330	6,750	11,000	8,800	7,240	11,030	27,080	8,980	25,490	38,630	30,470	14,100	195,900
1959	6,980	5,420	2,060	1,410	242	275	282	19,800	39,270	27,140	27,500	17,860	139,200
1960	470	33	34	34	29	37	194	18,580	23,880	30,040	25,800	10,540	109,700

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	471	341,200
1951	1214	2,220	May 30, 1951	27	376	272,000	380	275,300
1952	1244	3,060	May 13, 1952	116	566	411,100	560	406,800
1953	1284	1,870	June 15, 1953	.9	267	193,100	244	176,300
1954	1344	613	May 20, 1954	2.6	189	136,900	184	133,200
1955	1394	691	July 9, 1955	.3	169	122,500	165	119,500
1956	1444	1,620	May 25, 1956	.3	232	168,800	239	173,700
1957	1514	695	July 21, 1957	.7	200	145,100	219	158,500
1958	1564	822	Apr. 15, 1958	13	271	195,900	257	186,300
1959	(a)	b641	May 16, 1959	4.1	192	139,200	173	125,300
1960	(a)	b615	May 26, 1960	.5	151	109,700	-	-

a From reports of Weber River Water Commissioner.

b Maximum daily.

1325. Lost Creek near Croydon, Utah

Location--Lat 41°10'35", long 111°24'20", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.8, T.5 N., R.5 E., on right bank 0.8 mile downstream from Francis Fork, 1.6 miles upstream from Hell Canyon, and 9 $\frac{1}{2}$ miles northeast of Croydon.

Drainage area--133 sq mi.

Records available--February 1921 to December 1923, April 1941 to September 1960.

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--21 years (1921-23, 1941-60), 34.2 cfs (24,760 acre-ft per year).

Extremes--1921-23, 1941-60: Maximum discharge, 770 cfs May 10, 11, 18, 1923 (gage height, 4.20 ft, site and datum then in use), from rating curve extended above 200 cfs; minimum, 3 cfs for several days in 1941-42.

Remarks--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	16.2	21.1	18.7	19.2	23.0	23.5	148	255	67.0	23.8	16.8	14.4	54.0
1952	16.6	15.5	17.6	19.0	20.3	19.1	169	403	95.6	32.5	20.2	16.4	70.6
1953	16.8	16.1	15.4	17.1	16.8	25.3	51.5	83.3	62.6	16.3	10.8	9.53	28.5
1954	11.9	12.7	12.6	13.4	14.3	17.5	52.1	38.3	15.4	8.89	7.55	6.82	17.6
1955	9.19	10.9	10.0	10.1	10.5	13.0	34.9	92.4	29.2	9.65	7.45	6.19	20.4
1956	6.86	7.75	20.3	14.7	15.0	32.0	92.7	109	29.9	11.6	7.99	7.92	29.7
1957	9.86	11.2	12.5	14.0	16.9	20.4	50.5	176	82.0	14.8	9.18	9.50	34.1
1958	12.1	12.2	11.5	9.77	14.1	14.3	51.4	123	24.7	7.62	5.08	5.84	24.4
1959	7.01	10.0	10.2	7.68	7.96	13.5	32.8	43.0	15.9	5.59	4.61	7.92	13.9
1960	8.72	8.01	7.32	7.47	7.60	24.2	51.0	51.3	13.4	5.61	4.69	5.45	16.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	998	1,260	1,150	1,180	1,280	1,450	8,780	15,680	3,980	1,460	1,030	859	39,120
1952	1,020	922	1,080	1,170	1,170	1,170	10,080	24,770	5,690	2,000	1,240	974	51,290
1953	1,040	960	948	1,050	930	1,560	3,080	5,120	3,720	1,000	666	567	20,620
1954	731	758	774	825	793	1,080	3,100	2,350	918	546	464	406	12,740
1955	565	647	617	623	581	799	2,080	5,680	1,740	593	458	368	14,750
1956	422	461	1,250	903	863	1,970	5,520	6,730	1,780	715	492	471	21,580
1957	606	668	771	861	938	1,250	3,010	10,840	3,690	914	563	565	24,680
1958	746	724	706	601	785	877	3,060	7,560	1,470	468	312	347	17,660
1959	431	595	628	472	442	832	1,950	2,640	947	344	284	471	10,040
1960	536	477	450	459	437	1,490	3,030	3,150	797	345	289	324	11,780

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	65.2	47,210
1951	1214	350	May 21, 1951	-	54.0	39,120	53.5	38,720
1952	1244	730	May 6, 1952	-	70.6	51,290	70.5	51,210
1953	1284	-	-	9.1	28.5	20,620	27.5	19,940
1954	1344	89.0	Apr. 24, 1954	5.4	17.6	12,740	17.0	12,310
1955	1394	163	May 8, 1955	5.2	20.4	14,750	20.8	15,060
1956	1444	166	Apr. 23, 1956	-	29.7	21,580	29.6	21,490
1957	1514	290	May 19, 1957	-	34.1	24,680	34.3	24,810
1958	1564	187	May 6, 1958	4.4	24.4	17,660	23.7	17,130
1959	1634	80	May 2, 1959	3.2	13.9	10,040	13.6	9,840
1960	1714	112	May 16, 1960	4.1	16.2	11,780	-	-

1335. Weber River at Devils Slide, Utah

Location.--Lat 41°03'40", long 111°34'25", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.23, T.4 N., R.3 E., on right bank 350 ft downstream from highway underpass on U. S. Highway 30S, $1\frac{1}{2}$ miles west of Devils Slide, and $1\frac{1}{4}$ miles downstream from Lost Creek.

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

Records available.--February 1905 to September 1955.

Gage.--Water-stage recorder. Altitude of gage is 5,300 ft. Prior to Oct. 1, 1934, staff gage at site $1\frac{1}{2}$ miles upstream at different datum.

Average discharge.--50 years (1905-55), 438 cfs (317,100 acre-ft per year).

Extremes.--1905-55: 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.--Many diversions above station for irrigation. Flow regulated by Echo Reservoir (see p. 74).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	217	213	246	234	276	323	957	1,437	1,103	530	371	330	520
1952	248	237	233	232	270	570	1,171	3,222	1,658	560	465	313	766
1953	187	228	209	234	215	204	158	447	942	487	466	356	345
1954	158	89.0	40.7	95.6	203	153	160	463	459	424	356	204	234
1955	113	88.5	28.6	28.0	33.5	59.5	87.4	359	401	595	452	241	208

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	13,360	12,660	15,120	14,400	15,330	19,840	56,950	88,380	65,640	32,590	22,800	19,630	376,700
1952	15,250	14,150	14,340	14,240	14,980	35,050	69,680	198,100	98,670	34,460	28,580	18,610	556,100
1953	11,480	13,590	12,860	14,380	11,930	12,530	9,390	27,470	56,040	29,370	28,640	21,180	249,500
1954	9,720	5,290	2,510	5,760	11,290	9,400	9,550	28,490	27,300	26,050	21,870	12,150	169,400
1955	6,930	5,270	1,760	1,720	1,860	3,660	5,200	22,090	23,870	36,000	27,770	14,320	150,400

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	651	471,500
1951	1214	2,450	May 30, 1951	111	520	376,700	524	379,300
1952	1244	4,810	May 7, 1952	156	766	556,100	758	550,400
1953	1284	1,840	June 15, 1953	92	345	249,500	316	229,000
1954	1344	661	May 21, 1954	35	234	169,400	229	165,800
1955	1394	805	July 25, 1955	23	208	150,400	-	-

WEBER RIVER BASIN

1340. East Canyon Reservoir near Morgan, Utah

Location.--Lat 40°55'20", long 111°35'50", in NE $\frac{1}{4}$ sec.10, T.2 N., R.3 E., on upstream face of concrete dam, 9 miles southeast of Morgan.

Drainage area.--155 sq mi, approximately.

Records available.--October 1931 to September 1960. Prior to October 1937 month-end contents only, published in WSP 1314.

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

Extremes.--1931-60: Maximum contents, 29,170 acre-ft June 2, 1943 (gage height, 141.67 ft); no contents at times in 1931, 1934, 1937, 1946, 1954.

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

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	a12,170	a13,160	15,010	a16,080	17,140	a19,000	a26,480	28,920	28,690	a22,740	a17,420	12,720
1952	a13,120	a13,640	a14,130	a14,590	a14,280	a6,900	25,320	27,860	28,640	a24,250	17,860	a11,890
1953	a10,420	11,620	a12,850	a14,590	a15,900	a18,530	a24,530	28,840	a28,070	a21,110	a14,780	a8,580
1954	a8,690	a10,340	a11,850	13,250	14,440	a16,640	a19,340	19,390	a18,060	a11,090	a3,840	0
1955	876	a1,810	a2,670	a3,650	a4,890	a6,340	a11,620	a16,170	a16,800	14,240	a10,050	3,820
1956	a4,020	a5,260	a7,590	a9,970	a11,550	a15,440	a20,150	a27,210	a28,230	a24,060	a19,230	11,080
1957	a9,710	a10,660	a11,960	a13,050	a14,970	18,250	a24,810	a26,300	28,570	a23,700	a18,010	a14,240
1958	a14,610	a15,810	a15,660	a15,660	a15,690	a17,360	a25,110	a28,700	a27,760	a22,440	17,400	a10,660
1959	a7,450	8,580	a10,090	a11,440	a12,650	a14,980	a17,320	19,090	a18,020	a14,060	a8,740	a7,840
1960	a8,970	a10,010	a10,970	11,980	a13,100	a17,380	a23,410	a26,010	a22,390	16,690	a9,130	a2,430

a No gage-height record for last day of month; contents interpolated.

1345. East Canyon Creek near Morgan, Utah

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

Drainage area.--155 sq mi, approximately.

Records available.--October 1931 to September 1960. Monthly discharge only for October 1931 to September 1937, published in WSP 1314.

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

Average discharge.--29 years (1931-60), 51.0 cfs (36,920 acre-ft per year).

Extremes.--1931-60: Maximum discharge, 872 cfs May 4, 1952 (gage height, 3.49 ft); minimum daily, 1.4 cfs Dec. 18-20, 1954, Dec. 28, 1954, to Jan. 30, 1955.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	59.7	19.9	8.25	8.40	24.7	24.7	69.8	127	79.0	109	103	93.8	60.8
1952	18.9	19.5	20.6	21.2	38.8	131	124	397	138	109	130	126	107
1953	47.9	8.08	8.98	3.59	3.75	4.92	6.80	58.9	109	126	126	116	51.9
1954	18.3	3.71	4.32	4.38	4.59	5.42	7.21	26.0	42.5	127	119	60.7	35.5
1955	9.81	4.85	2.31	1.41	1.80	2.36	3.89	6.56	31.2	54.5	76.7	103	24.9
1956	12.0	3.87	3.67	5.28	5.78	7.21	8.33	10.5	40.9	68.9	82.3	140	32.4
1957	41.2	3.99	3.56	3.95	4.05	6.89	9.68	115	107	102	112	88.8	50.2
1958	13.3	4.80	32.2	33.0	20.9	11.8	78.0	168	83.6	88.7	90.1	123	62.5
1959	64.9	2.87	2.83	2.58	3.19	3.66	4.78	10.6	42.2	89.3	105	33.7	30.8
1960	3.66	3.87	2.52	2.26	2.58	3.67	5.96	13.0	69.1	95.5	133	108	36.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,670	1,190	507	516	1,370	1,520	4,150	7,790	4,700	6,730	6,330	5,580	44,050
1952	1,160	1,160	1,270	1,300	2,230	8,060	7,410	24,430	8,220	6,690	7,970	7,500	77,400
1953	2,950	481	552	221	208	303	405	3,620	6,510	7,720	7,740	6,870	37,580
1954	1,130	221	265	269	255	333	429	1,600	2,530	7,780	7,310	3,610	25,730
1955	603	289	142	87	100	145	232	404	1,850	3,350	4,720	6,110	18,030
1956	740	230	226	325	332	443	496	646	2,430	4,240	5,060	8,340	23,510
1957	2,530	238	219	243	225	424	576	7,070	6,380	6,280	6,870	5,290	36,340
1958	820	285	1,980	2,030	1,160	726	4,640	10,310	4,970	5,450	5,540	7,320	45,230
1959	3,990	171	174	158	177	225	284	654	2,510	5,490	6,440	2,010	22,280
1960	225	230	155	139	148	226	355	797	4,110	5,870	8,150	6,410	26,820

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	76.7	55,530
1951	1214	a188	May 22, 1951	4.2	60.8	44,050	58.4	42,270
1952	1244	872	May 4, 1952	17	107	77,400	107	77,790
1953	1284	280	May 21, 1953	3.2	51.9	37,580	48.7	35,210
1954	1344	166	July 13, 1954	3.2	35.5	25,730	34.7	25,150
1955	1394	158	Sept. 7, 1955	1.4	24.9	18,030	25.1	18,190
1956	1444	154	Sept. 16, 1956	2.2	32.4	23,510	34.9	25,300
1957	1514	257	May 22, 1957	1.8	50.2	36,340	50.3	36,440
1958	1564	211	May 20, 1958	3.6	62.5	45,230	64.2	46,480
1959	1634	140	Aug. 9, 1959	1.8	30.8	22,280	25.6	18,560
1960	1714	177	Sept. 15, 1960	2.2	36.9	26,820	-	-

a Maximum daily.

1350. Hardscrabble Creek near Porterville, Utah

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

Drainage area.--28.1 sq mi.

Records available.--October 1941 to September 1960 in reports of Geological Survey. December 1937 to August 1940 (fragmentary) in files of State engineer's office.

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

Average discharge.--19 years (1941-60), 31.0 cfs (22,440 acre-ft per year).

Extremes.--1941-60: Maximum discharge, 464 cfs Aug. 20, 1945 (gage height, 3.60 ft); minimum recorded, 3.0 cfs Feb. 11, 1944.

Remarks.--A small transbasin canal diverts water from Arthurs Fork, a tributary of Hardscrabble Creek, to Farmington Creek for irrigation in vicinity of Farmington.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.0	12.4	12.3	8.89	15.8	17.5	79.1	150	53.2	20.0	11.9	7.60	33.3
1952	7.94	7.57	7.98	8.0	9.0	9.5	116	259	109	24.6	13.2	9.78	48.6
1953	8.03	7.91	8.00	10.8	8.54	16.7	67.8	142	168	29.4	12.8	8.93	40.8
1954	7.95	8.09	6.91	6.06	5.14	7.77	39.0	41.7	15.3	7.90	4.98	4.68	13.0
1955	5.89	5.85	5.08	5.00	5.29	6.61	28.6	99.5	43.7	11.7	6.37	4.80	19.1
1956	5.85	6.03	14.7	14.3	8.50	23.3	65.0	108	41.0	13.0	7.19	5.66	26.1
1957	6.62	7.45	7.20	6.62	8.93	15.5	46.9	155	124	23.9	10.3	8.56	35.2
1958	8.61	8.33	8.15	6.97	11.5	14.7	71.3	209	58.4	15.2	8.69	6.42	35.8
1959	7.77	8.32	7.48	6.01	6.16	8.86	25.3	47.9	28.3	8.83	5.90	6.85	14.0
1960	8.41	7.69	6.13	5.30	5.6	21.5	60.8	86.4	28.5	9.68	5.70	7.90	21.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	617	740	758	547	879	1,070	4,710	9,200	3,170	1,230	733	452	24,110
1952	488	450	491	492	518	585	6,920	15,950	6,500	1,520	813	582	35,310
1953	494	470	492	666	474	1,030	4,040	8,750	10,010	1,800	787	532	29,540
1954	489	482	425	373	285	478	2,320	2,560	912	486	306	278	9,390
1955	362	348	312	307	294	406	1,700	6,120	2,600	722	392	285	13,850
1956	359	359	906	877	489	1,430	3,870	6,620	2,440	798	442	337	18,930
1957	407	443	443	407	496	956	2,790	9,540	7,400	1,470	632	498	25,480
1958	530	496	501	428	640	904	4,240	12,880	3,480	956	534	382	25,950
1959	478	495	460	370	342	545	1,510	2,940	1,690	543	363	408	10,140
1960	517	458	377	326	322	1,320	3,620	5,310	1,700	595	350	470	15,360

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	42.6	30,830
1951	1214	439	July 28, 1951	6.7	33.3	24,110	32.4	23,420
1952	1244	413	May 4, 1952	6.0	48.6	35,310	48.7	35,340
1953	1284	406	May 20, 1953	-	40.8	29,540	40.7	29,480
1954	1344	64	Apr. 28, 1954	3.5	13.0	9,390	12.5	9,020
1955	1394	149	May 21, 1955	-	19.1	13,850	20.0	14,450
1956	1444	182	Dec. 23, 1955	4.7	26.1	18,930	25.6	18,600
1957	1514	234	June 5, 1957	6.0	35.2	25,480	35.5	25,720
1958	1564	320	May 22, 1958	5.0	35.8	25,950	35.7	25,860
1959	1634	79	May 1, 1959	3.5	14.0	10,140	13.9	10,060
1960	1714	177	May 12, 1960	4.5	21.2	15,360	-	-

1355. East Canyon Creek below diversions, near Morgan, Utah

Location.--Lat 41°02'10", long 111°41'30", in SW¹/₄ 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 1955.

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

Extremes.--1950-55: Maximum discharge, 926 cfs May 8, 1952 (gage height, 9.19 ft); minimum daily, 0.4 cfs Nov. 8, 1953.

Remarks.--Diversions above station for irrigation. Flow regulated by East Canyon Reservoir (see p. 78).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	33.2	19.1	15.0	51.2	50.8	184	292	63.4	84.1	91.7	70.6	-
1952	32.5	26.7	28.0	32.6	49.2	146	298	679	235	71.5	96.5	98.6	150
1953	28.8	4.59	5.60	10.0	12.8	30.8	79.4	208	262	96.2	93.6	88.7	76.1
1954	9.08	1.09	2.00	5.42	7.75	11.5	29.8	6.18	10.2	90.2	88.8	44.3	25.7
1955	14.0	7.86	4.0	3.55	3.46	5.29	30.8	73.1	14.8	16.8	49.8	97.9	26.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	1,980	1,170	922	2,850	3,130	10,930	17,950	3,770	5,170	5,640	4,200	-
1952	2,000	1,590	1,720	2,010	2,830	8,960	17,730	41,770	14,010	4,390	5,930	5,870	108,800
1953	1,770	273	344	617	714	1,280	4,730	12,790	15,590	5,910	5,760	5,280	55,060
1954	559	65	123	333	430	705	1,780	580	605	5,540	5,460	2,640	18,620
1955	863	468	246	218	192	325	1,830	4,490	892	1,030	3,060	5,830	19,430

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1951	1214	382	May 22, 1951	-	-	-	82.7	59,870	
1952	1244	926	May 8, 1952	9.6	150	108,800	146	105,900	
1953	1284	724	May 20, 1953	.8	76.1	55,060	73.8	53,420	
1954	1344	190	July 26, 1954	.4	25.7	18,620	26.9	19,450	
1955	1394	206	May 8, 1955	.7	26.9	19,430	-	-	

1360. Weber River near Morgan, Utah

Location.--Lat 41°03'50", long 111°43'40", in NE $\frac{1}{4}$ sec.21, T.4 N., R.2 E., on right bank 300 ft downstream from Line Creek and 2 $\frac{1}{2}$ miles northwest of Morgan.

Drainage area.--1,500 sq mi, approximately.

Records available.--October 1950 to September 1955.

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.

Average discharge.--5 years (1950-55), 509 cfs (368,500 acre-ft per year).

Extremes.--1950-55: Maximum daily discharge, 6,000 cfs May 5, 6, 1952; minimum daily, less than 50 cfs during December 1954, January and February 1955.

Remarks.--Many diversions above and below station for irrigation. Flow regulated by Echo and East Canyon Reservoirs (see p. 74, 78).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	280	276	308	257	367	424	1,237	1,792	1,192	602	460	428	636
1952	301	273	268	261	306	696	1,617	3,985	1,932	674	586	424	946
1953	231	248	233	261	236	265	320	736	1,267	570	566	461	450
1954	199	132	66.5	110	216	176	224	427	428	490	453	281	267
1955	151	110	48	46	47	93.8	154	416	435	614	509	322	247

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	17,220	16,410	18,930	15,780	20,390	26,050	73,590	110,200	70,930	37,000	28,300	25,470	480,300
1952	19,520	16,260	16,450	16,050	17,610	42,790	96,190	245,100	114,900	41,450	36,020	25,220	686,600
1953	14,210	14,770	14,340	16,070	13,120	16,320	19,020	45,240	75,370	35,070	34,790	27,440	325,800
1954	12,220	7,830	4,090	6,760	11,980	10,820	13,340	26,240	25,460	30,110	27,860	16,700	193,400
1955	9,270	6,560	2,950	2,830	2,610	5,770	9,170	25,560	25,900	37,770	31,330	19,160	178,900

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1951	1214	2,640	May 30, 1951	-	636	460,300	634	458,900
1952	1244	6,000	May 5, 6, 1952	-	946	686,600	935	678,600
1953	1284	2,360	June 16, 1953	185	450	325,800	423	306,600
1954	1344	607	May 21, 1954	-	267	193,400	260	188,000
1955	1394	735	July 25, 1955	-	247	178,900	-	-

a Maximum daily.

1365. Weber River at Gateway, Utah

Location.--Lat 41°08'20", long 111°50'00", in NW 1/4 sec. 27, T.5 N., R.1 E., on right bank 800 ft downstream from Union Pacific Railroad bridge, 2,500 ft downstream from Strawberry Creek, and 2,500 ft east of section house at Gateway.

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

Records available.--November 1889 to June 1893, August 1894 to September 1899, August to November 1900, January to October 1901, July to August 1919, August 1920 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Published as "near Uinta" 1889-1903.

Gage.--Water-stage recorder. Altitude of gage is 4,790 ft (by barometer). Oct. 13, 1889, to July 11, 1903, staff gage at site 1 mile downstream at different datum. June 22, 1919, to Oct. 22, 1929, water-stage recorder at site 2,200 ft upstream at different datum. Oct. 22, 1929, to Oct. 30, 1947, water-stage recorder at site 50 ft downstream at datum 0.80 ft higher. Oct. 31, 1947, to Dec. 9, 1959, at present site at datum 0.80 ft higher.

Extremes.--1889-1901, 1919-60: Maximum discharge observed, 7,980 cfs May 31, 1896; minimum, 45 cfs Sept. 24, 1934.

Remarks.--Many diversions for irrigation above and below station. Flow regulated by Rockport, Echo, and East Canyon Reservoirs (see p. 70, 74, 78). Records of chemical analyses for the period May 1958 to September 1960 and water temperatures for the period August 1958 to September 1960 are published in reports of Geological Survey.

Correction.--In WSP 1314, the runoff in acre-ft for June 1939 is listed in error; it should be 31,620 acre-ft.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	342	364	404	308	472	537	1,637	2,210	1,320	668	521	459	771
1952	343	330	319	300	361	781	2,318	4,798	4,166	747	667	518	1,139
1953	292	308	293	346	304	362	507	1,047	1,564	653	625	516	568
1954	245	163	95.3	148	298	250	388	583	493	519	463	290	328
1955	178	148	86.6	81.2	79.0	149	282	648	545	639	553	380	316
1956	191	109	260	277	271	449	660	1,070	874	666	557	385	482
1957	219	175	108	85.8	277	349	455	1,317	931	677	649	422	472
1958	201	184	288	234	312	407	1,178	1,344	666	668	524	347	530
1959	212	157	104	96.6	91.3	118	200	473	550	437	454	332	270
1960	94.2	60	57.2	53.1	75.9	374	490	565	473	428	381	245	275

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	21,040	21,630	24,840	18,950	26,200	33,030	97,260	135,900	78,570	41,080	32,020	27,330	557,800
1952	21,080	19,610	19,630	18,450	20,780	48,000	137,900	295,000	128,900	45,900	41,040	30,810	827,100
1953	17,970	18,360	18,030	21,260	16,860	22,260	30,170	64,350	92,440	40,170	38,460	30,680	411,000
1954	15,050	9,670	5,860	9,080	16,530	15,390	23,100	35,850	29,330	31,940	29,440	17,250	237,500
1955	10,950	8,840	5,350	4,990	4,390	9,150	16,760	39,870	32,410	39,300	33,990	22,580	228,600
1956	11,760	6,480	15,970	17,000	15,560	27,590	39,280	65,810	52,010	40,960	34,250	22,890	349,600
1957	13,480	10,390	6,650	5,280	14,390	21,440	25,910	81,000	55,400	41,620	39,890	25,130	341,600
1958	12,360	10,950	17,710	14,400	17,310	25,020	70,110	82,640	39,020	41,100	32,190	20,650	383,500
1959	13,020	9,350	6,380	5,940	5,070	7,240	11,920	29,070	32,720	26,850	27,920	19,730	195,200
1960	5,790	3,570	3,520	3,270	4,370	23,010	29,140	34,740	28,160	26,320	23,400	14,560	199,800

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet		
		Discharge	Date							
1950	-	-	-	-	-	-	922	667,600		
1951	1214	2,940	May 30, 1951	280	771	557,800	761	550,700		
1952	1244	7,600	May 5, 1952	-	1,139	827,100	1,131	821,100		
1953	1284	2,520	June 15, 1953	240	568	411,000	535	387,200		
1954	1344	785	May 21, 1954	82	328	237,500	321	232,000		
1955	1394	927	May 10, 1955	-	316	228,600	328	237,600		
1956	1444	3,120	Dec. 23, 1955	89	482	349,600	476	345,900		
1957	1514	2,370	May 19, 1957	70	472	341,600	486	352,100		
1958	1564	2,400	Apr. 18, 1958	114	530	383,500	515	371,200		
1959	1634	820	June 26, 1959	71	270	195,200	248	179,300		
1960	1714	1,530	Mar. 8, 1960	47	275	199,800	-	-		

1375. South Fork Ogden River near Huntsville, Utah

Location--Lat 41°16', long 111°40', in SE $\frac{1}{4}$ sec.12, T.6 N., R.2 E., on right bank half a mile downstream from Maggie Creek, 1 mile upstream from Huntsville Mountain Canal, and $\frac{5}{8}$ miles east of Huntsville.

Drainage area--148 sq mi.

Records available--March 1921 to September 1960.

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--39 years (1921-60), 108 cfs (78,190 acre-ft per year).

Extremes--1921-60: Maximum discharge, 1,890 cfs May 3, 1952 (gage height, 5.98 ft); minimum observed, 20 cfs Nov. 25, 1931, July 28, 1934.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	48.5	55.7	62.2	54.8	90.7	108	543	669	181	74.3	57.1	48.2	166
1952	49.3	48.1	48.8	50.0	51.7	64.2	568	872	214	85.1	61.7	52.8	181
1953	50.0	49.2	45.9	53.2	49.0	83.5	202	347	284	71.7	49.4	43.3	111
1954	43.0	42.6	41.6	44.9	44.1	61.7	237	179	65.1	42.8	36.4	34.8	72.7
1955	36.1	38.5	36.5	35.6	35.1	49.7	154	396	117	50.3	40.9	35.1	85.8
1956	37.2	39.1	101	80.9	57.9	127	373	405	118	57.8	45.0	40.2	124
1957	42.5	41.7	41.8	38.6	57.5	85.8	178	642	278	76.9	49.6	42.8	132
1958	42.6	42.2	41.5	39.6	60.9	80.3	222	501	105	47.1	38.3	36.3	105
1959	56.7	40.7	40.3	37.4	40.5	52.8	125	176	76.0	37.7	34.5	35.5	61.1
1960	38.2	38.3	34.8	32.5	33.7	90.1	218	244	62.1	35.9	32.4	33.1	74.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,980	3,320	3,820	3,370	5,040	6,630	32,330	41,110	10,760	4,570	3,510	2,870	120,300
1952	3,030	2,860	3,000	3,070	2,970	3,950	33,780	53,610	12,730	5,230	3,800	3,140	131,200
1953	3,070	2,930	2,820	3,270	2,720	5,130	12,040	21,340	16,900	4,410	3,040	2,580	80,250
1954	2,650	2,530	2,560	2,760	2,450	3,790	14,080	10,990	3,870	2,630	2,240	2,070	52,620
1955	2,220	2,290	2,250	2,190	1,950	3,050	9,180	24,360	6,960	3,090	2,520	2,090	62,130
1956	2,280	2,330	6,240	4,970	3,330	7,820	22,200	24,910	7,050	3,560	2,760	2,390	89,840
1957	2,610	2,480	2,570	2,380	3,190	5,270	10,600	39,450	16,560	4,730	3,050	2,550	95,440
1958	2,620	2,510	2,550	2,430	3,380	4,940	15,230	30,820	6,230	2,890	2,350	2,160	76,110
1959	2,260	2,420	2,480	2,300	2,250	3,250	7,420	10,820	4,520	2,320	2,120	2,110	44,270
1960	2,350	2,280	2,140	2,000	1,940	5,540	12,970	15,010	3,700	2,210	1,990	1,970	54,100

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	168	-	121,300
1951	1214	1,000	May 12, 1951	45	166	120,300	164	-	119,100
1952	1244	1,890	May 3, 1952	43	181	131,200	181	-	131,100
1953	1284	611	May 29, 1953	40	111	80,250	109	-	79,170
1954	1344	409	Apr. 25, 1954	33	72.7	52,620	71.3	-	51,640
1955	1394	788	May 6, 1955	-	85.8	62,130	91.5	-	66,220
1956	1444	678	Dec. 24, 1955	35	124	89,840	119	-	86,650
1957	1514	969	May 19, 1957	-	132	95,440	132	-	95,460
1958	1564	870	May 6, 1958	34	105	76,110	104	-	75,590
1959	1634	329	May 2, 1959	30	61.1	44,270	60.6	-	43,880
1960	1714	458	May 11, 1960	29	74.0	54,100	-	-	-

1376. South Fork Ogden River at Huntsville, Utah

Location--Lat 41°14'50", long 111°45'45", in NE $\frac{1}{4}$ sec.19, T.6 N., R.2 E., on right banks of North and South Branches, both about 75 ft downstream from highway bridges, 1 mile southeast of Huntsville Post Office, and 4 $\frac{1}{4}$ miles upstream from Pine View Dam.

Drainage area--170 sq mi, approximately.

Records available--October 1959 to September 1960 in reports of Geological Survey. 1937-57 (seasonal records only for some years) in reports of Ogden River water commissioner.

Gage--Water-stage recorders and concrete controls. Altitude of gages is 4,910 ft (from topographic map).

Extremes--1959-60: Maximum discharge, 462 cfs May 11, 1960; minimum daily, 4.2 cfs Sept. 28-30, 1960.

Remarks--Diversions for irrigation above station. Records represent combined flow at gaging stations on North and South Branches.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	10	9.82	14.0	18.1	24.0	103	244	213	25.4	10.4	6.27	5.14	56.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	615	585	861	1,110	1,380	6,300	14,500	13,080	1,510	637	386	306	41,270

1377. North Fork Ogden River near Huntsville, Utah

Location--Lat 41°17'40", long 111°49'40", in SW $\frac{1}{4}$ sec.4, T 7 N., R.1 E., on left bank 75 ft downstream from bridge on State Highway 162, half a mile downstream from Grover Hollow, 3 $\frac{1}{2}$ miles northwest of Huntsville, and 4 miles upstream from Pine View Dam.

Drainage area--61 sq mi, approximately.

Records available--October 1959 to September 1960.

Gage--Water-stage recorder and concrete control. Datum of gage is 4,902.78 ft above mean sea level, datum of 1929.

Extremes--1959-60: Maximum discharge, 312 cfs Apr. 10, 1960; maximum gage height, 3.47 ft May 13, 1960; no flow for many days.

Remarks--Many diversions for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	0	0	0	0	0	45.8	173	136	7.18	2.15	0.52	0.003	30.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	0	0	0	0	0	2,820	10,290	8,390	427	132	3.2	0.2	22,090

1378. Middle Fork Ogden River at Huntsville, Utah

Location.--Lat 41°17'15", long 111°46'35", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1, T.6N., R.1 E., on left bank 20 ft downstream from bridge on State Highway 162 and $\frac{1}{2}$ miles north of Huntsville.

Drainage area.--32 sq mi, approximately.

Records available.--April 1958 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 4,915.41 ft above mean sea level, datum of 1929 (levels by Bureau of Reclamation).

Extremes.--1958-60: Maximum discharge, 450 cfs May 5, 1958 (gage height, 2.72 ft); no flow at times in each year.

Remarks.--Diversions above station during irrigation season only. Two main diversions for irrigation at mouth of Middle Fork Canyon take entire flow in late summer and fall.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	103	194	3.83	0.21	0	0	-
1959	0	0.55	0.06	0	0	5.05	58.0	41.1	1.54	.27	0	.09	8.89
1960	1.13	.35	.03	0	0	27.6	112	96.9	1.57	.18	0	0	20.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	6,110	11,950	228	13	0	0	-
1959	0	33	4.0	0	0	311	3,450	2,530	92	16	0	5.4	6,440
1960	69	21	2.0	0	0	1,700	6,650	5,960	93	11	0	0	14,510

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1958	1564	450	May 5, 1958	-	-	-	-	-
1959	1634	175	Apr. 26, 1959	0	8.89	6,440	8.97	6,500
1960	1714	273	May 10, 1960	0	20.0	14,510	-	-

1379. Spring Creek at Huntsville, Utah

Location.--Lat 41°15'55", long 111°45'55", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.7, T.6N., R.2 E., on left bank at north edge of Huntsville.

Drainage area.--7.2 sq mi, approximately.

Records available.--April 1958 to September 1960.

Gage.--Water-stage recorder and Parshall flume. Datum of gage is 4,902.99 ft above mean sea level, datum of 1929 (levels by Bureau of Reclamation).

Extremes.--1958-60: Maximum discharge, 101 cfs Mar. 28, 1960 (gage height, 2.13 ft); minimum, 3.0 cfs Sept. 8, 11, 12, 1959.

Remarks.--Diversions and return flow above station for a trout-fishing farm, which causes minor regulation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	13.5	16.5	7.55	6.04	5.78	-
1959	6.45	6.62	7.37	7.72	7.38	9.61	9.87	13.7	15.3	9.25	5.11	5.25	6.81
1960	6.58	6.14	6.12	6.45	7.58	21.2	14.1	13.2	12.8	5.69	4.50	4.45	9.07

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	188	831	984	464	371	344	-
1959	397	513	453	475	410	591	588	841	912	569	314	312	6,380
1960	404	365	376	436	436	1,300	839	811	759	350	277	265	6,580

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1958	1564	28	June 12, 1958	-	-	-	-	-
1959	1634	55	Mar. 13, 1959	3.2	8.81	6,380	8.51	6,160
1960	1714	101	Mar. 28, 1960	3.7	9.07	6,580	-	-

1390. Pine View Reservoir near Ogden, Utah

Location.--Lat 41°15'20", long 111°50'25", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.16, T.6 N., R.1 E., at trashrack at Pine View Dam on Ogden River, 7 miles northeast of Ogden.

Drainage area.--310 sq mi, approximately.

Records available.--November 1936 to September 1960.

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

Extremes.--1936-60: Maximum contents, 85,380 acre-ft May 21, 22, 1960 (elevation, 4,891.0 ft); minimum, 4 acre-ft Jan. 10, 1957 (elevation, 4,819.1 ft).

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

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	14,220	17,700	21,110	17,910	17,520	10,490	26,670	43,160	39,850	28,750	21,260	13,650
1952	12,190	13,480	8,400	3,530	1,580	2,710	34,780	42,410	43,820	32,920	22,040	13,480
1953	10,320	10,000	10,080	11,930	13,860	18,540	36,690	44,180	41,540	29,500	17,770	8,660
1954	2,020	1,040	655	1,650	5,900	10,080	30,810	35,250	29,640	20,250	10,000	4,140
1955	3,730	4,350	4,900	4,730	3,480	4,620	19,440	44,180	39,660	27,520	16,070	7,680
1956	6,400	3,150	10,820	20,950	18,210	4,290	32,920	44,180	38,000	26,290	13,860	6,020
1957	30	46	44	632	6,340	15,040	17,770	51,420	53,910	41,780	28,500	20,130
1958	18,880	19,670	15,450	12,470	12,190	4,780	19,330	52,790	46,900	34,460	21,670	13,100
1959	11,400	12,020	11,840	12,920	15,960	21,670	33,540	39,660	33,290	19,330	9,890	5,010
1960	4,950	5,960	7,680	9,880	12,280	29,360	63,850	84,610	65,050	40,000	20,020	8,980

1393. Wheeler Creek near Huntsville, Utah

Location.--Lat 41°15'15", long 111°50'35", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.16, T.6 N., R.1 E., on right bank 150 ft upstream from mouth, 150 ft downstream from culvert under State Highway 39, 250 ft downstream from Pine View Dam on Ogden River, 3 $\frac{1}{2}$ miles west of Huntsville, and 6 miles northeast of Ogden.

Drainage area.--11.1 sq mi.

Records available.--October 1958 to September 1960.

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

Extremes.--1958-60: Maximum discharge, 51 cfs Apr. 6, 1960 (gage height, 2.10 ft, from graph based on partial gage-height record); minimum daily, 0.2 cfs for several days in 1960.

Remarks.--Records include flow diverted around station by City of Ogden pipeline.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	0.70	0.74	0.72	0.81	0.66	1.58	8.51	8.81	7.49	0.85	0.70	0.70	2.69
1960	.85	.58	.51	.33	.34	7.22	18.0	19.1	10.7	2.33	1.57	1.13	5.27

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	43	44	44	50	37	97	506	542	446	52	43	42	1,950
1960	52	35	31	20	19	444	1,070	1,170	636	180	96	67	3,820

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1959	1714	45	Apr. 27, 1959	0.4	2.69	1,950	2.67	1,930	
1960	1714	51	Apr. 6, 1960	.2	5.27	3,820	-	-	

1395. Ogden River near Ogden, Utah

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

Drainage area.--321 sq mi.

Records available.--January 1904 to September 1912, October 1931 to September 1959.

Monthly discharge only October 1937 to September 1959.

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

Average discharge.--36 years (1904-12, 1931-59), 245 cfs (combined flow of river and pipeline, unadjusted for storage in Pine View Reservoir).

Extremes.--1904-12, 1932-59: Maximum combined daily discharge (flow in river and pipeline) 3,430 cfs Apr. 23, 1936; no flow Nov. 19, 20, 22, Dec. 15, 1936, when reservoir gates were closed. For river only, momentary maximum discharge, 3,700 cfs Apr. 24, 1936 (gage height, 11.48 ft), when pipeline was not in operation.

Remarks.--Records give combined flow of river and Pine View pipeline which diverts water above station for irrigation and power development. Pipeline has diverted at Pine View Dam since its construction in 1936, and at a small diversion dam at about the same site prior to that. Records do not include diversions for culinary use by the City of Ogden at Pine View Dam and an unmeasured discharge from pipeline which spills at No. 7 tunnel near mouth of canyon; this discharge is estimated to have been 1 or 2 cfs since 1945 and much higher prior to 1945. Flow of river affected by storage in Pine View Reservoir (see p. 88) beginning November 1936 and by diversions for irrigation and municipal supply above Pine View Reservoir.

Cooperation.--Records for Pine View pipeline from reports of Ogden River Water Commissioner.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	77.4	63.0	149	195	288	469	957	1,047	320	278	216	178	353
1952	89.4	72.8	178	185	148	141	1,156	1,636	337	288	243	190	390
1953	103	57.6	55.6	56.9	72.6	164	260	637	668	290	268	215	238
1954	124	77.3	49.5	52.4	23.5	85.5	129	193	197	201	203	125	122
1955	43.6	32.2	27.7	50.4	76.0	107	145	343	251	258	230	177	146
1956	63.3	108	157	147	238	559	239	550	274	259	240	163	250
1957	144	44.1	52.5	51.5	61.5	74.6	363	651	418	290	275	190	217
1958	75.0	51.6	145	119	153	400	547	613	287	278	265	184	260
1959	69.2	43.7	55.0	47.7	16.6	17.5	58.9	167	212	282	192	116	107
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,760	3,750	9,160	12,020	16,000	28,850	56,940	64,390	19,060	17,110	13,280	10,590	255,900
1952	5,490	4,330	10,940	11,400	8,540	8,670	68,760	100,600	20,040	17,730	14,960	11,320	282,800
1953	6,310	3,430	3,420	3,500	4,030	10,100	15,470	39,150	39,740	17,820	16,490	12,780	172,200
1954	7,610	4,600	3,040	3,220	1,300	5,260	7,660	11,860	11,720	12,370	12,490	7,430	88,550
1955	2,680	1,920	1,700	3,100	4,220	6,610	8,620	21,100	14,940	15,860	14,130	10,500	105,400
1956	3,890	6,430	9,670	9,060	13,690	34,370	14,210	33,830	16,280	15,900	14,780	9,700	181,800
1957	8,860	2,620	3,230	3,170	3,400	4,590	21,620	38,780	24,850	17,840	16,900	11,280	157,100
1958	4,610	3,070	8,790	7,320	8,520	24,570	32,530	37,690	17,090	17,090	16,140	10,940	188,400
1959	4,260	2,600	3,380	2,940	923	1,080	3,500	10,270	12,610	17,370	11,820	6,920	77,670
1960													

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	349	252,900
1951	-	-	-	-	353	255,900	358	259,000
1952	-	-	-	-	390	282,800	379	275,200
1953	-	-	-	-	238	172,200	241	174,300
1954	-	-	-	-	122	88,550	110	79,600
1955	-	-	-	-	146	105,400	164	119,100
1956	-	-	-	-	250	181,800	243	176,500
1957	-	-	-	-	217	157,100	219	158,900
1958	-	-	-	-	260	188,400	252	182,100
1959	-	-	-	-	107	77,670	-	-
1960	-	-	-	-	-	-	-	-

1410. Weber River near Plain City, Utah

Location.--Lat 41°16'42", long 112°05'30", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.8, T.6 N., R.2 W., on right bank at highway bridge, 1 mile downstream from Fourmile Creek, $\frac{1}{2}$ miles south of Plain City, and 6 miles upstream from mouth.

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

Records available.--January 1904 to September 1960. January 1904 to May 1905 monthly discharge only, published in WSP 1314.

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. 23, 1949, chain gage, at same site and datum.

Extremes.--1904-60: 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.--During summer months practically entire flow is diverted above station for irrigation. Flow regulated by Rockport, Echo, East Canyon, and Pine View Reservoirs (see elsewhere in this report). Records of chemical analyses and water temperatures for the period June 1959 to September 1960 are published in reports of Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	270	455	657	595	874	1,080	2,644	3,155	884	82.9	170	83.0	912
1952	393	398	517	553	630	1,052	3,466	6,201	1,825	188	96.0	79.8	1,285
1953	116	344	407	525	457	586	861	1,421	1,672	62.4	52.3	68.4	546
1954	140	243	212	260	351	385	380	34.7	33.8	30.2	18.0	32.7	175
1955	110	209	168	158	203	408	537	497	176	52.3	40.1	54.8	217
1956	118	249	495	544	570	1,110	789	1,050	344	38.4	22.7	27.4	444
1957	182	248	229	186	429	504	837	1,883	892	67.6	47.2	73.9	485
1958	156	253	474	391	547	856	1,780	1,471	47.5	35.0	37.3	52.8	508
1959	79.6	226	209	208	187	205	289	103	38.5	21.2	16.2	104	140
1960	156	129	108	121	168	518	531	162	39.0	19.1	42.5	53.7	170

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	16,590	27,080	40,420	36,600	48,570	66,380	157,300	194,000	52,630	5,100	10,480	4,940	660,100
1952	24,180	23,670	31,790	34,020	36,230	64,660	206,200	581,300	106,600	11,570	5,900	4,750	932,900
1953	7,160	20,440	25,000	32,270	25,350	36,060	51,260	87,390	99,470	3,840	3,220	4,070	395,500
1954	8,610	14,450	13,030	16,000	19,520	23,680	22,610	2,140	2,010	1,860	1,100	1,940	127,000
1955	6,780	12,450	10,340	9,710	11,280	24,990	31,960	30,550	10,460	3,210	2,470	3,260	157,500
1956	7,240	14,820	30,470	33,460	32,780	67,350	45,770	64,450	20,500	2,360	1,390	1,630	322,200
1957	11,200	14,750	14,050	11,420	23,840	30,960	49,790	115,800	53,070	4,160	2,900	4,400	336,300
1958	9,600	15,070	29,130	24,010	30,360	52,610	105,900	90,430	2,830	2,150	2,290	3,140	367,500
1959	4,890	13,460	12,870	12,780	10,370	12,630	17,200	6,340	2,290	1,300	994	6,160	101,300
1960	9,610	7,660	6,660	7,410	9,680	31,820	31,590	9,950	2,320	1,170	2,610	3,200	123,700

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	1,017	735,900
1951	1214	3,860	May 8, 1951	37	912	660,100	906	655,600
1952	1244	10,100	May 6, 1952	48	1,285	932,900	1,248	905,800
1953	1284	3,340	May 21, 1953	38	546	395,500	524	379,000
1954	1344	679	Apr. 19, 1954	7.7	175	127,000	166	120,400
1955	1394	976	May 9, 1955	21	217	157,500	249	180,400
1956	1444	2,610	Dec. 24, 1955	13	444	322,200	427	309,700
1957	1514	3,390	May 22, 1957	15	465	336,300	484	350,100
1958	1564	3,360	Apr. 19, 1958	23	508	367,500	476	344,900
1959	1634	707	Apr. 27, 1959	5.0	140	101,300	130	93,900
1960	1714	1,680	Mar. 9, 1960	13	170	123,700	-	-

1415. 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.

Drainage area.--2.49 sq mi.

Records available.--May 1950 to September 1960.

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

Average discharge.--10 years (1950-60), 3.69 cfs (2,670 acre-ft per year).

Extremes.--1950-60: Maximum discharge, 36 cfs May 3, 1952 (gage height, 1.13 ft); maximum gage height, 1.71 ft Jan. 17, 1960 (backwater from ice); no flow for part of several days in 1951, 1955.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.13	2.42	2.25	1.75	2.58	2.51	7.24	16.5	7.46	3.54	2.62	2.07	4.45
1952	2.18	2.22	1.88	1.61	2.02	2.12	13.1	19.7	9.73	4.28	3.54	2.55	5.45
1953	2.31	2.12	2.02	2.83	2.20	2.89	5.85	8.98	14.0	4.21	2.79	2.18	4.37
1954	2.03	2.03	1.78	1.83	1.91	1.87	3.32	3.63	2.36	1.61	1.19	1.15	2.06
1955	1.33	1.55	1.49	1.32	1.49	2.00	3.78	8.29	5.29	2.35	1.84	1.60	2.70
1956	1.75	1.81	2.38	2.66	1.84	2.94	4.36	7.60	4.42	2.46	2.00	1.73	3.00
1957	1.71	1.86	1.83	1.68	1.83	2.39	4.14	14.3	15.0	5.19	3.16	2.45	4.64
1958	2.47	2.04	2.22	1.82	2.80	3.00	6.62	18.8	8.28	3.71	2.64	2.35	4.75
1959	2.01	2.32	2.08	1.58	1.58	2.00	3.07	4.83	3.38	1.95	1.49	1.65	2.35
1960	1.65	1.48	1.47	1.52	1.55	3.49	8.08	9.27	3.84	2.52	1.95	1.52	3.20

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	131	144	139	107	143	155	431	1,010	444	218	161	123	3,210
1952	134	132	115	111	116	131	780	1,210	579	263	217	152	3,940
1953	142	126	124	174	122	178	348	552	835	259	172	130	3,160
1954	125	121	110	113	106	115	198	223	140	99	73	68	1,490
1955	82	92	92	81	83	123	225	510	315	144	113	95	1,960
1956	108	108	146	164	106	181	259	467	263	151	123	103	2,180
1957	105	111	112	103	102	147	246	679	891	319	195	146	3,360
1958	152	121	136	112	156	185	394	1,160	493	228	162	140	3,440
1959	123	138	128	97	88	123	182	297	201	120	92	98	1,690
1960	101	88	90	93	89	215	481	570	228	155	120	91	2,320

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1214	22	May 23, 1951	0.5	4.45	3,210	4.39	3,170	
1952	1244	36	May 3, 1952	1.6	5.43	3,940	5.45	3,950	
1953	1284	27	June 10, 1953	1.8	4.37	3,160	4.32	3,130	
1954	1344	6.2	(b)	1.0	2.06	1,490	1.93	1,400	
1955	1394	11	May 8, 1955	1.1	2.70	1,960	2.83	2,050	
1956	1444	21	July 28, 1956	1.4	3.00	2,180	2.95	2,140	
1957	1514	28	June 5, 1957	1.4	4.64	3,360	4.75	3,440	
1958	1564	33	May 24, 1958	1.7	4.75	3,440	4.72	3,420	
1959	1634	a7.5	May 18, 1959	1.3	2.33	1,690	2.18	1,580	
1960	1714	15	May 13, 1960	1.3	3.20	2,320	-	-	

a Maximum daily.

b Apr. 14, May 21, 1954.

1420. Farmington Creek above diversions, near Farmington, Utah

Location.--Lat 41°00'05", long 111°52'25", in NE $\frac{1}{4}$ sec.18, T.3 N., R.1 E., on right bank 1.0 mile northeast of Farmington.

Drainage area.--10.0 sq mi.

Records available.--October 1949 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

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

Average discharge.--11 years (1949-60), 12.6 cfs (9,120 acre-ft per year).

Extremes.--1949-60: Maximum discharge, 282 cfs May 20, 1958 (gage height, 1.86 ft); minimum, 0.9 cfs Aug. 25, 30, 31, 1954.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.54	5.69	4.92	4.29	6.69	6.22	34.6	75.4	39.7	9.93	5.83	3.85	16.8
1952	4.13	3.42	3.76	3.84	3.71	4.72	38.2	102	49.1	12.0	4.81	3.35	19.4
1953	2.95	2.93	3.66	4.92	4.16	6.17	13.6	44.4	67.6	12.1	5.14	2.59	14.2
1954	3.28	3.81	4.49	3.15	4.17	4.79	21.0	22.8	7.75	2.73	1.72	1.48	6.77
1955	2.07	2.67	2.21	2.13	2.48	3.82	12.0	50.7	18.5	4.02	2.11	1.90	8.76
1956	2.36	2.67	6.49	7.22	4.69	7.53	29.7	45.2	17.5	4.59	2.16	2.07	11.0
1957	2.38	2.52	2.76	2.55	3.56	4.81	11.5	61.1	52.4	13.6	4.54	3.14	13.6
1958	3.27	3.53	3.42	3.13	4.45	5.13	21.3	121	25.8	6.78	2.77	2.49	17.1
1959	2.64	3.16	2.95	2.80	2.84	4.28	15.1	28.5	15.5	3.58	2.00	2.45	7.16
1960	2.95	2.27	2.03	2.18	2.26	7.39	21.9	37.4	12.6	3.35	1.70	1.66	8.16

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	218	339	302	264	372	382	2,060	4,640	2,360	611	358	229	12,140
1952	254	204	231	236	213	290	2,270	6,250	2,920	740	296	199	14,100
1953	182	174	225	302	231	380	809	2,730	4,020	744	316	154	10,270
1954	202	227	276	194	232	295	1,250	1,400	461	166	106	88	4,900
1955	127	159	136	131	138	235	712	3,120	1,100	247	130	113	6,350
1956	145	159	399	444	270	463	1,770	2,780	1,040	282	133	123	8,010
1957	146	150	170	157	198	298	685	3,760	3,120	847	279	187	10,000
1958	201	210	210	192	247	315	1,260	7,450	1,530	418	171	148	12,350
1959	162	188	181	172	157	263	897	1,750	920	220	123	146	5,180
1960	182	135	125	134	130	455	1,310	2,300	748	206	105	99	5,930

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	15.6	11,300
1951	1214	126	May 20, 1951	3.1	16.8	12,140	16.5	11,960
1952	1244	150	May 6, 1952	2.4	19.4	14,100	19.3	14,000
1953	1284	157	May 19, 1953	1.5	14.2	10,270	14.4	10,390
1954	1344	43	Apr. 18, 1954	1.1	6.77	4,900	6.37	4,620
1955	1394	120	May 10, 1955	1.4	8.76	6,350	9.15	6,630
1956	1444	83	Apr. 26, 1956	1.9	11.0	8,010	10.7	7,770
1957	1514	169	May 19, 1957	1.9	13.8	10,000	14.0	10,150
1958	1564	282	May 20, 1958	2.1	17.1	12,350	17.0	12,260
1959	1634	80	May 1, 1959	1.4	7.16	5,180	7.04	5,090
1960	1714	99	May 8, 1960	1.4	8.16	5,930	-	-

1425. Ricks Creek above diversions, near Centerville, Utah

Location.--Lat 40°56'25", long 111°52'00", in NW $\frac{1}{4}$ sec.5, T.2 N., R.1 E., on left bank half a mile east of alternate U. S. Highway 91 and 1.2 miles north of Centerville.

Drainage area.--2.35 sq mi.

Records available.--April 1950 to September 1960.

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

Average discharge.--10 years (1950-60), 2.25 cfs (1,630 acre-ft per year).

Extremes.--1950-60: Maximum discharge, 34 cfs May 22, 1958 (gage height, 1.32 ft); minimum, 0.1 cfs Apr. 9, 1953, Feb. 3, 1955, Jan. 19, 1958, January or February 1959.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.23	1.27	1.02	1.17	1.54	1.63	3.57	12.4	4.74	2.01	1.36	0.99	2.76
1952	.91	.93	.85	.83	.93	1.11	6.67	19.4	6.88	2.57	1.57	1.07	3.65
1953	.96	.98	.75	1.02	.82	1.20	3.21	8.14	13.9	2.49	1.39	.95	2.98
1954	.97	.88	.79	.79	.73	1.01	2.23	2.84	1.42	.85	.58	.42	1.13
1955	.54	.67	.50	.48	.51	.72	1.90	7.04	3.40	1.39	.91	.61	1.55
1956	.75	.92	.95	1.03	.75	1.33	3.27	7.63	3.23	1.29	.99	.74	1.91
1957	.83	.76	.84	.65	.82	1.15	2.20	10.5	10.9	2.88	1.29	.90	2.82
1958	.95	.79	.78	.54	.77	1.02	3.37	14.7	4.43	1.70	1.03	.82	2.59
1959	.90	.88	.65	.68	.78	.89	1.69	4.50	2.24	1.00	.91	.75	1.32
1960	.75	.51	.60	.63	.55	1.47	4.53	7.97	2.17	1.05	.62	.68	1.80

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	76	78	62	72	95	100	212	785	282	124	94	59	2,000
1952	56	55	52	51	54	68	337	1,190	409	158	97	63	2,650
1953	59	58	46	63	45	74	191	501	827	153	85	57	2,160
1954	60	52	49	49	40	62	133	175	84	52	36	25	817
1955	33	40	31	30	28	44	113	433	202	85	50	36	1,120
1956	46	55	58	63	43	82	195	469	192	80	61	44	1,390
1957	51	45	52	40	48	71	131	644	651	177	80	53	2,040
1958	58	47	48	33	43	63	201	902	264	105	63	49	1,880
1959	55	52	40	42	43	55	100	276	133	61	56	45	958
1960	46	30	37	39	32	90	269	490	123	64	38	40	1,300

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	-
1951	1214	20	May 22, 1951	0.9	2.76	2,000	2.69	1,950
1952	1244	31	May 15, 1952	.6	3.65	2,650	3.65	2,650
1953	1284	29	June 6, 1953	.6	2.98	2,160	2.98	2,160
1954	1344	4.0	Apr. 28, 1954	.4	1.13	817	1.05	760
1955	1394	10	May 15, 1955	.3	1.55	1,120	1.63	1,180
1956	1444	23	May 27, 1956	.6	1.91	1,390	1.90	1,380
1957	1514	26	June 1, 1957	.4	2.82	2,040	2.83	2,050
1958	1564	34	May 22, 1958	.4	2.59	1,880	2.58	1,870
1959	1634	8.2	May 15, 1959	.4	1.32	958	1.28	924
1960	1714	17	May 10, 1960	.4	1.80	1,300	-	-

1430. Parrish Creek above diversions, near Centerville, Utah

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

Drainage area--2.08 sq mi.

Records available--October 1949 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage--Water-stage recorder. V-notch sharp-crested weir since October 1957. Altitude of gage is 4,600 ft (from topographic map). Prior to Oct. 1, 1957, water-stage recorder at site 500 ft downstream at different datum.

Average discharge--11 years (1949-60), 1.60 cfs (1.160 acre-ft per year).

Extremes--1949-60: Maximum discharge, 30 cfs May 5, 1952; minimum, 0.10 cfs Aug. 20, 1960.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.62	0.80	0.75	0.59	0.87	0.94	3.59	9.35	2.85	0.95	0.78	0.62	1.90
1952	.67	.57	.55	.55	.53	.73	6.01	15.9	4.27	.95	.68	.50	2.67
1953	.54	.41	.49	.66	.53	.69	2.52	6.56	10.7	1.66	1.00	.52	2.20
1954	.55	.55	.40	.46	.44	.60	1.69	1.78	.68	.40	.21	.27	.67
1955	.36	.30	.37	.40	.40	.53	1.25	5.63	2.14	.70	.36	.28	1.06
1956	.38	.46	.78	.70	.56	1.04	2.88	4.96	1.83	.56	.29	.26	1.23
1957	.39	.43	.43	.41	.52	.72	1.58	8.17	7.83	1.48	.60	.38	1.91
1958	.475	.464	.447	.432	.649	.784	2.99	12.1	2.91	.698	.379	.335	1.90
1959	.386	.449	.485	.450	.466	.564	1.44	3.14	1.23	.419	.270	.332	1.805
1960	.371	.341	.317	.332	.363	1.02	3.02	4.73	1.18	.346	.202	.226	1.04

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	38	48	46	36	48	58	214	575	170	58	48	37	1,380
1952	41	34	34	34	31	45	358	980	254	58	42	30	1,940
1953	33	24	30	41	29	55	150	404	634	102	61	31	1,590
1954	34	33	25	28	25	37	101	109	40	25	13	16	486
1955	22	18	23	25	22	32	75	346	127	43	22	16	771
1956	24	27	48	43	32	64	171	305	109	35	18	16	892
1957	24	25	26	25	29	44	94	501	466	91	37	23	1,380
1958	29	28	27	27	36	48	178	744	173	43	23	20	1,380
1959	24	27	30	28	26	35	86	193	73	26	17	20	585
1960	23	20	19	20	21	63	180	291	68	21	12	13	751

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	2.21	-	1,600
1951	1214	13	May 7, 1951	-	1.90	1,380	1.87	-	1,350
1952	1244	30	May 5, 1952	0.4	2.67	1,940	2.64	-	1,920
1953	1284	26	June 6, 1953	.3	2.20	1,590	2.21	-	1,600
1954	1344	27	Apr. 18, 1954	-	.67	486	.63	-	457
1955	1394	11	May 13, 1955	.2	1.06	771	1.12	-	807
1956	1444	12	May 8, 1956	.2	1.23	892	1.20	-	868
1957	1514	21	June 2, 1957	.3	1.91	1,380	1.92	-	1,390
1958	1564	21.9	May 22, 1958	.27	1.90	1,380	1.90	-	1,370
1959	1634	5.11	May 15, 1959	.18	.905	585	.790	-	566
1960	1714	9.92	May 11, 1960	.16	1.04	751	-	-	-

1435. Centerville Creek above diversions, near Centerville, Utah

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

Drainage area.--3.15 sq mi.

Records available.--October 1949 to September 1960. Monthly discharge only for some periods, published in WSP 1814.

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

Average discharge.--11 years (1949-60), 2.66 cfs (1,930 acre-ft per year).

Extremes.--1949-60: Maximum daily discharge, 30 cfs May 6, 7, 1952; minimum daily, 0.5 cfs Mar. 16, 1955.

Remarks.--Records include flow of one ditch which diverts water about a quarter of a mile above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.48	1.63	1.52	1.34	1.61	1.76	4.82	12.2	4.80	2.44	1.83	1.22	3.04
1952	1.27	1.52	1.45	1.38	1.41	1.66	9.63	21.1	8.56	3.32	1.82	1.40	4.55
1953	1.19	1.40	1.39	1.25	1.21	1.89	5.44	10.1	12.4	2.83	1.65	1.37	3.52
1954	1.26	1.54	1.27	1.30	1.27	1.19	2.56	2.21	1.37	.82	.75	.72	1.36
1955	.99	1.02	.89	1.15	1.18	.88	2.52	6.42	3.66	1.53	.92	.84	1.84
1956	1.03	1.23	1.39	1.54	1.37	1.98	3.87	6.44	3.28	1.28	.90	.83	2.10
1957	.96	1.01	1.04	.98	1.27	1.48	3.04	11.6	9.79	2.69	1.52	1.35	3.06
1958	1.43	1.38	1.36	1.23	1.29	1.50	4.92	14.0	5.56	1.78	1.15	1.09	3.07
1959	1.14	1.24	1.30	1.20	1.17	1.50	2.32	2.89	2.04	.82	.79	.95	1.46
1960	.96	1.03	1.05	.99	1.05	1.72	4.17	4.38	2.32	1.03	.74	.89	1.69

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	91	97	93	83	90	108	287	750	286	150	113	73	2,220
1952	78	90	88	85	81	102	573	1,300	510	204	112	84	3,310
1953	73	83	86	77	67	116	324	624	739	174	102	81	2,550
1954	78	92	78	80	71	73	153	136	82	51	46	43	983
1955	61	61	55	71	65	54	150	395	218	94	57	50	1,330
1956	63	73	85	95	79	122	230	396	195	79	55	49	1,520
1957	59	60	64	60	70	91	181	711	582	165	93	81	2,220
1958	88	82	84	76	72	92	293	859	331	109	71	65	2,220
1959	70	74	80	74	65	92	138	178	121	56	49	57	1,050
1960	59	61	65	61	60	106	248	270	138	63	45	53	1,230

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	3.20	2,320	
1951	1214	-	-	-	3.04	2,220	3.03	2,200	
1952	1244	30	May 6, 7, 1952	-	4.55	3,310	4.53	3,290	
1953	1284	20	June 7, 12, 1953	1.0	3.52	2,550	3.52	2,550	
1954	1344	3.6	Apr. 14, 1954	.6	1.36	983	1.26	912	
1955	1394	8.4	May 9, 1955	.5	1.84	1,330	1.90	1,380	
1956	1444	8.2	May 24, 1956	.7	2.10	1,520	2.04	1,480	
1957	1514	18	(a)	.8	3.06	2,220	3.16	2,280	
1958	1564	18	May 21-24, 1958	-	3.07	2,220	3.03	2,190	
1959	1634	3.7	May 1, 1959	-	1.46	1,050	1.40	1,020	
1960	1714	7.9	Apr. 10, 1960	.7	1.69	1,230	-	-	

a May 28, 29, June 2, 3, 1957.

1440. Stone Creek above diversions, near Bountiful, Utah

Location.--Lat 40°53'40", long 111°50'40", in NW $\frac{1}{4}$ sec.21, T.2 N., R.1 E., on right bank 2.2 miles east of Bountiful.

Drainage area.--4.48 sq mi.

Records available.--April 1950 to September 1960.

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

Average discharge.--10 years (1950-60), 3.22 cfs (2,330 acre-ft per year).

Extremes.--1950-60: Maximum discharge, 82 cfs May 5, 1952 (gage height, 2.79 ft); no flow Oct. 5, 1951.

Remarks.--Records include flow diverted around station in pipeline.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.17	1.57	1.55	1.45	1.92	1.99	5.82	15.4	5.48	1.64	1.06	0.77	3.32
1952	1.10	1.30	1.28	1.22	1.29	1.47	17.3	31.0	9.87	2.68	1.29	.71	5.88
1953	.95	1.39	1.35	1.62	1.60	2.70	8.06	14.6	18.3	3.01	1.19	.57	4.60
1954	.82	1.23	1.18	1.17	1.37	1.34	3.56	3.44	1.23	.65	.33	.3	1.38
1955	.57	.85	.81	.88	.9	.88	3.33	10.2	5.22	1.07	.64	.45	2.16
1956	.75	1.00	1.52	1.46	1.06	2.58	6.28	10.5	3.81	.94	.52	.38	2.57
1957	.70	1.05	1.06	.87	1.32	1.91	4.78	20.7	14.9	3.01	.95	.68	4.34
1958	1.36	1.28	1.39	1.30	1.51	2.08	7.65	25.8	6.62	1.16	.70	.80	4.31
1959	.64	1.17	1.25	1.23	1.15	1.57	14.03	5.45	3.06	.56	.40	.45	1.75
1960	.89	.82	.73	.81	.74	2.35	5.72	7.31	2.34	.53	.3	.26	1.90

† Corrected.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	72	94	95	89	107	122	346	944	326	101	65	46	2,410
1952	68	77	79	75	74	90	1,030	1,910	588	165	80	42	4,280
1953	59	83	83	99	89	166	480	901	1,090	179	73	34	3,340
1954	51	75	73	72	76	83	212	212	75	40	20	18	1,000
1955	35	50	50	54	50	54	198	628	310	66	39	27	1,560
1956	46	60	93	90	61	159	373	645	227	58	32	22	1,870
1957	43	62	65	53	73	117	285	1,280	885	185	58	40	3,150
1958	84	76	86	80	84	127	455	1,590	394	71	43	36	3,130
1959	39	69	77	76	64	97	240	335	182	35	25	27	1,270
1960	55	49	45	50	42	145	340	450	139	32	18	15	1,380

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1214	21	May 7, 1951	0.7	3.32	2,410	3.27	2,370	
1952	1244	82	May 5, 1952	.6	5.88	4,280	5.88	4,280	
1953	1284	49	June 5, 1953	-	4.60	3,340	4.56	3,310	
1954	1344	6.4	Apr. 14, 1954	-	1.38	1,000	1.30	941	
1955	1394	16	May 13, 1955	-	2.16	1,560	2.25	1,620	
1956	1444	16	Dec. 23, 1955	-	2.57	1,870	2.53	1,840	
1957	1514	39	May 13, 1957	-	4.34	3,150	4.44	3,220	
1958	1564	49	May 22, 1958	.5	4.31	3,130	4.23	3,060	
1959	1634	8.2	May 1, 1959	-	1.75	1,270	1.69	1,230	
1960	1714	14	May 13, 1960	-	1.90	1,380	-	-	

1450. Mill Creek at Mueller Park, near Bountiful, Utah

Location--Lat 40°51'50", long 111°50'10", in SE $\frac{1}{4}$ sec.33, T.2 N., R.1 E., on right bank 2 miles southeast of Bountiful.

Drainage area--8.79 sq mi.

Records available--April 1950 to September 1960.

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

Average discharge--10 years (1950-60), 6.37 cfs (4,610 acre-ft per year).

Extremes--1950-60: Maximum daily discharge, 140 cfs Apr. 28, 1952; minimum daily, 0.5 cfs for several days in August and September 1954.

Remarks--Records include flow in pipeline which diverts about a quarter of a mile above station and is measured at diversion box by Cippoletti weirs, and an additional flow of 0.3 cfs which is diverted around this structure.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.97	2.32	2.37	1.88	3.17	3.55	13.2	28.4	13.1	4.87	2.86	1.65	6.63
1952	1.83	1.69	1.71	1.82	1.93	2.17	38.8	71.9	32.2	8.42	3.66	2.08	14.0
1953	1.95	1.86	1.76	2.24	1.86	4.11	14.0	27.5	36.6	9.12	3.44	1.66	8.84
1954	1.61	1.77	1.75	1.59	1.74	2.53	7.47	7.20	5.33	1.47	.91	.62	2.66
1955	.89	1.32	1.11	1.17	1.34	1.76	8.20	25.2	10.3	3.66	1.56	1.01	4.82
1956	1.22	1.29	2.29	2.81	2.02	4.97	10.8	16.2	8.58	3.06	1.51	.93	4.65
1957	1.00	1.17	1.34	1.25	1.84	3.19	7.78	34.5	25.6	6.12	3.03	1.76	7.40
1958	1.84	1.87	1.91	1.93	2.62	3.34	11.0	38.5	16.5	4.21	1.95	1.39	7.28
1959	1.65	1.57	1.40	1.36	1.73	2.59	7.23	9.45	5.66	1.90	1.08	.99	3.05
1960	1.16	1.17	1.12	1.01	1.16	4.85	14.3	16.5	7.04	2.15	1.13	.93	4.36

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	121	138	146	116	178	218	787	1,740	781	299	176	98	4,800
1952	112	101	105	112	111	134	2,310	4,420	1,920	518	225	124	10,190
1953	120	110	108	137	103	253	833	1,690	2,180	561	211	99	6,400
1954	99	105	106	98	97	156	444	443	198	90	56	37	1,930
1955	55	79	68	72	74	108	488	1,550	614	225	96	60	3,490
1956	75	77	141	173	116	306	643	998	511	198	93	56	3,380
1957	62	69	82	77	102	196	463	2,120	1,520	376	186	105	5,360
1958	113	111	118	118	146	206	857	2,360	960	259	120	83	5,270
1959	102	93	86	84	96	159	430	581	337	117	66	59	2,210
1960	71	69	69	62	66	286	849	1,010	419	132	69	55	3,160

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Maximum day		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-
1951	1214	38	May 8, 1951	1.2	6.63	4,800	6.51
1952	1244	140	Apr. 28, 1952	1.3	14.0	10,190	14.1
1953	1284	61	June 12, 1953	1.2	8.84	6,400	8.80
1954	1344	10	Apr. 14, 1954	.5	2.66	1,950	2.51
1955	1394	44	May 7, 1955	.7	4.82	3,490	4.95
1956	1444	23	May 24, 1956	.8	4.65	3,380	4.54
1957	1514	50	May 9, 1957	.9	7.40	5,360	7.58
1958	1564	58	May 19, 1958	1.1	7.28	5,270	7.20
1959	1634	14	May 1, 1959	.6	3.05	2,210	2.95
1960	1714	26	May 12, 1960	.7	4.36	3,160	-

1460. Salt Creek at Nephi, Utah

Location.--Lat 39°42'45", long 111°48'25", in NE $\frac{1}{4}$ sec.3, T.13 S., R.1 E., on right bank 300 ft downstream from head of Salt Creek diversion canal and 1 mile east of Nephi.

Drainage area.--95.6 sq mi.

Records available.--December 1950 to September 1960.

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

Average discharge.--9 years (1951-60), 27.6 cfs (19,980 acre-ft per year).

Extremes.--1950-60: Maximum discharge, 724 cfs May 2, 1952; minimum, 1.1 cfs Dec. 13, 1951.

Remarks.--Records include flow in Salt Creek diversion canal near Nephi; no flow in canal since May 1958.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	10.8	11.1	11.9	13.7	32.6	59.2	46.9	17.3	12.4	9.19	-
1952	9.23	8.24	7.46	8.54	10.2	13.3	172	276	132	70.8	50.9	32.9	66.1
1953	26.0	19.7	16.4	16.3	15.6	19.1	35.4	57.1	74.1	32.3	21.3	11.4	28.8
1954	12.7	13.2	12.3	11.0	11.4	13.7	32.7	43.3	23.9	14.6	8.84	10.3	17.4
1955	9.24	9.70	8.77	7.89	8.31	9.75	19.9	47.1	35.0	16.9	12.4	7.87	16.1
1956	6.48	7.49	9.50	12.1	9.74	18.4	33.8	55.3	39.0	15.8	13.1	9.32	19.2
1957	8.09	8.71	8.71	8.21	9.36	12.8	38.2	102	109	42.5	23.1	17.2	32.4
1958	16.8	16.5	15.4	14.1	16.8	19.1	63.3	144	76.1	32.9	20.4	13.9	37.5
1959	12.9	12.9	12.5	10.6	11.5	12.0	16.8	25.3	25.7	11.1	8.67	7.21	13.9
1960	7.00	7.56	7.67	7.31	6.72	11.1	32.1	51.1	42.0	14.4	8.45	7.24	16.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	665	681	659	843	1,940	3,640	2,790	1,060	764	547	-
1952	568	491	459	525	586	817	10,250	16,960	7,850	4,550	3,130	1,960	47,950
1953	1,600	1,170	1,010	1,000	869	1,170	2,110	3,510	4,410	1,990	1,310	681	20,830
1954	781	787	758	675	631	843	1,940	2,660	1,420	900	543	615	12,550
1955	568	577	540	495	462	600	1,180	2,900	2,080	1,040	764	468	11,660
1956	398	446	584	744	560	1,130	2,010	3,400	2,320	972	803	554	13,920
1957	498	518	536	505	520	785	2,270	6,260	6,500	2,610	1,420	1,030	23,450
1958	1,030	980	946	965	934	1,170	3,770	8,850	4,530	2,020	1,250	827	27,170
1959	791	766	768	654	641	736	988	1,560	1,530	682	533	459	10,080
1960	431	450	471	449	387	682	1,910	3,140	2,500	883	520	431	12,250

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950							
1951	1214	164	June 17, 1951	-	-	-	19.9
1952	1244	724	May 2, 1952	4.5	66.1	47,950	69.2
1953	1284	125	June 13, 1953	9.5	28.8	20,830	26.8
1954	1344	299	Sept. 3, 1954	6.5	17.4	12,550	16.5
1955	1394	217	July 24, 1955	5.3	16.1	11,660	15.8
1956	1444	104	May 21, 1956	5.3	19.2	13,920	19.4
1957	1514	219	June 5, 1957	4.8	32.4	23,450	34.3
1958	1564	250	May 5, 1958	11	37.5	27,170	36.7
1959	1634	42	June 7, 1959	5.5	13.9	10,080	12.6
1960	1714	97	May 12, 1960	3.9	16.9	12,250	-

1465. Currant Creek near Goshen, Utah

Location--Lat 39°53'05", long 111°53'05", in NW¼ sec.1, T.11 S., R.1 W., on right bank 0.9 mile upstream from canal diversions and 5.4 miles south of Goshen.

Drainage area--303 sq mi.

Records available--August 1953 to September 1960.

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

Average discharge--7 years (1953-60), 21.8 cfs (15,780 acre-ft per year).

Extremes--1953-60: Maximum discharge, 78 cfs May 13, 14, 1959 (gage height, 1.65 ft); no flow Sept. 27-30, Oct. 1-11, 20, 22-28, 1959.

Remarks--Diversions for irrigation above station. Flow regulated by Mona (Mount Nebo) Reservoir about 1 mile above station. Spring area about half a mile below station contributes water to Currant Creek at head of canyon; a discharge of 1.5 cfs was measured Aug. 12, 1955, at point where spring flow enters creek.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	40.7	-
1954	21.5	15.3	2.45	2.57	5.40	2.43	35.5	64.2	55.2	43.6	47.5	33.7	27.5
1955	17.6	20.2	3.77	2.54	.41	.40	14.9	58.9	41.0	43.3	27.9	32.5	22.1
1956	14.7	15.7	2.29	2.57	.82	.82	20.2	58.4	44.6	39.7	31.5	25.5	21.5
1957	16.9	18.1	1.77	1.46	.78	.99	14.9	49.6	39.5	48.3	25.7	24.3	20.3
1958	13.3	14.6	2.70	2.36	2.49	3.39	9.51	55.3	52.8	40.7	27.3	25.7	20.9
1959	18.2	15.7	3.04	2.38	1.82	1.34	21.8	62.9	46.0	33.0	32.2	15.9	21.4
1960	2.76	18.1	2.95	4.80	4.70	4.00	19.5	52.4	38.6	35.6	22.9	16.7	18.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	2,420	-
1954	1,320	908	151	158	300	149	2,110	3,950	3,280	2,680	2,920	2,000	19,930
1955	1,080	1,200	232	156	23	25	889	3,620	2,440	2,660	1,710	1,930	15,960
1956	904	934	141	158	47	50	1,200	3,590	2,650	2,440	1,940	1,520	15,570
1957	1,040	1,080	109	90	43	61	888	3,050	2,350	2,970	1,580	1,450	14,710
1958	819	871	166	145	138	208	566	3,400	3,140	2,510	1,680	1,530	15,170
1959	1,120	994	187	147	101	82	1,300	3,870	2,740	2,030	1,980	944	15,500
1960	170	1,080	182	295	270	246	1,160	3,220	2,290	2,190	1,410	992	13,500

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953	1344	-	-	-	-	-	-	-
1954	1344	77	Apr. 26, 1954	0.5	27.5	19,930	27.7	20,060
1955	1394	77	May 10-12, 1955	-	22.1	15,960	21.3	15,430
1956	1444	69	(a)	-	21.5	15,570	21.8	15,820
1957	1514	77	May 18-20, 1957	-	20.3	14,710	19.8	14,340
1958	1564	67	(b)	.4	20.9	15,170	21.6	15,620
1959	1634	78	May 13, 14, 1959	0	21.4	15,500	20.2	14,630
1960	1714	69	May 9, 10, 1960	0	18.6	13,500	-	-

a May 11-12, 22-25, 1956.

b May 17-20, 27-31, 1958.

1470. Summit Creek near Santaquin, Utah

Location.--Lat 39°55'20", long 111°45'10", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.10 S., R.2 E., on right bank $\frac{3}{4}$ miles southeast of Santaquin.

Drainage area.--14.6 sq mi.

Records available.--March 1910 to September 1916, October 1954 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,900 ft (from topographic map). March 1910 to September 1916 hook gage and sharp-crested weir in power-plant tailrace and staff gages and weir in main river channel at site $2\frac{1}{2}$ miles downstream at different datums.

Average discharge.--12 years (1910-16, 1954-60), 13.4 cfs (9,700 acre-ft per year).

Extremes.--1910-16, 1954-60: Maximum discharge observed, 215 cfs June 3, 1957 (discharge measurement); minimum, 1.3 cfs Jan. 21, 1955.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954													
1955	5.0	4.76	4.05	4.07	4.20	3.78	9.03	38.6	22.2	9.25	7.43	6.06	9.92
1956	5.90	5.03	5.08	5.34	4.85	5.38	14.3	31.6	16.3	6.72	5.94	6.00	9.38
1957	5.92	4.59	4.64	4.50	4.69	5.81	11.6	53.8	76.8	21.0	12.0	10.4	18.0
1958	9.81	8.41	6.75	6.03	6.21	6.62	15.0	75.0	35.9	11.0	9.93	8.62	16.7
1959	7.39	7.93	6.26	6.05	5.63	5.25	8.52	14.2	9.90	5.26	4.92	4.61	7.14
1960	4.96	4.08	3.08	3.16	3.59	4.06	11.8	33.1	16.5	6.94	5.59	5.18	8.52

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954													
1955	307	283	249	250	233	232	538	2,380	1,320	569	457	361	7,180
1956	363	299	312	328	279	331	849	1,940	969	413	365	357	6,800
1957	364	273	285	277	260	357	690	3,310	4,560	1,290	738	619	13,020
1958	603	500	415	371	345	407	895	4,610	2,140	676	611	513	12,090
1959	455	458	385	372	313	323	507	871	589	323	303	274	5,170
1960	305	243	189	194	207	250	705	2,040	981	426	344	308	6,190

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954								
1955	1394	65	May 6, 1955	2.0	9.92	7,180	10.1	7,310
1956	1444	46	May 22, 1956	2.2	9.38	6,800	9.31	6,750
1957	1514	a215	June 3, 1957	1.9	18.0	13,020	18.6	13,620
1958	1564	118	May 21, 1958	5.1	16.7	12,090	16.4	11,870
1959	1634	23	May 14, 1959	4.3	7.14	5,170	6.37	4,610
1960	1714	65	May 13, 1960	2.6	8.52	6,190	-	-

a Maximum observed.

1475. Payson Creek above diversions, near Payson, Utah

Location.--Lat 39°58'10", long 111°41'35", in SE1/4 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, and 12 miles upstream from Utah Lake.

Drainage area.--18.8 sq mi.

Records available.--July 1947 to September 1960.

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

Average discharge.--13 years (1947-60), 13.1 cfs (9,480 acre-ft per year).

Extremes.--1947-60: 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, 1.5 cfs Jan. 8, 1957.

Remarks.--Flow affected by several small reservoirs.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.16	5.75	5.46	5.09	4.90	5.14	17.8	24.1	14.5	9.22	8.46	6.21	9.42
1952	5.39	4.75	4.95	4.75	4.34	5.07	35.0	157	35.0	17.6	13.9	12.2	25.1
1953	9.74	6.06	5.69	5.21	4.84	5.79	15.1	46.2	24.0	13.0	7.81	7.92	12.6
1954	5.73	5.51	5.15	5.25	5.34	5.73	23.5	23.1	9.79	7.29	7.30	5.39	9.10
1955	4.70	4.99	4.17	5.28	4.48	4.33	12.3	65.2	20.1	9.22	8.11	5.91	12.5
1956	4.96	5.14	5.35	5.22	4.98	5.40	22.8	24.3	10.6	9.03	8.10	5.60	9.30
1957	4.54	3.92	3.69	3.60	3.80	4.64	13.7	93.6	49.5	16.3	10.8	8.23	18.1
1958	7.36	6.57	6.03	5.60	5.85	6.31	16.6	79.2	18.5	11.3	11.0	7.79	15.3
1959	6.46	6.50	5.96	5.58	5.20	5.83	11.1	13.2	7.81	7.99	6.09	5.21	7.25
1960	4.63	4.31	4.00	3.85	4.30	5.28	17.1	34.1	12.5	8.37	8.29	4.39	9.29

Monthly and yearly discharge, in acre-feet													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	379	342	336	313	272	316	1,060	1,460	863	567	520	370	6,820
1952	331	283	305	292	250	312	2,080	9,630	2,080	1,080	857	723	18,220
1953	537	361	350	321	269	356	898	2,840	1,430	799	480	471	9,110
1954	352	328	317	323	296	352	1,400	1,420	582	448	449	321	6,590
1955	289	297	256	325	249	266	733	4,010	1,200	567	499	352	9,040
1956	305	306	329	321	286	332	1,360	1,490	633	555	498	333	6,750
1957	279	233	227	221	211	285	817	5,760	2,950	1,000	664	490	13,140
1958	453	391	371	345	325	398	986	4,870	1,110	694	679	463	11,080
1959	397	387	367	343	289	357	659	810	465	491	375	310	5,250
1960	284	256	246	237	248	325	1,020	2,100	745	515	510	261	6,750

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	13.2	-	9,580
1951	1214	61	May 20, 1951	4.0	9.42	8,820	9.23	-	6,680
1952	1244	465	May 4, 1952	4.0	25.1	18,220	25.6	-	18,550
1953	1284	281	May 20, 1953	4.4	12.6	9,110	12.2	-	8,860
1954	1344	71	May 6, 1954	3.9	9.10	6,590	8.88	-	6,430
1955	1394	294	May 6, 1955	-	12.5	9,040	12.6	-	9,140
1956	1444	70	Apr. 21, 1956	-	9.30	6,750	9.02	-	6,550
1957	1514	203	May 19, 1957	3.0	18.1	13,140	18.8	-	13,610
1958	1564	191	May 20, 1958	3.0	15.3	11,080	15.2	-	11,010
1959	1634	44	May 1, 1959	4.4	7.25	5,250	6.75	-	4,880
1960	1714	109	May 11, 1960	3.7	9.29	6,750	-	-	-

1485. Spanish Fork at Thistle, Utah

Location.--Lat 40°00', long 111°30', in NE 1/4 sec. 29, T.9 S., R.4 E., on right bank at Thistle, 0.3 mile downstream from confluence of Soldier Fork and Thistle Creek and 2 miles upstream from Diamond Fork.

Drainage area.--490 sq mi, approximately.

Records available.--January 1908 to September 1925, October 1932 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 5,027.28 ft above mean sea level, datum of 1929. Prior to Nov. 21, 1912, staff gage 0.9 mile downstream at different datum. Nov. 21, 1912, to Dec. 31, 1925, staff gage at site 600 ft upstream at different datum. Jan. 1, 1933, to May 10, 1937, staff gage 800 ft upstream at different datum. May 12, 1937, to Oct. 7, 1938, staff gage and Oct. 8, 1938, to June 7, 1960, water-stage recorder at site 800 ft upstream at datum 2.42 ft higher.

Average discharge.--45 years (1908-25, 1932-60), 90.4 cfs (65,450 acre-ft per year).

Extremes.--1908-25, 1932-60: Maximum discharge, 1,800 cfs May 4, 1952 (gage height, 7.96 ft, site and datum then in use); minimum observed, 10 cfs Sept. 17, 22, 25, Oct. 25, 1934, Dec. 9, 10, 1951.

Remarks.--Small diversions for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	35.5	49.0	49.8	44.3	59.4	56.9	84.4	188	102	42.9	40.5	27.9	65.0
1952	36.0	36.9	32.3	41.5	52.0	65.0	572	1,143	360	136	112	77.1	223
1953	73.5	71.7	63.5	70.5	64.7	76.5	95.5	143	116	50.9	49.3	37.5	76.1
1954	42.8	51.5	45.5	45.6	57.6	58.0	90.7	99.6	49.5	31.1	30.8	37.5	53.3
1955	31.5	37.7	35.6	36.0	40.8	71.7	96.5	195	87.1	48.8	40.6	31.1	62.9
1956	28.8	39.9	48.2	47.2	40.3	67.3	101	185	76.7	35.6	28.8	22.8	60.2
1957	28.7	31.3	34.2	35.1	68.8	80.5	101	319	282	86.1	53.8	48.5	95.8
1958	50.0	45.0	47.9	47.8	85.8	89.1	161	430	150	67.3	44.5	48.0	103
1959	45.0	49.5	52.9	50.8	54.1	56.0	45.9	71.8	42.0	29.8	24.5	24.2	45.6
1960	28.3	31.1	30.2	32.1	38.4	61.1	85.4	151	59.7	24.8	19.3	22.9	48.5

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,180	2,920	3,060	2,720	3,300	3,500	5,020	11,540	6,050	2,640	2,490	1,660	47,080
1952	2,220	2,200	1,990	2,550	2,990	4,000	34,020	70,300	21,420	8,390	6,900	4,590	161,600
1953	4,520	4,280	3,910	4,340	3,590	4,700	5,680	8,790	6,880	3,130	3,030	2,230	55,060
1954	2,650	3,070	2,790	2,810	3,200	3,570	5,400	6,120	2,950	1,910	1,900	2,230	36,580
1955	1,940	2,240	2,190	2,210	2,260	4,410	5,740	12,020	5,180	3,000	2,500	1,850	45,540
1956	1,770	2,370	2,960	2,900	2,320	4,140	5,990	11,390	4,560	2,190	1,770	1,360	43,720
1957	1,760	1,860	2,100	2,160	3,820	3,720	6,020	19,620	16,760	5,290	3,310	2,890	69,310
1958	3,080	2,680	2,950	2,940	3,650	5,480	9,800	26,450	8,940	3,520	2,740	2,860	74,890
1959	2,780	2,950	3,250	3,120	3,010	3,440	2,750	4,420	2,500	1,830	1,510	1,440	32,980
1960	1,740	1,850	1,860	1,970	2,090	3,760	5,080	9,260	3,550	1,530	1,190	1,360	35,240

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	83.7	60,610
1951	1214	298	May 21, 1951	24	65.0	47,080	62.6	45,330
1952	1244	1,800	May 4, 1952	10	223	161,600	231	167,800
1953	1284	371	July 28, 1953	33	76.1	55,060	70.3	50,860
1954	1344	203	Sept. 26, 1954	25	53.3	38,580	50.4	36,460
1955	1394	554	Aug. 6, 1955	27	62.9	45,540	63.9	46,270
1956	1444	357	Aug. 13, 1956	20	60.2	43,720	58.3	42,340
1957	1514	565	June 4, 1957	23	95.8	69,310	99.9	72,300
1958	1564	609	May 23, 1958	34	103	74,890	104	75,160
1959	1634	686	July 14, 1959	17	45.6	32,980	40.7	29,450
1960	1714	1,240	Sept. 5, 1960	12	48.5	35,240	-	-

9-2820. Strawberry tunnel at West Portal, near Thistle, Utah
(Transmountain diversion)

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.--June 1915 to September 1960. Monthly discharge only prior to October 1945, published in WSP 1314.

Gage.--Water-stage recorder and rectangular weir. Altitude of gage is 7,470 ft (by barometer).

Extremes.--1922-25, 1932-60: Maximum daily discharge, 595 cfs July 9, 1923; minimum daily observed, 4 cfs many times when no water was being diverted from Strawberry Reservoir.

Remarks.--Records 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 (in Great Basin). First diversion through tunnel was made in June 1915. This record also published in WSP 1733.

Cooperation.--Records furnished by Strawberry Water Users Association.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7.9	4.5	4.0	4.0	4.5	5	9.93	23.7	272	355	252	181	94.2
1952	32.7	5	4	4	4	4	5	6	83.8	238	178	189	63.1
1953	125	37.2	5	5	5	5	27.1	68.2	326	328	236	168	112
1954	40.2	6	6	6	6	6	33.1	204	333	285	295	80.0	109
1955	40.2	5	5	5	5	5.52	6	38.7	322	383	232	129	98.7
1956	29.4	5	5	5	5	5.52	9.03	83.6	354	297	282	141	102
1957	15.8	5	5	5	5	5.52	6	6	89.4	358	272	179	80.1
1958	47.7	5	5	5	5	5.52	6	13.7	294	328	291	94.6	92.3
1959	35.6	5	5	5	5	5.52	8.87	198	352	233	184	86.0	95.0
1960	24.3	5	5	5	5	5.52	19.1	169	401	317	258	74.1	108

Monthly and yearly diversions, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	486	268	246	246	250	307	591	1,460	16,190	21,850	15,520	10,760	68,170
1952	2,010	298	246	246	230	246	298	369	4,980	14,630	10,960	11,270	45,780
1953	7,700	2,220	307	307	278	307	1,610	4,200	19,400	20,170	14,500	9,970	80,970
1954	2,470	357	369	369	333	369	1,970	12,560	19,810	17,550	17,990	4,760	78,910
1955	2,470	298	307	307	278	339	357	2,380	19,190	23,550	14,270	7,700	71,450
1956	1,800	298	307	307	288	339	537	5,140	21,030	18,280	17,330	8,400	74,060
1957	970	298	307	307	278	339	357	369	5,320	22,040	16,740	10,630	57,960
1958	2,930	298	307	307	278	339	357	845	17,470	20,160	17,920	5,630	66,840
1959	2,190	298	307	307	278	339	528	12,180	21,560	14,350	11,290	5,120	68,750
1960	1,490	298	307	307	288	339	1,130	10,410	23,890	19,500	15,890	4,410	78,260

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	92.0
1951	1214	505	July 2-10, 1951	-	94.2	68,170	96.3
1952	1244	344	July 11, 1952	-	63.1	45,780	73.6
1953	1284	469	July 2, 1953	-	112	80,970	102
1954	1344	496	June 26-28, 1954	-	109	78,910	109
1955	1394	493	(a)	-	98.7	71,450	97.8
1956	1444	484	June 26, 27, 1956	-	102	74,060	101
1957	1514	467	(b)	-	80.1	57,960	82.8
1958	1564	474	June 21-24, 1958	-	92.3	66,840	91.3
1959	1634	482	June 25, 1959	-	95.0	68,750	94.0
1960	1714	481	June 24, 1960	-	108	78,260	-

a June 13, 14, July 8-10, 1955.

b June 30, July 9, 1957.

1495. Diamond Fork below Red Hollow, near Thistle, Utah

Location.--Lat 40°04'40", long 111°24'00", in NW $\frac{1}{4}$ sec.32, T.8 S., R.5 E., on right bank 0.5 mile downstream from Red Hollow, 7.2 miles upstream from mouth, and 8 miles north-east of Thistle.

Drainage area.--110 sq mi, approximately.

Records available.--October 1953 to September 1960.

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

Average discharge.--7 years (1953-60), 113 cfs (81,810 acre-ft per year).

Extremes.--1953-60: Maximum discharge, 1,020 cfs July 13, 1954 (gage height, 4.71 ft); minimum, 1.5 cfs Dec. 5, 1959.

Remarks.--Flow includes water diverted from Strawberry Reservoir (capacity, 270,000 acre-ft) in Colorado River basin via Strawberry tunnel (see preceding page) for irrigation in vicinity of Spanish Fork.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	55.9	20	15.8	17.2	15.8	17.3	61.8	227	337	280	284	91.5	119
1955	49.2	14.3	12.9	14.8	15.2	15.2	27.8	84.7	328	391	239	131	111
1956	35.9	10.8	13.5	14.3	9.97	23.3	70.9	157	358	316	307	157	123
1957	25.1	12.4	13.3	15.3	17.5	18.6	40.2	138	171	376	282	188	109
1958	60.3	17.7	15.2	14.8	18.4	18.5	55.5	176	308	323	294	105	118
1959	47.7	15.0	14.7	14.4	14.6	16.1	26.3	201	367	241	199	92.9	105
1960	31.5	11.2	10.4	13.0	16.1	17.5	39.4	192	371	296	237	74.0	109

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	3,440	1,190	962	1,060	875	1,070	3,680	13,960	20,050	17,200	17,440	5,440	86,370
1955	3,030	853	791	912	845	934	1,650	5,210	19,510	24,040	14,690	7,780	80,240
1956	2,210	640	831	881	573	1,430	4,220	9,630	21,280	19,460	18,850	9,330	89,340
1957	1,540	741	816	938	970	1,140	2,390	8,520	10,160	23,100	17,310	11,190	78,820
1958	3,710	1,060	933	912	1,020	1,130	3,300	10,830	18,350	19,850	18,060	6,270	85,420
1959	2,940	890	904	887	811	990	1,560	12,380	21,810	14,810	12,220	5,530	75,730
1960	1,940	664	639	802	924	1,080	2,350	11,780	22,070	18,190	14,590	4,410	79,440

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954	1394	1,020	July 13, 1954	11	119	86,370	118	85,450
1955	1394	576	Aug. 25, 1955	8	111	80,240	109	79,250
1956	1444	519	June 27, 1956	2.0	123	89,340	122	88,750
1957	1514	539	July 7, 1957	4.0	109	78,820	112	81,420
1958	1564	478	July 9, 1958	7.7	118	85,420	117	84,460
1959	1634	566	June 24, 1959	8.7	105	75,730	103	74,240
1960	1714	479	June 24, 1960	5.0	109	79,440	-	-

1500. Diamond Fork near Thistle, Utah

Location.--Lat 40°03'50", long 111°26'30", in NW $\frac{1}{4}$ 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 1955. Records prior to 1915 not equivalent due to transmountain diversion.

Gage.--Water-stage recorder. Altitude of gage is 5,140 ft (from river-profile map). Prior to Apr. 9, 1940, staff gage at site 4 miles downstream at different datum. Apr. 9, 1940, to Oct. 6, 1949, water-stage recorder at site 2.7 miles downstream at different datum.

Average discharge.--18 years (1914-17, 1940-55), 119 cfs (86,150 acre-ft per year).

Extremes.--1908-17, 1940-55: Maximum discharge, 1,610 cfs May 4, 1952 (gage height, 5.18 ft); minimum, 1.0 cfs Nov. 9, 1948.

Remarks.--Beginning in 1915, flow includes water diverted from Strawberry Reservoir in Colorado River basin via Strawberry tunnel (see p. 104) for irrigation in vicinity of Spanish Fork.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	29.3	24.9	23.5	16.6	20.9	29.2	108	187	351	354	261	195	132
1952	48.5	22.1	21.6	21.6	25.0	28.7	592	649	247	298	213	214	182
1953	151	72.2	47.4	41.6	34.2	41.9	81.7	138	374	350	255	178	148
1954	57.2	20.8	17.9	20.6	18.6	22.6	72.2	235	342	292	297	102	126
1955	55.2	17.8	14.7	15.7	16.0	16.0	36.0	106	331	391	237	131	115

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,800	1,480	1,440	1,020	1,160	1,800	6,440	11,520	19,680	21,760	16,040	11,580	95,730
1952	2,980	1,320	1,330	1,330	1,440	1,770	23,330	39,930	14,700	18,300	13,110	12,710	132,200
1953	9,280	4,300	2,920	2,560	1,900	2,570	4,860	8,510	22,240	21,550	15,680	10,590	107,000
1954	3,520	1,240	1,100	1,260	1,030	1,390	4,290	14,450	20,330	17,970	18,280	6,080	90,940
1955	3,400	1,060	904	964	889	986	2,140	6,500	19,690	24,050	14,580	7,800	82,960

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	132	95,740
1951	1214	550	July 1, 1951	8	132	95,730	133	96,630
1952	1244	1,610	May 4, 1952	5	182	132,200	197	143,100
1953	1284	532	July 2, 1953	31	148	107,000	133	96,320
1954	1344	-	-	-	126	90,940	125	90,440
1955	1394	510	Aug. 1, 1955	7.4	115	82,960	-	-

1505. Spanish Fork at Castilla, Utah.

Location.--Lat 40°03'00", long 111°32'50", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T.9 S., R.3 E., on left bank 800 ft upstream from outlet of Cold Springs, 1 mile upstream from diversion dam of Bureau of Reclamation, 1 $\frac{1}{2}$ miles northwest of Castilla, and 3 miles downstream from Diamond Fork.

Drainage area.--670 sq mi, approximately.

Records available.--September 1889 to December 1890, April 1903 to November 1917, May 1919 to September 1925, January 1933 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Published as "near Spanish Fork" 1889-90, 1903-8.

Gage.--Water-stage recorder. Altitude of gage is 4,870 ft (from topographic map). Prior to May 3, 1919, staff gage at various sites $1\frac{1}{2}$ to 2 $\frac{1}{2}$ miles downstream from present site at different datums and below power canal, which began diverting late in 1908. May 3, 1919, to Apr. 14, 1920, staff gage and Apr. 15, 1920, to Apr. 16, 1940, water-stage recorder, at present site upstream from power canal at datum 2.00 ft lower.

Average discharge.--12 years (1890, 1903-14), 172 cfs (124,500 acre-ft per year); 36 years (1914-17, 1919-25, 1933-60), 218 cfs (157,800 acre-ft per year) includes transmountain diversion.

Extremes.--1889-90, 1903-17, 1919-25, 1933-60: Maximum discharge, 3,610 cfs May 3, 1952 (gage height, 9.83 ft); minimum, 14 cfs Dec. 9, 1951.

Remarks.--Several small diversions for irrigation above station. Flow since June 1915 includes water diverted from Strawberry Reservoir (capacity, 270,000 acre-ft) in Colorado River basin via Strawberry tunnel (see p. 104) for irrigation in vicinity of Spanish Fork.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	79.1	85.1	84.7	67.1	90.3	94.4	224	400	451	426	301	233	212
1952	96.7	67.2	63.7	74.6	80.8	107	1,054	1,863	616	452	336	312	428
1953	245	162	130	130	113	132	188	286	497	405	305	216	235
1954	110	79.1	72.0	74.8	84.8	87.5	171	328	368	322	321	139	182
1955	90.4	59.0	56.6	51.6	56.7	105	145	308	424	449	297	167	185
1956	75.6	58.3	74.8	76.6	63.8	101	174	345	436	350	331	182	189
1957	70.7	52.4	57.9	55.9	99.2	107	168	490	473	488	354	241	222
1958	128	73.2	74.2	73.3	97.2	130	273	666	473	410	359	161	244
1959	109	75.0	74.1	75.4	80.5	83.6	86.0	28.1	420	290	236	130	162
1960	68.9	45.0	43.7	49.7	57.0	92.7	138	355	457	332	266	113	168

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,870	5,070	5,210	4,130	5,010	5,800	13,340	24,600	26,810	26,210	18,480	13,860	153,400
1952	5,940	4,000	3,920	4,590	4,650	6,580	62,720	114,500	36,680	27,820	20,640	18,590	310,600
1953	15,060	9,640	8,020	8,000	6,260	8,100	11,170	17,560	29,550	24,920	18,770	12,840	169,900
1954	6,730	4,710	4,430	4,600	4,710	5,380	10,160	20,180	23,100	19,770	19,770	8,250	131,800
1955	5,560	3,510	3,460	3,180	3,150	6,480	8,600	18,930	25,240	27,580	18,230	9,950	133,900
1956	4,650	3,470	4,600	4,710	3,670	6,240	10,340	21,230	25,920	21,490	20,350	10,840	137,500
1957	4,350	3,120	3,560	3,440	5,510	6,580	9,970	30,150	28,140	30,070	21,750	14,340	161,000
1958	7,860	4,350	4,560	4,510	5,400	6,020	16,270	40,950	28,160	25,200	22,100	9,600	177,000
1959	6,730	4,460	4,560	4,640	4,470	5,140	5,120	17,300	24,970	17,830	14,490	7,760	117,500
1960	4,240	2,680	2,690	3,050	3,280	5,700	8,220	21,810	27,200	20,390	16,330	6,700	122,300

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	230
1951	1214	622	July 5, 1951	34	212	153,400	210
1952	1244	3,610	May 3, 1952	20	428	310,600	454
1953	1284	618	June 4, 1953	84	235	169,900	211
1954	1344	622	July 13, 1954	55	182	131,800	177
1955	1394	732	Aug. 7, 1955	36	185	133,900	185
1956	1444	688	Aug. 13, 1956	37	189	137,500	187
1957	1514	758	June 4, 1957	36	222	161,000	230
1958	1564	680	May 21, 1958	52	244	177,000	243
1959	1634	958	July 14, 1959	41	162	117,500	154
1960	1714	656	Sept. 5, 1960	36	168	122,300	-

1520. Spanish Fork near Lake Shore, Utah

Location.--Lat 40°09'30", long 111°43'50", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.32, T.7 S., R.2 E., on left bank 1 mile upstream from mouth and 2 $\frac{1}{2}$ miles north of Lake Shore.

Drainage area.--700 sq mi, approximately.

Records available.--December 1903 to September 1907, March 1909 to December 1919, May 1920 to September 1925, January 1938 to September 1960. Published as "at Lake Shore" 1909, 1913-25.

Gage.--Water-stage recorder. Altitude of gage is 4,500 ft (from topographic map). Prior to Jan. 23, 1938, staff gages at several sites about 3 miles upstream at various datums. Jan. 23, 1938, to Mar. 23, 1953, water-stage recorder at present site at different datums. Mar. 24, 1953, to Sept. 15, 1957, water-stage recorder at present site at datum 4.0 ft higher.

Average discharge.--40 years (1904-7, 1909-19, 1920-25, 1938-60), 88.1 cfs (63,780 acre-ft per year).

Extremes.--1903-7, 1909-25, 1938-60: Maximum discharge observed, 3,020 cfs Apr. 28, 1952; no flow at times.

Remarks.--Flow regulated by many diversions for irrigation and hydroelectric powerplant. During latter part of irrigation season, only waste and return waters pass gage. Station is below all diversions. Discharge includes that of overflow canal constructed in winter of 1947-48, which diverts part of high flow from river about 1 mile above gage.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	9.86	75.7	92.2	90.9	113	113	121	56.4	1.63	1.82	1.26	0.56	56.0
1952	45.8	68.3	70.5	84.9	102	144	1,088	1,517	279	1.71	4.19	40	287
1953	45.8	120	150	140	115	147	160	41.2	.56	2.99	6.95	2.47	77.4
1954	26.4	77.7	86.1	93.4	103	113	103	.1	0	.27	.07	3.07	50.1
1955	14.9	56.8	57.8	55	67.0	123	148	34.2	.06	.24	2.76	.92	46.5
1956	15.6	56.1	86.3	97.9	90.0	138	82.6	3.08	.5	.5	.46	.33	47.5
1957	13.6	53.7	74.2	76.5	123	107	158	287	127	.84	.30	.88	84.9
1958	41.6	85.4	91.7	88.5	117	147	261	245	2.24	.38	.41	1.23	89.8
1959	9.51	53.9	95.8	93.3	104	104	26.5	.34	.37	.76	.19	6.24	40.9
1960	14.4	16.4	52.9	70.6	70.4	107	75.5	.68	1.26	.87	1.69	16.2	35.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	606	4,500	5,670	5,590	6,260	6,930	7,220	3,470	97	112	78	33	40,570
1952	2,820	4,060	4,350	5,220	5,840	8,840	64,760	93,300	16,610	105	258	2,380	208,500
1953	2,820	7,140	9,220	8,610	6,390	9,030	9,540	2,550	33	184	427	147	56,070
1954	1,620	4,630	5,290	5,740	5,710	6,960	6,130	7.9	0	16	3.2	183	36,290
1955	917	3,380	3,550	3,380	3,720	7,570	8,820	2,100	3.4	15	170	55	33,680
1956	962	3,340	5,310	6,020	5,180	8,490	4,920	189	30	31	29	20	34,520
1957	838	3,190	4,560	4,710	6,850	6,580	9,420	17,660	7,570	52	18	53	61,500
1958	2,560	5,080	5,640	5,440	6,470	9,010	15,520	15,030	133	23	25	73	65,000
1959	585	3,210	5,890	5,740	5,780	6,360	1,580	21	22	47	12	372	29,620
1960	888	977	3,250	4,340	4,050	6,580	4,490	42	75	54	104	962	25,810

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	71.3
1951	1214	236	Apr. 10, 1951	0.2	56.0	40,570	56.6
1952	1244	3,020	Apr. 28, 1952	0	287	208,500	298
1953	1284	233	Apr. 25, 1953	0	77.4	56,070	66.9
1954	1344	189	Apr. 14, 1954	0	50.1	36,290	45.0
1955	1394	477	Mar. 14, 1955	0	46.5	33,680	49.0
1956	1444	253	Jan. 16, 1956	-	47.5	34,520	46.1
1957	1514	512	May 30, 1957	-	84.9	61,500	91.4
1958	1564	568	Apr. 19, 1958	0	89.8	65,000	84.9
1959	1634	159	Mar. 4, 1959	0	40.9	29,620	34.6
1960	1714	357	Sept. 6, 1960	0	35.6	25,810	-

1525. Hobbie Creek near Springville, Utah

Location.--Lat 40°09'30", long 111°31'30", in NE $\frac{1}{4}$ sec.6, T.8 S., R.4 E., on right bank 1,000 ft downstream from Springville hydroelectric plant, $\frac{1}{4}$ miles downstream from Right Fork, and 4 miles southeast of Springville.

Drainage area.--105 sq mi.

Records available.--March 1904 to December 1916, April 1945 to September 1960. Monthly discharge only for some periods, published in WSP 1814.

Gage.--Water-stage recorder. Altitude of gage is 4,920 ft (from topographic map). Prior to June 1, 1909, staff gage at site 200 ft downstream at different datum (destroyed by flood). June 1, 1909, to Dec. 31, 1916, staff gage at site 800 ft upstream at different datum. Apr. 17, 1945, to July 23, 1952, water-stage recorder at same site at datum 1.70 ft higher.

Average discharge.--27 years (1904-16, 1945-60), 52.2 cfs (37,790 acre-ft per year).

Extremes.--1904-16, 1945-60: Maximum discharge, 1,250 cfs May 4, 1952 (gage height, 7.83 ft, present datum); minimum, 1.4 cfs Feb. 12, 1946.

Remarks.--Several diversions for irrigation above station. Flow regulated by hydroelectric plants at times during low stages. Springville City pipeline (capacity, approximately 5 cfs) diverts water from tributary spring above station (diversion began August 1951).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	23.0	25.6	26.4	22.5	25.4	33.1	149	156	60.3	24.2	22.2	20.1	49.0
1952	22.1	24.7	23.2	25.8	24.8	26.2	380	539	145	66.8	43.8	29.0	113
1953	29.2	28.8	29.8	31.5	26.5	28.5	65.0	76.2	64.3	30.6	25.9	19.8	38.0
1954	21.8	22.9	20.8	22.0	22.9	23.5	48.2	37.0	18.2	13.5	12.3	12.8	23.0
1955	14.8	16.2	16.7	15.8	14.8	18.0	42.0	66.4	24.8	13.2	12.7	10.5	22.2
1956	12.2	14.4	18.3	19.3	15.8	34.0	104	82.6	34.5	18.8	11.4	10.8	30.9
1957	11.9	12.5	14.7	15.0	17.2	20.4	67.6	172	114	32.5	21.0	16.2	43.0
1958	19.3	19.2	18.3	16.4	21.5	24.3	113	215	64.3	23.2	17.1	17.0	47.5
1959	16.1	19.4	18.0	16.8	18.8	19.7	26.0	27.3	13.7	10.0	10.2	10.6	17.2
1960	11.8	12.4	11.3	12.0	11.7	18.0	38.8	38.9	14.8	8.52	6.33	9.34	16.3

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,410	1,530	1,620	1,380	1,410	2,040	8,840	9,590	3,590	1,490	1,370	1,200	35,470
1952	1,360	1,470	1,450	1,590	1,450	1,610	22,630	33,120	8,610	4,110	2,700	1,720	81,780
1953	1,790	1,720	1,630	1,940	1,470	1,760	3,870	4,690	3,830	1,880	1,590	1,180	27,550
1954	1,340	1,360	1,280	1,350	1,270	1,440	2,870	2,280	1,080	831	756	762	16,620
1955	911	962	1,030	974	820	1,110	2,500	4,080	1,480	813	764	624	16,090
1956	753	857	1,130	1,190	910	2,090	6,180	5,080	2,050	851	703	640	22,430
1957	729	746	904	922	954	1,260	4,020	10,550	6,770	2,000	1,290	962	31,110
1958	1,180	1,140	1,210	1,010	1,190	1,490	6,730	13,220	3,830	1,430	1,050	1,010	34,400
1959	992	1,150	1,100	1,030	1,050	1,210	1,550	1,680	817	615	627	631	12,450
1960	724	736	695	738	670	1,110	2,310	2,390	881	524	512	556	11,850

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	48.5	35,100	
1951	1214	212	Apr. 30, 1951	15	49.0	35,470	48.6	35,170	
1952	1244	1,250	May 4, 1952	-	113	81,780	114	82,860	
1953	1284	145	Apr. 23, 1953	17	38.0	27,550	36.2	26,190	
1954	1344	71	Apr. 24, 1954	10	23.0	16,620	21.5	15,540	
1955	1394	119	May 7, 1955	8.6	22.2	16,090	22.0	15,930	
1956	1444	196	Apr. 24, 1956	6.1	30.9	22,430	30.4	22,070	
1957	1514	289	May 6, 1957	9.6	43.0	31,110	44.5	32,170	
1958	1564	398	May 6, 1958	14	47.5	34,400	47.3	34,200	
1959	1634	44	May 11, 1959	7.7	17.2	12,450	15.7	11,360	
1960	1714	73	Apr. 11, 1960	5.8	16.3	11,850	-	-	

1535. Provo River near Kamas, Utah

Location.--Lat 40°35'00, long 111°00'30", in NE $\frac{1}{4}$ sec.2, T.3 S., R.8 E., on right bank about 1,000 ft upstream from canal carrying flow of Duchesne tunnel, 3 miles upstream from Soapstone Creek, and 14 miles east of Kamas.

Drainage area.--29.6 sq mi.

Records available.--August 1949 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 8,110 ft (by barometer).

Average discharge.--11 years (1949-60), 50.0 cfs (36,200 acre-ft per year).

Extremes.--1949-60: Maximum discharge, 825 cfs June 6, 1957 (gage height, 3.66 ft); minimum, 1.7 cfs Oct. 30, 1956.

Remarks.--No diversion above station. Flow regulated by several lakes at headwaters which have dams and outlet works. Combined regulated capacity, 10,841 acre-ft.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.29	6.58	8.47	8.00	7.90	8.16	27.9	216	273	113	55.5	37.5	64.3
1952	10.7	7.16	6.69	5.93	5.99	5.69	36.9	257	293	93.6	66.3	21.2	67.8
1953	6.15	5.60	4.73	4.52	4.81	6.38	20.1	74.2	230	97.6	46.6	28.6	44.2
1954	4.31	4.60	4.20	3.88	4.16	5.50	42.9	157	86.2	57.6	21.3	5.43	33.3
1955	3.75	4.44	3.72	3.50	3.50	5.03	8.93	173	125	80.5	41.6	16.7	39.5
1956	5.00	6.71	7.65	7.23	7.0	9.29	37.4	219	188	84.3	46.1	8.36	52.3
1957	3.60	3.42	3.77	3.50	4.00	4.00	8.78	102	361	96.5	76.5	39.7	58.9
1958	7.47	5.94	5.88	5.55	5.60	5.99	21.1	230	162	85.3	36.9	9.35	48.8
1959	3.52	3.95	3.79	3.67	4.25	4.97	24.2	122	148	86.5	40.7	12.4	38.3
1960	18.9	11.8	5.58	3.99	4	5.5	41.9	156	114	75.6	28.2	5.39	39.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	387	391	521	492	439	502	1,660	13,290	16,270	6,930	3,400	2,230	46,530
1952	660	426	411	364	345	350	2,310	15,810	17,430	5,750	4,070	1,260	49,190
1953	378	333	291	278	267	393	1,200	4,560	13,720	6,000	2,860	1,700	31,980
1954	265	274	258	239	231	338	2,550	9,680	5,130	3,540	1,510	323	24,140
1955	230	264	228	215	194	309	532	10,660	7,450	4,950	2,560	992	28,580
1956	308	399	470	444	403	571	2,220	13,470	11,170	5,180	2,840	497	37,980
1957	222	203	232	215	222	246	523	6,270	21,500	5,950	4,700	2,360	42,620
1958	460	353	361	341	311	369	1,260	14,150	9,650	5,240	2,270	556	35,320
1959	216	235	233	226	236	306	1,440	7,490	8,780	5,320	2,500	739	27,720
1960	1,160	705	343	245	230	337	2,490	9,600	6,770	4,650	1,740	321	28,590

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	62.9	45,530
1951	1214	765	May 27, 1951	-	64.3	46,530	64.5	46,730
1952	1244	554	June 6, 1952	4.8	67.8	49,190	67.1	48,690
1953	1284	576	June 13, 1953	4.0	44.2	31,980	43.9	31,780
1954	1344	345	May 9, 1954	3.5	33.3	24,140	33.2	24,060
1955	1394	454	May 22, 1955	-	39.5	28,580	40.1	29,040
1956	1444	536	June 1, 1956	3.2	52.3	37,980	51.6	37,460
1957	1514	825	June 6, 1957	2.9	58.9	42,620	59.6	43,140
1958	1564	554	May 26, 1958	3.5	48.8	35,320	48.1	34,830
1959	1634	314	June 6, 1959	3.1	38.3	27,720	40.4	29,240
1960	1714	456	May 12, 1960	3.2	39.4	28,590	-	-

9-2725. Duchesne tunnel near Kamas, Utah
(Transmountain diversion)

Location.--Lat 40°36', long 111°00', in NE $\frac{1}{4}$ sec.2, T.3 S., R.8 E., on left bank of canal 600 ft downstream from tunnel outlet, about 1,000 ft upstream from confluence with Provo River, 3 miles upstream from Soapstone Creek, and 14 miles east of Kamas.

Drainage area.--40 sq mi, approximately.

Records available.--October 1953 to September 1960.

Gage.--Water-stage recorder with Parshall flume, and Sparling water meter for low flow. Datum of gage is 8,098.5 ft above mean sea level (Bureau of Reclamation design plan).

Extremes.--1953-60: Maximum discharge, 697 cfs June 2, 1960 (gage height, 4.74 ft); minimum daily discharge, 0.6 cfs July 20 to Aug. 14, 1960, when flow was cut off at head of tunnel.

Remarks.--Flow is diverted from Duchesne River in Colorado River basin to Jordan River basin, and normally includes about 1.5 cfs tunnel seepage.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	224	493	460	430	389	430	1,830	16,180	4,950	1,650	681	555	28,270
1955	422	456	383	400	361	400	503	11,170	13,870	2,070	1,230	795	32,060
1956	621	626	700	700	645	553	2,160	14,910	7,260	2,390	873	456	31,890
1957	448	417	427	428	365	470	650	6,040	10,350	7,730	1,800	669	29,790
1958	700	672	615	615	571	1,190	5,260	5,260	9,490	1,760	734	574	22,740
1959	400	412	410	411	379	430	1,230	7,920	18,910	2,970	593	681	34,750
1960	1,520	1,150	605	529	545	712	2,740	12,060	13,350	1,260	47	61	34,600

1545. Weber-Provo diversion canal near Woodland, Utah

Location.--Lat 40°36'40", long 111°18'15", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.30, T.2 S., R.6 E., on right bank 100 ft upstream from outlet to Provo River and $\frac{1}{2}$ miles northwest of Woodland.

Records available.--October 1931 to September 1960 (periods of diversion only).

Gage.--Water-stage recorder with Parshall flume or Cippoletti weir. Datum of gage is 6,318 ft above mean sea level (levels by Bureau of Reclamation).

Extremes.--1931-60: Maximum daily discharge, 870 cfs June 4, 1957; no water diverted from Weber River or Beaver Creek for several months in each year.

Remarks.--Canal diverts water from Weber River in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.21, T.1 S., R.6 E., and from Beaver Creek in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.2 S., R.6 E., to Provo River for irrigation along Provo and Jordan Rivers. Figures given herein represent quantity of water reaching Provo River during periods when water was diverted from Weber River and Beaver Creek. Not all of flow diverted reached Provo River due to evaporation, transpiration, and seepage losses. No water was diverted from Weber River or Beaver Creek during periods for which no figures are given, but there may have been small seepage flow. For records at head of canal see page 69.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	72.4	-	-	-
1952	-	-	-	-	-	-	-	-	-	87.1	-	-	-
1953	-	-	-	-	-	-	-	-	-	469	-	-	-
1954	-	-	19.6	-	-	-	-	-	-	-	-	-	-
1955	-	-	25.2	25.6	22.9	26.4	74.1	238	-	-	-	-	-
1956	-	-	56.9	55.9	42.9	56.3	175	433	288	-	-	-	-
1957	-	-	32.7	29.5	-	-	-	329	641	117	-	-	-
1958	-	35.3	-	-	-	-	86.3	474	-	-	-	-	-
1959	-	21.1	26.4	25.9	26.3	33.2	81.4	204	128	-	-	-	-
1960	-	34.7	21.1	19.9	19.3	31.5	114	226	-	-	-	-	-

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	776	4,450	67	-	5,290
1952	-	-	-	-	-	-	-	-	-	3,630	-	-	3,630
1953	-	-	-	-	-	-	-	7,460	27,920	2,880	-	-	38,260
1954	-	889	1,200	761	-	-	3,200	6,540	-	-	-	-	12,590
1955	-	890	1,550	1,570	1,270	1,620	4,410	14,650	11,400	-	-	-	37,360
1956	-	1,480	3,500	3,440	2,470	3,460	10,410	26,850	17,170	1,110	-	-	69,690
1957	-	764	2,010	1,810	230	698	3,020	20,220	38,140	7,210	17	-	74,120
1958	598	2,100	317	-	-	-	5,140	29,150	12,650	-	-	-	49,940
1959	-	1,250	1,620	1,590	1,460	2,049	4,850	12,560	7,630	-	-	-	33,000
1960	1,410	2,060	1,300	1,220	1,110	1,930	6,810	15,890	6,210	-	-	-	35,940

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1214	217	July 4, 1951	-	-	5,290	-	-	-
1952	1244	149	July 10, 1952	-	-	3,630	-	-	-
1953	1284	632	June 12, 1953	-	-	38,260	-	-	-
1954	1344	303	May 14, 1954	-	-	12,590	-	-	-
1955	1394	822	June 9, 1955	-	-	37,360	-	-	-
1956	1444	837	May 21, 1956	-	-	69,690	-	-	-
1957	1514	870	June 4, 1957	-	-	74,120	-	-	-
1958	1564	802	May 24, 1958	-	-	49,940	-	-	-
1959	1634	528	June 4, 1959	-	-	33,000	-	-	-
1960	1714	630	May 13, 1960	-	-	35,940	-	-	-

1550. Provo River near Hailstone, Utah

Location.--Lat 40°36', long 111°22', in sec.34, T.2 S., R.5 E., on right bank 3 miles upstream from Ross and Hailstone.

Drainage area.--233 sq mi.

Records available.--October 1949 to September 1960.

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

Extremes.--1949-60: Maximum discharge, 3,880 cfs June 4, 1957 (gage height, 7.28 ft); minimum, 11 cfs Aug. 20, 1960.

Remarks.--Records include flow of Weber-Provo diversion canal and Duchesne tunnel. Flow affected by irrigation diversions above station and by storage in several small reservoirs at headwaters.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	54.3	79.8	86.3	68.7	69.2	81.9	245	812	788	279	115	72.8	230
1952	79.0	78.4	73.2	73.0	75.9	78.5	440	1,305	1,022	286	156	86.8	313
1953	70.7	70.0	70	68.8	65.8	84.3	140	429	1,255	207	86.0	60.0	217
1954	50.7	87.3	92.9	84.8	73.8	90.9	329	867	269	112	47.2	45.6	180
1955	43.7	77.3	81.1	80.0	82.3	86.4	206	1,010	711	159	69.2	59.6	223
1956	55.3	95.2	156	135	113	166	456	1,530	967	183	79.1	41.8	332
1957	54.6	81.0	75.0	70.0	73.2	97.6	203	985	2,026	519	173	77.6	370
1958	89.2	131	83.1	67.8	71.4	70.6	290	1,484	844	162	59.7	55.4	285
1959	51.4	78.2	86.6	81.0	81.1	108	271	731	850	172	59.1	59.5	219
1960	134	124	80.8	65	65	127	403	924	608	116	26.7	27.2	225

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,340	4,750	5,300	4,230	3,850	5,040	14,570	49,900	46,810	17,180	7,080	4,330	166,500
1952	4,860	4,670	4,500	4,490	4,370	4,830	26,170	80,230	80,810	17,570	9,620	5,160	227,300
1953	4,350	4,170	4,300	4,230	3,650	5,180	8,310	26,360	74,650	12,750	5,290	3,570	156,800
1954	3,120	5,200	5,710	5,220	4,100	5,590	19,590	53,300	16,030	6,900	2,900	2,710	130,400
1955	2,690	4,600	4,990	4,920	4,570	5,310	12,260	62,330	42,310	9,750	4,250	3,550	161,600
1956	3,400	5,660	9,570	8,280	6,470	10,200	27,130	94,060	57,550	11,230	4,860	2,490	240,900
1957	3,360	4,820	4,610	4,300	4,070	6,000	12,060	60,600	120,600	31,890	10,620	4,620	267,600
1958	5,480	7,790	5,110	4,170	3,960	4,340	17,280	91,250	50,190	9,990	3,670	3,300	206,500
1959	3,160	4,650	5,330	4,980	4,510	6,670	16,140	44,960	50,570	10,600	3,630	3,340	158,700
1960	8,230	7,350	4,970	4,000	3,740	7,830	24,000	56,830	36,200	7,160	1,640	1,620	165,600

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	253	183,200
1951	1214	2,190	May 29, 1951	44	230	166,500	231	167,100
1952	1244	1,820	May 15, 1952	65	313	227,300	311	226,100
1953	1284	2,220	June 14, 1953	39	217	156,800	218	158,000
1954	1344	1,480	May 14, 1954	20	180	130,400	178	128,600
1955	1394	2,020	June 10, 1955	38	223	161,600	232	167,900
1956	1444	3,030	May 20, 1956	25	332	240,900	324	235,000
1957	1514	3,880	June 4, 1957	21	370	267,600	377	273,100
1958	1564	2,820	May 22, 1958	45	285	206,500	278	201,300
1959	1654	1,740	June 8, 1959	32	219	158,700	230	166,200
1960	1714	2,220	May 13, 1960	12	225	163,600	-	-

Transmountain diversions from Colorado River basin to Jordan River basin, Utah

Water for irrigation is diverted from Strawberry River and tributaries of Strawberry River, a tributary of Duchesne River in Colorado River basin, to Daniels Creek, a tributary of Provo River in The Great Basin. The diversions have been made for many years, but records are available only since October 1949. The tables herewith show the record of diversions above Strawberry Reservoir. Additional water is diverted from Strawberry Reservoir on Strawberry River to the Jordan River basin by Strawberry tunnel (see p. 104).

9-2800. Strawberry River and Willow Creek ditches near Heber, Utah

Location.--Lat 40°20', long 111°14', in SE $\frac{1}{4}$ sec.34, T.5 S., R.6 E., Salt Lake meridian, 15 miles southeast of Heber.

Records available.--October 1949 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 8,000 ft (from topographic map).

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	135	0	0	0	0	0	0	20	1,200	638	335	169	2,500
1952	154	2	0	0	0	0	0	23	705	1,040	415	143	2,480
1953	0	0	0	0	0	0	0	267	698	658	256	114	1,990
1954	86	0	0	0	0	0	0	422	406	234	136	9	1,290
1955	0	0	0	0	0	0	0	407	1,170	539	325	170	2,610
1956	13	0	0	0	0	0	0	172	1,140	594	274	158	2,350
1957	84	0	0	0	0	0	0	0	1,030	753	344	173	2,360
1958	134	0	0	0	0	0	0	133	1,430	583	234	160	2,670
1959	104	38	0	0	0	0	0	1,100	840	286	160	133	2,660
1960	31	0	0	0	0	0	14	1,560	815	233	107	77	2,840

9-2815. Hobbie Creek ditch near Heber, Utah

Location.--Lat 40°18', long 111°15', in NW $\frac{1}{4}$ sec.15, T.6 S., R.6 E., Salt Lake meridian, at Daniels Pass, 18 miles southeast of Heber.

Records available.--October 1949 to September 1960. Prior to October 1952 published as "Upper and Lower Hobbie Creek ditches."

Gage.--Water-stage recorder and 36-inch Parshall flume. Altitude of gage is 8,000 ft (from topographic map).

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	745	570	19	0	0	1,330
1952	0	0	0	0	0	0	0	0	474	68	8	1	551
1953	0	0	0	0	0	0	0	498	704	38	14	6	1,260
1954	3	0	0	0	0	0	0	901	90	0	1	0	995
1955	0	0	0	0	0	0	0	798	329	23	3	6	1,160
1956	6	2	1	0	0	0	0	909	328	11	1	2	1,260
1957	0	0	0	0	0	0	0	19	650	47	1	0	717
1958	0	0	0	0	0	0	0	379	226	1	0	0	608
1959	0	1	0	0	0	0	14	391	99	3	1	0	509
1960	7	3	0	0	0	0	12	587	67	0	0	0	696

1590. Deer Creek Reservoir near Charleston, Utah

Location.--Lat 40°24'20", long 111°31'40", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.5, T.5 S., R.4 E., at dam on Provo River, 800 ft upstream from Deer Creek and $\frac{1}{2}$ miles southwest of Charleston.

Drainage area.--560 sq mi.

Records available.--December 1940 to September 1960.

Gage.--Mercury indicating gage. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Extremes.--1940-60: Maximum contents, 155,900 acre-ft June 24, 25, 1957, June 8, 1958; maximum elevation, 5,418.25 ft June 8, 1958; minimum since reservoir first filled in June 1946, 55,750 acre-ft Oct. 16, 1959 (elevation, 5,367.78 ft).

Remarks.--Reservoir is formed by earth-fill dam with concrete cutoff wall. Storage began in October 1940. Capacity, 152,560 acre-ft between elevations 5,280 (bottom of outlet tunnel) and 5,417 ft (top of 20-foot radial gates). Dead storage, 2,870 acre-ft below elevation 5,305 ft (sill of trashrack structure). Water used for irrigation, domestic, and industrial purposes. Contents given herein include dead storage and are computed from 12 p.m. elevations which are based on trend indicated by 8 a.m. readings.

Cooperation.--Records of daily elevations and contents furnished by Provo River water commissioner.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	121,700	128,700	130,400	128,000	127,000	127,000	134,900	153,200	152,800	142,700	133,500	120,600
1952	120,300	120,800	118,800	117,100	113,900	111,600	125,500	141,500	152,500	147,800	140,200	127,200
1953	123,300	124,900	124,900	126,600	120,500	119,600	116,700	115,800	153,000	134,200	117,600	102,100
1954	101,000	104,000	95,960	91,950	96,220	103,300	113,200	125,200	112,300	93,930	77,440	65,910
1955	65,680	70,260	70,790	71,480	74,550	83,900	95,110	126,600	138,100	109,300	85,920	70,460
1956	71,160	76,060	87,260	91,120	88,710	86,800	98,920	151,200	149,200	124,700	101,800	84,640
1957	80,890	77,890	76,980	81,410	87,290	85,720	88,440	115,100	153,800	136,600	116,500	101,300
1958	102,100	106,900	104,000	99,590	98,980	96,960	100,200	151,700	148,700	125,200	103,700	89,320
1959	86,490	89,820	89,030	87,400	88,810	88,750	87,440	96,930	109,600	88,070	87,120	56,030
1960	56,900	60,940	63,140	65,420	67,840	79,080	92,550	114,200	116,100	91,680	69,750	55,920

1595. 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., on right bank 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 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,270 ft (from topographic map).

Average discharge.--7 years (1953-60), 333 cfs (241,100 acre-ft per year).

Extremes.--1953-60: Maximum discharge, 2,190 cfs June 26, 1957 (gage height, 6.74 ft); no flow Feb. 2, 3, 1957, when reservoir gates were closed.

Remarks.--Flow regulated by Deer Creek Reservoir (see preceding page), and by small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River drainage into Daniels Creek (see p. 114). Flow also affected by irrigation diversions above and water diverted to Provo River by Weber-Provo diversion canal (see p. 112) and Duchesne tunnel (see p. 111).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952	-	-	-	-	-	-	-	399	566	462	393	379	-
1953	-	-	-	-	-	-	-	473	408	387	330	269	287
1954	182	199	342	317	186	134	204	473	408	387	330	269	287
1955	121	138	199	201	147	108	110	412	510	564	473	365	280
1956	145	178	190	268	324	362	356	629	900	503	441	348	387
1957	175	266	249	181	187	290	250	560	1,386	679	481	394	423
1958	232	207	290	284	262	336	432	637	803	485	416	345	393
1959	193	167	245	248	215	262	301	419	483	435	376	282	303
1960	220	168	165	163	158	119	168	407	462	437	360	259	258

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952	-	-	-	-	-	-	-	24,540	33,670	28,390	24,190	22,540	-
1953	-	-	-	-	-	-	-	29,090	24,290	23,770	20,280	15,990	207,600
1954	11,220	11,820	21,010	19,470	10,300	8,240	12,130	24,540	33,670	28,390	24,190	22,540	207,600
1955	7,410	8,190	12,250	12,340	8,140	6,660	6,560	25,320	30,360	34,700	29,110	21,730	202,800
1956	8,900	10,620	11,670	16,470	18,640	22,280	21,180	38,690	53,540	30,950	27,100	20,730	280,800
1957	10,760	15,810	15,280	11,100	10,360	17,810	14,890	34,410	81,280	41,770	29,590	23,440	306,500
1958	13,060	12,350	17,810	17,440	14,570	20,650	25,730	39,190	47,750	29,810	25,590	20,540	284,500
1959	11,880	9,920	15,090	15,260	11,950	16,140	17,920	25,750	28,720	26,730	23,130	16,800	219,300
1960	13,530	10,000	10,150	10,040	9,110	7,320	9,990	25,050	27,500	26,850	22,120	15,400	187,100

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953	1344	-	-	-	-	-	-	-
1954	1344	557	May 16, 1954	77	287	207,600	264	191,400
1955	1394	649	July 13, 1955	96	280	202,800	285	206,100
1956	1444	1,860	June 3, 1956	99	387	280,800	401	291,400
1957	1514	2,190	June 26, 1957	0	423	306,500	425	307,900
1958	1564	1,690	June 8, 1958	171	393	284,500	384	278,200
1959	1634	595	June 12, 1959	130	303	219,300	298	216,100
1960	1714	690	June 7, 1960	85	258	187,100	-	-

1610. 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 northwest of Vivian Park, and three-quarters of a mile upstream from South Fork.

Drainage area.--60 sq mi, approximately.

Records available.--October 1911 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Published as "at Forks" 1911-37.

Gage.--Water-stage recorder. Altitude of gage is 5,200 ft (from topographic map). Prior to Nov. 13, 1933, staff gage at several sites three-quarters of a mile downstream at different datums.

Extremes.--1911-60: Maximum discharge observed, 3,180 cfs June 11, 1921; minimum daily, 29 cfs Mar. 11, 13, 15-17, 20-22, 1948.

Remarks.--Flow regulated by Deer Creek Reservoir (see p. 115) and by small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River into Daniels Creek (see p. 114). Flow also affected by irrigation diversions above station and water diverted to Provo River by Weber-Provo diversion canal (see p. 112), and Duchesne tunnel (see p. 111).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	227	207	293	305	309	305	386	684	830	489	384	386	401
1952	280	300	307	310	307	297	855	1,792	1,078	507	462	451	579
1953	307	257	292	251	369	324	336	435	625	505	436	403	378
1954	205	225	369	341	211	153	237	521	424	404	359	294	313
1955	135	161	227	218	163	137	149	456	550	588	494	394	306
1956	155	196	240	294	344	376	582	679	956	543	459	355	415
1957	195	284	263	197	215	319	282	628	1,402	736	494	407	452
1958	223	223	305	291	273	349	462	714	859	531	452	376	422
1959	217	192	272	279	243	285	319	441	516	488	422	310	333
1960	250	183	187	189	173	141	201	460	481	455	371	267	281

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	13,990	12,320	18,030	18,780	17,140	18,770	22,980	42,080	49,400	30,060	23,610	22,950	290,100
1952	17,240	17,860	18,850	19,080	17,650	18,260	50,860	10,200	64,150	31,180	28,420	26,830	420,600
1953	18,900	15,320	17,980	15,460	20,480	19,900	20,000	26,760	37,170	31,020	26,810	23,950	273,800
1954	12,450	13,390	22,710	20,980	11,720	9,400	14,090	32,010	25,260	24,960	22,070	17,490	226,500
1955	8,190	9,570	13,940	13,400	9,070	8,420	8,870	28,010	32,740	36,180	30,380	22,650	221,600
1956	9,550	11,680	14,760	18,070	19,800	23,150	22,710	41,760	56,910	33,420	28,200	21,120	301,100
1957	11,960	16,890	16,190	12,120	11,920	19,590	16,800	38,590	83,440	45,280	30,380	24,230	327,400
1958	13,720	15,300	18,780	17,910	15,160	21,440	27,500	43,880	51,100	32,640	27,820	22,400	305,600
1959	13,330	11,450	16,740	17,160	13,480	17,420	18,970	27,100	30,690	30,010	25,960	18,430	240,800
1960	15,400	10,860	11,510	11,640	9,970	8,680	11,950	28,290	28,640	27,990	22,820	15,910	203,700

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	421	305,000
1951	1214	1,950	May 31, 1951	173	401	290,100	414	299,700
1952	1244	3,050	May 9, 1952	260	579	420,600	577	418,800
1953	1284	730	June 24, 26, 1953	117	378	273,800	373	270,100
1954	1344	601	May 16, 1954	107	313	226,500	289	209,600
1955	1394	663	July 14, 1955	122	306	221,600	312	225,900
1956	1444	1,760	June 4, 1956	106	415	301,100	427	310,200
1957	1514	2,180	June 26, 1957	41	452	327,400	453	328,200
1958	1564	1,700	June 8, 1958	178	422	305,600	416	301,400
1959	1634	619	June 13, 1959	170	333	240,800	327	237,000
1960	1714	593	June 7, 1960	123	281	203,700	-	-

1615. South Fork Provo River at Vivian Park, Utah

Location.--Lat 40°21'10", long 111°34'10", in NW 1/4 sec. 26, T.5 S., R.3 E., on right bank a quarter of a mile southeast of Vivian Park and half a mile upstream from mouth.

Drainage area.--30 sq mi, approximately.

Records available.--October 1911 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Published as "at Forks" 1911-37.

Gage.--Water-stage recorder and Parshall flume. Altitude of gage is 5,240 ft (from topographic map). Prior to June 15, 1913, staff gage at site half a mile downstream at different datum. June 15, 1913, to Nov. 21, 1933, staff gage at site a quarter of a mile downstream at different datum.

Extremes.--1911-60: Maximum discharge observed, 123 cfs May 27, 1922; minimum, 3.6 cfs Aug. 15, 1960.

Remarks.--Flow affected by irrigation diversions upstream, and by diversion for city of Provo municipal supply which bypasses gaging station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	30.7	32.3	28.3	25.9	26.9	24.9	26.1	31.8	23.6	21.4	25.9	26.2	27.0
1952	30.7	29.6	25.2	24.1	22.7	22.3	36.3	72.4	45.1	37.7	45.8	48.9	36.8
1953	45.3	40.5	35.4	31.2	27.2	26.1	28.3	25.2	26.2	20.2	22.8	21.6	29.0
1954	22.4	25.1	22.4	21.3	21.0	20.1	19.8	17.4	15.4	13.8	14.9	14.8	19.0
1955	14.9	16.4	16.5	16.7	15.2	15.6	15.1	15.9	11.9	10.6	11.3	11.7	14.3
1956	14.0	14.6	14.7	13.5	12.9	11.7	14.4	15.3	12.6	11.7	12.6	12.2	13.3
1957	14.6	16.0	15.6	15.3	16.1	14.6	13.3	19.0	26.5	13.2	15.0	16.0	16.3
1958	20.9	21.1	19.0	18.6	17.8	16.7	17.2	30.3	20.2	16.4	20.3	24.2	20.2
1959	21.7	21.1	20.1	19.3	17.4	15.4	14.4	11.8	10.0	10.7	10.7	10.5	15.3
1960	11.9	12.8	12.7	12.3	12.0	12.9	12.1	9.05	7.56	7.16	8.39	9.32	10.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,890	1,920	1,740	1,590	1,490	1,530	1,550	1,960	1,400	1,320	1,590	1,560	19,540
1952	1,890	1,760	1,550	1,480	1,310	1,370	2,160	4,450	2,660	2,320	2,820	2,910	28,700
1953	2,780	2,410	2,170	1,920	1,510	1,600	1,570	1,550	1,560	1,240	1,400	1,290	21,000
1954	1,370	1,490	1,370	1,310	1,160	1,240	1,180	1,070	917	847	916	883	13,750
1955	918	974	1,010	1,030	845	958	899	978	710	651	693	698	10,370
1956	863	867	906	827	742	718	859	940	750	718	775	724	9,690
1957	897	954	960	938	895	900	791	1,170	1,580	810	922	954	11,770
1958	1,280	1,280	1,170	1,140	988	1,030	1,020	1,860	1,200	1,010	1,250	1,440	14,850
1959	1,340	1,250	1,230	1,180	964	948	857	729	596	656	658	626	11,030
1960	730	760	780	756	688	791	720	556	450	441	516	555	7,740

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	28.1	20,370	
1951	1214	61	May 28, 1951	12	27.0	19,540	26.5	19,190	
1952	1244	102	May 6, 1952	20	36.8	26,700	39.8	28,860	
1953	1254	49	Oct. 1, 1952	12	29.0	21,000	24.7	17,870	
1954	1344	39	Jan. 25, 1954	6.0	19.0	13,750	17.2	12,430	
1955	1394	24	Nov. 16, 1954	6.0	14.3	10,370	13.9	10,100	
1956	1444	33	Dec. 23, 1955	6.2	13.3	9,690	13.6	9,860	
1957	1514	49	June 7, 1957	8.1	16.3	11,770	17.5	12,670	
1958	1564	55	May 27, 1958	12	20.2	14,650	20.4	14,760	
1959	1634	25	Oct. 3, 1958	5.7	15.3	11,030	13.1	9,480	
1960	1714	20	Feb. 8, 1960	4.8	10.7	7,740	-	-	

1630. Provo River at Provo, Utah

Location.--Lat. 40°14'15", long 111°41'55", in NW 1/4 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.

Drainage area.--680 sq mi, approximately.

Records available.--May 1903 to June 1905, May 1933 to September 1934, January 1937 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Published as "at San Pedro, Los Angeles and Salt Lake Railroad bridge, near Provo" 1903-4 and as "at Rio Grande Western Railroad bridge, near Provo" 1905.

Gage.--Water-stage recorder. Altitude of gage is 4,510 ft (from topographic map). May 1903 to June 1905, staff gages at site three-quarters of a mile upstream at different datums. May 1933 to September 1934, staff gage at present site at different datum. January 1937 to November 1938, water-stage recorder at site 1,000 ft upstream at different datum. November 1938 to Aug. 23, 1957, water-stage recorder at present site at datum 2.00 ft higher.

Extremes.--1903-5, 1933-34, 1937-60: Maximum discharge, 2,520 cfs May 6, 1952 (gage height, 6.37 ft); practically no flow for several periods.

Remarks.--Station is below all diversions. At times entire flow is diverted above station for irrigation. Flow regulated by Deer Creek Reservoir (see p. 115) and by small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River drainage into Daniels Creek (see p. 114). Flow affected by Weber-Provo diversion canal (see p. 112) and Duchesne tunnel (see p. 111). Certain diversions for industrial use which reach Provo Bay, an arm of Utah Lake, are made above station; however, part of this flow is used for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	115	215	310	316	333	318	255	246	205	3.86	1.97	16.2	194
1952	235	322	344	355	339	331	884	1,396	537	19.2	14.5	45.3	402
1953	114	267	324	320	422	307	249	39.4	35.3	3.76	5.29	8.08	173
1954	77.8	228	585	346	219	148	70.8	11.6	6.61	3.76	2.48	3.09	125
1955	5.0	126	195	192	150	118	98.0	11.0	15.3	2.45	1.50	6.37	77.1
1956	33.6	178	235	278	317	346	180	137	321	4.94	3.11	6.09	169
1957	63.0	266	269	204	214	298	275	333	632	127	8.34	24.0	225
1958	133	234	311	290	284	342	460	236	242	5.31	6.53	17.4	213
1959	67.7	167	268	259	228	273	167	12.0	4.94	2.49	4.27	24.1	123
1960	169	164	171	175	158	113	48.9	3.64	3.58	1.90	1.12	1.56	84.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7,050	12,800	19,070	19,450	18,470	19,550	15,060	15,150	12,210	237	121	964	140,100
1952	14,460	19,150	21,130	21,820	19,470	20,350	52,570	85,820	31,960	1,180	889	2,703	291,500
1953	7,030	15,890	19,900	19,670	23,430	18,900	14,820	2,420	2,100	231	325	362	125,100
1954	4,780	13,590	23,520	21,260	12,160	9,110	4,210	712	394	231	153	184	90,300
1955	924	7,490	11,960	11,800	8,330	7,260	5,830	678	908	151	92	379	55,800
1956	2,070	10,600	14,470	17,110	18,220	21,280	10,710	8,440	19,080	303	191	362	122,800
1957	3,870	15,800	16,540	12,520	11,890	18,300	16,370	20,460	37,580	7,790	513	1,430	163,100
1958	8,180	13,910	19,120	17,830	15,790	21,030	27,400	14,520	14,390	326	401	1,040	153,900
1959	4,160	9,930	16,490	15,950	12,680	16,800	9,940	736	294	153	263	1,440	88,840
1960	10,400	9,750	10,520	10,780	9,100	6,970	2,910	224	213	117	69	93	61,130

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	218	157,700	
1951	1214	2,240	May 31, 1951	1.1	194	140,100	215	156,000	
1952	1244	2,520	May 6, 1952	7.6	402	291,500	365	279,600	
1953	1284	850	Feb. 2, 1953	2.5	173	125,100	171	124,100	
1954	1344	464	Dec. 3, 1953	1.9	125	90,300	95.0	68,790	
1955	1394	216	Feb. 11, 1955	.5	77.1	55,800	86.4	62,570	
1956	1444	960	June 4, 1956	-	169	122,800	182	131,900	
1957	1514	1,330	June 27, 1957	-	225	163,100	232	168,000	
1958	1564	900	May 27, 1958	3.5	213	153,900	198	143,300	
1959	1634	324	Mar. 16, 1959	-	123	88,840	123	88,910	
1960	1714	309	Oct. 12, 1959	.4	84.2	61,130	-	-	

1645. American Fork above upper powerplant, near American Fork, Utah

Location.--Lat 40°26'50", long 111°40'55", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.26, T.4 S., R.2 E., on right bank 600 ft downstream from Rock Creek, 1,000 ft upstream from intake for upper powerplant of Utah Power & Light Co., 4 miles upstream from mouth of Canyon, and 8 miles northeast of American Fork.

Drainage area.--51.1 sq mi.

Records available.--January 1927 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Figures of daily discharge for January 1927 to September 1945 available in files of Salt Lake City district office, Geological Survey.

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

Average discharge.--33 years (1927-60), 52.5 cfs (38,010 acre-ft per year).

Extremes.--1927-60: Maximum discharge not determined, occurred July 30, 1953 (gage height, 9.2 ft, from floodmark); minimum, 4 cfs Jan. 25, 1952.

Remarks.--No diversion above station.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	21.6	23.6	20.3	17.9	16.6	18.4	76.9	209	202	92.5	46.6	27.8	64.6
1952	24.2	19.4	18.6	15.3	14.9	14.5	74.5	339	301	127	53.4	31.9	86.3
1953	24.4	18.7	17.0	16.5	15.0	17.0	40.2	91.3	227	104	38.9	26.5	53.0
1954	21.5	19.4	16.0	15.3	15.5	17.8	61.5	140	80.0	39.8	23.6	19.1	39.3
1955	16.6	14.2	13.0	12.5	12.9	12.3	23.2	164	152	54.2	26.8	20.9	43.7
1956	17.0	16.4	20.6	18.0	15.6	20.3	66.6	183	169	55.2	28.3	20.3	52.6
1957	18.5	14.9	13.5	11.9	12.7	14.4	23.4	114	240	104	40.6	24.3	52.8
1958	20.1	19.2	17.7	14.1	15.1	15.3	39.4	269	243	82.4	34.6	25.9	66.5
1959	18.7	17.0	16.1	14.6	13.6	15.0	36.2	74.6	123	40.8	23.3	17.8	34.2
1960	18.9	15.7	13.9	14.2	12.7	18.2	58.7	142	119	35.7	20.5	17.2	40.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,330	1,400	1,250	1,100	920	1,130	4,580	12,820	12,020	5,690	2,870	1,660	46,770
1952	1,490	1,150	1,150	940	855	893	4,430	20,870	17,920	7,800	3,280	1,900	62,680
1953	1,500	1,110	1,050	1,010	833	1,050	2,390	5,610	15,510	6,370	2,390	1,570	38,390
1954	1,320	1,160	982	938	859	1,100	3,660	8,640	4,760	2,450	1,450	1,130	29,450
1955	1,020	847	799	766	714	758	1,380	10,060	9,030	3,330	1,650	1,250	31,600
1956	1,050	976	1,270	1,110	895	1,250	3,960	11,280	10,050	3,390	1,740	1,210	38,180
1957	1,140	889	831	730	704	883	1,390	7,000	14,280	6,410	2,500	1,440	38,200
1958	1,230	1,140	1,090	865	841	940	2,340	16,530	14,450	5,070	2,130	1,540	48,170
1959	1,150	1,010	992	900	754	920	2,150	4,590	7,330	2,510	1,430	1,060	24,800
1960	1,160	934	857	875	732	1,120	3,490	8,720	7,090	2,190	1,260	1,020	29,450

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	67.5	-	48,870
1951	1214	645	Aug. 3, 1951	14	64.6	46,770	64.3	-	46,570
1952	1244	551	June 6, 1952	13	86.3	62,680	86.2	-	62,540
1953	1284	-	July 30, 1953	13	53.0	38,390	52.8	-	38,200
1954	1344	273	May 21, 1954	10	39.3	29,450	38.2	-	27,650
1955	1394	292	May 21, 1955	10	43.7	31,600	44.5	-	32,230
1956	1444	344	May 25, 1956	13	52.6	38,180	52.0	-	37,740
1957	1514	509	June 6, 1957	10	52.8	38,200	53.6	-	38,800
1958	1564	624	May 26, 1958	12	66.5	48,170	66.1	-	47,860
1959	1634	203	June 15, 1959	11	34.2	24,800	34.0	-	24,600
1960	1714	293	May 13, 1960	10	40.6	29,450	-	-	-

1655. Dry Creek near Alpine, Utah

Location--Lat 40°28'35", long 111°45'25", in NE $\frac{1}{4}$ sec.18, T.4 S., R.2 E., on right bank 2 miles northeast of Alpine and $3\frac{1}{2}$ miles upstream from Fort Creek.

Drainage area--9.82 sq mi.

Records available--July 1947 to September 1955, water years 1959-60 (annual maximum).

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--8 years (1947-55), 21.3 cfs (15,420 acre-ft per year).

Extremes--1947-55, 1958-60: Maximum discharge not determined, occurred Aug. 3, 1951.
1947-55: Minimum discharge, 1.5 cfs Oct. 13, 1954.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	5.24	6.51	7.09	6.98	7.25	9.41	34.1	78.7	84.3	26.7	17.3	7.00	24.3
1952	5.40	6.05	5.75	5.27	4.53	4.53	42.2	120	108	29.3	11.3	7.06	29.1
1953	5.01	4.53	4.04	3.95	3.95	7.11	18.7	35.5	106	25.6	7.54	3.95	18.8
1954	4.16	4.99	4.46	4.14	5.83	6.62	36.7	73.3	25.1	9.58	4.89	3.84	15.3
1955	3.69	5.47	4.96	5.13	4.74	4.23	9.94	86.5	77.2	12.6	6.56	3.84	18.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	322	387	436	429	403	579	2,030	4,840	5,020	1,640	1,070	417	17,570
1952	332	360	353	324	261	278	2,510	7,370	6,440	1,800	694	420	21,140
1953	308	270	249	243	219	437	1,110	2,180	6,340	1,580	463	235	13,630
1954	256	297	274	255	324	407	2,190	4,500	1,490	589	289	229	11,100
1955	227	325	305	315	263	260	591	5,320	4,590	777	404	228	13,600

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	19.4	14,080
1951	1214	-	Aug. 3, 1951	3.0	24.3	17,570	24.1	17,470
1952	1244	292	May 3, 1952	3.6	29.1	21,140	28.8	20,920
1953	1284	304	June 13, 1953	-	18.8	13,630	18.8	13,630
1954	1344	185	May 13, 1954	2.7	15.3	11,100	15.4	11,130
1955	1394	187	May 23, 1955	2.9	18.8	13,600	-	-
1956								
1957								
1958								
1959	1714	294	Aug. 19, 1959	-	-	-	-	-
1960	1714	154	Feb. 2, 1960	-	-	-	-	-

1660. Fort Creek at Alpine, Utah

Location.--Lat 40°27'55", long 111°46'45". in SE $\frac{1}{4}$ sec.13, T.4 S., R.1 E., on right bank three-quarters of a mile north of Alpine and $1\frac{1}{2}$ miles upstream from mouth.

Drainage area.--6.55 sq mi (revised).

Records available.--July 1947 to September 1955.

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

Average discharge.--8 years (1947-55), 8.38 cfs (6,070 acre-ft per year).

Extremes.--1947-55: Maximum discharge, 246 cfs Aug. 4, 1951 (gage height, 4.60 ft), from rating curve extended above 83 cfs; no flow at times during summer months of 1951, 1954-55.

Remarks.--One diversion above station for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.02	3.94	4.08	3.37	4.31	6.01	15.8	24.1	11.1	3.04	3.73	2.42	7.08
1952	3.90	3.51	3.10	3.00	3.41	5.31	38.5	54.7	23.5	4.93	3.86	3.27	12.6
1953	4.67	4.09	4.00	5.19	4.45	7.29	14.2	18.7	30.7	3.34	2.55	2.25	8.44
1954	3.12	3.98	3.54	2.85	5.45	6.34	19.5	15.5	4.47	2.56	2.19	2.20	5.96
1955	2.92	3.28	3.17	3.07	3.31	4.46	10.9	31.1	15.8	2.89	2.35	2.31	7.15

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	186	235	251	207	239	370	938	1,480	658	187	229	144	5,120
1952	240	209	190	184	196	326	2,290	3,360	1,400	303	237	195	9,130
1953	287	243	246	319	247	448	845	1,150	1,830	205	157	134	6,110
1954	192	237	218	175	303	390	1,160	952	266	157	134	131	4,320
1955	179	195	195	189	184	274	648	1,910	943	178	144	137	5,180

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	7.72	5,590
1951	1214	246	Aug. 4, 1951	0	7.08	5,120	7.04	5,090
1952	1244	134	May 3, 1952	.7	12.6	9,130	12.8	9,270
1953	1284	100	June 12, 1953	.2	8.44	6,110	8.26	5,980
1954	1344	59	June 27, 1954	.2	5.96	4,320	5.85	4,240
1955	1394	105	May 11, 1955	.1	7.15	5,180	-	-

1665. Utah Lake near Lehi, Utah

Location.--Lat 40°21'50", long 111°53'45", in N $\frac{1}{2}$ sec.25, T.5 S., R.1 W., at head of Jordan River, 125 ft southeast of pumping station and 4 miles southwest of Lehi.

Drainage area.--2,950 sq mi, approximately, including 255 sq mi in closed basin in Cedar Valley (Revised).

Records available.--October 1883 to September 1960. Published as "near Spanish Fork" 1889-96 and as "at Geneva" 1897-1900.

Gage.--Water-stage recorder. Datum of gage is 4,489.40 ft above mean sea level, datum of 1929 (levels by State engineer) and 0.06 ft above compromise level. Compromise level varies with latitude owing to orthometric adjustments. Prior to Nov. 6, 1896, staff gage near Spanish Fork (compromise level, 4,489.43 ft above mean sea level, datum of 1929), at datum 3.29 ft below compromise level prior to Aug. 1, 1891, and 3.79 ft below compromise level Aug. 1, 1891, to Nov. 5, 1896. Nov. 6, 1896, to Oct. 14, 1899, staff gage at Geneva (compromise level, 4,489.36 ft above mean sea level, datum of 1929) at datum 2.00 ft below compromise level. Oct. 15, 1899, to July 22, 1936, staff gage at present site at datum changing chronologically from compromise level in 1899 to 0.48 ft below compromise level in 1936. July 23, 1936, to Feb. 10, 1946, water-stage recorder at present site at datum 0.48 ft below compromise level. Feb. 11, 1946, to Nov. 5, 1948, water-stage recorder at present site at datum 0.16 ft below compromise level. Nov. 6, 1948 to Mar. 1, 1955, water-stage recorder at present site at datum 0.05 ft above compromise level.

Since May 1, 1936, supplementary water-stage recorder at Pelican Point (compromise level, 4,489.39 ft above mean sea level, datum of 1929) at datum 0.52 ft below compromise level prior to Feb. 11, 1946, 0.20 ft below compromise level Feb. 11, 1946, to Apr. 4, 1953, and changing chronologically from 0.20 ft to 0.24 ft below compromise level, Apr. 5, 1953, to Sept. 30, 1960.

Since May 1, 1936, supplementary water-stage recorder at Lincoln Point (compromise level, 4,489.43 ft above mean sea level, datum of 1929), at datum 0.52 ft below compromise level prior to Feb. 11, 1946, 0.20 ft below compromise level Feb. 11, 1946, to July 21, 1960, and 0.42 ft above compromise level July 22, 1960, to Sept. 30, 1960.

All gage readings have been reduced to stage above or below compromise level.

Extremes.--1883-1960: Maximum stage, +4.9 ft July 1, 1884; minimum observed, -12.6 ft Oct. 10, 1935.

Maximum stage known, +6.42 ft sometime in 1862, from files of Salt Lake City engineer.

Remarks.--Level of lake affected after 1872 by dam in Jordan River, and since August 1902 by pumping station at head of Jordan River used to supply water to irrigation canals when lake level was low.

Compromise level is the height to which water of Utah Lake may be held by control structures as provided by an 1885 agreement between owners of land adjacent to the lake and users of water from the lake.

Cooperation.--Records furnished by Utah Lake and Jordan River Water Commissioner.

Stage, in feet, above or below compromise level, on first day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	-3.85	-3.89	-3.44	-2.81	a-2.13	-1.59	-1.20	-0.88	-0.88	a-1.44	-2.28	-2.98
1952	-3.70	-3.45	a-2.86	-2.07	-1.33	-.62	+.16	+1.45	+3.07	a+2.61	+1.82	a+1.13
1953	+.56	+.33	+.41	-.67	+.99	+1.05	+1.07	+1.00	+.54	-.18	-.98	-1.82
1954	-2.49	-2.57	-2.20	-1.70	-1.16	-.85	-.64	-.84	-1.56	-2.21	-3.21	-4.23
1955	a-4.84	-4.90	-4.57	-4.10	-3.48	-2.96	-2.40	-2.16	-2.65	-3.13	-4.23	-5.10
1956	-5.76	-5.84	-5.36	-4.81	-4.08	-3.42	-2.98	-2.94	-3.30	-4.02	-5.07	a-6.02
1957	a-6.82	a-7.07	a-6.42	-5.77	-5.20	-4.67	-4.16	-3.61	-2.98	-2.81	-3.68	-4.56
1958	-5.15	-5.12	-4.52	-3.86	-3.28	-2.63	-1.99	-1.48	-1.51	-2.25	-3.37	-4.23
1959	-4.89	-5.02	-4.61	-4.02	-3.42	-2.77	-2.33	-2.34	-2.93	-3.76	-4.78	-5.55
1960	a-6.00	a-5.94	-5.70	a-5.23	-4.69	-4.10	-3.65	-3.72	-4.45	a-5.19	-6.51	-7.47

a No gage-height record; elevation estimated on basis of previous and subsequent readings or water commissioner's notes.

JORDAN RIVER BASIN

1670. Jordan River at narrows, near Lehi, Utah

Location.--Lat 40°26'40", long 111°55'15", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.26, T.4 S., R.1 W., at narrows $\frac{5}{2}$ miles northwest of Lehi and $7\frac{1}{2}$ miles downstream from Utah Lake.

Drainage area.--3,000 sq mi, approximately, including 255 sq mi in closed basin in Cedar Valley.

Records available.--May to December 1904, July 1913 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 4,470 ft (by barometer). Prior to May 16, 1920, staff gage and May 16, 1920, to Sept. 30, 1934, water-stage recorder, at outlet of Utah Lake $7\frac{1}{2}$ miles upstream at different datum.

Average discharge.--47 years (1913-60), 365 cfs (264,200 acre-ft per year).

Extremes.--1904, 1913-60: Maximum daily discharge, 1,410 cfs June 10, 1952; no flow at times when gates were closed.

Remarks.--Figures given herein represent combined flow of Jordan River, Utah and Salt Lake Canal, and East Jordan Canal. Flow may be regulated by gates and pumps at outlet of Utah Lake, pumps at Pelican Point, and diversion dam at narrows.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	279	114	103	17.9	46.6	93.0	259	468	705	768	622	693	349
1952	194	117	99.8	222	343	461	588	1,131	1,285	1,005	819	653	577
1953	591	581	650	717	751	786	749	675	708	789	744	706	704
1954	323	131	188	184	265	378	376	634	698	813	757	635	450
1955	211	27.0	25.3	7.10	6.50	7.43	32.9	434	545	766	715	601	284
1956	187	24.1	15.3	5.78	1.52	1.01	112	507	664	784	751	618	307
1957	197	19.3	18.3	5.68	3.18	3.13	4.41	257	504	759	719	591	257
1958	168	17.0	18.1	29.4	83.9	67.2	188	625	716	821	794	660	332
1959	279	68.6	15.5	14.2	14.7	6.87	200	877	709	777	697	484	322
1960	164	84.4	23.6	8.59	1.94	11.8	86.1	578	671	770	572	406	283

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	17,180	6,790	6,360	1,100	2,590	5,720	15,440	28,780	41,920	47,230	38,250	41,260	252,600
1952	11,950	6,960	6,140	13,640	19,750	28,320	35,010	69,560	76,460	61,820	50,330	38,830	418,800
1953	36,360	34,580	39,990	44,090	41,700	48,320	44,560	41,530	42,150	48,500	45,770	42,010	509,600
1954	19,840	7,800	11,550	11,340	14,700	23,230	22,350	39,010	41,550	49,990	46,560	37,800	325,700
1955	12,970	1,600	1,560	436	361	457	1,960	26,710	32,440	47,090	43,950	35,740	205,300
1956	11,490	1,430	941	355	87	62	6,660	31,180	39,530	48,200	46,170	36,750	222,900
1957	12,140	1,150	1,120	349	177	192	262	15,790	29,960	45,450	44,230	35,170	186,000
1958	11,550	1,010	1,110	1,810	4,660	4,130	11,160	38,430	42,610	50,450	48,840	39,260	255,000
1959	17,180	4,080	956	872	816	422	11,880	35,490	42,170	47,750	42,850	28,790	233,300
1960	10,110	5,020	1,450	528	111	725	5,120	35,520	39,940	48,370	35,180	24,140	205,200

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	376	271,800	
1951	1214	873	July 12, 1951	14	349	252,600	342	247,300	
1952	1244	al, 410	June 10, 1952	50	577	418,800	695	504,600	
1953	1284	860	July 9, 1953	369	704	509,600	605	437,800	
1954	1344	877	July 8, 1954	31	450	325,700	418	302,700	
1955	1394	855	July 3, 1955	6.5	284	205,300	280	203,000	
1956	1444	817	July 9, 1956	-	307	222,900	308	223,400	
1957	1514	790	July 18, 1957	2.5	257	186,000	256	185,200	
1958	1564	859	July 11, 12, 1958	14	352	255,000	364	263,600	
1959	1634	855	July 10, 1959	.9	322	233,300	314	227,600	
1960	1714	804	June 28, 1960	1.2	283	205,200	-	-	

a Maximum daily.

1675. Little Cottonwood Creek near Salt Lake City, Utah

Location.--Lat 40°34'40", long 111°47'50", in NE¹/₄ sec. 11, T.3 S., R.1 E., at mouth of canyon 100 ft west of Wasatch Drive, 2 miles downstream from Wasatch Resort, and 14 miles southeast of Salt Lake City.

Drainage area.--27.4 sq mi (revised).

Records available.--November 1898 to May 1899, August to November 1904, October 1905 to March 1906, January to March 1907, November 1907 to March 1908, December 1908 to April 1909, November 1909 to March 1910, September 1910 to March 1911, January 1912 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and Parshall flume on creek. Altitude of gage is 5,080 ft (from topographic map). Supplementary gages measuring bypassed water: Cippoletti weir on City conduit, 24-inch rated gate on Farmers conduit, and separate weirs on West Side Water Co.'s conduit, Beaver Pond Springs and Sandy ditch. Prior to 1920, two weirs on creek at site about 1 mile downstream at different datum, stage determined by measurement from fixed point; two small irrigation ditches bypassed gage unmeasured.

1920-23, flow computed as sum of all diversions; method of measurement of flow not known. 1924 to January 1940, concrete flume $1\frac{1}{2}$ miles upstream from present site and above all diversions prior to 1931; water bypassing gage after 1930 measured by separate weirs on tailrace of Murray City powerplant, Beaver Pond Springs, and Sandy ditch.

Average discharge.--11 years (1912-23), 67.1 cfs (48,580 acre-ft); 37 years (1923-60), 58.6 cfs (42,420 acre-ft).

Extremes.--1912-13, 1915-60: Maximum daily discharge, 762 cfs June 11, 1921; minimum daily, 4.2 cfs Jan. 10, 1934.

Remarks.--Some storage and regulation in several small lakes and reservoirs. Several diversions above station for irrigation above and below station. Diversions above station for municipal supply and for three powerplants, of which discharge from two upper plants returns to creek above gage. Discharge which bypasses gage through conduits is included in record published herewith. Record since 1920 includes all water bypassing gage and shows natural flow except for small irrigation diversions above and except for slight storage and regulation mentioned above. Prior to 1920, record does not include two small irrigation diversions. Record prior to 1924 not equivalent to those after 1924 due to channel losses between sites.

Cooperation.--Records for 1951-60, not previously published by Geological Survey, furnished by Office of City Engineer of Salt Lake City.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	18.2	17.2	17.0	13.7	13.1	14.4	43.1	175	248	97.6	53.2	26.4	61.5
1952	20.3	15.8	13.8	12.5	13.6	13.5	53.8	266	367	170	56.3	30.6	86.2
1953	19.9	15.7	14.2	14.4	13.2	16.5	32.6	105	354	132	39.4	24.2	65.1
1954	18.0	17.8	15.8	14.7	15.9	19.1	44.8	184	139	64.3	31.8	20.1	49.0
1955	16.4	15.9	14.0	12.4	13.2	13.8	21.4	166	257	64.6	37.3	21.7	54.5
1956	15.8	14.1	15.9	17.9	15.8	15.5	35.3	194	253	71.9	37.8	20.8	59.0
1957	14.9	13.3	12.0	10.7	11.5	13.3	23.8	107	297	138	44.2	27.0	59.4
1958	17.0	13.0	11.8	9.95	13.6	13.3	27.1	232	289	79.7	37.2	23.9	64.1
1959	17.1	14.2	13.7	12.6	11.1	12.3	29.5	97.1	238	55.1	24.8	23.4	45.7
1960	24.7	18.7	15.1	13.1	12.6	20.8	54.8	165	203	64.0	26.5	17.0	53.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,120	1,020	1,040	840	730	882	2,560	10,780	14,730	6,000	3,270	1,570	44,540
1952	1,250	938	849	768	781	829	3,200	16,370	21,820	10,480	3,460	1,820	62,560
1953	1,230	937	874	888	735	1,010	1,940	6,460	21,050	8,120	2,420	1,440	47,100
1954	1,110	1,060	970	906	884	1,170	2,660	11,320	8,260	3,950	1,950	1,190	35,430
1955	1,010	945	864	765	734	847	1,270	10,180	15,280	3,970	2,290	1,290	39,440
1956	971	842	980	1,100	908	952	2,100	11,930	15,050	4,420	2,330	1,240	42,820
1957	916	790	739	661	638	818	1,420	6,570	17,660	8,450	2,720	1,600	42,980
1958	1,050	774	726	612	736	820	1,610	14,240	17,220	4,900	2,280	1,620	46,390
1959	1,050	846	845	774	618	758	1,750	5,970	14,140	3,590	1,530	1,400	33,070
1960	1,520	1,120	926	802	726	1,280	3,280	10,170	12,090	5,940	1,630	1,010	38,470

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	(a)	-	-	-	-	-	67.1	48,580
1951	(a)	473	May 28, 1951	9.5	61.5	44,540	61.3	44,400
1952	(a)	538	June 6, 1952	10	86.2	62,560	86.2	62,570
1953	(a)	619	June 13, 1953	11	65.1	47,100	65.2	47,200
1954	(a)	380	May 21, 1954	12	49.0	35,430	49.5	35,110
1955	(a)	446	June 9, 1955	11	54.5	39,440	54.5	39,420
1956	(a)	388	June 1, 1956	9.6	59.0	42,820	58.5	51,480
1957	(a)	418	June 7, 1957	6.2	59.4	42,980	59.5	43,090
1958	(a)	476	June 6, 1958	9.0	64.1	46,390	64.4	46,580
1959	(a)	351	June 15, 1959	9.0	45.7	33,070	46.8	33,900
1960	(a)	336	June 3, 1960	11	53.0	38,470	-	-

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1685. Big Cottonwood Creek near Salt Lake City, Utah

Location.--Lat 40°37'10", long 111°47'00" in SW 1/4 sec. 25, T.2 S., R.1 E., at mouth of canyon, about 80 ft upstream from Wasatch Boulevard bridge, a quarter of a mile downstream from Utah Power & Light Co.'s plant, and 12 miles southeast of Salt Lake City.

Drainage area.--50 sq mi (revised).

Records available.--October 1958 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and two Cipolletti weirs. Altitude of gage is 4,880 ft (from topographic map). Prior to 1908, water-level indicating glass tube at lower side of weirs.

Average discharge.--62 years (1898-1960), 73.8 cfs (53,430 acre-ft per year).

Extremes.--1898-1960: Maximum daily discharge (corrected), 835 cfs June 6, 1909; minimum daily, 4.5 cfs Jan. 10, 1937.

Remarks.--Some regulation during low flow since beginning of record by Utah Power & Light Co.'s plant about a quarter of a mile upstream. Adjustments have been made to the record for storage of municipal water at Brighton in Lake Mary (capacity, 742 acre-ft). Butler ditch, which has title to 0.89 percent of creek flow, diverts about three-quarters of a mile upstream from station for irrigation below station. The flow in Butler ditch was included in records May 16 to Sept. 30, 1912, only.

Cooperation.--Records for 1951-60, not previously published by Geological Survey, furnished by office of City Engineer of Salt Lake City.

Correction.--In WSP 1314, the mean for August 1912 is published in error; it should be 69.3 cfs. The maximum daily discharge under "Extremes" also is published in error; it should be as listed under "Extremes" above. The figure of 848 cfs published in WSP 1314 is the momentary maximum discharge for June 7, 1912.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	29.1	32.8	29.4	25.1	27.2	26.5	68.1	204	248	94.4	55.3	30.5	72.7
1952	35.1	27.3	25.5	23.5	25.8	26.5	110	298	338	136	63.4	38.1	95.6
1953	30.9	27.3	33.2	25.7	24.1	32.9	68.3	129	321	120	51.2	32.1	74.6
1954	30.3	28.3	24.5	23.4	23.8	28.4	64.6	153	101	48.0	25.7	21.6	47.9
1955	21.5	22.7	20.2	19.1	18.7	20.8	45.1	200	198	63.8	31.9	21.4	57.1
1956	19.7	22.2	28.2	28.4	20.5	28.6	64.3	189	200	63.1	32.8	26.9	60.3
1957	25.3	23.4	22.4	20.9	21.8	29.7	53.3	211	330	142	55.5	37.1	81.0
1958	51.1	28.2	25.5	23.7	25.1	29.1	69.3	331	275	77.8	41.2	31.0	82.6
1959	28.1	23.2	22.9	20.0	21.0	25.9	56.7	135	214	55.5	29.3	30.3	54.8
1960	33.4	24.3	20.1	19.0	19.8	35.8	92.6	192	166	40.9	25.7	22.7	57.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,790	1,950	1,810	1,540	1,510	1,630	4,050	12,540	14,760	5,810	3,400	1,810	52,600
1952	2,160	1,630	1,570	1,450	1,480	1,630	6,540	18,330	20,100	8,350	3,900	2,270	69,410
1953	1,900	1,630	2,040	1,580	1,340	2,030	4,060	7,930	19,100	7,380	3,150	1,910	54,050
1954	1,860	1,690	1,510	1,440	1,320	1,740	3,840	9,410	6,030	2,950	1,580	1,290	34,680
1955	1,320	1,350	1,240	1,170	1,040	1,280	2,690	12,310	11,770	3,920	1,960	1,270	41,320
1956	1,210	1,320	1,730	1,750	1,180	1,760	3,820	11,640	11,890	3,880	2,020	1,600	43,800
1957	1,560	1,390	1,370	1,280	1,210	1,830	3,170	12,970	19,650	8,710	3,290	2,210	58,640
1958	1,910	1,680	1,570	1,460	1,390	1,790	4,130	20,350	16,370	4,780	2,530	1,840	59,800
1959	1,600	1,380	1,410	1,230	1,170	1,470	3,380	8,280	12,710	3,410	1,800	1,800	39,640
1960	2,050	1,450	1,230	1,170	1,140	2,200	5,510	11,820	9,910	2,520	1,580	1,350	41,930

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	71.1	51,450	
1951	(a)	462	May 29, 1951	16	72.7	52,600	72.4	52,410	
1952	(a)	503	June 7, 1952	14	95.6	69,410	95.9	69,620	
1953	(a)	503	June 12, 1953	19	74.6	54,050	73.9	53,540	
1954	(a)	315	May 21, 1954	16	47.9	34,660	46.3	33,510	
1955	(a)	308	May 23, 1955	14	57.1	41,320	57.6	41,670	
1956	(a)	315	May 25, 1956	10	60.3	43,800	60.4	43,860	
1957	(a)	536	June 6, 1957	17	81.0	58,640	82.2	59,480	
1958	(a)	536	May 25, 1958	18	82.6	59,800	81.5	50,030	
1959	(a)	298	June 6, 1959	17	54.8	39,640	55.2	39,980	
1960	(a)	311	May 12, 1960	14	57.8	41,930	-	-	

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1700. Mill Creek near Salt Lake City, Utah

Location.--Lat 40°41'20", long 111°46'55", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.1 S., R.1 E., 1,000 ft upstream from bridge at mouth of canyon, a quarter of a mile upstream from lower powerplant, and 7 miles southeast of Salt Lake City.

Drainage area.--21.7 sq mi (revised).

Records available.--October 1898 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and rating flume on creek. Altitude of gage is 5,050 ft (from topographic map). Supplementary gage in tailrace of lower powerplant; water-stage recorder and weir a quarter of a mile downstream from creek gage. Prior to 1930 on creek, and prior to 1931 on tailrace, various type weirs at or near present sites at unknown datums; stage at creek weir, determined by measurement from fixed point, and at tailrace, by hook-gage.

Average discharge.--62 years (1898-1960), 15.4 cfs (11,150 acre-ft per year).

Extremes.--1898-1910, 1912-19, 1920-22, 1923-60: Maximum daily discharge, 152 cfs May 20, 1949; minimum not determined, but about 1 cfs or less.

Remarks.--No regulation. Records include flow through powerplant and, except for small diversion above station for culinary use, show natural runoff.

Cooperation.--Records for 1951-60, not previously published by Geological Survey, furnished by Office of City Engineer of Salt Lake City.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	12.3	12.2	11.4	9.91	10.3	11.1	15.7	36.4	30.2	16.6	13.4	11.1	15.9
1952	10.4	9.45	8.26	8.47	9.56	9.63	34.1	76.2	64.1	26.6	19.3	14.9	24.3
1953	12.6	10.8	10.8	11.3	10.2	10.3	14.4	24.4	47.9	21.1	15.5	12.1	16.8
1954	10.4	9.98	8.97	10.0	8.99	8.68	10.4	17.0	11.5	8.98	7.17	6.68	9.91
1955	6.66	6.97	5.06	6.04	5.58	7.43	9.97	24.0	19.7	13.0	9.88	8.53	10.3
1956	7.69	7.58	8.39	7.48	5.92	9.57	14.3	28.8	20.4	12.2	10.4	8.77	11.8
1957	8.07	5.37	7.89	6.79	7.96	8.77	12.3	32.2	48.1	21.0	13.9	11.4	15.3
1958	9.73	9.46	8.98	8.22	8.64	8.96	16.0	44.1	32.4	16.7	12.2	10.5	15.5
1959	9.27	9.00	9.08	8.34	8.65	8.77	10.8	15.3	17.3	10.0	8.66	8.45	10.3
1960	7.65	6.62	7.15	6.17	7.25	8.45	11.6	19.3	13.8	9.44	7.89	6.89	9.35

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	759	724	700	610	574	684	933	2,240	1,800	1,020	823	659	11,530
1952	842	562	508	521	550	592	2,030	4,680	3,810	1,840	1,190	889	17,610
1953	773	645	663	697	568	636	857	1,500	2,850	1,280	953	718	12,150
1954	639	594	552	618	499	534	822	1,040	685	552	441	398	7,170
1955	409	415	311	371	310	457	593	1,470	1,180	800	607	508	7,430
1956	473	451	516	460	340	588	853	1,770	1,210	753	641	522	8,580
1957	496	319	485	418	442	539	734	1,980	2,860	1,290	857	676	11,100
1958	616	563	552	505	480	551	953	2,710	1,930	1,230	754	625	11,470
1959	570	535	559	513	480	540	642	941	1,030	618	532	503	7,460
1960	471	394	440	379	417	519	689	1,190	818	580	485	410	6,790

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	19.6	14,200	
1951	(a)	72	May 30, 1951	2.5	15.9	11,530	15.3	11,060	
1952	(a)	102	June 2, 1952	2.5	24.3	17,610	24.8	17,980	
1953	(a)	77	June 13, 1953	3.4	16.8	12,150	16.4	11,850	
1954	(a)	24	May 22, 1954	3.7	9.91	7,170	9.01	6,520	
1955	(a)	40	May 24, 1955	3.2	10.3	7,430	10.7	7,740	
1956	(a)	46	May 25, 26, 1956	3.3	11.8	8,580	11.6	8,440	
1957	(a)	80	June 6, 1957	2.4	15.3	11,100	15.9	11,530	
1958	(a)	75	May 27, 1958	4.0	15.5	11,470	15.5	11,400	
1959	(a)	26	June 7, 1959	5.7	10.3	7,460	9.81	7,100	
1960	(a)	28	May 17, 1960	3.5	9.35	6,790	-	-	

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1705. Surplus Canal at Salt Lake City, Utah

Location.--Lat 40°43'40", long 111°55'35", 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 1960.

Gage.--Water-stage recorder. Datum of gage is 4,219.02 ft above mean sea level, datum of 1929. Prior to Oct. 22, 1952, at site 50 ft upstream at present datum.

Average discharge.--17 years (1943-60), 188 cfs (136,100 acre-ft per year).

Extremes.--1942-60: Maximum discharge, 1,700 cfs June 7, 1952; maximum gage height, 8.84 ft May 7, 1952; minimum daily discharge, 9.6 cfs Jan. 13, Feb. 20, June 26, 1956.

Remarks.--Flow regulated by headgates at diversion dam 350 ft above station. Canal was built to bypass floodwater of Jordan River around Salt Lake City residential and industrial area (see p.130 for records of combined flow of Jordan River and Canal). Several diversions for irrigation below station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	111	150	116	83.7	98.3	127	109	272	227	204	202	155	155
1952	174	127	201	357	393	533	682	1,221	1,214	511	290	217	493
1953	310	506	727	829	829	804	774	499	554	190	214	210	535
1954	201	155	222	240	229	329	237	176	193	138	97.6	135	196
1955	134	104	95.5	61.4	59.6	101	82.0	146	206	128	144	167	119
1956	147	85.7	65.4	30.8	37.1	65.8	121	274	188	95.5	92.1	156	113
1957	166	121	95.1	75.8	70.6	74.5	95.9	270	505	148	134	171	161
1958	163	110	100	107	203	244	369	470	416	87.1	97.3	181	212
1959	123	84.6	81.7	74.0	107	90.9	92.6	170	234	174	185	229	137
1960	132	76.5	73.1	66.9	59.3	63.9	116	165	162	113	109	112	104

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6,800	8,900	7,160	5,150	5,460	7,830	6,510	16,750	13,530	12,550	12,440	9,220	112,300
1952	10,890	7,580	12,340	21,970	22,590	32,770	40,350	75,090	72,240	31,430	17,650	12,880	358,000
1953	19,080	30,080	44,690	50,950	46,050	49,440	46,040	30,660	32,940	11,670	13,170	12,480	387,200
1954	12,350	9,240	13,670	14,750	12,730	20,220	14,100	10,840	11,490	8,490	6,000	8,050	141,900
1955	8,260	6,160	5,870	3,770	3,310	6,230	4,880	9,000	12,270	7,840	8,880	9,930	86,400
1956	9,020	4,980	4,020	1,900	2,130	4,050	7,220	16,880	11,210	5,870	5,660	9,280	82,220
1957	10,210	7,210	5,850	4,660	3,930	4,580	5,700	16,620	30,040	9,100	8,220	10,200	116,300
1958	10,050	6,520	6,180	6,600	11,260	15,000	21,930	28,910	24,730	5,360	5,980	10,800	153,300
1959	7,560	5,030	5,020	4,550	5,920	5,590	5,510	10,440	13,930	10,680	11,370	13,610	99,210
1960	8,150	4,550	4,490	4,110	3,410	3,930	6,900	10,150	9,620	6,920	6,700	6,650	75,580

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	167	121,100
1951	1214	585	May 30, 1951	72	155	112,300	166	120,000
1952	1244	1,700	June 7, 1952	90	493	358,000	580	421,200
1953	1284	1,100	June 14, 1953	155	535	387,200	454	328,700
1954	1344	439	May 22, 1954	29	196	141,900	175	127,000
1955	1394	366	June 9, 1955	24	119	86,400	116	84,150
1956	1444	633	May 25, 1956	9.6	113	82,220	121	87,470
1957	1514	872	June 7, 1957	26	161	116,300	160	115,800
1958	1564	850	May 28, 1958	40	212	153,300	205	148,200
1959	1634	418	June 16, 1959	52	137	99,210	136	98,790
1960	1714	510	May 13, 1960	45	104	75,580	-	-

1710. Jordan River at Salt Lake City, Utah

Location.--Lat 40°43'40", long 111°55'25", SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.14, T.1 S., R.1 W., on left bank a quarter of a mile downstream from highway bridge on Twenty-first South Street, Salt Lake City, and 2 miles downstream from Mill Creek.

Drainage area.--3,420 sq mi, approximately (including 255 sq mi in closed basin in Cedar Valley, Utah).

Records available.--December 1942 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 4,220.73 ft above mean sea level, datum of 1929.

Average discharge.--17 years (1943-60), 150 cfs (108,600 acre-ft per year) river only; 338 cfs (244,700 acre-ft per year) combined flow, river and canal.

Extremes.--1942-60: Maximum discharge, 384 cfs June 3, 1944; maximum gage height, 5.75 ft June 26, 1952; no flow May 10, 24, 1952 (entire flow diverted to Surplus Canal). Maximum combined discharge (Jordan River and Surplus Canal), 1,820 cfs June 7, 1952; minimum daily, 141 cfs July 13, 1955.

Remarks.--Flow completely regulated since reconstruction in May 1952 of Surplus Canal diversion dam 1,000 ft upstream. Flow affected by gates and pumps at outlet of Utah Lake. Many diversions above station for irrigation and industrial and municipal water supplies. For records of Surplus Canal see preceding page. For records of combined flow see following page. Records of chemical analyses and water temperatures for the period June 1959 to September 1960 are published in reports of Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second (river only)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	198	151	151	140	123	116	115	133	138	151	145	153	143
1952	151	123	140	143	215	258	251	51.3	162	164	161	152	164
1953	221	222	177	151	105	144	142	67.3	72.7	129	117	148	142
1954	171	153	183	166	189	208	168	148	157	156	160	169	169
1955	154	136	152	140	149	134	119	147	170	136	142	156	145
1956	172	172	189	193	169	126	99.4	181	161	198	175	185	168
1957	179	170	152	143	142	144	144	115	117	152	155	171	149
1958	165	141	155	128	99.4	72.0	69.3	47.1	88.8	212	239	258	136
1959	197	183	197	191	162	137	142	163	162	150	162	168	168
1960	157	154	156	155	144	167	119	124	152	143	131	139	145

Monthly and yearly discharge, in acre-feet (river only)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	12,170	8,980	9,260	8,630	6,850	7,110	6,820	8,170	8,180	9,250	8,940	9,100	103,500
1952	9,300	7,290	8,620	8,810	12,350	15,840	14,930	3,160	9,640	10,080	9,890	9,030	118,900
1953	13,580	13,220	10,850	9,260	5,810	8,850	8,480	4,140	4,320	7,950	7,200	8,780	102,400
1954	10,520	9,110	11,270	10,210	10,480	12,770	10,000	9,120	9,350	9,610	9,860	10,030	122,300
1955	9,490	8,100	9,380	8,620	8,290	8,220	7,080	9,060	10,100	8,360	8,730	9,290	104,700
1956	10,580	10,260	11,600	11,850	9,720	7,750	5,910	11,110	9,550	12,160	10,760	11,020	122,300
1957	10,990	10,140	9,330	8,770	7,870	8,830	8,590	7,080	6,930	9,330	9,520	10,160	107,500
1958	10,140	8,420	8,270	7,770	5,520	4,430	4,130	2,900	5,280	13,010	14,700	14,160	98,730
1959	12,120	10,860	12,090	11,730	9,020	8,420	8,440	10,020	9,650	9,220	9,970	10,030	121,600
1960	9,680	9,140	9,570	9,550	8,260	10,290	7,060	7,590	9,050	8,770	8,040	8,270	105,300

Yearly discharge, in cubic feet per second (river only)

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	148	107,500
1951	1214	285	Oct. 1, 1950	67	143	103,500	136	98,280
1952	1244	367	June 26, 1952	0	164	118,900	181	131,400
1953	1284	285	Oct. 17, 1952	1.9	142	102,400	132	95,700
1954	1344	308	May 22, 1954	108	169	122,300	164	118,400
1955	1394	233	June 14, 1955	96	145	104,700	152	110,200
1956	1444	279	May 24, 1956	70	168	122,300	166	120,300
1957	1514	223	May 19, 1957	31	149	107,500	144	103,900
1958	1564	279	Aug. 15, 1958	25	136	98,730	148	107,000
1959	1634	253	May 28, 1959	97	168	121,600	159	114,890
1960	1714	228	Mar. 31, 1960	77	145	105,300	-	-

Monthly and yearly mean discharge, in cubic feet per second, of Jordan River at Salt Lake City, Utah (combined flow, river and canal)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	309	300	267	224	222	243	224	405	365	355	348	308	298
1952	325	250	341	501	607	791	993	1,272	1,376	675	451	368	657
1953	531	728	903	979	933	948	916	566	626	319	331	357	676
1954	372	308	406	406	418	537	405	325	350	294	258	304	365
1955	289	240	248	201	209	235	201	294	376	264	286	323	264
1956	319	256	254	224	206	192	221	455	349	293	267	341	282
1957	345	292	247	218	213	218	240	385	621	300	289	342	309
1958	328	251	235	234	302	316	438	517	504	299	356	419	348
1959	320	267	278	265	269	228	234	333	396	324	347	397	305
1960	290	230	229	222	203	231	235	269	314	255	240	251	249

Monthly and yearly discharge, in acre-feet (combined flow, river and canal)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	18,970	17,880	16,430	13,780	12,310	14,940	13,330	24,920	21,720	21,810	21,380	18,320	215,800
1952	19,990	14,880	20,950	30,780	34,940	48,610	55,500	78,220	81,900	41,500	27,740	21,920	476,900
1953	32,660	43,300	55,550	60,220	51,840	58,320	54,520	34,800	37,260	19,620	20,370	21,260	489,700
1954	22,860	18,360	24,940	24,960	23,220	33,000	24,100	19,960	20,850	18,100	15,860	18,080	264,300
1955	17,750	14,270	15,250	12,390	11,600	14,450	11,960	18,060	22,370	16,200	17,610	19,220	191,100
1956	19,600	15,240	15,620	13,750	11,860	11,800	13,130	27,990	20,760	18,030	16,420	20,300	204,500
1957	21,200	17,350	15,180	13,430	11,800	13,410	14,300	23,690	36,970	18,430	17,750	20,360	223,900
1958	20,190	14,940	14,450	14,360	16,780	19,420	26,060	31,810	30,010	18,360	20,690	24,960	252,000
1959	19,670	15,900	17,110	16,280	14,940	14,010	13,950	20,460	23,590	19,900	21,340	23,640	220,800
1960	17,820	13,690	14,070	13,660	11,670	14,220	13,970	17,740	18,670	15,690	14,740	14,920	180,900

Yearly discharge, in cubic feet per second (combined flow, river and canal)

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	316	228,600	
1951	1214	854	May 29 30, 1951	182	298	215,800	302	219,300	
1952	1244	1,820	June 7, 1952	201	657	476,900	761	552,600	
1953	1284	1,140	June 14, 1953	266	676	489,700	586	424,400	
1954	1344	724	May 22, 1954	165	365	264,300	339	245,400	
1955	1394	595	June 9, 1955	141	264	191,100	268	194,300	
1956	1444	886	May 25, 1956	153	282	204,500	286	207,800	
1957	1514	935	June 7, 1957	187	309	223,900	304	219,700	
1958	1564	915	May 28, 1958	206	348	252,000	352	255,100	
1959	1634	660	June 16, 1959	169	305	220,800	295	213,700	
1960	1714	456	May 13, 1960	179	249	180,900	-	-	

1715. Parleys Creek near Salt Lake City, Utah

Location.--Lat 40°43'00", long 111°47'00", SE $\frac{1}{4}$ sec.24, T.1 S., R.1 E., a quarter of a mile upstream from Stillman highway bridge, three-quarters of a mile upstream from mouth of canyon, and 6 $\frac{1}{2}$ miles southeast of Salt Lake City.

Drainage area.--50.1 sq mi.

Records available.--August 1898 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and rating flume on creek. Altitude of gage is 4,890 ft (from topographic map). Prior to 1931, hook gage and two Cippoletti weirs about three-quarters of a mile downstream at different datum.

Supplementary gages: Water-stage recorder and Cippoletti weir on Parleys High-line conduit half a mile upstream from creek gage since beginning of records. Staff gage on Parleys surplus ditch prior to 1931, during which period ditch diverted around creek gage.

Average discharge.--62 years (1898-1960), 26.2 cfs (18,970 acre-ft), adjusted.

Extremes.--1898-1960: Maximum daily discharge, 365 cfs Apr. 26, 1952; minimum daily, 1.0 cfs Oct. 26, 1934.

Remarks.--Flow regulated by Mountain Dell Reservoir (capacity, about 3,400 acre-ft) since September 1917. Diversion by Parleys High-line conduit has bypassed creek gage since beginning of records. Diversion by Parleys surplus ditch was a mile upstream from gage and bypassed gage prior to 1931. Records herein adjusted for changes in storage in the reservoir and for the diversions bypassing gage on creek.

Cooperation.--Records for 1951-60, not previously published by Geological Survey, furnished by Office of City Engineer of Salt Lake City.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	14.8	15.6	14.5	12.0	17.3	21.6	65.3	99.6	49.3	24.3	17.8	13.3	30.5
1952	13.0	13.2	13.1	13.3	13.6	16.2	167	222	94.1	35.4	20.9	15.1	53.1
1953	12.9	12.6	12.6	14.2	10.9	17.9	52.0	82.4	78.1	25.5	16.4	12.5	29.0
1954	12.7	12.3	10.2	9.43	10.0	11.7	23.8	18.5	11.8	7.35	5.89	6.02	11.6
1955	7.04	8.48	7.50	7.61	8.02	9.55	24.0	48.5	23.5	12.2	8.06	7.24	14.3
1956	7.57	8.79	10.6	11.5	5.06	25.1	37.1	47.8	24.2	13.3	7.93	8.54	17.3
1957	8.82	6.97	7.89	7.10	6.52	15.2	35.8	101	79.0	22.3	12.9	10.3	26.2
1958	9.01	7.97	9.06	8.26	10.4	14.3	52.5	112	31.9	18.5	8.65	9.93	24.5
1959	6.85	8.36	8.13	5.24	9.66	10.3	17.3	23.6	14.1	8.31	6.03	6.48	10.4
1960	6.00	5.32	5.24	6.98	6.27	16.2	39.4	30.3	16.9	9.21	7.86	5.22	12.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	911	930	890	739	959	1,330	3,880	6,130	2,940	1,490	1,100	793	22,090
1952	797	788	808	817	784	998	9,940	13,680	5,600	2,170	1,290	897	38,580
1953	786	751	775	874	608	1,100	3,100	5,070	4,640	1,570	1,010	743	21,040
1954	778	733	630	580	557	720	1,410	1,130	702	452	362	358	8,410
1955	433	505	461	468	446	587	1,430	2,980	1,390	748	496	431	10,380
1956	466	523	651	705	291	1,540	2,210	2,940	1,440	820	488	508	12,580
1957	542	415	485	437	362	932	2,130	6,200	4,700	1,370	792	612	18,980
1958	554	474	557	508	576	879	3,130	6,880	1,900	1,140	532	591	17,720
1959	421	497	500	322	537	631	1,030	1,450	841	511	371	386	7,500
1960	369	317	322	429	361	994	2,340	1,860	1,010	566	483	311	9,560

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	39.0	28,230
1951	(a)	117	May 21, 1951	9.5	30.5	22,090	30.0	21,750
1952	(a)	365	Apr. 26, 1952	8.6	53.1	38,580	53.0	38,500
1953	(a)	114	May 20, 1953	7.3	28.0	21,040	28.8	20,860
1954	(a)	28	Apr. 26, 1954	4.0	11.8	8,410	10.8	7,670
1955	(a)	73	May 13, 1955	4.3	14.3	10,380	14.7	10,620
1956	(a)	58	Mar. 27, 1956	4.8	17.3	12,580	17.1	12,380
1957	(a)	142	May 31, 1957	5.2	26.2	18,980	26.4	19,120
1958	(a)	165	May 10, 1958	7.0	24.5	17,720	24.2	17,550
1959	(a)	27	May 21, 1959	3.0	10.4	7,500	9.79	7,090
1960	(a)	61	Apr. 11, 1960	3.5	12.9	9,560	-	-

a Files of Office of City Engineer of Salt Lake City.

Note.--Records adjusted for diversion by Parleys High-line conduit since beginning of record, and for change in storage in Mountain Dell Reservoir after September 1917 when storage began.

1720. Emigration Creek near Salt Lake City, Utah

Location.--Lat 40°45'00", long 111°48'45", in SW 1/4 sec. 11, T.1 S., R.1 E., at east boundary of Hogle Garden Zoo near mouth of canyon, 4 miles southeast of Salt Lake City.

Drainage area.--18 sq mi, approximately (revised).

Records available.--June 1900 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and rating flume. Altitude of gage is 4,870 ft (from topographic map). Prior to 1927, staff gage and Cippoletti weirs at same site.

Average discharge.--60 years (1900-1960), 6.11 cfs (4,420 acre-ft per year).

Extremes.--1900-1960: Maximum daily discharge, 156 cfs Apr. 26, 1952; minimum not determined.

Remarks.--No regulation or diversion above station except diversion by pipeline from spring upstream from station for Salt Lake City water supply. This diversion is not included in first three tables herewith but is given separately in last table.

Cooperation.--Records for 1951-60, not previously published by Geological Survey, furnished by Office of City Engineer of Salt Lake City, record of pipeline flow furnished by same office.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.84	2.52	2.90	2.00	5.32	7.09	18.5	22.1	9.88	4.68	2.85	1.21	6.74
1952	1.95	1.95	1.25	1.62	2.27	3.69	71.3	59.4	22.6	10.4	6.85	3.12	15.5
1953	2.11	2.33	1.85	2.89	2.69	6.93	21.4	22.8	18.6	8.42	4.87	3.10	8.18
1954	3.04	2.87	2.28	2.22	2.49	3.03	6.50	3.39	2.02	.60	.26	.22	2.41
1955	.31	.33	.35	.35	.52	1.21	6.97	9.48	5.08	2.13	.92	.50	2.35
1956	.44	.44	.41	1.63	.50	6.47	9.58	8.55	6.56	2.08	.53	.63	3.15
1957	.39	.41	.40	.38	.88	3.23	10.8	27.1	15.2	5.88	2.89	2.09	5.83
1958	2.09	1.87	2.06	3.24	4.06	5.55	28.0	38.6	12.9	5.56	2.55	1.78	9.04
1959	1.66	2.12	2.00	2.41	2.61	3.52	6.10	6.35	2.94	1.02	.46	.46	2.63
1960	.42	.51	.71	.76	.91	4.53	1.51	7.22	3.66	.40	.40	.40	2.90

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	113	150	178	123	296	436	1,100	1,360	588	288	175	72	4,880
1952	120	115	77	100	150	225	4,240	3,650	1,340	642	421	186	11,250
1953	150	139	114	178	149	426	1,270	1,400	1,110	518	299	184	5,920
1954	187	171	140	136	138	186	587	209	120	37	16	15	1,740
1955	19	19	22	22	29	74	415	583	302	131	56	30	1,700
1956	27	26	25	100	29	398	570	525	391	128	32	38	2,290
1957	24	24	25	23	49	198	646	1,670	903	361	178	124	4,220
1958	129	112	126	199	225	341	1,670	2,370	765	342	157	106	6,540
1959	102	126	123	148	145	216	363	390	175	65	28	28	1,910
1960	26	30	44	47	47	278	897	444	218	25	25	24	2,100

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year				
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet			
		Discharge	Date								
1950	-	-	-	-	-	-	8.92	6,460			
1951	(a)	31	May 5, 7, 8, 1951	0.9	6.74	4,880	6.56	4,750			
1952	(a)	156	Apr. 26, 1952	.9	15.5	11,250	15.6	11,320			
1953	(a)	42	Apr. 23, 1953	1.1	8.18	5,920	9.34	6,050			
1954	(a)	9.3	Apr. 6, 1954	.2	2.41	1,740	1.80	1,300			
1955	(a)	13	May 7, 8, 9, 1955	.1	2.35	1,700	2.38	1,720			
1956	(a)	12	June 16, 1956	.3	3.15	2,290	3.15	2,280			
1957	(a)	39	May 24, 1957	.3	5.83	4,220	6.24	4,520			
1958	(a)	63	May 7, 1958	1.3	9.04	6,540	9.02	6,530			
1959	(a)	8.9	May 4, 1959	.4	2.63	1,910	2.29	1,660			
1960	(a)	26	Apr. 10, 1960	.4	2.90	2,100	-	-			

a Files of office of City Engineer of Salt Lake City.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	162	145	133	137	133	152	156	186	184	183	160	143	1,870
1952	129	120	125	135	127	142	177	233	211	207	179	135	1,920
1953	127	92	111	98	86	89	85	84	74	76	93	82	1,100
1954	84	104	99	99	80	97	101	98	87	93	99	88	1,130
1955	84	79	86	86	79	104	124	91	69	77	86	89	1,050
1956	80	78	94	120	122	106	84	84	72	103	95	81	1,120
1957	80	77	84	89	91	125	132	132	142	163	153	120	1,390
1958	105	102	110	100	90	125	147	166	161	166	167	164	1,600
1959	141	130	127	123	101	111	112	116	106	94	92	89	1,340
1960	86	85	86	82	75	107	153	166	157	136	106	91	1,330

1725. City Creek near Salt Lake City, Utah

Location.--Lat 40°47'05", long 111°53'00", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.1 N., R.1 E., about 300 ft downstream from abandoned stone building near mouth of canyon and 0.6 mile northeast of Utah State Capitol building.

Records available.--October 1898 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Drainage area.--19.2 sq mi.

Gage.--Water-stage recorder and concrete rating flume on creek. Altitude of gage is 4,540 ft (from topographic map). Flow bypassing gage in New High line, Pleasant Valley pipeline, and 20th ward pipeline measured by flow meter, submerged orifice, or weir since 1924. Prior to 1924, two Cippoletti weirs on creek $\frac{3}{4}$ miles upstream, above all diversions; inflow between weirs and mouth of canyon estimated and added.

Average discharge.--62 years (1898-1960), 16.2 cfs (11,730 acre-ft per year).

Extremes.--1899-1909, 1911-60: Maximum daily discharge, 163 cfs May 30, 1921; minimum daily, 1.2 cfs Oct. 17, 1934.

Cooperation.--Records for 1951-60, not previously published by Geological Survey, furnished by office of City Engineer of Salt Lake City.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.6	9.91	8.83	8.44	8.89	9.70	17.8	45.0	32.5	17.4	13.8	9.64	16.1
1952	8.33	8.07	8.22	8.41	8.72	10.5	39.5	98.6	61.8	25.9	16.0	12.0	25.6
1953	10.5	9.97	9.26	9.22	8.81	9.69	17.3	34.6	57.9	21.3	14.8	10.7	17.8
1954	9.92	9.74	8.92	8.72	8.76	9.57	12.7	18.0	12.1	8.68	6.93	5.85	10.0
1955	5.44	5.60	5.73	5.55	5.25	4.56	10.7	31.0	23.0	11.7	8.26	6.53	10.3
1956	6.10	6.05	8.31	6.71	5.65	8.72	14.7	34.8	22.5	12.0	8.65	6.86	11.8
1957	6.84	6.44	6.35	5.55	6.26	7.21	12.6	39.6	43.4	19.4	12.0	8.95	14.6
1958	8.47	7.20	6.29	6.74	8.69	8.29	16.4	58.7	40.2	16.6	11.1	8.82	16.5
1959	8.50	7.84	7.69	7.57	6.67	6.95	9.19	16.1	15.0	9.87	7.86	6.92	9.18
1960	6.63	6.11	5.69	6.10	6.16	8.25	18.1	31.3	18.0	10.4	7.47	7.21	11.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	650	590	543	519	494	596	1,060	2,760	1,930	1,070	848	573	11,630
1952	512	480	505	517	502	646	2,350	6,070	3,680	1,600	985	713	18,560
1953	648	594	569	567	489	596	1,030	2,130	3,440	1,310	912	634	12,920
1954	610	579	549	536	487	588	756	1,110	722	532	426	348	7,240
1955	335	333	353	341	292	280	634	1,910	1,370	720	508	388	7,460
1956	375	360	511	413	325	536	874	2,140	1,340	738	532	408	8,550
1957	420	383	390	341	348	443	749	2,430	2,580	1,200	740	533	10,560
1958	521	429	386	414	465	510	978	5,610	2,390	1,020	685	525	11,950
1959	510	466	473	466	270	428	547	991	892	607	494	412	6,550
1960	408	363	350	375	354	507	1,080	1,930	1,070	636	459	429	7,960

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	19.4	14,040
1951	(a)	63	May 28, 1951	4.9	16.1	11,630	15.7	11,350
1952	(a)	127	May 5, 1952	7.7	25.6	18,560	26.0	18,870
1953	(a)	81	June 14, 1953	7.8	17.8	12,920	17.7	12,850
1954	(a)	23	May 18, 1954	4.2	10.0	7,240	9.01	6,530
1955	(a)	50	May 24, 1955	1.4	10.3	7,460	10.6	7,690
1956	(a)	50	May 29, 1956	4.5	11.8	8,550	11.1	8,500
1957	(a)	57	June 7, 1957	4.4	14.6	10,560	14.8	10,700
1958	(a)	99	May 28, 1958	5.6	16.5	11,950	16.7	12,060
1959	(a)	20	May 20, 1959	5.5	9.18	6,550	8.73	6,160
1960	(a)	49	May 15, 1960	5.4	11.0	7,960	-	-

a Files of office of City Engineer of Salt Lake City.

1727. Vernon Creek near Vernon, Utah

Location.--Lat 39°59', long 112°23', in W $\frac{1}{2}$ sec.2, T.10 S., R.5 W., on right bank 7 miles upstream from confluence with Dutch Creek forming Faust Creek and 8 miles southeast of Vernon.

Drainage area.--25 sq mi, approximately.

Records available.--June 1958 to September 1960.

Gage.--Water-stage recorder.

Extremes.--1958-60: Maximum daily discharge, 3.4 cfs May 15-18, 1960; minimum daily, 1.0 cfs Sept. 11, Oct. 4-20, 1959, Jan. 4, Aug. 28, 29, 1960.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	-	-	1.83	1.70	1.61	-
1959	1.65	1.67	1.59	1.55	1.60	1.80	1.73	1.57	1.50	1.37	1.23	1.11	1.53
1960	1.06	1.20	1.23	1.35	1.56	1.84	2.17	2.66	1.73	1.50	1.15	1.24	1.56

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	-	-	112	104	96	-
1959	101	99	98	95	89	111	103	96	89	84	75	66	1,110
1960	65	71	75	83	90	113	129	163	103	92	71	74	1,130

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1958	1634	a2.0	(b)	-	-	-	-	-
1959	1634	1.9	Mar. 23, 1959	1.0	1.53	1,110	1.41	1,020
1960	1714	a3.4	May 15-18, 1960	1.0	1.56	1,130	-	-

a Maximum daily.

b June 28 to July 3, 1958.

1728.7. Trout Creek near Callao, Utah

Location--Lat 39°44', long 113°53', in sec.33, T.12 S., R.18 W., on left bank 2½ miles upstream from Birch Creek and 14 miles southwest of Callao.

Drainage area--8.8 sq mi, approximately.

Records available--December 1958 to September 1960.

Gage--Water-stage recorder. Altitude of gage is 6,200 ft (from topographic map).

Extremes--1958-60: Maximum discharge, 21 cfs May 13, 1960 (gage height, 1.44 ft); minimum, 0.7 cfs Aug. 29, 1960.

Remarks--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	±1.3	±1.3	1.27	1.13	1.14	1.27	2.09	4.29	3.66	1.49	0.98	1.04	±1.75
1960	1.48	1.43	1.15	.96	1.02	1.82	4.76	10.1	7.18	2.20	1.01	.96	2.85

* Not previously published; estimated on basis of records for Vernon Creek near Vernon, and weather records.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	±80	±77	78	70	63	78	125	284	218	91	60	62	±1,270
1960	91	85	71	59	59	112	283	624	427	135	62	57	2,060

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1959	1634	6.2	May 15, 1959	±0.9	±1.75	±1,270	1.76	1,280
1960	1714	21	May 13, 1960	.8	2.85	2,060	-	-

* Not previously published.

1729.4. Dove Creek near Park Valley, Utah

Location.--Lat 41°47', long 113°34', in SE $\frac{1}{4}$ sec.4, T.12 N., R.15 W., on left bank 6 miles upstream from Black Hill Creek and 12 miles west of Park Valley.

Drainage area.--35 sq mi, approximately.

Records available.--December 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,600 ft (from topographic map).

Extremes.--1958-60: Maximum discharge, 11 cfs Sept. 1, 1960 (gage height, 1.49 ft); minimum daily, 0.1 cfs for many days in 1959-60.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	*0.4	*0.4	0.4	0.44	0.57	0.86	0.93	0.95	0.36	0.14	0.10	0.12	*0.47
1960	.22	.14	.20	.20	.20	.29	.34	.69	.33	.13	.11	.23	.26

* Not previously published; estimated on basis of records for Clear Creek near Naf, Idaho, and weather records.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	*25	*24	25	27	32	53	55	58	22	8.5	6.3	7.3	*343
1960	13	8.5	12	12	12	18	20	43	20	7.9	6.9	14	187

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1959	1634	1.8	May 25, 1959	*0.1	*0.47	*343	0.42	303
1960	1714	11	Sept. 1, 1960	.1	.28	167	-	-

* Not previously published.

1736. Midway Creek near Hatch, Utah

Location--Lat 37°31'10", long 112°43'35", in SE¼ sec.10, T.38 S., R.8 W., on right bank 200 ft south of State Highway 14, 0.7 mile east of Navajo Lake Resort turnoff, and 19 miles southwest of Hatch.

Records available--August 1957 to September 1960.

Gage--Water-stage recorder.

Extremes--1957-60: Maximum discharge, 153 cfs June 6, 1958 (gage height, 2.64 ft); no flow for most of period.

Remarks--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	-	-	-	0	-
1958	0	0	0	0	0	0	0	4.16	19.9	0	0	0	1.99
1959	0	0	0	0	0	0	0	1.38	0	0	0	0	.12
1960	0	0	0	0	0	0	0	5.46	0	0	0	0	.46

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	-	-	-	0	-
1958	0	0	0	0	0	0	0	256	1,180	0	0	0	1,440
1959	0	0	0	0	0	0	0	85	0	0	0	0	85
1960	0	0	0	0	0	0	0	336	0	0	0	0	336

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1957	1564	-	-	-	-	-	-	-
1958	1564	153	June 6, 1958	0	1.99	1,440	1.99	1,440
1959	1634	42	May 12, 1959	0	.12	85	.12	85
1960	1714	78	May 13, 1960	0	.46	336	-	-

1739. Duck Creek near Hatch, Utah

Location.--Lat 37°31', long 112°42', in SW $\frac{1}{4}$ sec.12, T.38 S., R.8 W., on right bank 150 ft north of State Highway 14, 200 ft east of Duck Lake dam, 400 ft downstream from Duck Creek Spring, 3 miles east of Navajo Lake, and 18 miles southwest of Hatch.

Records available.--October 1953 to March 1959.

Gage.--Water-stage recorder. Altitude of gage is 8,530 ft (by barometer).

Extremes.--1953-59: Maximum discharge, 226 cfs June 6, 1958 (gage height, 3.61 ft); minimum not determined; less than 0.4 cfs during some periods of ice effect or no gage-height record.

Remarks.--Station is above all diversions.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	2.0	1.84	1.35	0.94	0.63	0.46	10.0	51.8	21.1	15.4	9.72	6.71	10.2
1955	3.90	2.94	1.85	.84	.60	.50	2.16	13.0	8.19	5.00	3.84	2.59	3.81
1956	1.79	1.64	.71	.50	.50	.50	4.17	24.3	10.3	6.34	3.63	2.72	4.78
1957	2.15	1.74	1.30	.63	.56	.53	2.42	19.6	72.2	25.4	19.4	15.9	13.5
1958	9.49	5.07	3.39	2.56	2.04	1.91	4.60	59.1	91.3	31.2	22.1	18.5	21.0
1959	16.3	15.1	13.6	5.39	2.95	2.59	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	123	110	83	58	35	29	596	3,180	1,250	944	597	399	7,400
1955	240	175	114	51	33	31	129	802	467	307	236	154	2,760
1956	110	98	43	31	28	31	248	1,490	612	390	223	162	3,470
1957	132	104	80	39	31	33	144	1,210	4,300	1,560	1,190	948	9,770
1958	584	301	208	158	113	117	274	3,640	5,430	1,920	1,360	1,100	15,200
1959	1,000	897	835	331	164	159	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950							
1951							
1952							
1953							
1954	1344	140	May 20, 1954	-	10.2	7,400	10.5
1955	1394	43	May 14, 1955	-	3.81	2,760	3.43
1956	1444	65	May 24, 1956	-	4.78	3,470	4.87
1957	1514	158	June 6, 1957	-	13.5	9,770	14.6
1958	1564	226	June 6, 1958	0.5	21.0	15,200	23.3
1959	1634	a17	(b)	1.7	-	-	-
1960	-	-	-	-	-	-	-

a Maximum daily discharge for period October to March.

b Oct. 1-13, 16, 1958.

1740. Asay Creek above West Fork, near Hatch, Utah

Location--Lat 37°33', long 112°31', in sec.33, T.37 S., R.6 W., on right bank half a mile downstream from Asay Creek Spring, 2 miles upstream from West Fork Asay Creek, and 8 miles southwest of Hatch.

Records available--July 1954 to January 1959.

Gage--Water-stage recorder.

Extremes--1954-59: Maximum discharge, 419 cfs May 11, 1958 (gage height, 3.63 ft); minimum recorded, 13 cfs sometime during period Jan. 22 to Mar. 30, 1956 (from recorded range in stage), Jan. 28, 1958.

Remarks--Small diversions above station for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	-	-	-	-	-	-	-	-	-	34.7	27.1	24.3	-
1955	22.2	21.6	20.2	16.0	15.7	15.7	19.4	27.6	23.1	19.9	18.3	17.6	19.8
1956	17.9	17.9	17.5	17.0	17.0	17.0	20.0	34.8	23.9	22.3	18.8	17.8	20.2
1957	17.6	15.3	15.0	15.0	15.0	14.1	20.7	46.6	81.9	44.4	36.6	32.5	29.6
1958	27.7	23.9	21.3	17.0	16.9	18.9	71.6	248	119	64.9	50.3	45.8	60.7
1959	37.5	35.1	31.6	24.7	-	-	-	-	-	-	-	-	-
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	-	-	-	-	-	-	-	-	-	2,130	1,670	1,450	-
1955	1,360	1,290	1,240	986	873	964	1,160	1,700	1,370	1,230	1,120	1,050	14,340
1956	1,100	1,060	1,070	1,050	978	1,050	1,190	2,140	1,420	1,370	1,150	1,060	14,640
1957	1,080	912	922	922	833	865	1,230	2,870	4,870	2,730	2,250	1,930	21,420
1958	1,700	1,420	1,310	1,040	940	1,160	4,260	15,240	7,070	3,990	3,090	2,730	43,950
1959	2,300	1,970	1,950	1,520	-	-	-	-	-	-	-	-	-
1960													

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953	-	-	-	-	-	-	-	-
1954	1514	a59	July 25, 1954	-	-	-	-	-
1955	1514	36	May 15, 23, 1955	-	19.8	14,340	18.9	13,680
1956	1514	48	May 25, 1956	-	20.2	14,640	19.7	14,320
1957	1514	110	June 10, 1957	-	29.6	21,420	31.7	22,930
1958	1564	419	May 11, 1958	-	60.7	43,950	63.2	45,740
1959	1634	b41	Oct. 1, 1958	14	-	-	-	-
1960								

a Period July to September.

b Maximum daily discharge for period October to January.

1745. Sevier River at Hatch, Utah

Location.--Lat 37°39'00", long 112°25'30", in SW 1/4 sec. 28, T.36 S., R.5 W., on left bank 300 ft downstream from bridge, 0.2 mile east of Hatch, and 2.8 miles downstream from Mammoth Creek.

Drainage area.--340 sq mi, approximately.

Records available.--June 1911 to September 1928, June 1939 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Published as "near Hatchtown" 1911 and as "near Hatch" 1912.

Gage.--Water-stage recorder. Altitude of gage is 6,870 ft (from river-profile map). Prior to May 7, 1914, and Aug. 22, 1914, to Mar. 15, 1915, staff gages and May 7-25, 1914, Mar. 16, 1915, to Sept. 30, 1928, and June 20, 1939, to Oct. 3, 1949, water-stage recorder, at several sites within 2 miles of present site at various datums.

Average discharge.--38 years (1911-28, 1939-60), 133 cfs (96,300 acre-ft per year).

Extremes.--1911-28, 1939-60: Maximum discharge not determined, occurred May 25, 1914, when Hatchtown Dam failed; maximum recorded, 1,490 cfs May 26, 1922 (gage height, 5.25 ft, datum then in use); minimum daily, 10 cfs for several days in 1912 when water was stored in Hatchtown Reservoir. Minimum natural flow, 27 cfs Sept. 13, 1960.

Remarks.--Small diversions for irrigation above station. No regulation since Hatchtown Dam failed in 1914.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	52.5	58.5	61.2	53.8	55.2	55.2	57.2	106	69.5	48.3	46.2	43.1	58.9
1952	45.5	47.7	46.5	46.0	47.4	48.4	166	653	462	169	120	91.7	162
1953	82.2	79.9	73.7	67.0	66.0	57.7	56.3	79.0	76.7	64.8	62.6	46.3	67.7
1954	49.9	53.9	47.2	47.0	56.5	62.1	132	268	109	74.6	54.0	53.2	84.1
1955	55.7	53.4	53.0	50	50.6	69.7	56.5	114	66.4	52.9	55.1	47.7	60.5
1956	41.9	46.9	47.7	46.1	40.6	45.0	50.4	163	78.9	52.5	42.2	37.4	57.9
1957	37.4	38.0	36.2	42.9	45.8	38.5	44.0	110	392	121	73.1	57.8	86.2
1958	58.1	65.1	56.2	49.5	78.6	90.7	162	588	435	144	107	104	162
1959	86.7	80.9	75.1	61.9	60.0	70.4	64.4	67.9	50.7	45.6	53.1	40.9	63.2
1960	38.5	45.0	43.1	37.4	43.9	57.6	71.3	111	61.4	43.6	36.6	35.0	52.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,230	3,480	3,760	3,310	3,060	3,390	3,400	6,500	4,140	2,970	2,840	2,580	42,640
1952	2,800	2,840	2,860	2,830	2,730	2,980	9,890	40,160	27,500	10,410	7,400	5,460	117,800
1953	5,050	4,750	4,530	4,120	3,670	3,560	3,350	4,860	4,560	3,990	3,850	2,780	49,040
1954	3,070	3,210	2,900	2,890	3,140	3,820	7,840	16,490	6,480	4,590	3,320	3,160	60,910
1955	3,420	3,180	3,260	3,070	2,610	4,290	3,360	6,980	3,950	3,250	3,390	2,840	43,800
1956	2,570	2,790	2,940	2,840	2,340	2,770	3,000	10,030	4,700	3,230	2,590	2,230	42,030
1957	2,300	2,260	2,220	2,640	2,540	2,360	2,620	6,780	23,350	7,430	4,490	3,440	62,430
1958	3,570	3,870	3,460	3,040	4,370	5,580	9,630	36,170	25,900	8,860	6,600	6,210	117,260
1959	5,350	4,920	4,620	3,800	3,330	4,350	3,850	4,180	3,010	2,800	3,270	2,440	45,760
1960	2,370	2,660	2,650	2,300	2,520	3,540	4,240	6,820	3,650	2,690	2,250	2,080	37,760

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	88.5	64,050
1951	1214	248	May 29, 1951	40	58.9	42,640	56.2	40,680
1952	1244	827	June 3, 1952	-	162	117,800	170	123,700
1953	1284	455	July 31, 1953	41	67.7	49,040	60.6	43,890
1954	1344	410	May 10, 1954	45	84.1	60,910	85.1	61,590
1955	1394	343	Oct. 7, 1954	46	60.5	43,800	58.4	42,240
1956	1444	254	May 25, 1956	36	57.9	42,030	55.8	40,510
1957	1514	626	June 11, 1957	-	86.2	62,430	91.9	66,550
1958	1564	653	May 29, 1958	46	162	117,260	167	121,100
1959	1634	328	Aug. 19, 1959	38	63.2	45,760	53.4	38,690
1960	1714	259	May 14, 1960	31	52.1	37,760	-	-

1800. Sevier River near Circleville, Utah

Location.--Lat 38°06', long 112°19', in SW $\frac{1}{4}$ sec.20, T.31 S., R.4 W., Salt Lake meridian, on left bank 2 miles upstream from Pine Creek and 6 miles southwest of Circleville.

Drainage area.--950 sq mi, approximately.

Records available.--May to September 1912, April 1914 to September 1927 (fragmentary 1923, 1925-27), October 1949 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

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 0.23 ft higher.

Average discharge.--20 years (1914-22, 1923-24, 1949-60), 159 cfs (115,100 acre-ft per year).

Extremes.--1912, 1914-27, 1949-60: Maximum discharge, 1,960 cfs about May 21, 1922 (gage height, 9.8 ft, from high-water mark, present datum), from rating curve extended about 1,000 cfs by logarithmic plotting; minimum daily, 18 cfs June 30, July 1, 5, 1960.

Flood in March 1938 probably exceeded that in May 1922.

Remarks.--Many diversions above and below station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	70.0	114	125	115	115	95.1	49.0	82.1	49.6	50.7	52.4	38.6	79.6
1952	51.6	90.2	86.4	87.1	99.6	133	269	598	390	151	115	113	182
1953	102	131	149	144	132	120	62.2	47.7	44.8	65.9	77.6	50.4	93.8
1954	63.8	105	113	93.1	114	112	122	209	66.4	42.9	38.4	51.9	94.3
1955	53.4	87.5	103	92.4	90	164	75.6	67.3	31.8	22.7	51.1	28.9	72.3
1956	37.9	70.0	95.5	91.6	88.1	87.2	41.3	104	41.1	31.8	30.1	29.3	62.4
1957	38.3	68.3	88.9	88.6	103	68.7	51.4	76.8	267	79.8	45.1	52.0	85.3
1958	90.6	137	123	102	177	179	291	548	345	100	87.6	150	194
1959	113	125	131	120	117	123	73.6	38.3	29.3	27.2	55.6	41.1	82.7
1960	51.1	73.9	93.8	90.2	94.6	117	71.4	65.3	24.8	22.9	24.8	36.8	63.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,300	6,790	7,670	7,090	6,380	5,850	2,920	5,050	2,950	3,120	3,220	2,300	57,640
1952	3,170	5,370	5,310	5,360	5,730	8,200	16,030	36,790	23,180	9,310	7,100	6,730	132,300
1953	6,250	7,790	9,170	8,850	7,360	7,390	3,700	2,940	2,660	4,050	4,770	3,000	67,930
1954	3,920	6,230	6,930	5,730	6,360	6,910	7,270	12,850	3,950	2,640	2,360	3,090	68,240
1955	3,280	5,210	6,300	5,680	5,000	10,090	4,500	4,140	1,890	1,390	3,140	1,720	52,340
1956	2,330	4,170	5,870	5,640	5,070	5,360	2,460	6,400	2,440	1,950	1,850	1,740	45,280
1957	2,360	4,070	5,470	5,450	5,700	4,230	3,060	4,720	15,910	4,910	2,770	3,090	61,740
1958	5,570	8,170	7,590	6,250	9,850	10,980	17,320	33,670	20,550	6,180	5,390	8,980	140,500
1959	6,940	7,410	8,080	7,400	6,480	7,560	4,360	2,350	1,750	1,670	3,420	2,450	59,890
1960	3,140	4,400	5,770	5,550	5,440	7,160	4,250	4,020	1,480	1,410	1,530	2,190	46,340

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	106	76,590
1951	1214	709	July 22, 1951	30	79.6	57,640	72.8	52,720
1952	1244	802	May 6, 1952	44	182	132,300	195	141,600
1953	1284	570	Aug 1, 1953	26	93.8	67,930	85.4	61,800
1954	1344	292	May 11, 1954	26	94.3	68,240	91.1	65,950
1955	1394	297	Aug. 6, 1955	19	72.3	52,340	69.0	49,920
1956	1444	169	May 10, 1956	24	62.4	45,280	61.7	44,810
1957	1514	426	June 11, 1957	25	85.3	61,740	98.3	71,170
1958	1564	820	May 13, 1958	48	194	140,500	196	141,600
1959	1634	487	Aug. 3, 1959	24	82.7	59,890	70.1	50,770
1960	1714	223	Mar. 8, 1960	18	63.8	46,340	-	-

1835. Sevier River near Kingston, Utah

Location.--Lat 38°12', long 112°12', in NW¼ 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 1960.

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.--46 years (1914-60), 133 cfs (96,290 acre-ft per year).

Extremes.--1914-60: 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.--Many diversions for irrigation above station and one above for irrigation below.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	36.9	121	153	150	141	122	33.0	27.2	13.8	17.2	20.4	14.9	70.6
1952	26.5	106	110	99.5	132	163	300	568	308	84.2	64.1	81.8	170
1953	88.6	130	176	169	154	140	40.4	18.8	10.6	15.5	34.5	14.4	82.4
1954	40.3	110	135	135	144	138	78.8	113	18.1	13.3	10.4	23.1	79.7
1955	27.6	75.1	130	107	105	148	56.1	17.6	12.9	6.75	17.4	13.1	59.5
1956	13.6	68.4	121	120	107	96.5	18.4	33.2	9.71	8.63	9.04	8.42	51.1
1957	9.91	58.9	106	107	120	65.5	20.1	19.1	222	15.3	11.0	14.0	63.5
1958	87.4	176	148	127	218	209	289	448	253	21.0	26.3	110	175
1959	90.7	127	145	149	153	148	29.5	8.73	9.74	7.33	12.1	9.05	73.9
1960	12.6	53.0	116	116	120	132	20.0	11.7	8.85	7.47	5.36	7.01	50.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,270	7,220	9,420	9,210	7,800	7,520	1,960	1,670	820	1,050	1,250	885	51,080
1952	1,630	6,310	6,760	6,120	7,600	10,000	17,840	34,940	18,310	5,180	3,940	4,870	123,500
1953	5,450	7,730	10,830	10,380	8,540	8,610	2,400	1,150	633	953	2,120	857	59,650
1954	2,480	6,520	8,310	8,310	8,030	8,490	4,690	6,970	1,080	817	642	1,370	57,710
1955	1,700	4,470	8,000	6,600	5,750	9,130	3,340	1,080	769	415	1,070	778	43,100
1956	839	4,070	7,410	7,390	6,140	5,930	1,090	2,040	578	531	556	501	37,080
1957	609	3,510	6,520	6,570	6,670	4,030	1,190	1,180	13,240	938	678	831	45,870
1958	5,380	10,460	9,110	7,810	12,100	12,870	17,210	27,540	15,050	1,290	1,610	6,840	127,000
1959	5,580	7,570	8,930	9,170	8,520	9,120	1,760	537	579	450	746	539	53,500
1960	776	3,160	7,130	7,120	6,880	8,100	1,190	718	526	460	330	417	36,810

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet		
		Discharge	Date							
1950	-	-	-	-	-	-	-	-	-	-
1951	1214	549	July 22, 1951	7.0	70.6	51,080	86.9	62,860		
1952	1244	844	May 6, 1952	17	170	123,500	64.7	46,870		
1953	1284	424	Aug. 1, 1953	4.2	82.4	59,650	183	132,800		
1954	1344	227	May 22, 1954	9.8	79.7	57,710	73.1	52,950		
1955	1394	227	Dec. 4, 1954	5.8	59.5	43,100	75.4	54,570		
1956	1444	184	Nov. 22, 1955	6.2	51.1	37,080	57.0	41,250		
1957	1514	453	June 12, 1957	6.2	63.5	45,970				
1958	1584	694	May 13, 1958	9.8	175	127,000	48.8	35,400		
1959	1634	326	Aug. 3, 1959	6.2	73.9	53,500	83.3	60,300		
1960	1714	239	Mar. 8, 1960	4.6	50.7	36,810	171	124,100		

1840. Tropic and East Fork Canal near Tropic, Utah
(Transmountain diversion)

Location.--Lat 37°40', long 112°09', in SW $\frac{1}{4}$ sec.17, T.36 S., R.3 W., on right bank 4 miles northwest of Tropic.

Gage.--Water-stage recorder. Altitude of gage is 7,600 ft (from topographic map).

Records available.--October 1949 to September 1960.

Extremes.--1949-60: Maximum daily discharge, 29 cfs May 12, 1952; no flow for several months in each year.

Remarks.--One diversion above station for irrigation. Canal, which began operating in 1892, diverts from East Fork Sevier River in NE $\frac{1}{4}$ sec.28, T.36 S., R.4 W. Water is used in Faria River basin in vicinity of Tropic.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	68	0	0	0	0	0	0	691	837	427	289	84	2,400
1952	42	0	0	0	0	0	0	976	1,060	1,170	999	738	4,980
1953	301	0	0	0	0	0	0	287	549	455	178	107	1,880
1954	1.0	0	0	0	0	0	0	726	720	490	104	136	2,180
1955	104	0	0	0	0	0	0	518	392	347	256	437	2,050
1956	62	0	0	0	0	0	0	296	360	2	3.8	212	934
1957	280	.6	0	0	0	0	0	488	737	818	395	52	2,490
1958	19	0	0	0	0	0	4.0	667	1,380	1,230	1,050	295	4,890
1959	19	0	0	0	0	0	180	665	674	488	21	424	2,470
1960	155	0	0	0	0	0	.6	336	452	117	0	0	1,060

SEVIER LAKE BASIN

1850. Antimony Creek near Antimony, Utah

Location.--Lat 38°06', long 111°53', in NW $\frac{1}{4}$ sec.22, T.31 S., R.1 W., on right bank 5 miles upstream from mouth and 5 miles southeast of Antimony.

Drainage area.--26 sq mi, approximately.

Records available.--October 1946 to September 1948, August 1957 to September 1960.

Gage.--Water-stage recorder. October 1946 to September 1948 at datum 0.89 ft lower.

Average discharge.--5 years (1946-48, 1957-60), 21.2 cfs (15,350 acre-ft per year).

Extremes.--1946-48, 1957-60: Maximum discharge, 669 cfs Aug. 3, 1959 (gage height, 4.52 ft), from rating curve extended above 250 cfs on basis of slope-area measurement of peak flow; minimum, 11 cfs Aug. 22, 1947.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	-	-	18.7	17.1	-
1958	15.9	15.9	17.0	17.0	17.1	16.4	17.4	132	23.0	14.0	14.3	15.6	26.5
1959	16.6	15.3	14.2	15.2	17.7	17.6	27.0	16.5	16.3	16.1	15.3	14.4	16.8
1960	14.7	15.9	17.5	17.9	16.3	16.0	17.3	22.6	16.9	16.2	15.3	15.2	16.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	-	-	1,150	1,020	-
1958	978	948	1,050	1,050	948	1,010	1,040	8,140	1,370	881	877	930	19,200
1959	1,020	910	871	934	982	1,090	1,610	1,020	970	988	942	859	12,190
1960	904	948	1,090	1,100	936	984	1,030	1,390	1,010	996	938	906	12,220

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1957	1564	-	-	-	-	-	-	-
1958	1564	331	May 9, 1958	14	26.5	19,200	26.3	19,030
1959	1634	669	Aug. 3, 1959	13	16.8	12,190	17.0	12,320
1960	1714	181	July 31, 1960	14	16.8	12,220	-	-

1880. Otter Creek Reservoir near Antimony, Utah

Location.--Lat 38°10'15", long 112°00'00", in NW $\frac{1}{4}$ sec.28, T.30 S., R.2 W., near spillway on right side of dam on Otter Creek, 3 $\frac{1}{2}$ miles northwest of Antimony and 9 $\frac{1}{2}$ miles east of Kingston.

Records available.--January 1914 to September 1915, January 1934 to September 1960. Published as "near Coyote" 1914.

Gage.--Staff gage. Altitude of gage is 6,350 ft (by barometer).

Extremes.--1914-15, 1934-60: Maximum contents observed, 55,000 acre-ft May 1, 1946, May 20, 1948, June 10, 20, 1949, June 10, 1952, May 20, 1958 (gage height, 37.0 ft); minimum observed, 200 acre-ft Sept. 10, 1956 (gage height, 1.0 ft).

Remarks.--Reservoir was formed in 1898 by a 15-foot earth-fill, rock-faced dam which was raised some each year to the ultimate height of 45 ft in 1915. The dam has a concrete core through the center. Capacity, 52,500 acre-ft between gage height zero (bottom of outlet gate) and 36.0 ft (top of flashboards on spillway). Spillway crest is at gage height 33.5 ft. Figures given herein represent total contents. 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, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	10,800	14,300	19,200	22,900	27,900	31,600	32,400	29,600	21,600	8,900	4,600	2,080
1952	5,180	6,370	10,460	15,850	18,190	24,600	39,130	54,650	55,000	44,860	36,990	30,200
1953	31,750	33,890	38,000	42,420	46,320	50,000	51,750	46,620	38,240	24,120	14,100	7,100
1954	8,120	11,470	15,580	19,920	25,140	29,280	32,980	24,150	12,000	5,000	400	600
1955	2,760	5,310	9,000	12,280	15,440	22,440	25,320	20,200	12,620	7,220	2,650	400
1956	2,690	4,510	8,400	12,130	15,200	19,200	20,640	14,000	3,640	470	350	360
1957	1,920	3,620	6,400	9,220	13,550	16,450	17,950	23,960	27,370	22,890	13,340	7,300
1958	9,000	13,040	16,900	20,910	27,800	35,800	47,560	54,770	52,090	44,520	30,650	23,520
1959	25,080	27,360	30,000	33,900	37,090	40,100	40,180	37,470	29,950	20,080	10,460	9,750
1960	11,420	13,750	16,900	20,560	24,830	30,030	31,640	27,720	14,110	5,710	660	280

Note.--Month-end contents generally interpolated from contents determined from gage readings obtained on 20th day of month and 1st day of following month.

1890. East Fork Sevier River near Kingston, Utah

Location--Lat 38°12', long 112°09', in SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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, 4.1 miles upstream from mouth, and 10 $\frac{1}{2}$ miles downstream from Otter Creek.

Drainage area--1,260 sq mi, approximately.

Records available--March 1913 to September 1960.

Gage--Water-stage recorder. Altitude of gage is 6,110 ft (from river-profile map). Prior to Apr. 29, 1914, staff gage at site 1 mile upstream at different datum. Apr. 29, 1914, to June 2, 1939, water-stage recorder at site 1,500 ft downstream at different datum.

Average discharge--47 years (1913-60), 83.2 cfs (60,230 acre-ft per year).

Extremes--1913-60: Maximum discharge, 2,030 cfs May 12, 1941 (gage height, 5.05 ft); minimum daily recorded, 7 cfs Oct. 29, 30, 1930.

Remarks--Diversions for irrigation above and below station. Flow regulated by Otter Creek Reservoir (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	17.7	15.5	13.7	11.7	13.8	14.8	21.4	65.5	140	232	114	73.9	61.5
1952	46.8	13.6	13.0	13.3	13.2	17.2	28.0	162	89.1	138	169	152	71.7
1953	21.1	21.1	19.1	19.8	22.8	20.7	21.8	87.6	127	258	183	153	80.0
1954	41.5	13.4	11.6	11.9	13.0	14.2	23.5	155	197	146	84.5	37.3	62.6
1955	15.3	13.4	14.6	14.0	14.0	14.0	21.0	93.7	128	107	107	49.2	49.4
1956	11.3	21.4	11.2	11.6	11.2	11.7	24.7	124	203	48.6	23.2	18.5	43.3
1957	16.3	17.7	9.74	8.00	11.5	12.7	24.4	34.4	28.0	75.0	171	142	46.1
1958	29.5	15.0	12.0	10.0	16.2	20.8	68.5	369	52.7	116	235	163	93.1
1959	15.6	16.3	15.9	16.3	17.7	39.1	33.5	38.6	131	154	185	43.1	59.2
1960	13.1	11.7	9.36	7.00	9.78	14.5	30.7	61.2	214	162	96.7	28.0	55.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,090	924	841	720	764	908	1,270	4,030	8,320	14,280	6,980	4,400	44,530
1952	2,880	807	799	817	760	1,060	1,670	9,960	5,300	8,500	10,410	9,070	52,030
1953	1,300	1,260	1,170	1,220	1,270	1,260	1,300	5,390	7,550	15,830	11,250	9,080	57,900
1954	2,550	799	712	732	720	871	1,400	9,510	11,700	8,950	5,200	2,220	45,360
1955	940	799	900	861	778	863	1,250	5,760	7,590	6,560	6,560	2,930	35,790
1956	696	1,270	688	716	643	720	1,470	7,600	12,110	2,990	1,430	1,100	31,430
1957	1,000	1,050	599	492	641	780	1,450	2,110	1,660	4,610	10,520	8,460	33,370
1958	1,610	891	736	615	900	1,280	4,080	22,710	3,130	7,110	14,480	9,670	67,410
1959	962	970	976	1,000	982	2,400	2,000	2,380	7,790	9,460	11,390	2,560	42,870
1960	805	696	576	430	563	895	1,820	3,760	12,760	9,990	5,940	1,660	39,900

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	89.8	-	65,040
1951	1214	242	July 24, 1951	9	61.5	44,530	63.8	-	46,160
1952	1244	490	May 5, 1952	-	71.7	52,030	70.6	-	51,280
1953	1284	920	July 27, 1953	-	80.0	57,900	80.4	-	58,230
1954	1344	244	May 22, 1954	-	62.6	45,360	60.7	-	43,940
1955	1394	154	Aug. 5, 1955	11	49.4	35,790	49.4	-	35,810
1956	1444	237	June 5, 1956	7.8	43.3	31,430	43.4	-	31,430
1957	1514	854	Aug. 11, 1957	-	46.1	33,370	47.2	-	34,160
1958	1564	581	May 22, 1958	-	93.1	67,410	92.4	-	66,880
1959	1634	226	July 30, 1959	12	59.2	42,870	58.1	-	42,040
1960	1714	235	May 30, 1960	-	55.0	39,900	-	-	-

1910. Piute Reservoir near Marysville, Utah

Location.--Lat 38°19'30", long 112°11'30", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.3, T.29 S., R.3 W., at Piute Dam 9 miles south of Marysville.

Drainage area.--2,400 sq mi, approximately.

Records available.--March 1914 to September 1960.

Gage.--Staff gage. Datum of gage is 5,900.8 ft above mean sea level (levels by Office of State Engineer).

Extremes.--1914-60: Maximum contents, 82,300 acre-ft May 28, 1922 (gage height, 76.4 ft, original capacity table); no contents at times in 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 (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, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	566	9,900	20,580	29,950	39,030	45,530	39,380	30,110	19,410	15,120	8,130	1,270
1952	2,380	10,090	18,280	25,140	33,040	43,880	61,420	74,010	68,090	46,080	36,120	25,420
1953	21,920	30,410	42,420	54,110	62,760	71,260	59,030	49,250	34,150	23,030	14,450	6,530
1954	4,910	12,720	21,660	a30,770	a38,910	47,380	39,030	38,330	25,850	a16,210	2,060	a2,110
1955	3,850	a7,000	16,600	24,000	29,500	38,160	a36,400	a21,620	19,540	4,910	3,790	826
1956	e512	4,640	14,120	a22,030	28,760	21,660	13,580	10,870	12,940	3,730	e150	e284
1957	e196	3,140	10,670	16,950	20,080	16,250	16,660	16,950	a28,020	12,300	3,790	1,680
1958	8,550	17,190	27,300	33,670	44,980	56,530	65,730	73,260	61,860	35,290	a25,280	25,560
1959	25,710	a31,480	42,600	51,740	53,910	55,310	44,790	a26,940	19,670	9,080	8,040	4,640
1960	4,700	6,990	15,340	a23,860	27,730	28,760	19,410	8,460	10,970	a5,450	0	e27

a No gage-height record; contents interpolated.

e Capacity table in error; contents estimated on basis of inflow-outflow computations.

1915. Sevier River below Piute Dam, near Marysville, Utah

Location.--Lat 38°19'55", long 112°11'15", in NW¼SE¼ sec.34, T.28 S., R.3 W., on left bank three-quarters of a mile downstream from Piute Dam and 8 miles south of Marysville.

Drainage area.--2,440 sq mi, approximately.

Records available.--May to August 1911, May 1912 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,870 ft (by barometer). Prior to May 4, 1912, staff gage at site half a mile upstream at different datum. May 4, 1912, to Mar. 31, 1935, water-stage recorder at site a quarter of a mile upstream at different datum. Apr. 1, 1935, to Apr. 7, 1936, at datum 0.2 ft higher.

Average discharge.--48 years (1912-60), 227 cfs (164,300 acre-ft per year).

Extremes.--1911-60: Maximum discharge, 2,600 cfs May 23, 24, 1922; practically no flow at times when reservoir gates were closed.

Remarks.--One small diversion between gage and Piute Reservoir. Flow regulated by Piute Reservoir (see preceding page). Records of chemical analyses for the period March 1958 to September 1960 are published in reports of Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	137	25.3	9.85	1.56	1.76	11.8	152	246	357	347	242	206	146
1952	83.8	26.4	3.13	2.94	3.91	4.47	6.09	416	408	569	412	434	198
1953	203	51.2	2.45	5.22	6.36	6.06	238	254	372	478	369	349	195
1954	136	38.9	2.62	2.20	2.93	3.78	243	234	432	333	345	82.8	155
1955	55.3	72.7	3.66	3.81	4.66	25.1	115	360	135	348	151	130	118
1956	51.3	45.3	6.22	3.24	5.41	237	187	185	166	197	83.2	28.2	100
1957	43.0	51.2	9.25	11.9	74.3	138	34.4	41.9	14.6	330	311	202	106
1958	61.7	34.7	11.2	9.88	9.45	9.54	166	652	463	566	460	294	230
1959	123	53.6	5.75	5.38	114	143	234	344	266	323	247	131	166
1960	53.6	68.5	2.56	5.31	71.2	134	209	249	177	232	161	41.0	117

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	8,430	1,500	606	98	98	728	9,070	15,130	21,230	21,350	14,900	12,270	105,400
1952	5,150	1,570	193	181	225	275	363	25,560	24,270	34,970	25,330	25,840	143,900
1953	12,460	3,040	151	321	353	373	14,130	15,620	22,110	29,370	22,680	20,780	141,400
1954	8,380	2,320	161	135	163	232	14,450	14,360	25,720	20,280	21,180	4,930	112,300
1955	3,400	4,320	225	234	259	1,550	6,840	22,160	8,040	21,430	9,270	7,750	85,480
1956	3,150	2,700	383	200	311	14,600	11,120	11,390	9,880	12,110	5,120	1,680	72,640
1957	2,640	3,050	569	732	4,133	8,470	2,050	2,570	870	20,300	19,150	12,000	76,530
1958	3,790	2,060	689	608	525	587	9,850	40,070	27,550	34,810	28,300	17,510	166,300
1959	7,560	3,190	353	331	6,360	8,790	13,900	21,170	15,630	19,890	15,160	7,790	120,300
1960	3,300	4,080	158	328	4,100	8,230	12,450	15,300	10,510	14,270	9,880	2,440	85,040

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	211	152,800	
1951	-	-	-	-	-	-	211	141,800	
1952	1214	606	July 7, 1951	-	146	105,400	210	152,700	
1953	1244	1,020	June 3, 1952	-	198	143,900	189	136,600	
1955	1284	684	July 9, 1953	2.0	195	141,400	151	109,400	
1954	1344	686	June 23-24, 1954	.7	155	112,300	116	83,770	
1955	1394	592	May 2, 1955	-	118	85,480	-	-	
1956	1444	502	June 27, 1956	1.4	100	72,640	106	76,810	
1957	1514	482	Aug. 18, 1957	4.0	106	76,530	236	170,900	
1958	1564	778	(a)	4.8	230	166,300	161	116,800	
1959	1634	562	July 9, 1959	3.5	166	120,300	-	-	
1960	1714	454	July 8, 1960	.3	117	85,040	-	-	

a June 30, July 1, 2, 1958.

1940. Sevier River above Clear Creek, near Sevier, Utah

Location.--Lat 38°34'20", long 112°15'25", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 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 1955. Records for November 1916 to September 1929 (published as Sevier River at Sevier) include flow of Clear Creek and are not equivalent.

Gage.--Water-stage recorder. Altitude of gage is 5,560 ft (by barometer). Prior to May 16, 1912, staff gage and May 16, 1912, to Nov. 16, 1916, water-stage recorder, at site 0.8 mile downstream at different datums (datum lowered 1 ft Mar. 31, 1913).

Average discharge.--20 years (1912-16, 1939-55), 266 cfs (192,600 acre-ft per year).

Extremes.--1911-16, 1939-55: Maximum discharge, 2,270 cfs May 16, 1941 (gage height, 4.83 ft); minimum, 4.6 cfs Feb. 13, 1952.

Remarks.--Many diversions above station for irrigation. Flow regulated by Piute and Otter Creek Reservoirs.

Corrections.--In WSP 1314, the figures of acre-feet for December (1939-50) are aligned in error. The figures should be shifted down one line. The means and acre-feet for August, September, and water year 1948 should be footnoted as "Revised."

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	164	56.1	32.0	13.1	14.0	25.4	153	249	352	362	251	231	159
1952	113	48.6	24.3	22.0	25.0	25.9	30.2	555	624	635	455	455	252
1953	235	80.7	32.2	32.1	28.6	24.4	234	297	425	492	359	351	215
1954	163	58.1	20	21.0	20.0	19.1	232	316	461	352	347	97.6	176
1955	70.1	79.5	21.5	21.0	22.5	40.1	114	363	206	358	173	137	135

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10,080	3,340	1,970	807	778	1,560	9,130	15,280	20,940	22,290	15,430	13,750	115,400
1952	6,960	2,890	1,490	1,350	1,440	1,590	1,600	34,150	37,120	39,050	28,000	27,090	182,900
1953	14,450	4,800	1,980	1,970	1,590	1,500	13,940	17,640	25,300	30,270	21,550	20,860	155,800
1954	10,000	3,460	1,230	1,290	1,110	1,180	13,780	19,450	27,440	21,660	21,350	5,810	127,800
1955	4,310	4,730	1,320	1,290	1,250	2,460	6,770	22,340	12,260	21,990	10,670	8,120	97,510

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	219	158,700
1951	1214	-	July 9, 1951	-	159	115,400	154	111,300
1952	1244	601	June 7, 1952	-	252	182,900	266	192,800
1953	1284	704	July 11, 1953	17	215	155,800	206	149,300
1954	1344	687	June 25, 1954	14	176	127,800	170	123,430
1955	1394	544	May 7, 1955	-	135	97,510	-	-

1942. Clear Creek above diversions, near Sevier, Utah

Location.--Lat 38°34'45", long 112°17'20", in NW¼SW¼ sec.31, T.25 S., R.4 W., on left bank at south side of State Highway 13, 1.8 miles west of Sevier, 2.3 miles upstream from mouth, and 17 miles southwest of Richfield.

Drainage area.--164 sq mi.

Records available.--August 1957 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,680 ft (from topographic map).

Extremes.--1957-60: Maximum discharge, 301 cfs May 24, 1958 (gage height, 3.36 ft); minimum, 1.9 cfs Sept. 9, 1959.

Remarks.--Small diversions for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	-	-	16.3	10.7	-
1958	12.2	12.9	11.3	9.94	15.2	17.9	64.9	175	88.9	30.7	11.1	10.2	38.5
1959	12.3	21.4	9.94	9.93	11.7	12.3	14.5	22.4	21.1	8.01	8.10	4.20	12.1
1960	6.62	7.71	7.90	8.43	8.73	21.2	33.2	60.7	52.2	8.97	8.71	7.34	19.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	-	-	1,000	639	-
1958	751	770	698	611	842	1,100	3,860	10,750	5,290	1,890	681	606	27,850
1959	753	738	611	611	652	755	866	1,370	1,260	493	375	250	8,730
1960	407	459	486	518	502	1,300	1,980	3,730	3,110	552	351	437	13,830

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1957	1564	-	-	-	-	-	-	-	-
1958	1564	301	May 24, 1958	5.5	38.5	27,850	38.3	27,730	-
1959	1634	42	May 16, 1959	2.3	12.1	8,730	11.0	7,980	-
1960	1714	136	May 15, 1960	2.8	19.0	13,830	-	-	-

1950. Clear Creek at Sevier, Utah

Location.--Lat 38°34'55", long 112°15'30", in SW 1/4 sec. 32, T.25 S., R.4 W., on left bank 400 ft upstream from bridge on U. S. Highway 89, 1,000 ft upstream from mouth, and 0.3 mile south of Sevier.

Drainage area.--169 sq mi.

Records available.--February 1912 to September 1919, April 1934 to September 1958 (fragmentary). Monthly discharge only for some periods, published in WSP 1314.

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.--27 years (1912-19, 1937-39, 1940-58), 30.0 cfs (21,720 acre-ft per year).

Extremes.--1912-19, 1934-58: Maximum discharge, 611 cfs Aug. 17, 1955 (gage height, 5.97 ft), from rating curve extended above 230 cfs by logarithmic plotting; no flow Aug. 26, 1913.

Remarks.--Practically entire flow diverted above station each year during latter part of irrigation season.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.49	6.86	8.01	11.5	13.7	11.4	4.39	23.5	19.0	4.01	3.23	1.29	9.17
1952	4.10	6.36	10.8	10.6	11.9	17.3	133	200	156	35.0	7.17	2.77	49.5
1953	3.26	10.9	14.3	14.5	12.5	19.6	26.7	48.9	51.1	13.0	4.12	1.62	18.4
1954	2.08	8.11	11.9	13.4	15.2	17.5	26.8	65.7	27.3	5.32	1.65	2.55	16.5
1955	2.03	4.97	13.8	10.9	10.4	17.4	27.0	34.9	47.0	8.91	9.63	2.41	15.8
1956	2.02	6.59	13.2	11.3	11.3	15.0	11.9	46.0	35.0	3.24	1.51	1.55	13.2
1957	1.93	4.44	10.0	11.2	17.2	14.6	55.2	135	232	56.2	9.33	4.57	45.8
1958	5.81	14.9	14.7	12.8	17.1	19.4	58.0	163	85.9	21.2	3.05	2.70	35.0
1959													
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	214	408	492	705	759	698	261	1,440	1,130	247	199	77	6,630
1952	252	378	665	654	685	1,070	7,910	12,300	9,270	2,150	441	165	35,940
1953	201	647	878	892	695	1,210	1,590	3,000	3,040	800	253	97	13,300
1954	128	483	731	821	847	1,080	1,590	4,040	1,620	327	101	152	11,920
1955	125	296	847	673	578	1,070	1,610	2,150	2,800	548	592	143	11,430
1956	124	392	814	693	647	922	708	2,830	2,080	199	93	92	9,590
1957	118	264	618	686	953	899	3,280	8,270	13,790	3,460	574	272	33,180
1958	357	885	906	790	952	1,190	3,450	10,030	5,110	1,300	187	161	25,320
1959													
1960													

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	16.3	11,810
1951	1214	59	May 29, 1951	0.7	9.17	6,630	9.42	6,820
1952	1244	337	May 5, 1952	1.5	49.5	35,940	50.1	36,370
1953	1284	282	July 15, 1953	1.2	18.4	13,300	17.8	12,920
1954	1344	156	May 22, 1954	1.0	16.5	11,920	16.4	11,850
1955	1394	611	Aug. 17, 1955	1.4	15.8	11,430	15.9	11,490
1956	1444	86	May 27, 1956	1.1	13.2	9,590	12.8	9,260
1957	1514	484	June 5, 1957	1.7	45.8	33,180	47.4	34,330
1958	1564	278	May 27, 1958	1.8	35.0	25,320	-	-
1959			-					
1960								

2050. Sevier River near Sigurd, Utah

Location.--Lat 38°52', long 111°57', in SW $\frac{1}{4}$ sec.19, T.22 S., R.1 W., on left bank 200 ft downstream from bridge, half a mile downstream from Rockyford Dam, 2 miles northeast of Sigurd, and 5 miles upstream from Lost Creek.

Drainage area.--3,340 sq mi, approximately.

Records available.--July to September 1912, July 1914 to September 1960. Prior to October 1938, published as "near Vermilion."

Gage.--Water-stage recorder. Altitude of gage is 5,180 ft (by barometer). July to September 1912 staff gage a quarter of a mile downstream at different datum. July 31, 1914, to Apr. 19, 1917, staff gage and Apr. 20, 1917, to Oct. 16, 1935, water-stage recorder, at present site at datum 2.00 ft lower.

Average discharge.--46 years (1914-60), 99.8 cfs (72,250 acre-ft per year).

Extremes.--1914-60: Maximum discharge, 2,400 cfs May 30, 1922 (gage height, 6.1 ft, present datum), from rating curve extended above 600 cfs on basis of maximum discharge for other Sevier River stations; practically no flow (seepage only) when Rockford Reservoir gates are closed.

Remarks.--Flow regulated by reservoirs above station. During irrigation season practically entire flow through Rockyford Dam is diverted above station for irrigation below.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	64.6	85.6	87.3	95.3	123	69.2	8.37	11.9	1.92	1.98	1.68	1.01	45.6
1952	15.0	67.8	92.1	96.9	101	86.8	188	127	208	2.60	4.98	41.5	85.5
1953	101	110	127	139	127	89.6	30.0	6.57	1.47	1.80	14.4	2.77	62.3
1954	26.4	60.8	92.0	102	135	68.2	14.4	4.70	1.78	.88	1.09	2.15	42.0
1955	27.0	57.1	57.7	70.8	94.3	103	71.5	22.5	7.51	43.3	1.82	8.71	46.9
1956	18.5	42.4	53.3	52.9	61.0	198	161	14.0	15.0	13.6	5.28	.59	52.9
1957	20.2	34.6	35.4	47.8	106	116	81.8	4.17	135	22.9	25.4	21.6	53.8
1958	36.3	65.7	72.8	74.0	96.4	79.4	57.5	178	98.5	38.9	51.1	63.8	75.9
1959	66.8	89.7	82.6	96.8	172	186	102	55.4	20.1	31.4	9.91	1.1	75.6
1960	34.6	54.8	61.6	61.5	119	190	105	61.3	14.0	2.93	5.35	.87	59.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,970	5,090	5,370	5,860	6,810	4,250	498	732	114	122	104	60	32,980
1952	921	4,040	5,680	5,960	5,810	5,330	11,200	7,830	12,380	160	306	2,470	62,070
1953	6,200	6,570	7,830	8,530	7,040	5,510	1,780	404	87	111	883	165	45,110
1954	1,620	3,620	5,660	6,270	7,520	4,190	859	289	106	54	67	128	30,380
1955	1,660	3,400	3,550	4,360	5,240	6,360	4,260	1,380	447	2,660	112	518	33,950
1956	1,140	2,520	3,270	3,250	3,510	12,160	9,560	863	892	834	323	35	38,360
1957	1,240	2,060	2,180	2,940	5,910	7,150	4,870	256	8,050	1,410	1,560	1,280	38,510
1958	2,230	3,910	4,480	4,550	5,360	4,880	3,420	10,920	5,860	2,390	3,140	3,800	54,940
1959	4,110	5,340	5,080	5,950	9,550	11,430	6,050	3,410	1,200	1,930	609	65	54,720
1960	2,130	3,260	3,790	3,780	6,840	11,690	6,260	3,770	832	180	329	52	42,910

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	59.2	42,880
1951	1214	131	Feb. 17, 18, 1951	0.9	45.6	32,980	40.3	29,170
1952	1244	796	June 10, 1952	.6	85.5	62,070	99.3	72,050
1953	1284	174	Nov. 24, 1952	.4	62.3	45,110	48.9	35,410
1954	1344	219	Feb. 15, 1954	.2	42.0	30,380	38.8	28,090
1955	1394	202	July 28, 1955	.2	46.9	33,950	44.6	32,270
1956	1444	269	(a)	0	52.9	38,360	50.8	36,910
1957	1514	289	June 16, 1957	.6	53.8	38,510	60.9	44,050
1958	1564	549	May 26, 1958	.9	75.9	54,940	81.3	58,850
1959	1634	402	Mar. 1, 1959	-	75.6	54,720	68.2	49,370
1960	1714	334	Mar. 11, 1960	-	59.1	42,910	-	-

a Apr. 2, Mar. 20, 1956.

2051. Sheep Creek near Salina, Utah

Location.--Lat 38°47', long 111°41', in SW $\frac{1}{4}$ sec.27, T.23 S., R.2 E., Salt Lake meridian, in Fishlake National Forest, on left bank 1.6 miles south of Gooseberry ranger station, 1.9 miles upstream from mouth, and 15 miles southeast of Salina.

Records available.--October 1957 to September 1958.

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

Extremes.--1957-58: Maximum discharge, 5.60 cfs May 23, 28, 1958 (gage height, 1.49 ft); minimum not determined, occurred during period of ice effect or no gage-height record.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	0.115	0.118	0.06	0.05	0.057	0.070	0.133	1.47	1.46	0.299	0.150	0.105	0.341

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	7.1	7.0	3.7	3.1	3.2	4.3	7.9	90	87	18	9.2	6.3	247

2052. West Fork Sheep Creek near Salina, Utah

Location.--Lat 38°47', long 111°41', in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.21, T.23 S., R.2 E., on right bank 1,100 ft upstream from mouth, 1 mile south of Gooseberry ranger station, and 14.5 miles southwest of Salina.

Records available.--October 1957 to September 1958.

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

Extremes.--1957-58: Maximum discharge, 6.19 cfs May 16, 1958 (gage height, 1.63 ft), from rating curve extended above 1.30 cfs by logarithmic plotting; no flow for many days.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	0.004	0.007	0	0	0.006	0.010	0.112	2.35	0.191	0.005	0	0	0.227

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	0.3	0.4	0	0	0.4	0.6	6.6	144	11	0.3	0	0	164

2053. Sheep Creek at mouth, near Salina, Utah

Location.--Lat 38°48', long 111°41', in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.23 S., R.2 E., in Fishlake National Forest, on left bank 200 ft south of Gooseberry ranger station and Youth Camp, 700 ft upstream from junction with Gooseberry Creek, and 14 miles southeast of Salina.

Records available.--October 1957 to September 1958.

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

Extremes.--1957-58: Maximum discharge, 25.3 cfs May 11, 1958 (gage height, 2.30 ft); minimum, 0.01 cfs Sept. 2, 1958.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	0.185	0.167	0.106	0.099	0.090	0.097	0.759	9.16	3.03	0.416	0.092	0.055	1.20

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	11	9.9	6.5	6.1	5.0	6.0	45	563	181	26	5.7	3.3	868

2060. Salina Creek at Salina, Utah

Location.--Lat 38°57', long 111°52', in NW $\frac{1}{4}$ sec.25, T.21 S., R.1 W., on right bank 150 ft upstream from bridge on U. S. Highway 89 in Salina and three-quarters of a mile upstream from mouth.

Drainage area.--290 sq mi (revised), approximately.

Records available.--April 1914 to September 1917 (fragmentary), October 1917 to September 1919, November 1942 to September 1955, water year 1960 (annual maximum).

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,140 ft (estimated on basis of nearby bench mark). 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.--14 years (1917-19, 1943-55), 19.4 cfs (14,000 acre-ft per year)

Extremes.--1914-19, 1942-55, 1959-60: Maximum discharge, 2,650 cfs July 27, 1953 (gage height, 6.70 ft, from floodmark), from rating curve extended above 400 cfs by logarithmic plotting; no flow at times.

Remarks.--Diversions above and below station for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.00	4.63	6.83	8.0	8.62	5.65	0.71	23.8	1.64	0.71	1.83	0.22	5.31
1952	1.91	4.00	7.60	10.0	11.6	14.6	87.6	280	92.1	2.53	1.25	.91	43.0
1953	4.66	10.6	15.8	16.7	17.7	20	4.78	38.1	35.9	5.85	1.57	1.23	14.4
1954	2.01	2.80	7.73	11.2	13.2	8.13	.86	1.64	.45	.49	.22	.55	4.06
1955	1.53	3.18	7.18	7.68	7	8.39	1.61	5.21	1.26	.73	1.41	.34	3.79

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	62	276	420	492	479	347	42	1,460	97	43	112	13	3,840
1952	118	238	468	617	669	900	5,210	17,200	5,480	156	77	54	31,190
1953	287	628	970	1,030	982	1,230	284	2,340	2,140	360	96	73	10,420
1954	124	167	475	688	731	500	51	101	27	30	14	33	2,940
1955	94	189	442	472	389	516	96	320	75	45	86	20	2,740

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	6.79	4,920
1951	1214	223	May 27, 1951	0.1	5.31	3,840	5.40	3,910
1952	1244	856	May 3, 1952	.3	43.0	31,190	44.4	32,250
1953	1284	2,650	July 27, 1953	.7	14.4	10,420	12.8	9,300
1954	1344	41	Jan. 27, 1954	0	4.06	2,940	4.00	2,900
1955	1394	231	Aug. 15, 1955	.1	3.79	2,740	-	-
1956	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-
1960	-	*860	Sept. 5, 1960	-	-	-	-	-

* Not previously published.

2100. Pleasant Creek near Mount Pleasant, Utah

Location.--Lat 39°32'30", long 111°23'30", in W $\frac{1}{2}$ sec.5, T.15 S., R.5 E., on left bank a quarter of a mile downstream from South Fork and 3.9 miles east of Mount Pleasant.

Drainage area.--16 sq mi, approximately.

Records available.--October 1954 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 6,759.67 ft above mean sea level (levels by U. S. Soil Conservation Service).

Average discharge.--6 years (1954-60), 16.7 cfs (12,090 acre-ft per year).

Extremes.--1954-60: Maximum discharge not determined, occurred during mud-rock flow Aug. 16, 1955 (estimated flow, 750 cfs below debris basin located half a mile below gage); minimum, 0.8 cfs Sept. 28, 1959, caused by temporary obstruction upstream.
Maximum discharge known, 2,060 cfs July 24, 1946, from critical-depth measurement of peak flow over retention dam half a mile below gage.

Remarks.--Records include flow of Candland ditch and Coal Fork ditch which are transmountain diversions from San Rafael River basin (see p. 157).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954													
1955	9.0	8.97	7.97	7.91	8.69	8.73	10.2	30.0	57.8	16.8	11.2	8.63	15.5
1956	7.48	7.82	7.89	7.34	7.01	10.1	12.5	42.0	35.6	12.6	8.41	6.81	13.8
1957	6.61	7.06	6.67	7.08	6.71	7.64	10.5	25.2	117	47.4	14.2	10.3	22.1
1958	10.6	10.0	9.29	8.77	9.80	9.91	13.8	76.4	76.0	21.9	11.0	11.0	22.4
1959	10.3	10.1	9.65	8.11	8.02	8.07	10.6	19.5	31.3	12.9	9.28	8.67	12.2
1960	8.47	7.60	7.51	7.77	8.40	11.3	14.4	36.4	41.4	12.3	8.40	6.99	14.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954													
1955	553	534	490	486	482	537	608	1,850	3,440	1,030	687	514	11,210
1956	460	465	485	451	403	620	742	2,580	2,120	774	517	405	10,020
1957	407	420	410	436	373	469	624	1,550	6,950	2,910	871	612	16,030
1958	651	596	571	539	544	610	821	4,700	4,520	1,350	674	652	16,230
1959	631	599	593	499	446	496	630	1,200	1,860	791	570	516	8,830
1960	521	452	462	478	483	695	856	2,240	2,460	755	516	416	10,330

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954								
1955	1394	-	Aug. 16, 1955	7.3	15.5	11,210	15.3	11,040
1956	1444	93	May 26, 1956	6.2	13.8	10,020	13.6	9,850
1957	1514	178	June 4, 1957	5.9	22.1	16,030	22.9	16,610
1958	1564	209	May 27, 1958	8.2	22.4	16,230	22.4	16,230
1959	1634	44	June 9, 1959	7.5	12.2	8,830	11.7	8,440
1960	1714	88	Jan. 3, 1960	6.3	14.2	10,330	-	-

2110. Twin Creek near Mount Pleasant, Utah

Location--Lat 39°29'30", long 111°24'25", in NW $\frac{1}{4}$ sec.30, T.15 S., R.5 E., on right bank $\frac{3}{2}$ miles southeast of Mount Pleasant.

Drainage area--5.9 sq mi, approximately.

Records available--October 1954 to September 1960.

Gage--Water-stage recorder and concrete control. Altitude of gage is 6,500 ft (from topographic map).

Average discharge--6 years (1954-60), 8.09 cfs (5,860 acre-ft per year).

Extremes--1954-60: Maximum discharge, 117 cfs June 26, 1957 (gage height, 1.81 ft), from rating curve extended above 70 cfs; minimum, 1.8 cfs Mar. 18, 1955.

Remarks--Records include flow of Twin Creek tunnel, a transmountain diversion from San Rafael River basin.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954													
1955	3.6	3.57	3.91	4.0	4.0	4.11	4.18	10.2	21.6	8.32	5.77	4.69	6.49
1956	3.93	3.79	3.61	3.79	4.30	4.72	5.43	17.1	20.2	6.69	4.69	4.12	6.86
1957	4.40	4.11	3.90	4.05	3.94	4.16	4.48	10.9	57.6	30.9	9.81	7.12	12.1
1958	6.32	5.04	4.85	4.62	4.82	4.61	6.40	27.2	43.6	10.2	5.35	4.38	10.6
1959	4.98	5.18	4.39	4.72	4.02	5.01	5.23	8.29	12.0	6.21	5.25	5.14	5.88
1960	4.82	4.93	3.81	3.90	4.06	4.33	5.45	13.3	19.1	6.83	4.90	3.96	6.61

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954													
1955	221	212	240	246	222	252	249	624	1,290	511	355	279	4,700
1956	242	225	222	233	248	290	323	1,050	1,200	411	289	245	4,980
1957	271	245	240	249	219	256	267	673	3,430	1,900	603	424	8,780
1958	389	300	298	284	268	283	381	1,670	2,590	628	329	261	7,680
1959	306	308	270	290	223	308	311	510	716	382	323	306	4,250
1960	296	294	234	240	233	266	324	817	1,140	420	301	236	4,800

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954								
1955	1394	48	June 9, 1955	-	6.49	4,700	6.51	4,720
1956	1444	45	May 31, 1956	-	6.86	4,980	6.95	5,050
1957	1514	117	June 26, 1957	3.7	12.1	8,780	12.4	9,010
1958	1564	111	June 6, 1958	3.8	10.6	7,680	10.5	7,580
1959	1634	24	June 9, 1959	3.8	5.88	4,250	5.79	4,190
1960	1714	40	June 8, 1960	3.5	6.61	4,800	-	-

Transmountain diversions from Colorado River basin to Sevier Lake basin, Utah

Water for irrigation is diverted by 13 tunnels or ditches from tributaries of San Rafael and Price Rivers in the Colorado River basin to San Pitch River in Sevier Lake basin. The diversions have been made for many years, but records are available since September or October 1949 only. Records collected since 1950 for each tunnel or ditch, as measured at or near the divide between the Colorado River basin and The Great Basin, are given in the tables herewith.

9-3095. Fairview ditch near Fairview, Utah

Location.--Lat 39°39', long 111°19', in SE $\frac{1}{4}$ sec.26, T.13 S., R.5 E., 1.8 miles south of State Highway 31 and 6 $\frac{1}{2}$ miles northeast of Fairview.

Gage.--Water-stage recorder. Altitude of gage is 9,000 ft (from topographic map).

Extremes.--1949-60: Maximum daily discharge, 17 cfs June 28, 29, 1957; no flow for part of each year.

Remarks.--Ditch diverts waters from tributaries of San Rafael and Price Rivers for irrigation in San Pitch River valley in Sevier Lake basin.

Correction.--Erroneously published as Fairview ditch near Ephraim, Utah, in WSP 1313.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	0	121	704	776	216	1,820
1952	0	0	0	0	0	0	0	0	250	716	760	338	2,060
1953	0	0	0	0	0	0	0	0	158	744	633	165	1,700
1954	0	0	0	0	0	0	0	49	559	390	1.0	1.0	1,000
1955	0	0	0	0	0	0	0	.4	236	722	319	.8	1,280
1956	0	0	0	0	0	0	0	0	564	755	217	0	1,540
1957	0	0	0	0	0	0	0	0	480	853	766	311	2,410
1958	0	0	0	0	0	0	0	33	581	648	388	.2	1,650
1959	0	0	0	0	0	0	0	0	457	208	0	0	665
1960	0	0	0	0	0	0	0	0	311	402	7	0	720

9-3175. Candland ditch near Mount Pleasant, Utah

Location.--Lat 39°33', long 111°19', in NW $\frac{1}{4}$ sec.1, T.15 S., R.5 E., about 150 ft west of Skyline Drive, 8 miles east of Mount Pleasant, and 9.4 miles south of junction of Skyline Drive with Fairview-Huntington road.

Gage.--Water-stage recorder and Parshall flume. Altitude of gage is 9,900 ft (from topographic map).

Extremes.--1949-58: Maximum daily discharge, 7.3 cfs June 6, 1958; no flow for many days in each year.

Remarks.--Candland ditch diverts water from tributary of San Rafael River to the San Pitch River in Sevier Lake basin for irrigation.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.2	0	0	0	0	0	0	5.6	145	62	10	1.4	224
1952	0	0	0	0	0	0	12	253	238	61	11	8	583
1953	6	1	0	0	0	0	0	31	39	42	15	0	134
1954	0	0	0	0	0	0	0	20	116	28	0	0	164
1955	0	0	0	0	0	0	0	3	52	24	2	0	81
1956	0	0	0	0	0	0	0	38	80	36	1	0	155
1957	0	0	0	0	0	0	0	0	54	73	22	2	151
1958	0	0	0	0	0	0	0	32	206	52	9	2	301

9-3210. Coal Fork ditch near Mount Pleasant, Utah

Location.--Lat 39°30', long 111°19', in SW $\frac{1}{4}$ sec.24, T.15 S., R.5 E., 25 ft west of Skyline Drive and 8 $\frac{1}{2}$ miles southeast of Mount Pleasant.

Gage.--Water-stage recorder and 2-foot Cippoletti weir. Altitude of gage is 9,700 ft (from topographic map).

Extremes.--1949-58: Maximum daily discharge, 8.0 cfs June 28, 1957; no flow for most of each year.

Revisions.--Revised records for the water year 1950, superseding those published in WSP 1313, are given herewith:

Month	Diversion in acre-feet
June 1950.....	98
July.....	14
August.....	6.9
Water year 1949-50.....	183

Transmountain diversions from Colorado River basin to Sevier Lake basin, Utah--Continued

Monthly and yearly diversion, in acre-feet, of Coal Fork ditch near Mount Pleasant, Utah

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3	0	0	0	0	0	0	13	*116	34	8	6	*180
1952	1	0	0	0	0	0	23	282	*241	*88	*20	6	*662
1953	0	0	0	0	0	0	3	43	*124	*30	3	0	*203
1954	0	0	0	0	0	0	0	*86	61	18	6	0	*171
1955	0	0	0	0	0	0	0	10	*126	*27	*11	6	*180
1956	3.4	0	0	0	0	0	0	69	100	23	8	3	207
1957	0	0	0	0	0	0	0	0	240	160	24	2	426
1958	0	0	0	0	0	0	0	34	108	14	2	1	159

* Revised.

9-3215. Twin Creek tunnel near Mount Pleasant, Utah

Location.--Lat 39°28', long 111°20', in SE $\frac{1}{4}$ sec.35, T.15 S., R.5 E., just downstream from tunnel outlet, 400 ft west of Skyline Drive and 9 miles southeast of Mount Pleasant.

Gage.--Water-stage recorder and 1-foot Parshall flume. Altitude of gage is 10,000 ft (from topographic map).

Extremes.--1949-58: Maximum daily discharge, 9.5 cfs July 3, 1957; no flow for most months in each year.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	26	153	23	3.0	0	205
1952	0	0	0	0	0	0	0	18	277	165	2.4	0	463
1953	0	0	0	0	0	0	0	0	83	19	1	0	103
1954	0	0	0	0	0	0	0	97	45	2	0	0	144
1955	3.0	0	0	0	0	0	0	9	188	13	8	0	220
1956	0	0	0	0	0	0	0	26	92	3	0	0	121
1957	0	0	0	0	0	0	0	0	161	211	5	0	377
1958	0	0	0	0	0	0	0	6	207	12	0	1	226
1959													
1960													

9-3230. Spring City tunnel near Spring City, Utah

Location.--Lat 39°26', long 111°22', in SE $\frac{1}{4}$ sec.16, T.16 S., R.5 E., at west portal of tunnel, 11 miles east of Spring City.

Gage.--Water-stage recorder. Altitude of gage is 9,600 ft (from topographic map).

Extremes.--1949-60: Maximum daily discharge, 56 cfs June 25, 1957; no flow at times in most years.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	6.0	21	268	1,140	158	13	24	1,630
1952	51	42	43	43	35	37	159	578	324	259	78	11	1,680
1953	53	36	31	25	22	25	45	170	1,210	300	36	3.4	1,960
1954	52	31	31	25	22	25	69	828	278	24	4.2	39	1,430
1955	33	30	31	25	22	25	45	377	1,050	89	89	68	1,880
1956	45	48	46	43	40	43	48	806	750	11	5.2	5.0	1,890
1957	28	24	25	25	22	25	24	25	1,340	528	181	79	2,360
1958	61	49	34	25	22	25	24	493	1,250	139	61	57	2,240
1959	48	37	31	25	22	25	24	346	705	4.6	43	31	1,340
1960	30	19	12	12	12	19	24	668	1,210	52	18	45	2,320

9-3220. Black Canyon ditch near Spring City, Utah

Location.--Lat 39°27', long 111°20', in SE $\frac{1}{4}$ sec.10, T.16 S., R.5 E., 200 ft west of Skyline Drive and 9 miles east of Spring City.

Gage.--Water-stage recorder and 1-foot Parshall flume. Altitude of gage is 10,200 ft (from topographic map).

Extremes.--1949-58: Maximum daily discharge, 11 cfs July 1, 2, 3, 1957; no flow for most of each year.

Transmountain diversions from Colorado River basin to Sevier Lake basin, Utah--Continued

Monthly and yearly diversion, in acre-feet, of Black Canyon ditch near Spring City, Utah

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1	0	0	0	0	0	0	22	215	22	0	0	260
1952	0	0	0	0	0	0	0	26	337	135	2	0	500
1953	0	0	0	0	0	0	0	1	135	44	0	0	180
1954	0	0	0	0	0	0	0	155	57	5	.4	0	217
1955	0	0	0	0	0	0	0	8	201	17	5	0	232
1956	0	0	0	0	0	0	0	75	170	6	3.0	0	254
1957	0	0	0	0	0	0	0	0	201	222	5	0	428
1958	0	0	0	0	0	0	0	7	263	11	0	0	281

9-3225. Cedar Creek tunnel near Spring City, Utah

Location.--Lat 39°27', long 111°20', in sec.10, T.16 S., R.5 E., just downstream from Cedar Creek tunnel outlet, 200 ft west of Skyline Drive and 9 miles east of Spring City.

Gage.--Water-stage recorder and 1-foot Parshall flume. Altitude of gage is 10,200 ft (from topographic map).

Extremes.--1949-58: Maximum daily discharge, 8.3 cfs June 28, 1957; no flow during winter months in most years.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6	3	0	0	0	0	0	61	200	40	22	6.0	338
1952	6	0	0	0	0	0	0	178	340	154	25	9	718
1953	1	0	0	0	0	0	0	1	144	51	18	8	224
1954	3	0	0	0	0	0	0	115	45	16	6	6	191
1955	6	6	0	0	0	0	0	90	159	36	21	11	329
1956	7	8	0	0	0	0	2	68	110	25	11	6	238
1957	6	6	0	0	0	0	0	12	239	176	42	15	496
1958	13	9	0	0	0	0	0	64	204	40	18	10	358

9-3235. Reeder ditch near Spring City, Utah

Location.--Lat 39°23', long 111°23', in NW $\frac{1}{4}$ sec.32, T.16 S., R.5 E., 500 ft west of Skyline Drive and 9 miles southeast of Spring City.

Gage.--Water-stage recorder and 1-foot Parshall flume. Altitude of gage is 10,300 ft (from topographic map).

Extremes.--1949-58: Maximum daily discharge, 15 cfs June 28, 1957; no flow for most of each year.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6	4	0	0	0	0	0	6	50	32	12	6	116
1952	5	3	0	0	0	0	0	6	56	45	14	9	138
1953	6	1	0	0	0	0	0	0	17	17	3.4	0	45
1954	0	0	0	0	0	0	0	15	22	21	7	10	75
1955	5	4	0	0	0	0	0	11	135	25	68	24	272
1956	9	12	0	0	0	0	7	242	135	42	17	10	474
1957	5	0	0	0	0	0	0	10	153	244	57	24	493
1958	16	0	0	0	0	0	0	137	288	62	23	11	537

9-3255. John August ditch near Ephraim, Utah

Location.--Lat 39°18', long 111°27', in NW $\frac{1}{4}$ sec.35, T.17 S., R.4 E., half a mile southeast of Alpine substation and 9 miles southeast of Ephraim.

Gage.--Water-stage recorder and rectangular weir. Altitude of gage is 10,100 ft (from topographic map).

Extremes.--1949-58: Maximum daily discharge, 5.9 cfs June 17, 1951; no flow for most of each year.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	0	169	118	12	0	299
1952	0	0	0	0	0	0	0	0	2	139	57	8	205
1953	0	0	0	0	0	0	0	0	62	114	58	1	235
1954	0	0	0	0	0	0	0	42	117	58	5	2	224
1955	0	0	0	0	0	0	0	18	107	107	14	0	246
1956	0	0	0	0	0	0	0	6	118	58	1	0	183
1957	0	0	0	0	0	0	0	0	53	155	70	1	279
1958	0	0	0	0	0	0	0	0	107	99	14	1	221

SEVIER LAKE BASIN

Transmountain diversions from Colorado River basin to Sevier Lake basin, Utah--Continued

9-3260. Madsen ditch near Ephraim, Utah

Location.--Lat 39°19', long 111°27', in SW $\frac{1}{4}$ sec.23, T.17 S., R.4 E., a quarter of a mile southwest of junction of Skyline Drive and Orangeville road, and 8 miles east of Ephraim.

Gage.--Water-stage recorder and Parshall flume. Altitude of gage is 10,000 ft (from topographic map).

Extremes.--1949-58: Maximum daily discharge, 3.8 cfs June 21, 1951; no flow for most of each year.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	0	47	22	0	0	69
1952	0	0	0	0	0	0	0	6	7	0	0	0	13
1953	0	0	0	0	0	0	0	4	8	6	2	0	20
1954	0	0	0	0	0	0	0	3	1	0	0	0	4
1955	0	0	0	0	0	0	0	2	2	0	0	0	4
1956	0	0	0	0	0	0	0	99	5.0	0	0	0	104
1957	0	0	0	0	0	0	0	0	16	4	0	0	20
1958	0	0	0	0	0	0	0	2	2	0	0	0	4

9-3190. Ephraim tunnel near Ephraim, Utah

Location.--Lat 39°19', long 111°26', in NW $\frac{1}{4}$ sec.24, T.17 S., R.4 E., at east tunnel portal, 9 miles east of Ephraim.

Gage.--Water-stage recorder and masonry control. Altitude of gage is 9,500 ft (from topographic map).

Extremes.--1949-60: Maximum daily discharge, 104 cfs June 2, 1960; no flow at times in some years.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	15	18	12	6	6	12	24	1,030	1,810	155	55	37	3,180
1952	28	18	12	6	6	12	24	894	1,800	935	142	45	3,920
1953	37	21	12	6	6	12	24	97	2,990	421	65	31	3,720
1954	12	12	6	6	6	12	18	1,890	427	58	12	24	2,480
1955	21	18	12	12	11	12	24	1,050	1,600	168	0	23	2,950
1956	18	18	12	12	12	12	29	2,210	1,040	153	0	9	3,530
1957	18	18	12	12	11	12	29	176	1,010	990	127	45	2,460
1958	37	30	18	18	17	18	18	1,520	2,220	220	28	31	4,180
1959	40	30	25	18	17	18	18	921	1,140	108	10	12	2,360
1960	12	12	12	12	12	12	18	1,640	1,490	68	1	6	3,300

9-3205. Larsen tunnel near Ephraim, Utah

Location.--Lat 39°21', long 111°27', in SE $\frac{1}{4}$ sec.10, T.17 S., R.4 E., just downstream from tunnel outlet, a quarter of a mile west of Skyline Drive and 7 $\frac{1}{2}$ miles east of Ephraim.

Gage.--Water-stage recorder and rock masonry control. Altitude of gage is 9,700 ft (from topographic map).

Extremes.--1949-58: Maximum daily discharge, 25 cfs June 6, 9, 10, 12, 1952; no flow for most of each year.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	90	738	78	4.0	0	910
1952	0	0	0	0	0	0	0	615	1,210	410	44	2	2,280
1953	0	0	0	0	0	0	0	1	736	184	2	0	923
1954	0	0	0	0	0	0	0	460	221	23	0	1	705
1955	0	0	0	0	0	0	0	88	634	57	7	0	786
1956	0	0	0	0	0	0	0	308	596	7	1	1	913
1957	0	0	0	0	0	0	0	0	436	534	23	0	993
1958	0	0	0	0	0	0	0	264	898	81	1	0	1,240

Transmountain diversions from Colorado River basin to Sevier Lake basin, Utah--Continued

9-3200. Horseshoe tunnel near Ephraim, Utah

Location.--Lat 39°22', long 111°27', in SW $\frac{1}{4}$ sec.2, T.17 S., R.4 E., 500 ft west of Sky-line Drive and 8 miles east of Ephraim.

Gage.--Water-stage recorder. Altitude of gage is 10,200 ft (from topographic map).

Extremes.--1949-58: Maximum daily discharge, 23 cfs June 28, 1957; no flow for most of each year.

Monthly and yearly diversion, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	123	518	60	2	0	703
1952	0	0	0	0	0	0	0	123	575	284	20	0	1,000
1953	0	0	0	0	0	0	0	0	390	143	6	0	539
1954	0	0	0	0	0	0	0	220	123	17	0	2	362
1955	0	0	0	0	0	0	0	19	337	43	10	0	409
1956	0	0	0	0	0	0	0	201	276	15	0	0	492
1957	0	0	0	0	0	0	0	0	429	266	4	0	699
1958	0	0	0	0	0	0	0	140	482	27	0	1	650

2164. Twelvemile Creek near Mayfield, Utah

Location.--Lat 39°06'10", long 111°38'45", in NW¼ sec.1, T.20 S., R.2 E., on right bank 0.1 mile east of Manti-La Sal Forest boundary, half a mile downstream from Clear Creek, and 3.5 miles east of Mayfield.

Drainage area.--60 sq mi, approximately.

Records available.--October 1959 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 6,000 ft (from topographic map).

Extremes.--1959-60: Maximum discharge, 274 cfs May 11, 1960 (gage height, 2.75 ft, from reconstructed gage-height graph); minimum not determined, probably occurred during period of ice effect or no gage-height record.

Remarks.--No diversion above station. Flow regulated by several small reservoirs at headwaters; combined capacity, about 930 acre-ft.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	7	6.25	5.62	5.22	4.97	8.18	27.2	68.3	63.6	26.7	15.5	11.8	22.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	430	372	346	321	286	503	1,620	5,430	3,780	1,640	952	701	16,380

2170. Sevier River below San Pitch River, near Gunnison, Utah

Location.--Lat 39°09'00", long 111°52'30", in NE $\frac{1}{4}$ sec.14, T.19 S., R.1 W., on left bank 1,000 ft downstream from San Pitch River and 3 miles west of Gunnison.

Drainage area.--4,880 sq mi, approximately.

Records available.--March 1912 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 4,900 ft (from topographic map). Prior to Oct. 28, 1938, at same site at datum 0.36 ft higher.

Average discharge.--48 years (1912-60), 230 cfs (166,500 acre-ft per year).

Extremes.--1912-60: Maximum discharge, 2,620 cfs June 1, 1922 (gage height, 5.68 ft); minimum daily, 8 cfs July 13-17, Sept. 6, 1934.

Remarks.--Flow regulated by reservoirs and many diversions for irrigation above station. Most of flow diverted above station during irrigation season.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	171	219	244	234	256	167	83.1	127	61.1	39.8	56.3	52.2	142
1952	92.6	170	194	240	238	238	811	928	1,011	136	115	147	359
1953	244	287	297	302	414	361	114	148	105	72.4	110	87.7	209
1954	180	221	229	232	287	250	91.9	76.9	64.9	63.3	51.0	76.0	151
1955	116	151	148	162	176	230	146	72.7	68.5	75.0	57.1	62.1	122
1956	75.1	113	143	141	153	266	207	68.5	46.4	43.4	36.8	43.9	111
1957	48.1	68.9	115	120	208	173	152	189	675	55.5	76.5	84.4	163
1958	126	176	194	191	397	360	248	497	243	82.0	113	151	230
1959	154	194	201	207	271	267	174	119	66.4	53.2	50.8	52.3	150
1960	77.8	117	144	138	210	261	146	143	60.6	29.7	37.9	44.0	117

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10,530	13,050	15,010	14,380	14,200	10,260	4,940	7,790	3,640	2,450	3,460	3,100	102,800
1952	5,700	10,140	11,900	14,780	13,700	14,640	48,230	57,050	60,180	8,330	7,090	8,750	260,500
1953	14,990	15,890	16,280	18,590	22,970	22,200	6,790	9,080	6,260	4,450	6,790	5,220	151,500
1954	11,040	13,150	14,100	14,240	15,940	15,370	5,470	4,730	3,860	3,930	3,130	4,520	109,500
1955	7,130	8,970	9,070	9,930	9,760	14,160	8,720	4,470	4,070	4,610	3,510	3,700	88,100
1956	4,620	6,720	8,770	8,700	8,800	16,360	12,320	4,210	2,760	2,670	2,260	2,610	80,800
1957	2,960	4,100	7,090	7,380	11,530	10,650	9,030	11,610	40,180	3,410	4,700	5,020	117,700
1958	7,730	10,490	11,900	11,760	22,030	22,160	14,740	30,540	14,460	5,040	6,920	8,960	166,700
1959	9,490	11,550	12,370	12,700	15,070	16,440	10,330	7,320	3,950	3,270	3,120	3,110	108,700
1960	4,790	6,950	8,880	8,510	12,070	16,070	8,710	8,790	3,610	1,580	2,330	2,620	84,910

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	166	120,400
1951	1214	396	Oct. 25, 1950	17	142	102,800	127	91,970
1952	1244	2,050	June 10, 1952	24	359	260,500	388	281,800
1953	1284	563	Feb. 9, 1953	49	209	151,500	194	140,800
1954	1344	360	Feb. 17, 1954	34	151	109,500	133	96,360
1955	1394	410	Mar. 11, 1955	23	122	88,100	115	83,040
1956	1444	365	Mar. 13, 1956	20	111	80,800	103	74,840
1957	1514	964	June 11, 1957	33	163	117,700	185	133,630
1958	1564	932	May 29, 1958	45	230	166,700	235	170,000
1959	1634	490	Mar. 2, 1959	15	150	108,700	133	95,930
1960	1714	371	Mar. 9, 1960	13	117	84,910	-	-

2185. Sevier Bridge Reservoir near Juab, Utah

Location.--Lat 39°22'20", long 112°01'55", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.1, T.17 S., R.2 W., at Sevier Bridge Dam, 13 miles southwest of Juab.

Drainage area.--5,120 sq mi, approximately.

Records available.--January 1914 to September 1960.

Gage.--Staff gage below gage height 6 ft and wire-weight gage above.

Extremes.--1914-60: Maximum contents, 251,000 acre-ft Apr. 19, 20, 1922 (gage height, 80.0 ft), from former capacity table; no storage at times in 1927-28, 1930-36, 1951, 1960.

Remarks.--Reservoir was formed by a 30-foot earth-fill dam. Storage began about 1904. Dam ultimately raised to 90 ft by June 1916. Capacity, 236,000 acre-ft between gage heights 6 (approximate bottom of outlet tunnel) and 80.0 ft (top of flashboard on spillway). No dead storage. Water is used for irrigation.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	62,800	76,190	91,940	105,800	120,000	129,800	124,000	92,450	69,120	33,280	12,510	150
1952	9,070	21,720	35,630	51,890	66,830	86,490	134,400	160,800	192,900	161,600	141,500	133,800
1953	142,900	151,200	170,100	187,600	211,600	230,700	215,400	183,300	157,100	110,300	86,810	78,930
1954	89,760	103,600	118,200	133,100	149,800	164,700	155,600	110,800	84,250	60,220	36,910	37,340
1955	44,590	52,910	62,930	73,500	85,200	103,200	108,000	64,580	51,890	18,420	7,000	3,660
1956	10,290	19,060	29,740	40,440	50,400	66,830	70,560	38,660	20,370	6,020	2,080	3,380
1957	7,120	12,090	19,880	28,020	40,890	52,650	62,110	51,140	70,560	48,670	37,120	41,120
1958	47,700	58,870	70,260	81,730	103,600	125,400	125,400	90,760	64,860	58,220	26,890	31,910
1959	41,590	50,150	62,930	75,590	90,430	105,900	94,220	59,410	31,710	17,020	5,680	7,100
1960	12,970	20,540	30,130	39,760	52,400	68,250	63,760	29,930	14,020	246	0	1,810

2190. Sevier River near Juab, Utah

Location.--Lat 39°22'30", long 112°02'20", in SE $\frac{1}{4}$ sec.35, T.16 S., R.2 W., on left bank half a mile downstream from Sevier Bridge Dam and 12 miles southwest of Juab.

Drainage area.--5,120 sq mi, approximately.

Records available.--September 1911 to September 1960.

Gage.--Water-stage recorder and rubble masonry control since Apr. 16, 1914. Altitude of gage is 4,940 ft (by barometer). Prior to Apr. 16, 1914, staff gage 500 ft upstream at different datum. Apr. 16, 1914, to Apr. 7, 1938, water-stage recorder at present site and datum. Apr. 8, 1938, to Mar. 31, 1942, water-stage recorder at site 1,300 ft upstream at different datum.

Average discharge.--49 years (1911-60), 237 cfs (171,600 acre-ft per year).

Extremes.--1911-60: Maximum discharge, 2,140 cfs June 2, 1922 (gage height, 8.50 ft); practically no flow at times when reservoir gates were closed.

Remarks.--No diversion between station near Gunnison and this station. Flow regulated by Sevier Bridge Reservoir (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	27.0	8.97	5.63	5.54	6.14	7.91	147	605	452	598	430	275	216
1952	2.15	1.77	2.99	4.15	4.50	4.50	4.85	480	405	602	414	282	185
1953	45.0	108	6.35	9.07	11.6	42.0	325	662	639	679	509	226	273
1954	7.46	8.51	6.57	6	6.70	8.49	239	765	498	446	417	74.5	209
1955	8.60	34.4	4.01	3.88	4.50	5.09	54.2	745	278	591	232	134	182
1956	1.48	1.13	1.14	.85	.97	1.06	134	574	360	282	106	26.0	125
1957	2.10	2.00	1.50	2.20	2.70	3.10	2.50	379	357	404	260	4.82	120
1958	22.3	3.30	3.50	3.50	3.50	3.50	236	1,052	702	487	305	67.7	242
1959	3.1	59.8	3.6	3.4	3.3	3.6	346	679	536	300	248	32.6	186
1960	1.64	2.10	2.14	2.94	3.17	3.72	215	703	340	231	54.7	35.0	133

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,660	534	346	341	341	486	8,730	37,200	26,870	36,780	26,450	16,330	156,100
1952	132	106	184	255	259	277	288	29,530	24,120	37,010	25,480	16,770	134,400
1953	2,760	6,450	391	558	644	2,580	19,320	40,710	38,030	41,730	31,290	13,470	197,900
1954	459	506	404	369	372	522	14,250	47,070	29,660	27,400	25,640	4,430	151,100
1955	529	2,050	247	239	250	313	3,230	45,830	16,520	36,350	17,960	7,970	131,500
1956	91	67	70	52	56	65	7,980	35,270	21,410	17,330	6,500	1,550	90,440
1957	129	119	92	135	150	191	149	23,300	21,220	24,860	15,980	287	86,610
1958	1,370	196	215	215	194	215	14,020	64,670	41,760	29,940	18,730	4,030	175,600
1959	191	3,560	221	209	183	221	20,570	41,730	31,890	18,470	15,250	1,940	134,400
1960	101	125	132	180	182	229	12,770	43,230	20,240	14,200	3,360	2,180	96,930

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	222	161,000	
1951	1214	1,140	May 7, 1951	0.5	216	156,100	213	154,000	
1952	1244	944	June 21, 1952	.8	185	134,400	198	143,600	
1953	1284	1,090	July 8, 1953	3.8	273	197,900	262	189,700	
1954	1344	1,100	May 6, 1954	1.5	209	151,100	211	152,500	
1955	1394	1,160	May 14, 1955	1.4	182	131,500	178	128,900	
1956	1444	990	May 17, 1956	-	125	90,440	125	90,550	
1957	1514	911	May 10, 1957	-	120	86,610	122	88,050	
1958	1564	1,360	May 8, 1958	-	242	175,600	246	177,700	
1959	1634	938	May 1, 1959	-	186	134,400	181	130,800	
1960	1714	907	May 9, 1960	-	133	96,930	-		

2240. Sevier River near Lynndyl, Utah

Location.--Lat 39°29', long 112°24', in SE $\frac{1}{4}$ sec.27, T.15 S., R.5 W., on right bank $1\frac{1}{2}$ miles downstream from highway bridge and $3\frac{1}{2}$ miles southeast of Lynndyl.

Drainage area.--6,270 sq mi, approximately.

Records available.--April 1914 to October 1919, October 1942 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 4,660 ft (by barometer).

Average discharge.--23 years (1914-19, 1942-60), 202 cfs (146,200 acre-ft per year).

Extremes.--1914-19, 1942-60: Maximum daily discharge, 1,820 cfs June 9, 1914, based on records at Leamington; minimum, 5.2 cfs Nov. 25, 1957 (gage height, 1.79 ft), result of freezeup.

Remarks.--Flow regulated by Sevier Bridge Reservoir (see p. 164). Several diversions for irrigation between reservoir and station. Records of chemical analyses and water temperatures for the period March 1951 to September 1960 are published in reports of Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	77.1	61.6	30.5	23.0	43.8	34.9	183	441	409	437	244	175	181
1952	44.3	48.5	30.0	30.0	24.9	38.5	25.9	548	378	452	327	177	178
1953	79.1	165	30.8	18.8	17.2	65.3	326	482	462	541	408	171	232
1954	47.4	47.1	23.0	19.4	19.6	29.1	202	575	376	388	317	150	182
1955	40.2	71.9	17.7	17.1	19.4	64.0	67.8	538	241	458	242	154	162
1956	37.0	31.8	16.7	15.8	19.7	27.5	138	421	321	233	132	51.9	121
1957	37.2	39.7	43.0	18.5	31.5	32.0	31.2	287	286	335	227	34.6	118
1958	50.6	22.6	29.9	25.5	35.9	28.1	220	771	474	408	320	96.8	208
1959	42.9	83.9	15.4	14.5	23.6	36.5	296	483	422	328	262	83.8	175
1960	38.2	31.7	13.7	9.39	24.3	38.5	205	530	320	245	79.0	60.4	133

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,740	3,670	1,880	1,420	2,430	2,150	10,900	27,130	24,350	26,870	15,020	10,410	131,000
1952	2,730	2,890	1,840	1,840	1,430	2,240	1,540	33,720	22,400	27,790	20,100	10,560	129,100
1953	4,870	9,800	1,890	1,160	958	4,020	19,430	29,650	27,480	33,240	25,100	10,170	167,800
1954	2,910	2,800	1,420	1,190	1,090	1,790	12,020	35,380	22,390	23,840	19,520	7,710	132,100
1955	2,470	4,280	1,090	1,050	1,080	3,930	4,030	33,070	14,370	28,160	14,870	9,170	117,600
1956	2,280	1,890	1,030	970	1,130	1,690	8,230	25,890	19,100	14,310	8,090	3,090	87,700
1957	2,290	2,360	2,840	1,130	1,750	1,970	1,860	17,630	17,000	20,810	13,970	2,060	85,270
1958	3,110	1,340	1,840	1,560	1,990	1,750	13,060	47,400	28,230	25,070	19,670	5,760	150,800
1959	2,640	4,990	948	889	1,310	2,240	17,620	29,730	25,130	20,180	16,120	4,990	126,800
1960	2,350	1,890	840	577	1,400	2,370	12,160	32,610	19,020	15,080	4,860	3,600	96,780

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet		
		Discharge	Date							
1950	-	-	-	-	-	-	184	133,500		
1951	1214	825	May 9, 1951	-	181	131,000	177	128,100		
1952	1244	912	May 14, 1952	-	178	129,100	190	138,200		
1953	1284	858	July 11, 1953	16	232	167,800	219	158,300		
1954	1344	882	May 1, 1954	17	182	132,100	183	132,800		
1955	1394	798	July 12, 1955	15	162	117,600	159	114,800		
1956	1444	755	May 20, 1956	12	121	87,700	124	89,790		
1957	1514	707	May 12, 1957	-	118	85,270	116	84,270		
1958	1564	1,010	May 11, 1958	11	208	150,800	211	153,000		
1959	1634	765	Apr. 27, 1959	12	175	126,800	170	123,300		
1960	1714	725	May 11, 1960	-	133	96,780	-	-		

2325. Chalk Creek near Fillmore, Utah

Location.--Lat 38°59', long 112°18', in NE $\frac{1}{4}$ sec.28, T.21 S., R.4 W., on left bank 1 mile east of Fillmore and $\frac{2}{3}$ miles downstream from South Fork.

Drainage area.--60 sq mi, approximately.

Records available.--May to July 1914, March 1944 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,180 ft (by barometer). May to July 1914 staff gage at site $\frac{1}{4}$ miles upstream at different datum.

Average discharge.--16 years (1944-60), 31.4 cfs (22,730 acre-ft per year).

Extremes.--1914, 1944-60: Maximum discharge, 509 cfs May 4, 1952; minimum daily, 4.4 cfs Nov. 21, 1956.

Remarks.--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 diversion for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.4	9.84	9.80	9.27	9.24	10.5	14.7	45.8	24.8	10.7	7.44	6.25	14.1
1952	8.32	7.19	7.83	9.54	13.2	16.4	150	326	126	32.6	18.4	13.7	60.9
1953	13.0	12.6	12.6	12.6	15.9	25.9	53.4	117	76.3	24.1	17.5	11.2	32.7
1954	11.0	10.6	9.76	10.6	12.1	15.3	44.4	59.2	20.1	12.0	8.81	8.03	18.5
1955	8.60	7.48	7.94	8.02	7.64	14.0	39.0	87.5	42.0	17.2	12.6	8.85	21.8
1956	8.85	7.80	8.64	10.4	10.5	15.9	43.9	64.1	25.1	10.9	8.05	6.79	18.4
1957	7.54	6.76	7.30	7.99	9.66	13.0	67.5	191	165	35.4	18.9	13.4	45.3
1958	13.4	12.3	11.2	10.5	14.9	19.0	64.5	168	54.7	18.9	14.2	11.0	36.2
1959	10.7	9.47	10.1	8.95	9.33	10.8	22.0	34.1	15.3	7.85	7.94	6.89	12.8
1960	7.20	6.70	6.60	7.32	8.32	20.5	57.3	88.0	30.8	12.4	8.02	8.70	21.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	641	585	603	570	513	644	872	2,810	1,470	656	457	372	10,190
1952	512	428	482	587	758	1,010	8,950	20,040	7,470	2,010	1,130	815	44,190
1953	797	752	772	776	885	1,590	3,180	7,180	4,540	1,480	1,080	666	23,700
1954	676	634	600	649	674	942	2,640	3,640	1,190	740	542	478	13,400
1955	529	445	488	493	424	860	2,320	5,380	2,500	1,060	774	527	15,800
1956	544	464	531	642	601	976	2,610	3,940	1,500	672	495	404	13,380
1957	464	402	449	491	537	799	4,010	11,720	9,810	2,170	1,160	785	32,810
1958	821	735	687	645	827	1,170	3,840	11,540	3,250	1,160	873	655	26,200
1959	657	564	622	550	518	668	1,310	2,100	910	483	486	410	9,280
1960	443	399	406	450	476	1,260	3,410	5,410	1,830	764	493	517	15,660

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	27.6	19,990
1951	1214	64	May 27, 1951	5.3	14.1	10,190	13.5	9,790
1952	1244	509	May 4, 1952	4.9	60.9	44,190	62.1	45,090
1953	1284	345	July 31, 1953	9.4	32.7	23,700	32.2	23,280
1954	1344	99	May 10, 1954	7.0	18.5	15,400	17.9	12,960
1955	1394	364	Aug. 5, 1955	5.1	21.8	15,800	21.9	15,860
1956	1444	88	May 5, 1956	5.6	18.4	13,380	18.1	13,160
1957	1514	359	June 3, 1957	4.4	45.3	32,810	46.6	33,740
1958	1564	258	May 11, 1958	9.1	36.2	26,200	35.7	25,800
1959	1634	308	July 31, 1959	5.1	12.8	9,280	12.0	8,680
1960	1714	162	May 12, 1960	4.9	21.9	15,860	-	-

2340. Three Creeks near Beaver, Utah

Location.--Lat 38°17'40", long 112°25'40", in NW¹/₄ NW¹/₄ sec.16, T.29 S., R.5 W., on right bank half a mile downstream from Three Creeks Dam, half a mile upstream from Merchant Creek, and 16 miles east of Beaver.

Drainage area.--19.5 sq mi.

Records available.--July 1947 to September 1960.

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.--13 years (1947-60), 10.1 cfs (7,310 acre-ft per year).

Extremes.--1947-60: Maximum discharge, 290 cfs Aug. 9, 1947 (gage height, 4.35 ft, site and datum then in use), from rating curve extended above 160 cfs on basis of slope-area measurement of peak flow; minimum daily, 0.1 cfs May 6, 9, 10, 1955, when gates of Three Creeks Dam were closed.

Remarks.--Flow affected by storage in Puffer Lake and in Three Creeks Reservoir (capacity, 2,020 acre-ft) completed in 1950.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.03	3.22	3.00	3.00	3.00	3.00	6.09	10.8	27.6	9.52	7.95	5.37	7.13
1952	4.57	3.31	3.06	3.10	2.78	2.88	13.5	52.7	88.0	46.1	25.6	9.54	21.3
1953	8.00	5.90	4.54	3.65	3.73	4.27	8.08	5.73	18.2	5.03	4.91	3.69	6.23
1954	3.59	3.78	3.48	2.67	2.71	3.34	8.08	7.90	27.8	6.99	4.92	4.15	6.60
1955	3.32	3.19	2.56	2.12	2.0	2.1	4.27	14.0	17.6	7.71	5.98	3.98	5.75
1956	3.33	3.02	3.02	2.74	2.51	3.06	5.61	8.82	25.9	25.7	7.35	4.99	8.01
1957	3.94	3.53	3.50	3.00	3.50	3.50	6.72	14.1	68.6	49.5	32.6	9.05	16.8
1958	7.96	6.45	5.20	4.56	4.34	4.50	9.30	34.6	55.9	53.5	9.69	8.04	17.1
1959	6.13	5.06	3.89	3.19	3.16	3.37	5.59	5.63	5.43	4.44	3.38	2.66	4.33
1960	2.25	2.18	1.95	2.00	2.00	2.86	7.55	18.4	10.6	5.71	3.98	3.59	5.27

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	186	191	184	184	167	184	362	664	1,640	585	489	320	5,660
1952	281	197	188	190	160	177	806	3,240	5,230	2,830	1,580	568	15,450
1953	492	351	279	224	207	262	362	352	1,090	371	302	219	4,510
1954	221	225	213	164	150	205	481	486	1,650	430	302	247	4,770
1955	204	190	157	131	111	129	254	858	1,050	474	368	237	4,160
1956	204	180	185	168	145	188	334	542	1,540	1,580	452	297	5,820
1957	242	210	215	184	194	215	400	866	4,080	3,040	2,000	539	12,180
1958	484	384	320	268	241	277	553	2,130	3,330	3,290	596	478	12,350
1959	377	301	239	196	175	207	332	346	323	273	208	158	3,140
1960	138	130	120	123	115	177	449	1,130	633	351	245	213	3,820

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet			
		Discharge	Date								
1950	-	-	-	-	-	-	8.35	4,600			
1951	1214	38	June 7, 1951	0.2	7.13	5,660	7.27	5,260			
1952	1244	219	May 15, 1952	2.0	21.3	15,450	21.9	15,900			
1953	1284	28	June 4, 1953	1.7	6.23	4,510	5.59	4,050			
1954	1344	42	June 8, 1954	-	6.60	4,770	6.45	4,670			
1955	1394	33	May 27, 1955	.1	5.75	4,160	5.77	4,180			
1956	1444	57	July 7, 1956	.4	8.01	5,820	8.14	5,910			
1957	1514	147	June 10, 1957	.9	16.8	12,180	17.6	12,710			
1958	1564	133	May 31, 1958	-	17.1	12,350	16.7	12,080			
1959	1634	22	May 13, 1959	.8	4.33	3,140	3.60	2,610			
1960	1714	40	May 19, 1960	-	5.27	3,820	-	-			

2345. Beaver River near Beaver, Utah

Location.--Lat 38°16'40", long 112°33'30", in NW $\frac{1}{4}$ sec.20, T.29 S., R.6 W., on left bank a quarter of a mile downstream from Bakers Canyon and 4 $\frac{1}{2}$ miles east of Beaver.

Drainage area.--82 sq mi, approximately.

Records available.--June to September 1906, March 1914 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 6,500 ft (from topographic map). Prior to Mar. 30, 1914, staff gage and Mar. 30, 1914, to Oct. 15, 1937, water-stage recorder, at site 3,000 ft downstream at different datum. Oct. 16, 1937, to Mar. 20, 1959, at site 0.4 mile downstream at different datum.

Average discharge.--46 years (1914-60), 53.5 cfs (38,730 acre-ft per year).

Extremes.--1914-60: Maximum discharge, 1,080 cfs July 22, 1936 (gage height, 7.27 ft, site and datum then in use), from rating curve extended above 500 cfs; minimum daily recorded, 10 cfs for several days in 1915, 1931, 1934.

Remarks.--No diversion for irrigation above station. Water diverted for hydroelectric power, but returned to stream above station. Some regulation by powerplants and several small reservoirs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	15.9	17.5	16.5	14.5	14.9	18.4	34.9	93.4	88.7	33.7	26.8	20.1	33.0
1952	18.9	17.9	16.8	15	16.6	19.8	83.5	364	302	109	52.4	34.2	87.7
1953	26.2	22.7	21.7	23.2	21.7	24.3	33.8	54.4	83.1	31.2	25.3	16.6	32.0
1954	18.0	17.5	15.5	15.5	16.9	18.1	57.1	103	63.3	25.5	20.6	18.0	32.4
1955	16.5	15.9	15.0	14.5	14.5	16.9	31.0	89.4	76.8	32.5	24.2	17.2	30.4
1956	15.4	15.2	15.5	16.2	16.4	21.4	38.7	114	93.3	49.0	24.6	16.8	36.4
1957	16.4	16.0	15.3	15.1	16.0	17.6	37.0	115	385	120	54.3	27.7	69.5
1958	27.8	23.7	23.6	20.2	21.0	21.4	57.9	279	204	105	35.8	31.3	71.2
1959	24.7	23.2	19.3	18.9	18.8	20.7	34.1	42.2	30.0	16.9	16.1	13.5	23.2
1960	14.5	13.4	13.4	14.5	13.7	17.9	40.8	94.6	50.4	19.7	13.8	15.1	26.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	978	1,040	1,010	891	825	1,130	2,080	5,740	5,280	2,070	1,650	1,200	23,890
1952	1,160	1,070	1,030	922	952	1,220	4,970	22,410	17,970	6,680	3,220	2,040	63,640
1953	1,610	1,350	1,330	1,430	1,210	1,500	2,010	3,340	4,940	1,920	1,560	988	23,190
1954	1,100	1,040	956	950	940	1,110	3,400	6,300	3,760	1,570	1,270	1,070	23,470
1955	1,020	948	922	889	807	1,040	1,850	5,500	4,570	2,000	1,490	1,030	22,070
1956	944	902	956	996	944	1,320	2,300	7,000	5,550	3,010	1,510	1,000	26,430
1957	1,010	950	938	928	891	1,080	2,200	7,080	22,900	7,380	3,340	1,650	50,350
1958	1,710	1,410	1,450	1,240	1,170	1,310	3,440	17,150	12,130	6,450	2,200	1,860	51,520
1959	1,520	1,380	1,190	1,160	1,040	1,270	2,030	2,590	1,780	1,040	990	801	16,790
1960	895	799	821	893	789	1,100	2,430	5,820	3,000	1,210	847	900	19,500

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	31.8	23,010
1951	1214	220	May 27, 1951	11	33.0	23,890	33.3	24,130
1952	1244	624	May 15, 1952	-	87.7	63,640	89.1	64,670
1953	1264	149	July 11, 1953	15	32.0	23,190	30.4	21,990
1954	1344	173	May 9, 1954	-	32.4	23,470	32.1	23,260
1955	1394	151	May 12, 1955	13	30.4	22,070	30.3	21,980
1956	1444	179	May 24, 1956	12	36.4	26,430	36.5	26,530
1957	1514	732	June 6, 1957	14	69.5	50,350	70.8	52,020
1958	1564	606	May 27, 1958	14	71.2	51,520	70.5	51,040
1959	1634	99	May 14, 1959	12	23.2	16,790	21.0	15,220
1960	1714	188	May 12, 1960	11	26.9	19,500	-	-

2370. Beaver River at Adamsville, Utah

Location.--Lat 38°15'05", long 112°47'25", in SE $\frac{1}{4}$ 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 half a mile south of Adamsville.

Drainage area.--272 sq mi.

Records available.--December 1913 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 5,500 ft (from topographic map). Prior to Sept. 15, 1936, water-stage recorder and Sept. 15, 1936, to Oct. 15, 1937, staff gage, at site 225 ft upstream at different datum. Oct. 16, 1937, to May 28, 1946, water-stage recorder at site 75 ft downstream at datum 0.50 ft higher.

Average discharge.--46 years (1914-60), 37.3 cfs (27,000 acre-ft per year).

Extremes.--1913-60: Maximum discharge, 1,090 cfs July 23, 1941 (gage height, 4.68 ft, site and datum then in use), from rating curve extended above 500 cfs; no flow during summer months in many years.

Remarks.--No diversion between station and Rockyford Reservoir. Several ditches above station divert practically entire flow during irrigation season to supply Adamsville and Beaver districts.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.50	30.9	31.0	32.8	32.7	32.2	3.86	10.7	3.39	2.88	2.72	1.90	15.5
1952	7.45	38.8	41.4	42.5	44.4	55.3	116	282	225	37.3	34.8	22.4	79.9
1953	24.0	55.3	57.2	53.7	45.4	45.3	7.27	6.33	1.88	3.39	1.85	.81	25.1
1954	5.62	35.8	39.3	43.3	48.6	37.5	5.48	2.51	1.40	.03	0	.48	18.2
1955	5.06	27.5	35.6	34.2	39.5	37.9	6.01	1.49	4.06	.04	7.82	2.52	16.7
1956	3.87	30.7	33.5	35.4	30.9	32.0	3.49	1.35	.44	0	0	0	14.3
1957	0	32.9	31.7	33.1	43.9	32.3	12.1	24.4	325	28.5	16.0	14.9	49.1
1958	36.2	69.0	51.1	42.5	59.9	55.3	70.7	194	83.0	5.71	13.6	20.1	58.4
1959	23.9	52.2	44.6	40.2	50.3	43.1	5.81	.59	.07	0	.15	0	21.6
1960	.03	21.9	26.5	29.1	34.9	36.8	2.34	.76	.41	0	0	1.76	12.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	92	1,840	1,910	2,020	1,810	1,980	230	660	202	177	167	113	11,200
1952	458	2,300	2,540	2,610	2,550	3,400	6,920	17,330	13,410	2,290	2,140	1,330	57,280
1953	1,470	3,290	3,510	3,300	2,520	2,790	432	389	112	209	114	48	18,180
1954	346	2,130	2,410	2,660	2,700	2,300	326	155	84	2.0	0	28	13,140
1955	311	1,630	2,190	2,100	2,190	2,330	358	92	241	2.2	481	150	12,080
1956	238	1,830	2,060	2,180	1,790	1,970	208	83	26	0	0	0	10,380
1957	0	1,960	1,950	2,040	2,440	1,980	721	1,500	13,320	1,750	981	885	35,530
1958	2,230	4,100	3,140	2,620	3,330	3,400	4,210	11,900	4,940	351	834	1,190	42,240
1959	1,470	3,110	2,740	2,470	2,810	2,650	346	36	4.0	0	9.1	0	15,650
1960	1.8	1,300	1,630	1,790	2,010	2,270	139	47	24	0	0	105	9,320

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	18.3	13,260
1951	1214	78	July 22, 1951	0.3	15.5	11,200	17.5	12,660
1952	1244	605	June 4, 1952	1.7	78.9	57,280	83.0	60,250
1953	1284	411	July 15, 1953	.5	25.1	18,180	20.5	14,800
1954	1344	183	Jan. 25, 1954	0	18.2	13,140	17.1	12,390
1955	1394	251	Aug. 17, 1955	0	16.7	12,080	16.7	12,070
1956	1444	67	Jan. 23, 1956	0	14.3	10,380	14.0	10,180
1957	1514	699	June 8, 1957	0	49.1	35,530	56.8	41,090
1958	1564	480	May 28, 1958	4.0	58.4	42,240	55.4	40,100
1959	1634	120	Feb. 18, 1959	0	21.6	15,650	19.5	11,260
1960	1714	233	Sept. 6, 1960	0	12.8	9,320	-	-

2385. Rockyford Reservoir near Minersville, Utah

Location.--Lat 38°13'05", long 112°50'05", in NW¼ 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.--April to August 1915, November 1915 to September 1917, December 1917 to March 1921, June to September 1922, October 1937 to September 1960. Month-end contents only for some periods, published in WSP 1314.

Gage.--Staff gage.

Extremes.--1915-22, 1937-60: Maximum contents observed, 23,810 acre-ft Apr. 22, 25, 28, 30, May 1, 1945 (gage height, 51.5 ft); no contents at times in 1915, 1918-19, 1939, 1956.

Remarks.--Reservoir is formed by earth-fill dam completed in 1914. Capacity, 23,260 acre-ft between gage heights 0.0 (bottom of outlet tunnel) and 51.0 ft (spillway crest). Prior to fall of 1937 the spillway crest was at elevation 52.5 ft; capacity, 24,910 acre-ft. Dead storage negligible. Figures given herein represent total contents. Water is used for irrigation in vicinity of Minersville and Milford.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	a3,200	a4,400	a6,770	a8,530	10,200	11,550	a11,250	a9,500	6,940	a5,000	a3,200	2,490
1952	3,130	5,460	b7,600	b10,150	11,960	14,720	19,180	b21,280	b20,250	b15,290	11,820	9,930
1953	b10,780	b13,200	b15,500	18,040	19,740	b20,830	b19,620	b17,170	b12,240	b7,950	b4,250	b3,240
1954	b3,800	b5,860	b7,850	b9,850	b12,550	13,510	b11,910	b8,480	b6,040	b4,140	1,760	b1,630
1955	2,130	b3,780	b5,480	b7,040	8,690	10,810	b10,060	b6,870	b4,760	b3,090	b2,720	1,520
1956	b2,300	b3,770	5,540	b7,210	b8,250	b9,430	9,050	b6,070	b3,880	b1,260	b0	b0
1957	b0	b2,620	3,920	b5,620	7,380	8,360	b8,300	b9,080	b18,980	b14,580	b10,790	7,980
1958	b9,140	b12,440	b14,870	b16,610	b18,930	b21,000	b17,710	b17,070	b15,620	b9,140	5,210	b4,540
1959	b5,700	b8,250	b10,360	12,380	b14,330	b15,480	b14,380	b10,610	7,320	b4,310	b1,810	868
1960	b1,370	b2,660	4,290	b5,660	b7,240	8,690	b8,050	b6,210	b4,440	a3,110	a1,590	b1,620

a No gage-height record; contents estimated on basis of inflow-outflow studies.

b No gage-height record; contents interpolated.

2390. Beaver River at Rockyford Dam, near Minersville, Utah

Location.--Lat 38°14', long 112°50', in NW $\frac{1}{4}$ sec. 11, T.30 S., R.9 W., on right bank half a mile downstream from Rockyford Dam and $4\frac{1}{4}$ miles east of Minersville.

Drainage area.--512 sq mi.

Records available.--December 1913 to September 1936, April 1937 to September 1960.

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.--45 years (1914-36, 1937-60), 38.5 cfs (27,870 acre-ft per year).

Extremes.--1913-60: Maximum discharge, 727 cfs June 10, 1921 (gage height, 3.53 ft); minimum daily, 0.4 cfs Mar. 20, 1914.

Remarks.--One small diversion between dam and station. Flow regulated by Rockyford Reservoir (see preceding page). Numerous diversions above reservoir for irrigation and municipal use.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4.87	4.25	5.00	5.05	5.10	5.87	7.23	43.3	53.4	44.9	35.8	17.0	19.4
1952	4.46	4.31	4.55	5.30	6.08	8.25	15.3	241	238	122	107	67.0	68.8
1953	19.0	7.92	8.16	10.1	11.8	12.8	18.2	73.0	87.0	93.6	80.7	21.6	37.2
1954	5.19	5.16	5.23	5.54	6.54	8.10	12.3	72.1	58.3	43.5	42.2	8.02	22.8
1955	4.23	4.00	4.30	4.63	5.18	6.20	8.15	59.6	43.2	33.7	17.8	26.2	18.2
1956	4.04	3.60	3.57	4.48	5.00	5.79	7.13	53.4	118	32.5	21.3	4.59	21.9
1957	5.17	3.87	3.32	4.16	5.50	5.96	12.0	39.9	85.8	99.6	92.6	60.7	35.0
1958	22.9	6.98	7.46	9.32	11.3	14.5	131	190	123	131	92.8	44.0	65.7
1959	10.5	6.79	6.04	6.33	8.25	9.01	12.9	80.2	70.3	85.7	49.7	16.9	30.4
1960	3.74	4.03	4.14	4.40	4.62	4.88	7.92	32.1	29.8	23.7	25.9	5.35	12.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	300	253	307	310	283	361	430	2,660	3,180	2,760	2,200	1,010	14,050
1952	275	256	280	326	350	508	908	14,820	14,160	7,520	6,580	3,990	49,970
1953	1,170	471	502	621	653	785	1,080	4,490	5,170	5,760	4,960	1,280	26,940
1954	319	307	322	340	363	498	732	4,430	3,470	2,680	2,600	477	16,540
1955	260	238	264	285	286	381	485	3,670	2,570	2,075	1,100	1,560	13,170
1956	248	214	220	275	287	356	424	3,280	7,030	2,000	1,310	273	15,920
1957	318	230	204	256	305	368	711	2,430	5,100	6,120	5,690	3,610	25,340
1958	1,410	415	459	573	627	889	7,610	11,670	7,510	8,080	5,700	2,620	47,560
1959	648	404	371	389	458	554	765	4,930	4,180	5,270	3,050	1,010	22,030
1960	230	240	255	271	266	300	471	1,970	1,770	1,460	1,590	318	9,140

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	33.2
1951	1214	65	June 23, 1951	4.0	19.4	14,050	19.4
1952	1244	513	June 7, 1952	4.0	68.8	49,970	70.7
1953	1284	116	July 20, 1953	5.2	37.2	26,940	35.6
1954	1344	100	May 17, 1954	1.5	22.8	16,540	22.6
1955	1394	86	May 11-14, 1955	2.9	18.2	13,170	18.1
1956	1444	176	(a)	3.3	21.9	15,920	22.0
1957	1514	124	July 17, 18, 1957	3.3	35.0	25,340	37.1
1958	1564	212	May 29, 1958	6.3	65.7	47,560	64.5
1959	1634	152	July 2, 1959	4.4	30.4	22,030	29.5
1960	1714	33	May 9-18, 1960	2.5	12.6	9,140	-

a June 24, 25, 27, 1956.

2395. Minersville Canal at Minersville, Utah

Location--Lat 38°12'50", long 112°54'40", in NW $\frac{1}{4}$ 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 1955.

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, 1951-55: Maximum daily discharge, 63 cfs May 16, 23, June 1, 3, 1952; no flow for part of each year.

Remarks--Flow diverted from Beaver River for irrigation in vicinity of Minersville.

Correction--In WSP 1314, page 8, the period of record is listed in error; it should only be 1906 and 1914.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	25.6	25.3	-
1952	2.08	2.38	1.32	1.2	2.40	3.53	5.09	58.1	47.1	33.4	32.7	12.0	16.9
1953	2.15	2.06	1.92	1.86	1.90	.70	3.17	32.4	33.6	29.7	29.5	8.52	12.4
1954	1.63	1.60	1.56	1.70	2.12	1.83	4.06	33.5	28.5	25.4	29.9	7.12	11.7
1955	1.76	2.10	1.42	1.15	1.35	.63	2.03	32.5	28.0	25.6	16.0	21.5	11.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	1,570	1,560	1,560	727	-
1952	128	142	81	73	138	217	303	3,570	2,800	2,050	2,010	714	12,230
1953	132	123	118	114	105	43	188	2,000	2,000	1,830	1,820	507	8,980
1954	100	95	96	105	118	113	242	2,060	1,690	1,560	1,840	424	8,440
1955	108	125	87	71	75	39	121	2,000	1,660	1,570	982	1,280	8,120

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1951	1244	-	-	-	-	-	-	-	-
1952	1244	63	(a)	0	16.9	12,230	16.9	-	12,250
1953	1284	40	(b)	0	12.4	8,980	12.3	-	8,900
1954	1344	35	May 16, 22, 1954	0	11.7	8,440	11.7	-	8,470
1955	1394	34	(c)	0	11.2	8,120	-	-	-

a May 16, 23, June 1, 3, 1952.

b Apr. 29, May 4, 1953.

c On several days during irrigation season.

2400. Beaver River at Minersville, Utah

Location--Lat 38°13'10", long 112°55'35", in NE $\frac{1}{4}$ sec.12, T.30 S., R.10 W., on right bank at Minersville.

Drainage area--560 sq mi, approximately.

Records available--April 1909 to December 1913, June 1951 to September 1955.

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--8 years (1909-13, 1951-55), 24.0 cfs (17,380 acre-ft per year).

Extremes--1909-13, 1951-55: Maximum discharge observed, 1,200 cfs July 31, 1912 (gage height, 6.0 ft, site and datum then in use); no flow for part of each year 1909-13, 1954.

Remarks--Diversions above station for irrigation. Flow regulated by Rockyford Reservoir (see p. 171).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	15.7	10.4	5.30	-
1952	2.30	3.23	3.48	3.59	3.68	5.87	11.2	169	163	56.1	43.6	37.8	42.0
1953	7.81	4.96	5.81	8.64	10.4	12.5	8.17	21.3	33.8	37.4	35.4	9.66	16.4
1954	4.14	3.53	2.97	3.82	4.30	5.54	5.67	23.6	16.9	8.29	9.29	3.01	7.62
1955	2.66	2.62	2.82	3.65	4.46	6.30	5.98	16.4	11.9	4.05	4.82	2.97	5.73

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	965	637	316	-
1952	141	192	214	221	212	361	668	10,410	9,720	3,450	2,680	2,250	30,520
1953	480	295	357	531	578	767	486	1,310	2,010	2,300	2,170	575	11,860
1954	254	210	182	235	239	340	338	1,450	1,010	510	571	179	5,520
1955	164	156	174	224	248	387	356	1,010	705	249	296	177	4,150

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1951	1244	41	July 5, 1951	-	-	-	-	-	-
1952	1244	433	June 6, 1952	0.7	42.0	30,520	42.9	-	31,100
1953	1284	243	July 14, 1953	1.0	16.4	11,860	15.7	-	11,370
1954	1344	49	May 21, 1954	0	7.62	5,520	7.40	-	5,370
1955	1394	447	Aug. 23, 1955	.1	5.73	4,150	-	-	-

2410. Beaver River near Milford, Utah

Location.--Lat 38°28', long 113°01', in SW $\frac{1}{4}$ sec.17, T.27 S., R.10 W., on right bank 4 miles north of Milford.

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

Records available.--July 1951 to September 1955.

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

Extremes.--1951-55: Maximum discharge, 221 cfs June 11, 1952 (gage height, 2.84 ft); no flow at times in each year.

Remarks.--Most of flow is diverted for irrigation above station. Flow also affected by storage in Rockyford Reservoir.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	24.5	0	71.2	74.1	0	0	0	0
1952	0	.01	0.15	0.8	13.8	1.38	2.60	.68	0	1.60	1.57	1.26	15.9
1953	0	0	.29	.55	1.08	.94	.94	.68	0	0.25	0	0	.43
1954	0	0	0	.23	.39	.68	.20	.15	.003	0	0	0	.14
1955	0	0	0	0	0	1.89	.07	0	0	.02	.01	0	.17

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	1,510	155	4,380	4,410	0	0	0	0
1952	0	0	8.9	48	791	56	12	8.9	.2	14	0	0	11,570
1953	.6	1.4	18	34	60	85	56	42	.2	0	0	0	511
1954	0	0	0	14	22	42	12	0	0	0	0	0	99
1955	0	0	0	0	0	116	4.4	0	0	1.2	.4	0	122

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1951	1244	0	0	0	0	0	0	0	0
1952	1244	221	June 11, 1952	0	15.9	11,570	16.0	11,580	291
1953	1284	14	Mar. 30, 1953	0	.43	511	.40	99	99
1954	1344	3.8	Mar. 24, 1954	0	.14	99	.14	99	99
1955	1394	17	Mar. 2, 1955	0	.17	122	-	-	-

PAROWAN VALLEY

2414. Little Creek near Paragonah, Utah

Location.--Lat 37°54'30", long 112°43'00", near center of sec.25, T.33 S., R.8 W., on right bank half a mile downstream from Dixie National Forest boundary, 2 $\frac{1}{2}$ miles upstream from mouth of canyon, and 3 $\frac{1}{2}$ miles northeast of Paragonah.

Drainage area.--17 sq mi, approximately.

Records available.--July 1959 to September 1960.

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

Extremes.--1959-60: Maximum discharge not determined, occurred May 9, 1960 (gage height, 2.45 ft, from floodmarks); no flow Aug. 8, 11-12, 1960.

Remarks.--Station is above all diversions.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	0.48	0.40	0.43	0.61	0.69	1.31	1.20	1.27	0.87	0.29	0.30	0.17	0.66
1960	0.48	0.40	0.43	0.61	0.69	1.31	1.20	1.27	0.87	0.29	0.30	0.17	0.66

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	29	24	26	37	39	81	72	78	52	18	19	10	475
1960	29	24	26	37	39	81	72	78	52	18	19	10	475

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1959	1714	0	0	0	0	0	0	0	0
1960	1714	0	May 9, 1960	0	0.66	475	-	-	-

2418. Ashdown Creek near Cedar City, Utah

Location.--Lat 37°38'15", long 112°54'15", in SW $\frac{1}{4}$ sec.29, T.36 S., R.9 W., on right bank 1 mile upstream from East Fork Coal Creek and 8 miles southeast of Cedar City.

Drainage area.--13.1 sq mi.

Records available.--January 1957 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 7,540 ft (from topographic map).

Extremes.--1957-60: Maximum discharge, about 1,000 cfs Aug. 3, 1959 (gage height, 4.95 ft), on basis of slope-area measurement on Coal Creek near Cedar City; minimum recorded, 1.7 cfs Nov. 23, 1958.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	3.09	5.68	8.83	20.1	37.5	57.5	13.4	7.86	4.75	-
1958	7.18	6.11	5.21	4.90	7.89	5.78	25.2	71.9	42.2	10.3	6.62	7.46	16.8
1959	3.61	3.53	3.48	3.82	3.69	4.95	9.96	11.2	6.07	3.78	7.99	3.55	5.48
1960	3.38	4.21	3.71	4.5	4.17	13.8	28.9	23.1	8.79	4.45	3.71	4.21	8.91

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	190	315	543	1,200	2,310	3,420	827	483	282	-
1958	441	364	320	301	438	354	1,500	4,420	2,510	631	407	444	12,130
1959	222	210	214	235	205	304	592	690	361	232	492	211	3,970
1960	208	251	228	277	240	847	1,720	1,420	523	273	228	251	6,470

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1957	1564	a131	Aug. 23, 1957	-	-	-	-	-
1958	1564	228	Sept.12, 1958	3.4	16.8	12,130	16.1	11,650
1959	1714	b1,000	Aug. 3, 1959	2.2	5.48	3,970	5.54	4,010
1960	1714	116	Sept. 5, 1960	2.7	8.91	6,470	-	-

a During period January to September.

b About.

2420. Coal Creek near Cedar City, Utah

Location.--Lat 37°40'20", long 113°02'05", in NE $\frac{1}{4}$ sec.13, T.36 S., R.11 W., on right bank 300 ft downstream from powerplant, 1.3 miles east of Cedar City, and 4 miles downstream from South Creek.

Drainage area.--80.9 sq mi.

Records available.--May to September 1915 (gage heights and discharge measurements only), October 1915 to July 1916, September 1916 to July 1918, September 1918 to November 1919, May 1935 to September 1937, April 1938 to September 1960. Records May 1915 to November 1919 exclude flow of power canal but would be equivalent if flow of canal were added.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 6,000 ft (from topographic map). Prior to Mar. 30, 1939, staff gages and Mar. 30, 1939, to May 14, 1945, water-stage recorder, at several sites about 0.5 mile upstream at various datums. May 15, 1945, to Oct. 10, 1951, May 4 to July 2, 1952, water-stage recorder at site 2 miles upstream at different datum.

Average discharge.--24 years (1935-37, 1938-60), 30.7 cfs (22,230 acre-ft per year).

Extremes.--1915-19, 1935-60: Maximum discharge observed, 2,910 cfs July 9, 1936 (gage height, 6.4 ft, site and datum then in use), from rating curve extended by broad-crested weir formula; minimum, 0.3 cfs Nov. 5, 14, 17, 26, 1959, Feb. 17, 1960, result of powerplant regulation.

Remarks.--Diversion above station for municipal supply of Cedar City. No diversion above station for irrigation. Slight regulation of low flow by steam powerplant above gage.

Correction.--In WSP 1314, the mean for November 1916 is published in error; it should be 12.0 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7.77	8.02	7.45	6.41	7.67	9.10	20.9	41.8	16.0	9.24	9.06	6.75	12.5
1952	9.02	9.50	9.40	10.6	11.0	13.8	97.9	310	127	30.2	21.5	12.4	55.4
1953	10.8	10.8	11.5	12.2	12.4	16.1	28.9	38.0	26.3	20.8	12.2	8.57	17.3
1954	9.79	10.0	8.74	8.95	12.0	12.1	72.8	103	29.3	19.5	10.6	11.2	25.7
1955	8.35	9.02	7.88	8.65	9.58	14.6	24.4	73.2	18.6	17.9	23.7	7.92	18.8
1956	8.53	11.3	10.9	8.68	9.56	16.2	38.4	79.3	27.4	15.5	8.58	6.33	20.1
1957	7.59	6.01	5.92	6.73	10.1	11.6	32.4	112	140	25.9	14.6	9.82	32.0
1958	15.9	16.6	11.9	9.76	13.0	11.5	50.0	336	81.6	19.8	16.0	22.7	50.8
1959	10.3	9.10	8.65	7.84	8.10	13.0	31.4	26.5	15.1	7.61	29.3	6.70	14.5
1960	6.75	6.53	5.84	7.11	7.40	17.5	41.8	55.2	16.1	7.73	5.94	8.71	15.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	478	477	458	394	426	559	1,240	2,570	954	568	557	401	9,080
1952	555	565	578	651	631	848	5,820	19,070	7,550	1,850	1,320	740	40,180
1953	651	630	704	751	686	988	1,700	2,340	1,570	1,280	751	498	12,550
1954	602	598	538	551	665	745	4,330	6,320	1,740	1,200	652	666	18,610
1955	514	537	484	532	532	897	1,450	4,500	1,110	1,100	1,460	471	13,590
1956	524	672	669	534	550	999	2,280	4,880	1,630	956	528	377	14,600
1957	467	357	364	414	562	714	1,930	6,910	8,360	1,590	900	584	23,150
1958	975	987	732	600	721	709	2,980	20,660	4,850	1,210	984	1,350	36,760
1959	633	541	532	482	450	797	1,870	1,630	778	468	1,800	398	10,380
1960	415	389	359	437	425	1,080	2,490	3,270	960	475	365	518	11,180

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	21.3	15,450
1951	1214	112	May 6, 1951	4.0	12.5	9,080	12.9	9,370
1952	1244	456	May 20, 1952	3.7	55.4	40,180	55.8	40,460
1953	1284	1,750	July 14, 1953	7.8	17.3	12,550	17.0	12,300
1954	1344	1,000	July 19, 1954	4.3	25.7	18,610	25.4	18,400
1955	1394	1,570	Aug. 13, 1955	4.5	18.8	13,590	19.2	13,920
1956	1444	-	(a)	2.3	20.1	14,600	19.2	13,920
1957	1514	651	May 28, 1957	3.0	32.0	23,150	34.1	24,660
1958	1564	2,360	Sept. 12, 1958	6.5	50.8	36,760	49.4	35,770
1959	1714	1,210	Aug. 3, 1959	3.8	14.3	10,380	13.6	9,840
1960	1714	477	Sept. 6, 1960	2.5	15.4	11,180	-	-

a July 28 or 29, 1956.

9-4085. Santa Clara-Pinto diversion near Pinto, Utah

Location.--Lat 37°28'00", long 113°28'30", in SW¹ sec.19, T.38 S., R.14 W., on left bank 400 ft downstream from diversion tunnel outlet and 6 miles southeast of Pinto.

Records available.--October 1953 to September 1960 (monthly diversion only).

Gage.--Water-stage recorder and artificial rock-masonry control. Altitude of gage is 6,860 ft (by barometer).

Average discharge.--7 years (1953-60), 1.77 cfs (1,280 acre-ft per year).

Extremes.--1953-60: Maximum discharge, 72 cfs May 26, 1958 (gage height, 1.96 ft); no flow for most of each year.

Remarks.--This is a transmountain diversion from a tributary of Santa Clara River in Colorado River basin to Pinto Creek in Escalante Valley in The Great Basin.

Monthly and yearly diversion. in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	0	0	0	0	0	0.2	523	548	25	0	0	0	1,100
1955	0	0	0	0	0	0	114	334	73	0	30	0	551
1956	0	0	0	0	0	.2	47	91	3.2	0	0	0	141
1957	0	0	0	0	0	0	111	873	902	0	0	0	1,890
1958	0	0	0	0	3.4	17	532	2,850	747	0	0	0	4,150
1959	0	0	0	0	0	3.5	36	0	0	0	0	0	40
1960	0	0	0	0	0	94	500	489	46	0	0	0	1,130

2432.4. 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 4 $\frac{3}{4}$ miles southwest of Baker.

Drainage area.--16.4 sq mi.

Records available.--October 1947 to September 1955. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 6,800 ft (by barometer).

Average discharge.--8 years (1947-55), 8.53 cfs (6,170 acre-ft per year).

Extremes.--1947-55: Maximum discharge, 178 cfs June 7, 1952 (gage height, 2.72 ft); minimum recorded, 0.4 cfs Mar. 11, 1951.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.64	2.52	2.17	1.55	1.07	1.23	2.28	17.0	29.0	9.94	6.11	3.72	6.62
1952	3.37	2.86	1.95	1.92	1.57	1.87	9.44	65.1	90.5	39.2	12.0	5.25	19.6
1953	3.80	3.16	2.45	2.16	1.80	1.76	2.36	3.64	12.2	6.40	4.28	2.43	3.87
1954	2.75	3.23	1.69	1.50	1.90	2.27	9.65	40.6	18.8	8.24	3.66	3.37	8.18
1955	3.12	3.06	2.43	2.14	2.35	2.66	3.14	11.1	35.8	13.1	7.85	4.88	7.64

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	162	150	133	96	60	76	136	1,040	1,730	611	375	221	4,790
1952	207	170	120	118	90	115	562	4,000	5,390	2,410	737	312	14,230
1953	234	188	150	133	100	108	140	224	724	393	262	145	2,800
1954	169	192	104	92	106	140	574	2,500	1,120	506	225	201	5,930
1955	192	182	150	131	131	164	187	684	2,130	805	463	290	5,530

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet		
		Discharge	Date							
1950	-	-	-	-	-	-	5.57	4,040	-	-
1951	1214	84	May 28, 1951	0.5	6.62	4,790	6.69	4,840	-	-
1952	1244	178	June 7, 1952	.9	19.6	14,230	19.7	14,310	-	-
1953	1284	23	June 15, 1953	-	3.87	2,800	3.72	2,690	-	-
1954	1344	86	May 22, 1954	-	8.18	5,930	8.26	5,990	-	-
1955	1394	75	June 9, 1955	-	7.64	5,530	-	-	-	-

2432.6. Lehman Creek near Baker, Nev.

Location.--Lat 39°01', long 114°13', in sec.10, T.13 N., R.69 E., on left bank 4 $\frac{3}{4}$ miles west of Baker.

Drainage area.--11 sq mi, approximately.

Records available.--October 1947 to September 1955. Monthly discharge only for some periods, published in WSP 1314.

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.--8 years (1947-55), 4.94 cfs (3,570 acre-ft per year).

Extremes.--1947-55: Maximum discharge, 45 cfs June 2, 1952 (gage height, 1.49 ft); minimum recorded, 0.1 cfs Nov. 20, 1953.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.48	2.06	1.78	1.45	1.11	1.17	1.39	5.32	12.2	7.90	6.31	3.47	3.90
1952	2.20	1.65	1.33	1.22	1.25	1.69	5.20	20.9	32.5	21.5	12.9	6.10	9.06
1953	3.51	2.32	1.81	1.67	1.34	1.04	1.32	1.85	4.19	4.90	3.92	2.09	2.51
1954	1.58	1.43	1.29	.82	.89	1.19	3.14	14.1	12.3	10.1	4.53	2.97	4.55
1955	2.29	1.93	1.53	1.25	1.26	1.42	1.47	5.25	20.2	13.3	10.8	5.10	5.50

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	153	123	109	89	62	72	83	327	725	486	388	207	2,820
1952	135	98	82	75	72	104	310	1,280	1,930	1,320	794	363	6,560
1953	216	138	111	103	75	64	79	114	249	301	241	125	1,820
1954	97	85	79	50	49	73	187	864	734	623	278	177	3,300
1955	141	115	94	77	70	87	87	323	1,200	815	665	303	3,980

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet		
		Discharge	Date							
1950	-	-	-	-	-	-	3.66	2,650	-	-
1951	1214	16	(a)	-	3.90	2,820	3.80	2,750	-	-
1952	1244	45	June 2, 1952	1.0	9.06	6,560	9.26	6,710	-	-
1953	1284	6.8	June 25, 1953	-	2.51	1,820	2.23	1,610	-	-
1954	1344	21	May 22, 1954	-	4.55	3,300	4.68	3,380	-	-
1955	1394	27	June 13, 1955	-	5.50	3,980	-	-	-	-

a May 28 to June 1, 1951.

2437. Cleve Creek near Ely, Nev.

Location--Lat 39°12'50", long 114°32'20", in NW $\frac{1}{4}$ sec.34, T.16 N., R.66 E., on right bank 2 miles downstream from North Fork, 4 miles southwest of Cleveland Ranch headquarters, and 18 miles east of Ely.

Drainage area--31 sq mi, approximately.

Records available--June 1914 to December 1916 (published as Cleveland Creek near Osceola), October 1959 to September 1960.

Gage--Water-stage recorder. Altitude of gage is about 6,200 ft (from topographic map). June 1914 to December 1916 staff gage at site about 3 miles downstream at different datum.

Extremes--1914-16, 1959-60: Maximum discharge observed, 44 cfs June 3, 1914; minimum, 2.3 cfs Feb. 27, 1960.

Remarks--No diversion above station. Practically entire flow diverted for irrigation by Cleveland Ranch below station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	4.67	4.76	4.70	4.05	4.42	5.26	6.34	8.58	6.25	4.96	3.99	3.75	5.15

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	287	283	289	249	254	324	377	528	372	305	245	223	3,740

RUBY VALLEY

2447. Overland Creek near Ruby Valley, Nev.

Location--Lat 40°27'30", long 115°23'30", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.23, T.30 N., R.58 E., on left bank at mouth of canyon, 0.1 mile upstream from Humboldt National Forest boundary, 2 $\frac{1}{2}$ miles north of Ruby Valley Post Office, and 32 miles southeast of Elko.

Drainage area--9 sq mi, approximately.

Records available--April to November 1917, March to June 1918, September 1918 (fragmentary), August 1959 to September 1960.

Gage--Water-stage recorder. Altitude of gage is 6,450 ft (from topographic map). Prior to Aug. 23, 1959, at site about an eighth of a mile downstream at different datum.

Extremes--1917, 1959-60: Maximum discharge, 143 cfs June 17, 1917 (gage height, 2.77 ft, site and datum then in use); minimum, 0.5 cfs Sept. 10, 1959.

Remarks--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	-	-	-	-	-	-	-	-	-	-	-	1.15	-
1960	2.01	1.38	1.02	1.02	1.67	4.50	16.6	35.3	39.9	7.11	1.93	1.11	9.45

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	-	-	-	-	-	-	-	-	-	-	-	68	-
1960	124	82	63	63	96	277	985	2,170	2,370	437	119	66	6,850

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1959	1714	-	-	-	-	-	-	-
1960	1714	104	May 12, 1960	0.8	9.45	6,850	-	-

IVANPAH VALLEY

2523. China Spring Creek near Mountain Pass, Calif.

Location--Lat 35°28'05", long 115°30'30", in E $\frac{1}{2}$ sec.31, T.16 N., R.14 E., on upstream right bank of State highway culvert on U. S. Highways 466 and 91, 2.0 miles east of Mountain Pass.

Drainage area--0.94 sq mi.

Records available--January 1959 to September 1960.

Gage--Water-stage recorder. Datum of gage is 5.94 ft above mean sea level, datum of 1959.

Remarks--No flow since station first established Jan. 14, 1959. No regulation or diversion. Recording rain gage at station.

2540.05. Salton Sea near Westmoreland, Calif.

Location.--Lat 33°11'37" long 115°49'54", in NE¼SE¼SW¼ sec.21, T.11 S., R.11 E., at outer end of third mooring pier from western shore at Sandy Beach, 15.5 miles northwest of Westmoreland.

Drainage area.--8,360 sq mi, approximately.

Records available.--November 1904 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 250.00 ft below mean sea level, datum of 1929, adjustment of 1934; gage readings have been reduced to elevations below mean sea level. Prior to January 1925, staff gages at various sites along eastern shore, but all elevations have been converted to datum of 1901. January 1925 to Oct. 22, 1951, staff gages and reference marks at site on western shore 22 miles northwest originally set to 1901 datum; on Mar. 2, 1956, found at mean-sea-level datum 0.91 ft lower than 1929 datum, adjustment of 1934.

Extremes.--1904-60: Maximum elevation, 195.0 ft below mean sea level (former site and datum) during February and March 1907; minimum since 1906, 250.7 ft below mean sea level (former site and datum) during November 1924.

Remarks.--Bottom of sea is 273.5 ft below mean sea level (determined in 1904-5, datum of 1901). See WSP 300, 735, and 918 for condensed history of Salton Sea. Area and capacity table for November 1904 to Oct. 23, 1951, is given below and supersedes that published in WSP 1314. Table for Oct. 23, 1951, to Sept. 30, 1960, as computed from survey of 1956 above elevation 240 ft below mean sea level and based on former survey for portion below this elevation is also given below.

Area and capacity table, November 1905 to Oct. 22, 1951

Elevation, in feet, below mean sea level	Area, in acres	Capacity, in acre-feet
273.5	0	0
270	58,000	50,750
265	106,000	460,750
260	135,000	1,063,000
250	168,000	2,576,000
240	206,000	4,446,000
230	234,000	6,646,000
220	261,000	9,121,000
210	289,000	11,671,000
200	316,000	14,896,000
195	326,600	16,741,000

Area and capacity table, Oct. 23, 1951, to Sept. 30, 1960

Elevation, in feet, below mean sea level	Area, in acres	Capacity, in acre-feet
273.5	0	0
273	12,000	3,000
272	30,000	24,000
271	45,000	61,500
270	58,000	113,000
269	69,500	176,800
268	80,000	251,500
267	89,700	336,400
266	98,300	430,400
265	106,000	532,500
264	113,000	642,000
262	125,000	880,700
260	135,000	1,142,000
258	142,000	1,419,000
256	148,000	1,709,000
254	154,000	2,011,000
252	161,000	2,326,000
250	168,000	2,655,000
248	175,000	2,998,000
246	183,000	3,356,000
244	191,000	3,730,000
242	199,000	4,120,000
240	206,000	4,525,000
235	222,000	5,596,000
230	235,000	6,739,000

Elevation, in feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	a241.0	a240.8	a240.5	a240.2	a240.0	a239.7	a239.5	a239.7	a239.6	a239.8	a239.8	a239.8
1952	239.9	239.6	239.3	238.6	238.5	238.2	238.0	238.0	238.2	238.3	238.4	238.5
1953	238.3	238.2	237.8	237.4	237.3	237.0	236.9	237.0	237.0	237.0	237.3	237.3
1954	237.2	237.0	236.8	236.4	236.0	235.8	235.7	235.6	235.7	235.8	236.1	236.1
1955	236.1	235.9	235.8	235.5	235.3	235.1	235.1	235.2	235.4	235.4	235.5	235.7
1956	235.7	235.6	235.4	235.2	235.0	234.8	234.7	234.8	234.9	235.1	235.5	235.6
1957	235.7	235.6	235.5	235.2	234.9	234.8	234.7	234.9	235.0	235.3	235.6	235.7
1958	235.6	235.6	235.4	235.2	234.9	234.7	234.6	234.6	234.8	235.1	235.3	235.6
1959	235.6	235.6	235.4	235.2	235.0	234.8	234.7	234.8	235.0	235.1	235.4	235.7
1960	235.5	235.4	235.2	235.0	234.4	234.4	234.4	234.3	234.4	234.6	234.8	234.9

† Corrected.

a Adjusted for month-end readings at datum established Oct. 23, 1951. Prior to this date, elevations were obtained from staff gages 22 miles northwest of present gage on or about first day of each month at datum 0.91 ft higher and furnished by Imperial Irrigation District.

2547.3. Alamo River near Niland, Calif.

Location.--Lat 33°12'03", long 115°36'07", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.22, T.11 S., R.13 E., on left bank 0.6 mile upstream from mouth and 5.8 miles southwest of Niland.

Records available.--January 1943 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 235 ft below mean sea level (from topographic map).

Remarks.--Flow represents seepage and return flow from irrigated areas.

Cooperation.--Records, not previously published by Geological Survey, furnished by Imperial Irrigation District and reviewed by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	557	936	702	689	572	621	666	618	702	-
1944	851	792	446	630	703	667	740	711	743	713	616	635	687
1945	921	673	611	487	645	690	777	737	827	787	646	691	708
1946	853	778	692	768	818	875	881	868	843	753	646	728	792
1947	907	778	725	784	777	836	273	787	779	695	574	653	765
1948	1,074	867	627	721	785	849	743	783	682	675	698	708	768
1949	847	829	599	896	779	913	792	652	732	618	795	859	792
1950	1,094	927	849	953	906	877	831	810	678	782	703	854	855
1951	987	948	735	870	852	924	946	863	842	845	639	830	874
1952	1,060	960	806	822	975	942	1,011	918	922	908	953	1,070	945
1953	1,249	943	821	961	1,079	1,117	1,029	1,090	1,017	967	989	1,026	1,024
1954	1,278	1,055	940	956	956	1,094	1,075	1,073	1,025	940	973	1,014	1,032
1955	1,114	1,023	899	521	840	960	955	998	860	926	1,081	926	926
1956	1,049	991	737	792	813	891	1,066	880	841	1,053	1,018	999	928
1957	1,114	995	841	712	758	879	1,035	934	874	845	842	905	900
1958	1,056	732	689	652	761	859	1,062	945	856	872	837	878	838
1959	1,062	903	643	666	765	941	1,101	945	877	918	867	996	892
1960	1,174	818	707	535	668	1,030	1,183	987	958	1,025	1,001	1,078	947

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	34,260	51,960	43,180	41,010	35,180	36,970	42,200	37,970	41,750	-
1944	52,320	47,110	27,440	38,740	40,410	41,040	44,020	43,690	44,230	43,860	37,860	37,790	498,500
1945	56,600	40,050	37,570	29,940	35,810	42,410	46,250	45,330	49,210	48,400	39,690	41,120	512,400
1946	52,430	46,300	42,570	47,190	45,410	53,810	52,430	53,350	40,160	46,310	39,710	43,350	573,000
1947	55,780	46,270	44,640	48,220	43,130	51,420	53,720	48,580	46,360	42,760	35,270	38,850	554,800
1948	66,040	51,610	38,580	44,310	45,160	52,200	44,220	48,120	40,600	41,800	42,890	41,990	557,200
1949	52,110	49,320	36,840	55,070	43,280	56,170	47,110	40,110	43,530	50,200	46,850	51,090	573,700
1950	67,240	55,160	52,190	58,620	50,340	53,920	49,440	49,790	40,360	46,080	43,210	50,790	619,100
1951	60,700	56,410	45,190	53,520	47,320	56,840	56,290	53,050	50,130	51,950	51,600	49,400	632,400
1952	65,170	57,140	49,550	50,550	56,110	57,910	60,180	56,430	54,840	55,830	58,570	63,650	685,900
1953	76,780	56,120	50,470	59,070	59,910	68,700	61,230	67,040	60,540	59,450	60,810	61,050	741,200
1954	78,590	62,770	57,800	58,770	53,070	67,280	63,940	65,980	61,020	57,830	59,810	60,320	747,200
1955	68,510	60,850	55,280	32,030	46,670	59,040	56,820	61,390	51,190	56,940	66,480	55,080	670,300
1956	64,470	58,980	45,340	48,710	46,750	54,760	63,440	54,090	50,030	64,760	62,600	59,420	673,400
1957	68,490	59,220	51,740	43,780	42,090	54,020	65,030	57,410	52,010	51,980	51,790	53,740	651,300
1958	65,050	43,570	42,360	40,110	33,350	52,790	63,180	58,090	50,910	53,640	51,460	52,270	606,800
1959	65,300	53,740	39,540	40,930	42,490	57,880	65,540	58,080	52,200	56,460	54,540	53,240	645,900
1960	72,190	46,700	43,470	32,690	49,330	63,320	70,420	60,710	57,030	63,050	61,560	64,050	687,500

2555.5. New River near Westmoreland, Calif.

Location.--Lat 33°06'17", long 115°39'49", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.12 S., R.13 E., on right bank 3.5 miles upstream from mouth and 5.2 miles northwest of Westmoreland.

Records available.--January 1943 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 220 ft below mean sea level (from topographic map).

Remarks.--Flow represents seepage and return flow from irrigated areas.

Cooperation.--Records, not previously published by Geological Survey, furnished by Imperial Irrigation District and reviewed by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	716	626	700	673	590	628	640	689	690	-
1944	779	690	696	795	789	779	766	656	620	703	629	593	708
1945	695	665	649	641	715	653	733	673	681	646	698	541	666
1946	669	731	666	626	676	626	675	703	620	639	628	640	658
1947	704	705	649	671	639	683	634	607	601	503	536	515	621
1948	675	652	621	660	620	651	599	613	585	559	529	573	611
1949	686	652	568	767	697	656	616	621	591	550	552	550	625
1950	661	617	590	611	574	609	615	640	585	681	583	622	614
1951	742	742	646	650	693	745	805	597	667	643	577	620	677
1952	791	740	600	596	677	760	776	751	700	772	744	739	721
1953	837	656	651	614	732	728	786	853	763	790	712	764	741
1954	811	760	649	649	671	810	749	828	717	689	636	759	727
1955	690	507	462	424	515	560	592	576	494	524	578	581	542
1956	606	582	530	507	538	603	752	596	512	665	647	572	593
1957	627	556	525	517	520	578	640	598	556	505	522	577	560
1958	666	513	478	489	472	581	619	598	561	544	575	595	558
1959	680	519	476	514	538	617	679	615	564	532	598	681	585
1960	756	540	559	470	586	660	775	638	591	625	600	666	622

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	44,010	34,770	43,030	40,050	36,290	37,360	39,360	42,370	41,050	-
1944	47,880	41,080	42,780	48,910	45,390	47,870	45,690	40,320	36,900	43,220	38,670	35,290	514,000
1945	42,760	39,590	39,910	39,430	39,700	40,140	43,620	41,390	40,550	39,690	42,950	32,200	481,900
1946	41,150	43,500	40,930	38,510	37,560	38,470	40,170	43,210	36,870	39,280	38,480	38,110	476,200
1947	43,270	41,970	39,890	41,240	35,500	41,990	37,710	37,340	35,760	30,950	32,970	39,650	449,200
1948	41,490	38,770	38,200	40,600	35,660	40,020	35,650	37,680	34,840	34,400	32,510	34,090	443,900
1949	42,190	38,820	34,910	47,160	38,730	40,310	36,630	38,160	35,160	33,790	33,930	32,700	452,500
1950	40,650	36,710	36,300	37,570	31,890	37,430	36,580	39,380	34,810	40,650	35,860	36,990	444,800
1951	45,630	44,160	39,720	39,980	38,470	45,810	47,900	36,710	39,710	39,550	35,500	36,910	490,000
1952	48,630	44,030	36,890	36,630	38,970	46,720	46,200	46,160	41,680	47,480	45,720	44,000	523,100
1953	51,460	39,040	40,010	37,780	40,650	44,760	46,790	52,430	45,400	48,550	43,780	45,450	536,100
1954	49,860	45,200	39,900	39,910	37,290	49,790	44,550	50,890	42,650	42,380	39,090	45,150	526,700
1955	42,450	30,190	28,390	26,090	26,600	34,410	35,200	35,410	29,380	32,210	35,510	34,540	392,400
1956	37,260	34,640	32,580	31,180	30,940	37,090	44,740	36,630	30,490	40,880	39,750	34,030	430,200
1957	38,540	33,090	32,290	31,800	28,880	35,560	38,090	36,740	33,100	31,020	32,100	34,340	405,600
1958	40,940	30,540	29,400	30,040	26,210	35,720	36,850	36,800	33,390	33,430	35,340	35,430	404,100
1959	41,810	30,860	29,290	31,630	29,850	37,950	40,380	37,820	33,550	32,710	36,790	40,530	423,200
1960	46,470	32,150	34,390	28,890	33,730	40,580	46,100	39,250	35,180	38,460	36,900	39,610	451,700

2557. San Felipe Creek near Julian, Calif.

Location.--Lat 33°07'07", long 116°26'04", in NW 1/4 sec. 23, T.12 S., R.5 E., on left bank at bridge on State Highway 78, in Sentenac Canyon, 0.9 mile upstream from Grapevine Canyon and 10 miles northeast of Julian.

Records available.--August 1958 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 1,872.69 ft above mean sea level (datum of 1929).

Extremes.--1958-60: Maximum discharge, 7.1 cfs Feb. 16, 1959 (gage height, 1.68 ft), from rating curve extended above 2.0 cfs on basis of velocity-area study; no flow for many days in each year.

Remarks.--No regulation or diversion.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	-	-	-	0.003	0.007	-
1959	0.13	0.41	0.60	0.72	1.02	0.65	0.44	0.21	0.03	0	.03	0	0.35
1960	.12	.26	.55	.83	.91	.77	.43	.18	.03	0	0	0	.34

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	-	-	-	-	-	-	-	-	-	-	0.2	0.4	-
1959	8.1	24	37	44	57	40	26	13	1.8	0	1.8	0	253
1960	7.3	16	34	51	52	47	26	11	1.8	0	0	0	246

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1958	1564	-	-	-	-	-	-	-
1959	1634	7.1	Feb. 16, 1959	0	0.35	253	0.33	241
1960	1714	6.2	Dec. 24, 1959	0	.34	246	-	-

2558. Coyote Creek near Borrego Springs, Calif.

Location.--Lat 33°22'30", long 116°25'25", in SE $\frac{1}{4}$ sec.23, T.9 S., R.5 E., on right bank 500 ft upstream from Box Canyon and 9 miles northwest of Borrego Springs.

Drainage area.--144 sq mi.

Records available.--October 1950 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 1,250 ft (from topographic map).

Average discharge.--10 years (1950-60), 2.47 cfs (1,790 acre-ft per year).

Extremes.--1950-60: 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 measurement of peak flow; minimum daily, 1.1 cfs Aug. 19, 20, 1959.

Remarks.--No regulation or diversion.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	*2.5	*3.0	3.26	3.28	3.81	3.53	2.93	2.42	2.33	9.09	2.10	2.33	*3.39
1952	2.0	2.46	3.59	7.87	2.2	4.05	3.20	2.26	2.21	2.20	2.24	4.03	3.20
1953	2.58	2.99	2.62	2.78	2.97	2.44	2.47	2.29	2.09	1.78	1.73	1.76	2.37
1954	2.04	2.41	2.61	2.71	2.81	3.04	2.32	1.84	1.68	1.86	4.75	2.60	2.58
1955	1.92	2.19	2.36	2.75	2.38	2.46	2.24	1.87	1.71	3.21	2.9	1.99	2.33
1956	2.01	2.47	2.61	2.65	2.65	2.87	2.34	1.80	1.71	1.95	1.51	1.51	2.17
1957	1.77	2.06	2.26	2.73	2.42	2.16	1.93	1.79	1.48	1.54	1.95	1.76	1.99
1958	1.82	1.86	2.01	2.22	2.26	2.80	7.98	1.24	1.20	1.57	3.69	1.76	2.51
1959	1.99	2.15	2.29	2.45	2.45	2.27	1.99	1.74	1.62	2.69	2.09	1.70	2.12
1960	1.73	2.08	2.13	2.12	2.21	2.27	1.87	1.76	-1.58	1.28	2.45	2.82	2.04

* Not previously published; estimated on basis of 1 discharge measurement and weather records.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	*154	*179	200	202	212	217	174	149	138	559	129	138	*2,450
1952	123	146	221	484	129	249	190	139	131	135	138	240	2,320
1953	158	178	161	171	185	150	147	141	124	109	106	105	1,720
1954	125	144	161	167	156	187	138	113	100	114	292	155	1,850
1955	118	130	145	169	132	152	133	115	102	198	177	118	1,690
1956	124	147	160	163	152	177	139	111	102	120	93	90	1,580
1957	109	123	139	168	135	133	115	110	88	95	120	105	1,440
1958	112	111	124	136	126	160	475	76	71	97	227	105	1,820
1959	123	128	141	150	136	139	118	107	96	166	128	101	1,530
1960	106	124	131	131	127	139	111	108	94	79	151	168	1,470

* Not previously published; estimated on basis of 1 discharge measurement and weather records.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	-
1951	1214	3,800	July 28, 1951	-	*3.39	*2,450	3.33	2,410
1952	1244	312	Jan. 18, 1952	1.7	3.20	2,320	3.21	2,330
1953	1284	14	Nov. 8, 1952	1.4	2.37	1,720	2.27	1,650
1954	1344	2,020	Aug. 31, 1954	1.6	2.56	1,850	2.51	1,820
1955	1394	577	July 19, 1955	1.5	2.33	1,690	2.38	1,730
1956	1444	a100	July 25, 1956	-	2.17	1,580	2.09	1,520
1957	1514	44	Aug. 17, 1957	1.3	1.99	1,440	1.95	1,420
1958	1564	a500	Aug. 13, 1958	-	2.51	1,820	2.58	1,860
1959	1634	460	July 1, 1959	1.1	2.12	1,530	2.08	1,500
1960	1714	845	Aug. 31, 1960	1.2	2.04	1,470	-	-

* Not previously published.

2558.1. Palm Canyon Creek near Borrego Springs, Calif.

Location.--Lat 33°16'40", long 116°25'50", in NW $\frac{1}{4}$ 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.--October 1950 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 1,200 ft (from topographic map).

Average discharge.--10 years (1950-60), 0.49 cfs (355 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.--1950-60: Maximum discharge, about 2,000 cfs Aug. 23, 1955 (gage height, 9.9 ft, from floodmarks), on basis of velocity-area study; no flow for several months in each year.

Remarks.--No regulation or diversion.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	#0	#0	0.15	0.62	0.60	0.82	0.52	0.31	0.01	0.12	0	0	#0.26
1952	0	.04	1.49	3.36	1.36	6.60	2.69	.65	.03	0	0	0	1.36
1953	0	.04	1.42	1.28	.78	1.02	.54	.27	.06	0	0	0	.45
1954	0	0	.01	.83	.86	2.06	.89	.16	0	0	0	0	.40
1955	0	.04	.19	.95	.73	.62	.27	.18	.02	0	†1.90	.26	.43
1956	.20	.35	.43	.78	1.42	.69	.49	.09	.01	0	0	0	.37
1957	0	.08	.21	.69	.66	.54	.22	.20	0	0	0	0	.21
1958	0	.003	.24	.29	1.04	3.94	6.00	.52	.01	.003	0	0	1.00
1959	0	0	.16	.31	1.02	.47	.13	.02	0	.07	0	0	.18
1960	0	0	.34	.64	1.18	.57	.06	.02	0	0	0	0	.23

† Corrected.

* Not previously published; estimated on basis of weather records.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	#0	#0	9.5	38	34	50	31	19	0.4	7.3	0	0	#189
1952	0	2.2	91	206	78	406	160	40	1.6	0	0	0	985
1953	0	2.6	87	79	43	63	32	17	3.6	0	0	0	327
1954	0	0	.4	51	48	127	53	9.7	0	0	0	0	289
1955	0	2.6	12	58	40	38	16	11	1.0	0	117	16	312
1956	12	21	27	48	82	42	29	5.6	.6	0	0	0	267
1957	0	5.0	13	42	37	33	13	12	0	0	0	0	155
1958	0	.2	15	18	58	242	357	32	.8	.2	0	0	723
1959	0	0	10	19	57	29	7.5	1.0	0	4.2	0	0	128
1960	0	0	21	39	68	35	3.6	1.4	0	0	0	0	168

* Not previously published; estimated on basis of weather records.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	-
1951	1214	45	July 28, 1951	0	#0.26	#189	0.38	273
1952	1244	50	Jan. 18, 1952	0	1.36	985	1.35	981
1953	1284	14	Dec. 17, 1952	0	.45	327	.33	238
1954	1344	15	Mar. 22, 1954	0	.40	289	.42	303
1955	1394	a2,000	Aug. 23, 1955	0	.43	312	.49	357
1956	1444	8.0	Feb. 1, 1956	0	.37	267	.31	225
1957	1514	3.4	Jan. 7, 1957	0	.21	155	.21	152
1958	1564	123	Apr. 3, 1958	0	1.00	723	.99	718
1959	1634	93	July 23, 1959	0	.18	128	.19	139
1960	1714	5.1	Feb. 10, 1960	0	.23	168	-	-

* Not previously published.

a Not previously published; estimated as about 2,000 cfs on basis of measured area and estimated velocity.

2560. Whitewater River at White Water, Calif.

Location.--Lat 33°56'48", long 116°38'24", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.2, T.3 S., R.3 E., on right bank 1.5 miles north of White Water and $3\frac{1}{2}$ miles upstream from San Geronio River.

Drainage area.--57.4 sq mi.

Records available.--October 1948 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 1,610.98 ft above mean sea level, adjustment of 1934. Prior to Apr. 13, 1960, supplementary water-stage recorder and sharp-crested weir on diversion channel 400 ft west and 500 ft downstream from base gage. From Feb. 24, 1950, to Sept. 30, 1952, supplementary gage used as base gage. Since Apr. 13, 1960, supplementary gage 150 ft upstream at datum 5.0 ft higher.

Average discharge.--12 years (1948-60), 11.0 cfs (7,960 acre-ft per year); average combined discharge of river and infiltration line, 11 years (1949-60), 12.7 cfs (9,190 acre-ft per year); median of combined yearly mean discharges, 10 cfs (7,200 acre-ft per year).

Extremes.--1948-60: Maximum discharge, about 1,500 cfs Apr. 3, 1958 (gage height, 8.35 ft), from rating curve extended above 680 cfs by logarithmic plotting; no flow Jan. 9, 11, 1957.

Maximum discharge known, 42,000 cfs Mar. 2, 1938, from slope-area measurement of peak flow, at site 2.5 miles upstream (drainage area, 51.4 sq mi).

Remarks.--Monthly runoff adjusted for flow from infiltration line, rising water, open sump and well that bypasses station are given in third table below. Water is diverted out of basin about 15 miles upstream to powerplants in San Geronio River basin and thence to an area north of Banning for irrigation. One small diversion for domestic use and one for irrigation are made 2 to 3 miles upstream.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.56	6.32	6.75	7.43	5.31	5.48	5.82	5.30	4.54	4.54	4.63	4.84	5.63
1952	5.81	4.80	8.44	9.47	7.04	6.59	26.5	18.5	11.0	11.8	12.9	17.6	11.5
1953	12.9	17.0	18.1	16.4	12.8	14.8	12.7	10.7	9.72	8.75	8.63	7.72	12.5
1954	7.78	6.57	5.51	11.7	7.61	10.2	9.28	11.8	16.4	20.5	17.3	14.8	11.7
1955	13.6	16.2	12.1	15.6	14.5	13.4	10.6	9.69	8.46	7.42	8.17	8.91	11.5
1956	9.38	7.90	8.27	11.9	8.54	5.47	4.92	4.75	4.39	4.10	4.18	5.87	6.64
1957	6.16	5.60	5.35	14.7	6.74	4.42	6.38	5.55	5.51	6.23	6.40	6.38	6.61
1958	4.74	6.19	11.0	7.99	10.6	18.8	87.7	52.9	37.7	34.6	38.9	34.8	28.8
1959	26.0	26.9	22.4	21.9	28.6	7.60	8.88	7.50	10.2	8.53	9.37	9.58	15.5
1960	5.70	6.84	11.3	8.27	9.74	7.50	8.84	6.53	6.12	7.40	6.48	7.15	7.65

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	404	376	415	457	295	337	347	326	270	279	285	288	4,080
1952	357	286	519	582	241	405	1,580	1,140	652	728	792	1,050	8,330
1953	795	1,010	1,110	1,010	710	910	756	659	579	538	531	460	9,070
1954	479	391	339	720	423	630	552	726	978	1,260	1,060	883	8,440
1955	835	962	743	959	803	823	633	596	503	456	502	530	8,340
1956	577	470	508	734	491	337	293	292	261	252	257	349	4,820
1957	379	333	329	907	374	272	380	341	316	383	394	380	4,790
1958	291	369	678	491	586	1,160	5,220	3,250	2,240	2,130	2,390	2,070	20,870
1959	1,600	1,600	1,370	1,350	1,590	467	529	461	605	524	576	558	11,230
1960	350	407	696	509	560	461	526	401	364	455	399	425	5,550

Adjusted monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	481	466	517	562	375	439	399	371	285	295	297	298	4,790
1952	370	325	583	704	356	528	1,700	1,260	771	851	915	1,170	9,530
1953	918	1,130	1,230	1,130	821	1,030	875	782	698	616	563	488	10,280
1954	498	458	462	943	531	753	671	842	1,090	1,370	1,180	1,000	9,700
1955	958	1,080	866	1,080	914	946	752	715	584	487	575	607	9,560
1956	607	529	617	831	532	363	323	312	281	275	276	369	5,320
1957	395	348	345	955	404	328	400	350	323	390	401	388	5,030
1958	307	369	702	544	681	1,260	5,270	3,350	2,350	2,220	2,460	2,150	21,640
1959	1,680	1,680	1,450	1,430	1,650	532	605	527	674	598	630	610	12,070
1960	533	517	826	639	704	621	670	588	554	638	605	595	7,490

Yearly discharge, in cubic feet per second, of Whitewater River at White Water, Calif.

Year	WSP	Water year ending Sept. 30						Calendar year					
		Observed			Adjusted			Observed			Adjusted		
		Momentary maximum	Minimum	Mean	Runoff	Mean	Runoff	Mean	Runoff	Mean	Runoff	Mean	Runoff
		Discharge	Date	day	in acre-feet	in acre-feet	in acre-feet	in acre-feet	in acre-feet	in acre-feet	in acre-feet	in acre-feet	in acre-feet
1950	-	-	-	-	-	-	-	6.63	4,800	8.12	5,880	-	-
1951	1214	102	Jan. 23, 1951	2.4	5.63	4,080	6.62	4,790	5.59	4,050	6.35	4,600	-
1952	1244	265	Dec. 5, 1951	1.1	11.5	8,330	13.1	9,530	13.9	10,080	15.9	11,530	-
1953	1284	98	Apr. 28, 1953	4.0	12.5	9,070	14.2	10,280	10.2	7,360	11.6	8,420	-
1954	1344	686	June 25, 1954	2.2	11.7	8,440	13.4	9,700	13.5	9,770	15.4	11,180	-
1955	1394	157	Nov. 11, 1954	5.6	11.5	8,340	13.2	9,560	10.2	7,360	11.6	8,410	-
1956	1444	578	Jan. 27, 1956	1.0	6.64	4,820	7.33	5,320	5.94	4,310	6.41	4,650	-
1957	1514	750	Jan. 13, 1957	0	6.61	4,790	6.95	5,030	7.02	4,580	7.36	5,330	-
1958	1564	1,500	Apr. 3, 1958	.9	28.8	20,870	29.9	21,640	33.3	24,110	34.6	25,060	-
1959	1634	1,300	Feb. 16, 1959	5	15.5	11,230	16.7	12,070	10.7	7,750	12.6	9,130	-
1960	1714	140	Feb. 2, 1960	2.8	7.65	5,550	10.3	7,490	-	-	-	-	-

† Corrected.

a About.

2565. Snow Creek near White Water, Calif.

Location.--Lat 33°52'10", long 116°40'50", in NW¼ sec.33, T.3 S., R.3 E., on left bank 50 ft upstream from Southern Pacific Railroad diversion dam, 500 ft downstream from unnamed tributary, 2.8 miles upstream from mouth, and 4.5 miles southwest of White Water.

Drainage area.--11.0 sq mi.

Records available.--July to December 1921, May 1922 to February 1927, December 1927 to September 1931, October 1959 to September 1960. Yearly discharge only for 1930, published in WSP 1314.

Gage.--Water-stage recorder and bubble gage. Altitude of gage is 2,100 ft (from topographic map). Prior to Dec. 16, 1927, water-stage recorders at sites 50 and 150 ft downstream at different datums. Dec. 16, 1927, to Sept. 30, 1931, water-stage recorder at site 500 ft upstream at different datum.

Average discharge.--8 years (1922-26, 1928-31, 1959-60), 7.19 cfs (5,210 acre-ft per year).

Extremes.--1921-31, 1959-60: Maximum discharge not determined; minimum daily, 2.2 cfs Aug. 1-8, 1960.

Remarks.--No regulation or diversion.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	2.87	3.25	4.34	4.30	6.80	5.69	5.43	5.50	3.58	2.68	2.35	2.49	4.10

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1960	177	194	267	265	391	350	323	338	213	165	145	148	2,990

2580. Tahquitz Creek near Palm Springs, Calif.

Location.--Lat 33°48'18", long 116°33'30", in NE1/4SW1/4 sec.22, T.4 S., R.4 E., on left bank 2.2 miles southwest of Palm Springs and 7 miles upstream from mouth.

Drainage area.--16.7 sq mi.

Records available.--October 1947 to September 1960.

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.--13 years (1947-60), 2.82 cfs (2,040 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

Extremes.--1947-60: Maximum discharge, 1,570 cfs Aug. 31, 1954 (gage height, 8.45 ft in gage well, 10.0 ft outside, from floodmarks), from rating curve extended above 60 cfs on basis of slope-area measurement of peak flow; no flow for parts of each year.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0.05	0.25	0.31	0.39	0.19	0.52	0.04	0.20	0	0	0.16
1952	0	0	3.09	4.49	2.57	4.40	18.6	48.1	21.4	4.68	1.44	.91	9.02
1953	.41	.90	1.87	3.41	2.60	3.36	6.96	6.58	2.35	1.28	0	0	2.39
1954	0	0	.04	1.11	1.89	4.85	16.1	17.9	5.40	1.46	1.17	1.20	4.26
1955	.10	.42	.66	1.41	2.68	3.56	5.89	6.30	2.30	1.17	.95	.01	2.12
1956	0	.07	.45	1.77	1.62	1.69	2.08	1.19	.04	0	0	0	.74
1957	0	0	0	3.41	3.92	3.61	2.34	3.45	1.78	.15	0	0	1.54
1958	0	.02	1.31	.94	4.12	11.7	29.3	55.3	24.3	6.43	2.89	.91	11.3
1959	.54	.84	.69	.87	4.93	3.57	1.88	.43	.03	0	0	0	1.12
1960	0	0	.17	.42	.91	2.17	2.51	1.50	.19	0	0	0	.65

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	3.0	16	17	24	12	32	2.4	12	0	0	118
1952	0	0	190	276	148	271	1,000	2,960	1,280	288	89	54	6,560
1953	25	54	115	210	145	207	414	405	140	17	0	0	1,730
1954	0	0	2.2	68	105	299	958	1,100	321	90	72	71	3,090
1955	6.1	25	40	87	149	219	350	387	137	72	58	.8	1,530
1956	0	4.2	28	109	93	104	124	73	2.6	0	0	0	538
1957	0	0	0	210	218	222	139	212	106	8.9	0	0	1,120
1958	0	1.2	81	58	229	718	1,750	3,280	1,440	395	178	54	8,180
1959	33	50	42	54	274	219	112	26	1.6	0	0	0	812
1960	0	0	10	26	53	134	149	92	11	0	0	0	475

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	0.931	675
1951	1214, 1244	164	July 28, 1951	0	0.16	118	.42	1305
1952	1244	135	Dec. 30, 1951	0	9.02	6,560	9.03	6,560
1953	1284	36	Apr. 28, 1953	0	2.39	1,730	2.13	1,540
1954	1344	1,570	Aug. 31, 1954	0	4.26	3,090	4.36	3,160
1955	1394	248	July 19, 1955	0	2.12	1,530	2.06	1,490
1956	1444	37	Jan. 27, 1956	0	.74	538	.70	506
1957	1514	138	Jan. 13, 1957	0	1.54	1,120	1.65	1,200
1958	1564	99	Mar. 16, 1958	0	11.3	8,180	11.4	8,230
1959	1634	107	Feb. 16, 1959	0	1.12	812	.96	697
1960	1714	5.4	Apr. 27, 1960	0	.65	475	-	-

† Corrected.

2585. Palm Canyon Creek near Palm Springs, Calif.

Location.--Lat 33°44'55", long 116°32'15", in S $\frac{1}{2}$ sec.11, T.5 S., R.4 E., on right bank three-quarters of a mile upstream from Murray Canyon Creek and 6 miles south of Palm Springs.

Drainage area.--94.0 sq mi.

Records available.--January 1930 to January 1942, October 1947 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 700 ft (from topographic map). Prior to Jan. 14, 1942, at datum 0.2 ft higher.

Average discharge.--24 years (1930-41, 1947-60), 4.54 cfs (3,290 acre-ft per year); median of yearly mean discharges, 0.9 cfs (650 acre-ft per year).

Extremes.--1930-42, 1947-60: 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 for several months in most years.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0.01	0.003	0	2.13	0	0	0.18
1952	0	0	13.4	31.7	3.62	37.5	14.6	2.80	0.31	0.67	0.04	0.03	8.81
1953	0	.61	4.76	3.54	.64	1.09	.05	0	0	0	0	0	.90
1954	0	0	0	.17	2.08	11.8	2.93	.02	0	0	0	0	1.42
1955	0	0	0	.94	.98	.55	0	0	0	.62	.99	0	.34
1956	0	0	0	0	0	0	0	0	0	.003	0	0	.0003
1957	0	0	0	.03	.10	.03	0	0	0	0	0	0	.01
1958	0	0	0	0	10.7	24.2	80.8	4.59	.33	.11	1.29	.11	10.1
1959	.10	0	0	.03	2.78	.13	0	0	0	0	0	0	.24
1960	0	0	0	0	.96	.77	.007	0	0	0	0	.25	.16

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0.6	0.2	0	131	0	0	132
1952	0	0	825	1,950	208	2,300	871	172	18	41	2.4	2.0	6,390
1953	0	36	293	218	35	67	2.8	0	0	0	0	0	652
1954	0	0	0	10	115	728	175	1.2	0	0	0	0	1,030
1955	0	0	0	58	54	34	0	0	0	38	61	0	245
1956	0	0	0	0	0	0	0	0	0	.2	0	0	.2
1957	0	0	0	1.8	5.6	1.8	0	0	0	0	0	0	9.2
1958	0	0	0	0	593	1,490	4,810	282	20	6.7	79	6.7	7,290
1959	6.3	0	0	1.6	154	7.9	0	0	0	0	0	0	170
1960	0	0	0	0	55	47	.4	0	0	0	0	15	117

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	0.236	170	
1951	1214	850	July 28, 1951	0	0.18	152	1.32	957	
1952	1244	1,010	Jan. 18, 1952	0	8.81	6,390	8.12	5,890	
1953	1284	272	Dec. 17, 1952	0	.90	652	.45	323	
1954	1344	358	Mar. 22, 1954	0	1.42	1,030	1.42	1,030	
1955	1394	263	July 18, 1955	0	.34	245	.34	245	
1956	1444	.4	July 26, 1956	0	.0003	.2	.0003	.2	
1957	1514	4.2	Jan. 13, 1957	0	.01	9.2	.01	9.2	
1958	1564	1,130	Apr. 3, 1958	0	10.1	7,290	10.1	7,290	
1959	1634	82	Feb. 16, 1959	0	.24	170	.23	164	
1960	1714	76	Sept. 10, 1960	0	.16	117	-	-	

2590. Andreas Creek near Palm Springs, Calif.

Location.--Lat 33°45'36", long 116°32'57", in NW1/4SE1/4 sec.3, T.5 S., R.4 E., on left bank at Bureau of Indian Affairs diversion dam, 1.1 miles above mouth and 5.1 miles south of Palm Springs.

Drainage area.--8.78 sq mi.

Records available.--October 1948 to September 1960.

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.--12 years (1948-60), 2.02 cfs (1,460 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,000 acre-ft per year).

Extremes.--1948-60: Maximum discharge, 1,960 cfs Aug. 31, 1954 (gage height, 7.11 ft), from rating curve extended above 80 cfs on basis of slope-area measurement of peak flow; minimum daily, 0.3 cfs for many days in 1950-51, 1960.

Remarks.--One small diversion for domestic use about 1 mile above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.78	1.15	1.15	1.40	1.63	1.94	1.59	1.24	1.09	0.51	0.54	0.49	1.12
1952	.62	1.08	4.99	6.88	4.34	6.88	7.69	4.98	2.47	1.69	1.67	1.72	3.75
1953	1.82	2.32	3.29	3.41	2.72	3.19	2.78	2.23	1.46	1.17	.78	1.53	2.14
1954	.82	1.15	1.34	2.88	3.94	6.41	8.00	2.75	1.80	1.32	3.23	2.50	2.83
1955	1.50	1.76	1.94	2.77	3.38	2.55	2.20	1.68	.96	1.27	1.60	.85	1.86
1956	.85	1.40	1.72	3.31	1.96	1.55	1.47	1.01	.69	.66	.43	.54	1.30
1957	.74	1.03	1.12	3.77	2.56	2.11	1.23	1.25	.86	.69	.66	.58	1.38
1958	1.23	1.54	2.39	2.05	4.81	8.99	13.5	6.99	3.11	1.96	1.78	1.42	4.13
1959	1.39	1.75	1.82	1.97	3.72	1.88	1.70	.90	.70	.45	.54	.61	1.44
1960	.91	1.17	1.60	1.83	2.85	2.32	1.81	1.40	.58	.52	.39	.49	1.32

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	48	68	71	86	91	119	95	76	65	32	33	29	813
1952	56	84	307	423	250	423	458	305	147	104	103	102	2,720
1953	112	138	201	209	151	196	166	137	87	72	48	32	1,550
1954	50	68	82	177	219	394	357	169	107	81	198	149	2,050
1955	92	105	119	171	188	157	131	102	57	78	98	51	1,350
1956	53	84	106	204	113	95	88	62	41	41	27	32	946
1957	45	61	69	232	142	130	73	77	51	42	41	34	997
1958	76	91	147	126	267	553	801	430	185	120	109	84	2,990
1959	85	104	112	121	206	116	101	56	42	28	33	36	1,040
1960	56	70	98	113	164	143	108	86	35	32	24	29	958

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	1.33	961
1951	1214	50	July 28, 1951	0.3	1.12	813	1.43	1,040
1952	1244	96	Dec. 30, 1951	.4	3.75	2,720	3.81	2,770
1953	1284	31	Dec. 17, 1952	.4	2.14	1,550	1.79	1,300
1954	1344	1,960	Aug. 31, 1954	.6	2.83	2,050	2.99	2,170
1955	1394	130	Aug. 23, 1955	.6	1.86	1,350	1.76	1,280
1956	1444	53	Jan. 27, 1956	.4	1.30	946	1.21	878
1957	1514	64	Jan. 13, 1957	.4	1.38	997	1.57	1,140
1958	1564	75	Mar. 16, 1958	.7	4.13	2,990	4.11	2,980
1959	1634	57	Feb. 16, 1959	.4	1.44	1,040	1.33	963
1960	1714	48	July 22, 1960	.3	1.32	958	-	-

2596. Cottonwood Wash near Cottonwood Spring, Calif.

Location.--Lat 33°44'40", long 115°49'35", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.5 S., R.11 E., on left bank on Cottonwood Spring road, 1 mile northwest of Cottonwood Spring.

Drainage area.--0.71 sq mi.

Records available.--October 1959 to September 1960.

Gage.--Water-stage recorder and standard U. S. Weather Bureau 8-inch rain gage with 0.1-inch tipping-bucket attachment. Altitude of gage is 3,100 ft (from topographic map).

Extremes.--1959-60: Maximum discharge, about 1 cfs Sept. 5, 1960 (gage height, 1.33 ft), estimated on basis of velocity-area study; no flow including maximum day, which was less than 0.05 cfs.

Remarks.--No flow since station first established Oct. 1, 1959.

EMERSON LAKE BASIN

2602. Pipes Creek near Yucca Valley, Calif.

Location.--Lat 34°10'20", long 116°32'45", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.1 N., R.4 E., on left bank 2.8 miles upstream from Antelope Wash and 6.8 miles northwest of Yucca Valley.

Records available.--September 1958 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 4,435.40 ft above mean sea level, datum of 1929.

Remarks.--No flow since station first established Sept. 3, 1958. No regulation or diversion.

2605. Deep Creek near Hesperia, Calif.

Location.--Lat 34°20'30", long 117°13'40", in SE $\frac{1}{4}$ sec.18, T.3 N., R.3 W., on right bank 0.5 mile upstream from confluence with West Fork Mojave River and 7 miles southeast of Hesperia.

Drainage area.--137 sq mi.

Records available.--October 1904 to September 1922, October 1929 to September 1960.

Monthly discharge only for some periods, published in WSP 1314. Combined flow of creek and canal also published for October 1950 to September 1960.

Gage.--Water-stage recorder and broad-crested weir. Altitude of gage is 3,050 ft (from topographic map). Prior to Sept. 30, 1922, staff gage and water-stage recorder at same site at different datum. December 1929 to Apr. 20, 1938, at same site at different datum. Apr. 21 to Dec. 10, 1938, at site 0.25 mile downstream at different datum.

Average discharge.--49 years (1904-22, 1929-60), 69.5 cfs (50,320 acre-ft per year); median of yearly mean discharges, 51 cfs (36,900 acre-ft per year). Average combined discharge of creek and canal, 10 years (1950-60), 41.7 cfs (30,190 acre-ft per year); median of yearly mean combined discharges, 23 cfs (16,700 acre-ft per year).

Extremes.--1904-22, 1929-60: Maximum discharge, 46,600 cfs Mar. 2, 1938, by slope-area measurement of peak flow; minimum, 0.1 cfs at times in 1932-34, 1936.

Remarks.--Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft), used principally for recreation. Hesperia Water Co.'s canal diverts water about 2½ miles above station for irrigation of about 1,500 acres and domestic use below station. For combined flow of creek and canal see third table below.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.76	2.48	2.94	4.56	6.08	6.18	3.20	7.17	1.46	1.31	0.40	0.37	3.06
1952	1.56	3.44	85.7	104	87.2	198	364	133	17.2	6.95	2.37	3.55	81.4
1953	1.35	5.96	16.6	33.6	8.15	23.1	9.47	5.42	2.69	1.39	1.10	1.42	9.25
1954	.65	1.35	3.02	150	94.2	150	187	28.8	3.48	2.00	1.28	1.00	51.5
1955	.76	11.2	15.5	21.5	48.8	56.1	22.5	36.8	2.57	1.32	1.13	.46	18.1
1956	.57	1.90	4.24	171	20.2	4.87	15.1	10.4	1.14	.95	.62	.30	19.4
1957	.61	1.14	3.12	163	59.4	37.5	16.5	24.1	4.31	1.11	.48	.48	25.9
1958	3.46	8.37	137	21.3	308	339	747	126	23.4	5.19	3.66	6.95	142
1959	1.72	3.74	3.67	8.28	129	35.7	15.2	10.5	.26	.62	1.36	.95	18.9
1960	1.91	4.63	8.79	15.8	27.4	34.8	22.3	23.3	3.14	.51	.33	1.06	12.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	47	148	180	280	337	380	191	441	87	81	25	22	2,220
1952	96	205	5,270	6,400	3,290	12,200	21,660	8,190	1,030	428	146	211	59,100
1953	85	355	1,020	2,070	453	1,420	564	333	160	85	68	84	6,700
1954	52	80	186	9,200	5,230	9,210	11,130	1,770	207	123	79	59	37,330
1955	47	666	951	1,320	2,710	3,450	1,340	2,260	153	81	70	27	13,080
1956	35	113	261	10,530	1,160	299	896	640	68	58	38	18	14,120
1957	38	68	192	10,040	3,300	2,300	980	1,480	256	68	29	29	18,780
1958	213	498	8,440	1,310	17,130	20,850	44,450	7,750	1,390	319	255	414	103,000
1959	106	223	226	509	7,180	3,420	905	647	254	38	64	56	13,650
1960	117	288	541	971	1,580	2,140	1,330	1,430	187	31	20	63	8,700

Combined monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	64	264	274	459	447	792	551	838	326	274	25	22	4,340
1952	104	263	5,350	6,410	3,630	12,410	22,110	8,350	1,610	890	706	803	62,640
1953	343	712	1,170	2,100	946	1,980	1,200	938	618	316	291	282	10,890
1954	112	238	327	9,200	5,260	9,490	11,630	2,340	696	417	365	240	40,320
1955	141	743	956	1,350	2,790	3,920	1,970	2,840	657	444	349	79	16,240
1956	88	265	436	10,630	1,330	767	1,380	1,180	348	318	225	18	16,980
1957	72	169	255	10,070	3,430	2,600	1,270	1,840	552	111	29	29	20,430
1958	213	498	8,660	1,690	17,350	21,300	44,690	8,280	1,800	523	366	617	106,000
1959	350	532	611	867	7,550	3,840	1,270	722	254	38	84	56	16,150
1960	117	288	541	971	1,580	2,140	1,330	1,430	187	31	20	63	8,700

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year					
		Observed			Combined			Observed			Combined		
		Momentary maximum		Min-imum day	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet	Mean
		Discharge	Date										
1950	-	-	-	-	-	-	-	-	10.5	7,580	-	-	-
1951	1214	40	May 3, 1951	0.3	3.06	2,220	5.99	4,340	10.2	7,410	131	9,450	-
1952	1244	2,630	Dec. 30, 1951	.5	81.4	59,100	86.3	62,640	.5	1,760	81.5	59,140	-
1953	1284	144	Jan. 7, 1953	.8	9.25	6,700	15.1	10,890	7.67	5,560	12.9	9,350	-
1954	1344	7,340	Jan. 25, 1954	4	51.5	37,330	55.7	40,320	53.4	38,670	57.3	41,480	-
1955	1394	513	Feb. 17, 1955	.3	18.1	13,080	22.4	16,240	16.5	11,820	21.0	15,190	-
1956	1444	6,740	Jan. 27, 1956	.2	19.4	14,120	23.4	16,980	19.3	14,000	23.0	16,690	-
1957	1514	11,500	Jan. 15, 1957	.2	25.9	18,780	28.2	20,430	38.2	27,630	40.5	29,300	-
1958	1564	12,400	Apr. 3, 1958	1.0	142	103,000	146	106,000	130	94,390	130	94,390	-
1959	1634	6,920	Feb. 16, 1959	.2	18.9	13,650	18.9	16,150	19.4	14,040	21.6	15,630	-
1960	1714	112	Apr. 28, 1960	.2	12.0	8,700	12.0	8,700	-	-	-	-	-

2610. West Fork Mojave River near Hesperia, Calif.

Location.--Lat 34°20'27", long 117°14'24", in SW¹/₄SW¹/₄ sec.18, T.3 N., R.4 W., on left bank at highway bridge, 0.5 mile upstream from confluence with Deep Creek and 6.5 miles southeast of Hesperia.

Drainage area.--74.8 sq mi.

Records available.--October 1904 to September 1922, October 1929 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 3,050 ft (from topographic map). Prior to June 30, 1922, staff gage and water-stage recorder several hundred feet downstream at different datum.

Average discharge.--49 years (1904-22, 1929-60), 41.3 cfs (29,900 acre-ft per year); median of yearly mean discharges, 24 cfs (17,400 acre-ft per year).

Extremes.--1904-22, 1929-60: Maximum discharge, 26,100 cfs Mar. 2, 1938, on basis of slope-area measurement of peak flow; no flow for several months in each year.

Remarks.--Water diverted from Lake Gregory above station for domestic use and fire protection. One small diversion for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	19.1	249	34.9	265	116	31.2	4.07	0	0	0	60.1
1953	0	.07	5.24	10.9	2.84	13.3	2.48	.07	0	0	0	0	2.93
1954	0	0	0	63.8	46.4	113	53.3	6.78	.01	0	0	0	23.6
1955	0	.28	0	9.21	21.4	30.5	5.71	13.2	.06	0	0	0	6.63
1956	0	0	0	25.3	4.82	.45	2.31	1.87	0	0	0	0	2.91
1957	0	0	0	12.4	17.5	13.1	1.22	11.1	.05	0	0	0	4.55
1958	0	0	24.3	10.2	166	150	389	34.1	2.06	0	0	.13	63.4
1959	0	0	0	1.29	75.4	6.53	.51	.03	0	0	0	0	6.49
1960	0	0	0	0	0	0	0	0	0	0	0	1.24	.10

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	1,180	15,290	2,010	16,290	6,890	1,920	242	0	0	0	43,820
1953	0	4.2	322	670	158	816	147	4.6	0	0	0	0	2,120
1954	0	0	0	3,930	2,580	6,970	3,170	417	.6	0	0	0	17,070
1955	0	17	0	566	1,190	1,870	340	812	3.4	0	0	0	4,800
1956	0	0	0	1,560	277	28	138	115	0	0	0	0	2,120
1957	0	0	0	761	972	803	73	684	3.0	0	0	0	3,300
1958	0	0	1,490	628	9,220	9,230	23,140	2,090	122	0	0	7.9	45,930
1959	0	0	0	79	4,190	401	31	2.0	0	0	0	0	4,700
1960	0	0	0	0	0	0	0	0	0	0	0	74	74

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	3.64	2,640
1951	1214	0	-	0	0	0	1.62	1,180
1952	1244	6,780	Mar. 15, 1952	0	60.1	43,820	59.2	42,970
1953	1284	117	Mar. 20, 1953	0	2.93	2,120	2.48	1,800
1954	1344	2,440	Jan. 25, 1954	0	23.6	17,070	23.6	17,080
1955	1394	261	Feb. 27, 1955	0	6.63	4,800	6.61	4,780
1956	1444	880	Jan. 27, 1956	0	2.91	2,120	2.91	2,120
1957	1514	562	Jan. 13, 1957	0	4.55	3,300	6.62	4,790
1958	1564	10,200	Apr. 3, 1958	0	63.4	45,930	61.4	44,440
1959	1634	2,800	Feb. 16, 1959	0	6.49	4,700	6.49	4,700
1960	1714	856	Sept. 2, 1960	0	.10	74	-	-

2615. Mojave River at lower narrows, near Victorville, Calif.

Location.--Lat 34°34'22", long 117°19'08", in SW¹/₄SW¹/₄SE¹/₄ sec.29, T.6 N., R.4 W., on left bank 1,000 ft upstream from bridge on county road (formerly U. S. Highway 66), 2,500 ft downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, and 3 miles north-west of Victorville.

Drainage area.--530 sq mi.

Records available.--February 1899 to September 1906, October 1930 to September 1960.

Monthly discharge only for some periods, published in WSP 1314. Prior to October 1936, published as "at Victorville" and as "near Victorville" in 1937.

Gage.--Water-stage recorder. Altitude of gage is 2,650 ft (from topographic map). Prior to Aug. 1, 1906, staff gage and Nov. 12, 1930, to Dec. 8, 1936, water-stage recorder, at site 3.8 miles upstream at different datum. Dec. 9, 1936, to Mar. 28, 1938, water-stage recorder at present site at datum 2.00 ft higher.

Average discharge.--37 years (1899-1906, 1930-60), 76.9 cfs (55,670 acre-ft per year); median of yearly mean discharges, 43 cfs (31,100 acre-ft per year).

Extremes.--1930-60: Maximum discharge, 70,600 cfs Mar. 2, 1938 (gage height, 18.7 ft, present datum), by slope-area measurement of peak flow; minimum daily, 6 cfs Aug. 19, 21, 26, 1951.

Remarks.--Periodic regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 5,000 acres above station.

Corrections.--In WSP 1314, the runoff for March 1901 is listed in error; it should be 10,945 acre-ft.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	21.5	34.6	36.4	42.2	40.8	42.2	29.9	30.6	23.8	18.3	11.6	13.9	28.8
1952	23.9	31.9	43.0	125	41.6	268	406	88.9	28.9	18.4	12.6	17.1	92.0
1953	24.9	35.0	39.2	38.0	36.6	37.5	32.5	31.6	25.3	22.1	19.9	19.2	30.1
1954	26.3	36.2	37.7	54.9	42.0	107	104	29.0	23.9	19.6	17.8	19.4	43.1
1955	27.8	40.7	41.1	50.0	45.1	36.4	33.4	27.9	19.6	18.2	16.9	19.1	31.1
1956	26.9	33.5	37.0	53.5	43.9	34.4	34.2	26.4	20.9	19.4	15.3	14.6	30.0
1957	23.6	32.8	35.8	49.4	38.8	42.0	27.6	24.2	19.3	16.5	13.3	17.8	28.4
1958	23.6	34.1	36.3	38.7	107	254	1,015	60.8	19.1	17.9	18.0	15.2	135
1959	21.1	28.6	37.6	45.9	63.9	38.6	28.3	22.8	14.9	11.0	11.6	15.4	28.1
1960	27.5	31.4	39.5	44.1	45.2	34.1	26.8	22.4	14.3	11.0	10.6	12.3	26.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,320	2,060	2,240	2,590	2,260	2,600	1,780	1,880	1,420	1,130	714	825	20,820
1952	1,470	1,900	2,650	7,870	2,390	16,450	24,150	5,470	1,720	1,130	773	1,020	66,790
1953	1,530	2,080	2,410	2,340	2,030	2,300	1,930	1,950	1,510	1,360	1,220	1,140	21,800
1954	1,620	2,150	2,320	3,380	2,330	6,570	6,210	1,790	1,420	1,200	1,090	1,150	31,250
1955	1,710	2,420	2,520	3,080	2,590	2,240	1,990	1,720	1,160	1,120	1,040	1,130	22,520
1956	1,650	1,990	2,280	3,290	2,520	2,120	2,030	1,620	1,240	1,190	942	871	21,740
1957	1,450	1,950	2,200	3,040	2,160	2,580	1,640	1,490	1,150	1,020	819	1,060	20,560
1958	1,450	2,030	2,230	2,360	5,940	15,630	60,400	3,740	1,130	1,100	1,110	904	98,040
1959	1,300	1,700	2,310	2,820	3,550	2,370	1,680	1,400	885	674	716	915	20,320
1960	1,690	1,870	2,430	2,710	2,600	2,100	1,590	1,370	851	678	654	730	19,270

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	29.2	21,140
1951	1214	109	Apr. 28, 1951	6	28.8	20,820	29.3	21,220
1952	1244	3,690	Mar. 15, 1952	7.8	92.0	66,790	92.0	66,790
1953	1284	1,884	Aug. 11, 1953	16	30.1	21,800	30.2	21,870
1954	1344	1,980	Mar. 23, 1954	15	43.1	31,230	43.9	31,790
1955	1394	112	Nov. 11, 1954	14	31.1	22,520	30.1	21,780
1956	1444	790	Jan. 27, 1956	12	30.0	21,740	29.5	21,420
1957	1514	1,300	Jan. 13, 1957	12	28.4	20,560	28.5	20,670
1958	1564	15,900	Apr. 3, 1958	13	135	98,040	136	98,650
1959	1634	1,580	Feb. 17, 1959	9.7	28.1	20,320	29.0	21,000
1960	1714	94	Dec. 24, 1959	8.8	26.6	19,270	-	-

2625. Mojave River at Barstow, Calif.

Location.--Lat 34°54'25", long 117°01'20", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.31, T.10 N., R.1 W., on left bank 75 ft upstream from bridge on U. S. Highway 91 at Barstow.

Records available.--October 1930 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 2,090 ft (from topographic map).

Average discharge.--30 years (1930-60), 26.5 cfs (19,190 acre-ft per year); median of yearly mean discharges, zero cfs.

Extremes.--1930-60: Maximum discharge, 64,300 cfs Mar. 3, 1938 (gage height, 8.60 ft), by slope-area measurement of peak flow; no flow for several months in each year.

Remarks.--Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 15,000 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	1.98	0	20.8	164	22.1	0	0	0	0	17.3
1953	0	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	1.79	335	0	0	.09	0	.12	27.7
1959	.06	0	0	0	0	0	0	0	0	0	0	0	.005
1960	0	0	0	0	0	0	0	0	0	0	0	0	0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	122	0	1,280	9,780	1,360	0	0	0	0	12,540
1953	0	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	110	19,940	0	0	5.6	0	7.1	20,070
1959	3.8	0	0	0	0	0	0	0	0	0	0	0	3.8
1960	0	0	0	0	0	0	0	0	0	0	0	0	0

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	0	0
1951	1214	0	-	0	0	0	0	0
1952	1244	960	Mar. 16, 1952	0	17.3	12,540	17.3	12,540
1953	1284	0	-	0	0	0	0	0
1954	1344	0	-	0	0	0	0	0
1955	1394	0	-	0	0	0	0	0
1956	1444	0	-	0	0	0	0	0
1957	1514	0	-	0	0	0	0	0
1958	1564	9,140	Apr. 3, 1958	0	27.7	20,070	27.7	20,070
1959	1634	25	Oct. 24, 1958	0	.005	0	0	0
1960	1714	0	-	0	0	0	-	-

2630. Mojave River at Afton, Calif.

Location.--Lat 35°02'15", long 116°23'00", in SE $\frac{1}{4}$ sec.18, T.11 N., R.6 E., on downstream end of right pier of Union Pacific Railroad bridge, 0.3 mile west of Afton.

Records available.--October 1929 to September 1932, October 1952 to September 1960. Records for water year 1930 incomplete, yearly estimate published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 1,400.15 ft above mean sea level, datum of 1929, supplementary adjustment of 1943. Dec. 21, 1929, to Sept. 30, 1932, water-stage recorder at site 1.7 miles downstream at different datum.

Average discharge.--11 years (1929-32, 1952-60), 2.34 cfs (1,690 acre-ft per year); median of yearly mean discharges, 1.3 cfs (940 acre-ft per year).

Extremes.--1929-32, 1952-60: Maximum discharge, 3,550 cfs Feb. 10, 1932 (gage height, 4.70 ft, site and datum then in use); minimum daily, 0.1 cfs for some days in 1932, 1960.

Remarks.--Natural flow affected by ground-water withdrawals, diversions, municipal use, and storage in two small reservoirs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	1.12	1.55	1.79	1.92	1.84	1.94	1.68	1.27	0.93	0.90	0.72	0.78	1.37
1954	1.22	1.57	1.66	1.75	1.61	1.77	1.50	1.14	.96	.99	.76	.86	1.32
1955	1.11	1.39	1.55	1.55	1.50	1.53	1.23	1.27	.97	.76	1.58	.89	1.26
1956	1.10	1.28	1.35	1.57	1.43	1.53	1.55	1.22	.86	1.63	.75	.65	1.24
1957	.96	1.21	1.56	1.49	1.55	1.36	1.11	.97	.52	.61	.68	.66	1.04
1958	.85	1.10	1.20	1.62	1.31	1.27	33.4	1.01	.49	.32	3.47	.45	3.85
1959	.80	1.01	1.10	1.12	1.20	1.50	.88	.51	.40	.43	.47	.48	.82
1960	.65	1.07	1.31	1.38	1.42	1.37	.90	.76	.33	.13	.17	1.84	.94

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	69	92	110	118	102	119	100	78	56	56	44	46	990
1954	75	93	102	108	90	109	89	70	57	61	47	51	952
1955	68	83	95	95	83	82	73	78	58	47	97	53	913
1956	68	76	83	96	82	94	92	75	51	100	46	39	902
1957	59	72	84	92	86	84	66	60	31	38	42	39	753
1958	53	65	74	100	73	78	1,990	62	29	19	214	27	2,780
1959	49	60	68	69	67	92	52	32	24	26	29	29	597
1960	40	64	80	85	82	84	54	47	20	7.7	11	108	684

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-
1953	1284	99	July 14, 1953	0.7	1.37	990	1.37	989
1954	1344	16	July 17, 1954	.7	1.32	952	1.28	928
1955	1394	285	Aug. 17, 1955	.6	1.26	913	1.23	893
1956	1444	127	July 22, 1956	.6	1.24	902	1.23	890
1957	1514	11	Aug. 11, 1957	.4	1.04	753	1.01	730
1958	1564	1,570	Aug. 7, 1958	.2	3.85	2,780	3.82	2,770
1959	1634	30	Aug. 17, 1959	.2	.82	597	.83	604
1960	1714	107	Sept. 1, 1960	.1	.94	684	-	-

2635. Big Rock Creek near Valyermo, Calif.

Location.--Lat 34°25'17", long 117°50'19", in NE $\frac{1}{4}$ sec.20, T.4 N., R.9 W., on left bank 0.1 mile upstream from Punchbowl Canyon and 0.9 mile south of Valyermo.

Drainage area.--23.0 sq mi.

Records available.--January 1923 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Prior to October 1954, published as "Rock Creek near Valyermo."

Gage.--Water-stage recorder. Altitude of gage is 4,050 ft (from topographic map). Prior to May 4, 1938, at same site at different datums. May 4, 1938, to Jan. 26, 1939, at site 0.2 mile downstream (below Punchbowl Canyon) at different datum.

Average discharge.--37 years (1923-60), 15.6 cfs (11,290 acre-ft per year); median of yearly mean discharges, 8.8 cfs (6,400 acre-ft per year).

Extremes.--1923-60: Maximum discharge, 8,300 cfs Mar. 2, 1938, on basis of slope-area measurement of peak flow; minimum daily, 0.7 cfs Nov. 5, 1951.

Remarks.--There is evidence of appreciable infiltration into the stream bed in the immediate vicinity of station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.73	1.80	2.12	2.10	2.39	2.40	2.67	2.35	1.88	1.28	1.15	1.06	1.91
1952	1.05	1.09	8.58	18.2	17.2	29.9	63.9	54.5	41.3	26.0	16.5	12.0	24.2
1953	8.76	8.18	9.07	9.96	8.48	7.69	7.33	6.14	4.92	3.59	2.75	2.37	6.60
1954	2.19	2.31	2.47	10.9	13.0	12.0	31.3	12.9	8.90	8.36	6.06	5.98	9.65
1955	4.55	5.69	6.90	6.41	11.6	11.2	11.9	15.7	9.10	6.17	5.16	4.48	8.21
1956	4.40	4.32	3.91	17.0	8.10	5.95	8.78	11.3	6.20	3.65	3.24	2.62	6.62
1957	2.77	3.01	2.91	10.5	10.6	11.5	8.22	7.49	5.84	4.33	3.28	2.95	6.10
1958	2.70	2.97	23.2	8.96	49.2	52.6	97.2	84.1	46.8	23.9	14.6	10.5	34.6
1959	8.14	6.97	6.25	6.52	15.2	12.2	10.3	6.87	4.69	3.71	3.18	2.61	7.17
1960	2.40	2.44	2.55	3.20	4.68	4.73	4.06	3.86	2.44	1.75	1.68	1.52	2.94

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	106	107	130	129	133	148	159	144	112	79	70	63	1,380
1952	64	65	527	1,120	992	1,840	3,800	3,350	2,480	1,600	1,010	716	17,540
1953	539	487	558	613	471	473	436	377	293	1221	189	141	4,780
1954	135	137	152	668	724	740	1,860	795	530	514	375	356	6,980
1955	280	339	424	394	644	686	708	966	541	379	317	267	5,940
1956	271	257	241	1,040	466	366	522	692	369	225	199	156	4,800
1957	170	179	179	647	591	708	489	461	348	266	202	175	4,420
1958	166	177	1,420	551	2,730	3,240	5,790	5,170	2,790	1,470	897	622	25,020
1959	501	415	384	401	847	750	611	423	279	228	195	155	5,190
1960	148	145	156	197	269	291	242	237	145	108	103	91	2,130

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	4.30	-	3,110
1951	1214	4.3	Apr. 28, 1951	0.9	1.91	1,380	2.34	1,690	
1952	1244	224	Dec. 30, 1951	.7	24.2	17,540	25.4	18,470	
1953	1284	17	Dec. 1, 1952	2.0	6.80	4,780	5.00	3,620	
1954	1344	320	Jan. 25, 1954	1.8	8.65	6,980	10.5	7,600	
1955	1394	48	Nov. 11, 1954	4.0	8.21	5,940	7.83	5,670	
1956	1444	380	Jan. 26, 1956	2.3	6.62	4,800	6.29	4,560	
1957	1514	362	Jan. 13, 1957	2.3	6.10	4,420	7.81	5,650	
1958	1564	399	Dec. 15, 1957	2.5	34.8	25,020	33.9	24,560	
1959	1634	215	Feb. 16, 1959	2.5	7.17	5,190	5.99	4,340	
1960	1714	6.5	Feb. 1, 1960	1.3	2.94	2,130	-	-	

2640. Little Rock Creek near Little Rock, Calif.

Location.--Lat 34°27'50", long 118°01'05", in SW¹/₄SW¹/₄NE¹/₄ sec.3, T.4 N., R.11 W., on right bank 0.3 mile upstream from Santiago Creek, 1.65 miles upstream from Little Rock Palm-dale Irrigation District's dam, and 5 miles south of Little Rock.

Drainage area.--49.0 sq mi.

Records available.--October 1930 to February 1938, May to September 1938, April 1939 to September 1960.

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 datum (datum changed in March 1939).

Average discharge.--28 years (1930-37, 1939-60), 16.7 cfs (12,090 acre-ft per year); median of yearly mean discharges, 8.4 cfs (6,100 acre-ft per year).

Extremes.--1930-60: Maximum discharge, 17,000 cfs (estimated) Mar. 2, 1938; no flow for periods in most years.

Remarks.--No regulation or diversion.

Cooperation.--Records furnished by Los Angeles County Flood Control District; records reviewed by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0.73	1.12	1.79	1.41	1.89	0.24	0.01	0	0	0.60
1952	0	.10	20.9	44.2	36.4	84.5	122	55.2	10.0	3.73	1.13	.84	31.6
1953	0.63	3.54	7.34	14.0	6.74	7.54	5.67	3.28	1.12	.17	.003	0	4.17
1954	0	1.11	1.85	25.5	25.5	25.8	46.8	9.58	3.85	.95	.21	.03	11.6
1955	.07	5.67	5.99	11.2	28.1	22.6	14.3	27.2	5.18	1.73	.33	.03	10.1
1956	.04	1.61	3.41	32.3	11.6	6.18	18.3	13.6	2.98	.44	.01	0	7.54
1957	0	.34	1.51	21.7	21.9	16.8	6.99	5.47	1.63	.15	0	0	6.30
1958	0	1.62	39.1	8.36	98.4	94.7	179	54.1	12.7	4.23	1.70	.83	40.7
1959	1.24	3.07	4.45	5.85	25.7	18.1	8.14	3.27	.57	.02	0	0	5.73
1960	0	0	1.99	5.79	8.17	6.73	3.46	2.75	.24	0	0	0	2.41

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	45	62	110	84	116	14	0.8	0	0	432
1952	0	5.8	1,290	2,720	2,100	5,210	7,290	3,400	598	230	69	50	22,960
1953	38	211	451	862	374	464	337	202	67	10	.2	0	3,020
1954	0	66	113	1,570	1,420	1,590	2,780	589	229	58	13	2.0	8,430
1955	4.4	337	368	690	1,560	1,390	853	1,670	308	106	20	1.6	7,310
1956	2.4	96	209	1,980	666	380	1,090	838	177	27	.6	0	5,470
1957	0	20	93	1,330	1,220	1,040	416	336	97	9.3	0	0	4,560
1958	0	96	2,400	514	5,470	5,830	10,660	3,330	758	260	104	50	29,470
1959	76	183	274	360	1,430	1,110	484	201	34	1.4	0	0	4,150
1960	0	0	123	356	470	414	206	169	14	0	0	0	1,750

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	3.09	2,230
1951	1214	5.0	May 4, 1951	0	0.60	432	2.38	1,690
1952	1244	502	Dec. 30, 1951	0	31.6	22,960	30.8	22,370
1953	1284	36	Jan. 9, 1953	0	4.17	3,020	3.45	2,500
1954	1344	655	Jan. 25, 1954	0	11.6	8,430	12.4	8,960
1955	1394	236	Nov. 11, 1954	0	10.1	7,310	9.55	6,910
1956	1444	1,050	Jan. 26, 1956	0	7.54	5,470	7.27	5,270
1957	1514	1,040	Jan. 13, 1957	0	6.30	4,560	6.80	6,940
1958	1564	1,070	Dec. 15, 1957	0	40.7	29,470	38.0	27,510
1959	1634	598	Feb. 16, 1959	0	5.73	4,150	5.17	3,740
1960	1714	17	Jan. 26, 1960	0	2.41	1,750	-	-

2646. Oak Creek near Mojave, Calif.

Location.--Lat 35°03'00", long 118°21'25", in NW¼ sec.15, T.11 N., R.14 W., on upstream right wingwall of culvert, 100 ft downstream from unnamed tributary, 0.1 mile west of junction of Oak Creek and Willow Springs Roads, and 10.5 miles west of Mojave.

Drainage area.--15.8 sq mi.

Records available.--August 1957 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 4,100 ft (from topographic map).

Extremes.--1957-60: Maximum discharge, 22 cfs Apr. 18, 1958 (gage height, 1.51 ft); no flow for some months in each year.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	-	-	0	0	-
1958	0	0	0.06	0.19	0.48	0.88	10.5	7.26	3.00	1.75	.79	.83	2.15
1959	.84	1.00	1.05	1.80	1.95	1.71	1.37	.90	.36	.06	0	0	.91
1960	0	0	0	.05	.68	.40	.37	.36	.12	0	0	0	.16

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	-	-	0	0	-
1958	0	0	4.0	12	27	54	626	446	179	108	49	49	1,550
1959	51	59	64	110	108	105	81	55	21	3.8	0	0	658
1960	0	0	0	2.8	39	25	22	22	6.9	0	0	0	118

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1957	-	-	-	-	-	-	-
1958	1564	22	Apr. 18, 1958	0	2.15	1,550	2.38
1959	1634	9.2	Jan. 6, 1959	0	.91	658	.67
1960	1714	4.0	Feb. 1, 1960	0	.16	118	-

2652. Convict Creek near Mammoth Lakes, Calif.

Location.--Lat 37°36'30", long 118°50'55", in NE¹ sec.14, T.4 S., R.28 E., on right bank 1.1 miles downstream from Convict Lake, 2.0 miles upstream from U. S. Highway 395, and 7.0 miles southeast of Mammoth Lakes (ranger station).

Drainage area.--18.7 sq mi.

Records available.--July 1925 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and wooden retaining walls and control. Altitude of gage is 7,450 ft (from topographic map). Prior to Nov. 15, 1926, staff gage at same site and datum.

Average discharge.--35 years (1925-60), 23.6 cfs (17,090 acre-ft per year).

Extremes.--1925-60: Maximum discharge, 290 cfs June 29, 1932 (gage height, 4.43 ft); minimum daily, 1.3 cfs Jan. 10, 1951.

Remarks.--No diversion; some regulation by Convict Lake above station.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1951-59 not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7.09	18.9	22.9	10.7	10.4	8.28	11.2	31.0	66.3	49.9	23.8	13.5	22.9
1952	9.80	10.8	11.6	14.5	11.6	11.2	13.5	43.3	91.1	97.1	57.5	25.2	33.2
1953	15.8	10.8	12.4	11.6	7.08	6.32	8.66	17.2	42.9	64.0	24.5	14.0	19.7
1954	9.66	9.61	7.05	6.67	8.52	9.35	12.6	40.7	54.4	41.7	18.3	10.8	19.2
1955	7.22	8.29	8.80	9.78	7.42	7.08	6.94	21.4	74.5	51.0	24.8	13.6	20.1
1956	8.86	8.04	21.4	21.8	14.3	9.17	12.5	29.7	101	101	51.0	28.3	34.0
1957	20.5	15.5	13.0	12.8	11.6	11.6	10.5	23.2	83.2	57.7	25.7	15.1	25.1
1958	11.3	10.7	9.12	8.36	10.3	12.7	12.8	39.1	95.0	90.3	48.1	25.4	31.2
1959	14.9	12.3	9.95	10.7	10.7	9.19	11.3	23.5	46.3	26.2	15.1	9.87	16.7
1960	8.52	6.69	6.27	7.66	8.34	6.41	8.43	18.9	33.9	17.7	13.0	6.18	11.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	436	1,130	1,410	660	576	509	668	1,910	3,940	3,070	1,470	805	16,580
1952	602	834	714	889	688	692	805	2,660	5,420	5,970	3,530	1,500	24,080
1953	970	642	762	710	393	388	515	1,060	2,550	3,930	1,510	851	14,260
1954	594	572	433	410	473	575	747	2,500	3,240	2,570	1,130	644	13,890
1955	444	493	541	601	412	436	413	1,310	4,440	3,130	1,530	809	14,560
1956	545	479	1,320	1,340	823	564	742	1,830	6,030	6,230	3,130	1,680	24,710
1957	1,260	924	797	785	647	711	628	1,430	4,950	3,550	1,580	900	18,160
1958	694	634	561	514	571	781	760	2,400	5,650	5,550	2,960	1,510	22,580
1959	914	734	612	657	594	565	672	1,440	2,760	1,610	927	587	12,070
1960	524	398	366	471	480	394	502	1,160	2,020	1,090	799	368	8,590

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	20.7	15,040
1951	(a)	82	June 27, 1951	1.3	22.9	16,580	21.5	15,560
1952	(a)	117	(b)	2.3	33.2	24,080	33.8	24,510
1953	(a)	83	July 10, 1953	5.2	19.7	14,260	18.6	13,490
1954	(a)	92	June 26, 1954	5.2	19.2	13,890	19.0	13,770
1955	(a)	126	June 10, 1955	3.1	20.1	14,560	21.3	15,420
1956	(a)	168	June 30, 1956	7.2	34.0	24,710	34.9	25,350
1957	(a)	136	June 28, 1957	9.0	25.1	18,160	23.6	17,070
1958	(a)	201	June 24, 1958	7.1	31.2	22,580	31.7	22,960
1959	(a)	58	June 14, 1959	7.6	16.7	12,070	15.4	11,120
1960	1714	42	June 5, 6, 1960	4.9	11.8	8,590	-	-

a Files of city of Los Angeles, Department of Water and Power.

b June 9, July 8, 1952.

2657. Rock Creek at Little Round Valley, near Bishop, Calif.

Location.--Lat 37°32'50", long 118°41'15", T.5 S., R.30 E., on right bank just upstream from diversion to Little Round Valley, 1.1 miles south of Toms Place and 20.5 miles northwest of Bishop, Mono County.

Drainage area.--35.8 sq mi.

Records available.--January to December 1918, January 1920 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and 6-foot Parshall flume. Altitude of gage is 7,450 ft (from topographic map). Prior to May 24, 1926, staff gage at different datums. May 24 to Sept. 23, 1926, recorder at two different datums. Sept. 24, 1926, to Sept. 10, 1936, recorder at same site at datum 1.30 ft lower.

Average discharge.--40 years (1920-60), 30.5 cfs (22,080 acre-ft per year).

Extremes.--1918-60: Maximum discharge, 270 cfs July 26, 1952 (gage height, 2.93 ft, site and datum then in use); minimum daily, 3.2 cfs Mar. 11, 1926.

Remarks.--No regulation or diversion above station.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1951-59 not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.3	17.5	20.1	15.9	17.4	14.7	23.2	46.3	80.6	60.5	28.9	17.1	29.4
1952	14.1	14.3	14.3	21.8	15.7	16.6	18.6	87.4	118	115	67.1	29.5	44.5
1953	16.4	15.6	16.1	14.7	13.6	13.6	19.9	27.1	55.2	75.9	27.1	15.3	26.0
1954	11.7	12.6	12.8	11.1	12.6	14.6	25.3	64.8	55.6	42.8	19.5	13.0	24.8
1955	10.8	11.6	13.7	12.9	12.0	11.3	14.0	35.4	77.5	48.8	25.3	13.3	23.9
1956	10.2	9.99	22.0	17.9	14.6	14.4	25.1	66.5	134	127	54.9	29.8	44.0
1957	22.1	18.2	15.6	13.7	14.8	15.1	17.7	38.1	102	58.9	29.4	16.0	30.2
1958	12.1	11.7	12.5	12.5	12.4	13.0	17.5	82.4	106	82.6	50.7	23.8	36.6
1959	15.2	13.9	13.2	14.1	15.1	13.1	18.6	22.8	43.3	25.8	16.6	13.4	18.7
1960	11.2	9.88	9.76	10.2	10.7	11.7	16.5	20.8	41.1	22.2	15.2	9.93	15.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	835	1,040	1,230	978	968	904	1,380	2,850	4,800	3,720	1,780	1,020	21,300
1952	867	851	877	1,340	904	1,020	1,100	5,370	7,020	7,070	4,130	1,760	32,310
1953	1,010	926	992	904	758	857	1,180	1,670	3,290	4,670	1,670	912	18,820
1954	722	750	788	680	702	897	1,500	3,980	3,310	2,630	1,200	772	17,930
1955	662	691	845	793	668	697	833	2,180	4,610	3,000	1,560	793	17,330
1956	628	594	1,350	1,100	841	883	1,490	4,090	7,990	7,790	3,370	1,770	31,900
1957	1,360	1,080	960	843	819	926	1,060	2,340	6,080	3,620	1,810	950	21,850
1958	744	698	770	766	688	799	1,040	5,070	6,280	5,080	3,120	1,420	26,480
1959	936	825	811	865	838	803	1,100	1,400	2,570	1,580	1,020	795	13,540
1960	690	588	600	629	615	718	984	1,280	2,440	1,360	936	591	11,430

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	25.7	16,680
1951	(a)	117	June 22, 1951	10	29.4	21,300	29.0	21,000
1952	(a)	270	July 26, 1952	8.8	44.5	32,310	45.0	32,640
1953	(a)	135	July 18, 1953	12	26.0	18,820	25.1	18,150
1954	(a)	98	May 21, 22, 1954	8.7	24.8	17,930	24.7	17,870
1955	(a)	153	June 11, 1955	9.5	23.9	17,330	24.5	17,710
1956	(a)	193	June 30, 1956	8.2	44.0	31,900	45.1	32,720
1957	(a)	147	June 5, 1957	11	30.2	21,850	28.5	20,660
1958	(a)	159	June 24, 1958	10	36.6	26,480	37.1	26,840
1959	(a)	54	June 13, 1959	9.5	18.7	13,540	17.8	12,650
1960	1714	55	June 5, 1960	8.5	15.8	11,430	-	-

a Files of city of Los Angeles, Department of Water and Power.

2670. Pine Creek at division box, near Bishop, Calif.

Location.--Lat 37°25'00" long 118°37'15", in NW¼ sec.19, T.6 S., R.31 E., on right bank 0.25 mile upstream from division box (at Rovana), 1.9 miles west of Round Valley school-house, and 13 miles northwest of Bishop.

Drainage area.--37.9 sq mi.

Records available.--October 1921 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and Farshall flume, since November 1938. Altitude of gage is 5,280 ft (from topographic map).

Average discharge.--39 years (1921-60), 43.6 cfs (31,570 acre-ft per year).

Extremes.--1921-60: Maximum discharge, 356 cfs June 4, 1957; minimum, 10 cfs Jan. 8, 1930, Jan. 21, 1935.

Remarks.--No regulation or diversion.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1951-59, not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	20.5	27.9	30.1	24.1	21.5	20.8	30.2	71.5	121	86.6	40.5	25.9	43.3
1952	20.7	19.7	19.9	19.8	20.0	21.1	51.1	102	172	203	91.1	47.8	64.2
1953	32.5	25.5	25.9	23.2	22.0	21.5	25.6	33.0	90.2	108	38.4	24.7	39.2
1954	21.7	20.0	18.8	17.8	19.0	20.4	30.7	94.3	94.3	61.4	27.6	19.8	37.2
1955	19.9	20.5	20.9	21.3	21.0	21.0	21.2	51.8	120	71.3	37.3	22.7	37.4
1956	19.2	18.5	30.1	27.9	26.5	26.2	31.6	70.3	177	182	73.1	43.2	60.6
1957	34.0	28.0	24.0	22.9	22.6	24.1	26.1	51.0	176	85.8	46.5	29.3	47.6
1958	25.5	24.2	25.2	22.1	22.1	23.6	31.6	119	192	153	86.2	39.4	63.7
1959	28.9	26.1	22.9	22.0	22.4	23.7	30.3	51.2	96.6	46.0	28.5	27.9	35.5
1960	26.2	22.7	20.8	19.7	20.0	20.5	28.5	48.7	77.6	35.0	25.2	19.8	30.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,260	1,660	1,850	1,480	1,190	1,280	1,800	4,400	7,200	5,320	2,490	1,420	31,350
1952	1,280	1,170	1,220	1,220	1,150	1,300	1,850	6,280	10,230	12,450	5,600	2,850	46,600
1953	2,000	1,520	1,470	1,430	1,220	1,320	1,530	2,030	5,370	6,660	2,360	1,470	28,380
1954	1,350	1,190	1,150	1,100	1,050	1,250	1,830	5,800	5,610	3,770	1,700	1,180	26,960
1955	1,220	1,220	1,280	1,310	1,170	1,290	1,260	3,180	7,140	4,390	2,290	1,350	27,100
1956	1,180	1,100	1,850	1,720	1,520	1,610	1,880	4,320	10,560	11,190	4,490	2,570	43,990
1957	2,090	1,660	1,480	1,410	1,260	1,480	1,550	3,140	10,480	5,280	2,880	1,750	34,440
1958	1,570	1,440	1,430	1,360	1,230	1,450	1,880	7,290	11,410	9,400	5,300	2,340	46,100
1959	1,780	1,550	1,410	1,350	1,240	1,460	1,800	3,150	5,750	2,850	1,750	1,660	25,730
1960	1,610	1,350	1,280	1,210	1,150	1,260	1,700	3,000	4,620	2,150	1,550	1,180	22,060

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	36.5	26,380
1951	(a)	255	June 18, 1951	19	43.3	31,350	41.8	30,250
1952	(a)	288	June 6, 1952	10	64.2	46,600	66.0	47,920
1953	(a)	269	July 17, 1953	21	39.2	28,380	37.4	27,060
1954	(a)	222	May 20, 1954	16	37.2	26,960	37.3	27,010
1955	(a)	305	June 10, 1955	18	37.4	27,100	38.0	27,510
1956	(a)	339	June 30, 1956	17	60.6	43,990	62.1	45,090
1957	(a)	356	June 4, 1957	21	47.6	34,440	46.4	33,650
1958	(a)	317	June 23, 1958	21	63.7	46,100	64.1	46,400
1959	(a)	144	June 6, 1959	21	35.5	25,730	34.9	25,230
1960	1714	147	June 4, 1960	19	30.4	22,060	-	-

a Files of city of Los Angeles, Department of Water and Power.

2687. Silver Canyon Creek near Laws, Calif.

Location.--Lat 37°24'15", long 118°18'30", in NW¼ sec.25, T.6 S., R.33 E., on right bank at mouth of canyon, 2.0 miles east of Laws.

Drainage area.--22.4 sq mi.

Records available.--March 1930 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and 1-foot Parshall flume. Altitude of gage is 4,600 ft (from topographic map). Prior to Feb. 24, 1943, staff gage and 2-foot Cippoletti weir at site ½ miles downstream at different datum.

Average discharge.--30 years (1930-60), 1.51 cfs (1,090 acre-ft per year).

Extremes.--1930-60: Maximum discharge, 8.4 cfs Oct. 19, 1958; no flow at times in some years.

Remarks.--Occasional diversion above gage.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1951-59 not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1.50	1.53	1.67	1.69	1.66	1.61	1.54	1.55	1.44	1.37	1.34	1.33	1.52
1952	1.40	1.28	1.46	1.47	1.50	1.51	1.76	2.39	2.50	2.85	2.96	2.78	1.99
1953	2.58	2.65	2.62	2.52	2.52	2.24	2.04	2.37	2.25	1.90	2.10	2.01	2.32
1954	2.10	1.96	2.10	2.15	2.17	2.12	1.99	1.92	1.80	1.78	1.80	1.80	1.97
1955	1.76	1.80	1.84	1.96	1.97	1.93	1.82	1.81	1.71	1.60	1.77	1.84	1.80
1956	1.86	1.90	1.92	1.95	1.90	1.85	1.87	2.00	1.99	1.87	1.88	1.95	1.91
1957	1.90	1.99	1.85	1.97	1.93	1.86	1.83	1.83	1.60	1.50	1.31	1.51	1.76
1958	1.68	1.70	1.81	1.81	1.80	1.80	1.67	2.12	2.26	2.03	1.99	2.00	1.89
1959	2.16	2.11	2.19	2.08	2.00	1.82	1.75	1.72	1.67	1.80	1.80	1.84	1.91
1960	1.93	2.00	1.92	1.95	1.99	1.90	1.90	1.82	1.78	1.74	1.70	1.70	1.86

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	92	91	103	104	92	99	91	95	86	84	83	79	1,100
1952	86	76	90	91	86	93	105	147	149	175	182	165	1,440
1953	159	159	161	155	140	138	121	146	134	117	129	119	1,690
1954	129	117	129	132	121	131	118	118	107	109	111	107	1,430
1955	108	107	113	121	109	119	108	111	102	99	109	98	1,300
1956	115	113	118	120	109	114	111	123	118	115	116	116	1,390
1957	117	118	114	121	107	114	109	112	95	92	81	90	1,270
1958	103	101	111	111	100	111	100	130	134	125	123	119	1,370
1959	133	126	135	128	111	112	104	106	99	111	111	109	1,380
1960	119	119	118	120	114	117	113	112	106	107	105	101	1,350

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	1.54	1,110
1951	(a)	2.7	July 18, 1951	1.2	1.52	1,100	1.47	1,060
1952	(a)	4.4	July 26, 1952	1.0	1.99	1,440	2.30	1,670
1953	(a)	3.6	May 15, 1953	0	2.32	1,680	2.18	1,570
1954	(a)	2.9	Feb. 13, 1954	1.3	1.97	1,435	1.91	1,380
1955	(a)	5.1	Aug. 4, 1955	1.5	1.80	1,300	1.82	1,320
1956	(a)	3.5	July 30, 1956	1.7	1.91	1,390	1.92	1,390
1957	(a)	2.0	(b)	1.2	1.76	1,270	1.71	1,240
1958	(a)	2.7	(c)	1.1	1.89	1,370	2.00	1,450
1959	(a)	8.4	Oct. 19, 1958	1.4	1.91	1,380	1.86	1,350
1960	1714	2.2	Feb. 1, 1960	1.2	1.86	1,350	-	-

a Files of city of Los Angeles, Department of Water and Power.

b On many days.

c Dec. 16, 1957, June 13, 1958.

2760. Big Pine Creek near Big Pine, Calif.

Location.--Lat 37°08'40", long 118°18'55", in NW¼ sec.25, T.9 S., R.33 E., on left bank 0.3 mile downstream from Little Pine Creek, 0.5 mile downstream from powerhouse No. 3, and 2.2 miles southwest of Big Pine.

Drainage area.--39.0 sq mi.

Records available.--November 1907 to February 1911, January 1920 to September 1960.

Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and Parshall flume. Altitude of gage is 4,550 ft (from topographic map). Prior to January 1923, staff gage at same site and datum.

Average combined discharge.--30 years (1930-60), 40.8 cfs (29,540 acre-ft per year), including diversion to upper and lower Groux ditches.

Extremes.--1907-11, 1920-60: Maximum discharge, 458 cfs July 3, 1932 (gage height, 6.55 ft); no flow (channel only) Dec. 3-12, 1935, caused by diversion of total flow into Groux ditches.

Remarks.--Diversion for power and irrigation above station. Records prior to June 1930 do not include diversions to Groux ditches. Extremes, and first two tables hereunder show flow past station only. Third table shows flow past station combined with diversion to Groux ditches.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1950-59, not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4.86	7.33	7.65	4.66	4.88	4.86	6.63	28.2	80.7	79.6	42.1	21.6	24.5
1952	5.57	5.59	6.21	7.83	8.88	8.98	16.1	71.9	131	177	99.3	34.0	47.9
1953	15.1	8.62	9.68	8.85	14.0	13.4	11.3	31.7	32.8	118	39.7	16.8	25.3
1954	8.01	8.54	7.24	6.92	7.33	8.48	13.8	43.4	72.4	79.8	37.0	19.3	28.1
1955	6.19	4.25	7.96	9.06	7.42	7.43	6.01	20.3	92.2	81.2	66.3	22.9	27.6
1956	9.76	8.36	13.8	11.4	9.47	9.18	10.5	31.0	120	145	57.9	25.6	47.7
1957	11.2	8.37	7.61	7.24	6.89	6.59	9.03	18.7	106	76.0	42.9	18.6	28.7
1958	7.69	8.04	8.56	9.32	9.59	11.3	16.8	55.5	114	121	92.2	36.1	40.9
1959	18.6	16.0	14.7	13.6	14.7	15.1	20.7	22.6	60.6	65.4	42.7	24.6	27.4
1960	15.8	14.1	11.6	10.6	10.8	10.2	14.0	22.9	49.4	48.8	47.9	25.5	23.5

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	299	436	470	287	271	299	395	1,730	4,800	4,890	2,590	1,290	17,760
1952	342	333	382	482	511	552	958	4,420	7,770	10,890	6,110	2,020	34,770
1953	930	573	595	544	775	823	672	718	1,950	7,270	2,440	1,000	18,290
1954	492	496	445	425	407	521	820	2,670	4,510	4,910	2,270	1,150	18,920
1955	380	253	434	557	412	457	358	1,250	5,490	4,990	4,070	1,360	20,010
1956	600	498	850	702	544	564	625	1,910	7,140	8,940	3,560	1,520	27,450
1957	689	498	468	445	382	405	538	1,150	6,320	4,680	2,640	1,110	19,320
1958	473	479	526	573	521	694	1,000	3,290	6,760	7,440	5,670	2,150	29,580
1959	1,140	954	906	837	817	930	1,230	1,390	3,610	3,900	2,630	1,460	19,800
1960	974	841	712	654	620	628	831	1,410	2,940	3,000	2,950	1,520	17,080

Combined monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	873	988	1,030	831	708	754	952	2,400	5,590	5,690	3,430	2,000	25,250
1952	885	758	775	856	835	875	1,310	4,990	8,250	11,480	6,680	2,800	40,290
1953	1,430	1,030	974	895	1,100	1,150	1,100	1,300	2,700	8,170	3,480	1,750	25,080
1954	1,120	1,020	960	897	827	964	1,400	3,460	5,260	5,840	3,150	1,810	26,710
1955	1,040	851	855	865	764	845	853	1,810	8,080	5,660	4,810	2,030	26,460
1956	1,210	1,060	1,380	1,120	900	947	1,300	2,660	7,910	9,800	4,420	2,310	35,040
1957	1,430	1,190	1,100	1,040	924	962	1,020	1,710	7,090	5,780	3,660	1,890	27,800
1958	1,100	992	976	928	833	936	1,210	3,710	7,550	8,590	6,000	2,820	36,240
1959	1,520	1,070	1,030	960	875	1,040	1,600	1,980	4,890	5,270	3,860	2,150	25,840
1960	1,250	1,080	920	787	758	750	1,000	1,630	3,290	3,440	3,590	1,940	20,220

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30										Calendar year			
		Observed					Combined					Observed		Combined	
		Momentary maximum		Minimum day	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet	Mean
		Discharge	Date												
1950	-	-	-	-	-	-	-	-	-	-	33.0	23,870	35.2	25,560	-
1951	(a)	155	June 17, 1951	2.5	24.5	17,760	34.9	25,250	24.3	17,610	34.2	24,770	34.2	24,770	-
1952	(a)	245	July 31, 1952	2.3	47.9	34,770	55.5	40,290	49.3	35,810	56.9	41,310	56.9	41,310	-
1953	(a)	283	July 17, 1953	7.4	25.3	18,290	34.7	25,080	24.4	17,620	34.2	24,740	34.2	24,740	-
1954	(a)	171	June 24, 1954	4.1	26.1	18,920	36.9	26,710	25.6	18,550	36.4	26,350	36.4	26,350	-
1955	(a)	287	Aug. 5, 1955	2.6	27.6	20,010	36.6	26,460	28.9	20,690	37.8	27,370	37.8	27,370	-
1956	(a)	251	July 22, 1956	6.5	47.7	27,450	48.3	35,040	37.4	27,160	48.4	35,110	48.4	35,110	-
1957	(a)	200	June 27, 1957	4.7	26.7	19,320	38.4	27,800	26.4	19,150	37.5	27,140	37.5	27,140	-
1958	(a)	214	June 24, 1958	5.4	40.9	29,580	50.1	36,240	43.0	31,100	50.5	36,400	50.5	36,400	-
1959	(a)	102	June 16, 1959	12	27.4	19,800	35.7	25,840	26.7	19,330	35.5	25,680	35.5	25,680	-
1960	1714	91	July 26, 1960	8.7	23.5	17,080	27.9	20,220	-	-	-	-	-	-	-

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2775. Owens River near Big Pine, Calif.

Location.--Lat 37°00'55", long 118°13'30", in SE $\frac{1}{4}$ sec.2, T.11 S., R.34 E., on left bank 0.1 mile downstream from Little Seeley Spring, 0.15 mile downstream from Charles Butte, and 10.8 miles southeast of Big Pine.

Drainage area.--1,930 sq mi (approximately).

Records available.--January 1906 to September 1960. Published as "near Tinemaha" prior to 1912. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder with artificial rock control. Altitude of gage is 3,800 ft (from topographic map). Prior to Oct. 8, 1922, staff gage at same site and datum.

Average discharge.--54 years (1906-60), 367 cfs (265,700 acre-ft per year).

Extremes.--1906-60: Maximum discharge, about 3,220 cfs Jan. 26, 1914 (gage height, 11.2 ft), from rating curve extended above 1,100 cfs; no flow Jan. 9-13, 21-26, 1937.

Remarks.--Diversions above station from both main stream and tributaries. Flow regulated by Sabrina Reservoir and South Lake since 1911 (combined capacity, 20,900 acre-ft), Tinemaha Reservoir since 1929 (capacity, 16,600 acre-ft), Lake Crowley since 1941 (capacity, 183,500 acre-ft), and Pleasant Valley Reservoir since 1955 (capacity, 3,900 acre-ft). Water imported from Mono Lake basin since 1941 for diversion to Los Angeles aqueduct which diverts 4 miles downstream.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1951-59 not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	406	500	439	331	461	530	68.2	491	515	571	571	549	453
1952	310	260	498	450	494	518	476	308	379	373	514	193	398
1953	292	352	481	594	596	296	398	549	475	498	494	202	434
1954	427	508	429	455	459	235	379	455	452	442	566	161	412
1955	589	490	447	437	473	276	427	510	462	532	540	125	445
1956	547	440	418	379	506	288	347	466	457	495	583	183	426
1957	458	382	538	480	498	330	332	520	380	510	420	52.4	409
1958	340	439	540	633	566	317	248	390	369	457	555	371	435
1959	341	638	562	443	218	511	455	391	456	426	488	556	458
1960	208	454	497	499	496	458	439	445	480	458	417	384	436

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	24,930	29,750	27,000	20,370	25,610	32,560	4,060	30,210	30,670	35,120	35,120	32,690	328,100
1952	19,090	15,480	30,650	27,670	28,440	31,830	28,330	18,910	22,560	22,950	31,570	11,480	289,000
1953	17,980	19,730	29,560	36,550	33,130	18,190	23,710	33,750	28,250	30,610	30,360	12,050	313,900
1954	26,230	30,240	26,350	28,000	24,390	14,450	22,540	27,850	26,910	27,190	34,820	9,590	298,600
1955	36,200	29,180	27,490	26,840	26,270	16,970	25,390	31,330	27,480	32,710	33,190	7,430	320,500
1956	33,650	26,180	25,690	23,280	29,120	17,710	20,630	28,670	27,220	30,430	35,880	10,900	309,400
1957	28,160	22,760	35,060	29,480	27,660	20,280	19,780	31,970	22,590	31,560	25,840	3,120	296,100
1958	20,880	26,120	33,190	38,900	31,410	19,520	14,760	23,950	21,980	28,070	34,110	22,100	315,000
1959	20,940	37,940	34,530	27,260	12,100	31,450	27,070	24,020	27,120	26,180	30,030	33,080	331,700
1960	12,760	26,990	30,570	30,710	28,550	28,150	26,100	27,350	28,560	28,170	25,630	22,670	316,400

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	408	295,200
1951	(a)	634	July 13, 1951	12	453	328,100	430	311,600
1952	(a)	663	Mar. 27, 1952	13	398	289,000	401	291,000
1953	(a)	676	Dec. 31, 1952	21	434	315,900	456	329,400
1954	(a)	610	Sept. 8, 1954	17	412	298,600	426	308,600
1955	(a)	687	Oct. 10, 11, 1954	16	443	320,500	433	313,100
1956	(a)	726	Aug. 16, 1956	13	426	309,400	424	307,800
1957	(a)	662	Oct. 23, 1956	19	409	296,100	404	292,300
1958	(a)	676	Jan. 11-12, 1958	59	435	315,000	453	328,200
1959	(a)	669	Nov. 18, 1958	22	458	331,700	426	308,600
1960	1714	668	Oct. 25, 1959	7	436	316,400	-	-

a Files of city of Los Angeles, Department of Water and Power

2818. Independence Creek below Pinyon Creek, near Independence, Calif.

Location.--Lat 36°46'45", long 118°15'45", in NE $\frac{1}{4}$ sec.27, T.13 S., R.34 E., on right bank 0.2 mile downstream from Pinyon Creek and 4.0 miles southwest of Independence.

Drainage area.--18.2 sq mi.

Records available.--January 1923 to September 1960.

Gage.--Water-stage recorder and Parshall flume. Altitude of gage is 5,300 ft (from topographic map). Prior to Sept. 12, 1934, water-stage recorder, and Sept. 12, 1934, to Dec. 13, 1936, water-stage recorder and Cippoletti weir (removed during high water), at same site and datum.

Average discharge.--37 years (1923-60), 12.8 cfs (9,270 acre-ft per year).

Extremes.--1923-60: Maximum daily discharge, 106 cfs June 16, 1941; minimum daily, 0.7 cfs Jan. 25, 1926, Dec. 15, 1935.

Remarks.--No regulation or diversion above station.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1923-59 not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	3.28	5.03	2.95	4.21	21.0	17.9	22.0	10.7	7.87	-
1924	5.28	4.16	3.52	2.64	2.31	2.38	3.55	11.5	7.61	5.28	2.87	2.29	4.46
1925	2.23	2.53	3.53	2.40	2.43	2.66	5.28	21.1	34.4	27.5	12.6	7.19	10.4
1926	4.66	3.88	3.23	2.93	2.51	2.39	7.60	25.3	23.1	11.7	5.48	4.16	8.12
1927	3.58	3.87	4.72	4.08	4.50	4.85	8.44	31.5	68.5	46.0	10.2	6.77	16.5
1928	5.74	5.68	4.77	3.84	3.26	4.11	7.15	26.7	41.3	17.8	8.92	4.88	11.2
1929	3.73	4.08	3.85	3.39	3.50	2.56	3.35	15.0	18.4	16.8	6.31	4.32	7.13
1930	3.35	2.82	2.68	2.84	2.80	3.06	6.93	15.9	42.5	20.6	8.30	4.71	9.71
1931	3.30	2.72	2.35	1.97	2.02	2.06	3.67	10.7	12.3	7.47	4.68	5.26	4.89
1932	3.91	3.28	3.30	3.23	4.19	6.41	11.5	25.9	54.0	45.7	16.9	8.24	15.6
1933	8.04	5.31	3.45	4.48	4.07	4.11	6.11	8.66	37.3	28.8	9.47	4.45	10.4
1934	3.33	2.77	2.99	2.59	2.28	2.83	6.69	9.92	6.78	7.46	4.41	3.11	4.78
1935	2.57	2.51	2.39	2.51	2.39	2.48	5.02	15.8	45.8	23.1	9.95	5.51	10.0
1936	5.49	3.49	2.23	2.67	4.01	4.79	12.5	37.3	52.6	39.0	20.3	7.34	16.0
1937	6.17	5.75	5.25	4.42	5.70	5.99	9.84	44.1	60.8	40.0	17.5	8.40	17.9
1938	5.73	4.41	6.40	4.55	4.75	6.94	12.9	32.9	72.2	55.4	24.7	12.5	20.3
1939	10.7	7.75	5.94	4.90	5.35	4.99	14.4	30.0	38.2	19.5	13.3	7.56	13.6
1940	6.72	4.82	3.61	4.15	4.19	4.75	9.97	38.6	59.3	29.0	11.3	5.90	15.2
1941	4.15	3.44	3.76	3.72	5.01	6.16	9.72	49.9	80.4	68.2	34.0	13.5	23.6
1942	7.73	7.07	7.40	6.03	5.35	5.45	9.74	21.3	55.7	42.3	19.0	8.21	16.3
1943	5.32	4.42	3.93	4.66	4.61	5.88	12.2	40.7	50.2	44.5	19.6	8.36	17.1
1944	5.69	4.64	4.07	3.76	3.51	5.23	7.44	25.6	43.0	38.8	15.3	7.27	13.7
1945	5.11	4.63	3.98	3.36	4.29	4.22	9.17	33.0	55.2	52.3	21.5	9.72	17.3
1946	15.0	10.9	7.84	6.53	5.69	5.91	12.8	32.1	37.2	28.1	13.0	7.33	15.2
1947	5.85	6.09	5.44	5.07	4.32	4.92	8.68	35.7	32.7	16.6	8.61	5.03	11.6
1948	4.72	4.37	3.83	3.10	2.60	2.58	3.62	12.5	26.1	20.6	7.82	4.23	8.02
1949	3.24	2.71	2.55	2.24	2.32	2.20	5.32	20.6	37.2	16.5	7.22	3.88	8.86
1950	3.09	3.07	2.88	3.06	3.04	3.54	8.83	19.2	37.2	24.6	8.80	5.15	10.2
1951	3.34	6.97	11.4	6.44	4.96	4.18	8.24	21.8	42.0	27.5	11.5	5.42	12.8
1952	4.11	3.48	4.42	4.35	4.87	5.16	10.7	50.1	67.8	54.1	26.7	13.1	20.8
1953	7.42	5.54	5.09	4.39	4.34	4.08	6.35	10.3	24.9	30.3	10.9	5.25	9.95
1954	3.81	3.33	2.54	2.60	3.18	4.23	9.63	34.2	31.9	21.7	8.78	4.63	10.9
1955	3.34	3.25	3.27	3.38	3.13	2.93	3.96	12.5	32.4	19.1	13.5	5.34	8.86
1956	3.61	3.09	8.05	6.21	6.56	6.56	10.8	29.4	68.1	54.4	22.6	10.2	19.2
1957	6.97	5.00	4.64	4.05	3.75	3.94	5.19	15.7	62.8	31.6	11.6	6.41	13.5
1958	4.79	4.43	3.89	3.47	3.52	4.54	9.41	40.9	70.9	48.3	23.4	10.8	19.2
1959	6.25	4.57	3.88	3.75	3.51	5.64	6.37	9.82	14.1	9.30	5.01	3.39	6.13
1960	2.79	2.45	2.29	2.11	2.36	2.15	5.01	9.29	15.4	6.74	3.23	2.20	4.66

Monthly and yearly discharge, in acre-feet, of Independence Creek below Pinyon Creek, near Independence, Calif.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	202	279	181	251	1,290	1,060	1,350	656	468	-
1924	324	247	216	162	133	146	211	706	453	325	177	136	3,240
1925	137	151	217	148	135	163	314	1,300	2,050	1,690	774	428	7,510
1926	287	231	199	180	140	147	452	1,560	1,380	721	337	248	5,880
1927	220	230	290	251	250	299	502	1,950	4,080	2,850	626	403	11,910
1928	353	338	293	236	188	252	425	1,640	2,480	1,100	548	290	8,120
1929	229	243	236	208	195	157	200	921	1,090	1,030	388	257	5,150
1930	206	168	165	174	158	188	413	978	2,530	1,260	510	280	7,030
1931	203	162	144	121	112	127	219	660	732	460	288	313	3,540
1932	241	195	203	199	241	394	684	1,590	3,210	2,810	1,040	491	11,500
1933	494	316	212	275	226	252	364	532	2,220	1,770	582	265	7,510
1934	205	165	184	159	127	174	398	610	523	459	271	185	3,460
1935	158	149	147	154	133	153	299	970	2,730	1,420	612	328	7,250
1936	338	208	137	164	231	294	746	2,290	3,130	2,400	1,250	437	11,620
1937	379	342	323	272	317	368	573	2,710	3,620	2,460	1,070	500	12,930
1938	352	263	394	280	264	427	766	2,020	4,300	3,410	1,520	744	14,740
1939	657	461	365	301	297	307	857	1,850	1,200	1,200	818	450	9,830
1940	413	287	222	255	241	292	593	2,380	3,530	1,780	698	351	11,040
1941	255	205	231	229	278	379	578	3,070	4,780	4,190	2,090	801	17,090
1942	475	420	455	371	297	335	580	1,310	3,310	2,500	1,170	489	11,810
1943	327	263	241	286	256	362	727	2,500	2,990	2,730	1,200	497	12,380
1944	350	276	250	231	202	322	443	1,580	2,560	2,390	942	433	9,980
1945	314	276	245	206	238	259	546	2,030	3,290	3,220	1,320	578	12,520
1946	919	647	482	402	316	363	761	1,970	2,210	1,730	801	436	11,040
1947	360	362	334	312	240	302	517	2,200	1,940	1,020	530	299	8,420
1948	290	260	236	190	149	159	215	766	1,550	1,270	481	252	5,820
1949	199	161	157	137	129	135	317	1,270	2,210	1,020	444	231	6,410
1950	190	183	177	188	169	218	525	1,180	2,210	1,510	541	306	7,400
1951	205	415	699	396	275	257	491	1,340	2,500	1,690	708	322	9,300
1952	253	207	272	268	269	318	639	3,080	4,040	3,330	1,640	777	15,090
1953	456	330	313	270	241	251	378	635	1,480	1,860	672	312	7,200
1954	234	198	156	160	177	260	573	2,100	1,900	1,340	540	276	7,910
1955	205	193	201	208	174	180	236	768	1,930	1,170	829	318	6,410
1956	222	184	495	382	377	404	644	1,810	4,050	3,340	1,390	609	13,910
1957	429	297	285	249	208	242	309	953	3,740	1,950	712	382	9,770
1958	295	264	239	214	196	279	560	2,520	4,220	3,030	1,440	643	13,900
1959	384	272	239	230	195	224	379	591	841	572	308	202	4,440
1960	172	146	141	130	135	132	298	571	916	414	199	131	3,380

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1923	(a)	36	July 3, 4, 1923	-	-	-	9.02	6,520
1924	(a)	14	May 18-21, 1924	1.8	4.46	3,240	4.07	2,950
1925	(a)	52	June 28, 1925	1.8	10.4	7,510	10.7	7,720
1926	(a)	43	May 21, 1926	.7	8.12	5,880	8.15	5,900
1927	(a)	100	June 19, 1927	2.1	16.5	11,910	16.8	12,160
1928	(a)	63	June 5, 1928	2.6	11.2	8,120	10.8	7,850
1929	(a)	30	(b)	1.9	7.13	5,150	6.89	4,980
1930	(a)	65	June 15, 1930	2.2	9.71	7,030	9.67	7,000
1931	(a)	14	(c)	1.7	4.89	3,540	5.07	3,670
1932	(a)	90	June 25, 1932	1.7	15.6	11,300	16.1	11,680
1933	(a)	56	June 16, 1933	2.2	10.4	7,510	9.72	7,040
1934	(a)	11	(d)	2.1	4.78	3,460	4.64	3,360
1935	(a)	57	June 13, 1935	1.3	10.0	7,250	10.3	7,480
1936	(a)	74	June 23, 1936	.7	16.0	11,620	16.5	11,990
1937	(a)	80	June 22, 1937	3.1	17.9	12,930	17.8	12,900
1938	(a)	95	June 3, 1938	3.8	20.3	14,740	21.0	15,210
1939	(a)	55	May 31, 1939	3.9	13.6	9,830	12.8	9,270
1940	(a)	78	June 15, 16, 1940	1.8	15.2	11,040	14.9	10,810
1941	(a)	106	June 16, 1941	1.8	23.6	17,090	24.5	17,740
1942	(a)	70	June 18, 1942	4.7	16.3	11,810	15.6	11,290
1943	(a)	86	May 28, 1943	2.6	17.1	12,380	17.2	12,420
1944	(a)	62	June 8, 1944	1.9	13.7	9,980	13.7	9,940
1945	(a)	77	June 21, 1945	2.8	17.3	12,520	19.0	13,740
1946	(a)	41	(e)	5.0	15.2	11,040	13.9	10,040
1947	(a)	50	May 23, 1947	3.8	11.6	8,420	11.3	8,150
1948	(a)	38	June 27-29, 1948	2.3	8.02	5,820	7.65	5,550
1949	(a)	54	June 15, 16, 1949	1.9	8.86	6,410	8.90	6,440
1950	(a)	45	June 2, 3, 1950	2.2	10.2	7,400	11.3	8,170
1951	(a)	58	June 17-19, 1951	2.8	12.8	9,300	12.0	8,710
1952	(a)	f102	May 29, 1952	2.9	20.8	15,090	21.3	15,460
1953	(a)	f42	July 9, 1953	3.3	9.95	7,200	9.24	6,690
1954	(a)	f65	May 22, 1954	2.0	10.9	7,910	10.9	7,920
1955	(a)	f57	June 10, 1955	2.6	8.86	6,410	9.27	6,710
1956	(a)	f99	June 30, 1956	2.4	19.2	13,910	19.3	14,020
1957	(a)	f94	June 8, 1957	3.3	13.5	9,770	13.2	9,550
1958	(a)	f97	June 24, 1958	2.8	19.2	13,900	19.3	14,000
1959	(a)	f21	June 24, 1959	2.3	6.13	4,440	5.53	4,000
1960	1714	f19	June 18, 1960	1.7	4.66	3,380	-	-

a Files of City of Los Angeles, Department of Water and Power.

b June 30, July 2, 1929.

c June 5, 15-17, 1951.

d May 15-17, 21-27, 1934.

e June 4, 5, 10, 1946.

f Momentary maximum.

2857. Owens River at Keeler Bridge, near Lone Pine, Calif.

Location.--Lat 36°34'30", long 118°00'45", in NW¼ sec.1, T.16 S., R.36 E., on left bank under old timber bridge, 0.5 mile upstream from bridge on State Highway 190 and 3.4 miles southeast of Lone Pine.

Records available.--January 1927 to September 1960. Monthly discharge only for some periods, published in WSP 1814.

Gage.--Water-stage recorder and 10-foot Cippoletti weir. Altitude of gage is 3,600 ft (from topographic map). Prior to Oct. 19, 1930, staff gage and Oct. 20, 1930, to Feb. 14, 1935, staff gage and 3-foot Cippoletti weir, all at present site but at different datums.

Average discharge.--33 years (1927-60), 21.8 cfs (15,780 acre-ft per year); median of yearly mean discharges, 6.6 cfs (4,800 acre-ft per year).

Extremes.--1927-60: Maximum daily discharge, 1,200 cfs July 9, 1938 (gage height, 7.06 ft); no flow at times.

Remarks.--Natural flow affected by storage in several reservoirs, many natural lakes, diversions for irrigation, and return flow from irrigated areas. Major portion of runoff from drainage is diverted out of basin through Los Angeles aqueduct. Discharge at this point is wasted into Owens Lake.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1951-59 not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.17	5.41	6.19	7.35	8.49	9.16	8.51	4.95	2.70	4.29	1.11	1.76	5.24
1952	3.05	4.53	7.26	9.95	9.98	11.0	9.73	6.77	7.61	8.06	8.63	2.39	7.41
1953	3.25	7.71	15.3	11.1	12.0	12.2	9.14	6.15	3.82	2.62	.61	1.29	7.08
1954	2.71	4.57	6.69	9.15	10.3	10.5	9.98	4.48	1.90	.70	.52	1.10	5.17
1955	2.96	3.99	5.23	8.09	9.40	8.96	9.54	5.91	2.91	1.78	1.03	1.49	5.08
1956	2.96	3.99	7.80	11.3	10.3	9.56	10.9	5.48	2.12	1.40	.52	1.22	5.62
1957	3.15	4.15	5.79	8.73	10.3	14.8	15.6	7.08	3.50	.66	0	1.30	6.22
1958	2.80	4.37	6.41	8.51	10.6	15.7	20.4	7.47	2.40	1.66	.82	1.06	6.82
1959	2.26	4.58	6.50	9.43	27.5	12.2	8.89	5.23	1.93	.72	.03	1.15	6.54
1960	2.92	3.97	5.73	8.71	10.6	11.3	7.98	5.62	2.45	.96	.12	.69	5.07

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	195	322	380	452	472	564	507	305	161	264	68	105	3,800
1952	187	270	447	612	574	676	579	416	453	495	550	142	5,380
1953	200	459	942	680	666	751	544	378	227	161	38	77	5,120
1954	166	260	412	563	574	645	594	276	113	43	32	66	3,740
1955	182	237	321	498	522	551	568	363	173	110	63	89	3,680
1956	182	238	479	697	595	588	647	337	126	86	32	72	4,080
1957	194	247	356	537	573	908	930	435	208	41	0	77	4,510
1958	172	260	394	523	590	964	1,220	459	143	102	51	63	4,940
1959	139	260	400	580	1,530	750	528	322	115	44	2.0	68	4,740
1960	180	236	352	536	612	692	475	346	146	59	7.5	41	3,680

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean		Acre-feet	
		Discharge	Date							
1950	-	-	-	-	-	-	5.00	-	-	3,620
1951	(a)	36	July 2, 1951	0.9	5.24	3,800	5.25	-	-	3,800
1952	(a)	45	Aug. 1, 1952	1.2	7.41	5,380	8.37	-	-	6,080
1953	(a)	59	Nov. 29, 1952	.5	7.08	5,120	6.02	-	-	4,360
1954	(a)	18	Apr. 10, 1954	.1	5.17	3,740	5.04	-	-	3,650
1955	(a)	32	Apr. 9, 1955	.5	5.08	3,680	5.30	-	-	3,640
1956	(a)	28	Dec. 26, 1955	.4	5.62	4,080	5.48	-	-	3,980
1957	(a)	28	Mar. 25, 1957	0	6.22	4,510	6.26	-	-	4,540
1958	(a)	125	Apr. 18, 1958	.3	6.82	4,940	6.78	-	-	4,910
1959	(a)	63	Feb. 13, 1959	0	6.54	4,740	6.50	-	-	4,710
1960	1714	19	Mar. 11, 1960	0	5.07	3,680	-	-	-	-

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2860. Cottonwood Creek near Olancha, Calif.

Location.--Lat 36°26'20", long 118°04'40", T.17 S., R.36 E., just downstream from intake to Cottonwood powerhouse, 11.2 miles north of Olancha.

Drainage area.--39.9 sq mi.

Records available.--January 1906 to March 1911, January 1914 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and Parshall flume on creek; water-stage recorder and Cippoletti weir for powerhouse diversion. Prior to Sept. 9, 1908, staff gage at site about 2 miles downstream at different datum. Sept. 9, 1908, to Mar. 31, 1911, and Jan. 1, 1914, to Mar. 6, 1921, staff gage and Mar. 7, 1921, to Oct. 31, 1938, water-stage recorder, at site just upstream from intake to Cottonwood powerhouse at different datum.

Average combined discharge.--50 years (1906-10, 1914-60), 22.5 cfs (16,290 acre-ft per year).

Extremes.--1906-11, 1914-60: Maximum discharge observed, 434 cfs June 13, 1906 (discharge measurement); no flow Mar. 25-30, 1959.

Remarks.--No regulation above station. Cottonwood powerhouse (maximum capacity, 22 cfs) has diverted since Nov. 13, 1908. Records Oct. 31, 1938, to Sept. 30, 1950, computed as sum of powerhouse diversion and flow past station. For flow past station combined with powerhouse diversions see third table below.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1951-60 not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.62	0.54	0.26	0.19	0.19	0.47	2.66	9.78	9.66	0.93	0.87	0.79	2.25
1952	.54	.35	.19	.31	.20	.19	11.3	176	156	52.0	15.0	.41	34.4
1953	.25	.45	.20	.20	.20	1.43	5.93	15.7	19.2	6.80	1.35	1.12	4.41
1954	.85	.36	.20	.21	.11	.60	20.3	49.5	17.6	4.87	1.03	.89	8.09
1955	.70	.36	.20	.19	.25	.24	.28	5.32	2.39	.52	1.08	3.71	1.27
1956	.67	.34	1.33	.99	.20	39.6	20.4	72.1	64.5	18.8	2.18	.41	15.5
1957	.53	.41	.21	.18	.20	1.57	5.28	31.7	67.9	10.3	.54	.93	9.97
1958	.72	.60	.34	.21	.24	.48	8.12	128	108	38.4	7.19	.78	24.4
1959	.41	.49	.30	.21	.22	.39	3.16	.72	.38	.38	.37	.30	.61
1960	.32	.24	.17	.19	.10	.14	.53	.16	.12	.20	.10	.13	.20

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	37	32	16	12	11	29	158	601	575	57	54	46	1,630
1952	33	21	12	19	12	12	674	10,810	9,280	3,200	920	24	25,020
1953	15	27	12	12	11	88	353	963	1,140	418	83	66	3,190
1954	53	21	12	13	6.0	37	1,210	3,040	1,050	300	63	53	5,860
1955	43	21	12	12	14	15	17	327	142	32	67	221	923
1956	41	20	82	61	12	244	1,210	4,440	5,840	1,180	134	24	11,270
1957	33	24	13	11	11	97	314	1,950	4,040	635	33	55	7,220
1958	44	36	21	13	13	50	483	7,770	6,440	2,360	442	45	17,700
1959	25	29	19	13	12	24	188	44	22	24	23	18	440
1960	19	14	11	12	5.8	8.7	32	9.9	7.1	12	6.1	7.5	145

Combined monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	263	491	538	403	339	421	971	1,590	1,520	684	316	193	7,730
1952	245	256	296	520	449	533	1,680	11,790	10,300	4,270	1,960	897	33,200
1953	654	586	625	595	468	550	1,300	2,090	2,030	1,460	560	348	11,270
1954	351	361	354	309	338	535	1,740	3,630	1,680	908	434	314	10,930
1955	282	309	343	369	386	420	590	1,350	1,170	584	621	282	6,710
1956	283	281	558	731	566	841	2,170	5,550	4,910	2,420	1,160	544	20,010
1957	598	458	373	344	363	556	1,010	3,100	5,180	1,760	643	471	14,840
1958	519	505	495	455	423	591	1,380	8,920	7,550	3,530	1,580	826	26,770
1959	621	560	485	469	450	599	1,240	940	553	352	228	221	6,720
1960	262	295	226	235	279	447	764	554	364	176	102	141	3,840

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30										Calendar year					
		Observed					Combined					Observed			Combined		
		Momentary maximum		Minimum day	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet			
		Discharge	Date														
1950	-	-	-	-	-	-	-	-	-	-	10.2	7,410	11.9	8,610			
1951	(a)	26	May 19, 1951	0.1	2.25	-	-	1,630	10.7	7,730	2.22	1,610	10.0	7,230			
1952	(a)	256	May 30, 1952	.1	34.4	-	-	25,020	45.8	33,200	34.4	25,000	47.2	34,260			
1953	(a)	52	May 19, 1953	.2	4.41	-	-	3,190	15.6	11,270	4.45	3,220	14.5	10,470			
1954	(a)	113	May 8, 1954	.1	8.09	-	-	5,860	15.1	10,930	8.08	5,850	14.9	10,800			
1955	(a)	21	May 18, 1955	.1	1.27	-	-	923	9.27	6,710	1.37	990	9.53	6,890			
1956	(a)	119	May 23, 1956	.2	15.5	-	-	11,270	27.5	20,010	15.4	11,200	28.0	20,320			
1957	(a)	130	June 5, 1957	.1	9.97	-	-	7,220	20.5	14,840	10.0	7,250	20.6	14,930			
1958	(a)	256	May 22, 1958	.1	24.4	-	-	17,700	37.0	26,770	24.4	17,670	37.2	26,920			
1959	(a)	15	Apr. 13, 1959	0	.61	-	-	440	9.29	6,720	.57	412	8.07	5,840			
1960	1714	8.0	Apr. 5, 1960	.1	.20	-	-	145	5.30	3,840	-	-	-	-			

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2870. Mono Lake near Mono Lake, Calif.

Location.--Lat 38°00', long 119°08', in NE $\frac{1}{4}$ sec.31, T.2 N., R.26 E., on west bank 1 mile south of town of Mono Lake.

Records available.--June 1912 to September 1960. Records prior to September 1934 are published in WSP 765.

Gage.--Staff gage or reference point. Datum of gage is 6,410.73 ft above mean sea level, datum of 1929. Prior to Oct. 2, 1945, at datum 20.07 ft lower. Gage readings have been reduced to elevations above mean sea level.

Extremes.--1912-60: Maximum elevation observed, 6,428.1 ft July 18, 1919; minimum observed, 6,397.65 ft Sept. 26, 1960.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power.

Elevation, in feet, on or near last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	409.75	409.92	410.00	409.94	409.87	409.77	409.78	409.61	409.40	409.08	408.58	408.31
1952	407.95	407.88	407.91	407.99	408.05	408.22	408.37	408.68	408.76	409.16	409.09	408.73
1953	408.56	408.53	408.70	408.91	408.91	409.06	408.98	408.81	408.67	408.46	407.86	407.60
1954	407.37	407.10	407.01	407.10	407.22	407.23	407.18	406.87	406.60	406.30	405.66	405.28
1955	405.01	404.84	404.84	404.80	404.80	404.78	404.72	404.52	404.26	404.01	403.59	403.18
1956	402.91	402.71	403.12	403.24	403.16	403.08	403.15	403.05	402.90	402.80	402.53	402.18
1957	401.96	401.99	402.01	402.28	402.52	402.61	402.60	402.59	402.42	401.98	401.52	401.20
1958	400.94	400.88	401.02	401.05	401.27	401.43	401.77	401.97	402.10	402.18	402.05	401.55
1959	401.34	401.19	401.18	401.21	401.39	401.51	401.52	401.32	401.04	400.71	400.22	399.79
1960	399.55	399.41	399.31	399.22	399.31	399.29	399.17	399.00	398.72	398.40	397.99	397.65

Note.--Add 6,000.00 ft to obtain elevation above mean sea level, datum of 1929.

2874. Rush Creek above Grant Lake, near June Lake, Calif.

Location.--Lat 37°48'20", long 119°06'30", in NE $\frac{1}{4}$ sec. 4, T.2 S., R.26 E., on left bank in narrows, 0.6 mile upstream from head of Grant Lake and 2.7 miles northwest of town of June Lake.

Drainage area.--51.2 sq mi.

Records available.--December 1936 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and 15-foot Parshall flume. Altitude of gage is 7,200 ft (from topographic map).

Average discharge.--23 years (1937-60), 81.0 cfs (58,640 acre-ft per year).

Extremes.--1937-60: Maximum daily discharge, 711 cfs June 28, 1938; minimum daily, 5.5 cfs Sept. 6-8, 14, 1954.

Remarks.--Flow regulated by Gem Lake, Lake Agnew, and Waugh Lake (combined capacity, 23,400 acre-ft), and by many natural lakes. No diversion.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1951-59 not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	11.3	43.3	75.7	62.7	56.2	42.9	52.1	74.8	113	100	95.3	67.7	66.3
1952	84.9	28.5	25.2	30.9	68.1	63.7	96.3	207	232	328	127	89.6	115
1953	97.4	94.2	59.5	62.2	59.0	34.2	31.5	49.7	112	139	84.8	44.1	72.4
1954	52.9	44.1	26.5	37.5	45.4	54.3	78.0	148	109	36.5	8.18	6.44	53.9
1955	66.0	46.0	22.6	25.7	52.2	67.6	68.7	85.1	146	29.1	44.5	90.2	61.7
1956	90.8	39.7	54.7	71.9	89.2	74.2	58.7	146	231	315	114	96.4	115
1957	96.5	78.0	47.9	42.2	42.5	60.7	47.2	80.1	175	77.8	95.8	96.2	78.4
1958	37.4	39.3	39.5	37.4	19.3	21.2	61.1	183	228	262	132	99.3	97.2
1959	96.3	66.8	18.9	16.6	47.4	70.4	79.7	84.8	86.5	49.7	23.5	47.8	57.8
1960	56.3	20.6	25.4	31.3	20.4	18.0	22.9	76.1	117	48.6	25.3	56.3	43.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	695	2,580	4,660	3,860	3,120	2,640	3,100	4,600	6,720	6,170	5,860	4,030	48,040
1952	5,220	1,700	1,550	1,900	3,920	3,920	5,730	12,710	13,780	20,190	7,820	5,330	83,770
1953	5,990	5,610	3,660	3,820	3,270	2,100	1,880	3,060	6,660	6,560	5,210	2,620	52,440
1954	3,250	2,630	1,630	2,300	2,520	3,340	4,640	9,100	6,470	2,250	503	383	39,020
1955	4,060	2,740	1,390	1,580	2,900	4,160	4,090	5,230	8,670	1,790	2,740	5,370	44,720
1956	5,580	2,360	3,360	4,420	5,130	4,580	3,490	9,000	13,760	19,390	7,000	5,730	83,780
1957	5,930	4,640	2,950	2,600	2,360	3,730	2,810	4,930	10,420	4,780	5,890	5,720	56,760
1958	2,300	2,340	2,430	2,300	1,070	1,310	3,630	11,230	13,590	16,120	8,140	5,910	70,370
1959	5,920	3,970	1,160	1,020	2,630	4,330	4,740	5,210	5,150	3,060	1,810	2,840	41,840
1960	3,460	1,230	1,560	1,920	1,180	1,110	1,360	4,680	6,960	2,990	1,550	3,350	31,350

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	(a)	219	Nov. 19, 1950	7.1	66.3	48,040	67.1	48,850	
1952	(a)	457	July 8, 1952	13	115	83,770	125	48,570	
1953	(a)	-	-	16	72.4	52,440	61.8	44,690	
1954	(a)	201	May 21, 1954	5.5	53.9	39,020	54.8	39,700	
1955	(a)	260	June 10, 1955	5.9	61.7	44,720	66.1	47,830	
1956	(a)	394	July 9, 1956	14	115	83,780	118	86,000	
1957	(a)	227	June 5, 1957	17	78.4	56,760	69.5	50,310	
1958	(a)	455	July 8, 1958	12	97.2	70,370	103	74,350	
1959	(a)	126	June 6, 1959	10	57.8	41,840	51.2	37,040	
1960	1714	148	May 31, 1960	8.4	43.2	31,350	-	-	

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2879. Lee Vining Creek near Lee Vining, Calif.

Location--lat 37°55'45", long 119°10'10", in SW $\frac{1}{4}$ sec.24, T.1 N., R.25 E., on right bank 0.8 mile upstream from Gibbs Canyon and 3.3 miles southwest of Lee Vining.

Drainage area--35.2 sq mi.

Records available--April 1934 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage--Water-stage recorder on concrete revetment walls, rebuilt at different datum Oct. 17 1955. Altitude of gage is 7,400 ft (from topographic map). Prior to Aug. 6, 1944, staff gage at same site at different datum.

Average discharge--26 years (1934-60), 67.8 cfs (49,080 acre-ft per year).

Extremes--1934-60: Maximum discharge observed, 503 cfs June 9, 1938 (gage height, 3.07 ft); no flow Nov. 29, 1935.

Remarks--Flow regulated by Ellery, Saddlebag, and Tioga Lakes (combined capacity, 13,269 acre-ft), and several small natural lakes. No diversion above station.

Cooperation--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; those for 1951-59 not previously published by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	40.5	52.9	48.1	23.1	40.0	60.7	82.7	127	210	116	39.8	39.9	73.4
1952	38.8	44.1	38.3	37.1	35.1	46.7	67.3	166	249	212	97.4	62.8	91.3
1953	56.5	23.1	28.2	46.4	31.9	21.4	30.5	54.0	168	180	42.3	40.8	60.4
1954	20.0	9.04	11.4	8.95	8.65	14.3	36.7	116	93.2	52.1	23.5	21.3	34.7
1955	18.1	21.7	18.4	15.4	14.6	16.0	17.9	74.5	135	60.2	47.3	42.2	40.1
1956	31.7	30.4	33.6	33.9	37.6	33.5	32.9	84.0	277	201	76.8	60.2	77.7
1957	57.2	74.3	53.2	34.9	34.3	44.4	23.2	73.2	207	90.1	36.6	22.4	62.6
1958	31.5	23.0	22.5	18.2	36.7	30.8	28.1	140	200	166	109	33.0	70.1
1959	23.7	43.5	38.5	36.3	39.7	31.9	54.2	71.2	112	54.3	30.8	27.4	46.9
1960	18.7	16.1	24.1	24.7	24.0	20.0	48.7	84.4	114	44.6	24.5	18.7	38.5

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,490	3,150	2,960	1,420	2,220	3,730	4,920	7,800	12,510	7,160	2,450	2,380	53,190
1952	2,380	2,620	2,350	2,280	2,020	2,870	4,010	10,180	14,840	13,020	5,390	3,730	66,290
1953	3,480	1,370	1,740	2,850	1,770	1,310	1,820	3,320	10,010	11,060	2,600	2,430	43,760
1954	1,230	538	703	551	480	876	2,180	7,130	5,540	3,200	1,450	1,270	25,150
1955	1,110	1,290	1,130	949	809	985	1,070	4,580	8,020	3,700	2,910	2,510	29,060
1956	1,950	1,810	2,060	2,080	2,160	2,060	1,960	5,170	16,480	12,340	4,720	3,580	56,370
1957	3,520	4,420	3,270	2,140	1,910	2,730	1,380	4,500	12,320	5,540	2,250	1,330	45,310
1958	1,940	1,370	1,380	1,120	2,040	1,890	1,670	8,600	11,880	10,220	6,690	1,960	50,760
1959	1,460	2,590	2,370	2,230	2,210	1,960	3,230	4,380	6,640	3,340	1,900	1,650	33,940
1960	1,150	960	1,480	1,520	1,380	1,230	2,900	5,190	6,910	2,740	1,510	1,110	27,980

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet		
		Discharge	Date							
1950	-	-	-	-	-	-	61.2	41,250		
1951	(a)	385	June 17, 1951	11	73.4	53,190	71.7	51,940		
1952	(a)	400	June 8, 1952	12	91.3	66,290	90.3	65,550		
1953	(a)	391	June 19, 1953	8.4	60.4	43,760	54.8	39,640		
1954	(a)	254	May 20, 1954	5.6	34.7	25,150	36.2	26,210		
1955	(a)	278	June 8, 1955	5.2	40.1	29,060	43.3	31,350		
1956	(a)	391	June 29, 1956	7.4	77.7	56,370	85.1	61,760		
1957	(a)	378	June 5, 1957	11	62.6	45,310	53.6	38,790		
1958	(a)	335	June 24, 1958	8.0	70.1	50,760	72.5	52,490		
1959	(a)	165	May 12, 1959	12	46.9	33,940	43.0	31,110		
1960	1714	216	June 2, 1960	9.8	38.5	27,980	-	-		

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2885. Walker Lake near Hawthorne, Nev.

Location.--Lat 38°35'05", long 118°42'15", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.2, T.8 N., R.29 E., 5 $\frac{1}{2}$ miles northwest of Hawthorne.

Records available.--August 1928 to September 1960. Occasional readings prior to August 1928.

Gage.--Bench mark, at U. S. Naval Depot, 4,053.41 ft above mean sea level, adjustment of 1912.

Extremes.--1928-60: Maximum elevation observed, 4,051.8 ft Mar. 13, 1928 (Indian Service); minimum observed, 3,983.43 ft Sept. 23, 1960.
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							
Date	Elevation	Date	Elevation	Date	Elevation	Date	Elevation
1950		1954-Con.		1957		1958-Con.	
Oct. 6	3,999.0	Aug. 2	3,995.5	Jan. 2	3,991.6	Sept. 3	3,990.3
Nov. 4	3,998.7	Sept. 7	3,994.7	Feb. 5	3,991.5	Dec. 1	3,989.8
Dec. 11	3,998.4	Oct. 30	3,994.2	Mar. 7	3,991.5		
		Oct. 1	3,984.2	Apr. 8	3,991.5	1959	
1951		Oct. 29	3,983.8	May 2	3,991.5	Feb. 4	3,989.4
Feb. 13	3,998.9	Dec. 1	3,993.4	June 4	3,991.5	Mar. 6	3,989.4
Mar. 28	3,999.0			July 1	3,991.4	Apr. 3	3,989.5
May 16	3,999.0	1955		July 15	3,991.1	June 25	3,989.1
June 7	3,998.8	Jan. 6	3,993.3	Aug. 1	3,990.8	July 2	3,988.8
July 5	3,998.8	July 6	3,992.1	Sept. 3	3,990.2	Aug. 6	3,988.4
Sept. 28	3,997.7	Aug. 1	3,992.0	Oct. 4	3,989.6	Sept. 2	3,987.8
Oct. 3	3,997.3	Sept. 1	3,991.3	Nov. 1	3,989.3	Oct. 5	3,987.1
Nov. 5	3,996.0			Dec. 2	3,989.2	Nov. 6	3,986.7
		1956				Dec. 8	3,986.4
1952		Apr. 16	3,990.4	1958			
Feb. 25	3,996.6	May 2	3,990.7	Jan. 7	3,989.1	1960	
Apr. 22	3,998.0	June 5	3,991.0	Feb. 5	3,989.0	July 7	3,984.8
Dec. 10	3,999.0	July 3	3,992.0	Mar. 11	3,989.0	Sept. 6	3,983.7
		Aug. 1	3,992.5	Apr. 9	3,989.0	23	3,983.4
1954		Sept. 6	3,992.2	May 2	3,989.2		
Apr. 15	3,996.5	Oct. 3	3,991.5	June 2	3,989.5		
May 13	3,996.4	Nov. 5	3,991.5	July 7	3,990.5		
June 30	3,995.8	Dec. 3	3,991.6	Aug. 4	3,990.4		

2890. Virginia Creek near Bridgeport, Calif.

Location.--Lat 38°11'30", long 119°12'30", near center of W $\frac{1}{2}$ sec.22, T.4 N., R.25 E., on right bank $\frac{1}{4}$ miles downstream from Clearwater Creek, 3 miles upstream from mouth, and $\frac{1}{2}$ miles southeast of Bridgeport.

Drainage area.--64 sq mi, approximately.

Records available.--October 1953 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 6,700 ft (from topographic map).

Average discharge.--7 years (1953-60), 15.0 cfs (10,860 acre-ft per year).

Extremes.--1953-60: Maximum discharge, 1,300 cfs Dec. 23, 1955 (gage height, 8.40 ft), from rating curve extended above 170 cfs on basis of slope-area measurement of peak flow; minimum, 1.0 cfs Aug. 18, 1960.

Remarks.--Flow partly regulated by Virginia Lakes and other lakes near headwaters. Diversions for irrigation of about 3,000 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	9.34	11.2	9.05	9.31	10.3	13.3	23.9	16.1	7.01	3.57	3.77	4.36	10.1
1955	6.14	9.04	9.54	9.98	9.95	11.8	13.6	12.7	17.7	5.72	3.85	4.10	9.49
1956	5.29	7.78	43.4	16.8	12.1	20.1	30.9	40.0	64.0	51.3	26.2	18.2	28.1
1957	16.9	15.6	14.0	13.2	16.9	14.7	17.2	17.5	29.5	10.9	4.24	4.99	14.6
1958	7.82	9.88	9.44	8.52	10.3	11.2	45.5	77.6	44.8	30.2	19.9	12.6	24.1
1959	11.2	13.4	12.2	12.0	12.1	15.4	22.1	12.3	9.03	3.17	2.59	4.67	10.8
1960	7.55	7.58	7.52	7.91	9.69	14.7	14.7	9.04	8.51	2.80	1.99	3.67	7.96

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	574	665	557	572	573	816	1,420	991	417	220	232	260	7,300
1955	378	538	586	614	552	724	811	784	1,050	352	237	244	6,870
1956	325	463	2,670	1,030	696	1,240	1,840	2,460	3,810	3,160	1,610	1,080	20,380
1957	1,040	928	861	813	940	906	1,030	1,070	1,750	668	261	297	10,560
1958	481	588	580	524	573	690	2,710	4,770	2,670	1,850	1,230	748	17,410
1959	686	795	751	736	673	944	1,310	758	538	195	159	278	7,820
1960	465	451	462	486	557	904	876	556	507	172	122	218	5,780

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950									
1951									
1952									
1953									
1954	1444	74	Apr. 14, 1954	2.3	10.1	7,300	9.67	7,000	
1955	1444	45	June 9, 1955	1.9	9.49	6,870	12.2	8,830	
1956	1444	1,300	Dec. 23, 1955	4.0	28.1	20,380	27.2	19,760	
1957	1514	54	June 4, 1957	3.4	14.6	10,560	13.0	9,380	
1958	1564	375	Apr. 20, 1958	5.1	24.1	17,410	24.9	18,000	
1959	1634	76	Apr. 4, 1959	1.9	10.8	7,820	9.63	6,970	
1960	1714	39	Mar. 25, 1960	1.1	7.96	5,780	-	-	

2895. Green Creek near Bridgeport, Calif.

Location.--Lat 38°10'25", long 119°14'00", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.29, T.4 N., R.25 E., on right bank 130 ft downstream from county road bridge and $\frac{5}{2}$ miles south of Bridgeport.

Drainage area.--19.4 sq mi.

Records available.--October 1953 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 6,850 ft (from topographic map).

Average discharge.--7 years (1953-60), 27.8 cfs (20,130 acre-ft per year).

Extremes.--1953-60: Maximum discharge, 307 cfs Dec. 23, 1955, from rating curve extended above 220 cfs on basis of slope-area measurement of peak flow and logarithmic plotting; maximum gage height, 3.46 ft Feb. 2, 1956 (backwater from ice); minimum discharge, 2.5 cfs Sept. 27, 1960.

Remarks.--Flow regulated by West, Green, East, Summit, and other lakes.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	6.69	6.28	5.70	5.60	8.18	11.9	27.7	64.6	56.3	47.7	11.8	5.06	21.5
1955	4.32	4.97	5.84	7.87	7.04	7.54	12.8	41.5	92.9	46.9	22.0	5.68	21.6
1956	4.48	5.66	26.6	22.0	13.8	15.2	29.5	75.2	174	137	61.9	25.7	49.4
1957	16.4	13.2	10.6	9.57	10.4	11.6	17.4	39.0	119	53.7	26.1	8.97	28.0
1958	7.16	7.67	6.74	6.60	8.67	9.30	22.4	90.2	115	98.9	63.1	19.9	38.2
1959	8.49	7.20	6.13	7.79	8.55	9.71	23.7	33.8	55.3	31.9	13.2	9.53	17.9
1960	8.79	4.85	4.18	4.96	6.20	9.65	23.5	41.6	67.3	24.5	19.5	3.91	18.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	412	374	350	344	453	734	1,650	3,970	3,350	2,930	723	301	15,590
1955	265	296	359	484	391	464	761	2,550	5,530	2,880	1,350	338	15,670
1956	276	337	1,640	1,350	791	936	1,760	4,620	10,350	8,430	3,810	1,530	35,830
1957	1,010	785	655	588	580	714	1,030	2,400	7,060	3,500	1,600	534	20,260
1958	440	456	414	406	481	572	1,330	5,550	6,820	6,080	3,880	1,180	27,610
1959	522	428	377	479	475	597	1,410	2,080	3,290	1,960	814	567	15,000
1960	541	289	257	305	357	594	1,400	2,560	4,000	1,510	1,200	232	13,240

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950							
1951							
1952							
1953							
1954	1444	135	May 20, 1954	4.2	21.5	15,590	21.2
1955	1444	237	June 10, 1955	4.2	21.6	15,670	23.5
1956	1444	307	Dec. 23, 1955	4.0	49.4	35,830	49.6
1957	1514	184	June 3, 1957	6.3	28.0	20,260	26.4
1958	1564	233	June 24, 1958	5.3	38.2	27,610	38.2
1959	1634	73	June 14, 1959	4.2	17.9	13,000	17.6
1960	1714	109	June 5, 1960	2.6	18.2	13,240	-

2900. Summers Creek near Bridgeport, Calif.

Location.--Lat 38°09'15", long 119°15'30", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T.3 N., R.25 E., on right bank $7\frac{1}{2}$ miles southwest of Bridgeport.

Drainage area.--12.6 sq mi.

Records available.--October 1953 to November 1959.

Gage.--Water-stage recorder. Altitude of gage is 7,000 ft, revised (from topographic map).

Average discharge.--6 years (1953-59), 5.92 cfs (4,290 acre-ft per year).

Extremes.--1953-59: Maximum discharge, 690 cfs Dec. 23, 1955 (gage height, 5.95 ft in gage well, 6.2 ft from floodmark), from rating curve extended above 58 cfs on basis of slope-area measurement of peak flow; minimum, 0.4 cfs Sept. 1, 1959.

Remarks.--Flow partly regulated by Tamarack Lake, several smaller lakes, and a transarea diversion to Twin Lakes. Diversions for irrigation of about 160 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	4.12	3.13	2.33	2.12	2.42	4.85	9.54	5.72	6.17	3.73	2.06	2.18	4.03
1955	2.65	2.66	2.46	2.33	2.36	2.83	4.26	4.39	7.24	5.87	2.25	2.37	3.47
1956	2.01	2.14	13.9	6.53	4.10	6.02	11.5	16.4	21.6	18.9	9.56	5.17	9.84
1957	8.46	7.09	5.16	4.35	5.19	6.21	7.08	6.91	12.0	7.68	3.02	2.89	6.34
1958	3.63	3.49	3.22	2.88	3.77	3.22	9.44	24.2	18.2	14.8	8.40	4.30	8.32
1959	3.28	3.62	3.53	4.35	3.12	4.27	5.84	4.01	4.28	2.80	1.19	1.96	3.52
1960	1.94	#2.05	-	-	-	-	-	-	-	-	-	-	-

* Not previously published; partly estimated on basis of records for nearby streams.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	253	186	143	130	135	298	568	352	367	229	127	130	2,920
1955	163	158	151	143	131	174	253	270	431	361	138	141	2,510
1956	124	128	854	401	236	370	682	1,010	1,280	1,160	588	307	7,140
1957	521	422	317	267	268	382	421	425	715	472	166	172	4,590
1958	223	208	198	177	209	198	562	1,490	1,080	908	517	256	6,030
1959	202	216	217	267	173	262	348	246	255	172	73	116	2,550
1960	119	#122	-	-	-	-	-	-	-	-	-	-	-

* Not previously published; partly estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954	1444	42	Mar. 9, 1954	1.1	4.03	2,920	3.88	2,810
1955	1444	16	Nov. 15, 1954	1.0	3.47	2,510	4.35	3,150
1956	1444	690	Dec. 23, 1955	1.6	9.84	7,140	10.1	7,290
1957	1514	a26	(b)	.8	6.34	4,590	5.47	3,960
1958	1564	70	May 6, 1958	2.5	8.32	6,030	8.33	6,030
1959	1634	18	Apr. 1, 1959	.8	3.52	2,550	-	-
1960	1634	-	-	-	-	-	-	-

a Maximum recorded.

b May 21, June 7, 1957.

2905. Robinson Creek at Twin Lakes outlet, near Bridgeport, Calif.

Location.--Lat 38°10'20", long 119°19'25", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.4 N., R.23 E., on left bank a quarter of a mile downstream from Twin Lakes and 8 miles southwest of Bridgeport.

Drainage area.--34.7 sq mi.

Records available.--October 1953 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 7,050 ft (from topographic map).

Average discharge.--7 years (1953-60), 55.2 cfs (39,960 acre-ft per year).

Extremes.--1953-60: Maximum discharge, 445 cfs June 29, 1956 (gage height, 4.35 ft); no flow for many days in 1954-55, 1958.
Maximum discharge known, 660 cfs June 21, 1911 (gage height, 5.2 ft), at site 2 $\frac{1}{2}$ miles downstream.

Remarks.--Flow regulated by Twin Lakes.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	23.5	1.17	0	0	0	2.35	42.5	130	116	104	95.5	28.3	45.7
1955	12.0	.87	0	0	0	0	55.4	59.1	133	98.6	93.0	47.3	41.8
1956	9.80	5.68	1.07	38.4	20.9	17.5	70.2	107	278	289	122	84.2	87.0
1957	34.6	7.79	12.4	20.0	19.4	22.1	57.3	69.9	176	119	98.5	60.3	58.2
1958	16.9	.67	.20	.10	.04	8.85	50.4	143	240	213	126	65.5	72.5
1959	21.7	12.6	18.0	20.0	22.5	18.1	79.4	74.5	116	78.9	57.8	22.4	45.2
1960	21.9	.79	1.62	.31	.21	.96	59.5	74.6	118	91.6	46.5	16.6	36.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	1,440	69	0	0	0	145	2,530	7,990	6,900	6,420	5,870	1,680	33,040
1955	735	52	0	0	0	0	3,290	3,630	7,920	6,070	5,720	2,820	30,240
1956	602	338	66	2,360	1,200	1,080	4,180	6,560	16,560	17,740	7,480	5,010	63,180
1957	2,130	464	759	1,230	1,080	1,360	3,410	4,300	10,480	7,300	6,060	3,590	†42,160
1958	1,040	40	12	6.1	2.0	543	3,000	8,770	14,280	13,110	7,760	3,900	52,460
1959	1,340	751	1,100	1,230	1,250	1,110	4,730	4,580	6,890	4,850	3,550	1,330	32,710
1960	1,340	47	99	19	12	59	3,540	4,590	7,010	5,640	2,860	989	26,200

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954	1444	225	May 21, 1954	0	45.7	33,040	44.7	32,320
1955	1444	216	June 14, 1955	0	41.8	30,240	42.1	30,460
1956	1444	445	June 29, 1956	-	87.0	63,180	90.3	65,520
1957	1514	270	June 17, 1957	2.9	58.2	†42,160	55.1	39,900
1958	1564	363	June 25, 1958	0	72.5	52,460	75.4	54,560
1959	1634	136	June 15, 1959	3.9	45.2	32,710	42.9	31,010
1960	1714	141	June 16, 1960	.1	36.1	26,200	-	-

† Corrected.

2915. Buckeye Creek near Bridgeport, Calif.

Location.--Lat 38°14'20", long 119°19'30", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.4, T.4 N., R.24 E., on right bank at Buckeye Hot Springs, 0.6 mile downstream from Eagle Creek and 5 $\frac{1}{2}$ miles southwest of Bridgeport.

Drainage area.--45 sq mi, approximately.

Records available.--November 1910 to September 1914 (fragmentary), October 1953 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 6,900 ft (from topographic map). November 1910 to September 1914 staff gage at site half a mile downstream at different datum.

Average discharge.--8 years (1911-12, 1953-60), 55.7 cfs (40,330 acre-ft per year).

Extremes.--1953-60: Maximum discharge, 700 cfs Dec. 23, 1955 (gage height, 4.00 ft), from rating curve extended above 360 cfs on basis of slope-area measurement of peak flow; minimum, 3.3 cfs Dec. 12, 1959.

Flood of June 21, 1911, reached an observed stage of 4.8 ft (discharge not determined), site and datum then in use.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	20.2	19.8	16.6	15.1	17.2	27.6	72.9	163	116	61.7	25.0	15.2	47.7
1955	13.0	13.6	14.2	14.1	13.5	15.6	27.9	94.8	169	64.6	26.4	16.4	40.3
1956	14.0	14.3	48.3	37.8	27.7	33.6	74.0	186	345	247	97.0	53.5	98.3
1957	41.4	33.7	28.0	23.4	23.9	25.5	45.5	105	220	89.9	32.0	21.2	57.5
1958	19.7	19.5	18.5	16.9	17.4	18.0	41.5	226	272	192	90.5	40.8	81.5
1959	26.0	21.7	18.6	19.5	19.8	26.5	60.1	84.1	105	39.5	18.1	21.5	35.4
1960	16.8	13.1	11.0	10.2	13.2	21.4	52.6	85.7	114	36.8	16.2	11.3	33.5

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	1,240	1,180	1,020	930	956	1,700	4,340	10,050	6,900	3,800	1,540	904	34,560
1955	801	807	871	865	752	962	1,660	5,830	10,030	3,970	1,620	978	29,150
1956	861	848	2,970	2,320	1,590	2,070	4,400	11,410	20,550	15,210	5,960	3,180	71,370
1957	2,540	2,010	1,720	1,440	1,320	1,560	2,710	6,460	13,110	5,530	1,970	1,260	41,630
1958	1,210	1,160	1,140	1,040	964	1,110	2,470	13,890	16,190	11,820	5,570	2,430	58,990
1959	1,600	1,290	1,140	1,200	1,100	1,630	3,580	5,170	6,260	2,430	1,110	1,280	27,790
1960	1,030	780	674	629	758	1,320	3,130	5,270	6,790	2,260	994	684	24,320

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954	1444	404	May 20, 1954	13	47.7	34,560	46.4	33,600
1955	1444	438	June 7, 1955	11	40.3	29,150	43.3	31,350
1956	1444	700	Dec. 23, 1955	9.6	98.3	71,370	101	72,960
1957	1514	414	June 3, 1957	18	57.5	41,630	53.7	38,870
1958	1564	540	June 23, 1958	11	81.5	58,990	82.2	59,510
1959	1634	201	June 6, 1959	13	38.4	27,790	36.3	26,240
1960	1714	261	June 2, 1960	9	33.5	24,320	-	-

2920. Swager Creek near Bridgeport, Calif.

Location.--Lat 38°17'00", long 119°17'50", in SE¼NW¼ sec.23, T.5 N., R.24 E., on right bank three-quarters of a mile downstream from Yaney Canyon and 4 miles northwest of Bridgeport.

Drainage area.--53 sq mi, approximately.

Records available.--June 1911 to September 1915 (fragmentary), October 1953 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 6,620 ft (from topographic map). June 1911 to September 1915 staff gages at approximately same site at different datums.

Average discharge.--8 years (1911-12, 1953-60), 11.7 cfs (8,470 acre-ft per year).

Extremes.--1911-15, 1953-60: Maximum discharge, 585 cfs Dec. 23, 1955 (gage height, 6.24 ft), from rating curve extended above 175 cfs on basis of slope-area measurement of peak flow; minimum observed, 0.5 cfs Apr. 20, 1912.

Remarks.--Diversions for irrigation of about 1,000 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	8.52	9.10	7.69	7.68	8.55	14.4	21.3	11.7	6.31	2.25	1.81	2.30	8.45
1955	5.11	7.19	6.97	8.04	8.27	10.1	7.30	7.80	6.25	2.55	1.89	1.82	6.09
1956	4.17	5.25	17.9	13.5	11.6	22.5	44.0	57.8	40.2	15.9	9.08	9.20	20.9
1957	9.96	9.66	8.68	8.40	11.8	12.8	13.7	18.5	14.6	3.47	2.41	3.32	9.78
1958	6.79	7.35	6.80	6.85	9.44	8.94	51.7	109	44.0	13.8	13.6	9.48	24.0
1959	9.82	11.0	10.4	10.3	11.5	15.9	17.2	9.56	4.41	1.95	1.73	2.89	8.87
1960	5.68	5.73	5.36	5.68	6.81	7.76	6.80	4.59	3.04	1.94	1.67	2.64	4.80

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	524	541	473	472	475	883	1,270	721	376	138	111	137	6,120
1955	314	428	428	494	459	620	434	480	372	157	116	108	4,410
1956	256	312	1,100	831	668	1,380	2,620	3,550	2,390	980	558	547	15,190
1957	612	587	534	517	658	789	815	1,140	868	213	148	198	7,080
1958	416	437	418	421	524	549	3,080	6,700	2,620	847	836	564	17,410
1959	604	655	640	636	639	978	1,020	568	262	120	106	172	6,420
1960	349	341	329	349	392	477	404	282	181	119	103	157	3,480

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954	1444	77	Mar. 9, 1954	1.7	8.45	6,120	7.94	5,750
1955	1444	24	Mar. 11, 1955	1.6	6.09	4,410	6.78	4,910
1956	1444	585	Dec. 23, 1955	1.9	20.9	15,190	21.0	15,260
1957	1514	51	May 18, 1957	1.7	9.78	7,080	9.14	6,620
1958	1564	361	Aug. 14, 1958	3.7	24.0	17,410	24.9	18,040
1959	1634	35	Mar. 30, 1959	1.5	8.87	6,420	7.66	5,540
1960	1714	20	Mar. 7, 1960	1.4	4.80	3,480	-	-

2925. Bridgeport Reservoir near Bridgeport, Calif.

Location.--Lat 38°19'30", long 119°12'50", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.34, T.6 N., R.25 E., at Bridgeport Dam on East Walker River, $\frac{4}{5}$ miles north of Bridgeport.

Drainage area.--362 sq mi.

Records available.--March 1926 to September 1960. Month-end contents only for some periods, published in WSP 1314.

Gage.--Float gage. Datum of gage is at mean sea level.

Extremes.--1926-60: Maximum contents, 44,580 acre-ft June 12, 1938, June 25, 1958 (elevation, 6,460.7 ft); no contents during fall of 1929, 1930, 1960.

Remarks.--Reservoir is formed by earth-fill, rock-faced dam. Storage began Dec. 8, 1923. Dam completed in November 1924. Capacity, 42,460 acre-ft between elevations 6,415 (approximate elevation of bottom of reservoir) and 6,460 ft (crest of spillway). Elevation of sill of outlet gage, 6,412 ft. No dead storage. Figures given herein represent total contents. Water is used for irrigation by Walker River Irrigation District.

Cooperation.--Elevations and capacity table furnished by Walker River Irrigation District.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	5,800	23,520	35,300	41,730	42,460	43,980	42,760	40,270	43,370	35,300	26,530	20,340
1952	21,600	25,210	29,640	33,980	31,700	20,820	9,430	10,320	32,330	42,920	35,830	29,760
1953	29,040	33,220	35,300	35,570	40,120	41,730	39,280	35,440	37,320	39,120	26,200	20,820
1954	21,600	25,430	28,820	32,330	36,360	40,560	37,040	30,970	25,430	14,430	6,990	3,510
1955	4,450	7,700	10,910	13,720	17,230	20,720	18,960	13,920	15,320	10,040	3,400	1,540
1956	1,740	4,970	23,000	33,730	34,110	34,770	35,700	39,690	42,920	42,460	36,100	27,550
1957	26,640	27,440	30,970	35,040	42,170	42,610	38,840	35,040	42,460	31,450	17,580	10,910
1958	13,720	17,580	21,310	24,240	30,240	36,760	24,990	32,840	43,980	43,070	38,570	24,560
1959	21,990	25,760	30,850	36,900	41,580	43,070	38,840	32,460	26,530	16,820	6,460	3,780
1960	5,370	7,890	10,850	13,850	18,690	22,680	21,210	16,580	14,210	7,650	219	1

a Estimated from contents for the following day.

2930. East Walker River near Bridgeport, Calif.

Location.--Lat 38°19'40", long 119°12'50", in SW 1/4 sec. 34, T.6 N., R.25 E., on right bank 1,500 ft downstream from Bridgeport Reservoir, 5 miles north of Bridgeport, and 10 miles upstream from Sweetwater Creek.

Drainage area.--362 sq mi.

Records available.--July 1911 to September 1914 (gage heights only), October 1921 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 6,400 ft (from topographic map). Prior to Oct. 1, 1921, staff gage at site half a mile upstream at different datum. Oct. 1, 1921, to Feb. 21, 1924, water-stage recorder at site 1 mile downstream at different datum. Feb. 22, 1924, to Sept. 30, 1931, water-stage recorder and Oct. 1, 1931, to May 25, 1939, staff gage, at present site at datum 2.34 ft lower.

Average discharge.--37 years (1922-24, 1925-60), 132 cfs (95,560 acre-ft per year).

Extremes.--1921-60: Maximum discharge, 1,240 cfs Jan. 22, 1943; maximum gage height, 4.95 ft Jan. 22, 1943 (top of surge); minimum daily, 0.2 cfs Nov. 2-29, Dec. 1-22, 25-28, 1955, Jan. 17-25, 1956.

Remarks.--Diversion for irrigation of meadow pasture lands near Bridgeport above reservoir and one small diversion above gage for irrigation below station. Flow regulated by Bridgeport Reservoir since Dec. 8, 1923 (see preceding page). Records of chemical analyses for the period October 1958 to September 1960 are published in reports of Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	27.9	3.72	172	50.6	108	54.7	134	151	291	257	205	168	135
1952	35.0	6.23	6.85	6.88	156	298	721	562	371	454	381	254	271
1953	124	22.0	62.9	125	43.4	61.4	122	161	212	502	301	187	145
1954	58.4	7.96	6.71	5.71	6.07	82.4	131	267	216	250	161	95.8	113
1955	24.4	9.05	10.9	6.75	5.00	18.8	65.0	139	204	163	151	79.3	73.4
1956	48.1	1.10	5.21	39.0	119	139	161	319	646	598	304	311	224
1957	143	88.0	26.9	23.4	24.9	110	136	207	249	327	272	170	149
1958	33.8	20.6	21.0	21.3	17.4	17.0	480	369	412	423	354	366	212
1959	131	24.4	11.8	4.50	25.1	112	153	176	210	186	178	84.0	109
1960	36.2	8.53	2.50	2.49	2.50	25.5	70.7	133	166	156	139	34.8	65.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,720	222	10,600	3,110	5,970	3,370	7,990	9,280	17,330	15,790	12,630	9,970	97,980
1952	2,030	371	421	423	8,950	18,310	42,900	34,550	22,070	27,910	23,450	15,090	196,500
1953	7,630	1,310	3,870	7,660	2,410	3,770	7,230	9,920	12,600	18,590	18,510	11,140	104,600
1954	3,590	474	413	351	337	5,070	11,340	16,420	12,870	15,400	9,890	5,700	81,860
1955	1,500	538	668	415	278	1,150	3,870	8,520	12,170	10,050	9,270	4,720	53,150
1956	2,960	65	320	2,400	6,830	8,540	9,580	19,600	38,420	36,750	18,660	18,490	162,600
1957	8,810	5,240	1,650	1,440	1,380	6,750	8,060	12,730	14,800	20,120	16,710	10,140	107,800
1958	2,080	1,220	1,290	1,310	966	1,050	28,570	22,720	24,540	25,980	21,740	21,800	153,300
1959	8,080	1,450	726	276	1,390	6,910	9,090	10,810	12,470	11,440	10,950	5,000	78,590
1960	2,230	507	154	153	144	1,570	4,210	8,200	9,910	9,580	8,560	2,070	47,290

Yearly discharge, in cubic feet per second

Year	MSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet		
		Discharge	Date							
1950	-	-	-	-	-	-	98.0	-	70,980	-
1951	1214	714	June 24, 1951	0.6	135	97,980	122	88,260	-	-
1952	1244	985	July 31, 1952	5.0	271	196,500	284	206,500	-	-
1953	1284	475	July 16, 1953	12	145	104,600	133	96,310	-	-
1954	1344	328	June 4, 1954	5.0	113	81,860	111	80,080	-	-
1955	1394	a242	June 12-21, 1955	2.2	73.4	53,150	74.3	53,790	-	-
1956	1444	981	July 1, 1956	.2	224	162,600	241	175,000	-	-
1957	1514	a385	July 19-21, 1957	22	149	107,800	134	96,720	-	-
1958	1564	982	June 26, 1958	17	212	153,300	220	158,900	-	-
1959	1634	259	Oct. 1, 2, 1958	4.0	109	78,590	98.4	71,230	-	-
1960	1714	a265	June 6-8, 1960	2.4	65.1	47,290	-	-	-	-

a Maximum daily.

2935. East Walker River above Strosnider ditch, near Mason, Nev.

Location.--Lat 38°48'50", long 119°02'50", in NW¹SW¹ sec.14, T.11 N., R.26 E., on right bank 0.8 mile upstream from head of Strosnider ditch, 12 miles southeast of Mason, and 13½ miles southeast of Yerington.

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

Records available.--January 1947 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 4,574.10 ft above mean sea level, datum of 1929. Prior to Oct. 24, 1957, at site 400 ft upstream at datum 0.56 ft higher.

Average discharge.--13 years (1947-60), 132 cfs (95,560 acre-ft per year).

Extremes.--1947-60: Maximum discharge, 1,640 cfs Dec. 24, 1955 (gage height, 6.87 ft, site and datum then in use), from rating curve extended above 1,100 cfs by logarithmic plotting; minimum, 3.1 cfs Mar. 21, 1946; minimum daily, 3.4 cfs Mar. 21-24, 1946.

Remarks.--Diversions for irrigation above station. Flow regulated by Bridgeport Reservoir (see p. 220).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	36.7	28.7	178	80.0	104	63.1	123	138	253	216	187	139	129
1952	60.8	27.8	31.3	25.0	162	284	744	658	499	473	416	247	302
1953	139	59.0	77.2	131	71.5	58.4	94.5	145	193	266	258	160	138
1954	87.2	35.9	28.7	27.7	23.1	69.2	142	226	185	192	131	85.2	103
1955	34.5	27.2	31.4	27.6	27.0	20.0	46.2	115	165	121	97.5	65.3	65.0
1956	42.4	25.3	84.5	78.0	132	155	186	336	674	629	280	295	243
1957	173	120	62.1	46.2	50.2	112	99.1	194	208	255	212	157	141
1958	55.6	47.2	42.3	38.3	35.3	35.3	478	412	435	412	352	326	223
1959	146	63.2	43.1	27.7	40.6	112	130	156	161	143	134	74.4	103
1960	33.2	22.8	21.0	21.2	20.2	18.9	54.9	99.0	114	97.0	100	27.8	52.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,260	1,710	10,920	4,920	5,780	3,880	7,320	8,480	15,060	13,300	11,530	8,280	95,440
1952	3,740	1,650	1,920	1,540	9,290	17,470	44,280	40,460	29,690	29,100	25,570	14,680	219,400
1953	8,540	3,510	4,750	8,050	3,970	3,590	5,630	8,890	11,500	16,370	15,870	9,550	100,200
1954	5,360	2,020	1,770	1,710	1,290	4,250	8,440	13,910	11,010	11,780	8,050	4,950	74,540
1955	2,120	1,620	1,930	1,700	1,500	1,230	2,750	7,080	9,830	7,410	5,990	3,890	47,050
1956	2,600	1,500	5,190	4,790	7,610	9,520	11,070	20,660	40,080	38,670	17,190	17,540	176,400
1957	10,640	7,160	3,820	2,840	2,790	6,880	5,890	11,950	12,350	15,710	13,050	9,340	102,400
1958	3,420	2,810	2,600	2,350	1,960	2,170	28,430	25,310	25,910	25,340	21,670	19,390	161,400
1959	8,960	3,760	2,650	1,700	2,260	6,910	7,730	9,620	9,570	8,760	8,230	4,430	74,580
1960	2,040	1,350	1,290	1,300	1,160	1,160	3,270	6,090	6,780	5,960	6,160	1,650	36,230

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	91.1	65,930
1951	1214	489	June 25, 1951	20	129	95,440	119	85,860
1952	1244	1,400	July 14, 1952	16	302	219,400	128	92,900
1953	1284	409	July 19, 1953	40	138	100,200	128	92,570
1954	1344	259	June 8, 1954	19	103	74,540	98.1	71,060
1955	1394	243	July 22, 1955	9.6	65.0	47,050	70.0	50,670
1956	1444	1,640	Dec. 24, 1955	14	243	176,400	260	188,800
1957	1514	318	July 21, 1957	41	141	102,400	124	89,630
1958	1564	955	Aug. 17, 1958	33	223	161,400	232	167,900
1959	1634	372	July 24, 1959	26	103	74,580	88.3	63,890
1960	1714	179	June 9, 1960	11	52.7	36,230	-	-

2952. West Walker River at Leavitt Meadows, near Coleville, Calif.

Location.--Lat 38°19'50", long 119°33'05", in NW 1/4 sec. 34, T.6 N. R.22 E., on left bank at Leavitt Meadows Lodge, 500 ft upstream from Brownie Creek, 0.9 mile downstream from Leavitt Creek, and 16 1/2 miles south of Coleville.

Drainage area.--73 sq mi, approximately.

Records available.--July 1945 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 7,111.32 ft above mean sea level (levels by Bureau of Reclamation). Prior to Oct. 1, 1957, water-stage recorder 0.2 mile upstream at different datum.

Average discharge.--15 years (1945-60), 157 cfs (113,700 acre-ft per year).

Extremes.--1945-60: Maximum discharge, 2,810 cfs Nov. 21, 1950 (estimated on basis of records for West Walker River below Little Walker River, near Coleville); minimum, 3.8 cfs Jan. 11, 1960.

Remarks.--No storage or regulation above station.

Cooperation.--Records prior to October 1957, not previously published by Geological Survey, furnished by Sierra Pacific Power Co.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1945	-	-	-	-	-	-	-	-	-	429	89.4	33.0	-
1946	47.1	68.8	45.6	46.1	26.2	47.5	254	613	548	220	45.3	24.0	166
1947	31.5	24.0	27.6	23.8	27.4	63.3	210	617	322	89.7	22.5	11.1	123
1948	25.0	26.6	22.2	17.5	12.7	14.0	77.2	385	629	256	41.6	14.5	127
1949	11.4	10.8	9.7	9.2	9.1	12.1	238	553	547	107	26.8	13.8	129
1950	11.6	13.1	13.4	12.4	19.7	35.4	215	565	668	249	37.2	21.8	157
1951	19.4	378	266	59.6	45.9	231	231	471	558	260	65.5	19.0	202
1952	12.5	17.0	27.2	16.7	18.4	28.1	191	709	916	619	170	62.3	233
1953	24.2	18.2	36.4	31.0	39.4	38.5	193	242	652	508	71.5	24.7	157
1954	15.1	14.0	12.9	10.3	16.6	44.9	231	591	384	152	32.0	14.5	127
1955	9.3	10.1	13.2	17.1	20.4	23.6	83.8	421	662	176	38.4	16.8	124
1956	13.7	14.7	161	111	72.8	93.8	228	639	1,093	641	166	65.0	275
1957	42.6	41.6	35.7	32.9	36.0	50.7	108	280	554	128	35.9	16.1	113
1958	20.4	22.0	18.4	16.1	21.0	27.3	117	805	674	555	181	45.1	91,840
1959	20.1	15.5	12.4	16.9	19.2	40.3	217	320	382	71.5	19.9	40.5	97.8
1960	20.8	11.2	6.69	7.96	15.6	40.3	192	365	407	70.5	19.1	9.51	96.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1945	-	-	-	-	-	-	-	-	-	26,390	5,480	1,960	-
1946	2,890	4,090	2,800	2,830	1,450	2,920	15,080	37,650	32,560	13,510	2,780	1,430	120,000
1947	1,940	1,430	1,700	1,460	1,520	3,880	12,470	37,860	19,150	5,500	1,380	662	88,950
1948	1,530	1,580	1,560	1,070	730	856	4,590	32,620	37,560	15,720	2,550	859	91,840
1949	697	843	596	562	505	745	14,140	33,940	32,490	6,590	1,840	818	93,350
1950	727	776	824	758	1,100	2,170	12,800	34,670	40,850	15,310	2,280	1,290	113,600
1951	1,190	22,470	16,350	3,660	2,540	3,040	13,710	28,920	33,150	15,930	4,020	1,130	146,100
1952	770	1,010	1,670	1,150	1,060	1,720	11,380	43,510	54,410	38,000	10,420	3,700	168,800
1953	1,490	1,080	2,250	1,900	2,190	2,360	11,500	14,840	38,720	31,160	4,390	1,470	113,300
1954	928	831	794	632	921	2,750	13,700	36,290	22,790	9,340	1,970	860	91,810
1955	570	602	811	1,050	1,130	1,450	4,980	25,820	39,320	10,780	2,350	998	89,860
1956	841	873	9,860	6,820	4,180	5,760	13,540	39,200	64,930	39,370	10,170	3,860	199,400
1957	2,620	2,480	2,190	2,020	2,000	3,120	6,450	17,250	32,980	7,890	2,080	960	82,000
1958	1,260	1,310	1,130	1,110	1,170	1,680	6,970	49,510	52,010	34,150	11,100	2,560	163,900
1959	1,240	922	762	1,040	1,070	2,480	12,900	19,670	22,720	4,390	1,220	2,410	70,820
1960	1,280	668	411	489	899	2,480	11,410	22,460	24,220	4,330	1,170	566	70,380

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1945	-	-	-	-	-	-	-	-
1946	(a)	936	May 20, 1946	17	166	120,000	159	115,300
1947	(a)	979	May 3, 1947	9	123	88,950	122	88,360
1948	(a)	809	May 26, 1948	8	127	91,840	123	89,300
1949	(a)	1,071	June 10, 1949	6	129	93,350	130	93,740
1950	(a)	1,259	June 1, 1950	10	157	113,600	209	151,500
1951	(a)	b2,810	Nov. 21, 1950	12	202	146,100	152	109,600
1952	(a)	1,675	June 6, 1952	8	233	168,800	235	170,100
1953	(a)	1,320	June 18, 1953	11	157	113,300	154	111,100
1954	(a)	1,120	May 20, 1954	8	127	91,810	126	91,240
1955	(a)	1,414	June 10, 1955	7	124	89,860	138	99,450
1956	(a)	1,910	Dec. 23, 1955	8	275	199,400	269	195,100
1957	(a)	1,440	June 3, 1957	14	113	82,000	108	78,410
1958	1564	c1,440	June 23, 1958	-	226	163,900	225	163,180
1959	1634	c735	May 12, 1959	9.7	97.8	70,820	97.0	70,260
1960	1714	c970	June 2, 1960	5.6	96.9	70,380	-	-

a From files of Sierra Pacific Power Co.

b Estimated on basis of records for West Walker River below Little Walker River, near Coleville.

c Momentary maximum.

2955. Little Walker River near Bridgeport, Calif.

Location.--Lat 38°21'30", long 119°26'30", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.22, T.6 N., R.23 E., on right bank three-quarters of a mile north of Sonora Junction, $1\frac{1}{2}$ 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 1960. Prior to October 1958, published as East Fork West Walker River near Bridgeport.

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.--16 years (1944-60), 49.7 cfs (35,980 acre-ft per year).

Extremes.--1910, 1944-60: Maximum discharge, 994 cfs Dec. 23, 1955 (gage height, 2.80 ft), from rating curve extended above 370 cfs on basis of slope-area measurements at gage heights 2.60 and 2.80 ft; maximum gage height recorded, 3.63 ft Jan. 3, 1945 (backwater from ice); minimum discharge recorded, 4.9 cfs Nov. 17, 1948, but may have been less during periods of ice effect.

Remarks.--Small diversions above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	15.8	65.3	98.4	41.1	33.5	30.8	51.9	116	164	72.5	32.8	18.1	61.7
1952	17.2	17.5	14.4	15.7	16.1	17.7	78.2	226	296	236	83.2	39.7	87.5
1953	27.2	21.6	20.3	25.9	21.4	24.3	48.6	56.6	147	139	37.5	22.9	49.5
1954	19.6	18.2	16.1	13.9	15.9	27.7	53.5	110	63.3	39.0	17.0	13.6	35.8
1955	13.8	15.0	15.2	14.9	16.6	20.4	23.8	61.7	145	55.2	19.9	13.7	34.6
1956	13.7	13.4	60.8	43.1	27.7	39.7	76.6	172	304	212	71.8	40.7	89.7
1957	30.8	27.0	22.3	19.6	24.0	25.0	32.5	73.4	191	70.4	27.4	18.4	46.8
1958	19.2	19.2	17.2	16.5	20.9	19.8	62.2	201	236	164	70.6	32.9	73.5
1959	24.5	22.7	19.8	20.8	21.6	24.3	36.8	57.2	78.7	28.7	13.5	14.3	30.2
1960	13.1	12.2	11.2	11.5	15.0	20.3	28.9	53.9	73.3	22.6	11.4	9.75	23.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	970	3,680	6,050	2,530	1,860	1,900	3,090	7,120	9,750	4,460	2,020	1,080	44,710
1952	1,060	1,040	863	966	928	1,090	4,650	13,670	17,050	14,520	5,120	2,360	63,540
1953	1,670	1,290	1,250	1,590	1,190	1,490	2,890	3,480	6,740	8,550	2,300	1,360	35,800
1954	1,220	1,080	992	857	881	1,700	3,190	6,780	4,950	2,400	1,050	807	25,910
1955	847	893	934	914	924	1,250	1,410	3,790	8,610	3,400	1,220	813	25,000
1956	841	795	3,740	2,650	1,590	2,440	4,560	10,570	18,090	13,040	4,420	2,420	65,160
1957	1,680	1,610	1,370	1,210	1,330	1,540	1,930	4,510	11,390	4,330	1,680	1,100	33,890
1958	1,180	1,140	1,060	1,020	1,160	1,220	3,700	12,340	14,030	10,080	4,340	1,960	53,230
1959	1,510	1,350	1,220	1,280	1,200	1,500	2,190	3,520	4,680	1,770	830	849	21,900
1960	807	728	688	708	865	1,250	1,720	3,310	4,360	1,390	699	580	17,100

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	-
1951	1214	850	Dec. 3, 1950	14	61.7	44,710	51.6	37,330
1952	1244	490	June 7, 1952	12	87.5	63,540	89.2	36,780
1953	1284	289	June 18, 1953	-	49.5	35,800	48.2	34,880
1954	1344	259	May 19, 20, 1954	11	35.8	25,910	34.9	25,290
1955	1394	350	June 9, 1955	12	34.6	25,000	36.3	27,710
1956	1444	994	Dec. 23, 1955	10	89.7	65,160	89.0	64,650
1957	1514	340	June 3, 1957	16	46.8	33,890	44.7	32,400
1958	1564	428	June 23, 1958	-	73.5	53,230	74.5	53,930
1959	1634	134	June 5, 1959	8.9	30.2	21,900	27.7	20,040
1960	1714	169	June 3, 1960	5.5	23.6	17,100	-	-

2960. West Walker River below Little Walker River, near Coleville, Calif.

Location.--Lat 38°22'45", long 119°27'00" in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.9, T.6 N., R.23 E., on left bank 50 ft downstream from Little Walker River, 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 1960. Prior to October 1958, published as "below East Fork."

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.--22 years (1938-60), 254 cfs (183,900 acre-ft per year).

Extremes.--1938-60: 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 measurement of peak flow; minimum, 4.0 cfs Nov. 18, 1948, result of freezeup.
Maximum discharge recorded prior to 1938, 5,800 cfs Dec. 11, 1937, by slope-area measurement.

Remarks.--Station is above diversions except for a few small ranch ditches. Flow very slightly regulated by Poor Lake Reservoir (capacity unknown), 7 miles upstream. Records of chemical analyses for the period October 1958 to September 1960 are published in reports of Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	45.1	539	448	144	124	116	340	741	899	360	102	59.2	327
1952	40.2	43.2	44.6	40.9	49.8	61.3	378	1,217	1,444	1,095	305	124	405
1953	68.7	51.5	53.0	84.5	71.4	85.0	313	568	903	733	139	75.9	246
1954	48.6	45.0	41.1	37.3	50.3	111	349	780	494	204	60.8	44.6	189
1955	30.2	34.5	42.4	43.5	50.5	61.3	131	543	903	243	75.7	43.2	184
1956	29.8	32.0	293	204	122	152	379	941	1,602	973	272	138	429
1957	89.2	84.2	62.4	52.0	79.2	92.5	183	511	1,135	323	95.5	58.5	230
1958	46.9	47.5	46.9	42.1	58.6	63.9	260	1,240	1,328	797	299	107	363
1959	55.9	48.1	42.0	50.4	55.1	89.1	301	423	504	111	45.7	59.9	149
1960	39.2	30.3	23.9	28.3	39.7	77.4	249	459	547	104	41.0	23.1	138

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,770	32,050	27,540	8,840	6,870	7,110	20,230	45,550	53,490	22,150	6,290	3,520	236,400
1952	2,470	2,570	2,740	2,520	2,860	3,770	22,480	74,820	85,930	67,340	18,760	7,390	293,600
1953	4,220	3,070	3,260	5,200	3,960	5,230	18,640	22,630	53,550	45,060	8,560	4,510	177,900
1954	2,990	2,680	2,520	2,290	2,790	6,800	20,770	47,930	29,420	12,540	3,740	2,660	137,100
1955	1,860	2,050	2,600	2,680	2,800	3,770	7,810	33,410	53,720	14,970	4,660	2,570	132,900
1956	1,830	1,910	18,020	12,560	6,990	9,370	22,530	57,890	95,350	59,850	16,750	8,180	311,200
1957	5,480	5,010	3,840	3,200	4,400	5,680	10,910	31,400	67,530	19,830	5,870	3,490	166,800
1958	2,890	2,830	2,880	2,590	3,250	3,930	15,440	76,250	79,020	49,040	18,410	6,380	262,900
1959	3,440	2,860	2,580	3,100	3,060	5,480	17,910	26,010	30,000	6,820	2,810	3,570	107,600
1960	2,410	1,800	1,470	1,740	2,280	4,760	14,830	28,250	32,530	6,390	2,520	1,370	100,400

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1214	6,220	Nov. 20, 1950	33	327	236,400	308	222,900	
1952	1244	2,650	June 8, 1952	29	405	293,600	251	181,800	
1953	1284	2,030	June 19, 1953	45	246	177,900	242	175,500	
1954	1344	1,710	May 19, 1954	31	189	137,100	187	135,400	
1955	1394	2,230	June 10, 1955	27	184	132,900	205	148,200	
1956	1444	5,180	Dec. 23, 1955	20	429	311,200	418	303,800	
1957	1514	2,070	June 3, 1957	39	230	166,800	222	160,900	
1958	1564	2,330	June 24, 1958	36	363	262,900	364	263,200	
1959	1634	866	May 13, 1959	25	149	107,600	144	104,400	
1960	1714	1,270	June 2, 1960	19	158	100,400	-	-	

2965. West Walker River near Coleville, Calif.

Location.--Lat 38°30'55", long 119°27'15", in NW¹/₄NE¹/₄ sec.28, T.8 N., R.23 E., on left bank a quarter of a mile downstream from Rock Creek and 5 miles southeast of Coleville.

Drainage area.--245 sq mi.

Records available.--October 1902 to July 1908 (published as West Fork of Walker River near Coleville 1903, 1905-8 and as Walker River (West Fork) near Coleville 1904), March 1909 to September 1910, June 1915 to March 1938, May 1957 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 5,520 ft (from topographic map). Prior to July 31, 1908, staff gage at site half a mile upstream at different datum. Mar. 1, 1909, to Aug. 31, 1910, staff gage and June 18, 1915, to Aug. 15, 1919, water-stage recorder, near present site at different datums. Aug. 16, 1919, to Mar. 31, 1938, water-stage recorder at site 1,000 ft upstream at different datum.

Average discharge.--31 years (1902-7, 1909-10, 1915-37, 1957-60), 274 cfs (198,400 acre-ft per year).

Extremes.--1915-38, 1957-60: Maximum discharge, 6,500 cfs Dec. 11, 1937, from slope-area measurement of peak flow; minimum, 5 cfs Dec. 3, 1924, Aug. 27, 1931.

Remarks.--Station is above diversions except for a few small ranch ditches. Flow very slightly regulated by Poor Lake Reservoir (capacity unknown) 17 miles upstream. Records of chemical analyses and water temperatures for the water year 1959 are given in reports of Geological Survey.

Correction.--In WSP 1314, the calendar year mean and runoff in acre-feet for 1923 are listed in error; they should be 296 cfs and 215,000 acre-ft, respectively.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	1,141	337	103	66.5	-
1958	60.1	62.6	55.7	51.3	73.7	79.2	295	1,268	1,328	783	307	123	375
1959	70.0	62.2	52.5	59.2	59.4	107	309	438	508	121	52.1	69.6	159
1960	47.8	35.4	28.7	33.5	47.0	89.4	268	454	541	108	53.6	31.2	144

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	-	-	-	-	-	-	-	-	67,910	20,710	6,330	3,960	-
1958	3,690	3,720	3,430	3,160	4,090	4,670	17,540	77,980	79,020	48,150	18,660	7,510	271,800
1959	4,300	3,700	3,230	3,640	3,300	6,570	18,400	26,960	30,240	7,430	3,200	4,140	115,100
1960	2,940	2,110	1,760	2,060	2,710	5,490	15,940	27,930	32,170	6,610	3,300	1,660	104,900

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1957	1514	2,000	June 4, 1957	46	-	-	-	-
1958	1564	2,230	June 24, 1958	45	375	271,800	376	272,200
1959	1634	884	May 13, 1959	26	159	115,100	153	110,700
1960	1714	1,270	June 2, 1960	24	144	104,900	-	-

a Maximum during period May to September.

2970. Topaz Reservoir near Topaz, Calif.

Location.--Lat 38°41'35", long 119°31'10", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.10 N., R.22 E., at outlet works of Topaz Reservoir, 5 $\frac{1}{2}$ miles north of Topaz.

Records available.--December 1921 to September 1960.

Gage.--Float and staff gages. Datum of gage is at mean sea level (levels by Walker River Irrigation District).

Extremes.--1921-60: Maximum contents observed, 60,240 acre-ft June 30, 1941 (elevation, 5,005.35 ft); no contents observed Oct. 31, 1924, Sept. 22, 24-30, 1960.

Remarks.--Topaz Reservoir, formerly known as Alkali Lake, was formed by the diversion of water from West Walker River through a feeder canal and the construction of an outlet tunnel through a low saddle in rim of lake. Storage began Jan. 30, 1922. Usable capacity, 59,440 acre-ft between elevations 4,972.3 (lowest practical elevation for diversion through tunnel, bottom of outlet tunnel at elevation 4,970 ft) and 5,005 ft (3 ft below top of levee). Capacity of reservoir increased from about 45,000 to 59,440 acre-ft in October 1937 by an earth-fill, rock-faced levee at south end. Figures given herein represent usable contents. Water is used for irrigation in Walker River Irrigation District.

Cooperation.--Elevations furnished by Walker River Irrigation District. Records for

1921-31 not previously published by Geological Survey; those for 1921-25 from monthly report of engineer.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1922	-	-	11,000	-	18,000	23,000	-	-	46,000	46,000	30,000	17,000
1923	18,000	-	-	29,000	34,300	39,000	38,000	44,500	50,000	41,000	23,000	-
1924	5,750	-	19,000	22,000	26,500	29,000	27,400	-	11,800	3,000	-	-
1925	0	1,900	4,300	7,000	-	11,720	-	-	36,000	34,000	25,000	-
1926	-	-	-	-	-	38,280	41,130	37,310	29,010	14,360	3,750	1,250
1927	1,020	4,650	10,810	15,230	20,020	28,200	32,130	36,620	44,080	41,200	28,100	19,040
1928	20,260	25,020	28,460	32,840	38,050	44,270	40,460	45,120	42,070	20,480	6,880	3,380
1929	3,520	5,710	7,630	11,380	14,630	16,900	16,090	17,230	23,080	10,410	2,860	1,270
1930	1,220	1,980	3,410	5,640	9,650	13,380	12,290	14,140	21,650	10,750	3,340	1,990
1931	3,390	6,310	9,520	12,470	15,300	16,070	16,210	14,630	11,180	3,480	1,260	691
1951	14,710	39,810	49,510	56,800	59,440	59,440	57,070	58,890	59,460	46,200	30,430	17,100
1952	a16,350	a20,650	27,140	a33,850	a41,650	36,050	21,510	28,640	56,080	58,980	47,300	34,870
1953	a30,310	a32,290	a40,850	a50,860	a56,020	58,980	56,100	52,420	58,410	54,000	35,240	21,840
1954	a21,100	a25,310	30,080	a35,510	a40,340	a49,950	49,590	55,630	52,420	30,310	12,600	4,520
1955	a4,350	a7,460	11,730	a16,070	a20,360	22,420	20,290	24,180	41,950	27,990	12,110	4,180
1956	2,460	4,520	19,720	a36,420	46,440	51,630	52,120	57,950	59,620	59,550	45,340	33,240
1957	a34,360	a37,840	43,470	a48,880	56,530	59,300	52,510	50,810	59,600	39,570	19,470	9,700
1958	10,530	15,400	19,820	23,750	29,760	37,670	37,480	53,420	59,480	57,610	47,070	31,390
1959	27,230	32,300	38,060	44,800	51,770	57,200	50,220	42,960	36,610	17,680	6,580	3,520
1960	3,080	5,370	8,120	11,210	16,170	18,080	16,670	14,410	16,390	5,590	1,040	0

a Contents interpolated.

2975. West Walker River at Hoyer Bridge, near Wellington, Nev.

Location.--Lat 38°43'40", long 119°25'40", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.10 N., R.23 E., on left bank 20 ft upstream from Hoyer Bridge, 2 miles upstream from head of Saroni Canal, and 4 miles southwest of Wellington.

Drainage area.--504 sq mi.

Records available.--April to August 1910 (published as West Walker River near Wellington), July 1920 to September 1923, March 1924 to September 1932, October 1957 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 4,980 ft (from topographic map). April to August 1910, staff gage at same site at different datum. July 1, 1920, to Sept. 30, 1923, water-stage recorder at site 3 miles downstream (1 mile downstream from Saroni Canal) at different datum and supplemental staff gage on Saroni Canal 1 mile downstream from head. Mar. 1, 1924, to Sept. 30, 1932, water-stage recorder at same site at different datum.

Average discharge.--13 years (1920-23, 1925-32, 1957-60), 207 cfs (149,900 acre-ft per year).

Extremes.--1910, 1920-23, 1924-32, 1957-60: Maximum discharge, 2,180 cfs June 6, 1922; minimum, 6 cfs Dec. 19, 1925, Dec. 29, 1959, but may have been less during periods of ice effect.

Remarks.--Flow regulated by off-channel storage in Topaz Reservoir (see preceding station) since Jan. 30, 1922. Diversions for irrigation of about 10,500 acres above station. Records include releases from Topaz Reservoir and all return flow from Antelope Valley.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	51.0	25.8	20.8	18.8	23.4	25.4	274	897	1,131	724	441	332	331
1959	140	31.8	17.5	16.2	19.2	25.8	31	455	481	353	179	70.8	175
1960	42.8	19.7	16.9	16.9	18.6	24.2	183	349	375	200	70.2	33.6	113

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	3,130	1,520	1,280	1,140	1,300	1,560	18,300	55,130	67,290	44,500	27,090	19,740	240,000
1959	8,620	1,890	1,080	994	1,070	1,590	18,420	27,990	28,610	21,520	10,990	4,210	127,000
1960	2,630	1,170	1,040	1,040	1,070	1,490	10,890	21,480	22,340	12,270	4,320	2,000	81,740

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum		Mean	Acre-feet	Mean
		Discharge	Date	Day	Mean			
1958	1564	1,860	June 24, 1958	17	331	240,000	339	245,600
1959	1634	593	June 6, 1959	15	175	127,000	166	120,200
1960	1714	564	July 28, 1960	12	113	81,740	-	-

WALKER LAKE BASIN

3000. West Walker River near Hudson, Nev.

Location.--Lat 38°48'35", long 119°13'35", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T. 11 N., R. 25 E., on left bank half a mile upstream from Wilson Canyon and 3 miles southeast of Hudson.

Drainage area.--964 sq mi.

Records available.--August 1914 to March 1925, January 1947 to September 1960. August 1914 to May 1921 published as "at Hudson."

Gage.--Water-stage recorder. Altitude of gage is 4,670 ft (from topographic map). Prior to May 1921, staff gage at site 2 $\frac{1}{2}$ miles upstream at different datum. May 1921 to March 1925 water-stage recorder at approximately same site at different datum.

Average discharge.--23 years (1914-24, 1947-60), 195 cfs (141,200 acre-ft per year).

Extremes.--1914-25, 1947-60: Maximum discharge, 2,700 cfs Dec. 24, 1955 (gage height, 7.42 ft, from floodmarks), from rating curve extended above 1,700 cfs; minimum daily, 13 cfs Aug. 7 to Sept. 21, 1920.

Remarks.--Flow regulated by off-channel storage in Topaz Reservoir (see p. 227) since Jan. 30, 1922. Many diversions above station for irrigation. Station is below return flow from irrigated areas in Smith Valley.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	66.8	178	493	122	127	132	226	395	520	270	173	153	239
1952	66.8	50.6	54.6	46.3	51.4	243	525	809	816	726	315	194	325
1953	118	116	51.4	47.5	64.4	71.8	173	276	504	456	208	173	189
1954	81.3	54.4	53.2	46.2	40.8	41.1	173	349	298	265	166	94.6	139
1955	58.4	47.1	43.2	38.0	36.8	41.5	74.4	249	321	228	152	113	117
1956	50.5	40.9	265	86.4	51.1	70.4	252	565	1,171	692	279	167	308
1957	91.4	114	58.8	45.0	46.0	82.6	141	334	534	317	176	124	172
1958	60.4	53.5	41.3	42.5	43.1	49.3	208	623	977	469	280	203	255
1959	129	60.3	53.1	42.2	51.5	45.3	169	288	301	192	75.6	43.8	121
1960	47.1	38.2	32.9	35.0	45.0	40.1	156	230	262	117	38.8	39.9	90.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,110	10,610	30,290	7,530	7,080	8,090	13,460	24,290	30,950	16,580	10,630	9,100	172,700
1952	4,110	3,010	3,360	2,850	2,960	14,950	31,240	49,720	48,530	44,630	19,390	11,520	236,300
1953	7,240	6,920	3,160	2,920	3,570	4,420	10,300	16,970	29,980	28,030	12,780	10,320	136,600
1954	5,000	3,240	3,270	2,840	2,260	2,550	10,290	21,480	17,700	16,270	10,200	5,630	100,700
1955	3,590	2,800	2,660	2,330	2,040	2,550	4,430	15,280	19,130	13,990	9,340	6,730	84,870
1956	3,100	2,430	16,270	5,310	2,940	4,330	14,970	34,710	69,700	42,570	17,160	9,930	223,400
1957	5,620	6,760	3,620	2,770	2,560	5,080	8,400	20,550	31,790	19,480	10,810	7,410	124,800
1958	3,710	3,180	2,540	2,610	2,390	3,030	12,390	38,330	58,130	28,850	17,200	12,080	184,400
1959	7,920	3,590	3,270	2,600	2,860	2,780	10,040	17,700	17,900	11,790	4,650	2,610	87,710
1960	2,890	2,270	2,020	2,150	2,590	2,460	9,490	14,140	15,570	7,190	2,390	2,370	65,330

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	181	131,400	
1951	1214	1,690	Dec. 10, 1950	37	239	172,700	191	138,200	
1952	1244	1,410	June 5, 1952	38	325	236,300	335	243,100	
1953	1284	1,360	June 20, 1953	42	189	136,600	181	130,800	
1954	1344	522	May 10, 1954	35	138	100,700	136	98,250	
1955	1394	403	June 8, 1955	-	117	84,870	135	97,620	
1956	1444	2,700	Dec. 24, 1955	32	308	223,400	300	217,600	
1957	1514	938	June 7, 1957	-	172	124,800	163	118,300	
1958	1564	1,730	June 20, 1958	38	255	184,400	262	189,800	
1959	1634	373	May 14, 1959	30	121	87,710	111	80,110	
1960	1714	346	June 3, 1960	18	90.0	65,330	-	-	

3015. Walker River near Wabuska, Nev.

Location.--Lat 39°09'10", long 119°05'50", in SE¼NW¼ sec.20, T 15 N., R.26 E., on left bank 600 ft upstream from timber bridge at Julian Ranch, 1½ miles downstream from Southern Pacific Railroad bridge, 4.6 miles east of Wabuska, and 16 miles upstream from Weber Dam.

Drainage area.--2,600 sq mi, approximately.

Records available.--July 1902 to December 1904, January 1905 to July 1908 (fragmentary), January 1920 to September 1935, January 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 4,280 ft (from topographic map). July 22, 1902, to July 31, 1908, staff gage at site 2½ miles upstream at different datum. Jan. 15 to July 27, 1920, staff gage; July 28, 1920, to Aug. 29, 1922, water-stage recorder; Aug. 30 to Oct. 13, 1922, staff gage; Oct. 14, 1922, to Sept. 30, 1924, water-stage recorder; Oct. 1, 1924, to Sept. 30, 1929, staff gage; all near present site at different datums; Oct. 1, 1929, to Sept. 30, 1935, water-stage recorder at site 1½ miles downstream at different datum. January 1939 to September 1958 staff gage on bridge 300 ft downstream at datum 1.19 ft higher.

Average discharge.--35 years (1902-4, 1920-24, 1925-35, 1939-41, 1942-43, 1944-60), 152 cfs (110,000 acre-ft per year).

Extremes.--1902-8, 1920-35, 1939-60: Maximum discharge observed, 3,280 cfs July 10, 11, 1906 (gage height, 5.90 ft, site and datum then in use); no flow at times in 1924-25, 1931.

Remarks.--Many diversions for irrigation above station. Flow regulated by Bridgeport Reservoir (p. 220) and Topaz Reservoir (p. 227).

Cooperation.--Records for 1934-35, not previously published by Geological Survey, furnished by the Bureau of Indian Affairs. Records for 1939-58, not previously published by Geological Survey, furnished by Walker River Irrigation District.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	6.45	9.30	19.5	25.2	23.7	13.2	48.7	87.8	362	103	41.4	31.0	64.1
1939	-	-	-	147	83.3	116	246	97.5	49.4	27.0	25.5	29.2	-
1940	40.4	39.7	54.3	96.8	82.7	51.5	49.4	124	352	67.6	40.8	45.8	86.7
1941	58.9	58.0	59.7	67.4	74.8	259	123	172	1169	706	135	96.0	248
1942	167	114	-	-	360	181	357	457	1,441	791	83.3	85.8	-
1943	98.4	108	101	449	240	412	689	445	1,120	185	82.4	63.7	332
1944	82.3	101	-	33.0	88.1	200	171	83.5	125	97.5	66.9	45.7	-
1945	58.0	84.2	91.1	84.3	324	108	164	1,092	2,000	1,509	89.3	86.8	457
1946	118	132	132	438	246	232	251	629	232	139	126	130	234
1947	119	146	144	133	122	120	108	155	176	84.9	49.5	31.5	116
1948	28.4	43.7	59.8	75.5	56.8	26.3	19.5	55.9	80.8	46.3	7.9	8.80	42.4
1949	16.0	23.4	51.1	89.1	156	66.2	34.3	51.2	48.6	26.3	25.4	21.1	50.0
1950	36.7	43.5	38.8	53.6	48.5	20.6	17.0	42.6	63.8	48.9	28.0	57.7	41.6
1951	39.3	269	745	288	235	165	90.9	195	372	88.1	75.9	40.9	217
1952	57.8	62.3	76.1	85.5	236	630	1,348	1,254	1,138	695	463	169	518
1953	115	137	101	289	235	165	91.5	87.3	408	274	57.4	48.0	167
1954	59.8	55.6	63.3	54.6	42.9	69.0	62.3	86.3	88.3	55.6	33.7	31.7	59.4
1955	36.5	50.8	69.4	73.1	64.6	49.8	29.3	37.7	60.7	45.6	24.8	27.5	47.4
1956	21.1	33.7	274	194	153	166	224	462	1,771	971	177	99.9	378
1957	139	150	94.4	88.4	103	186	66.7	131	269	103	56.7	66.2	121
1958	65.1	104	95.5	98.2	88.9	83.6	420	547	1,144	532	341	243	314
1959	237	145	115	103	115	165	67.5	96.1	67.2	29.0	17.0	12.1	97.5
1960	18.5	23.5	37.8	33.3	55.7	41.1	42.0	41.7	30.3	26.1	43.3	42.0	36.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	397	553	1,200	1,550	1,320	809	2,900	5,400	21,550	6,340	2,550	1,840	46,410
1939	-	-	-	9,010	4,630	7,160	14,640	5,990	2,940	1,660	1,560	1,740	-
1940	2,490	2,360	3,340	5,950	4,760	3,170	2,940	7,630	20,920	4,160	2,510	2,730	62,960
1941	3,620	3,450	3,670	4,140	4,150	15,910	7,330	10,580	69,580	43,430	8,300	5,710	179,900
1942	10,240	6,770	-	-	19,980	11,120	21,220	28,080	85,760	48,650	5,120	5,100	-
1943	6,050	6,410	6,210	27,580	13,360	25,330	40,970	27,330	66,660	11,380	5,060	3,790	240,100
1944	5,060	6,030	-	5,150	5,110	12,380	10,260	5,180	7,500	6,050	4,150	2,740	-
1945	3,600	5,050	5,600	5,220	18,120	6,700	9,840	65,730	120,100	81,170	5,540	5,210	331,900
1946	7,300	7,930	8,170	27,180	13,760	14,390	15,060	39,970	13,890	8,630	7,810	7,780	170,900
1947	7,350	8,760	8,950	8,220	6,800	7,420	6,510	9,590	10,580	5,270	3,070	1,890	84,410
1948	1,760	2,620	3,710	4,680	3,500	1,630	1,170	3,460	4,850	2,870	490	528	31,070
1949	990	1,400	3,170	5,520	8,710	4,100	2,060	3,180	2,910	1,630	1,580	1,270	36,520
1950	2,280	2,610	2,410	3,320	2,710	1,280	1,020	2,640	3,830	3,030	1,740	3,460	30,330
1951	2,440	16,130	46,200	17,880	13,150	10,240	5,450	12,120	22,330	5,460	4,710	2,450	158,600
1952	3,580	5,740	4,720	5,300	13,680	39,080	80,890	77,760	68,280	43,070	28,690	10,160	379,000
1953	7,100	8,220	6,280	17,920	13,170	10,250	5,490	5,410	24,560	16,990	3,560	2,880	121,800
1954	3,710	3,940	3,930	3,380	2,400	4,280	3,730	5,350	5,180	3,450	2,090	1,900	43,340
1955	2,270	3,050	4,300	4,530	3,620	3,090	1,760	2,340	3,640	2,830	1,540	1,650	34,620
1956	1,310	2,020	16,990	12,000	8,850	10,270	13,450	28,620	106,300	60,210	11,000	6,000	277,000
1957	8,600	9,020	5,850	5,480	5,750	11,530	4,000	8,120	16,110	6,400	3,520	3,970	88,350
1958	4,040	6,250	5,920	6,090	4,930	5,140	25,010	33,660	68,100	32,720	20,990	14,440	227,300
1959	14,580	8,620	7,080	6,320	6,370	10,130	4,010	5,910	4,000	1,780	1,050	722	70,590
1960	1,140	1,400	2,320	2,050	3,200	2,530	2,500	2,560	1,800	1,600	2,660	2,500	26,260

WALKER LAKE BASIN

Yearly discharge, in cubic feet per second, of Walker River near Wabuska, Nev.

Year	WSP	Water year ending Sept. 30					Calendar year	
		Maximum observed		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1934	-	-	-	-	-	-	24.6	17,780
1935	(a)	518	June 15, 1935	2	64.1	46,410	-	-
1939	(a)	-	-	-	-	-	79.5	57,520
1940	(a)	863	June 14, 1940	30	86.7	62,960	90.2	65,510
1941	(a)	1,800	June 23, 1941	42	248	179,900	-	-
1942	(a)	2,000	June 13, 1942	-	-	-	-	-
1943	(a)	2,420	Jan. 25, 1943	56	332	240,100	-	-
1944	(a)	-	-	-	-	-	99.5	72,770
1945	(a)	2,630	June 25, 1945	25	457	331,900	470	341,000
1946	(a)	1,300	May 10, 1946	90	234	170,900	236	172,500
1947	(a)	297	Nov. 26, 1946	21	116	84,410	92.4	67,440
1948	(a)	114	Jan. 28, 1948	3.5	42.4	31,070	39.0	28,540
1949	(a)	200	Feb. 20, 1949	9	50.0	36,520	52.4	38,260
1950	(a)	135	Jan. 27, 1950	15	41.6	30,350	120	87,800
1951	(a)	1,750	Dec. 11, 1950	25	217	158,600	145	105,800
1952	(a)	1,800	June 1, 1952	45	518	379,000	531	388,500
1953	(a)	955	June 22, 1953	25	167	121,800	153	111,800
1954	(a)	167	May 18, 1954	28	59.4	43,340	56.7	41,380
1955	(a)	260	Jan. 23, 1955	12	47.4	34,620	62.1	45,320
1956	(a)	2,350	June 13, 1956	15	378	277,000	383	280,200
1957	(a)	535	June 7, 1957	41	121	88,350	111	81,090
1958	(a)	1,880	June 24, 1958	45	314	227,300	333	241,400
1959	1634	b516	Oct. 8, 1958	8.5	97.5	70,590	62.4	45,160
1960	1714	b128	Feb. 11, 1960	9.1	36.2	26,260	-	-

a From reports of Walker Irrigation District.

b Momentary maximum.

HUMBOLDT-CARSON SINK BASIN

CARSON RIVER BASIN

3025. East Fork Carson River above Soda Springs ranger station, near Markleeville, Calif.

Location.--Lat 38°30', long 119°41', in sec.28, T.8 N., R.21 E., half a mile downstream from Murray Canyon Creek, 2 miles southwest of Soda Springs ranger station, and 14 miles southeast of Markleeville.

Drainage area.--30 sq mi, approximately.

Records available.--September 1946 to September 1951.

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

Average discharge.--5 years (1946-51), 61.6 cfs (44,600 acre-ft per year).

Extremes.--1946-51: Maximum discharge, 3,570 cfs Nov. 20, 1950 (gage height, 7.62 ft), from rating curve extended above 320 cfs on basis of slope-area measurement of peak flow; minimum, 4.5 cfs Sept. 25, 1949.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.4	227	129	28.1	26.8	31.5	105	208	232	71.3	19.9	9.91	91.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	640	13,510	7,950	1,730	1,490	1,940	6,250	12,800	13,820	4,380	1,220	590	66,320

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	91.8	66,480
1951	1214	3,570	Nov. 20, 1950	7.7	91.6	66,320	-	-

3030. Silver King Creek near Coleville, Calif.

Location.--Lat 38°31', long 119°36', in sec.30, T.8 N., R.22 E., on left bank a quarter of a mile downstream from Poison Valley, 2½ miles east of Soda Springs ranger station, and 6½ miles southwest of Coleville.

Drainage area.--30 sq mi, approximately.

Records available.--September 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 7,650 ft (from topographic map).

Average discharge.--5 years (1946-51), 37.3 cfs (27,000 acre-ft per year).

Extremes.--1946-51: Maximum discharge, 748 cfs Nov. 20, 1950 (gage height, 5.47 ft); minimum recorded, 2.5 cfs Oct. 28, Nov. 8, 1948.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	13.0	101	118	41.7	31.3	27.1	64.0	100	103	43.3	18.7	12.6	56.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	797	5,980	7,280	2,570	1,740	1,670	3,810	6,150	6,110	2,660	1,150	748	40,660

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	54.7	39,630
1951	1214	748	Nov. 20, 1950	10	56.2	40,660	-	-

3040. Wolf Creek near Markleeville, Calif.

Location.--Lat 38°32', long 119°43', in sec.24, T.8 N., R.20 E., on left bank three-quarters of a mile downstream from Bull Canyon Creek and 12 miles southwest of Markleeville.

Drainage area.--9.8 sq mi, approximately.

Records available.--September 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 7,350 ft (from topographic map).

Average discharge.--5 years (1946-51), 29.0 cfs (21,000 acre-ft per year).

Extremes.--1946-51: Maximum discharge, 1,480 cfs Nov. 20, 1950 (gage height, 7.10 ft), from rating curve extended above 150 cfs on basis of slope-area measurement of peak flow; minimum, 0.6 cfs Sept. 29, 1950.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7.33	106	80.1	23.1	20.1	18.4	48.4	88.0	81.3	25.5	9.47	6.07	42.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	450	6,330	4,930	1,420	1,120	1,130	2,880	5,410	4,840	1,560	583	361	31,010

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	43.8	31,740
1951	1214	1,480	Nov. 20, 1950	5.2	42.8	31,010	-	-

3045. Silver Creek below Pennsylvania Creek, near Markleeville, Calif.

Location.--38°36'00", long 119°46'30", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.9 N., R.20 E., a quarter of a mile downstream from Pennsylvania Creek, 4 miles upstream from mouth, and 6 $\frac{1}{2}$ miles south of Markleeville.

Drainage area.--20 sq mi, approximately.

Records available.--October 1946 to September 1960. October and November 1946 monthly discharge only, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 6,500 ft (from topographic map). Prior to Aug. 3, 1954, at site 180 ft upstream at datum 3.20 ft higher. Aug. 3, 1954, to Sept. 16, 1957, at site 30 ft upstream at datum 1.00 ft higher.

Average discharge.--14 years (1946-60), 42.7 cfs (30,910 acre-ft per year).

Extremes.--1946-60: Maximum discharge, 1,520 cfs Dec. 23, 1955 (gage height, 6.09 ft, site and datum then in use), from rating curve extended above 450 cfs on basis of slope-area measurement of peak flow; minimum, 0.6 cfs Dec. 5, 1959.

Remarks.--Flow partly regulated by three small reservoirs (total capacity, about 1,700 acre-ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	5.96	116	100	23.0	27.5	23.2	74.4	131	99.2	27.2	16.2	19.6	55.3
1952	4.97	5.08	6.52	6.11	8.52	13.2	75.1	250	251	147	31.1	28.6	69.9
1953	8.23	3.97	5.46	14.8	12.9	15.9	76.8	103	174	77.5	20.3	23.1	44.7
1954	3.78	6.03	5.31	3.81	6.30	26.0	95.5	179	64.8	42.1	19.8	3.78	38.3
1955	2.74	4.11	4.80	4.22	5.85	8.54	25.5	128	118	25.2	21.1	7.31	29.7
1956	2.86	4.14	63.6	34.0	15.9	27.7	96.4	212	265	80.8	18.6	19.6	70.0
1957	16.7	8.72	6.33	4.27	13.1	17.2	50.8	137	176	43.8	16.9	7.33	41.5
1958	4.59	5.50	5.53	4.52	8.59	9.29	49.4	233	193	66.9	19.0	30.7	52.8
1959	4.18	4.07	3.23	8.82	7.92	17.3	63.7	77.5	62.7	21.7	15.0	6.73	24.4
1960	3.17	2.09	1.74	2.16	6.54	19.6	58.0	86.9	49.6	15.1	15.3	2.10	21.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	366	6,890	6,150	1,410	1,530	1,430	4,430	8,060	5,900	1,670	994	1,170	40,000
1952	306	302	401	376	490	809	4,470	15,390	15,520	9,050	1,910	1,700	50,720
1953	506	236	336	911	715	978	4,570	6,330	10,380	4,770	1,250	1,380	32,360
1954	232	359	326	234	350	1,600	5,680	11,030	3,860	2,590	1,220	225	27,710
1955	169	244	295	259	325	525	1,520	7,850	7,050	1,550	1,300	435	21,520
1956	176	246	3,910	2,090	916	1,700	5,740	13,030	15,740	4,970	1,140	1,170	50,820
1957	1,030	519	389	262	727	1,060	3,020	8,410	10,480	2,690	1,040	436	30,060
1958	282	327	340	278	477	571	2,940	14,350	11,460	4,110	1,170	1,830	38,140
1959	257	242	199	542	440	1,060	3,790	4,760	3,730	1,340	919	400	17,680
1960	195	125	107	133	376	1,210	3,450	5,340	2,950	928	938	125	15,880

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	61.8	44,750	
1951	1214	1,260	Nov. 20, 1950	3.0	55.3	40,000	38.1	27,600	
1952	1244	556	July 27, 1952	1.3	69.9	50,720	70.0	50,790	
1953	1284	343	June 18, 1953	1.0	44.7	32,360	44.5	32,200	
1954	1344	347	May 8, 1954	-	38.3	27,710	38.0	27,500	
1955	1394	426	July 14, 1955	1.6	29.7	21,520	34.7	25,140	
1956	1444	1,520	Dec. 23, 1955	1.8	70.0	50,820	66.7	48,430	
1957	1514	432	June 1, 1957	1.9	41.5	30,060	40.2	29,070	
1958	1564	490	May 18, 1958	3.2	52.6	38,140	52.3	37,880	
1959	1634	207	May 12, 1959	1.7	24.4	17,680	24.1	17,410	
1960	1714	269	May 11, 1960	1.3	21.9	15,880	-	-	

3090. East Fork Carson River near Gardnerville, Nev.

Location.--Lat 38°50'50", long 119°42'10", in SW¼NE¼ sec.2, T.11 N., R.20 E., 2 miles east of Mud Lake Reservoir, 4½ miles downstream from Bryant Creek, and 7 miles south-east of Gardnerville.

Drainage area.--344 sq mi.

Records available.--January 1890 to December 1893, October 1900 to December 1906 (gage heights only August to December 1904 and July to December 1905), January 1908 to December 1910, June to October 1917, December 1924 to September 1928, June to September 1929, October 1935 to December 1937, May 1939 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 4,985.11 ft above mean sea level (levels by Bureau of Reclamation). Prior to May 19, 1939, staff gages at several sites within 2 miles of present site at various datums.

Average discharge.--34 years (1890-93, 1900-1903, 1908-10, 1925-28, 1935-37, 1939-60), 395 cfs (286,000 acre-ft per year).

Extremes.--1890-93, 1900-1906, 1908-10, 1917, 1924-28, 1929, 1935-37, 1939-60: Maximum discharge, 17,600 cfs Dec. 23, 1955 (gage height, 11.88 ft), from rating curve extended above 6,000 cfs on basis of slope-area measurements at gage heights 9.66 and 11.88 ft; minimum observed, 8 cfs Dec. 4-10, 19-23, 1904.

Remarks.--Station is above all diversions in Carson Valley. Diversions for irrigation above station. Flow slightly regulated by several small reservoirs (total capacity, about 5,000 acre-ft). Records of water temperatures for the period May 1953 to September 1960 are published in reports of Geological Survey; those for May 1953 to September 1954 were found to be unreliable and should not be used.

Correction.--The mean daily discharge for Aug. 31, 1929, was corrected in WSP 1714. Corrected monthly mean and runoff for August 1929 are 60.9 cfs and 3,740 acre-ft respectively, superseding those published in WSP 1314.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	87.5	1,110	1,127	284	284	253	564	914	750	227	105	81.9	482
1952	70.5	85.9	124	129	204	250	1,108	2,162	1,934	1,035	313	162	632
1953	106	94.4	112	201	154	185	588	727	1,189	817	163	100	353
1954	61.5	87.8	81.7	82.6	118	341	725	1,046	435	170	90.9	52.2	277
1955	49.5	69.6	77.2	74.9	93.5	125	241	817	779	165	92.4	51.7	222
1956	48.9	61.8	914	515	259	379	782	1,503	1,671	696	209	151	600
1957	128	115	108	108	237	239	413	908	1,091	271	104	65.4	315
1958	75.0	83.0	86.5	79.8	192	199	688	1,909	1,418	544	211	133	469
1959	79.4	81.4	70.7	129	143	220	494	545	410	126	65.9	70.2	203
1960	55.5	49.9	45.7	51.0	117	204	466	554	388	104	51.7	31.2	176

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	5,380	66,030	69,320	17,440	15,740	15,570	33,590	56,210	44,630	13,960	6,450	4,870	349,200
1952	4,340	5,110	7,630	7,920	11,730	15,380	65,960	133,000	115,100	63,620	19,240	9,630	458,700
1953	6,500	5,620	6,890	12,380	8,570	11,350	35,010	44,700	70,770	37,910	10,010	5,950	255,700
1954	5,010	5,220	5,020	5,080	6,530	20,990	43,020	64,310	25,870	10,450	5,590	3,100	200,200
1955	3,050	4,140	4,750	4,610	5,190	7,680	14,330	50,220	46,290	11,400	5,680	3,070	160,400
1956	3,010	3,680	56,210	31,670	14,900	23,300	46,530	92,440	99,430	42,800	12,840	9,000	435,800
1957	7,770	6,820	6,640	6,610	13,160	14,710	24,580	55,810	84,940	16,680	6,420	3,890	228,000
1958	4,810	4,940	5,320	4,910	10,650	12,240	40,930	117,400	84,390	33,480	13,000	7,900	339,800
1959	4,680	4,850	4,350	7,920	7,930	15,530	29,410	33,500	24,420	7,750	4,050	4,180	145,900
1960	3,420	2,970	2,610	3,140	6,740	12,560	27,760	34,040	23,060	6,410	3,180	1,860	128,000

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	529	363,300	
1951	1214	12,100	Nov. 21, 1950	54	482	349,200	312	225,500	
1952	1244	3,560	June 6, 1952	58	632	458,700	834	460,600	
1953	1284	2,200	June 19, 1953	64	353	255,700	348	251,900	
1954	1344	2,730	Mar. 9, 1954	41	277	200,200	272	196,900	
1955	1394	1,920	June 9, 1955	35	222	160,400	292	211,400	
1956	1444	17,600	Dec. 23, 1955	40	600	435,800	543	394,100	
1957	1514	2,340	June 2, 1957	56	315	228,000	306	221,700	
1958	1564	3,160	May 19, 1958	60	469	339,800	468	339,000	
1959	1634	1,030	May 13, 1959	39	203	146,800	196	141,900	
1960	1714	1,160	May 13, 1960	22	176	128,000	-	-	

3095. West Fork Carson River above Woodfords, Calif.

Location.--Lat 38°47', long 119°54', in sec.31, T.11 N., R.19 E., on right bank 1 mile above Horsethief Canyon Creek and 4 miles west of Woodfords.

Drainage area.--53 sq mi, approximately.

Records available.--December 1946 to November 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,860 ft (from river-profile map).

Average discharge.--5 years (1946-51), 81.9 cfs (59,290 acre-ft per year).

Extremes.--1946-51: Maximum discharge, 4,600 cfs Nov. 20, 1950 (gage height, 9.82 ft); minimum, 2.5 cfs Dec. 3, 1948.

Remarks.--No diversion above station; flow slightly regulated by several small reservoirs (total capacity, about 1,500 acre-ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	20.2	314	324	88.1	86.4	77.8	166	205	127	41.3	30.4	15.3	125
1952	+16.9	+21.5	-	-	-	-	-	-	-	-	-	-	-

* Not previously published; discharge estimated on basis of records for station at Woodfords.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,240	18,680	19,940	5,420	4,800	4,780	9,890	12,630	7,570	2,540	1,870	911	90,270
1952	+1,040	+1,280	-	-	-	-	-	-	-	-	-	-	-

* Not previously published; discharge estimated on basis of records for station at Woodfords.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	146	105,500
1951	1214	4,600	Nov. 20, 1950	9.0	125	90,270	-	-

3100. West Fork Carson River at Woodfords, Calif.

Location.--Lat 38°46'10", long 119°49'55", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.11 N., R.19 E., 0.3 mile downstream from bridge on State Highways 88 and 89, 0.6 mile southwest of Woodfords, and 3 $\frac{1}{4}$ miles downstream from Willow Creek.

Drainage area.--66 sq mi, approximately.

Records available.--October 1900 to May 1907, 1910-11 (fragmentary), October 1938 to September 1960. January 1890 to March 1892, June 1907 to September 1920 (except portions of 1910-11), at site 0.7 mile downstream; records not equivalent owing to diversions for irrigation. Monthly discharge only for some periods, published in WSP 1314.

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. Oct. 1, 1938, to Nov. 11, 1958, water-stage recorder at site 150 ft upstream at datum 2.04 ft higher.

Average discharge.--29 years (1900-1907, 1938-60), 117 cfs (84,700 acre-ft per year).

Extremes.--1900-1907, 1910-11, 1938-60: Maximum discharge, 4,810 cfs Dec. 23, 1955 (gage height, 8.86 ft), from rating curve extended above 1,000 cfs on basis of slope-area measurements at gage heights 8.85 and 8.86 ft; minimum (1900-1907, 1938-60), 6.3 cfs Sept. 19-21, 26, 27, 1960.

Flood of Dec. 11, 1937, reached a stage of 11.0 ft (present datum), from floodmarks (discharge, 3,500 cfs by slope-area measurement).

Remarks.--One small diversion above station for irrigation. Flow slightly regulated by several small reservoirs (total capacity, about 1,500 acre-ft). Records of chemical analyses for the period October 1958 to September 1960 are published in reports of Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	28.1	321	347	99.5	105	86.9	178	219	142	49.1	37.3	23.9	136
1952	23.7	28.8	27.9	27.1	32.3	36.6	277	778	494	233	86.5	57.8	176
1953	33.4	30.3	29.6	47.2	39.2	47.1	251	277	310	138	55.9	34.8	108
1954	28.0	30.4	26.7	23.2	26.0	65.7	258	258	80.2	40.8	22.6	15.1	73.0
1955	15.6	19.1	20.1	21.3	23.2	29.8	90.0	300	199	51.0	25.7	18.3	68.0
1956	16.6	19.8	205	135	74.6	96.5	278	517	427	169	68.2	46.3	171
1957	38.7	38.3	34.6	28.4	47.0	65.5	184	327	251	67.0	33.0	20.1	94.6
1958	20.8	23.9	24.3	20.9	28.7	34.0	129	741	386	128	50.8	35.2	136
1959	23.9	27.5	23.6	36.9	31.3	61.7	188	145	84.4	35.3	14.9	16.2	57.4
1960	17.4	17.0	16.1	16.5	24.7	62.2	187	142	91.6	34.9	15.6	7.03	52.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,730	19,110	21,360	6,120	5,830	5,340	10,600	13,450	8,450	3,020	2,290	1,420	98,720
1952	1,460	1,710	1,710	1,670	1,860	2,250	16,470	47,820	29,580	14,340	5,320	3,440	127,400
1953	2,050	1,800	1,820	2,900	2,180	2,900	14,920	17,040	18,450	8,490	3,440	2,070	78,060
1954	1,720	1,810	1,640	1,430	1,450	4,040	15,350	15,860	4,770	2,510	1,390	899	52,870
1955	962	1,140	1,240	1,310	1,290	1,830	5,350	18,470	11,870	3,130	1,580	1,090	49,260
1956	1,020	1,180	12,580	8,310	4,290	5,930	16,550	31,780	25,400	10,370	4,190	2,760	124,400
1957	2,380	2,280	2,130	1,750	2,610	4,030	10,960	20,120	14,910	4,120	2,030	1,190	68,510
1958	1,280	1,420	1,490	1,290	1,590	2,090	7,660	45,540	22,950	7,870	3,130	2,100	98,410
1959	1,470	1,640	1,450	2,270	1,740	3,790	11,190	8,910	5,020	2,170	914	965	41,530
1960	1,070	1,010	990	1,020	1,420	3,820	11,110	8,760	5,450	2,150	962	418	38,180

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	161	116,240
1951	1214	4,730	Nov. 20, 1950	19	136	98,720	84.8	61,400
1952	1244	1,100	May 20, 1952	20	176	127,400	177	128,200
1953	1284	813	Apr. 25, 1953	24	108	78,060	107	77,560
1954	1344	701	Apr. 22, 1954	13	73.0	52,870	70.5	51,040
1955	1394	596	May 12, 1955	12	68.0	49,260	83.9	60,700
1956	1444	4,810	Dec. 23, 1955	15	171	124,400	160	116,400
1957	1514	880	May 18, 1957	15	94.6	68,510	91.0	65,910
1958	1564	1,650	May 18, 1958	18	136	98,410	136	98,780
1959	1634	320	Apr. 5, 1959	8.6	57.4	41,530	55.3	40,040
1960	1714	350	Apr. 9, 1960	6.3	52.6	38,180	-	-

3105. Clear Creek near Carson City, Nev.

Location.--Lat 39°06'50", long 119°47'50" in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.1, T.14 N., R.19 E., on left bank 3 miles upstream from mouth and $3\frac{1}{2}$ miles southwest of Carson City.

Drainage area.--15 sq mi, approximately.

Records available.--March 1948 to September 1960.

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

Average discharge.--12 years (1948-60), 5.85 cfs (4,240 acre-ft per year).

Extremes.--1948-60: Maximum discharge, 117 cfs Dec. 23, 1955 (gage height, 2.03 ft); minimum, 0.7 cfs Aug. 15, 1960.

Remarks.--Four small diversions for irrigation of about 150 acres of hay meadow and pasture above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.36	11.2	15.3	10.2	10.2	8.04	7.81	6.27	3.48	2.66	2.52	2.46	6.93
1952	3.92	5.60	6.18	5.59	9.60	11.6	30.9	26.8	15.0	8.09	5.75	5.73	11.2
1953	6.54	7.48	8.79	12.0	9.44	9.65	10.8	8.61	6.94	3.79	2.99	3.05	7.50
1954	3.84	4.54	5.73	6.21	7.15	8.30	7.97	4.16	2.99	2.27	2.03	2.23	4.77
1955	2.63	3.45	5.14	4.88	5.27	5.72	5.33	5.30	3.14	2.12	1.80	1.82	3.88
1956	2.13	3.27	11.3	11.1	9.59	11.2	12.4	14.0	8.00	3.99	3.10	2.83	7.75
1957	4.21	4.70	5.78	5.48	7.29	7.75	7.27	6.40	3.73	2.25	1.82	1.96	4.87
1958	2.82	4.49	5.40	6.07	8.97	7.30	12.4	15.8	6.82	4.36	3.08	3.04	6.70
1959	3.35	4.85	5.17	6.96	5.74	6.20	5.21	3.83	2.25	1.69	1.85	2.42	4.12
1960	2.47	3.11	3.49	4.27	6.11	5.41	4.21	2.66	1.73	1.25	1.13	1.15	3.07

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	207	664	938	626	568	494	465	385	207	164	155	147	5,020
1952	241	333	380	344	552	711	1,840	1,650	893	498	354	341	8,140
1953	402	445	540	739	524	593	642	529	413	233	184	181	5,420
1954	236	270	352	582	397	510	474	256	178	140	125	133	3,450
1955	162	205	316	300	293	352	317	326	187	130	110	108	2,810
1956	131	195	694	684	552	691	740	863	476	245	191	168	5,630
1957	259	280	356	337	405	476	433	393	222	138	112	116	3,530
1958	173	267	332	373	498	449	739	971	406	268	189	181	4,850
1959	206	289	318	428	319	381	310	235	134	104	114	144	2,980
1960	152	185	215	263	351	332	251	164	103	77	70	69	2,230

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	7.17	5,200
1951	1214	106	Dec. 3, 1950	2.1	6.93	5,020	5.75	4,160
1952	1244	70	Apr. 25, 1952	2.8	11.2	8,140	11.8	8,570
1953	1284	32	Jan. 9, 1953	2.9	7.50	5,420	6.77	4,900
1954	1344	26	Mar. 9, 1954	1.8	4.77	3,450	4.53	3,280
1955	1394	22	Feb. 16, 1955	1.7	3.88	2,810	4.34	3,140
1956	1444	117	Dec. 23, 1955	1.8	7.75	5,630	7.58	5,500
1957	1514	29	(a)	1.7	4.87	3,530	4.70	3,400
1958	1564	59	Feb. 24, 1958	2.3	6.70	4,850	6.75	4,890
1959	1634	24	Jan. 9, 1959	1.6	4.12	2,980	3.76	2,720
1960	1714	37	Feb. 8, 1960	.9	3.07	2,230	-	-

a Sometime during period Feb. 23-25, 1957.

CARSON RIVER BASIN

3110. Carson River near Carson City, Nev.

Location.--Lat 39°06'30", long 119°42'40", in SW1/4 sec.2, T.14 N., R.20 E., on left bank 2 miles downstream from Clear Creek, 3 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 1960.

Gage.--Water-stage recorder. Datum of gage is 4,621.48 ft above mean sea level, datum of 1929. Dec. 23, 1955, to Mar. 13, 1956, staff gage at present site and datum.

Average discharge.--21 years (1939-60), 395 cfs (286,000 acre-ft per year).

Extremes.--1939-60: Maximum discharge, 30,000 cfs Dec. 24, 1955 (gage height, 15.0 ft, from floodmarks), from rating curve extended above 6,000 cfs on basis of slope-area measurements at gage heights 8.40 and 15.0 ft, computation of flow over dam at gage height 11.40 ft, and float measurement at gage height 9.60 ft; minimum, 3.3 cfs part of each day Sept. 3-8, 1960.

Remarks.--Many diversions above station for irrigation. Flow slightly regulated by several small reservoirs on tributaries.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	82.1	1,693	1,992	582	468	395	493	806	553	72.7	24.1	29.2	599
1952	75.9	152	293	297	475	497	1,397	2,623	2,327	1,008	275	108	793
1953	124	165	247	396	275	289	673	788	1,240	453	47.0	54.8	395
1954	85.1	150	156	174	226	485	742	944	235	36.4	19.2	16.8	273
1955	29.7	91.0	138	129	161	149	129	686	634	51.1	14.6	16.5	186
1956	31.5	66.5	1,688	905	494	503	953	1,782	1,910	572	92.9	75.1	758
1957	167	210	183	178	455	378	374	967	999	113	21.8	21.8	336
1958	58.9	121	150	154	328	341	808	2,219	1,495	397	84.3	62.4	519
1959	83.7	133	143	254	325	293	311	415	159	21.4	7.53	13.2	177
1960	32.1	55.6	73.9	99.6	208	184	312	336	155	19.4	13.7	4.57	124

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	5,050	100,800	122,500	35,800	26,020	24,280	29,310	49,560	32,910	4,470	1,480	1,740	433,900
1952	4,670	9,030	17,990	18,250	27,350	30,530	83,150	161,300	138,400	61,990	16,930	6,400	576,000
1953	7,800	9,790	15,160	24,340	15,290	17,780	40,070	48,480	73,770	27,880	2,890	3,280	286,300
1954	5,230	8,930	9,620	10,680	12,560	29,810	44,180	58,020	13,980	2,240	1,180	1,000	197,400
1955	1,830	5,410	8,490	7,920	8,970	9,140	7,700	42,150	37,740	3,140	897	982	134,400
1956	1,940	3,960	103,800	55,650	28,410	30,930	56,740	109,600	113,700	35,150	5,710	4,470	550,100
1957	10,270	12,470	11,260	10,930	24,150	23,260	22,280	59,460	59,420	6,970	1,340	1,300	243,100
1958	3,620	7,180	9,240	9,450	18,210	21,000	48,110	136,500	88,990	24,410	5,180	3,710	375,600
1959	5,150	7,900	8,610	14,370	18,030	18,020	18,500	25,530	9,440	1,280	451	787	128,300
1960	1,970	3,310	4,540	6,130	11,980	11,320	18,590	20,630	9,240	1,190	845	272	90,020

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	661	478,800
1951	1214	15,500	Nov. 22, 1950	18	599	433,900	328	237,300
1952	1244	3,750	June 9, 1952	38	793	576,000	795	576,800
1953	1284	1,990	Apr. 28, 1953	29	395	286,300	383	277,500
1954	1344	1,970	Mar. 10, 1954	13	273	197,400	262	189,400
1955	1394	1,410	June 10, 1955	8.8	186	134,400	315	228,300
1956	1444	30,000	Dec. 24, 1955	21	758	550,100	653	474,400
1957	1514	1,900	June 3, 1957	12	336	243,100	317	229,200
1958	1564	3,100	May 21, 1958	27	519	375,600	521	377,400
1959	1634	1,690	Feb. 17, 1959	5.2	177	128,300	161	116,200
1960	1714	1,100	Feb. 9, 1960	3.5	124	90,020	-	-

3120. Carson River near Fort Churchill, Nev.

Location.--Lat 39°17'30", long 119°18'40", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.32, T.17 N., R.24 E., on right bank 400 ft downstream from Buckland ditch, 2 miles west of Fort Churchill, and $4\frac{1}{2}$ miles upstream from Weeks bridge on U. S. Highway 95 alternate.

Drainage area.--1,450 sq mi, approximately.

Records available.--April 1911 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 4,214.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Apr. 25, 1924, staff gage at site $7\frac{1}{2}$ miles upstream at different datum. Apr. 25, 1924, to Dec. 31, 1933, water-stage recorder at site 8 miles upstream at different datum. Jan. 1, 1934, to Sept. 30, 1957, water-stage recorder at present site at datum 1.36 ft higher (levels by Truckee-Carson Irrigation District).

Average discharge.--49 years (1911-60), 362 cfs (262,100 acre-ft per year).

Extremes.--1911-60: Maximum daily discharge, 9,680 cfs Dec. 26, 1955; maximum gage height, about 11 ft in December 1955, present datum, from floodmarks; no flow for some periods in nearly every year since 1923.

Remarks.--Many diversions for irrigation above station, including those for irrigation of 720 acres between present site and sites used prior to Jan. 1, 1934. Buckland ditch diverts 400 ft upstream for irrigation below station.

Cooperation.--Records for October 1950 to September 1960 furnished by Truckee-Carson Irrigation District.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	65.7	1,653	2,540	611	467	341	302	592	414	22.3	0	0	585
1952	19.9	123	200	494	491	495	1,380	2,771	2,507	909	259	50.7	808
1953	75.8	123	211	378	293	296	560	719	996	341	0	0	332
1954	40.1	103	156	166	238	463	657	878	224	0	0	0	244
1955	0	43.0	131	141	176	149	109	518	633	2.52	0	0	158
1956	0	30.9	1,326	914	539	542	1,068	1,816	1,940	510	89.0	34.8	735
1957	125	167	148	137	333	278	286	1,014	1,119	110	0	0	309
1958	17.7	120	163	139	305	349	749	2,012	1,408	348	29.7	8.37	471
1959	48.6	132	148	237	317	286	221	319	97.8	.22	.02	.17	150
1960	.38	.54	44.4	85.5	205	162	194	217	80.5	.25	.07	0	82.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4,040	98,340	156,200	37,560	25,930	20,960	18,000	36,390	24,610	1,370	0	0	423,400
1952	1,230	7,340	12,310	30,400	28,240	30,410	82,190	170,400	149,200	55,910	15,900	3,020	586,600
1953	4,660	7,340	12,970	23,220	16,250	18,190	33,340	44,230	59,270	20,950	0	0	240,400
1954	2,460	6,130	9,600	10,220	13,240	28,490	39,090	53,980	13,340	0	0	0	176,600
1955	0	2,560	8,030	8,660	9,790	9,160	6,500	31,840	37,680	155	0	0	114,400
1956	0	1,840	81,560	56,220	31,010	33,300	63,530	111,600	115,400	31,340	5,470	2,070	533,300
1957	7,670	9,940	9,110	8,440	18,510	17,080	19,040	62,350	66,590	6,740	0	0	223,500
1958	1,090	7,110	10,050	8,520	16,940	21,470	44,590	123,700	83,800	21,390	1,830	498	341,000
1959	2,990	7,860	9,130	14,600	17,620	17,600	13,140	19,620	5,820	14	1.2	10	108,400
1960	24	32	2,730	5,260	11,790	9,980	11,550	13,320	4,790	15	4.4	0	59,500

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	702	508,300
1951	1214	a7,850	Nov. 23, 1950	0	585	423,400	256	185,700
1952	1244	a3,650	June 11, 1952	0	808	586,600	814	590,600
1953	1264	a1,440	June 22, 1953	0	332	240,400	323	233,600
1954	1344	a1,500	Mar. 10, 1954	0	244	176,600	233	169,000
1955	1394	a1,200	June 11, 1955	0	158	114,400	259	187,200
1956	1444	a9,680	Dec. 26, 1955	0	735	533,300	658	476,700
1957	1514	a2,050	June 6, 1957	0	309	223,500	297	215,000
1958	1564	2,880	May 21, 1958	.3	471	341,000	473	342,700
1959	1634	1,320	Feb. 18, 1959	0	150	108,400	126	91,210
1960	1714	836	Feb. 10, 1960	0	82.0	59,500	-	-

a Maximum daily.

3121. Lahontan Reservoir near Fallon, Nev.

Location.--Lat 39°27'45", long 119°04'00", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.33, T.19 N., R.26 E., in outlet control house on upstream side of dam, 18 miles west of Fallon.

Records available.--January 1917 to September 1960.

Gage.--Float tape with surface contact detector. Prior to 1956, float tape. Datum of gage is at mean sea level (Bureau of Reclamation datum).

Extremes.--1917-60: Maximum contents observed (20-inch flashboard on weir), 299,200 acre-ft June 16, 1942 (elevation, 4,164.43 ft); minimum observed, 465 acre-ft Sept. 16-19, 1931 (elevation, 4,070.80 ft).

Remarks.--Reservoir is formed by earth- and gravel-fill dam. Constructed by U. S. Bureau of Reclamation. Storage began sometime between the completion of the dam in June 1915 and the beginning of the period of record, January 1917. Capacity, 273,600 acre-ft between elevations 4,060.0 (invert of outlet conduit) and 4,162.0 ft (spillway crest). Surface area at spillway elevation, 10,000 acres. Water is used for irrigation of 87,500 acres in Newlands Project and for power. Figures given herein represent total contents and are computed from 8 a.m. readings. Reservoir stores water from Carson River and from Truckee River at Derby Dam via Truckee Canal. Inflow is regulated by Lake Tahoe, Donner Lake, Boca Reservoir, and Derby Dam. Extensive irrigation above reservoir in Carson and Truckee River basins.

Cooperation.--Records of daily elevations and contents furnished by Federal Court Watermaster in cooperation with Truckee-Carson Irrigation District, not previously published by Geological Survey.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1917	-	-	-	43,570	64,180	90,600	107,100	139,400	198,700	192,400	159,600	131,300
1918	92,800	33,010	34,940	47,940	72,800	110,200	124,900	136,800	150,500	116,300	92,800	80,990
1919	87,120	98,200	111,600	123,000	142,000	159,600	181,800	241,500	227,600	175,700	138,400	117,700
1920	124,000	140,400	157,300	169,900	188,800	211,300	207,400	202,100	195,400	151,000	118,200	89,280
1921	85,420	100,900	125,400	140,400	155,000	168,200	169,200	217,700	255,800	220,100	173,700	155,600
1922	155,000	166,200	179,100	191,700	199,800	214,500	232,800	283,800	280,700	246,000	201,400	183,700
1923	164,300	179,100	200,600	214,500	229,500	232,800	217,700	243,300	255,200	216,100	167,400	142,000
1924	142,500	159,000	180,400	198,400	205,100	212,100	187,400	152,100	112,500	61,970	24,590	6,660
1925	6,310	15,580	22,200	34,570	68,410	108,800	132,800	164,300	174,400	140,900	105,500	78,300
1926	84,150	95,950	114,400	124,400	147,200	169,900	176,400	155,000	112,000	62,590	21,660	6,790
1927	3,370	7,910	33,280	61,350	102,700	147,200	173,100	224,500	261,900	226,800	177,700	151,600
1928	161,300	198,800	207,400	199,800	208,200	223,400	225,900	234,500	193,200	158,900	94,150	69,070
1929	69,410	74,960	82,570	89,840	98,200	115,800	111,100	106,400	85,420	36,090	4,800	1,860
1930	2,040	6,190	30,850	47,040	74,600	105,500	121,600	160,100	152,200	99,320	55,780	29,500
1931	29,720	35,900	41,510	49,720	64,180	82,060	73,740	54,830	28,660	960	678	1,000
1932	1,210	695	7,180	24,840	45,630	86,150	124,200	174,900	227,200	192,400	143,800	110,200
1933	92,760	87,940	94,330	104,800	102,600	117,100	111,700	99,500	116,100	66,040	29,030	8,450
1934	4,730	7,190	22,670	43,670	62,840	92,840	88,140	58,660	41,550	15,760	7,260	4,160
1935	4,770	8,630	17,100	28,890	45,270	62,400	106,100	146,400	176,100	133,700	92,540	60,580
1936	52,600	57,490	64,440	84,960	127,400	178,800	213,500	257,900	280,900	230,500	187,500	159,800
1937	157,500	164,800	176,500	188,200	220,800	210,300	202,800	253,000	265,800	215,800	168,800	138,100
1938	128,700	136,000	186,700	215,800	225,300	220,400	231,600	271,800	283,000	263,300	223,700	196,200
1939	207,200	207,600	208,500	230,000	239,100	256,600	251,900	228,700	182,900	138,700	103,500	93,480
1940	110,700	122,800	142,200	189,500	228,800	263,700	272,400	292,800	280,800	236,400	189,800	171,700
1941	173,700	175,200	172,800	175,600	195,200	230,300	231,100	289,500	291,900	257,400	222,100	195,800
1942	204,500	220,600	235,700	256,400	242,100	229,000	256,600	269,500	295,500	266,000	219,000	188,400
1943	188,400	214,300	234,000	269,500	250,100	248,600	255,200	271,800	286,100	249,500	199,100	163,400
1944	164,400	179,200	204,900	232,000	256,900	265,600	259,900	262,100	250,000	191,600	142,600	110,700
1945	115,000	138,500	163,200	187,100	236,400	270,100	274,300	291,300	294,100	251,000	200,800	164,300
1946	164,100	192,300	217,900	237,900	229,700	249,000	271,400	291,200	267,800	212,100	158,200	131,500
1947	142,300	170,600	186,500	193,900	218,700	245,600	225,800	223,400	193,600	136,200	97,300	71,410
1948	76,110	95,100	123,900	154,100	178,500	188,900	179,000	209,300	240,300	190,800	145,700	112,700
1949	114,400	123,100	146,700	158,900	174,000	196,400	211,800	268,800	234,500	169,000	117,800	76,480
1950	67,450	70,250	89,500	125,400	162,200	189,700	219,300	261,900	290,100	236,900	182,600	163,800
1951	154,400	235,800	252,900	233,400	250,200	238,700	236,600	263,800	267,600	204,200	154,000	114,000
1952	107,300	125,400	151,600	176,400	179,000	150,400	125,800	175,100	262,800	272,500	235,200	199,300
1953	183,400	191,800	213,600	243,100	267,600	277,200	276,600	282,100	292,000	264,400	207,400	169,500
1954	161,200	170,800	189,200	215,000	242,200	274,500	282,700	288,300	251,000	184,500	127,200	91,040
1955	75,390	85,720	112,900	140,700	165,700	190,800	180,700	184,000	184,000	131,400	82,960	57,100
1956	53,870	63,220	165,700	212,700	192,900	201,400	234,400	280,200	291,500	265,900	213,200	175,000
1957	165,700	170,900	181,400	196,800	227,700	255,900	254,800	280,700	280,500	220,600	163,400	133,800
1958	156,900	149,200	167,600	185,200	207,100	238,000	231,700	254,900	296,000	259,800	206,500	170,300
1959	159,200	165,100	173,700	205,500	241,100	258,000	230,000	205,800	154,700	98,650	48,500	28,710
1960	26,890	39,890	66,630	93,430	130,000	161,900	159,600	148,800	118,400	73,770	38,060	17,950

3155. Marys River above Hot Springs Creek, near Deeth, Nev.

Location.--Lat 41°15', long 115°17', in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T.39 N., R.59 E., on right bank 1 mile upstream from Hot Springs Creek, 7 miles north of Cross Ranch, and 13 miles north of Deeth.

Drainage area.--415 sq mi.

Records available.--October 1943 to September 1960. Prior to October 1950, published as "below Hot Springs Creek, near Deeth."

Gage.--Water-stage recorder. Altitude of gage is 5,500 ft (from river-profile map). Prior to Nov. 3, 1950, at site $1\frac{1}{4}$ miles downstream at different datum.

Average discharge.--17 years (1943-60), 58.3 cfs (42,210 acre-ft per year).

Extremes.--1943-60: Maximum discharge, 1,250 cfs Apr. 29, 1952 (gage height, 6.57 ft); minimum, 0.1 cfs Sept. 5, 1950, Aug. 27, 1955.

Remarks.--Several diversions for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.78	17.0	37.7	24.6	88.6	83.8	358	311	114	10.7	3.42	1.29	87.4
1952	2.79	9.60	11.5	12.3	18.0	37.4	515	649	232	26.9	4.24	1.25	127
1953	2.51	7.42	13.0	29.2	27.1	52.6	122	148	264	42.0	3.94	.94	59.2
1954	2.05	8.03	12.4	12.6	29.4	46.2	64.2	61.0	20.6	8.62	1.06	.63	22.2
1955	1.61	3.58	4.25	5.78	8.57	21.9	40.0	131	83.4	9.79	.55	.38	26.0
1956	.94	3.48	18.2	40.4	29.4	99.7	254	298	123	8.47	.96	1.12	73.1
1957	2.05	7.06	9.27	9.67	42.6	58.7	110	302	206	23.6	1.13	.79	64.3
1958	2.20	6.28	9.43	8.90	44.7	57.4	179	361	126	13.1	1.37	.75	67.6
1959	2.07	5.04	10.9	15.6	16.6	32.1	74.8	85.4	60.4	3.57	.54	1.02	25.6
1960	2.29	5.41	7.65	7.97	14.4	63.8	163	141	80.0	3.04	.75	.98	40.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	233	1,010	2,320	1,510	4,920	5,160	21,310	19,100	6,770	655	210	77	63,280
1952	171	571	710	758	1,040	2,300	30,640	39,910	13,790	1,650	261	74	91,880
1953	142	442	801	1,800	1,510	3,230	7,270	9,090	15,710	2,580	242	56	42,870
1954	126	478	762	778	1,630	2,840	3,820	3,750	1,230	530	65	37	16,050
1955	111	213	262	355	476	1,350	2,380	8,050	4,960	602	35	23	18,820
1956	58	207	1,120	2,480	1,690	6,130	15,130	18,330	7,290	521	59	67	53,080
1957	126	420	570	595	2,370	3,610	6,520	18,550	12,280	1,450	69	47	46,590
1958	135	373	580	547	2,480	3,530	10,680	22,170	7,480	803	84	45	48,910
1959	127	300	670	960	924	1,980	4,450	5,250	3,590	219	33	61	18,560
1960	141	322	470	490	829	3,920	9,670	8,680	4,760	187	46	59	29,570

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	69.7	50,460
1951	1214	452	Apr. 18, 1951	0.9	87.4	63,280	84.5	61,160
1952	1244	1,250	Apr. 29, 1952	1.0	127	91,880	126	91,810
1953	1284	398	June 15, 1953	-	59.2	42,870	59.2	42,850
1954	1344	128	Apr. 29, 1954	.4	22.2	16,050	21.1	15,270
1955	1394	189	May 25, 1955	.2	26.0	18,820	27.1	19,620
1956	1444	610	May 26, 1956	.4	73.1	53,080	72.8	52,810
1957	1514	510	May 21, 1957	.6	64.3	46,590	64.3	46,560
1958	1564	500	May 23, 1958	.6	67.6	48,910	67.6	48,920
1959	1634	128	June 8, 1959	.4	25.6	18,560	25.4	18,400
1960	1714	276	Apr. 12, 1960	.6	40.7	29,570	-	-

3165. Lamoille Creek near Lamoille, Nev.

Location.--Lat 40°41'30", long 115°28'30", in NE $\frac{1}{4}$ 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 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Concrete control since Oct. 30, 1950. Altitude of gage is 6,240 ft (from topographic map). Prior to Oct. 1, 1943, staff gages at various sites nearby at different datums.

Average discharge.--24 years (1915-22, 1943-60), 42.7 cfs (30,910 acre-ft per year).

Extremes.--1915-23, 1943-60: Maximum discharge recorded, 794 cfs June 4, 1957, caused by failure of diversion dam 200 ft upstream but may have been exceeded by that in June 1917 when gage washed out; minimum, 1 cfs Jan. 24, 1918, Dec. 8, 1954.

Remarks.--Records include flow of McDermott ditch, which diverts about 200 ft upstream from station. Elko-Lamoille powerplant diverts about 6 miles upstream, but flow is returned to channel at powerplant 300 ft upstream from station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.53	7.54	10.6	9.27	8.23	7.01	41.6	177	205	85.2	20.1	8.77	48.8
1952	6.36	4.50	4.11	4.5	4.52	4.80	34.1	187	222	105	24.8	8.74	51.0
1953	4.65	3.28	2.99	3.24	3.54	5.15	17.1	48.2	188	133	18.8	6.23	36.2
1954	4.29	4.28	4.04	3.89	4.84	6.52	25.5	130	80.0	27.7	6.89	3.47	25.2
1955	3.53	3.23	2.66	2.61	2.70	3.06	5.37	53.2	159	47.5	11.2	5.29	24.9
1956	4.26	3.29	5.70	8.38	6.87	7.98	321	175	268	106	18.4	7.15	53.6
1957	5.61	4.85	4.53	3.89	3.73	5.33	10.2	96.1	318	140	25.8	9.11	52.3
1958	8.77	6.97	5.96	5.40	6.11	6.36	17.6	211	192	64.8	19.2	6.60	46.1
1959	4.06	3.41	3.01	2.55	2.61	3.30	12.3	60.0	121	22.0	6.89	5.62	20.5
1960	10.8	6.91	3.87	3.52	3.7	5.99	28.7	106	177	32.9	9.15	4.61	32.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	401	449	654	570	457	431	2,470	10,870	12,170	5,240	1,230	403	35,340
1952	391	268	252	277	260	295	2,030	11,510	13,190	6,490	1,520	520	37,000
1953	286	195	184	199	197	317	1,020	2,960	11,170	8,150	1,160	371	26,210
1954	264	255	248	239	269	401	1,520	7,970	4,760	1,700	424	208	18,260
1955	217	192	163	160	150	188	319	3,270	9,460	2,920	692	315	18,050
1956	261	196	350	516	395	491	1,910	10,760	15,960	6,490	1,130	426	38,880
1957	345	289	278	239	207	327	607	5,910	18,930	8,590	1,580	542	37,840
1958	539	415	366	332	339	391	1,050	12,980	11,450	3,980	1,180	393	33,420
1959	250	203	185	157	145	203	734	3,690	7,170	1,350	424	334	14,840
1960	666	411	238	216	213	368	1,710	6,620	10,540	2,020	563	274	23,840

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	54.3	39,300
1951	1214	505	May 26, 1951	4.0	48.8	35,340	48.0	34,750
1952	1244	415	June 5, 1952	3.4	51.0	37,000	50.6	36,760
1953	1284	311	June 18, 1953	-	36.2	26,210	36.3	26,310
1954	1344	235	May 19, 1954	3.2	25.2	18,260	25.0	18,060
1955	1394	323	June 9, 1955	-	24.9	18,050	25.3	18,280
1956	1444	447	May 24, 1956	2.8	53.6	38,880	53.7	38,990
1957	1514	794	June 4, 1957	3.3	52.3	37,840	52.8	38,250
1958	1564	457	May 24, 1958	4.0	46.1	33,420	45.2	32,730
1959	1634	238	June 6, 1959	2.1	20.5	14,840	21.4	15,520
1960	1714	348	June 2, 1960	-	32.8	23,840	-	-

3175. North Fork Humboldt River at Devils Gate, near Halleck, Nev.

Location.--Lat 41°11', long 115°29', in SE $\frac{1}{4}$ sec.13, T.38 N., R.57 E., on right bank 16 miles north of Halleck and 26 miles upstream from mouth.

Drainage area.--830 sq mi, approximately.

Records available.--October 1913 to December 1921, October 1943 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 5,368 ft above mean sea level (Geological Survey planetable bench mark). November 1913 to September 1921 at site a quarter of a mile upstream at different datum.

Average discharge.--25 years (1913-21, 1943-60), 72.4 cfs (52,420 acre-ft per year).

Extremes.--1913-21, 1943-60: Maximum discharge, 2,450 cfs Apr. 20, 1952 (gage height, 9.63 ft); minimum, 1.1 cfs July 26, 1960.

Remarks.--Many diversions for irrigation above station.

Correction.--In WSP 460 and 1314, the means and runoff in acre-feet for March, water year, and calendar year 1917 are published in error. The means should be 118, 155, and 155 cfs, respectively; and runoff, 7,260, 112,000, and 112,000 acre-ft, respectively.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.1	20.3	45.4	27.6	216	218	293	176	88.5	9.79	9.04	5.62	92.1
1952	10.8	18.0	18.0	20	25	48.8	1,046	732	353	79.7	22.4	9.27	198
1953	12.6	18.8	18.1	42.0	42.9	62.9	93.3	140	265	72.0	17.6	11.7	66.2
1954	12.7	17.2	19.9	17.7	39.7	51.6	42.9	31.5	13.0	3.93	2.91	5.06	21.4
1955	8.71	10.2	9.90	9.0	11.4	22.1	27.8	27.2	20.4	4.06	3.12	4.11	13.2
1956	7.35	10.4	26.5	76.5	47.9	296	263	238	126	22.6	9.18	7.69	94.5
1957	12.0	16.7	18.5	13.3	196	117	153	299	217	38.5	11.0	7.55	90.7
1958	11.2	16.7	17.2	15.4	130	128	380	328	193	36.4	15.0	9.36	106
1959	12.6	18.1	20.9	21.6	22.7	38.0	28.6	13.9	8.96	3.38	2.86	7.44	16.5
1960	9.79	9.33	12	12.7	17	140	143	72.4	56.5	6.45	3.68	5.23	40.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	620	1,210	2,790	1,700	11,990	13,420	17,410	10,810	5,260	602	556	334	66,700
1952	664	1,070	1,100	1,230	1,440	3,000	62,250	45,010	20,990	4,900	1,380	552	143,600
1953	777	1,120	1,110	2,580	2,380	3,870	5,550	8,620	15,800	4,450	1,080	695	47,960
1954	779	1,030	1,230	1,090	2,200	3,180	2,550	1,940	773	242	179	301	15,490
1955	536	609	609	553	631	1,360	1,650	1,670	1,210	250	192	244	9,510
1956	452	618	1,630	4,700	2,760	18,200	15,680	14,630	7,490	1,390	565	458	68,570
1957	738	994	1,130	817	10,890	7,210	9,090	18,380	12,900	2,370	677	449	65,640
1958	686	994	1,060	946	7,240	7,860	22,640	20,150	11,480	2,240	921	557	76,770
1959	774	1,080	1,290	1,330	1,260	2,330	1,700	853	533	208	176	443	11,980
1960	602	555	738	781	978	8,620	8,520	4,450	3,360	396	226	311	29,540

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	63.3	45,820
1951	1214	954	Feb. 6, 1951	-	92.1	66,700	89.7	64,920
1952	1244	2,450	Apr. 20, 1952	7.8	198	143,600	198	143,800
1953	1284	1,050	May 31, 1953	4.7	66.2	47,960	66.3	48,040
1954	1344	106	Mar. 10, 1954	2.3	21.4	15,490	19.6	14,210
1955	1394	43	May 30, 1955	2.3	13.2	9,510	14.5	10,460
1956	1444	1,200	Mar. 26, 1956	2.6	94.5	68,570	94.7	68,740
1957	1514	860	Feb. 24, 1957	6.2	90.7	65,640	90.5	65,520
1958	1564	914	Apr. 19, 1958	7.8	106	76,770	107	77,180
1959	1634	69	Mar. 3, 1959	2.0	16.5	11,980	14.8	10,730
1960	1714	371	Mar. 8, 1960	2.2	40.7	29,540	-	-

HUMBOLDT RIVER BASIN

3185. Humboldt River near Elko, Nev.

Location.--Lat 40°56', long 115°38', in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.35 N., R.56 E., on right bank 1 mile southwest of Ryndon, 5 miles downstream from North Fork, and 10 miles northeast of Elko.

Drainage area.--2,800 sq mi, approximately.

Records available.--June 1895 to October 1902, October 1944 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 5,142.32 ft above mean sea level, datum of 1929. June 1895 to October 1902, staff gage at site 11 miles downstream at different datum.

Average discharge.--23 years (1895-1902, 1944-60), 228 cfs (165,100 acre-ft per year).

Extremes.--1895-1902, 1944-60: Maximum discharge, 3,860 cfs Apr. 30, 1952 (gage height, 9.60 ft); no flow for many days in August and September 1948.

Remarks.--Diversions for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	5.35	54.4	157	130	589	399	708	699	530	56.0	9.05	1.02	275
1952	2.74	24.7	32.0	36.6	59.1	161	1,966	2,079	1,152	213	28.4	2.96	479
1953	10.9	18.5	30.7	129	132	166	167	209	761	252	16.0	1.86	157
1954	11.2	23.9	25.5	32.5	123	181	122	67.9	11.9	2.35	.50	.85	49.7
1955	1.02	1.32	4.78	4.23	8.54	75.2	95.2	116	192	14.2	.99	.63	42.8
1956	1.17	3.63	42.4	209	136	579	631	829	894	120	6.05	1.10	287
1957	3.87	16.2	44.6	36.0	278	301	321	737	1,257	290	9.22	1.72	273
1958	8.19	44.3	55.8	40.5	284	322	665	856	665	70.5	5.83	1.81	250
1959	10.0	19.5	33.0	63.5	79.4	97.7	72.9	46.1	35.1	3.47	1.10	1.25	38.3
1960	1.90	3.94	4.30	3.65	16.5	165	256	198	219	9.04	1.41	.98	73.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	329	3,240	9,670	7,970	32,720	24,500	42,120	42,970	31,550	3,450	557	61	139,100
1952	168	1,470	1,970	2,250	3,400	9,890	117,000	127,800	68,560	13,080	1,750	176	347,500
1953	670	1,100	1,890	7,900	7,360	10,190	9,960	12,840	45,280	15,490	984	110	113,800
1954	690	1,420	1,570	2,000	6,840	11,100	7,270	4,180	707	144	31	51	36,000
1955	63	79	294	260	474	4,630	5,660	7,130	11,440	874	61	38	31,000
1956	72	216	2,610	12,850	7,840	35,530	37,530	50,980	53,170	7,370	372	65	208,700
1957	238	962	2,740	2,210	15,410	18,520	19,080	45,300	74,820	17,840	567	102	197,800
1958	503	2,630	3,430	2,430	15,790	19,800	39,600	52,660	39,580	4,340	358	108	181,300
1959	615	1,160	2,030	3,910	4,410	6,010	4,340	2,830	2,090	213	67	74	27,750
1960	117	234	265	225	950	10,130	15,210	12,160	13,050	556	87	58	53,040

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	210	152,000
1951	1214	1,650	Feb. 8, 1951	0.9	275	199,100	262	189,500
1952	1244	3,860	Apr. 30, 1952	1.2	479	347,500	479	347,600
1953	1294	1,020	June 9, 1953	1.2	157	113,800	157	113,800
1954	1344	337	Mar. 12, 1954	.4	49.7	36,000	45.2	32,760
1955	1394	414	June 18, 1955	.4	42.8	31,000	46.2	33,460
1956	1444	2,180	May 30, 1956	.7	287	208,700	289	209,710
1957	1514	2,250	June 12, 1957	1.1	273	197,800	277	200,400
1958	1584	1,620	May 28, 1958	1.5	250	181,300	247	178,500
1959	1634	142	Mar. 3, 1959	.8	38.3	27,750	33.9	24,560
1960	1714	453	June 11, 1960	.6	73.1	53,040	-	-

3190. South Fork Humboldt River near Lee, Nev.

Location.--Lat 40°34', long 115°33', in SE $\frac{1}{4}$ sec.16, T.31 N., R.57 E., on left bank 400 ft downstream from Kleckner Creek and 2 $\frac{1}{2}$ miles east of Lee.

Drainage area.--54 sq mi, approximately.

Records available.--January 1945 to September 1955. Monthly discharge only for January 1945, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 5,970 ft (from topographic map).

Average discharge.--10 years (1945-55), 67.2 cfs (48,650 acre-ft per year).

Extremes.--1945-55: Maximum discharge, 935 cfs May 27, 1951 (gage height, 3.81 ft); minimum, 2.0 cfs Nov. 29, 1954.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.60	12.1	24.2	15.0	24.5	24.5	105	337	316	89.7	18.0	6.09	81.8
1952	7.25	6.23	8.47	8.82	10.7	13.2	154	383	377	136	22.7	6.60	94.5
1953	5.68	5.58	6.25	7.52	8.36	16.9	64.4	107	356	187	23.9	6.71	66.3
1954	7.10	9.11	9.03	7.43	11.6	18.5	64.2	207	107	27.7	7.07	4.69	40.2
1955	5.95	5.66	4.33	4.15	4.5	8.04	22.9	115	264	46.6	11.2	5.51	41.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	406	720	1,490	924	1,360	1,510	6,260	20,750	18,820	5,520	1,110	363	59,230
1952	446	371	521	542	616	813	9,140	23,530	22,440	8,380	1,400	393	68,590
1953	349	320	385	463	465	1,040	3,830	6,570	21,200	11,500	1,470	399	47,990
1954	437	542	555	457	647	1,140	3,820	12,720	6,370	1,700	435	279	29,100
1955	366	337	266	255	250	494	1,360	7,050	15,690	3,000	686	328	30,080

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	78.0	56,460
1951	1214	935	May 27, 1951	4.7	81.8	59,230	80.0	57,955
1952	1244	687	June 5, 1952	4.0	94.5	68,590	94.1	68,310
1953	1284	664	June 12, 1953	3.7	66.3	47,990	67.0	48,470
1954	1344	357	May 19, 1954	4.2	40.2	29,100	39.4	28,540
1955	1394	592	June 9, 1955	2.9	41.6	30,080	-	-

3195. Huntington Creek near Lee, Nev.

Location.--Lat 40°33', long 115°43', in SW $\frac{1}{4}$ sec.19, T.31 N., R.56 E., on right bank $\frac{5}{2}$ miles upstream from mouth and 6 miles west of Lee.

Drainage area.--770 sq mi, approximately.

Records available.--October 1948 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 5,315 ft (from river-profile map).

Average discharge.--12 years (1948-60), 30.9 cfs (22,370 acre-ft per year).

Extremes.--1948-60: 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 daily, 0.2 cfs Aug. 7, 1959.

Remarks.--Divisions for irrigation of 17,700 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.69	18.7	34.6	21.9	89.4	52.3	86.4	162	60.1	8.29	4.34	3.39	45.3
1952	7.15	8.14	8.41	10	11.9	51.1	415	397	112	18.2	7.40	4.88	87.5
1953	7.12	10.7	13.8	30.6	27.2	29.0	23.6	21.4	64.8	9.17	3.81	3.14	20.3
1954	5.07	6.48	7.61	8.85	22.7	27.0	19.6	10.2	8.00	2.66	1.44	1.83	10.0
1955	3.72	5.60	6.99	6.0	7.0	21.8	12.6	15.6	39.4	3.98	2.26	1.79	10.5
1956	4.24	7.23	15.1	29.9	26.6	90.6	124	190	103	7.67	2.57	2.12	50.3
1957	5.75	6.48	7.0	6.48	15.4	25.6	31.4	80.3	188	18.1	2.82	3.17	30.6
1958	5.57	10.6	12.0	10.4	43.5	39.1	85.3	149	55.8	4.87	2.15	2.98	35.0
1959	4.89	9.09	11.5	14.6	17.5	14.8	8.89	4.53	1.85	1.11	1.40	2.93	7.69
1960	5.10	4.45	4.97	6.71	10.6	21.9	11.6	10.3	6.83	2.69	1.53	2.01	7.38

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	411	1,110	2,130	1,340	4,960	3,210	5,140	9,960	3,580	510	267	202	32,820
1952	440	484	517	615	686	3,140	24,680	24,390	6,660	1,120	473	290	63,500
1953	438	636	851	1,880	1,510	1,780	1,400	1,320	3,860	584	234	187	14,660
1954	312	386	468	544	1,260	1,660	1,170	628	476	165	86	109	7,270
1955	229	333	430	369	389	1,340	748	958	2,340	245	139	107	7,630
1956	261	430	931	1,840	1,530	5,570	7,350	11,680	6,130	471	158	126	36,480
1957	353	386	430	399	853	1,570	1,870	4,930	9,870	1,110	173	189	22,130
1958	343	633	738	637	2,420	2,400	5,080	9,190	3,320	287	132	177	25,360
1959	301	540	706	898	970	908	529	278	110	68	86	174	5,570
1960	313	265	306	413	610	1,350	689	631	406	165	94	119	5,360

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	34.3	24,850
1951	1214	382	Feb. 5, 1951	2.8	45.3	32,820	42.3	30,610
1952	1244	1,210	Apr. 29, 1952	3.5	87.5	63,500	88.1	63,980
1953	1284	129	June 15, 1953	2.4	20.3	14,660	19.2	13,900
1954	1344	37	Mar. 25, 1954	-	10.0	7,270	9.80	7,090
1955	1394	104	June 11, 1955	.6	10.5	7,630	11.4	8,260
1956	1444	422	May 25, 1956	1.1	50.3	36,480	49.6	36,020
1957	1514	388	June 6, 1957	1.3	30.6	22,130	31.3	22,680
1958	1564	257	May 28, 1958	1.4	35.0	25,360	34.8	25,190
1959	1634	23	Feb. 19, 1959	.2	7.68	5,570	6.78	4,900
1960	1714	72	Mar. 7, 1960	1.0	7.38	5,360	-	-

3200. South Fork Humboldt River above Dixie Creek, near Elko, Nev.

Location.--Lat 40°41'05", long 115°48'45" in NW 1/4 sec. 5, T.32 N., R.55 E., on left bank 1 1/2 miles upstream from Dixie Creek and 10 1/2 miles south of Elko.

Drainage area.--1,150 sq mi, approximately.

Records available.--October 1948 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 5,140 ft (from topographic map).

Average discharge.--12 years (1948-60), 101 cfs (73,120 acre-ft per year).

Extremes.--1948-60: Maximum discharge, 1,700 cfs Apr. 29, 1952, June 6, 1957; maximum gage height, 5.58 ft June 6, 1957; minimum daily discharge, 0.1 cfs Sept. 9, 1959 (gage height, 1.62 ft).

Remarks.--Diversions for irrigation of 32,900 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	14.5	38.3	75.3	49.8	126	95.4	199	479	369	92.1	24.7	6.81	131
1952	14.9	22.1	15.7	18	24.5	84.2	633	845	549	162	31.7	9.84	201
1953	14.4	21.1	20.7	51.0	44.7	53.5	78.3	97.9	412	189	23.0	6.26	84.1
1954	10.4	22.2	21.2	20.4	52.7	59.9	77.8	193	89.8	17.4	1.97	1.20	47.3
1955	3.83	5.82	10.2	9	11	38.2	39.4	103	313	35.8	6.43	1.80	47.9
1956	8.01	14.8	44.4	84.2	63.1	164	255	534	549	111	16.4	4.35	154
1957	10.2	16.9	20.0	16.5	31.4	53.1	81.6	255	744	212	20.5	6.14	122
1958	18.6	31.4	24.1	19.4	79.5	75.3	200	572	420	73.1	14.9	5.70	128
1959	11.1	21.0	25.5	28.6	32.1	28.3	29.9	55.7	94.1	7.16	76	2.03	27.9
1960	5.28	13.4	16	18.7	23	60.3	70.0	160	242	21.8	3.36	1.40	52.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	889	2,280	4,630	3,060	6,980	5,870	11,850	29,420	21,940	5,660	1,520	405	94,500
1952	91 ⁶	1,320	968	1,110	1,410	5,180	37,680	51,960	32,690	9,980	1,950	585	145,700
1953	888	1,260	1,270	3,130	2,480	3,290	4,660	6,020	24,500	11,620	1,410	372	60,900
1954	641	1,320	1,300	1,250	2,930	3,690	4,630	11,890	5,340	1,070	121	71	34,250
1955	235	347	629	553	611	2,350	2,350	6,340	18,600	2,200	395	107	34,720
1956	492	879	2,730	5,180	3,630	10,110	15,160	32,830	32,660	6,820	1,010	259	111,800
1957	628	1,000	1,230	1,010	1,750	3,260	4,850	15,570	44,240	13,060	1,260	366	88,220
1958	1,140	1,870	1,480	1,190	4,420	4,630	11,880	35,150	24,960	4,490	919	339	92,470
1959	680	1,250	1,570	1,760	1,790	1,740	1,780	3,420	5,600	440	47	121	20,200
1960	324	799	984	1,150	1,320	3,710	4,170	9,860	14,410	1,340	207	84	38,360

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	120	86,730
1951	1214	1,240	May 28, 1951	5.1	131	94,500	124	89,910
1952	1244	1,700	Apr. 29, 1952	8.1	201	145,700	201	146,000
1953	1284	731	June 19, 1953	4.5	84.1	60,900	83.9	60,740
1954	1344	343	May 21, 1954	.7	47.3	34,250	44.5	32,200
1955	1394	676	June 11, 1955	.8	47.9	34,720	51.9	37,610
1956	1444	1,360	May 25, 1956	3.1	154	111,800	152	110,500
1957	1514	1,700	June 6, 1957	4.3	122	89,220	124	89,850
1958	1564	1,160	May 25, 1958	4.3	128	92,470	126	91,480
1959	1634	216	June 7, 1959	.1	27.9	20,200	26.0	18,800
1960	1714	499	June 4, 1960	1.0	52.8	38,360	-	-

3205. South Fork Humboldt River near Elko, Nev.

Location.--Lat 40°43'25", long 115°49'45", in NE¼NW¼ sec.30, T.33 N., R.55 E., on right bank 0.1 mile upstream from head of canyon, 1.7 miles downstream from highway bridge, 8.8 miles upstream from mouth, and 10 miles southwest of Elko.

Drainage area.--1,310 sq mi (revised), approximately.

Records available.--August 1896 to December 1909, September 1910 to September 1918, April to November 1919, May 1920 to September 1922, October 1923 to September 1932, October 1936 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Published as "at Mason's Ranch" 1896-1902.

Gage.--Water-stage recorder. Altitude of gage is 5,100 ft (from topographic map). Prior to November 1913, staff gages at several sites about 1 mile upstream at various datums. November 1913 to February 1927 water-stage recorder near present site at different datum. March 1927 to September 1932 staff gage at site 1 mile upstream at different datum. October 1932 to Oct. 12, 1955, water-stage recorder at site 900 ft upstream at datum 1.97 ft higher.

Average discharge.--56 years (1896-1909, 1910-18, 1920-22, 1923-32, 1936-60), 126 cfs (91,220 acre-ft per year).

Extremes.--1896-1922, 1923-32, 1936-60: Maximum daily discharge, 2,400 cfs Jan. 26, 1914; maximum gage height observed, 12.0 ft Jan. 26, 1914, site and datum then in use (ice jam); no flow at times in many years.

Remarks.--Many diversions for irrigation above station. Station is below all diversions except those of Hunter & Banks ranch 3 miles downstream.

Correction.--Corrected records for the water years 1921 and 1927, superseding those published in WSP 530 and 1314, are given herewith:

Month	Mean	Acre-feet
July 1921.....	299	18,400
Water year 1920-21.....	240	174,000
Calendar year 1921.....	239	173,000
January 1927.....	28	1,710
February 1927.....	158	8,750
Water year 1926-27.....	108	78,400
Calendar year 1927.....	111	80,200
Calendar year 1928.....	64.5	-

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	11.1	38.2	96.7	52.9	139	105	213	445	341	82.4	19.6	4.10	129
1952	11.9	18.9	16.9	20	17.3	116	786	891	530	142	28.9	6.59	216
1953	9.64	18.7	21.9	55.8	48.6	53.2	71.6	90.0	417	167	21.4	3.93	81.3
1954	7.22	20.5	20.1	19.1	45.6	51.1	71.9	186	77.4	17.0	0	.21	43.0
1955	.15	1.57	8.06	7.0	9.0	31.8	33.1	101	305	28.7	6.97	.76	44.3
1956	3.20	10.6	40.9	92.6	63.1	191	266	542	550	100	13.1	1.24	156
1957	6.75	13.2	13.0	11.9	26.4	54.1	82.9	262	757	198	16.1	1.83	120
1958	12.5	24.6	19.1	14.4	84.2	81.2	223	561	411	73.5	12.8	3.12	127
1959	7.78	15.9	21.0	23.8	26.0	25.8	27.1	50.5	89.1	5.15	.03	.44	24.4
1960	2.11	8.90	11	14.1	20	62.3	73.1	155	230	12.9	.90	0	49.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	685	2,270	5,950	3,250	7,730	6,430	12,680	27,350	20,280	5,070	200	244	93,140
1952	733	1,120	1,040	1,230	1,570	7,120	46,790	54,810	31,540	8,710	780	392	156,800
1953	593	1,110	1,340	3,430	2,700	3,270	4,260	5,530	24,810	10,290	1,320	234	58,890
1954	444	1,220	1,240	1,170	2,530	3,140	4,280	11,440	4,600	1,040	13	0	31,120
1955	9.3	94	496	430	500	1,950	1,970	6,210	18,170	1,760	429	45	32,060
1956	197	633	2,510	5,700	3,630	11,750	15,820	33,310	32,740	6,170	808	74	113,300
1957	415	785	799	706	1,470	3,330	4,930	16,090	45,030	12,200	989	109	86,850
1958	770	1,460	1,170	885	4,680	4,990	13,260	34,490	24,440	4,520	787	186	91,640
1959	478	946	1,290	1,460	1,550	1,590	1,610	3,100	5,300	317	1.8	26	17,670
1960	130	530	676	865	1,150	3,870	4,350	9,540	13,680	792	55	0	35,620

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	120	87,150
1951	1214	1,120	May 29, 1951	3.2	129	93,140	120	87,130
1952	1243	1,700	Apr. 29, 1952	5.0	216	156,800	216	157,000
1953	1284	742	June 19, 1953	1.3	81.3	58,890	81.1	58,750
1954	1344	358	May 21, 1954	0	43.0	31,120	39.8	28,810
1955	1394	688	June 10, 1955	0	44.3	32,060	48.1	34,800
1956	1444	1,270	May 26, 1956	.6	156	113,300	154	112,000
1957	1514	1,590	June 6, 1957	.5	120	86,850	122	88,250
1958	1564	1,110	May 25, 1958	2.0	127	91,640	126	90,950
1959	1634	221	June 7, 1959	0	24.4	17,670	22.1	16,290
1960	1714	488	June 4, 1960	0	49.1	35,620	-	-

3210. 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 4½ miles southwest of Moleen, 5 miles upstream from Susie Creek, 5½ miles east of Carlin, and 15 miles southwest of Elko.

Drainage area.--4,310 sq mi, approximately.

Records available.--October 1943 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 4,931.91 ft above mean sea level (levels by State Highway Department).

Average discharge.--17 years (1943-60), 318 cfs (230,200 acre-ft per year).

Extremes.--1943-60: Maximum discharge, 5,220 cfs May 1, 1952 (gage height, 9.35 ft); minimum, 0.1 cfs Aug. 16, 1959.

High water in February 1943 reached a stage of 9.8 ft (discharge, 5,900 cfs, by slope-area measurement of peak flow).

Remarks.--Many diversions for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	21.6	79.5	262	199	844	512	872	1,097	956	152	37.5	13.5	416
1952	22.6	39.0	49.5	70.0	112	332	2,730	5,012	1,633	386	76.7	18.5	706
1953	203	41.9	62.7	161	174	219	234	227	1,003	431	74.2	8.78	218
1954	16.6	36.7	54.0	56.3	162	244	208	183	67.3	20.7	2.63	.52	86.9
1955	1.80	5.48	7.11	10	22.3	107	125	154	430	42.9	4.65	1.93	75.7
1956	6.05	10.1	59.2	316	205	745	886	1,242	1,524	223	27.3	10.5	438
1957	14.7	28.4	67.2	67.5	228	412	411	864	1,991	541	31.4	9.14	388
1958	22.5	65.6	81.5	78.4	348	448	875	1,254	1,144	164	31.3	12.0	376
1959	18.4	42.4	64.3	89.7	109	135	108	78.8	106	11.1	.92	4.59	63.6
1960	10.5	18.8	25.1	22.1	43.0	181	313	285	392	25.4	5.77	6.15	110

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,330	4,750	16,100	12,240	46,960	31,460	51,890	67,430	56,880	9,330	2,300	801	301,400
1952	1,590	2,320	3,050	4,300	6,430	20,440	62,400	185,200	97,170	23,730	4,720	1,100	512,200
1953	1,250	2,500	3,860	9,870	9,870	13,480	13,930	13,940	59,680	26,520	2,900	522	158,100
1954	1,020	2,180	3,320	3,460	9,000	15,020	12,240	11,240	4,000	1,270	161	31	62,940
1955	111	326	437	615	1,240	6,590	7,420	9,440	25,590	2,640	286	115	54,810
1956	372	1,140	3,640	19,450	11,790	45,780	52,710	76,340	90,700	13,710	1,680	627	317,900
1957	903	1,690	4,130	4,150	12,690	25,300	24,450	53,150	18,450	33,240	1,930	544	280,600
1958	1,380	3,900	5,010	4,820	19,330	27,560	52,070	77,120	68,050	10,100	1,920	711	272,000
1959	1,130	2,520	3,950	5,520	6,040	8,320	6,420	4,850	6,300	683	56	273	46,060
1960	643	1,120	1,540	1,360	2,470	11,150	18,600	17,520	23,330	1,560	355	366	80,010

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	331	239,700
1951	1214	2,000	June 12, 1951	12	416	301,400	395	286,000
1952	1244	5,220	May 1, 1952	12	706	512,200	707	513,100
1953	1284	1,440	June 20, 1953	6.8	218	158,100	217	157,000
1954	1344	308	Mar. 28, 1954	.4	88.9	62,940	79.1	57,300
1955	1394	741	June 18, 1955	.5	75.7	54,810	81.6	59,090
1956	1444	2,960	May 29, 1956	2.6	438	317,900	440	319,500
1957	1514	3,340	June 10, 1957	6.0	388	280,600	393	284,200
1958	1564	2,280	May 30, 1958	5.2	376	272,000	372	264,300
1959	1634	225	June 7, 1959	.2	63.6	46,060	57.7	41,760
1960	1714	679	June 7, 1960	2.6	110	80,010	-	-

3215. Susie Creek near Carlin, Nev.

Location.--Lat 40°56', long 115°58', in SW $\frac{1}{4}$ sec.12, T.35 N., R.53 E., on left bank half a mile upstream from Adobe Creek, 16 miles upstream from mouth, and 17 miles northeast of Carlin.

Drainage area.--82.5 sq mi.

Records available.--October 1955 to September 1958.

Gage.--Water-stage recorder.

Extremes.--1955-58: Maximum discharge, 184 cfs Jan. 15, 1956 (gage height, 3.49 ft); no flow Aug. 30, 1958.

Remarks.--Divisions above station for irrigation of about 159 acres.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	0.63	0.66	3.21	9.21	5.81	29.3	14.9	9.90	1.05	0.19	0.14	0.44	6.31
1957	1.02	.91	1.84	.90	27.6	12.5	14.2	11.8	2.85	.24	.11	.34	6.03
1958	.70	1.14	1.15	1.64	13.5	14.0	26.0	11.1	1.75	.24	.29	.25	5.94

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1956	39	39	197	566	334	1,800	887	609	62	12	8.3	26	4,580
1957	62	54	113	55	1,530	771	843	724	169	14	6.9	20	4,360
1958	43	68	71	101	750	864	1,560	685	104	15	18	15	4,290

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1956	1444	184	Jan. 15, 1956	0.1	6.31	4,580	6.25	4,530	
1957	1514	161	Feb. 25, 1957	.1	6.03	4,360	5.96	4,310	
1958	1564	89	Apr. 17, 1958	0	5.94	4,290	-	-	

3225. Humboldt River at Palisade, Nev.

Location--Lat 40°36'25", long 116°12'05", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.35, T.32 N., R.51 E., on right bank a quarter of a mile downstream from Southern Pacific Railroad bridge, half a mile downstream from Palisade, and three-quarters of a mile upstream from Pine Creek.

Drainage area--5,010 sq mi, approximately.

Records available--October 1902 to October 1906, July 1911 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage--Water-stage recorder. Datum of gage is 4,825.55 ft above mean sea level, datum of 1929. Prior to Apr. 1, 1939, staff or chain gages (water-stage recorder Apr. 22 to June 3, 1935) at several sites within half a mile of present site at various datums.

Average discharge--53 years (1902-6, 1911-60), 355 cfs (257,000 acre-ft per year).

Extremes--1902-6, 1911-60: Maximum discharge, 6,250 cfs Feb. 26, 1943 (gage height, 9.92 ft); minimum, 2 cfs Aug. 25-28, 1931.

Remarks--Diversion for irrigation of about 150,000 acres of hay and pasture land above station.

Correction--In WSP 1314, the monthly mean for October 1903 is listed in error; it should be 36 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	39.4	92.4	312	216	1,000	575	953	1,111	961	164	51.0	28.4	455
1952	39.5	54.6	61.9	80.0	134	403	3,759	3,636	1,803	439	96.8	34.2	877
1953	39.5	65.7	86.2	202	221	257	249	221	1,026	467	58.8	21.6	242
1954	35.3	56.7	69.3	74.0	184	264	209	171	77.8	34.2	13.0	10.7	99.3
1955	15.2	22.5	24.0	29.7	36.4	129	142	169	412	57.8	13.9	10.3	88.3
1956	17.9	33.8	85.4	376	225	892	997	1,310	1,552	251	43.0	22.7	483
1957	28.1	43.6	82.4	71.7	294	514	492	981	2,075	570	52.9	25.4	435
1958	38.6	94.8	108	99.3	410	529	1,039	1,357	1,181	196	49.1	28.3	426
1959	36.1	61.5	85.8	116	136	154	121	82.8	104	23.8	9.20	15.5	78.3
1960	23.6	31.0	33.2	30.4	65.6	226	328	287	391	39.5	15.2	14.7	123

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,420	5,500	19,160	13,300	55,520	35,330	56,680	68,300	57,190	10,100	3,130	1,690	328,300
1952	2,430	3,250	3,800	4,920	7,700	24,760	223,700	223,600	107,300	26,980	5,950	2,040	636,400
1953	2,430	3,910	5,300	12,440	12,250	15,810	14,800	13,580	61,050	28,720	3,620	1,280	175,200
1954	2,170	3,380	4,260	4,550	10,210	16,220	12,420	10,490	4,630	2,100	797	636	71,860
1955	956	1,340	1,480	1,830	2,020	7,960	8,440	10,360	24,520	3,550	857	515	63,910
1956	1,100	2,010	5,250	23,120	12,950	54,840	59,330	80,580	92,340	15,450	2,650	1,350	351,000
1957	1,730	2,590	5,060	4,410	16,300	31,590	29,300	60,320	23,500	35,070	3,250	1,510	314,600
1958	2,380	5,640	6,670	6,110	22,750	32,520	61,830	83,440	70,250	12,030	3,020	1,680	308,300
1959	2,220	3,660	5,280	7,120	7,550	9,440	7,200	5,090	6,160	1,460	565	922	56,670
1960	1,450	1,840	2,040	1,870	3,770	13,900	19,500	17,670	23,250	2,430	810	875	89,400

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	381	-	275,900
1951	1214	2,080	Feb. 6, 1951	26	453	328,300	429	-	310,700
1952	1244	6,050	May 2, 1952	27	877	636,400	880	-	636,600
1953	1284	1,460	June 20, 1953	20	242	175,200	239	-	173,400
1954	1344	338	Mar. 29, 1954	8.8	99.3	71,860	90.9	-	65,810
1955	1394	710	June 17, 1955	8.8	88.3	63,910	94.6	-	68,510
1956	1444	2,940	May 30, 1956	13	483	351,000	485	-	352,000
1957	1514	3,420	June 10, 1957	22	435	314,600	442	-	319,900
1958	1564	2,300	May 30, 1958	22	426	308,300	421	-	304,800
1959	1634	212	June 8, 1959	7.6	78.3	56,670	70.2	-	50,840
1960	1714	650	June 8, 1960	9.5	123	89,400	-	-	-

3230. Pine Creek near Palisade, Nev.

Location.--Lat 40°35'45", long 116°10'25", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.1, T.31 N., R 51 E., on right bank $1\frac{1}{4}$ miles upstream from mouth and $1\frac{1}{2}$ miles southeast of Palisade.

Drainage area.--999 sq mi.

Records available.--November 1902 to December 1904 (gage heights only), January 1912 to September 1914, January 1946 to September 1958.

Gage.--Water-stage recorder. Altitude of gage is 4,900 ft (from topographic map). Prior to Jan. 1, 1946, staff gages at site half a mile downstream at different datums. Jan. 1 to July 18, 1946, water-stage recorder at site 1,000 ft downstream at different datum.

Average discharge.--14 years (1912-14, 1946-58), 13.3 cfs (9,630 acre-ft per year).

Extremes.--1912-14, 1946-58: 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 measurement of peak flow; no flow for several days in 1951, 1953-55, 1957-58.

Remarks.--Divisions above station for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4.55	15.4	28.8	24.6	61.1	27.3	12.6	4.86	1.84	0.60	1.03	0.70	15.0
1952	7.02	11.9	10.2	8.98	14.7	74.5	269	71.5	4.72	2.33	1.24	2.73	39.7
1953	7.26	12.3	10.5	15.5	13.0	12.1	4.56	.33	.18	.08	.18	.78	6.36
1954	4.32	8.63	8.40	7.67	14.0	9.36	2.27	.27	.37	.19	.05	1.24	4.68
1955	4.58	8.17	9.17	6.56	7.48	20.6	4.78	.19	.08	.003	2.05	.38	5.34
1956	2.76	5.56	15.1	26.8	13.8	61.7	21.2	9.20	2.48	.15	.19	1.33	13.4
1957	5.45	7.42	9.62	7.18	11.9	13.8	8.07	3.50	1.41	.09	.28	1.81	5.83
1958	6.66	9.97	9.88	11.1	17.4	19.6	31.8	.17	.17	.14	.15	.13	8.84
1959													
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	280	917	1,770	1,510	3,390	1,680	751	299	110	37	63	42	10,850
1952	431	706	625	552	847	4,580	16,010	4,400	281	143	76	163	28,810
1953	446	730	648	952	720	741	271	20	11	5.2	11	46	4,600
1954	266	514	517	471	780	576	135	17	22	12	3.4	74	3,390
1955	282	486	564	404	416	1,270	284	12	4.8	.2	126	22	3,870
1956	170	331	931	1,650	793	3,790	1,260	566	148	9.5	12	79	9,740
1957	335	441	591	442	662	852	480	203	84	5.8	17	108	4,220
1958	410	593	608	683	966	1,200	1,890	11	10	8.5	9.1	7.7	6,400
1959													
1960													

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	11.2	8,140
1951	1214	358	Feb. 5, 1951	0	15.0	10,850	13.3	9,640
1952	1244	1,010	Mar. 27, 1952	0	39.7	28,810	39.8	28,880
1953	1284	24	Jan. 18, 1953	0	6.36	4,600	5.63	4,070
1954	1344	23	Feb. 14, 1954	0	4.68	3,390	4.73	3,420
1955	1394	788	Aug. 13, 1955	0	5.34	3,870	5.48	3,970
1956	1444	190	Mar. 4, 1956	.1	13.4	9,740	13.3	9,670
1957	1514	60	May 19, 1957	0	5.83	4,220	6.17	4,460
1958	1564	67	Jan. 25, 1958	0	8.84	6,400	-	-
1959								
1960								

3235. Humboldt River near Argenta, Nev.

Location.--Lat 40°40'45", long 116°38'45", in SE $\frac{1}{4}$ sec.2, T.32 N., R.47 E., on left bank 3 miles east of Argenta and 15 $\frac{1}{2}$ miles east of Battle Mountain.

Drainage area.--7,490 sq mi, approximately.

Records available.--February 1946 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 4,580 ft (from topographic map).

Average discharge.--14 years (1946-60), 276 cfs (199,800 acre-ft per year).

Extremes.--1946-60: Maximum daily discharge, 5,700 cfs May 2, 1952 (includes flow bypassing gage outside of main channel); minimum daily, 0.2 cfs Sept. 15 to Oct. 17, 1955.

Remarks.--Many diversions above station for irrigation. Records do not include flow in secondary channels or ditches, much of which is used for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	17.8	90.7	319	232	966	599	864	913	889	159	33.5	3.63	419
1952	12.6	46.3	64.8	96.8	184	404	3,411	3,568	1,605	445	92.4	6.1	828
1953	15.7	57.5	95.3	208	235	248	217	177	778	430	41.6	2.67	208
1954	8.11	39.2	70.6	73.5	164	243	188	128	39.5	15.5	.35	.30	80.3
1955	.32	.36	4.61	10.1	24.4	120	136	124	300	34.7	.63	.27	62.8
1956	.28	7.00	72.3	350	231	777	906	1,036	1,510	256	17.7	1.50	430
1957	7.25	35.3	60.7	61.2	230	502	480	835	1,688	558	37.7	2.63	374
1958	25.2	75.5	94.7	101	346	511	890	1,037	1,114	186	24.3	3.99	366
1959	15.6	47.1	74.3	102	125	140	105	51.9	56.4	6.45	.66	.41	60.0
1960	.55	10.4	15.9	15.0	49.8	190	280	226	305	16.6	.71	.40	92.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,090	5,400	19,620	14,270	53,650	36,820	51,420	56,160	52,910	9,750	2,060	216	303,400
1952	775	2,750	3,990	5,950	10,560	24,860	203,000	219,400	95,500	27,380	5,680	961	600,800
1953	966	3,420	5,860	12,780	13,040	15,250	12,940	10,860	46,290	26,470	2,560	159	150,600
1954	499	2,330	4,340	4,520	9,110	14,920	11,190	7,900	2,350	954	22	18	58,150
1955	19	22	283	622	1,350	7,400	8,080	7,600	17,880	2,130	39	16	45,440
1956	17	416	4,440	21,530	13,310	47,770	53,880	63,680	89,860	15,750	1,090	89	311,800
1957	446	2,100	3,730	3,760	12,770	30,890	28,540	51,360	100,400	34,320	2,320	157	270,800
1958	1,550	4,480	5,820	6,220	19,210	31,410	52,960	63,770	66,280	11,460	1,490	238	264,900
1959	958	2,800	4,570	6,290	6,970	8,580	6,270	3,190	3,350	396	41	24	45,440
1960	34	619	979	922	2,860	11,660	16,660	13,930	18,150	1,020	43	24	66,900

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	334	242,000
1951	1214	1,630	Feb. 12, 1951	1.6	419	303,400	393	284,800
1952	1244	5,700	May 2, 1952	1.3	828	600,800	831	603,500
1953	1284	1,120	June 23, 1953	1.3	208	150,600	204	147,500
1954	1344	315	Mar. 29, 1954	.3	80.3	58,150	70.9	51,310
1955	1394	523	June 18, 1955	.2	62.8	45,440	69.1	49,990
1956	1444	2,430	June 3, 1956	.2	430	311,800	431	313,200
1957	1514	2,680	June 13, 1957	1.1	374	270,800	382	276,400
1958	1564	1,510	June 3, 1958	2.5	366	264,900	361	261,400
1959	1634	153	Mar. 9, 1959	.3	60.0	43,440	50.8	36,740
1960	1714	462	June 10, 1960	.3	92.2	66,900	-	-

a Maximum daily.

3245. Rock Creek near Battle Mountain, Nev.

Location.--Lat 40°49', long 116°35', in NE $\frac{1}{4}$ sec.17, T.34 N., R.48 E., on left bank at mouth of canyon, 22 miles northeast of Battle Mountain.

Drainage area.--875 sq mi, approximately.

Records available.--March to July 1896, March 1918 to September 1925 (fragmentary October 1923 to April 1925), March 1927 to May 1929 (fragmentary), October 1945 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 4,600 ft (estimated from nearby U. S. Coast and Geodetic Survey bench mark). Prior to Mar. 26, 1918, staff gage at site about 11 miles upstream at different datum. Mar. 26, 1918, to Jan. 3, 1946, water-stage recorder at present site at different datum.

Average discharge.--20 years (1918-23, 1945-60), 31.2 cfs (22,590 acre-ft per year).

Extremes.--1918-25, 1927-29, 1945-60: Maximum discharge, 3,000 cfs Apr. 7, 1952 (gage height, 5.60 ft); no flow at times in July, August, September, and October nearly every year.

Remarks.--Several diversions for irrigation in valleys upstream. Station is above all diversions in Boulder Flat and below all tributaries. Flow slightly affected by small reservoir in Squaw Valley, 30 miles upstream.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.72	2.83	21.9	10.9	173	86.4	112	50.7	10.3	0.48	0.06	0	40.8
1952	.80	3.44	1.77	1.48	2.87	87.6	1,178	265	40.5	10.9	.86	0	132
1953	1.21	2.38	4.15	8.95	8.62	11.7	20.9	24.6	25.6	.19	0	.08	9.00
1954	.80	1.01	1.06	1.31	6.21	10.3	13.2	1.02	.37	0	0	0	2.91
1955	.48	1.25	.88	.87	1.78	11.5	20.2	13.7	.88	0	0	0	4.31
1956	.08	.81	44.1	76.6	16.5	152	56.2	58.2	11.1	.36	0	.03	35.0
1957	.82	1.19	2.37	1.76	56.0	53.3	129	283	39.2	1.78	.003	.31	47.3
1958	1.46	2.84	3.20	4.56	64.0	76.3	261	115	37.8	4.14	.53	.40	47.2
1959	2.37	4.21	5.03	5.87	6.71	6.46	7.68	5.20	.83	.85	0	.31	3.78
1960	.74	.97	1.32	1.97	10.0	78.0	44.3	14.8	1.99	.07	0	.04	12.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	44	168	1,350	670	10,870	5,960	6,700	3,120	614	29	3.6	0	29,530
1952	49	205	109	91	165	5,390	70,070	16,270	2,410	673	53	58	95,540
1953	75	142	255	550	479	717	1,240	1,510	1,520	12	0	4.8	6,500
1954	49	60	65	81	345	632	787	63	22	0	0	0	2,100
1955	30	74	54	54	99	706	1,200	845	52	0	0	0	3,110
1956	4.8	48	2,710	4,710	947	9,370	3,340	3,580	659	22	0	1.8	25,390
1957	51	71	146	108	3,110	3,280	7,650	17,400	2,330	109	.2	18	34,270
1958	90	169	197	280	3,550	4,690	15,520	7,080	2,250	255	33	24	34,140
1959	146	251	309	361	372	397	457	320	49	53	0	18	2,740
1960	45	58	81	121	576	4,800	2,640	913	119	4.6	0	2.2	9,360

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	27.9	20,210	
1951	1214	1,200	Feb. 4, 1951	0	40.8	29,530	39.1	28,330	
1952	1244	3,000	Apr. 7, 1952	0	132	95,540	132	95,650	
1953	1284	73	June 4, 1953	0	9.00	6,500	8.58	6,210	
1954	1344	38	Mar. 11, 1954	0	2.91	2,100	2.98	2,090	
1955	1394	141	Mar. 11, 1955	0	4.31	3,110	7.91	5,720	
1956	1444	500	Jan. 15, 1956	0	35.0	25,390	31.5	22,900	
1957	1514	785	May 20, 1957	0	47.3	34,270	47.6	34,460	
1958	1564	445	Apr. 23, 1958	0	47.2	34,140	47.5	34,390	
1959	1634, 1714	24	Feb. 1, 1959	0	3.78	2,740	3.06	2,210	
1960	1714	253	Mar. 8, 1960	0	12.9	9,360	-	-	

3250. Humboldt River at Battle Mountain, Nev.

Location.--Lat 40°39'15", long 116°55'10", in NE¹/₄NE¹/₄ sec.17, T.32 N., R.45 E., on left bank 1 mile northeast of Battle Mountain. Reese River enters Humboldt River several miles below station.

Drainage area.--8,870 sq mi, approximately.

Records available.--May 1896 to December 1897, March 1921 to April 1924, October 1945 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 4,500 ft (from topographic map). Prior to Mar. 1, 1921, staff gage 1,500 ft upstream and Mar. 1, 1921, to Apr. 19, 1924, staff gage 900 ft downstream, both at different datums.

Average discharge.--18 years (1896-97, 1921-23, 1945-60), 309 cfs (223,700 acre-ft per year).

Extremes.--1896-97, 1921-24, 1945-60: Maximum daily discharge, 5,800 cfs May 3, 4, 1952 (includes flow bypassing gage outside of main channel); no flow Sept. 8 to Oct. 22, 1948, Sept. 21-26, 1949, Sept. 21-27, 1959.

Remarks.--Records do not include flow in secondary channels or ditches, much of which is used for irrigation. Many diversions above station for irrigation.

Correction.--In WSP 1314, the mean discharge for July 1898 is published in error; it should be 380 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	14.7	78.8	297	231	927	676	925	905	811	164	37.6	4.23	418
1952	10.8	45.7	64.1	87.6	167	321	3,060	3,718	1,626	490	102	19.4	809
1953	13.6	57.0	81.8	186	225	236	195	143	641	403	42.0	1.55	188
1954	4.92	36.9	66.8	74.0	155	231	186	100	35.3	10.5	.31	.13	74.6
1955	.13	.21	3.67	9.58	22.7	109	127	105	246	31.5	1.47	.11	54.5
1956	.10	3.72	57.2	302	216	664	880	920	1,277	274	23.0	.77	384
1957	5.52	34.4	60.0	59.9	209	481	464	701	1,353	562	44.6	4.27	331
1958	22.8	75.1	98.0	107	341	552	970	993	1,078	209	27.3	3.29	372
1959	15.2	44.4	72.4	97.6	124	143	96.9	50.7	48.2	6.23	.25	.08	57.8
1960	.18	7.73	14.7	16.8	53.8	190	254	201	275	17.4	1.14	.15	85.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	906	4,690	18,240	14,230	51,460	41,580	55,070	55,670	48,240	10,060	2,310	252	302,700
1952	662	2,720	3,940	5,390	9,600	19,740	182,100	228,600	96,770	30,130	6,270	1,150	587,100
1953	837	3,390	5,640	11,410	12,510	14,500	11,580	8,820	38,140	24,790	2,580	92	134,300
1954	303	2,200	4,110	4,550	8,620	14,200	11,080	6,150	2,100	643	19	7.5	53,980
1955	7.9	12	226	589	1,260	6,690	7,560	6,430	14,650	1,940	91	6.3	39,460
1956	6.1	221	3,520	18,590	12,400	40,830	52,350	56,580	76,010	16,880	1,410	46	278,800
1957	339	2,040	3,690	3,680	11,620	29,590	27,620	43,130	80,530	34,570	2,740	254	239,800
1958	1,400	4,470	6,030	6,590	18,920	33,920	57,750	61,070	64,120	12,880	1,680	196	269,000
1959	935	2,640	4,450	6,000	6,870	8,820	5,760	3,120	2,870	383	15	4.6	41,870
1960	11	460	902	1,030	3,090	11,690	15,130	12,330	16,380	1,070	70	8.7	62,170

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	302	219,000	
1951	1214	1,370	Feb. 15, 1951	1.2	418	302,700	395	286,200	
1952	1244	as,800	May 3, 4, 1952	.9	809	587,100	812	589,600	
1953	1284	896	June 26, 1953	.4	188	134,300	181	131,000	
1954	1344	304	Mar. 30, 1954	.1	74.6	53,980	65.8	47,620	
1955	1394	403	June 19, 1955	.1	54.5	39,460	59.3	42,960	
1956	1444	1,560	June 5, 1956	.1	384	278,800	387	281,200	
1957	1514	1,580	June 16, 1957	.1	331	239,800	339	245,600	
1958	1564	1,440	June 7, 1958	2.2	372	269,000	366	265,200	
1959	1634	a155	Mar. 7, 1959	0	57.8	41,870	48.6	35,220	
1960	1714	396	June 9, 1960	.1	85.7	62,170	-	-	

a Maximum daily.

3255. Reese River near Ione, Nev.

Location.--Lat 38°51', long 117°28', in NE $\frac{1}{4}$ sec.3, T.11 N., R.40 E., on right bank $\frac{1}{2}$ miles upstream from Indian Creek, 8 miles southeast of Ione, and 58 miles southwest of Austin.

Drainage area.--44 sq mi, approximately.

Records available.--August 1951 to September 1960.

Gage.--Water-stage recorder and, since Oct. 3, 1956, concrete control. Altitude of gage is 7,350 ft (from topographic map). Prior to Sept. 9, 1955, water-stage recorder at site 200 ft upstream at datum 2.85 ft higher.

Average discharge.--9 years (1951-60), 10.5 cfs (7,600 acre-ft per year).

Extremes.--1951-60: Maximum discharge, 512 cfs July 27, 1956 (gage height, 4.86 ft), from rating curve extended above 45 cfs on basis of slope-area measurement of peak flow; no flow at times in some years.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	1.44	0.88	-
1952	1.50	1.80	1.95	2.15	2.11	4.25	78.8	139	60.0	17.8	7.44	4.99	26.9
1953	4.17	3.39	3.97	3.58	4.14	6.24	12.1	12.2	11.4	4.58	1.50	1.25	5.72
1954	1.71	1.97	1.65	1.85	2.58	3.34	15.9	16.1	7.40	2.84	1.10	1.03	4.79
1955	1.36	1.82	1.65	2.19	2.36	3.56	6.11	12.0	11.0	4.64	1.32	.91	4.08
1956	1.37	1.61	3.74	3.21	2.19	6.97	16.0	41.8	34.0	10.6	3.89	2.93	10.7
1957	2.81	1.53	1.64	2.02	2.58	3.23	8.75	33.3	43.8	8.78	4.33	2.99	9.65
1958	4.40	3.68	2.93	3.15	5.67	9.34	74.4	154	50.0	12.2	5.75	4.06	27.6
1959	3.58	3.48	3.49	2.89	3.50	3.60	4.31	3.85	1.96	.30	.10	.60	2.63
1960	1.10	.88	1.04	1.34	1.60	2.60	4.87	8.61	4.09	1.18	.30	.59	2.35

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	-	80	50	-
1952	90	107	120	132	121	261	4,690	8,570	3,570	1,100	457	297	19,520
1953	256	202	244	220	230	383	721	752	681	281	92	74	4,140
1954	105	117	102	112	143	205	949	992	441	174	67	61	3,470
1955	85	108	102	135	131	219	363	735	655	285	81	54	2,950
1956	84	96	230	197	126	428	952	2,570	2,020	649	239	175	7,770
1957	173	91	101	124	143	198	521	2,050	2,600	540	266	178	6,980
1958	270	219	180	195	315	574	4,430	9,470	2,970	747	353	242	19,960
1959	220	207	215	177	194	221	256	236	116	18	6.3	36	1,900
1960	67	52	64	82	92	160	290	529	243	73	18	35	1,700

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	-
1951	1244	-	-	-	-	-	-	-
1952	1244	268	Apr. 28, 1952	-	26.9	19,520	27.4	19,900
1953	1284	268	July 9, 1953	0.8	5.72	4,140	5.19	3,760
1954	1344	27	Apr. 5, 1954	.8	4.79	3,470	4.75	3,440
1955	1394	18	June 16, 1955	.6	4.08	2,950	4.24	3,070
1956	1444	512	July 27, 1956	1.1	10.7	7,770	10.6	7,720
1957	1514	80	June 5, 1957	.3	9.65	6,980	10.1	7,290
1958	1564	274	Apr. 20, 1958	.7	27.6	19,960	27.5	19,940
1959	1634	12	Nov. 23, 1958	0	2.63	1,900	2.00	1,440
1960	1714	12	May 15, 1960	.1	2.35	1,700	-	-

3270. Humboldt River near Valmy, Nev.

Location--Lat 40°48', long 117°04', in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.34 N., R.44 E., on left bank $\frac{3}{4}$ miles east of Valmy and 13 miles northwest of Battle Mountain.

Records available--March 1950 to September 1958.

Gage--Water-stage recorder. Altitude of gage is 4,440 ft (from topographic map).

Average discharge--8 years (1950-58), 302 cfs (218,600 acre-ft per year).

Extremes--1950-58: Maximum daily discharge, 5,800 cfs May 5, 6, 1952 (includes flow bypassing gage outside of main channel); no flow at times in most years.

Remarks--Diversions above station for irrigation. Flow bypassing station at high stages not included in this report.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.2	83.4	292	233	735	654	788	781	753	191	33.3	4.87	377
1952	5.15	36.8	59.7	74.4	149	289	2,630	3,889	1,524	517	105	17.7	775
1953	27.7	49.9	92.0	182	227	230	168	142	521	424	48.8	3.62	176
1954	1.42	33.9	64.3	71.0	138	215	190	96.6	36.8	6.95	0	0	70.7
1955	0	0	0	1.08	19.1	99.6	121	101	196	38.6	.26	0	47.9
1956	0	0	40.2	278	223	527	804	800	1,104	314	30.1	1.12	343
1957	1.03	27.7	55.4	54.5	174	464	433	567	1,152	576	54.0	4.77	297
1958	15.4	66.9	96.3	106	281	508	780	855	958	239	30.6	2.05	327

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	626	4,960	17,970	14,340	40,830	40,220	46,910	48,040	44,820	11,770	2,050	290	272,800
1952	317	2,190	3,670	4,580	8,570	17,800	156,500	239,100	90,690	31,810	6,460	1,050	562,700
1953	1,710	2,970	5,660	11,160	12,590	14,150	9,970	8,740	30,970	26,100	3,000	215	127,200
1954	87	2,020	3,960	4,370	7,650	13,200	11,330	5,940	2,190	427	0	0	51,170
1955	0	0	0	66	1,060	6,130	7,200	6,180	11,670	2,380	16	0	34,700
1956	0	0	2,470	17,110	12,820	32,410	47,840	49,220	65,680	19,300	1,850	67	248,800
1957	63	1,650	3,400	3,350	9,680	28,560	25,740	34,850	68,540	35,420	3,320	284	214,900
1958	944	3,980	5,920	6,500	15,620	31,240	46,400	52,580	57,010	14,710	1,880	122	236,900

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	1214	ab910	June 16, 1950	0	-	-	-	-
1951	1214	1,050	(c)	0	377	272,800	353	255,400
1952	1244	b5,800	May 5, 6, 1952	0	775	562,700	781	566,900
1953	1284	729	June 30, 1953	0	176	127,200	170	123,000
1954	1344	273	Mar. 31, 1954	0	70.7	51,170	62.3	45,110
1955	1394	314	June 20, 1955	0	47.9	34,700	51.3	37,170
1956	1444	1,250	June 7, 1956	0	343	248,800	346	251,400
1957	1514	b1,320	June 20, 1957	0	297	214,900	305	220,600
1958	1564	1,190	June 9, 1958	.8	327	236,900	-	-

a For period March to September.

b Maximum daily.

c Feb. 18, 19, June 11, 12, 1951.

3275. Humboldt River at Comus, Nev.

Location.--Lat 41°00', long 117°19', in SE $\frac{1}{4}$ sec.14, T.36 N., R.41 E., on left bank at Comus siding of Southern Pacific Railroad, 9 miles northeast of Golconda and 32 miles northwest of Battle Mountain.

Drainage area.--12,100 sq mi, approximately.

Records available.--October 1894 to December 1909, September 1910 to September 1926, October 1945 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Published as "near Golconda" prior to October 1917.

Gage.--Water-stage recorder. Datum of gage is 4,359.9 ft above mean sea level (from Soil Conservation Service reference mark). Prior to Sept. 25, 1917, staff or chain gages at several sites about 10 miles downstream at different datums. Sept. 25, 1917, to June 30, 1923, and May 23, 1925, to May 31, 1926, staff gage at several sites within half a mile of present site at different datum.

Average discharge.--46 years (1894-1909, 1910-26, 1945-60), 277 cfs (200,500 acre-ft per year).

Extremes.--1894-1909, 1910-26, 1945-60: Maximum discharge, 5,860 cfs May 6, 1952 (gage height, 11.52 ft); no flow at times in some years.

Remarks.--Many diversions for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.47	63.1	263	231	652	640	760	742	726	197	29.3	0.79	356
1952	.17	25.3	44.4	62.3	182	274	2,272	4,002	1,633	586	121	19.7	769
1953	8.55	40.5	86.7	189	227	226	142	113	403	399	46.1	1.15	155
1954	.05	13.1	54.5	61.7	127	201	176	68.6	24.9	.23	.08	.10	60.2
1955	.10	.10	.10	.10	.16	66.2	111	85.2	160	33.4	.13	.17	38.0
1956	.12	.10	13.8	248	228	472	773	786	1,079	351	30.8	.64	331
1957	.41	11.6	40.2	43	164	446	408	489	1,232	642	65.3	1.96	295
1958	5.89	54.4	88.4	98.6	254	494	737	800	981	258	30.0	.89	316
1959	1.41	29.9	63.9	90.2	111	133	84.2	31.0	27.5	1.22	.15	.10	48.2
1960	.22	.20	.15	.11	34.1	139	227	140	215	21.8	.16	.14	64.5

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	29	3,760	16,150	14,200	56,210	39,380	45,240	45,610	43,170	12,100	1,800	47	257,700
1952	11	1,500	2,730	3,830	10,470	16,860	135,200	246,100	97,150	36,030	7,440	1,170	558,500
1953	525	2,410	5,460	10,410	12,590	13,890	8,420	6,960	23,980	24,540	2,830	69	112,100
1954	2.8	779	3,350	3,790	7,060	12,380	10,500	4,220	1,460	14	5.2	6.0	43,590
1955	6.1	6.0	6.1	6.1	8.7	4,070	6,600	5,240	9,520	2,050	7.7	10	27,530
1956	7.5	6.0	848	15,240	13,130	29,040	45,970	48,310	64,180	21,590	1,890	38	240,200
1957	25	701	2,470	2,640	9,010	27,410	24,270	30,050	73,330	39,500	4,020	116	213,500
1958	362	3,240	5,430	6,070	14,100	30,360	43,850	49,220	58,390	15,840	1,850	53	228,800
1959	86	1,780	3,930	5,550	6,170	8,160	5,600	1,900	1,640	75	9.5	6.1	34,910
1960	13	12	9.1	6.5	1,960	8,530	13,490	8,640	12,780	1,340	9.9	8.5	46,800

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	253
1951	1214	1,030	Feb. 21, 1951	0.1	356	257,700	334
1952	1244	5,860	May 6, 1952	.1	769	558,500	77.5
1953	1284	642	June 24, 1953	.1	155	112,100	149
1954	1344	268	Mar. 30, 1954	0	60.2	43,590	54.5
1955	1394	243	June 25, 1955	0	38.0	27,530	39.2
1956	1444	1,200	(a)	.1	331	240,200	334
1957	1514	1,540	June 24, 1957	.3	295	213,500	303
1958	1564	1,270	June 12, 1958	.3	316	228,800	311
1959	1634	170	Jan. 12, 1959	0	48.2	34,910	40.3
1960	1714	357	Apr. 30, 1960	0	64.5	46,800	-

a June 10, 11, 15, 16, 1956.

3290. 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 1960. Monthly discharge only for some periods, published in WSP 1314.

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.--22 years (1921-23, 1924-27, 1943-60), 25.0 cfs (18,100 acre-ft per year).

Extremes.--1921-28, 1943-60: Maximum discharge, 1,100 cfs Feb. 2, 1952 (gage height, 7.71 ft); minimum, 4.5 cfs Aug. 12, 1954.

Remarks.--Bullshead Ranch diverts water for irrigation above station. Station is above all diversions in Paradise Valley.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.97	7.75	17.4	14.5	55.3	61.3	104	72.6	16.9	6.30	5.65	5.57	31.0
1952	7.08	7.57	7.76	10.5	86.5	52.2	456	†268	125	33.2	9.54	7.28	88.6
1953	7.60	8.32	8.60	15.0	15.1	15.5	18.4	24.3	37.6	8.64	6.23	6.47	14.3
1954	6.37	6.78	6.55	6.66	9.80	13.1	14.7	12.7	6.90	6.55	5.86	6.48	8.53
1955	6.71	7.18	7.41	6.84	6.69	8.85	11.1	21.4	14.5	6.60	6.20	6.03	9.14
1956	6.25	6.57	10.5	31.0	13.6	50.2	61.8	72.1	24.1	7.39	6.63	6.38	24.8
1957	6.88	6.97	7.94	6.85	25.8	65.5	89.3	132	41.0	7.87	6.48	6.54	33.6
1958	6.62	6.95	7.21	7.96	88.4	65.2	223	138	49.6	11.6	7.38	7.17	51.0
1959	7.78	8.28	9.01	9.77	10.3	12.0	16.7	15.4	10.5	5.58	6.31	7.03	9.88
1960	7.43	7.60	7.73	7.25	8.84	27.0	38.3	23.3	11.3	6.51	6.37	6.22	13.1

† Corrected.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	429	461	1,070	893	3,070	3,770	6,210	4,480	1,010	387	348	331	22,440
1952	436	450	477	648	4,980	3,210	27,150	16,470	7,450	2,040	587	433	64,330
1953	467	495	529	924	839	952	1,090	1,500	2,240	551	383	385	10,340
1954	392	404	403	410	544	805	875	780	411	403	361	366	6,170
1955	413	427	455	421	372	544	662	1,310	862	406	381	359	6,610
1956	384	391	646	1,910	783	3,080	3,680	4,430	1,430	454	408	380	17,980
1957	423	415	468	421	1,430	4,030	5,310	8,090	2,440	484	399	377	24,310
1958	407	414	444	490	4,800	4,010	13,280	8,510	2,950	711	453	426	36,900
1959	479	492	554	601	574	740	992	944	624	343	388	418	7,150
1960	457	452	475	446	509	1,660	2,280	1,430	672	400	392	370	9,540

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	21.3	15,440	
1951	1214	129	Mar. 24, 1951	5.2	31.0	22,440	30.2	21,840	
1952	1244	1,100	Feb. 2, 1952	5.6	88.6	64,330	88.8	64,460	
1953	1284	57	June 7, 1953	6.1	14.3	10,340	13.9	10,040	
1954	1344	19	Apr. 21, 22, 1954	5.0	6.53	6,170	8.66	6,270	
1955	1394	28	May 26, 1955	5.6	9.14	6,610	9.31	6,740	
1956	1444	154	Mar. 27, 1956	6.1	24.8	17,980	24.7	17,890	
1957	1514	182	May 14, 1957	5.9	33.6	24,310	33.5	24,250	
1958	1564	482	Apr. 19, 1958	6.3	51.0	36,900	51.3	37,160	
1959	1634	21	Apr. 7-9, 1959	5.1	9.88	7,150	9.68	7,010	
1960	1714	64	Mar. 28, 1960	6.2	13.1	9,540	-	-	

3295. 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 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 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 4,700 ft (from extension of river-profile map). Prior to Oct. 22, 1946, at several sites within 400 ft of present site at different datums.

Average discharge.--39 years (1921-60), 30.5 cfs (22,080 acre-ft per year).

Extremes.--1921-60: Maximum discharge, 9,000 cfs Jan. 21, 1943 (gage height, 11.1 ft, site and datum then in use), by slope-area measurement of peak flow; minimum, 1.8 cfs Feb. 6, 1945.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7.15	8.98	20.1	12.9	66.8	58.2	127	111	34.5	7.31	5.19	5.39	38.5
1952	7.27	8.84	10.1	10.1	16.6	71.6	441	307	141	31.2	8.32	7.23	88.1
1953	7.76	8.38	9.84	20.6	16.0	20.4	36.1	69.6	97.6	13.5	5.34	5.30	25.8
1954	5.86	7.96	7.94	8.40	11.4	19.6	24.5	26.5	11.9	4.87	4.77	5.47	11.6
1955	6.21	7.27	7.12	7.88	8.93	13.0	18.2	47.6	32.0	8.05	4.98	5.72	13.9
1956	6.05	6.46	53.5	65.4	16.0	71.7	91.9	123	55.6	11.4	5.66	5.08	42.8
1957	7.74	8.65	11.0	7.65	53.7	51.3	87.7	172	74.1	10.2	5.20	5.49	41.1
1958	7.64	11.5	10.7	14.5	118	53.3	215	211	66.1	13.8	7.24	6.63	60.6
1959	7.54	8.94	9.08	9.58	10.3	17.1	32.8	32.8	22.9	7.19	5.75	6.66	14.2
1960	7.69	8.72	7.46	8.38	13.0	66.1	64.1	56.0	34.8	6.21	5.11	6.13	23.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	440	534	1,240	790	3,710	3,580	7,580	6,850	2,050	449	319	321	27,860
1952	447	526	622	624	956	4,400	26,210	18,900	8,390	1,920	511	430	63,940
1953	477	499	605	1,270	887	1,260	2,150	4,280	5,810	830	328	315	18,710
1954	360	473	488	517	635	1,210	1,460	1,630	711	299	293	326	8,400
1955	382	432	438	485	496	802	1,080	2,930	1,900	495	306	341	10,090
1956	376	384	3,290	4,020	923	4,410	5,470	7,560	3,310	701	348	302	31,090
1957	476	515	676	470	2,980	3,150	5,220	10,550	4,410	626	320	327	29,720
1958	469	665	656	894	6,560	3,270	12,780	12,970	3,930	848	445	395	43,900
1959	463	532	559	589	571	1,050	1,950	2,020	1,360	442	353	396	10,280
1960	473	519	459	515	748	4,060	3,810	3,440	2,070	382	314	365	17,160

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	36.1	26,140	
1951	1214	470	Feb. 7, 1951	4.9	38.5	27,860	37.6	27,240	
1952	1244	955	Apr. 6, 1952	6.2	88.1	63,940	88.1	63,920	
1953	1284	174	May 29, 1953	4.9	25.8	18,710	25.5	18,450	
1954	1344	177	Mar. 9, 1954	4.0	11.6	8,400	11.5	8,330	
1955	1394	87	Mar. 7, 1955	4.6	13.9	10,090	17.8	12,880	
1956	1444	1,200	Jan. 15, 1956	4.9	42.8	31,090	39.5	28,710	
1957	1514	684	Feb. 25, 1957	4.7	41.1	29,720	41.3	29,860	
1958	1564	1,940	Feb. 25, 1958	5.3	60.6	43,900	60.3	43,650	
1959	1634	71	(a)	5.3	14.2	10,280	14.1	10,180	
1960	1714	265	Mar. 7, 1960	4.7	23.6	17,160	-	-	

a About Apr. 4, 1959.

3305. Cottonwood Creek at Paradise Valley, Nev.

Location.--Lat 41°31'00", long 117°32'30", in NW¼ sec.25, T.42 N., R.39 E., on right bank at highway bridge, 300 ft west of Paradise Valley Post Office.

Drainage area.--57.4 sq mi (revised).

Records available.--October 1944 to September 1951.

Gage.--Water-stage recorder.

Average discharge.--7 years (1944-51), 10.1 cfs (7,310 acre-ft per year).

Extremes.--1944-51: Maximum discharge, 794 cfs Mar. 19, 1950 (gage height, 3.16 ft); no flow Oct. 8, 1948, Nov. 16, 1949.

Remarks.--Several diversions for irrigation above and below station.

Monthly and yearly discharge, in cubic feet per second, of Cottonwood Creek at Paradise Valley, Nev.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.20	0.51	19.9	17.6	74.1	33.8	67.7	45.5	7.89	1.16	0.48	0.19	22.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	12	31	1,220	1,080	4,120	2,080	4,030	2,800	469	72	30	12	15,960

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	21.9	9,340
1951	1214	720	Feb. 7, 1951	0.1	22.0	15,960	-	-

3315. Humboldt River near Rose Creek, Nev.

Location.--Lat 40°52'05", long 117°59'45", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.35 N., R.35 E., on right bank $5\frac{1}{2}$ miles southwest of Rose Creek and $15\frac{1}{2}$ miles southwest of Winnemucca.

Drainage area.--15,200 sq mi, approximately.

Records available.--April 1948 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 4,200 ft (Soil Conservation Service bench mark).

Average discharge.--12 years (1948-60), 219 cfs (158,500 acre-ft per year).

Extremes.--1948-60: Maximum discharge, 5,810 cfs May 8, 1952 (gage height, 11.41 ft); minimum, 3.7 cfs Dec. 27, 1959, result of freezeup.

Remarks.--Many diversions above station for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	32.8	51.2	237	224	460	626	604	638	595	278	80.1	44.8	321
1952	37.6	46.1	65.6	83.2	195	259	1,378	4,050	1,667	758	197	89.6	738
1953	57.9	67.2	99.1	166	221	353	232	86.7	189	378	101	40.4	166
1954	51.0	33.8	62.6	77.4	125	178	134	37.6	21.0	13.5	12.5	12.5	61.2
1955	12.6	16.8	18.4	18	20.8	34.6	53.5	40.5	83.0	43.3	11.6	9.09	30.1
1956	10.3	13.0	16.3	150	232	358	543	599	751	457	95.3	40.0	272
1957	32.3	35.3	51.5	59.5	108	378	301	334	777	720	132	59.6	250
1958	45.0	73.0	101	115	231	439	748	892	901	352	89.9	47.0	336
1959	38.8	52.2	83.2	106	130	136	57.0	44.6	19.0	17.5	13.1	12.8	58.9
1960	14.5	15.0	15.6	16.5	40.9	93.4	120	94.3	126	41.6	13.6	10.4	50.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,020	3,050	14,600	13,790	25,520	38,480	35,930	39,220	35,390	17,070	4,920	2,670	232,700
1952	2,310	2,740	4,030	5,120	11,210	15,930	81,990	249,200	99,210	46,600	12,130	5,330	535,800
1953	3,560	4,000	6,090	10,240	12,270	21,690	13,780	5,330	11,250	23,240	6,230	2,410	120,100
1954	1,910	2,010	3,850	4,760	6,950	10,920	7,970	2,310	1,250	827	766	746	44,270
1955	778	998	1,130	1,110	1,160	2,130	3,190	2,490	4,940	2,660	714	541	21,840
1956	633	772	1,000	9,210	13,340	22,010	32,310	36,850	44,700	28,100	5,860	2,390	197,200
1957	1,990	2,100	3,170	3,660	5,970	23,240	17,930	20,530	46,240	44,270	8,140	3,550	180,800
1958	2,770	4,350	6,190	7,090	12,800	27,000	44,530	54,850	53,630	21,670	5,530	2,800	243,200
1959	2,390	3,110	5,110	6,520	7,220	8,390	3,390	2,740	1,380	1,080	803	764	42,650
1960	691	893	962	1,010	2,350	5,740	7,160	5,800	7,470	2,560	834	621	36,290

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	208	150,200
1951	1214	747	Mar. 2, 1951	31	321	232,700	307	222,100
1952	1244	5,810	May 8, 1952	34	738	535,800	744	540,400
1953	1284	644	Mar. 27, 1953	32	166	120,100	158	114,200
1954	1344	278	Apr. 3, 1954	11	61.2	44,270	54.4	39,400
1955	1394	214	June 27, 1955	8.3	30.1	21,840	29.5	21,340
1956	1444	950	June 26, 1956	9.5	272	197,200	278	202,000
1957	1514	1,140	July 1, 1957	30	250	180,800	258	186,800
1958	1564	1,170	May 2, 1958	41	336	243,200	332	240,500
1959	1634	230	Mar. 21, 1959	12	58.9	42,650	46.0	34,780
1960	1714	203	May. 2, 1960	9.7	50.0	38,290	-	-

3325. Humboldt-Lovelock Irrigation, Light & Power Co.'s feeder canal near Imlay, Nev.

Location.--Lat 40°40'05", long 118°11'55", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1, T.32 N., R.33 E., on left bank 3 miles northwest of Imlay and 9 miles downstream from headgates.

Records available.--October 1946 to September 1960. Records for 1914-31, 1937-38, published in WSP 1314, are not equivalent due to overflow and leakage back to river between the two sites.

Gage.--Water-stage recorder. Altitude of gage is 4,170 ft (from topographic map).

Extremes.--1946-60: Maximum daily discharge, 153 cfs May 3, 1958 (gage height, 4.22 ft); no flow most of time.

Remarks.--Canal diverts water from Humboldt River in NW $\frac{1}{4}$ sec.29, T.33 N., R.35 E., for storage in Pitt-Taylor Reservoirs near Humboldt. During irrigation season, water is released about 3 miles west of Humboldt and conveyed through Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal to Rye Patch Reservoir, from which it is later released and carried in natural river channel to Lovelock district for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	19.8	22.1	0	0	0	3.50
1952	0	0	0	0	0	0	2.16	0	0	0	0	0	.18
1953	28.0	47.5	69.9	87.9	83.2	70.7	18.6	.85	.18	0	0	0	33.7
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	28.1	130	61.5	0	0	0	18.3
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0	0	0	0	0	0	0	1,220	1,310	0	0	0	2,530
1952	0	0	0	0	0	0	129	0	0	0	0	0	129
1953	1,720	2,830	4,300	5,410	4,620	4,350	1,110	53	11	0	0	0	24,400
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	1,550	8,000	3,660	0	0	0	13,210
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	0
1951	1214	60	May 20, 1951	0	3.50	2,530	3.50
1952	1244	117	Apr. 25, 1952	0	.18	129	12.4
1953	1284	110	Jan. 30, 1953	0	33.7	24,400	21.5
1954	1344	0	-	0	0	0	0
1955	1394	0	-	0	0	0	0
1956	1444	0	-	0	0	0	0
1957	1514	0	-	0	0	0	0
1958	1564	a153	May 3, 1958	0	18.3	13,210	18.3
1959	1634	0	-	0	0	0	0
1960	1714	0	-	0	0	0	-

a Maximum daily.

3330. Humboldt River near Imlay, Nev.

Location.--Lat 40°41'30", long 118°12'10", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T.33 N., R.33 E., on right bank 1 mile upstream from old Calahan Dam and 4 miles northwest of Imlay.

Drainage area.--15,700 sq mi, approximately.

Records available.--June 1935 to December 1941, April 1945 to September 1960. Monthly discharge only October to December 1941, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 4,130 ft (from Geological Survey verticle-angle bench mark). Prior to Apr. 28, 1945, at site 1 mile downstream at different datum. Apr. 28, 1945, to Aug. 20, 1947, at present site at datum 1 ft higher.

Average discharge.--21 years (1935-41, 1945-60), 162 cfs (117,300 acre-ft per year).

Extremes.--1935-41, 1945-60: Maximum discharge, 6,080 cfs May 9, 1952 (gage height, 12.15 ft); no flow at times in many years.

Remarks.--Humboldt-Lovelock Irrigation, Light & Power Co.'s feeder canal diverts water from river above station to Pitt-Taylor Reservoirs (see preceding page). This water is ordinarily released during irrigation season through Rye Patch Reservoir to Humboldt River for irrigation in Lovelock district. Flow affected by many other diversions above station for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	31.6	49.1	228	214	424	632	612	614	561	281	80.5	40.7	313
1952	35.9	42.1	61.4	77.6	192	242	1,075	4,035	1,705	823	222	89.4	719
1953	23.2	14.9	29.0	60.2	131	247	222	81.3	162	361	88.1	33.9	121
1954	31.5	34.4	60.7	76.2	114	177	136	27.8	13.1	1.15	5.0	9.32	56.7
1955	10.5	16.0	17.9	16	18.7	33.7	45.8	40.9	62.1	41.8	5.77	2.80	26.0
1956	6.61	11.5	17.2	123	217	335	539	611	718	486	97.9	39.4	266
1957	33.6	38.3	51.1	55.1	95.5	377	290	328	729	737	147	52.5	245
1958	44.8	65.2	93.3	104	203	428	668	778	845	389	88.6	48.0	313
1959	38.2	48.7	77.4	99.0	129	134	47.5	40.9	15.3	3.14	.85	3.56	52.8
1960	11.2	13.6	13.0	13.1	34.8	80.7	105	86.5	111	36.7	9.38	6.86	43.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,940	2,920	14,000	13,170	23,570	38,840	38,390	37,740	33,360	17,280	4,950	2,420	226,600
1952	2,210	2,510	3,770	4,770	11,020	14,860	63,940	248,100	101,500	50,590	13,660	5,320	522,200
1953	1,430	887	1,790	3,790	7,290	15,170	13,240	5,000	9,640	22,220	5,420	2,020	87,810
1954	1,940	2,050	3,730	4,680	6,350	10,860	8,120	1,710	780	71	203	555	41,050
1955	647	954	1,100	984	1,040	2,070	2,720	2,520	3,700	2,570	355	167	18,830
1956	407	686	1,060	7,570	12,450	20,610	32,070	37,590	42,730	29,890	6,020	2,340	193,400
1957	2,080	2,280	3,140	3,390	5,300	23,190	17,230	20,190	45,370	45,340	9,080	5,130	177,700
1958	2,760	3,880	5,740	6,420	11,260	26,330	39,750	47,850	50,290	23,940	5,450	2,860	226,500
1959	2,350	2,900	4,760	6,090	7,190	8,240	2,820	2,510	910	193	52	212	38,230
1960	686	811	797	803	2,000	4,960	6,270	5,320	6,620	2,260	577	408	31,510

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	203
1951	1214	736	Mar. 4, 1951	30	313	226,600	299
1952	1244	6,080	May 9, 1952	23	719	522,200	713
1953	1284	538	Mar. 28, 1953	13	121	87,810	126
1954	1344	276	Apr. 4, 1954	0	56.7	41,050	49.8
1955	1394	152	June 28, 1955	.8	26.0	18,830	25.2
1956	1444	882	June 30, 1956	4.6	266	193,400	274
1957	1514	1,040	July 5, 1957	31	245	177,700	252
1958	1564	1,060	(a)	42	313	226,500	310
1959	1634	178	Mar. 23, 1959	.3	52.8	38,230	42.1
1960	1714	171	Apr. 8, 1960	5.2	43.4	31,510	-

a June 20, 22, 23, 1958.

3345. Rye Patch Reservoir near Rye Patch, Nev.

Location.--Lat 40°28'15", long 118°18'30", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.18, T.30 N., R.33 E., at control works at left end of Rye Patch Dam, 2 miles northwest of Rye Patch.

Drainage area.--16,100 sq mi, approximately.

Records available.--February 1936 to September 1960.

Gage.--Mercury-indicating gage. Datum of gage is at mean sea level (Southern Pacific Railroad datum).

Extremes.--1936-60: Maximum contents, 196,900 acre-ft Apr. 9, 1946 (elevation, 4,134.62 Ft); no contents Aug. 7-11, 1955.

Remarks.--Reservoir is formed by earth-fill, rock-faced dam; storage began Feb. 20, 1936. Capacity, 179,100 acre-ft between elevations 4,072.5 (sill of trashrack structure) and 4,133.0 ft (top of spillway gates). Elevation of spillway (gate sill) is 4,116 ft. Figures given herein represent usable contents. Dead storage negligible. Water is used for irrigation in the Lovelock area.

Cooperation.--Records of daily elevation furnished by Pershing County Water Conservation District of Nevada.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	27,610	30,940	44,100	56,030	77,690	109,100	124,600	130,100	131,600	115,600	97,890	85,380
1952	82,420	83,900	87,260	92,300	101,900	114,800	137,200	159,100	167,400	168,400	155,500	146,000
1953	138,700	132,000	133,900	137,200	143,100	150,000	146,000	135,800	127,400	114,800	97,890	83,160
1954	78,390	77,690	80,200	84,640	89,590	95,860	82,050	53,180	37,030	13,680	1,780	1,350
1955	2,530	3,950	5,490	6,890	8,450	10,800	12,900	9,090	5,530	1,730	154	786
1956	1,390	2,370	3,640	10,070	21,430	40,180	52,290	44,790	59,090	52,650	43,420	31,190
1957	30,090	31,400	34,290	37,890	42,880	63,060	62,620	51,140	69,080	76,280	62,940	52,760
1958	54,880	58,340	63,430	69,740	80,800	100,300	110,400	119,800	148,500	141,300	131,100	108,900
1959	108,300	108,300	111,200	115,200	120,000	123,200	99,100	82,050	63,250	35,850	25,860	18,950
1960	19,050	19,760	20,420	21,650	25,730	27,750	18,950	10,270	11,890	3,750	4,170	3,920

3350. Humboldt River near Rye Patch, Nev.

Location.--Lat 40°28'00", long 118°18'20", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.18, T.30 N., R.33 E., on left bank 1,000 ft downstream from Rye Patch Dam and $\frac{1}{2}$ miles northwest of Rye Patch.

Drainage area.--16,100 sq mi, approximately.

Records available.--January 1896 to June 1898, June 1899 to December 1909, September 1910 to June 1917, September 1917 to September 1922, September 1922 to September 1930 (fragmentary), October 1930 to September 1932, October 1935 to September 1941, October 1943 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Prior to October 1935, published as "near Oreana."

Gage.--Water-stage recorder. Datum of gage is 4,068.53 ft above mean sea level (levels by Bureau of Reclamation). Prior to Oct. 1, 1935, water-stage recorder or staff gages at several sites about 7 miles downstream at different datums. Oct. 1, 1935, to Oct. 13, 1945, water-stage recorder at site half a mile downstream at different datum.

Average discharge.--46 years (1899-1909, 1910-16, 1917-22, 1930-32, 1935-41, 1943-60), 199 cfs (144,100 acre-ft per year).

Extremes.--1896-1922, 1924-32, 1935-41, 1943-60: Maximum discharge, 4,720 cfs May 11, 12, 1952 (gage height, 10.26 ft); no flow at times in some years.

Remarks.--Flow completely regulated by Rye Patch Reservoir (see preceding page). Many diversions above station for irrigation. Records of chemical analyses and water temperatures for the period December 1951 to September 1960 are published in reports of Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	40.0	0.80	0.85	1.19	1.50	18.3	257	434	399	441	271	186	172
1952	65.0	3.37	2.12	2.42	2.47	36.9	539	3,355	1,505	710	298	198	563
1953	78.6	86.7	4.30	†3.97	3.28	121	339	336	320	460	254	233	188
1954	82.3	24.7	16.9	2.48	2.54	55.3	321	419	230	338	182	20.5	142
1955	†.03	0	.3	.3	.22	.09	.3	104	103	104	34.5	.2	29.2
1956	.10	.10	.17	.15	.10	†.10	265	669	362	525	236	209	190
1957	42.7	.80	.70	.60	.60	.60	256	485	314	492	268	162	170
1958	.10	.10	.10	.10	.10	58.9	418	524	196	541	174	321	187
1959	5.99	3.1	4.53	30.9	23.6	46.7	422	281	288	376	135	86.3	142
1960	.47	.57	.45	.48	.54	39.9	229	219	77.4	156	5.49	9.11	61.6

† Corrected.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,460	47	52	73	84	1,120	15,280	26,710	23,770	27,120	16,680	11,080	124,500
1952	4,060	201	131	149	142	2,270	32,050	206,300	89,550	43,670	18,310	11,750	408,600
1953	4,840	5,160	264	244	182	7,440	20,170	20,640	19,040	28,300	15,600	13,860	135,700
1954	5,060	1,470	1,040	153	141	3,400	19,100	25,740	13,700	20,790	11,220	1,220	105,000
1955	1.8	0	18	18	12	5.6	18	6,410	6,150	6,400	2,120	12	21,170
1956	6.1	6.0	10	9.1	5.8	6.1	15,770	41,130	21,550	32,290	14,490	12,480	137,700
1957	2,620	48	43	37	33	37	15,250	29,840	18,680	30,270	18,500	9,650	123,000
1958	6.1	6.0	6.1	5.1	5.6	3,620	24,860	32,240	11,690	33,270	10,690	19,100	135,200
1959	369	184	279	1,900	1,310	2,870	25,120	17,300	17,130	23,120	8,290	5,140	103,000
1960	29	34	27	30	31	2,450	13,610	13,450	4,610	9,580	338	542	44,730

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1214	589	July 19, 20, 1951	0.6	172	124,500	160	116,000	126,300
1952	1244	4,720	May 11, 12, 1952	2.0	563	408,600	571	414,500	414,500
1953	1284	595	Apr. 27, 1953	2.5	188	135,700	184	133,000	133,000
1954	1344	584	July 7, 1954	.3	142	103,000	132	95,480	95,480
1955	1394	359	May 29, 1955	0	29.2	21,170	29.3	21,170	21,170
1956	1444	758	May 4, 1956	.1	190	137,700	193	140,400	140,400
1957	1514	797	May 7, 1957	-	170	123,000	166	120,300	120,300
1958	1564	824	July 9, 1958	-	187	135,200	188	136,300	136,300
1959	1634	713	July 2, 1959	-	142	103,000	141	102,300	102,300
1960	1714	410	May 3, 1960	0	61.6	44,730	-	-	-

Location.--Lat 40°03'05", long 118°28'05", in SE¼NW¼ 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.

Records available.--February 1912 to September 1927, June 1950 to September 1959. Monthly discharge only for some periods, published in WSP 1314.

Average discharge.--20 years (1913-16, 1918-22, 1923-27, 1950-59), 74.4 cfs (53,860 acre-ft per year).

Remarks.--Flow regulated by Rye Patch Reservoir (see p. 264) since Feb. 20, 1936, and affected by irrigation in Lovelock Valley.

[illegible][illegible]

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	-	
1951	1244	60	July 24, 1951	0.5	8.72	6,310	8.92	
1952	1244	3,540	May 19, 1952	1.2	410	297,500	412	
1953	1204	109	Mar. 19, 1953	1.6	16.5	11,940	14.1	
1954	1344	188	Aug. 24, 1954	6	8.06	5,940	6.93	
1955	1394	6.3	June 20, 1955	.1	1.87	1,350	1.78	
1956	1444	64	June 18, 1956	.4	5.18	3,760	6.17	
1957	1514	150	Oct. 7, 1957	0	5.73	4,150	6.86	
1958	1564	119	July 9, 1958	.3	9.14	6,620	11.2	
1959	1634	104	Oct. 5, 1958	.2	7.38	5,350	-	
1960							-	

3365. Pyramid Lake near Nixon, Nev.

Location.--Lat 39°50'30", long 119°28'00", in SE $\frac{1}{4}$ 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.--1867-1925 (occasional elevations in some years), June 1926 to September 1960 (occasional elevations in each year).

Gage.--Bench mark N-21 of U. S. Coast and Geodetic Survey at elevation of 3,940.29 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to January 1934, elevations were determined from bench mark No. 1 of General Land Office using elevation of 3,882.26 ft, adjustment of 1912 (to convert these records to supplementary adjustment of 1956, add 0.81 ft). January 1934 to September 1955, elevations were determined from bench mark N-21 using elevation of 3,940.04 ft, datum of 1929 (to convert these records to supplementary adjustment of 1956, add 0.25 ft).

Extremes.--1926-60: Maximum elevation observed, 3,848.75 ft June 1926; minimum observed, 3,795.44 ft Sept. 21, 1960.

The highest elevation observed since 1867 was 3,884.9 ft in 1871.

Elevation, in feet, above mean sea level

Date	Elevation	Date	Elevation	Date	Elevation	Date	Elevation	Date	Elevation
1950		1952-Con.		1954-Con.		1957-Con.		1959-Con.	
Nov. 15	3,801.4	June 15	3,810.2	Nov. 23	3,804.7	Aug. 27	3,802.3	June 23	3,801.4
Dec. 10	3,803.1	Aug. 12	3,810.1	Dec. 30	3,804.3	Oct. 10	3,801.6	July 21	3,801.1
29	3,804.0	Oct. 6	3,809.3			Nov. 26	3,801.3	Aug. 24	3,800.2
		Dec. 16	3,808.6	1955				Sept. 21	3,799.9
1951				Mar. 3	3,804.1	1958		Oct. 19	3,799.4
Jan. 19	3,804.5	1953		Apr. 27	3,803.6	Feb. 11	3,800.9	Nov. 18	3,799.1
Feb. 26	3,805.3	Feb. 6	3,808.9	June 16	3,803.6	Apr. 7	3,801.0	Dec. 21	3,798.7
Mar. 9	3,805.4	Mar. 14	3,809.0	Aug. 17	3,802.6	May 27	3,804.0		
Apr. 1	3,805.4	May 16	3,809.1	Oct. 20	3,801.9	June 10	3,804.4	1960	
June 8	3,805.4	June 22	3,809.8			Aug. 4	3,804.2	Jan. 27	3,798.5
July 19	3,804.8	July 17	3,810.0	1956		Sept. 8	3,805.8	Feb. 23	3,798.5
Aug. 23	3,804.0	Aug. 25	3,809.2	Jan. 10	3,802.7	Oct. 16	3,805.1	Mar. 22	3,798.4
28	3,804.0	Sept. 19	3,808.9	Feb. 24	3,803.2	Nov. 17	3,802.6	Apr. 26	3,798.2
Sept. 20	3,803.9	Oct. 24	3,808.2	Apr. 10	3,804.1	Dec. 15	3,802.4	May 25	3,797.8
Oct. 18	3,803.3	Nov. 21	3,807.9	June 7	3,805.4			June 21	3,797.7
Dec. 5	3,802.8	Dec. 26	3,807.6	July 19	3,805.6	1959		July 26	3,796.7
				Oct. 8	3,804.2	Jan. 14	3,802.3	Aug. 23	3,796.8
1952		1954				19	3,802.3	Sept. 20	3,796.5
Jan. 3	3,802.7	Jan. 27	3,807.4	1957		Feb. 5	3,802.2	21	3,796.4
Feb. 20	3,803.6	Feb. 27	3,807.3	Jan. 11	3,804.3	Mar. 5	3,802.0		
22	3,803.8	Apr. 1	3,807.4	Apr. 9	3,803.5	24	3,802.1		
Mar. 29	3,804.6	June 10	3,807.0	June 12	3,803.5	Apr. 25	3,801.9		
May 21	3,808.4	July 28	3,806.6	July 31	3,802.8	May 21	3,801.6		

3370. Lake Tahoe at Tahoe, Calif.

Location.--Lat 39°10'04", long 120°08'23", in NE $\frac{1}{4}$ sec. 7, T. 15 N., R. 17 E., on Truckee River at Tahoe, on pier 1,000 ft east of dam at lake outlet.

Drainage area.--506 sq mi at lake outlet.

Records available.--April 1900 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 6,220.00 ft above mean sea level, datum of Bureau of Reclamation (6,219.01 ft, datum of 1929). Prior to Oct. 1, 1957, staff gages at several sites near outlet of lake at same datum. Oct. 1, 1957, to May 8, 1958, water-stage recorder on left wingwall of dam at outlet of lake at same datum.

Extremes.--1900-60: Maximum elevation, 6,231.26 ft July 14, 15, 17, 18, 1907; minimum, 6,221.74 ft Dec. 26, 1934.

Remarks.--Lake levels regulated by a 17-gate concrete dam at outlet of lake; storage began about 1874. Usable capacity, 744,600 acre-ft between elevations 6,223 (natural rim of lake) and 6,229.1 ft (maximum permissible elevation by Federal Court decree). Water is used for domestic and recreational purposes in Lake Tahoe area and for irrigation and power in downstream areas. Figures given herein represent usable contents. Lake elevations are referred to Bureau of Reclamation datum because that datum is used as the official reference point by all local, state, and federal agencies. One intermittent trans-mountain diversion from Echo Lake to South Fork American River (Sacramento River basin) for power and irrigation. Records of chemical analyses for the period April 1951 to September 1960 and water temperatures for the period October 1958 to September 1960 are published in reports of Geological Survey.

Cooperation.--Records for 1934-57, not previously published by Geological Survey, furnished by Truckee-Carson Irrigation District in cooperation with Federal Court Watermaster.

PYRAMID AND WINNEMUCCA LAKES BASIN

Gage height, in feet, on last day of month, of Lake Tahoe at Tahoe, Calif.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1900	-	-	-	-	-	-	6.37	6.83	7.00	6.71	6.20	5.95
1901	5.91	6.00	6.10	*6.18	6.95	*7.11	7.40	7.92	8.33	8.43	8.13	7.73
1902	7.50	7.16	7.28	7.08	7.50	*6.24	8.42	*8.70	*9.02	8.79	8.57	7.83
1903	7.59	7.08	*7.04	6.91	*7.24	7.45	7.86	8.44	*8.87	8.70	8.25	*7.74
1904	7.30	7.55	*7.30	7.10	*6.13	9.25	9.55	*10.12	10.38	*9.94	9.33	8.76
1905	*8.44	7.88	7.80	*7.69	7.75	7.90	8.18	8.50	8.65	8.40	7.90	*7.32
1906	8.70	8.40	6.20	*7.08	*7.18	*7.58	*7.87	8.70	9.50	9.85	9.30	8.70
1907	8.00	7.50	*7.85	8.00	*8.00	9.35	9.80	10.40	*11.11	11.19	*10.45	9.60
1908	*8.98	8.30	*8.40	8.12	7.72	7.40	7.54	7.88	8.08	*7.91	7.33	6.90
1909	6.62	6.40	6.10	*7.77	*7.90	7.70	7.78	8.29	8.90	8.66	*8.16	*7.52
1910	7.20	*7.46	*7.55	7.67	7.45	7.58	*8.01	8.42	*8.32	7.88	*7.18	6.58
1911	6.08	5.80	5.81	*6.93	*7.06	7.14	7.33	8.04	9.10	9.08	8.58	*7.91
1912	*7.50	7.29	*6.99	6.90	6.72	6.65	*6.76	7.30	7.62	7.56	7.05	6.75
1913	6.20	*6.08	*5.79	*5.89	5.70	5.66	*5.88	6.47	6.65	6.66	6.39	*5.76
1914	5.20	*4.96	*5.27	6.80	7.04	*7.24	*7.91	8.83	9.47	9.49	9.01	8.35
1915	7.96	*7.51	7.10	*7.16	*7.60	*7.54	7.95	8.56	9.08	8.95	8.51	7.82
1916	7.37	*6.98	*7.00	8.05	8.09	8.10	8.56	9.16	9.68	9.70	9.25	8.80
1917	8.44	8.06	8.19	7.87	8.35	8.29	8.60	9.22	9.69	9.58	9.07	8.42
1918	7.98	7.53	7.48	7.13	7.51	7.83	8.06	8.37	8.68	8.02	7.39	7.23
1919	7.02	6.71	6.40	6.20	6.86	6.85	7.23	8.02	7.86	7.40	6.80	6.10
1920	5.82	5.10	5.31	5.07	4.98	5.11	5.32	5.76	5.98	5.67	5.24	4.71
1921	4.45	4.53	4.75	4.85	4.98	5.18	5.35	6.09	6.67	6.52	5.93	5.35
1922	4.93	4.61	4.90	4.75	5.29	5.24	5.24	6.15	7.16	7.07	6.50	5.58
1923	5.45	5.22	5.82	5.98	5.83	5.74	6.22	6.87	7.23	7.21	6.82	6.36
1924	6.00	5.67	5.37	5.15	5.10	4.95	4.95	5.01	4.65	4.82	3.83	3.31
1925	2.99	2.88	2.98	2.96	3.75	3.87	4.38	5.05	5.48	5.36	4.90	4.54
1926	4.27	4.07	3.98	4.05	4.42	4.44	4.95	5.22	5.05	4.63	4.09	3.51
1927	3.22	3.67	3.58	3.72	4.40	4.67	5.27	6.01	6.75	6.77	6.16	5.56
1928	5.31	5.31	5.14	4.99	4.83	5.82	6.19	6.84	6.84	6.26	5.64	4.96
1929	4.57	4.19	4.16	4.00	*3.96	4.02	4.19	4.46	4.71	4.43	4.00	3.42
1930	3.07	2.65	3.04	3.21	3.50	3.68	4.11	4.46	4.64	4.38	3.99	3.52
1931	5.17	5.15	2.92	3.02	3.05	3.08	3.31	3.57	3.47	3.24	2.87	2.36
1932	2.06	1.86	2.39	2.42	2.76	2.86	3.08	3.73	4.49	4.38	3.97	3.67
1933	5.15	2.93	2.78	3.07	2.88	3.00	3.04	3.40	3.83	3.70	3.36	2.89
1934	2.92	2.66	2.96	3.01	3.17	3.37	3.50	3.53	3.55	3.15	2.73	2.25
1935	1.93	1.93	1.82	1.96	1.90	2.07	2.80	3.37	3.76	3.59	3.30	2.91
1936	2.46	2.28	2.31	2.87	3.78	3.94	4.48	5.22	5.88	5.75	5.20	4.72
1937	4.28	3.97	4.08	4.05	4.59	4.68	4.91	5.54	5.82	5.56	4.96	4.45
1938	4.15	4.02	4.72	4.74	5.44	6.06	6.46	7.64	8.69	8.31	8.39	7.88
1939	7.48	7.14	6.85	6.83	6.73	6.74	6.99	7.22	6.94	6.50	5.95	5.42
1940	5.03	4.69	4.41	5.40	6.21	6.71	7.15	8.00	8.30	7.82	7.39	6.78
1941	6.36	6.10	6.49	6.64	6.86	7.04	7.25	8.11	8.52	8.40	7.90	7.26
1942	6.86	6.67	7.30	7.93	7.91	7.85	8.30	8.69	8.91	8.90	8.34	7.80
1943	7.37	7.74	7.96	8.55	8.09	8.19	8.36	8.72	8.98	8.91	8.28	7.83
1944	7.29	7.00	6.69	6.76	6.82	6.79	6.97	7.49	7.66	7.50	7.00	6.43
1945	6.05	6.01	5.99	5.91	6.41	6.66	6.85	7.71	8.14	7.92	7.33	6.81
1946	6.84	6.79	7.33	7.35	7.39	7.74	8.09	8.69	8.80	8.63	8.12	7.60
1947	7.08	7.28	7.17	7.03	7.11	7.32	7.46	7.85	7.73	7.30	6.80	6.24
1948	5.93	5.48	5.10	5.19	5.14	5.18	5.64	6.13	6.69	6.45	5.83	5.31
1949	4.87	4.59	4.64	4.42	4.44	4.50	4.78	5.45	5.46	5.00	4.55	4.06
1950	3.68	3.71	3.49	4.29	4.47	4.90	5.46	6.26	6.86	6.73	6.27	5.77
1951	5.60	6.88	7.89	7.77	7.90	7.94	8.40	8.88	8.86	8.48	7.87	7.43
1952	7.19	7.24	7.73	7.87	7.46	7.20	7.11	7.74	8.30	8.76	8.51	8.29
1953	7.87	7.46	7.72	7.86	7.46	7.60	8.14	8.67	8.94	8.94	8.53	8.26
1954	7.76	7.47	7.23	7.31	7.56	7.85	8.17	8.50	8.54	8.26	7.56	6.95
1955	6.38	6.25	6.25	6.18	6.13	6.00	6.13	6.54	6.84	6.51	6.00	5.37
1956	4.94	4.69	6.50	7.36	7.28	7.00	7.50	8.47	8.92	8.98	8.64	8.28
1957	8.11	7.78	7.66	7.68	8.01	7.98	8.18	8.81	9.02	8.82	8.27	7.76
1958	7.34	7.14	7.20	7.37	7.92	8.25	8.08	8.35	8.88	9.03	8.86	8.25
1959	7.74	7.45	7.24	7.40	7.71	7.69	7.85	8.10	8.05	7.68	7.00	6.44
1960	5.90	5.51	5.15	5.12	5.47	5.83	5.98	6.19	6.22	5.96	5.23	4.75

* Not previously published; elevations interpolated or estimated for end of month.

Note.--Add 6,220 ft to obtain elevation above Bureau of Reclamation datum.

3375. Truckee River at Tahoe, Calif.

Location.--Lat 39°10'00", long 120°08'40", in NE 1/4 sec. 7, T.15 N., R.17 E., at Tahoe, on left bank 510 ft downstream from dam at outlet of Lake Tahoe.

Drainage area.--507 sq mi.

Records available.--July 1895 to February 1896, March 1900 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and concrete control. Datum of gage is 6,216.75 ft above mean sea level, datum of 1929. Prior to Nov. 12, 1912, staff gage at site 370 ft upstream at different datum. Nov. 12, 1912, to Sept. 30, 1937, staff gage and Oct. 1, 1937, to Aug. 21, 1957, water-stage recorder, at datum 2.26 ft higher and Aug. 22, 1957, to July 10, 1960, at datum 2.42 ft higher; all at site 270 ft upstream.

Average discharge.--60 years (1900-60), 248 cfs (179,500 acre-ft per year).

Extremes.--1895-96, 1900-60: Maximum discharge, 1,870 cfs Apr. 5, 6, 1958 (gage height, 7.30 ft, site and datum then in use); maximum gage height, 7.34 ft Apr. 5, 1958, site and datum then in use (backwater from snow in channel); no flow for parts of 1900, 1901, 1914, 1918-43, 1947-49, 1956.

Remarks.--Flow regulated by Lake Tahoe and occasionally by pumping from the lake (see preceding page).

Cooperation.--Records for January 1944 to August 1957, not previously published by Geological Survey, furnished by Truckee-Carson Irrigation District and Federal Court Water-master.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	196	199	258	77.2	336	197	22.9	22.0	23.6	246	344	462	198
1945	372	288	189	47.5	27.8	20.0	16.2	6.0	8.0	309	456	234	166
1946	169	152	101	40.0	55.8	40.7	62.8	125	69.2	293	405	199	144
1947	263	232	190	173	100	195	93.5	24.2	163	366	226	420	204
1948	348	273	287	39.8	89.9	224	79.3	0	0	252	414	361	198
1949	238	154	199	187	189	139	29.4	0	151	432	296	161	180
1950	68.8	51.1	38.1	32.8	8.6	5.0	6.1	8.5	9.2	192	381	381	99.1
1951	274	31.1	571	952	282	29.0	23.7	29.1	462	352	410	277	309
1952	25.6	97.5	239	862	1,492	1,347	1,228	1,354	825	43.9	20.0	81.7	631
1953	354	367	374	575	699	20.0	20.0	20.0	808	375	201	220	333
1954	302	302	303	129	164	146	40.5	27.0	48.4	235	415	454	214
1955	321	268	187	266	240	191	23.6	20.0	64.6	413	463	436	242
1956	227	142	75.5	6	496	631	10.1	111	551	117	74.2	149	214
1957	328	305	291	250	152	653	21.0	21.0	332	121	165	459	259
1958	295	278	291	164	107	24	1,584	1,746	215	8.42	4.12	370	424
1959	389	318	292	133	155	82.0	6.60	4.80	4.30	306	488	443	219
1960	323	318	307	234	66.7	87.7	3.94	2.54	2.00	147	482	457	203

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	12,020	11,820	15,890	4,750	19,320	12,090	1,360	1,350	1,400	15,130	21,180	27,500	143,800
1945	22,860	17,120	11,600	2,920	1,550	1,230	962	369	474	19,030	28,060	13,950	120,100
1946	10,390	9,070	6,180	2,460	3,100	2,500	3,740	7,680	4,120	18,000	24,900	11,820	104,000
1947	16,150	13,800	11,700	10,640	5,580	12,000	5,560	1,490	9,670	22,520	13,880	24,990	148,000
1948	21,430	16,250	17,640	2,450	5,170	13,790	4,720	0	0	15,490	25,470	21,470	143,900
1949	14,610	9,130	12,210	10,250	10,510	8,540	1,750	0	8,980	26,540	18,190	9,600	130,300
1950	4,230	3,040	2,340	2,020	476	309	361	524	547	11,810	23,430	22,660	71,750
1951	16,850	1,850	35,130	58,530	15,630	1,780	1,410	1,790	27,460	21,650	25,230	16,480	223,800
1952	1,580	5,800	14,700	53,000	85,820	82,820	73,080	83,220	49,080	2,700	1,230	4,860	457,900
1953	21,760	21,840	23,020	35,350	38,800	1,230	1,190	1,230	48,090	23,050	12,360	13,060	241,000
1954	18,550	17,990	18,600	7,930	9,130	8,990	2,410	1,660	2,880	14,460	25,520	27,040	155,200
1955	19,750	15,960	11,480	16,380	13,320	11,740	1,400	1,230	3,840	25,390	28,480	25,950	174,900
1956	13,970	8,460	4,640	39	28,540	38,810	603	6,840	32,760	7,180	4,560	8,850	155,300
1957	20,160	18,150	17,870	15,400	8,420	40,130	1,250	1,290	19,730	7,410	10,170	27,300	187,300
1958	18,160	16,520	17,900	10,080	5,930	1,480	94,760	07,300	12,820	518	253	22,010	307,200
1959	23,920	18,900	17,980	8,170	8,630	5,040	393	295	256	18,800	29,990	26,390	158,800
1960	19,880	18,910	18,880	14,380	3,840	5,390	234	156	119	9,050	29,630	27,180	147,600

PYRAMID AND WINNEMUCCA LAKES BASIN

Yearly discharge, in cubic feet per second, of Truckee River at Tahoe, Calif.

Year	WSP	Water year ending Sept. 30				Calendar year		
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1944	(a)	481	Aug. 23, 1944	22	198	143,800	214	155,700
1945	(a)	457	(b)	6	166	120,100	130	94,180
1946	(a)	419	Aug. 3-23, 1946	19	144	104,000	166	120,000
1947	(a)	429	Sept.14-23, 1947	0	204	148,000	223	161,600
1948	(a)	436	(c)	0	198	143,900	172	124,500
1949	(a)	456	July 21, 1949	0	180	130,300	144	104,000
1950	(a)	388	(d)	4	99.1	71,750	160	116,000
1951	(a)	1,198	Dec. 23-31, 1950	9	309	223,800	265	192,000
1952	(a)	1,597	Jan. 25, 1952	15	631	457,900	692	502,400
1953	(a)	1,602	June 24, 1953	20	333	241,000	317	229,500
1954	(a)	455	Sept.2-30, 1954	27	214	155,200	203	147,200
1955	(a)	544	Aug. 6-8, 1955	20	242	174,900	214	154,800
1956	(a)	1,336	Mar. 2, 1956	0	214	155,300	254	184,400
1957	(a)	1,325	June 6, 1957	21	259	187,300	254	183,700
1958	1564	e1,870	Apr. 5-6, 1958	3.2	424	307,200	436	315,500
1959	1634	e503	July 18-20, 1959	3.6	219	158,800	215	155,600
1960	1714	e558	July 25, 1960	1.8	203	147,600	-	-

a Files of Truckee-Carson Irrigation District.

b Aug. 4 to Sept. 3, 1945.

c July 26 to Aug. 19, 1948.

d Sept. 18-20, 26, 1950.

e Momentary maximum.

3380. Truckee River near Truckee, Calif.

Location.--Lat 39°17'30", long 120°12'30", in SW 1/4 sec. 28, T.17 N., R.16 E., on left bank 1.4 miles upstream from Donner Creek and 2.5 miles southwest of Truckee.

Drainage area.--552 sq mi.

Records available.--December 1944 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,860 ft (from topographic map).

Average discharge.--15 years (1945-60), 357 cfs (258,500 acre-ft per year).

Extremes.--1944-60: Maximum discharge, 7,760 cfs Dec. 23, 1955 (gage height, 7.92 ft), from rating curve extended above 2,400 cfs on basis of slope-area measurements at gage heights 7.62 and 7.92 ft; maximum gage height, 9.69 ft Apr. 3, 1958 (backwater from snow in channel); minimum discharge, 11 cfs Jan. 27, 1948.

Remarks.--Flow regulated by Lake Tahoe (see p. 267). Records of chemical analyses for the period April 1951 to September 1960 and water temperatures for period October 1958 to September 1960 are published in reports of Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	310	551	1,019	1,140	416	122	242	280	587	379	425	291	481
1952	43.3	124	272	901	1,560	1,420	1,570	2,120	1,380	308	80.0	104	821
1953	366	379	388	638	724	80.7	253	273	1,121	535	214	221	430
1954	297	314	303	142	189	268	276	280	127	234	410	453	275
1955	309	261	200	275	260	235	114	257	245	434	460	440	291
1956	241	153	501	183	577	769	279	578	902	225	98.4	156	388
1957	340	322	520	271	228	785	194	318	561	161	173	439	343
1958	299	292	315	184	187	83.9	1,730	2,400	564	114	30.3	368	549
1959	384	328	299	190	202	161	143	131	86.0	309	492	450	265
1960	324	312	305	240	129	241	205	186	134	153	463	446	262

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	19,090	32,770	62,640	70,100	23,090	7,500	14,400	17,230	34,920	23,320	26,120	17,290	348,500
1952	2,660	7,390	16,730	55,410	89,730	87,370	93,700	130,500	82,150	18,920	4,920	6,160	595,600
1953	22,480	22,570	23,870	39,200	40,230	4,960	15,030	16,790	66,710	32,910	13,140	13,170	311,100
1954	18,230	18,680	18,630	8,720	10,500	16,480	16,390	17,220	7,550	14,380	25,240	26,940	199,000
1955	19,010	15,540	12,320	16,910	14,440	14,430	6,800	15,820	14,570	26,690	28,260	26,170	211,000
1956	14,830	9,110	30,830	11,250	33,210	47,260	16,620	35,540	53,700	13,840	6,050	9,300	281,500
1957	20,880	19,160	19,650	16,680	12,640	48,270	11,540	19,560	33,360	9,930	10,640	26,120	248,400
1958	16,360	17,380	19,380	11,340	10,400	5,160	103,200	147,800	33,550	7,000	1,860	21,920	397,400
1959	23,610	19,540	18,390	11,680	11,210	9,930	8,500	8,050	5,120	19,000	30,250	26,760	192,000
1960	19,920	18,580	18,770	14,730	7,450	14,820	12,180	11,450	7,970	9,380	28,480	26,520	190,200

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	349	252,700
1951	1214	6,480	Nov. 20, 1950	30	481	348,500	360	260,800
1952	1244	2,640	June 5, 1952	34	821	595,600	879	637,800
1953	1284	1,990	June 23, 1953	48	430	311,100	411	297,700
1954	1344	1,540	Mar. 9, 1954	94	275	199,000	263	190,300
1955	1394	552	Aug. 8, 1955	74	291	211,000	302	218,900
1956	1444	7,760	Dec. 23, 1955	76	388	281,500	395	286,500
1957	1514	2,040	June 5, 1957	58	343	248,400	337	243,900
1958	1564	2,920	May 18, 1958	19	549	397,400	558	403,800
1959	1634	576	Sept. 18, 1959	52	265	192,000	259	187,800
1960	1714	1,190	Feb. 8, 1960	12	262	190,200	-	-

3385. Donner Creek at Donner Lake, near Truckee, Calif.

Location.--Lat 39°19'25", long 120°14'00", in SW 1/4 sec.17, T.17 N., R.16 E., on left bank 10 ft downstream from bridge on Donner Memorial State Park road, 0.2 mile downstream from Donner Lake outlet, 0.7 mile upstream from Cold Creek, and 2½ miles west of Truckee.

Drainage area.--14.5 sq mi.

Records available.--November 1909 to August 1910 (monthly discharge only), January 1929 to October 1935, January 1936 to March 1938, July to October 1938, January 1939 to February 1943, June 1943 to December 1953, May 1955 to December 1957, October 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,930 ft (from topographic map). Nov. 1, 1909, to Aug. 31, 1910, staff gage at different datum.

Average discharge.--23 years (1929-35, 1936-37, 1939-42, 1943-52, 1955-57, 1958-60), 29.3 cfs (21,210 acre-ft per year).

Extremes.--1909-10, 1929-53, 1955-57, 1958-60: Maximum daily discharge, 700 cfs (estimated) Nov. 21, 1950; no flow for many days in most years.

Remarks.--Flow regulated by dam at outlet of Donner Lake (usable capacity, 9,500 acre-ft).

Cooperation.--Records for January 1929 to December 1953 and May 1955 to December 1957, not previously published by Geological Survey, furnished by Federal Court Watermaster in cooperation with Truckee-Carson Irrigation District.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	0	0	0	0	0	0	32.3	21.0	4.63	-
1930	0	0	0	0	0	0	0	0	0	12.2	36.5	0	4.13
1931	0	18.3	0	4.32	10.1	13.7	7.50	29.8	12.1	17.1	16.8	17.9	12.3
1932	8.97	0	8.00	34.9	8.75	0	48.1	169	79.1	32.9	52.7	8.37	36.0
1933	.94	19.3	12.1	9.77	0	0	0	51.2	61.3	50.0	14.6	0	18.4
1934	0	0	0	0	.71	52.8	47.2	13.3	19.1	67.2	17.1	4.46	18.6
1935	0	0	0	0	0	0	78.3	150	51.3	55.3	41.5	7.77	32.3
1936	1.94	-	-	0	0	49.2	128	148	37.7	2.19	0	0	-
1937	0	0	0	0	0	51.8	90.9	120	32.4	0	0	0	24.8
1938	0	0	106	14.3	130	40.3	-	-	-	25.6	0	0	-
1939	34.1	-	-	0	0	29.3	72.3	20.5	0	0	0	0	-
1940	17.6	10.1	0	7.32	28.9	62.4	14.4	140	34.3	0	0	27.9	39.3
1941	14.0	0	0	0	16.5	36.1	69.0	168	31.4	4.13	0	0	28.4
1942	30.3	0	0	0	0	0	82.5	116	113	11.5	0	0	29.5
1943	0	28.9	17.6	43.4	77.4	-	-	-	36.0	18.3	1.00	79.7	-
1944	21.3	11.5	5.00	5.00	3.66	28.2	3.57	51.6	23.1	2.16	1.00	1.00	13.2
1945	1.00	1.47	43.0	35.9	67.5	44.2	43.0	118	32.0	7.06	2.00	2.00	33.0
1946	2.00	30.8	55.9	80.7	32.3	29.3	74.6	110	17.7	16.9	1.00	9.27	38.4
1947	1.00	22.8	54.2	19.8	38.9	3.48	23.8	60.1	17.6	2.00	19.3	18.8	23.4
1948	3.45	1.50	1.00	37.6	66.0	0	25.3	105	58.7	4.29	13.1	30.3	28.4
1949	20.4	13.8	9.87	27.0	6.18	31.7	37.5	67.7	3.80	1.00	1.00	1.00	18.6
1950	22.4	52.9	26.6	26.6	29.2	62.7	45.9	113	53.9	16.6	1.16	1.00	37.8
1951	23.9	195	214	3.00	3.00	4.29	12.0	53.8	16.4	3.00	3.00	33.0	44.7
1952	37.6	29.7	21.5	21.6	23.0	23.0	141	246	97.7	18.9	5.55	1.00	55.3
1953	1.00	1.00	98.8	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	12.6	42.6	2.84	2.13	2.13	-
1956	68.4	34.3	84.2	127	27.7	63.3	91.5	113	74.7	13.0	7.03	3.00	59.2
1957	42.7	64.3	26.2	18.3	25.7	28.7	28.3	121	41.7	14.3	12.8	27.9	37.7
1958	27.2	19.6	14.5	-	-	-	-	-	-	-	-	-	-
1959	34.9	19.3	10.2	2.13	2.76	6.13	53.4	55.7	16.3	9.83	8.41	27.3	20.6
1960	44.6	3.17	.64	.50	1.75	9.21	86.0	68.5	20.0	.77	.43	.82	19.7

PYRAMID AND WINNEMUCCA LAKES BASIN

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Monthly and yearly discharge, in acre-feet, of Donner Creek at Donner Lake, near Truckee, Calif.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	0	-	0	0	0	0	0	0	1,990	1,290	276	-
1930	0	0	0	0	0	0	0	0	0	752	2,240	0	2,990
1931	0	1,090	0	265	562	842	445	1,830	719	1,050	1,030	1,060	8,890
1932	550	0	491	2,140	485	0	2,860	10,340	4,700	792	3,240	497	26,100
1933	57	1,150	744	600	0	0	0	3,140	3,640	3,070	895	0	13,300
1934	0	0	0	0	40	3,240	2,810	814	1,130	4,120	1,050	265	13,470
1935	0	0	0	0	0	0	4,650	9,220	3,040	3,390	2,540	461	23,300
1936	119	-	-	0	0	3,020	7,600	9,110	2,240	135	0	0	-
1937	0	0	0	0	0	3,190	5,410	7,400	1,920	0	0	0	17,920
1938	0	0	6,520	877	7,200	2,480	-	-	-	1,570	0	0	-
1939	2,090	-	-	0	0	1,800	4,300	1,260	0	0	0	0	-
1940	1,080	603	0	449	1,660	3,830	8,560	2,040	0	0	1,660	0	28,480
1941	857	0	0	0	917	2,220	4,100	10,340	1,870	253	0	0	20,560
1942	1,860	0	0	0	0	0	4,900	7,140	6,730	707	0	0	21,540
1943	0	1,720	1,080	2,670	4,290	-	-	2,140	1,120	61	4,740	-	-
1945	1,310	683	307	307	210	1,730	212	3,170	1,370	133	61	59	9,550
1945	61	87	2,640	2,210	3,740	2,720	2,560	7,260	1,900	434	123	119	23,850
1946	123	1,830	3,430	4,950	1,790	1,800	4,430	6,730	1,050	1,040	61	550	27,780
1947	61	1,350	3,330	1,220	2,150	214	1,410	3,690	1,050	123	1,180	1,120	16,900
1948	212	89	61	2,310	3,660	0	1,500	6,420	3,490	263	806	1,800	20,610
1949	1,250	822	606	1,660	343	1,950	2,230	4,150	226	61	61	60	13,420
1950	1,370	3,140	1,630	1,630	1,620	3,850	2,730	6,950	3,200	1,020	71	59	27,270
1951	1,460	11,570	13,130	184	166	263	711	3,310	976	184	184	196	32,330
1952	2,310	1,760	1,320	1,330	1,280	1,370	8,360	15,100	5,800	1,110	341	60	40,140
1953	61	60	6,050	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	774	2,530	174	131	127	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	4,200	2,040	5,170	7,820	1,590	3,890	5,440	6,920	4,440	796	432	178	42,920
1957	2,620	3,820	1,610	1,120	1,430	1,760	1,680	7,420	2,480	877	788	1,660	27,270
1958	1,670	1,160	889	-	-	-	-	-	-	-	-	-	-
1959	2,150	1,150	626	131	153	377	3,180	3,430	970	604	517	1,620	14,910
1960	2,740	189	39	31	101	566	5,120	4,210	1,190	47	26	49	14,310

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Maximum day		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1929	(a)	-	-	0	-	-	4.91
1930	(a)	-	-	0	4.13	2,990	5.64
1931	(a)	102	May 26, 1931	0	12.3	8,890	12.2
1932	(a)	300	May 22, 1932	0	36.0	26,100	37.3
1933	(a)	221	May 31, 1933	0	18.4	13,300	15.7
1934	(a)	244	Mar. 30, 1934	0	18.6	13,470	18.6
1935	(a)	228	May 23, 1935	0	32.3	23,300	-
1936	(a)	b303	June 7, 1936	0	-	-	30.5
1937	(a)	151	May 16, 1937	0	24.8	17,920	33.8
1938	(a)	b600	Dec. 11, 1937	0	-	-	-
1939	(a)	b204	Apr. 30, 1939	0	-	-	12.5
1940	(a)	345	Apr. 15, 1940	0	39.3	28,480	38.2
1941	(a)	301	May 10, 1941	0	28.4	20,560	29.8
1942	(a)	251	May 13, 1942	0	29.5	21,340	30.8
1943	(a)	b206	Sept. 4, 1943	0	-	-	-
1944	(a)	148	May 23, 1944	0	13.2	9,550	13.9
1945	(a)	248	May 6, 1945	1.0	33.0	23,850	36.6
1946	(a)	170	May 11, 1946	1.0	38.4	27,780	37.6
1947	(a)	146	May 4, 1947	1.0	23.4	16,900	17.3
1948	(a)	151	Feb. 9, 1948	0	28.4	20,610	31.6
1949	(a)	102	May 17-20, 1949	0	18.6	13,420	23.4
1950	(a)	b224	May 29-30, 1950	0	37.8	27,270	65.5
1951	(a)	c700	Nov. 21, 1950	1.0	44.7	32,330	16.0
1952	(a)	278	May 29, 1952	1.0	55.3	40,140	56.4
1953	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-
1955	(a)	-	-	-	-	-	-
1956	(a)	289	Dec. 29, 1955	1.0	59.2	42,920	54.6
1957	(a)	375	May 19, 1957	1.0	37.7	27,270	31.7
1958	(a)	-	-	-	-	-	-
1959	1634	d408	Apr. 14, 1959	1.5	20.6	14,910	19.3
1960	1714	d215	Apr. 7, 1960	0	19.7	14,310	-

a Files of Federal Court Watermaster.

b Maximum daily recorded.

c Estimated.

d Momentary maximum.

3394. Martis Creek near Truckee, Calif.

Location.--Lat 39°20'20", long 120°07'00", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.8, T.17 N., R.17 E., on left bank three-quarters of a mile upstream from mouth and 3 $\frac{1}{2}$ miles northeast of Truckee.

Drainage area.--40.4 sq mi.

Records available.--October 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,700 ft (from topographic map).

Extremes.--1958-60: Maximum discharge, 436 cfs Feb. 8, 1960 (gage height, 3.73 ft); minimum, 1.4 cfs July 10, 11, 1960.

Remarks.--No known regulation or diversion above gage.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	9.32	10.4	9.30	19.6	21.1	29.3	27.7	13.5	4.15	2.24	2.17	4.74	12.7
1960	5.61	6.27	7.34	9.13	21.1	53.4	32.4	10.0	3.21	1.90	1.82	2.37	13.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	573	618	572	1,200	1,170	1,800	1,650	833	247	137	134	282	9,220
1960	345	373	451	561	1,420	3,280	1,930	615	191	117	112	141	9,540

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1959	1634	232	Feb. 16, 1959	1.8	12.7	9,220	11.9	8,620
1960	1714	436	Feb. 8, 1960	1.6	13.1	9,540	-	-

3397. Prosser Creek at Hobart Mills, Calif.

Location.--Lat 39°24'00", long 120°12'00", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.18 N., R.16 E., on left bank 0.8 mile west of Hobart Mills, 3 miles upstream from Alder Creek, and 5 miles north of Truckee.

Drainage area.--27.4 sq mi.

Records available.--October 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,840 ft (from topographic map).

Extremes.--1958-60: Maximum discharge, 521 cfs Feb. 8, 1960 (gage height, 3.77 ft); minimum, 2.7 cfs Dec. 11, 1959.

Remarks.--No known regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	7.45	10.0	9.13	34.9	26.6	51.2	114	101	70.0	11.3	4.00	6.35	37.1
1960	†4.41	4.55	4.74	6.98	45.4	87.7	149	131	112	15.7	3.78	3.34	47.2

† Corrected.

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	458	596	561	2,150	1,480	3,150	6,770	6,210	4,170	692	246	378	26,860
1960	271	271	291	429	2,610	5,390	8,850	8,060	6,660	964	232	199	34,230

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1959	1634	262	Jan. 10, 1959	3.2	37.1	26,860	36.0	26,080
1960	1714	521	Feb. 8, 1960	3.0	47.2	34,230	-	-

3399. Alder Creek near Truckee, Calif.

Location.--Lat 39°22'10", long 120°10'50", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.34, T.18 N., R.16 E., on right bank 2 miles upstream from mouth and 2 $\frac{1}{2}$ miles north of Truckee.

Drainage area.--7.36 sq mi.

Records available.--October 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,800 ft (from topographic map).

Extremes.--1958-60: Maximum discharge, about 59 cfs Feb. 8, 1960 (gage height, 2.47 ft, backwater from ice); no flow for some periods in each year.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	0.83	0.96	0.83	3.16	2.05	4.14	10.7	5.21	1.28	0.19	0.02	0.19	2.46
1960	.22	.30	.29	.40	5.87	8.76	17.6	7.38	1.63	.06	.06	0	3.52

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1959	51	57	51	195	114	255	637	320	76	12	1.0	12	1,780
1960	14	18	18	25	337	539	1,050	454	97	4.0	4.0	0	2,560

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1959	1634	37	Jan. 10, 1959	0	2.46	1,780	2.31
1960	1714	a59	Feb. 8, 1960	0	3.52	2,560	-

a About.

3405. Prosser Creek near Boca, Calif.

Location.--Lat 39°22'10", long 120°07'10", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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.--53.5 sq mi.

Records available.--October 1902 to June 1903 (gage heights only), October 1942 to December 1950, June 1951 to September 1960. Records for April 1889 to November 1890, published in the 11th and 12th Annual Reports, Pt. 2, have been found to be unreliable and should not be used.

Gage.--Water-stage recorder. Datum of gage is 5,572.66 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. October 1942 to December 1950, water-stage recorder at approximately same site at different datum. June 1951 to Sept. 30, 1956, water-stage recorder at present site at datum 2.00 ft higher.

Average discharge.--17 years (1942-50, 1951-60), 79.2 cfs (57,340 acre-ft per year).

Extremes.--1942-50, 1951-60: Maximum discharge, 4,560 cfs Dec. 23, 1955 (gage height, 10.13 ft, present datum), from rating curve extended above 910 cfs on basis of slope-area measurement of peak flow; minimum daily, 3 cfs many days during August and September 1947; minimum observed, 2.5 cfs Dec. 3, 1959, result of freezeup.
Flood of Nov. 20, 1950, reached a stage of 11.0 ft (present datum), from floodmarks (discharge, 4,320 cfs by slope-area measurement).

Remarks.--No known regulation or diversion above station.

Cooperation.--Records for October 1942 to December 1950, not previously published by Geological Survey, furnished by Federal Court Watermaster in cooperation with Bureau of Reclamation, for "Prosser Creek near confluence with Truckee River."

Monthly and yearly mean discharge, in cubic feet per second, of Frosser Creek near Boca, Calif.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	10.0	42.7	66.1	80.3	89.7	175	307	237	126	48.7	13.7	9.5	100
1944	11.3	14.8	15.0	15.0	15.0	31.4	101	203	92.6	24.4	7.0	6.7	44.8
1945	8.9	33.4	20.0	15.0	20.0	52.5	196	283	133	36.7	10.1	8.3	68.2
1946	22.4	39.7	33.0	49.2	36.8	100	274	297	107	34.2	9.7	8.6	84.6
1947	13.8	31.8	33.0	20.0	50.8	75.5	111	133	53.9	11.5	4.0	3.9	45.1
1948	17.9	19.0	11.9	10.0	11.0	20.0	114	167	156	43.8	7.9	4.7	48.6
1949	7.0	17.2	10.0	12.0	15.0	31.4	179	193	86.4	12.2	5.0	5.3	47.8
1950	7.5	12.4	14.0	14.0	42.9	113	238	325	216	58.0	5.1	4.0	87.4
1951	19.0	268	213	-	-	-	-	-	-	32.4	10.7	9.66	-
1952	19.4	38.0	43.2	32.8	49.4	54.9	406	669	395	176	44.5	19.6	162
1953	15.2	18.6	20.6	92.7	47.8	78.1	220	225	250	120	23.7	13.5	93.8
1954	14.0	24.2	23.1	25.0	35.6	114	215	193	76.2	22.1	8.14	7.72	63.2
1955	9.24	17.4	19.9	15	17.6	39.7	94.5	202	135	27.2	7.07	6.48	49.4
1956	8.39	14.3	321	155	73.4	96.0	273	417	277	105	26.0	14.4	149
1957	22.4	27.5	28.4	23.6	61.6	108	152	224	171	42.0	10.0	8.68	73.2
1958	19.8	23.0	31.9	26.1	78.4	60.0	220	614	285	94.5	27.1	13.0	125
1959	11.9	16.0	16.0	56.5	42.7	75.3	132	106	69.5	13.2	4.47	8.59	45.9
1960	7.73	8.62	9.8	12.5	72.0	130	176	139	115	17.5	4.51	4.94	57.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	614	2,540	4,060	4,930	4,970	10,720	18,250	14,550	7,470	2,990	843	564	72,500
1944	691	881	921	921	861	1,920	6,000	12,440	5,500	1,500	430	400	32,460
1945	546	1,980	1,230	921	1,110	3,220	11,670	17,380	7,890	2,250	620	493	49,310
1946	1,380	2,360	2,030	3,020	2,040	6,160	16,300	18,240	6,380	2,100	594	509	61,110
1947	849	1,890	2,030	1,230	2,820	4,630	6,620	8,180	3,200	703	248	232	32,630
1948	1,100	1,130	729	614	632	1,230	6,790	10,260	9,270	2,690	485	281	35,200
1949	430	1,020	614	737	832	1,930	10,610	11,850	5,130	750	307	313	34,520
1950	461	735	859	859	2,380	6,920	14,120	19,940	12,800	3,560	315	240	63,190
1951	1,160	15,920	13,070	-	-	-	-	-	-	1,990	660	575	-
1952	1,190	2,260	2,650	2,020	2,840	3,370	24,140	41,130	23,500	10,830	2,740	1,160	117,800
1953	934	1,100	1,270	5,700	2,650	4,800	13,100	13,810	14,910	7,390	1,460	805	67,930
1954	859	1,440	1,420	1,540	1,980	7,010	12,780	11,660	4,530	1,360	500	460	45,740
1955	568	1,040	1,220	922	978	2,440	5,630	12,440	8,030	1,670	435	386	35,760
1956	516	852	19,710	9,500	4,220	5,900	16,250	25,610	16,490	6,440	1,600	855	107,900
1957	1,370	1,640	1,740	1,450	3,420	6,650	9,060	13,770	10,170	2,580	615	516	52,980
1958	1,220	1,370	1,960	1,610	4,350	3,690	13,070	37,780	16,950	5,810	1,660	772	90,240
1959	734	952	986	3,480	2,370	4,630	7,860	6,520	4,140	813	275	511	33,270
1960	475	513	603	766	4,140	8,010	10,500	8,540	6,850	1,080	277	294	42,050

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1943	(a)	b472	Jan. 21, 1943	9	100	72,500	93.8	67,780
1944	(a)	433	May 7, 1944	5	44.8	32,460	46.6	33,730
1945	(a)	635	May 4, 1945	7	68.2	49,310	71.0	51,320
1946	(a)	b467	Apr. 26, 1946	7	84.6	61,110	83.2	60,110
1947	(a)	b228	May 3, 1947	3	45.1	32,630	42.6	30,820
1948	(a)	b290	Apr. 17, 1948	4	48.6	35,200	47.3	34,310
1949	(a)	b347	May 15, 1949	5	47.8	34,520	47.8	34,510
1950	(a)	b420	May 25, 1950	4	87.4	63,190	126	91,280
1951	(a)	-	-	-	-	-	-	-
1952	1244	1,130	May 2, 1952	11	162	117,800	158	115,000
1953	1284	903	Apr. 27, 1953	12	93.8	67,930	94.4	68,340
1954	1344	1,150	Mar. 9, 1954	6.7	63.2	45,740	61.9	44,850
1955	1394	357	May 12, 1955	4.6	42.4	35,760	74.6	54,010
1956	1444	4,560	Dec. 23, 1956	7.0	149	107,900	126	91,620
1957	1514	1,500	May 18, 1957	6.6	73.2	52,980	72.9	52,780
1958	1564	980	May 18, 1958	11	125	90,240	122	88,360
1959	1634	264	Jan. 12, 1959	3.8	45.9	33,270	74.5	32,190
1960	1714	c660	Feb. 8, 1960	3.6	57.9	42,050	-	-

† Corrected.

a From files of Federal Court Watermaster, in cooperation with Bureau of Reclamation.

b Maximum day.

c About.

3420. Little Truckee River near Hobart Mills, Calif.

Location.--Lat 39°30'05", long 120°16'35", in NE¼NE¼ 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.--36.6 sq mi.

Records available.--December 1946 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 6,290 ft (from topographic map).

Average discharge.--13 years (1947-60), 89.1 cfs (64,510 acre-ft per year).

Extremes.--1946-60: 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 measurement of peak flow; minimum, 1.1 cfs Aug. 19, 20, 23, 24, 1949.

Remarks.--One transmountain diversion to Sierra Valley above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	15.5	359	300	69.8	82.5	89.1	227	290	93.1	3.94	3.61	3.33	126
1952	9.68	17.8	23.3	17.3	23.0	23.0	214	863	834	272	36.0	6.39	182
1953	7.41	8.63	15.0	57.6	38.7	44.8	207	278	432	134	8.53	5.97	103
1954	8.85	16.4	14.9	16.1	15.1	81.8	242	304	36.2	3.29	4.52	3.55	62.5
1955	4.57	8.88	8.18	8.28	9.95	15.4	52.4	280	177	5.25	2.96	4.44	48.3
1956	5.00	8.03	276	119	60.1	57.0	193	519	435	76.9	6.04	3.65	147
1957	13.8	17.4	15.4	14.6	35.4	59.9	145	371	255	9.38	3.52	4.53	78.6
1958	12.0	16.6	21.7	20.2	47.4	54.0	120	677	440	92.5	8.13	3.70	126
1959	6.20	9.38	7.22	36.6	29.5	51.1	158	144	62.4	3.15	2.41	5.77	42.9
1960	4.72	4.51	4.38	5.32	26.9	88.7	213	178	104	5.01	2.85	2.57	53.2

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	953	21,380	18,460	4,290	4,580	4,250	13,530	17,850	5,540	242	222	198	91,500
1952	595	1,060	1,430	1,060	1,320	1,410	12,760	40,800	37,700	16,740	2,210	380	117,500
1953	455	513	923	3,540	2,150	2,760	12,320	17,110	25,710	8,220	524	355	74,580
1954	544	979	914	989	837	5,030	14,400	18,670	2,150	202	278	211	45,200
1955	281	529	503	508	552	948	3,120	17,230	10,540	323	182	264	34,980
1956	307	478	16,960	7,340	3,460	3,500	11,500	31,940	25,880	4,730	371	217	106,700
1957	848	1,040	944	897	1,860	3,680	8,610	22,790	15,200	577	216	270	56,930
1958	741	986	1,340	1,240	2,830	3,320	7,130	41,630	26,150	5,690	500	220	91,580
1959	381	556	444	2,250	1,640	3,140	9,380	8,830	3,710	194	148	343	31,020
1960	290	269	269	327	1,550	5,450	12,700	10,970	6,190	308	176	153	38,650

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	1180	-	-	-	-	-	143	103,600	
1951	1214	7,010	Nov. 20, 1950	2.7	126	91,500	74.3	53,800	
1952	1244	1,050	June 8, 1952	4.4	162	117,500	160	116,300	
1953	1284	895	Apr. 27, 1953	3.0	103	74,580	104	75,130	
1954	1344	695	May 8, 1954	1.9	62.5	45,200	60.9	44,080	
1955	1394	605	May 20, 1955	2.3	48.3	34,980	71.0	51,410	
1956	1444	5,690	Dec. 23, 1955	3.0	147	106,700	126	91,770	
1957	1514	1,570	May 16, 1957	3.0	78.6	56,950	79.0	57,170	
1958	1564	1,100	May 23, 1958	3.3	125	91,580	124	89,690	
1959	1634	2,890	May 12, 1959	2.2	42.9	31,020	42.1	30,460	
1960	1714	390	Apr. 9, 1960	2.0	53.2	38,650	-	-	

PYRAMID AND WINNEMUCCA LAKES BASIN

3435. Sagehen Creek near Truckee, Calif.

Location.--Lat 39°25'50", long 120°14'10", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T.18 N., R.16 E., on left bank 2.2 miles upstream from bridge on State Highway 89 and 7.5 miles north of Truckee.

Drainage area.--10.8 sq mi.

Records available.--October 1953 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 6,320 ft (from topographic map). Prior to Dec. 2, 1953, staff gage at site 100 ft upstream at different datum.

Average discharge.--7 years (1953-60), 10.8 cfs (7,820 acre-ft per year).

Extremes.--1953-60: Maximum discharge, 495 cfs Dec. 23, 1955 (gage height, 4.28 ft), from rating curve extended above 70 cfs on basis of slope-area measurement of peak flow; minimum, 0.6 cfs Aug. 8, 1960, result of temporary regulation.

Remarks.--No storage or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	3.17	3.69	3.54	3.93	3.96	9.77	31.2	23.6	6.82	2.51	1.85	1.86	8.00
1955	2.06	3.20	3.18	2.96	3.05	4.01	9.83	29.0	10.9	2.80	1.92	1.87	6.26
1956	1.98	2.51	32.4	14.9	6.66	9.88	42.9	78.5	43.9	11.2	3.45	2.51	20.9
1957	3.74	3.81	3.67	3.08	6.18	9.18	25.4	37.2	18.0	3.52	2.03	1.97	9.81
1958	2.67	3.28	3.81	3.03	8.91	5.70	20.8	101	42.0	12.1	3.92	2.91	17.5
1959	2.76	3.11	2.95	6.14	4.79	7.83	21.3	12.0	4.21	1.78	1.38	1.81	5.82
1960	1.94	2.01	2.13	2.81	4.73	13.5	29.1	16.9	6.79	1.85	1.26	1.11	6.99

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951													
1952													
1953													
1954	195	220	217	242	220	601	1,860	1,450	406	154	114	110	5,790
1955	127	190	196	182	169	246	585	1,790	649	172	118	111	4,540
1956	122	150	1,990	914	383	608	2,550	4,830	2,610	687	212	149	15,200
1957	230	227	225	190	343	564	1,510	2,280	1,070	217	125	117	7,100
1958	184	195	234	186	495	350	1,240	6,180	2,500	741	241	173	12,700
1959	170	185	182	378	266	481	1,270	736	251	109	85	108	4,220
1960	119	120	131	173	272	829	1,730	1,040	404	113	77	66	5,070

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951								
1952								
1953								
1954	1344	72	Apr. 22, 1954	1.7	8.00	5,790	7.83	5,670
1955	1394	59	May 8, 1955	1.7	6.26	4,540	8.68	6,280
1956	1444	495	Dec. 23, 1955	1.9	20.9	15,200	18.8	13,630
1957	1514	212	May 18, 1957	1.8	9.81	7,100	9.69	7,010
1958	1564	212	May 18, 1958	1.8	17.5	12,700	17.5	12,640
1959	1634	38	Apr. 5, 1959	1.3	5.82	4,220	5.59	4,050
1960	1714	66	Feb. 8, 1960	1.0	6.99	5,070	-	-

3444. Little Truckee River above Boca Reservoir, near Boca, Calif.

Location.--Lat 39°26'10", long 120°05'00", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.18 N., R.17 E., on left bank 1 mile upstream from Boca Reservoir, $\frac{1}{2}$ miles upstream from Dry Creek, and $3\frac{1}{2}$ miles north of Boca.

Drainage area.--146 sq mi.

Records available.--June 1903 to October 1910, September 1939 to September 1960. Published as "at Pine Station" June 1903 to December 1907 and as "at Starr" January 1908 to October 1910. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder and concrete control. Datum of gage is 5,618.67 ft above mean sea level (Bureau of Reclamation bench mark). June 1903 to October 1910 staff gages at different sites and datums.

Average discharge.--28 years (1903-10, 1939-60), 195 cfs (141,200 acre-ft per year).

Extremes.--1903-10, 1939-60: Maximum discharge, about 9,500 cfs Dec. 23, 1955 (computed from change in contents of Boca Reservoir); minimum recorded, 2.2 cfs Dec. 5, 1959.

Remarks.--Flow slightly regulated by Independence Lake (capacity, about 17,500 acre-ft) and one transmountain diversion to Sierra Valley.

Cooperation.--Records for September 1939 to September 1957, not previously published by Geological Survey, furnished by Federal Court Watermaster and Washoe County Conservation District.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	11.0	-
1940	14.2	13.0	85.5	69.0	122	355	648	620	227	45.8	180	52.0	202
1941	38.0	37.2	59.2	58.0	111	228	295	705	303	94.4	17.5	15.3	164
1942	98.1	37.2	185	143	104	138	225	573	524	129	16.1	17.4	185
1943	22.7	77.3	110	160	146	354	716	511	224	60.4	14.1	15.6	201
1944	27.9	86.9	40.5	72.0	35.0	80.8	214	468	139	19.3	9.81	13.0	102
1945	17.9	67.8	156	61.3	151	160	396	586	239	28.2	10.3	11.3	157
1946	49.3	44.3	124	76.2	56.9	222	551	548	188	25.8	8.48	14.8	157
1947	58.6	85.2	47.6	61.4	128	181	222	233	50.8	7.06	7.77	10.6	90.7
1948	47.7	58.6	22.2	56.6	22.0	39.0	195	377	373	48.1	7.94	5.93	104
1949	81.2	43.4	30.7	21.8	30.0	63.2	271	422	115	6.06	4.45	8.10	91.7
1950	75.7	122	28.2	74.0	115	154	683	644	378	76.6	10.1	11.3	197
1951	105	630	663	235	255	196	345	412	183	58.0	44.5	44.8	264
1952	69.2	138	78.5	50.0	136	113	856	1,310	735	268	61.6	49.3	321
1953	138	55.9	55.0	78.1	114	169	541	427	464	335	75.7	86.8	198
1954	117	55.3	44.5	47.7	53.8	134	339	266	45.7	18.2	8.97	11.0	95.0
1955	25.7	24.0	15.5	21.4	32.0	69.4	130	429	233	24.3	17.9	24.4	110
1956	17.9	17.3	505	264	103	264	616	865	611	145	25.8	13.8	288
1957	113	87.0	55.5	25.0	95.7	235	290	474	308	28.4	12.6	14.9	145
1958	120	104	88.5	35.8	328	110	558	1,220	645	162	26.0	24.4	267
1959	114	95.8	62.5	76.5	58.9	134	255	190	77.1	8.96	14.6	7.5	96.9
1960	59.8	15.1	11.6	13.5	98.6	232	336	222	122	9.47	7.02	48.3	97.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	651	-
1940	874	772	5,120	4,240	7,000	21,790	38,500	38,030	13,480	2,810	11,030	3,090	146,700
1941	2,330	2,210	3,630	3,560	6,160	14,010	17,550	43,280	17,970	5,790	1,070	911	118,500
1942	6,020	2,210	11,530	8,770	5,770	8,460	13,360	35,160	31,110	7,910	988	1,030	132,100
1943	1,390	4,590	6,750	9,820	8,100	21,760	42,540	31,380	13,510	3,710	863	925	145,100
1944	1,710	5,160	2,470	4,420	1,890	4,960	12,740	29,350	8,240	1,180	602	770	74,070
1945	1,100	4,030	9,570	3,760	8,390	9,810	23,500	35,980	14,210	1,730	632	673	113,400
1946	3,020	2,630	7,590	4,680	3,150	13,630	32,740	33,660	11,180	1,460	522	877	115,100
1947	3,060	5,060	2,920	3,770	7,090	11,100	13,180	14,290	3,020	434	477	630	65,570
1948	2,930	3,480	1,360	3,480	1,260	2,390	11,610	23,110	22,130	2,950	487	352	75,540
1949	4,990	2,580	1,880	1,340	1,660	3,880	16,100	26,930	6,810	372	273	481	67,300
1950	4,650	7,250	1,730	4,540	6,390	9,460	20,580	39,550	22,440	4,700	618	673	122,600
1951	6,450	37,400	40,700	14,440	14,130	12,780	20,500	25,300	10,840	3,560	2,730	2,660	191,500
1952	4,240	8,190	4,820	3,070	7,820	6,950	50,850	80,150	43,660	16,470	3,780	2,930	232,300
1953	8,470	3,320	3,380	4,800	6,350	10,410	32,210	26,190	27,570	11,000	4,520	5,170	143,400
1954	7,180	3,280	2,710	2,930	2,980	8,250	20,120	16,350	2,720	1,120	550	651	68,840
1955	1,580	1,430	948	1,320	1,780	4,260	7,700	26,330	13,830	1,490	1,100	1,450	63,220
1956	1,100	1,030	30,980	16,180	5,910	16,230	36,600	53,110	36,290	8,900	1,460	820	208,600
1957	6,920	5,160	3,410	1,540	5,200	14,340	17,250	29,160	18,300	1,750	774	887	104,700
1958	7,380	8,200	5,440	2,200	7,100	6,750	31,990	74,990	38,380	9,970	1,600	1,450	193,400
1959	6,980	5,700	3,840	4,700	3,270	8,220	15,150	11,670	4,590	551	897	4,550	70,120
1960	3,680	899	712	829	5,670	14,260	19,980	13,670	7,250	582	432	2,870	70,830

Yearly discharge, in cubic feet per second, of Little Truckee River above Boca Reservoir, near Boca, Calif.

Year	WSP	Water year ending Sept. 30					Calendar year	
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1939	(a)	-	-	-	-	-	-	-
1940	(a)	1,440	May 12, 1940	10	202	146,700	204	148,100
1941	(a)	1,140	May 25, 1941	12	164	118,500	180	129,900
1942	(a)	1,380	May 25, 1942	14	183	132,100	173	125,300
1943	(a)	960	May 2, 1943	7	201	145,100	196	141,700
1944	(a)	788	May 7, 8, 9, 1944	8	102	74,070	110	79,430
1945	(a)	1,000	May 4, 1945	8	157	113,400	155	111,900
1946	(a)	935	Apr. 18, 1946	7	157	115,100	157	113,500
1947	(a)	522	Feb. 12, 1947	5	90.7	65,570	85.4	61,760
1948	(a)	599	June 10, 1948	5	104	75,540	107	77,220
1949	(a)	788	May 14, 1949	4	91.7	67,300	97.5	71,480
1950	(a)	1,040	Apr. 21, 1950	7	197	122,600	295	193,500
1951	(a)	5,000	Nov. 20, 1950	13	264	191,500	171	124,200
1952	(a)	2,200	May 2, 1952	39	321	232,900	319	230,800
1953	(a)	698	May 19, 1953	-	198	143,400	196	141,400
1954	(a)	528	Apr. 23, 1954	6	95.0	68,840	82.5	59,630
1955	(a)	575	May 8, 1955	3	110	63,220	150	92,370
1956	(a)	b9,500	Dec. 23, 1955	11	288	208,600	264	191,000
1957	(a)	1,120	May 18, 1957	-	145	104,700	149	108,200
1958	1564	b1,650	May 5, 1958	14	267	193,400	264	191,000
1959	1634	b390	Jan. 12, 1959	5.7	96.9	70,120	81.3	58,890
1960	1714	b1,430	Feb. 8, 1960	5.7	97.6	70,830	-	-

a Files of Federal Court Watermaster.

b Momentary maximum.

3444.9. Boca Reservoir at Boca, Calif.

Location.--Lat 39°23'20", long 120°05'40", in NE 1/4 sec.28, T.18 N., R.17 E., in control house at Boca dam, 1,600 ft upstream from mouth of Little Truckee River and half a mile northwest of Boca.

Drainage area.--172 sq mi.

Records available.--December 1939 to September 1960.

Gage.--Pressure gage with mercury column. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Extremes.--1939-60: Maximum contents, 41,440 acre-ft Dec. 23, 1955; minimum, 37 acre-ft Mar. 4-9, 1955.

Remarks.--Reservoir is formed by earth-fill, rock-faced dam. Storage began Dec. 8, 1938. Usable capacity, 40,900 acre-ft between elevations 5,521 (outlet sill) and 5,605 ft. Dead storage, 240 acre-ft. Figures given herein represent usable contents. Water is used for irrigation in the State of Nevada and for power development.

Cooperation.--Daily elevations furnished by Washoe County Conservation District. Capacity table and maximum elevation for Dec. 23, 1955, furnished by Bureau of Reclamation. Contents prior to Oct. 1, 1957, not previously published by Geological Survey, furnished by Federal Court Watermaster.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1939	-	-	a1,420	a3,360	a5,630	a14,010	27,880	27,270	26,910	a26,650	28,170	28,410
1940	29,070	28,600	28,650	22,680	19,730	40,320	40,340	40,450	40,360	39,330	36,230	34,770
1941	34,070	22,520	23,370	15,190	3,580	7,160	15,860	38,160	40,700	35,440	31,370	28,020
1942	33,330	25,960	30,110	20,640	18,770	25,700	27,070	39,640	40,950	40,220	39,330	38,320
1943	30,680	32,420	25,510	28,580	14,400	20,980	25,220	39,660	39,930	39,920	39,110	38,720
1944	30,700	24,030	19,120	2,770	2,530	1,370	10,640	39,730	35,600	24,900	15,700	15,600
1945	16,200	16,350	22,320	12,260	14,180	4,200	26,730	39,260	40,380	36,330	36,020	22,510
1946	17,260	19,300	18,320	14,200	2,420	12,900	17,870	39,060	39,160	34,100	30,400	15,920
1947	17,550	17,040	14,130	3,640	2,900	13,840	28,570	40,170	35,720	30,240	12,570	10,330
1948	12,860	14,050	12,170	5,450	1,440	4,260	19,170	40,900	40,900	35,060	29,900	24,410
1949	21,420	17,680	11,660	2,800	46	445	23,060	39,980	40,320	38,210	28,900	17,650
1950	13,840	18,390	12,080	6,350	5,990	16,130	34,660	40,340	40,900	37,060	32,000	27,750
1951	31,820	33,210	21,090	23,730	26,250	19,400	38,820	40,900	40,900	39,200	36,700	27,800
1952	14,870	11,560	8,920	3,280	70	270	30,400	30,830	40,900	40,900	25,800	6,300
1953	11,180	11,780	11,590	13,720	5,850	6,210	35,600	29,190	40,900	39,590	25,820	13,870
1954	15,860	14,970	14,440	5,690	1,680	6,540	33,800	40,850	32,580	17,610	12,460	10,270
1955	9,710	10,000	6,510	3,160	410	790	2,990	24,990	26,370	26,610	27,530	27,270
1956	25,670	24,070	24,800	17,070	7,120	10,350	19,880	31,560	40,900	39,930	21,100	4,010
1957	8,620	9,690	8,440	4,640	8,990	22,110	26,000	40,900	40,850	24,110	4,590	4,370
1958	7,910	9,460	10,760	4,500	9,000	7,890	22,580	35,280	40,950	35,530	11,660	4,400
1959	8,230	10,790	8,940	4,740	2,080	2,140	14,730	21,930	12,300	1,360	1,020	4,760
1960	8,440	9,260	10,140	10,210	5,220	22,320	39,490	41,050	32,820	9,720	6,560	8,340

a Interpolated on basis of weekly observations of elevation.

3445. Little Truckee River at Boca, Calif.

Location.--Lat 39°23'10", long 120°05'40". In NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.18 N., R.17 E., on right bank 800 ft upstream from mouth, 1,000 ft downstream from Boca Dam, and a third of a mile northwest of Boca.

Drainage area.--172 sq mi.

Records available.--April to October 1890 (monthly discharge only), January 1911 to September 1915, January 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 5,500 ft (from topographic map). Jan. 1, 1911, to Sept. 30, 1915, staff gage at site 650 ft downstream at different datum. January 1939 to September 1957, records computed from daily log of rated settings of needle valve in dam, and from computed flow over spillway.

Average discharge.--25 years (1911-15, 1939-60), 185 cfs (133,900 acre-ft per year).

Extremes.--1890, 1911-15, 1939-60: Maximum discharge, 8,800 cfs Dec. 24, 1955, from records of Washoe County Water Conservation District; no flow for many days in most years.

Remarks.--Flow regulated by Boca Reservoir (see preceding page), Independence Lake (capacity, about 17,500 acre-ft), and one transmountain diversion to Sierra Valley.

Cooperation.--Records for January 1939 to September 1957 not previously published by Geological Survey, furnished by Federal Court Watermaster in cooperation with Washoe County Water Conservation District.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	0	0	0	0	0	0	0	0	0	-
1940	0	17.0	79.8	169	154	39.6	680	631	197	40.2	181	52.9	186
1941	29.5	200	38.6	170	282	182	130	264	212	134	73.0	54.4	146
1942	52	157	127	264	149	106	741	345	508	123	9.26	10.0	211
1943	172	147	189	129	358	326	642	274	224	44.4	5.00	5.00	208
1944	202	155	87.2	290	36.1	95.2	87.8	15.7	186	181	163	5.73	126
1945	3.23	46.5	32.1	208	121	297	100	442	214	73.1	0	240	148
1946	210	117	110	188	289	121	623	239	187	91.4	57.4	271	207
1947	126	76.9	96.0	199	120	6.35	0	52.6	106	102	263	40.3	99.3
1948	3.97	53.4	58.7	185	97.4	0	1.10	29.4	374	137	86.5	95.9	95.1
1949	122	102	114	158	76.1	56.6	29.0	155	108	32.2	150	188	108
1950	130	32.5	124	174	115	71.8	332	557	378	120	76.5	66.6	187
1951	31.9	611	856	133	245	327	106	395	182	50.7	64.5	186	266
1952	260	186	119	141	140	120	807	1,648	789	272	321	414	435
1953	44.6	40.6	55.0	100	253	196	41.7	663	309	202	312	2.90	209
1954	72.3	62.0	40.0	199	130	119	34.3	222	175	257	90.8	50.9	121
1955	43.6	40.8	72.7	75.9	81.6	59.6	174	33.5	183	5.74	21.6	16.2	66.6
1956	42.0	73.0	678	434	331	295	650	804	475	172	366	324	387
1957	43.2	72.4	111	97.3	56.7	11.1	250	269	312	335	358	16.5	162
1958	54.9	75.6	68.5	141	79.9	195	460	1,193	537	244	408	128	301
1959	47.7	54.0	94.8	154	115	157	37.3	81.0	240	169	16.6	10.8	98.0
1960	.17	.20	.20	21.1	155	5.82	70.8	197	269	365	56.8	12.0	95.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	0	0	0	0	0	0	0	0	0	-
1940	0	1,010	4,900	10,400	8,860	2,430	40,410	38,720	11,720	2,470	11,090	3,140	135,200
1941	1,810	11,850	2,370	10,440	15,640	11,190	7,750	16,230	12,570	8,370	4,430	3,230	105,900
1942	32	9,320	7,810	16,200	8,240	6,510	44,010	21,150	30,160	7,570	568	594	152,200
1943	10,550	8,720	11,600	7,940	19,840	20,040	38,180	16,830	13,280	2,720	307	297	150,300
1944	12,430	9,180	5,350	17,790	2,070	5,840	5,210	962	11,070	11,080	9,980	341	91,300
1945	198	2,760	1,970	12,760	6,700	18,250	5,950	27,140	12,730	4,490	0	14,270	107,200
1946	12,890	6,940	6,750	11,560	16,030	7,430	36,990	14,680	11,110	5,610	3,520	16,120	149,600
1947	7,740	4,570	5,890	12,210	6,640	390	0	3,230	6,290	6,260	16,120	2,400	71,740
1948	244	3,170	3,610	11,330	5,600	0	65	1,800	22,240	8,410	5,310	5,690	67,470
1949	7,490	6,070	7,020	9,690	4,330	3,480	1,720	9,500	6,420	1,980	9,180	11,150	78,030
1950	8,000	1,930	7,590	10,720	6,360	4,410	23,290	34,190	22,440	7,380	4,690	3,960	135,000
1951	1,960	36,290	52,520	8,150	13,600	20,070	6,320	24,220	10,830	3,120	3,960	11,080	192,100
1952	15,950	11,020	7,310	8,650	8,050	7,380	47,960	101,200	46,890	16,720	19,680	24,570	315,400
1953	2,740	2,410	3,380	5,140	14,010	12,160	2,480	41,100	18,360	12,400	19,220	17,250	151,800
1954	4,440	3,660	2,460	12,220	7,220	7,270	2,040	13,820	10,380	15,780	5,580	3,020	87,690
1955	2,680	2,430	4,460	4,660	4,520	3,680	10,160	2,060	10,660	352	1,330	962	48,130
1956	2,580	4,340	41,640	26,650	19,010	17,890	38,610	49,370	28,240	10,530	22,440	19,250	280,600
1957	2,650	4,320	6,750	5,970	3,140	681	14,820	16,520	18,500	20,550	22,000	978	116,900
1958	3,380	4,500	4,210	8,680	4,440	12,010	27,390	73,360	31,950	14,990	25,110	7,640	217,700
1959	2,930	3,210	5,850	9,440	6,390	9,670	2,220	4,980	14,270	10,370	1,020	642	70,970
1960	11	12	12	1,300	8,920	358	4,210	12,130	15,990	22,440	3,490	716	69,590

Yearly discharge, in cubic feet per second, of Little Truckee River at Boca, Calif.

Year	WSP	Water year ending Sept. 30					Calendar year	
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1939	(a)	-	-	0	-	-	-	-
1940	(a)	1,330	May 13, 1940	0	186	135,200	200	145,300
1941	(a)	680	May 27, 28, 1941	0	146	105,900	148	107,100
1942	(a)	1,100	Apr. 16-18, 1942	0	211	152,200	230	165,900
1943	(a)	834	Apr. 21, 1943	0	208	150,300	202	146,400
1944	(a)	457	Aug. 18, 1944	0	126	91,300	95.6	69,270
1945	(a)	1,400	May 15, 1945	0	148	107,200	178	128,900
1946	(a)	799	(b)	0	207	149,600	195	141,200
1947	(a)	435	Jan. 13-18, 1947	0	99.3	71,740	83.8	60,560
1948	(a)	595	June 10, 1948	0	93.1	67,470	112	81,020
1949	(a)	375	May 6-8, 1949	0	108	78,030	104	74,970
1950	(a)	850	Apr. 28, 1950	0	187	135,000	288	208,200
1951	(a)	5,000	Nov. 20, 1950	0	266	192,100	188	135,600
1952	(a)	2,516	May 4, 1952	0	435	315,400	400	289,600
1953	(a)	750	May 8-26, 1953	0	209	151,600	212	153,700
1954	(a)	450	May 10, 1954	0	121	87,690	120	86,700
1955	(a)	c333	June 3, 1955	0	66.6	48,130	121	87,124
1956	(a)	cs,800	Dec. 24, 1955	0	387	280,600	339	245,700
1957	(a)	587	June 2, 1957	0	162	116,900	159	115,200
1958	1564	cl,590	May 14, 1958	3.8	301	217,700	300	217,500
1959	1634	b460	July 8, 1959	.1	98.0	70,970	81.5	59,040
1960	1714	b526	July 22, 1960	.1	95.9	69,590	-	-

a Files of Federal Court Watermaster.

b Apr. 20 to May 2, 1946.

c Momentary maximum.

3460. Truckee River at Farad, Calif.

Location.--Lat 39°25'41" N., long 120°01'59" W. in NE $\frac{1}{4}$ sec. 12, T. 18 N., R. 17 E., on left bank 0.7 mile downstream from Farad powerplant, 2.5 miles north of Floriston, 3.4 miles downstream from Bronco Creek, and 3.5 miles upstream from California-Nevada State line.

Drainage area.--932 sq. mi.

Records available.--March to October 1890 (monthly discharge only), September 1899 to September 1960. Published as "near Boca" March to October 1890; "at or near Nevada-California State line" September 1899 to August 1912; "at Iceland" August 1912 to December 1937. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 5,153.21 ft above mean sea level (Bureau of Reclamation bench mark). March to October 1890, staff gage at site about 7 miles upstream at different datum. Sept. 7, 1899, to May 31, 1909, staff gage at approximately same location at different datum. June 1, 1909, to July 31, 1912, staff gage at site about 2 $\frac{1}{2}$ miles downstream at different datum. Aug. 1, 1912, to Dec. 31, 1937, water-stage recorder at site 4.1 miles upstream at different datum. Jan. 1, 1938, to Aug. 27, 1957, water-stage recorder at approximately same location at datum 1.0 ft higher.

Average discharge.--61 years (1899-1960), 793 cfs (574,100 acre-ft per year).

Extremes.--1899-1960: Maximum discharge, 17,500 cfs Nov. 21, 1950 (gage height, 14.5 ft, present datum, from floodmarks), from slope-area measurement of peak flow; minimum, 28 cfs Dec. 18, 1930.

Remarks.--Flow regulated by Lake Tahoe (see p. 267), Boca Reservoir (see p. 280), Donner and Independence Lakes, and by several powerplants. Records of chemical analyses for the period October 1958 to September 1960 are published in reports of Geological Survey.

Cooperation.--Records for January 1944 to August 1957, not previously published by Geological Survey, furnished by Federal Court Watermaster in cooperation with Truckee-Carson Irrigation District.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	487	459	434	423	430	469	511	915	661	532	515	503	529
1945	415	427	396	387	577	530	835	1,595	798	526	501	502	624
1946	437	441	502	498	460	551	1,656	1,545	745	538	513	502	700
1947	440	458	423	448	463	498	562	754	512	509	505	498	506
1948	425	371	377	437	337	310	572	888	1,164	542	524	504	537
1949	413	317	358	388	351	314	780	1,011	564	514	465	371	488
1950	261	192	229	344	406	466	1,355	1,864	1,283	544	504	498	662
1951	430	2,064	2,742	1,481	1,065	664	790	1,183	1,000	533	532	513	1,083
1952	420	454	542	1,134	1,758	1,631	3,887	5,674	3,394	1,160	541	541	1,758
1953	443	458	816	917	1,131	492	838	1,519	2,083	1,059	578	565	889
1954	505	472	446	428	454	609	680	1,061	528	527	516	508	575
1955	411	413	415	427	399	425	510	721	765	521	524	491	502
1956	393	316	1,863	1,124	1,077	1,434	1,712	2,458	2,134	667	523	520	1,186
1957	516	557	536	457	506	1,047	788	1,164	1,395	587	547	530	720
1958	449	452	479	405	517	543	2,914	5,125	1,996	657	559	569	1,225
1959	532	473	476	469	458	515	541	539	528	540	544	536	511
1960	413	362	365	311	426	550	744	761	675	605	560	495	522

Monthly and yearly discharge, in acre-feet, of Truckee River at Farad, Calif.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	29,940	27,330	26,700	26,030	24,750	28,830	30,400	56,230	39,320	32,690	31,640	29,920	383,800
1945	25,540	25,400	24,540	23,800	32,020	32,580	49,680	98,080	47,450	32,360	30,820	29,650	451,900
1946	26,870	26,220	30,850	30,650	25,520	33,850	98,570	95,000	44,360	33,080	31,560	29,900	508,400
1947	27,040	27,240	28,020	27,560	25,730	30,630	33,410	46,380	30,490	31,280	30,950	29,650	368,400
1948	26,160	22,070	23,160	26,840	19,360	19,040	34,070	54,570	69,290	33,300	32,230	30,010	390,100
1949	25,410	18,840	22,030	23,850	19,470	19,300	46,390	62,150	33,590	31,630	28,600	22,080	353,300
1950	16,020	11,450	14,060	21,180	22,570	28,670	80,650	114,600	76,350	33,430	30,970	29,620	479,600
1951	26,540	122,800	168,600	91,060	59,150	40,850	47,020	72,710	59,510	32,760	32,690	30,540	784,100
1952	25,820	27,000	33,350	59,710	101,100	100,300	231,300	348,900	202,000	71,340	33,290	32,200	1,276,000
1953	27,260	27,240	37,900	58,390	62,800	30,280	49,890	93,400	123,900	65,140	35,510	33,600	843,300
1954	31,060	28,080	27,440	28,330	24,080	37,430	51,190	65,250	31,400	32,360	31,700	30,230	416,600
1955	25,210	24,590	25,510	26,250	22,170	26,130	30,370	44,340	45,530	32,010	32,230	29,220	363,600
1956	24,150	18,800	114,500	69,100	61,970	88,160	101,900	151,200	127,000	41,010	32,150	30,970	860,900
1957	31,730	33,140	32,960	28,080	28,110	64,400	46,910	71,550	82,980	36,080	33,660	31,520	520,800
1958	27,620	26,880	29,480	24,920	28,700	33,380	173,400	515,100	118,800	40,380	34,350	33,840	886,800
1959	32,710	28,160	29,240	28,820	24,310	31,660	32,210	33,130	31,420	33,190	33,460	31,880	370,200
1960	25,370	21,530	22,460	19,140	24,520	33,790	44,290	46,800	40,150	37,190	34,440	29,480	379,200

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1944	(a)	1,694	May 6, 1944	394	529	383,800	517	375,100
1945	(a)	3,357	May 10, 1945	345	624	451,900	636	400,600
1946	(a)	3,085	Apr. 28, 1946	368	700	506,400	694	502,800
1947	(a)	b1,253	Feb. 12, 1947	362	508	366,400	494	357,500
1948	(a)	b1,780	June 9, 1948	293	537	390,100	530	356,000
1949	(a)	b1,539	May 14, 1949	293	468	353,300	454	328,600
1950	(a)	b2,607	May 28, 1950	156	662	479,600	1,044	755,900
1951	(a)	17,500	Nov. 21, 1950	338	1,083	784,100	763	552,500
1952	(a)	b6,874	May 3, 1952	394	1,758	1,276,000	1,767	1,283,000
1953	(a)	b3,048	June 19, 1953	420	889	643,300	881	637,500
1954	(a)	b2,203	Mar. 9, 1954	412	575	416,600	560	405,400
1955	(a)	b1,254	June 8, 1955	349	502	363,600	616	445,700
1956	(a)	14,400	Dec. 23, 1955	282	1,186	860,900	1,104	801,300
1957	(a)	b3,276	June 6, 1957	374	720	520,800	815	506,900
1958	1564	6,360	May 19, 1958	361	1,225	886,800	1,233	893,000
1959	1634	1,050	Jan. 12, 1959	382	511	370,200	483	349,400
1960	1714	2,180	Feb. 8, 1960	285	522	379,200	-	-

a Files of Truckee-Carson Irrigation District.

b Maximum day.

3473. Dog Creek near Verdi, Nev.

Location.--Lat 39°33'55", long 120°01'25", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.20 N., R.18 E., on left bank $3\frac{1}{2}$ miles upstream from mouth and 4 miles northwest of Verdi.

Drainage area.--16.2 sq mi.

Records available.--October 1956 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,660 ft (from topographic map).

Extremes.--1956-60: Maximum discharge, 550 cfs Feb. 24, 1958 (gage height, 2.75 ft), from rating curve extended above 250 cfs; minimum, 0.1 cfs Aug. 7-18, 1959, July to September 1960.

Maximum discharge known, 880 cfs Dec. 23, 1955, from slope-area measurement of peak flow.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	0.52	0.63	0.82	0.65	9.58	9.41	5.49	5.73	2.01	0.21	0.20	0.20	2.91
1958	.33	.58	.95	.66	21.1	13.5	67.1	33.1	3.14	.39	.23	.20	11.6
1959	.30	.42	.52	1.83	1.99	8.02	2.76	1.37	.38	.20	.16	.20	1.51
1960	.20	.22	.32	.48	6.05	14.0	4.28	.66	.20	.11	.10	.18	2.23

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1957	32	37	50	40	532	579	327	352	120	13	12	12	2,110
1958	20	34	59	40	1,170	832	3,990	2,030	187	24	14	12	8,410
1959	18	25	32	113	110	493	164	84	22	12	9.9	12	1,090
1960	12	13	20	30	348	862	254	41	12	6.9	6.1	11	1,620

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1957	1514	157	Feb. 24, 1957	0.2	2.91	2,110	2.90	2,100
1958	1564	550	Feb. 24, 1958	.2	11.6	8,410	11.6	8,370
1959	1634	35	Mar. 12, 1959	.1	1.51	1,090	1.47	1,060
1960	1714	256	Feb. 8, 1960	.1	2.23	1,620	-	-

3480. Truckee River at Reno, Nev.

Location.--Lat 39°31'55", long 119°47'05", in NW $\frac{1}{4}$ sec. 7, T.19 N., R.20 E., on left bank 400 ft downstream from Kietzke Lane bridge, half a mile east of Reno, and 5 miles upstream from Steamboat Creek.

Drainage area.--1,067 sq mi.

Records available.--July 1906 to September 1921, June 1925 to September 1926, January 1930 to December 1935, January to December 1943, January 1946 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 4,431.97 ft above mean sea level (levels by Corps of Engineers). July 1906 to September 1946, staff gages at sites 1 to 1 $\frac{1}{2}$ miles upstream at different datums.

Average discharge.--34 years (1906-21, 1925-26, 1930-34, 1946-60), 675 cfs (488,700 acre-ft per year).

Extremes.--1906-21, 1925-26, 1930-35, 1943, 1946-60: Maximum discharge, 20,800 cfs Dec. 23, 1955, from rating curve extended above 14,000 cfs; maximum gage height, 13.83 ft Nov. 21, 1950; no flow Sept. 12, 14-24, 26-30, 1926.

Remarks.--Flow regulated by Lake Tahoe (see p. 267), Boca Reservoir (see p. 280), Donner and Independence Lakes, and by several powerplants. Many diversions above station.

Cooperation.--Records for October 1919 to December 1946, not previously published by Geological Survey, partly furnished by Federal Court Watermaster in cooperation with U. S. Reclamation Service.

Correction.--In WSP 1314, the following were listed in error and should be:

	Mean (cfs)	Runoff in acre-feet
January 1915.....	431	26,500
Water year 1914-15.....	-	454,000
January 1916.....	484	29,700
Water year 1915-16.....	961	-
Calendar year 1916.....	994	722,000

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	194	324	371	316	279	445	754	1,332	392	145	128	66.2	396
1921	96.6	246	284	424	400	1,145	1,124	1,513	1,228	153	102	183	575
1925	-	-	-	-	-	-	-	-	430	152	117	34.7	-
1926	87.6	104	152	202	256	604	1,049	568	82.4	72.0	39.1	5.03	268
1930	-	-	-	175	338	589	1,133	750	443	119	124	114	-
1931	80.6	132	73.9	76.6	97.5	287	227	202	44.7	16.0	10.4	23.2	106
1932	31.6	47.5	97.6	171	187	554	1,235	1,623	1,192	256	145	43.4	465
1933	41.4	36.1	53.9	64.9	85.5	127	369	445	714	93.2	31.8	19.7	173
1934	52.4	82.3	128	114	163	556	334	95.4	52.0	107	186	126	167
1935	66.2	97.7	70.3	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	1,281	2,305	1,983	2,856	1,506	694	203	207	215	-
1944	375	520	468	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	539	520	633	1,561	1,236	365	223	177	287	-
1947	*409	*492	*416	-	-	-	-	-	-	-	-	-	*344
1951	260	2,006	2,963	1,592	1,168	783	651	1,008	800	155	171	193	979
1952	286	474	584	1,162	1,979	1,854	3,371	5,679	3,097	832	202	289	1,696
1953	261	414	599	972	1,196	515	640	1,255	1,941	753	268	255	751
1954	323	434	421	414	422	663	681	716	160	142	143	160	392
1955	169	330	378	421	397	428	320	405	436	140	127	165	309
1956	206	291	2,078	1,258	1,091	1,492	1,701	2,272	1,913	319	150	187	1,080
1957	356	533	536	474	558	1,101	576	949	1,061	183	155	212	557
1958	367	451	484	429	603	584	2,958	4,827	1,681	296	210	263	1,098
1959	332	444	461	459	462	528	239	231	145	162	169	223	321
1960	221	315	328	298	455	537	468	381	286	194	178	160	318

* Revised.

Monthly and yearly discharge, in acre-feet, of Truckee River at Reno, Nev.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	11,900	19,300	22,830	19,450	16,050	27,330	44,840	81,900	23,330	8,930	7,840	3,940	287,600
1921	5,940	14,650	17,450	26,040	22,190	70,400	66,900	93,040	73,070	9,410	6,260	10,880	416,200
1925	-	-	-	-	-	-	-	-	25,600	9,360	7,200	2,060	-
1926	5,390	6,190	9,340	12,400	14,210	37,120	62,430	34,950	4,900	4,430	2,410	300	194,100
1930	-	-	-	10,780	18,790	36,230	67,420	46,100	26,350	7,310	7,610	6,770	-
1931	4,960	7,880	4,540	4,710	5,410	17,640	13,510	12,440	2,680	984	639	1,380	76,750
1932	1,950	2,830	5,000	10,500	10,770	34,090	73,480	99,800	70,940	15,770	8,920	2,580	337,600
1933	2,540	2,150	3,310	3,990	4,750	7,820	21,940	27,330	42,480	5,730	1,960	1,170	125,200
1934	3,220	4,900	7,890	7,040	9,060	34,210	19,890	5,860	3,090	6,580	11,410	7,500	120,600
1935	4,070	5,820	4,320	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	78,760	128,000	21,900	170,000	92,610	41,270	12,490	12,740	12,800	-
1944	23,040	30,910	28,780	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	33,120	28,860	38,900	92,910	76,030	21,740	13,740	10,850	17,060	-
1947	*25,170	*29,280	*25,560	-	-	-	-	-	-	-	-	-	*248,800
1951	15,970	19,400	18,200	97,890	64,850	48,170	39,320	61,830	47,600	9,510	10,540	11,510	708,800
1952	17,580	28,220	35,890	71,450	113,800	14,000	236,300	549,200	84,300	51,170	12,400	17,180	1,231,000
1953	16,040	24,630	36,840	59,780	66,450	31,680	38,050	77,170	115,500	46,290	16,460	15,180	544,100
1954	19,890	25,830	25,860	25,480	23,410	40,790	40,500	44,040	9,500	8,760	8,780	10,710	283,600
1955	10,400	19,660	23,220	25,900	22,030	26,300	19,050	24,930	25,970	8,580	7,830	9,840	223,700
1956	12,680	17,310	127,800	77,370	62,760	91,740	101,200	139,700	113,800	19,590	9,200	11,100	784,200
1957	21,890	31,730	32,950	29,140	30,990	67,690	34,300	58,340	63,110	11,270	9,550	12,620	403,600
1958	22,570	26,860	29,780	26,360	33,480	35,880	176,000	296,800	100,000	18,210	12,900	15,670	794,500
1959	20,420	26,400	28,330	28,240	25,660	32,470	14,230	14,220	8,690	9,940	10,410	13,250	232,200
1960	13,570	18,760	20,160	18,330	26,190	33,000	27,710	23,450	17,010	11,940	10,960	9,500	230,600

* Revised.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1919	(a)	-	-	-	-	-	629
1920	(a)	b2,070	May 19-21, 1920	48	396	287,600	374
1921	(a)	b2,200	(c)	48	575	416,200	-
1925	(a)	b1,200	(d)	14	-	-	-
1926	(a)	b1,647	Apr. 6, 1926	0	268	194,100	-
1930	(a)	-	-	-	-	-	338
1931	(a)	b759	Mar. 19, 1931	3	106	76,750	96.9
1932	(a)	b2,590	May 14, 1932	13	465	337,600	461
1933	(a)	b1,480	May 31, 1933	15	173	125,200	184
1934	(a)	b1,790	Mar. 29, 1934	16	167	120,600	164
1943	(a)	-	-	-	-	-	1,041
1946	(a)	-	-	-	-	-	571
1947	1120	e1,840	Feb. 12, 1947	124	*344	*248,800	325
1950	(a)	-	-	-	-	-	917
1951	1214	19,900	Nov. 21, 1950	106	979	708,800	653
1952	1244	7,950	May 3, 1952	178	1,696	1,231,000	1,691
1953	1284	3,430	June 20, 1953	207	751	544,100	743
1954	1344	3,700	Mar. 9, 1954	101	392	283,600	366
1955	1394	1,020	June 9, 1955	99	309	223,700	453
1956	1444	20,800	Dec. 23, 1955	118	1,080	784,200	982
1957	1514	4,103	May 19, 1957	95	557	403,600	547
1958	1564	6,090	May 20, 1958	151	1,098	794,500	1,092
1959	1634	1,050	Feb. 17, 1959	108	321	232,200	289
1960	1714	2,620	Feb. 8, 1960	128	518	230,600	-

* Revised.

a Files of Federal Court Watermaster.

b Maximum day.

c Mar. 18, May 14, 15, Sept. 7, 1921.

d May 17, 22, 27, 1925.

e Maximum observed.

3485. 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 1955.

Gage.--Water-stage recorder. Altitude of gage is 5,200 ft (from topographic map). Gage destroyed by flood Dec. 3 or 4, 1950; reestablished May 21, 1951, at same site at different datum.

Average discharge.--6 years (1948-50, 1951-55), 13.9 cfs (10,060 acre-ft per year).

Extremes.--1948-55: Maximum discharge, 800 cfs Dec. 3 or 4, 1950, from slope-area measurement of peak flow; minimum, 0.2 cfs Feb. 7-9, 1949, Dec. 4, 1953 (flow dammed by snow-slide).

Flood of Dec. 23, 1955, was estimated to have reached a momentary peak in the range of 10,000 to 20,000 cfs, caused mostly by failure of Hobart Dam.

Remarks.--Small diversions on tributaries above station for irrigation. During summer, flow sometimes supplemented by diversion from North Creek, a tributary to Lake Tahoe.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.1	-	-	-	-	-	-	-	23.3	11.3	7.85	7.02	-
1952	9.24	9.90	11.1	9.70	12.5	12.5	45.2	94.8	72.2	29.8	15.0	11.9	27.8
1953	8.46	8.68	11.3	24.0	16.1	14.6	30.9	27.6	25.3	14.0	7.47	6.01	16.2
1954	6.31	6.86	6.42	7.16	9.97	15.6	23.0	17.5	12.1	3.51	2.09	2.25	9.39
1955	3.07	5.63	6.10	5.52	7.24	10.5	16.0	19.5	12.3	4.17	1.58	2.15	7.80

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	622	-	-	-	-	-	-	-	1,380	693	482	418	-
1952	568	589	684	596	720	768	2,690	5,830	4,300	1,830	920	707	20,200
1953	520	516	697	1,470	895	897	1,840	1,700	1,500	861	460	358	11,710
1954	388	408	395	441	554	960	1,370	1,080	722	216	129	134	6,800
1955	189	335	375	339	402	646	952	1,200	734	257	97	128	5,650

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1214	800	Dec. 3 or 4, 1950	-	-	-	-	-	-
1952	1244	164	May 1, 1952	6.0	27.8	20,200	27.7	20,090	-
1953	1284	188	Apr. 27, 1953	3.4	16.2	11,710	15.4	11,170	-
1954	1344	130	Mar. 9, 1954	1.6	9.39	6,800	8.98	6,500	-
1955	1394	44	Mar. 28, 1955	1.2	7.80	5,650	-	-	-

3500. Truckee River at Vista, Nev.

Location.--Lat 39°31'05", long 119°40'58", in NW 1/4 sec. 13, T.19 N., R.20 E., on left bank 800 ft downstream from Southern Pacific Railroad bridge, 0.9 mile southeast of Vista, 1 1/2 miles downstream from Steamboat Creek, and 4 miles southeast of Sparks.

Drainage area.--1,429 sq mi.

Records available.--August 1899 to December 1907, January 1932 to December 1954, October 1958 to September 1960. Monthly discharge only for some periods, published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 4,371.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Apr. 16, 1907, staff gages at several sites in vicinity of present site at various datums. May to December 1907 reference point on railroad bridge. October 1958 to Aug. 17, 1959, at site 1,200 ft upstream at datum 2.69 ft higher.

Average discharge.--32 years (1899-1907, 1932-54, 1958-60), 803 cfs (581,300 acre-ft per year).

Extremes.--1899-1908, 1932-54, 1958-60: Maximum daily discharge, about 10,000 cfs (revised) Mar. 18, 1907, estimated on basis of discharge at Farad and at Reno; minimum daily, 7 cfs Aug. 26, 1935.

Flood of Dec. 23, 1955, probably equaled or exceeded that of Mar. 18, 1907.

Revisions.--The maximum daily discharge for water year 1907 published in WSP 1314 has been revised to about 10,000 cfs.

Remarks.--Flow regulated by Lake Tahoe (see p. 267), Boca Reservoir (see p. 280), and other lakes. Several powerplants and many diversions above station.

Cooperation.--Records for January 1932 to December 1954, not previously published by Geological Survey, furnished by Federal Court Watermaster.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	-	-	-	223	252	577	1,250	1,673	1,141	263	148	79.4	-
1933	83.6	87.7	94.9	132	147	197	376	561	812	129	44.4	34.1	224
1934	41.7	127	178	225	265	627	369	103	46.2	104	185	139	200
1935	97.2	140	112	150	199	211	1,574	1,804	951	122	36.7	28.8	452
1936	42.7	103	130	302	455	901	1,909	1,728	882	220	238	209	592
1937	229	191	167	220	683	575	1,190	1,494	559	226	191	166	489
1938	216	324	1,373	476	612	820	2,583	4,307	2,642	581	265	332	1,213
1939	486	519	517	537	474	548	402	339	226	232	261	387	411
1940	403	402	388	668	648	1,157	2,024	1,932	710	274	253	394	771
1941	429	545	645	542	781	709	600	1,465	741	299	320	366	619
1942	454	530	761	910	1,296	727	1,955	1,963	2,622	498	254	349	1,021
1943	395	632	702	1,616	2,676	2,308	3,065	1,799	1,017	378	283	359	1,258
1944	523	572	571	536	520	623	487	768	456	266	252	310	490
1945	436	592	516	471	794	629	776	1,466	614	279	255	325	595
1946	525	590	695	639	581	661	1,521	1,363	512	303	271	371	669
1947	494	645	558	558	559	570	395	513	281	245	258	324	450
1948	472	528	537	496	396	347	450	724	958	283	284	323	483
1949	385	432	490	417	441	479	756	920	306	256	278	208	447
1950	283	338	393	549	549	560	1,302	1,655	1,128	314	295	447	650
1951	496	2,122	3,130	1,791	1,280	831	758	1,137	966	252	293	366	1,120
1952	438	578	701	1,328	2,079	1,934	3,966	5,643	3,322	1,015	398	512	1,822
1953	472	615	768	1,133	1,275	625	746	1,438	2,059	891	353	426	896
1954	500	566	509	522	547	722	791	854	296	221	244	324	508
1955	355	472	518	-	-	-	-	-	-	-	-	-	-
1959	504	566	563	577	618	598	358	422	253	265	266	327	442
1960	371	454	416	393	554	593	546	504	378	287	295	294	423

PYRAMID AND WINNEMUCCA LAKES BASIN

Monthly and yearly discharge, in acre-feet, of Truckee River at Vista, Nev.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	-	-	-	13,660	14,440	35,410	74,270	102,700	67,760	16,170	9,110	4,720	-
1933	5,130	5,210	5,820	8,120	8,130	12,070	22,350	34,430	48,250	7,940	2,720	2,030	162,200
1934	2,560	7,530	10,910	13,820	14,680	38,480	21,900	6,320	2,750	6,350	11,340	6,250	144,900
1935	5,970	8,330	6,860	9,230	11,060	12,930	93,520	110,700	56,480	7,460	2,250	1,710	326,500
1936	2,620	6,140	8,000	18,550	26,120	55,330	113,400	106,100	52,410	13,490	14,610	12,420	429,200
1937	14,050	11,370	10,250	13,460	37,860	35,320	70,700	91,690	33,220	13,860	11,710	9,870	353,400
1938	13,260	19,230	84,260	29,230	33,950	50,340	153,500	284,400	156,900	35,690	16,170	19,700	876,600
1939	29,800	39,840	31,740	32,940	26,290	33,650	23,910	20,820	13,540	14,270	16,040	22,990	296,800
1940	24,730	23,890	23,840	41,020	37,180	71,020	120,200	118,600	42,180	16,800	15,500	23,400	558,400
1941	26,310	32,380	39,580	33,280	43,290	43,490	35,670	89,930	44,000	16,340	19,670	21,710	447,600
1942	27,860	31,450	46,700	55,840	71,870	44,590	116,100	120,500	155,700	30,590	15,600	20,760	737,600
1943	24,240	37,560	43,070	99,200	148,300	41,700	182,100	110,400	60,390	23,160	17,370	21,350	908,900
1944	32,130	33,960	35,020	32,890	29,870	38,220	28,900	47,120	27,070	16,300	15,470	18,400	355,400
1945	26,740	35,140	31,650	28,920	44,040	38,590	46,070	90,000	36,470	17,150	15,670	19,300	429,700
1946	32,220	35,050	42,660	39,230	32,220	40,560	90,340	83,660	30,440	18,620	16,610	22,020	483,600
1947	30,340	38,300	34,240	34,270	31,000	35,010	23,440	31,490	16,700	15,030	15,830	19,240	324,900
1948	28,940	31,340	32,950	30,470	22,760	21,300	26,700	44,420	56,880	17,390	17,440	19,190	349,800
1949	23,630	25,650	30,080	25,600	24,450	29,420	44,920	56,450	18,160	15,700	17,040	12,340	323,400
1950	17,360	20,100	24,110	33,720	30,420	34,370	77,340	101,600	66,980	19,240	18,110	26,530	469,900
1951	30,450	126,100	192,100	109,900	70,980	51,010	45,030	69,790	58,590	15,490	18,010	21,740	809,200
1952	26,900	34,340	43,000	81,510	119,400	18,700	235,400	346,400	197,300	62,280	24,410	30,420	1,320,000
1953	28,980	36,530	47,210	69,530	70,710	38,340	44,300	88,250	122,300	54,700	21,660	25,300	647,800
1954	30,700	33,640	31,220	32,020	30,330	44,500	46,960	52,400	17,600	13,540	14,960	19,230	366,900
1955	21,760	26,030	31,610	-	-	-	-	-	-	-	-	-	-
1959	30,960	33,680	34,630	35,450	34,310	36,800	21,330	25,950	15,070	16,310	16,380	19,470	320,300
1960	22,840	26,990	25,560	24,170	31,890	36,480	32,520	30,970	22,480	17,670	18,150	17,500	307,200

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1932	(a)	-	-	-	-	-	489	354,400
1933	(a)	1,600	May 30, 1933	32	224	162,200	231	167,000
1934	(a)	1,730	Mar. 29, 1934	28	200	144,900	201	145,100
1935	(a)	2,510	Apr. 29, 1935	7	452	326,500	446	332,100
1936	(a)	3,070	(b)	28	592	429,200	618	446,100
1937	(a)	2,370	Apr. 15, 1937	115	489	353,400	601	434,400
1938	(a)	9,760	Dec. 12, 1937	192	1,213	876,600	1,179	852,200
1939	(a)	868	Mar. 23, 1939	179	411	296,800	383	276,900
1940	(a)	4,100	Apr. 1, 1940	179	771	558,400	806	584,200
1941	(a)	1,930	May 12, 1941	230	619	447,600	630	455,400
1942	(a)	3,140	June 6, 1942	224	1,021	737,600	1,019	736,500
1943	(a)	7,680	Jan. 22, 1943	250	1,258	908,900	1,252	905,100
1944	(a)	1,290	May 8, 1944	226	490	355,400	480	347,800
1945	(a)	2,910	Feb. 2, 1945	219	595	429,700	617	446,100
1946	(a)	2,460	Apr. 26, 1946	240	669	483,600	659	476,600
1947	(a)	1,220	Nov. 23, 1946	209	450	324,900	436	315,300
1948	(a)	1,500	June 9, 1948	213	483	349,800	464	335,900
1949	(a)	1,600	May 14, 1949	175	447	323,400	423	305,600
1950	(a)	2,330	May 29, 1950	203	650	469,900	1,047	757,000
1951	(a)	8,750	Nov. 21, 1950	195	1,120	809,200	782	564,800
1952	(a)	7,090	May 4, 1952	347	1,822	1,320,000	1,833	1,328,000
1953	(a)	3,050	June 20, 1953	315	896	647,800	873	650,700
1954	(a)	1,400	Mar. 10, 1954	180	508	366,900	488	352,900
1955	(a)	-	-	-	-	-	-	-
1959	1634	c1,810	Feb. 17, 1959	219	442	320,300	409	296,500
1960	1714	c2,850	Feb. 8, 1960	223	423	307,200	-	-

a Files of Federal Court Watermaster.
 b Apr. 18, 19, 23, 1936.
 c Momentary maximum.

3516. Truckee River below Derby Dam, near Wadsworth, Nev.

Location.--Lat 39°35'05", long 119°26'25", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.20 N., R.23 E., on right bank 1,500 ft downstream from Derby Dam, $3\frac{1}{4}$ miles downstream from Clark, and 9 miles southwest of Wadsworth.

Drainage area.--1,670 sq mi.

Records available.--January 1909 to December 1910, January to December 1916, January 1918 to July 1958, October 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 4,200 ft (from topographic map).

Average discharge.--41 years (1918-57, 1958-60), 282 cfs (204,200 acre-ft per year).

Extremes.--1909-10, 1916-60: Maximum daily discharge recorded, 8,970 cfs Dec. 13, 1937; no flow Aug. 8-11, 1924, Sept. 1-7, 10, 1956.

Flood peaks in November 1950 and December 1955 probably exceeded that of Dec. 13, 1937.

Remarks.--Flow regulated by Lake Tahoe (see p. 267), Boca Reservoir (see p. 280), other lakes, powerplants, many diversions for irrigation, and by Derby Dam. Truckee Canal diverts water at Derby Dam out of basin to Lahontan Reservoir.

Cooperation.--Records prior to October 1958, not previously published by Geological Survey, furnished by Truckee-Carson Irrigation District in cooperation with Sierra Pacific Power Co.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	2,387	1,402	1,235	2,826	2,901	2,770	1,228	732	590	-
1910	853	1,134	1,342	1,355	1,393	1,726	1,958	1,455	-	-	934	389	-
1911	408	437	570	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	572	1,005	2,005	2,697	2,023	1,202	192	27	38	-
1917	422	396	374	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	357	221	403	1,162	493	77	18	17	98	-
1919	245	185	226	189	27	165	1,526	60	11	11	12	369	-
1920	20	17	186	100	14	31	391	568	30	16	13	12	118
1921	12	31	12	300	265	943	363	823	559	15	15	19	281
1922	16	17	40	152	426	468	856	2,671	1,840	105	21	31	554
1923	34	173	424	257	321	618	1,324	1,395	319	20	20	25	412
1924	24	24	142	214	286	135	21	21	11	10	6	10	75.3
1925	11	10	12	10	326	104	374	646	25	21	21	21	131
1926	21	21	21	28	23	87	433	147	130	24	25	25	72.4
1927	13	60	17	22	489	585	1,291	1,804	1,234	32	27	36	466
1928	47	18	124	415	264	2,195	1,068	561	23	25	25	19	401
1929	23	10	41	99	14	17	11	31	26	17	20	13	27.5
1930	4	2	89	2	2	100	314	55	16	14	12	8	52.1
1931	2	3	3	3	3	7	6	16	13	6	5	4	6.16
1932	3	2	2	2	3	70	440	868	380	15	15	8	151
1933	4	4	4	4	4	6	8	98	216	12	9	8	31.7
1934	4	4	4	2	2	7	26	20	16	17	18	13	17.5
1935	4	2	2	1	2	2	760	956	283	17	12	8	170
1936	6	5	5	16	68	205	1,113	918	329	278	20	49	230
1937	30	8	8	12	590	567	932	609	37	23	18	12	234
1938	70	14	107	174	574	857	2,499	4,093	2,316	232	26	32	998
1939	160	467	497	206	371	371	161	21	22	21	22	11	195
1940	12	5	5	67	77	972	1,764	1,423	262	25	24	24	374
1941	43	356	601	515	362	13	29	599	402	27	27	20	249
1942	21	150	736	860	1,259	696	1,484	1,452	2,250	209	28	36	759
1943	17	109	448	1,472	2,625	2,248	2,860	1,368	508	47	42	42	970
1944	173	149	48	47	40	462	174	111	33	30	21	17	110
1945	3	39	8	3	166	80	409	1,170	291	26	21	14	186
1946	34	87	364	357	492	287	930	727	72	24	21	17	263
1947	7	25	260	339	91	3	7	44	19	15	15	14	70.7
1948	1	1	1	2	2	2	21	54	191	16	16	16	26.9
1949	4	1	7	2	2	2	9	76	13	14	14	11	13.2
1950	5	2	2	2	2	2	364	752	320	14	14	6	124
1951	11	1,572	3,224	1,804	1,123	633	154	126	60	14	14	12	729
1952	9	2	2	851	2,014	1,785	3,395	4,585	2,555	330	15	43	1,293
1953	15	15	278	684	791	50	264	878	1,670	285	15	15	410
1954	15	15	15	5	5	205	212	235	12	12	12	12	63.5
1955	10	6	5	5	5	5	11	18	25	23	21	17	12.8
1956	4	11,058	853	932	1,048	1,256	1,715	1,591	36	14	10	711	-
1957	14	13	13	12	113	551	26	260	581	17	15	28	137
1958	11	12	23	12	119	23	2,426	3,337	1,125	15	-	-	-
1959	14.3	35.1	7.36	23.4	39.1	5.62	7.10	22.2	19.8	24.6	25.1	17.3	19.9
1960	4.64	4.72	4.73	3.09	62.4	18.7	18.7	32.3	11.4	26.5	31.8	21.3	19.9

PYRAMID AND WINNEMUCCA LAKES BASIN

Monthly and yearly discharge, in acre-feet, of Truckee River below Derby Dam, near Wadsworth, Nev.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	146,800	77,870	75,970	168,100	178,400	164,800	75,540	45,000	35,150	-
1910	52,460	57,520	82,560	83,320	77,380	106,100	116,500	89,460	-	-	24,280	23,180	-
1911	25,130	26,000	35,070	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	35,470	58,340	124,400	161,900	125,500	72,140	11,950	1,690	2,320	-
1917	26,190	23,780	23,200	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	22,160	12,420	25,010	69,730	30,580	4,640	1,170	1,100	5,950	-
1919	15,230	11,120	14,020	11,770	15,620	16,740	99,370	94,620	3,610	702	684	734	284,200
1920	1,300	1,070	11,580	6,180	804	1,970	23,230	34,910	1,790	1,020	845	713	85,410
1921	737	1,870	756	18,470	14,730	57,920	21,620	50,560	33,260	974	921	1,180	203,000
1922	1,120	1,040	2,490	9,390	26,630	28,760	50,960	164,000	109,300	6,470	1,330	1,860	403,300
1923	2,120	10,330	26,060	15,610	17,840	37,980	78,690	85,660	18,970	1,270	1,240	1,520	297,500
1924	1,510	1,440	8,770	13,150	16,470	8,340	1,250	1,290	691	614	406	634	54,560
1925	715	636	754	643	18,130	6,420	22,220	39,700	1,520	1,320	1,290	1,230	54,600
1926	1,290	1,250	1,330	1,720	1,300	5,340	25,760	9,030	772	1,480	1,540	1,430	52,240
1927	816	3,590	1,060	1,560	27,120	35,960	76,720	10,800	74,350	1,990	1,700	2,310	337,800
1928	2,920	1,070	7,630	25,470	15,190	134,700	63,660	34,780	1,400	1,590	1,540	1,180	291,100
1929	1,410	594	2,520	6,140	830	1,050	655	1,920	1,590	1,100	1,230	822	19,860
1930	285	131	3,480	123	129	6,280	18,670	3,430	964	875	764	511	35,640
1931	113	148	184	184	166	442	412	1,020	772	422	331	259	4,450
1932	208	119	129	152	162	4,350	26,180	53,280	22,580	944	952	499	109,600
1933	285	238	246	246	234	384	529	6,020	12,850	764	552	531	22,880
1934	281	253	281	123	147	4,730	1,580	1,260	1,000	1,080	1,130	788	12,650
1935	269	145	160	61	135	152	45,180	57,480	16,850	1,050	790	505	122,800
1936	422	340	337	1,010	3,920	12,610	66,130	56,400	19,600	1,710	1,230	2,940	166,600
1937	1,880	451	491	741	32,760	34,850	55,360	37,420	2,210	1,460	1,110	742	169,500
1938	4,320	877	65,720	10,720	31,830	52,650	148,500	251,300	137,600	14,290	1,630	1,930	721,400
1939	9,860	27,780	39,520	12,660	20,620	22,820	9,620	1,310	1,340	1,300	1,350	665	139,800
1940	740	341	307	4,130	4,450	48,640	104,900	87,390	15,600	1,590	1,510	1,430	271,000
1941	2,640	21,170	36,930	31,620	20,110	823	1,730	36,790	23,880	1,700	1,700	1,220	180,300
1942	1,340	8,960	45,180	52,790	69,830	42,780	88,200	89,160	133,700	12,890	1,780	2,280	548,900
1943	1,050	6,510	27,560	90,380	145,500	138,000	169,900	84,000	30,220	2,930	2,580	2,600	701,200
1944	10,620	8,870	3,000	2,910	2,320	28,360	10,390	6,850	1,990	1,860	1,280	1,040	79,490
1945	186	2,350	507	184	9,230	4,940	24,320	71,680	17,300	1,640	1,330	839	134,500
1946	2,100	5,220	22,380	21,930	27,320	17,640	55,270	44,630	4,280	1,490	1,330	1,030	204,600
1947	463	1,520	15,980	20,840	5,100	162	461	2,720	1,080	921	921	885	51,050
1948	87	59	61	123	115	123	1,290	3,350	11,360	982	962	950	19,500
1949	265	59	459	123	111	123	538	4,690	772	859	859	653	9,510
1950	337	119	123	123	111	123	21,670	46,160	19,040	859	859	380	89,900
1951	701	93,410	97,900	10,800	62,310	38,870	9,160	7,780	3,620	859	859	729	427,000
1952	598	119	123	52,250	115,600	109,500	201,700	281,400	151,800	20,270	921	2,550	936,800
1953	921	891	17,050	42,010	43,890	3,090	15,690	53,870	99,260	17,530	9,210	8,910	312,300
1954	9,210	8,910	9,210	297	277	12,580	12,640	14,470	712	736	736	712	70,490
1955	601	356	326	307	277	307	665	1,120	1,510	1,430	1,330	1,030	9,260
1956	261	8	64,940	52,360	55,360	64,330	74,600	105,200	94,500	2,210	861	586	515,200
1957	843	748	778	724	6,260	33,800	1,530	15,960	34,510	1,030	925	1,650	98,760
1958	671	729	1,380	737	6,580	1,430	144,100	204,800	66,860	920	-	-	-
1959	878	2,090	452	1,440	2,170	346	423	1,360	1,180	1,510	1,540	1,030	14,420
1960	285	281	291	190	3,590	1,150	1,120	1,990	679	1,630	1,960	1,270	14,440

PYRAMID AND WINNEMUCCA LAKES BASIN

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Yearly discharge, in cubic feet per second, of Truckee River below Derby Dam, near Wadsworth, Nev.

Year	WSP	Water year ending Sept. 30				Calendar year		
		Maximum day		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1909	(a)	b8,040	Jan. 17, 1909	-	-	-	1,617	1,160,000
1910	(a)	b2,250	Apr. 19, 1910	-	-	-	-	-
1911	(a)	-	-	-	-	-	-	-
1916	(a)	b3,880	Apr. 11, 1916	-	-	-	911	666,800
1917	(a)	-	-	-	-	-	698	509,400
1918	(a)	b1,900	Apr. 10, 1918	-	-	-	2,942	213,100
1919	(a)	2,790	May 3, 1919	3.0	389	284,200	353	257,800
1920	(a)	1,190	Apr. 16, 1920	2.0	118	85,410	103	74,820
1921	(a)	2,040	Mar. 19, 1921	12.0	281	203,000	283	204,300
1922	(a)	3,750	May 7, 1922	15.0	554	403,300	601	434,200
1923	(a)	2,960	Apr. 18, 1923	15.0	412	297,500	375	270,700
1924	(a)	748	Feb. 8, 1924	0	75.3	54,560	62.0	44,960
1925	(a)	2,890	Feb. 7, 1925	10.0	131	94,600	133	96,350
1926	(a)	964	Apr. 6, 1926	10.0	72.4	52,240	74.6	53,840
1927	(a)	3,090	May 17, 1927	10.0	466	337,800	474	343,900
1928	(a)	c12,000	Mar. 28, 1928	10.0	401	291,100	391	284,100
1929	(a)	381	June 17, 1929	3.0	27.5	19,860	29.3	19,230
1930	(a)	865	Dec. 13, 1929	2.0	52.1	35,640	44.5	32,190
1931	(a)	87.0	Mar. 19, 1931	1.0	6.16	4,450	6.17	4,460
1932	(a)	1,980	May 14, 1932	1.0	151	109,600	152	109,900
1933	(a)	811	May 31, 1933	3.0	31.7	22,880	31.7	22,930
1934	(a)	1,080	Mar. 30, 1934	2.0	17.5	12,650	17.2	12,410
1935	(a)	1,490	Apr. 21, 1935	1.0	170	122,800	171	123,300
1936	(a)	2,170	Apr. 19, 1936	2.0	230	166,600	232	168,400
1937	(a)	2,160	Apr. 16, 1937	5.0	234	169,500	329	237,600
1938	(a)	8,970	Dec. 13, 1937	8.0	998	721,400	994	718,500
1939	(a)	778	Mar. 24, 1939	5.0	193	139,800	101	73,070
1940	(a)	4,610	Mar. 31, 1940	5.0	374	271,000	456	330,400
1941	(a)	1,450	May 28, 1941	8.0	249	180,300	242	175,000
1942	(a)	2,670	June 7, 1942	18.0	759	548,900	731	528,500
1943	(a)	7,570	Jan. 22, 1943	8.0	970	701,200	953	688,600
1944	(a)	664	Mar. 13, 1944	7.0	110	79,490	82.9	60,040
1945	(a)	2,390	Feb. 2, 1945	1.0	186	134,500	223	161,200
1946	(a)	1,810	Apr. 29, 1946	2.0	283	204,600	267	192,900
1947	(a)	545	Jan. 6, 1947	1.0	70.7	51,050	46.1	33,290
1948	(a)	632	June 10, 1948	1.0	26.9	19,500	27.7	20,080
1949	(a)	632	May 15, 1949	1.0	13.2	9,510	12.9	9,310
1950	(a)	1,330	(d)	2.0	124	89,900	528	281,300
1951	(a)	c9,180	Nov. 22, 1950	2.0	729	427,000	326	235,800
1952	(a)	6,240	May 4, 1952	2.0	1,293	936,800	1,318	954,900
1953	(a)	3,050	June 20, 1953	15.0	410	312,300	387	320,800
1954	(a)	2,050	Mar. 9, 1954	5.0	63.5	70,490	61.5	44,440
1955	(a)	39.0	June 1, 1955	2.0	12.8	9,260	101	73,190
1956	(a)	6,160	Dec. 24, 1955	0	711	515,200	624	452,400
1957	(a)	2,100	June 6, 1957	10.0	137	96,760	137	99,170
1958	(a)	3,720	May 20, 1958	-	-	-	-	-
1959	1634	1,430	Feb. 17, 1959	1.4	19.9	14,420	16.4	11,860
1960	1714	2,430	Feb. 8, 1960	1.3	19.9	14,440	-	-

a Files of Truckee-Carson Irrigation District and Bureau of Reclamation.

b Probable maximum daily; some record missing.

c Estimated daily discharge.

d May 28, June 1, 1950.

3517. Truckee River near Nixon, Nev.

Location.--Lat 39°46'40", long 119°20'10", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.22 N., R.24 E., on right bank 1 mile upstream from Pyramid Indian Reservation diversion dam, 4 miles south of Nixon, and 13 miles upstream from mouth.

Drainage area.--1,869 sq mi.

Records available.--October 1957 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 3,940 ft (from topographic map).

Extremes.--1957-60: Maximum discharge, 5,160 cfs May 21, 1958 (gage height, 8.77 ft); minimum daily, 8.1 cfs July 7, 1960.

Flood of Dec. 24, 1955, reached a stage of 14.1 ft, from floodmarks (discharge, 14,000 cfs by flow-over-dam measurement of peak flow).

Remarks.--Flow regulated by Lake Tahoe (see p. 267), Boca Reservoir (see p. 280), other lakes, powerplants, and many diversions for irrigation. Truckee Canal often diverts practically all flow at Derby Dam about 25 miles upstream out of basin to Lahontan Reservoir. Several diversions for irrigation between station and Truckee Canal. One irrigation canal diverts between station and mouth of river.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	35.7	38.9	52.3	33.2	125	74.7	2,605	4,269	1,166	47.2	110	27.5	719
1959	29.7	60.2	35.2	51.6	61.4	29.9	21.0	26.3	19.0	20.6	25.5	29.9	34.0
1960	23.5	24.2	25.5	26.7	79.6	41.0	33.2	65.5	14.8	20.2	31.3	35.2	34.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1958	2,200	2,310	3,220	2,040	6,950	4,590	155,000	263,700	89,520	2,900	6,760	1,640	520,800
1959	1,820	3,560	2,170	3,180	3,410	1,840	1,250	1,610	1,130	1,280	1,570	1,760	24,460
1960	1,450	1,440	1,560	1,640	4,580	2,520	1,980	4,030	880	1,240	1,920	2,090	25,330

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1958	1564	5,160	May 21, 1958	21	719	520,800	719	520,700	
1959	1634	726	Feb. 17, 1959	14	34.0	24,460	29.7	21,500	
1960	1714	1,560	Feb. 9, 1960	8.1	34.9	25,330	-	-	

3525. McDermitt Creek near McDermitt, Nev.

Location.--Lat 41°58', long 117°50', in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.8, T.47 N., R.37 E., on left bank $\frac{1}{2}$ miles southwest of McDermitt.

Drainage area.--225 sq mi.

Records available.--October 1948 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 4,545 ft (from topographic map).

Average discharge.--12 years (1948-60), 31.0 cfs (22,440 acre-ft per year).

Extremes.--1948-60: Maximum discharge, 2,100 cfs Jan. 15, 1956 (gage height, 8.60 ft, from floodmark), from rating curve extended above 460 cfs on basis of slope-area measurements at gage heights 7.74 and 8.60 ft; no flow for several days in 1955, 1959-60.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.53	5.50	13.9	9.30	72.0	76.2	112	59.2	16.2	5.00	1.95	1.44	31.0
1952	3.30	4.55	6.95	7.49	17.9	97.1	600	252	88.0	35.7	7.29	5.32	93.3
1953	5.10	5.71	8.36	37.8	35.2	34.6	46.7	66.8	87.7	16.6	4.14	2.61	29.2
1954	4.35	6.70	7.42	8.91	14.8	31.4	24.6	23.2	6.68	3.47	1.23	1.40	11.3
1955	3.51	4.10	3.69	4.52	4.82	7.94	12.2	24.8	14.5	4.72	1.64	.90	7.29
1956	2.57	3.58	50.9	91.5	21.0	120	118	106	30	7.04	2.89	1.78	46.5
1957	4.21	6.93	13.4	9.08	114	88.3	66.7	107	35.9	6.00	2.03	1.80	37.5
1958	4.94	9.25	6.78	10.6	144	72.2	217	118	55.2	15.0	2.63	1.99	53.9
1959	5.04	7.55	8.35	7.84	9.47	10.2	14.9	18.7	9.21	2.85	.24	.80	7.92
1960	3.34	5.03	4.33	6.04	15.1	77.4	57.3	30.3	12.5	3.10	.95	0	17.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	217	327	852	572	4,000	4,680	6,660	3,640	961	308	120	86	22,420
1952	203	271	427	461	1,030	5,970	35,690	15,510	5,240	2,190	448	328	67,770
1953	313	340	514	2,330	1,960	2,130	2,780	4,110	5,220	1,020	255	155	21,130
1954	268	399	456	546	823	1,930	1,460	1,430	516	214	76	83	8,200
1955	216	244	227	278	268	488	726	1,520	861	290	101	54	5,270
1956	158	213	3,130	5,630	1,210	7,400	7,030	6,500	1,780	433	178	106	33,770
1957	259	412	821	558	6,350	5,430	3,970	6,580	2,130	369	125	107	27,110
1958	304	551	417	652	8,000	4,440	12,920	7,280	3,290	922	162	118	39,060
1959	310	449	513	492	526	630	868	1,150	548	176	14.9	47.4	5,730
1960	205	299	266	372	866	4,760	3,410	1,860	743	191	58	0	13,030

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	18.3	-	13,270
1951	1214	401	Feb. 7, 1951	1.1	31.0	22,420	30.3	-	21,930
1952	1244	1,240	Apr. 26, 1952	2.2	93.3	67,770	93.7	-	68,030
1953	1284	694	June 2, 1953	2.1	29.2	21,130	29.1	-	21,090
1954	1344	322	Mar. 9, 1954	.8	11.3	8,200	10.7	-	7,770
1955	1394	109	Apr. 22, 1955	0	7.29	5,270	11.2	-	8,090
1956	1444	2,100	Jan. 15, 1956	1.4	46.5	33,770	43.7	-	31,760
1957	1514	1,270	Feb. 26, 1957	1.4	37.5	27,110	37.2	-	26,890
1958	1564	1,920	Feb. 25, 1958	.5	53.9	39,060	53.9	-	39,060
1959	1634	52	May 26, 1959	0	7.92	5,730	7.23	-	5,230
1960	1714	298	Mar. 22, 1960	0	17.9	13,030	-	-	-

3530. 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.

Drainage area.--140 sq mi, approximately.

Records available.--October 1948 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 4,700 ft (from topographic map).

Average discharge.--12 years (1948-60), 26.6 cfs (19,260 acre-ft per year).

Extremes.--1948-60: Maximum discharge, 1,270 cfs Jan. 15, 1956 (gage height, 8.52 ft); minimum, 0.1 cfs Sept. 6, 7, 1955.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.05	4.77	21.8	10.6	76.1	52.5	110	54.6	15.1	2.61	0.87	0.94	29.0
1952	2.31	4.20	4.96	6.06	22.0	69.5	447	225	85.6	21.1	4.78	4.47	74.3
1953	4.04	3.90	5.05	13.3	17.1	18.9	17.9	39.5	47.7	4.83	1.47	1.08	14.5
1954	1.92	5.37	5.56	4.03	12.5	16.5	25.1	10.8	5.32	1.78	.9	.99	7.50
1955	2.43	3.39	2.89	3.76	5.23	9.06	52.8	72.2	16.0	3.41	.60	.53	14.4
1956	1.23	3.62	43.6	86.6	19.0	56.9	80.9	82.1	22.9	3.20	1.32	1.09	33.7
1957	3.04	7.92	15.6	6.44	69.7	101	87.7	107	23.5	4.19	1.86	1.59	35.6
1958	3.47	9.58	6.55	8.50	107	45.4	205	98.7	28.8	7.20	3.32	3.05	43.2
1959	3.83	4.87	5.30	6.49	6.46	8.82	18.8	16.1	9.95	1.91	1.17	1.76	7.10
1960	3.59	3.82	3.72	4.52	10.8	67.5	57.5	23.5	7.69	1.50	1.30	1.32	15.6

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	187	284	1,340	654	4,220	3,230	6,570	3,360	900	160	54	56	21,020
1952	142	250	305	372	1,270	4,270	26,570	13,820	5,090	1,300	294	266	53,950
1953	249	232	311	818	951	1,170	1,070	2,430	2,840	297	90	64	10,520
1954	118	319	342	248	692	1,010	1,490	684	317	110	55	59	5,420
1955	149	201	178	231	290	557	3,140	4,440	953	210	37	32	10,420
1956	75	215	2,680	5,320	1,090	3,500	4,810	5,050	1,360	197	81	65	24,440
1957	167	471	958	396	3,870	6,240	5,220	6,590	1,400	257	115	95	25,800
1958	213	570	402	523	5,940	2,790	12,190	6,070	1,710	443	204	182	31,240
1959	236	290	326	399	359	542	1,120	989	592	117	72	105	5,150
1960	221	228	228	278	619	4,150	3,420	1,440	457	92	80	78	11,290

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	20.5	14,860
1951	1214	380	Apr. 17, 1951	0.6	29.0	21,020	27.5	19,900
1952	1244	940	Apr. 6, 1952	1.3	74.3	53,950	74.5	54,044
1953	1284	190	May 29, 1953	.8	14.5	10,520	14.5	10,510
1954	1344	88	Apr. 4, 1954	-	7.50	5,420	7.15	5,170
1955	1394	208	May 6, 1955	.2	14.4	10,420	17.8	12,860
1956	1444	1,270	Jan. 15, 1956	.7	33.7	24,440	31.8	23,090
1957	1514	609	Feb. 26, 1957	-	35.6	25,800	35.0	25,370
1958	1564	727	Apr. 17, 1958	2.3	43.2	31,240	42.7	30,900
1959	1634	53	May 27, 1959	9	7.10	5,150	6.86	4,970
1960	1714	290	Mar. 25, 1960	.8	15.6	11,290	-	-

3535. Quinn River near McDermitt, Nev.

Location.--Lat 41°47', long 117°48', in SW $\frac{1}{4}$ sec.15, T.45 N., R.37 E., on left bank $1\frac{1}{2}$ miles upstream from Flat Creek and $15\frac{1}{2}$ miles south of McDermitt.

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

Records available.--October 1948 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 4,240 ft (from river-profile map).

Average discharge.--12 years (1948-60), 35.1 cfs (25,410 acre-ft per year).

Extremes.--1948-60: Maximum discharge, 1,580 cfs Apr. 27, 1952 (gage height, 8.39 ft); minimum, 0.1 cfs Feb. 28, 1960.

Remarks.--Several diversions for irrigation above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	0.85	0.79	0.92	0.83	33.8	71.3	149	84.6	8.64	1.19	0.87	0.79	29.3
1952	.83	.97	1.00	.95	4.41	59.1	998	603	174	47.9	3.66	2.05	157
1953	1.94	2.15	2.81	7.25	14.4	8.10	6.16	38.0	85.2	2.60	.81	.84	14.1
1954	.91	.83	.80	.83	.96	1.11	.99	.90	.78	.45	.40	.47	.78
1955	.57	.65	.69	.70	.70	.84	10.3	1.00	.50	.35	.37	1.46	
1956	.59	.62	6.78	73.7	20.9	99.7	164	189	34.1	1.34	.69	.64	49.4
1957	.74	.81	1.29	.69	24.5	142	148	282	45.8	2.03	1.14	.96	54.4
1958	.68	.95	1.13	1.47	146	131	453	223	77.8	4.46	1.37	1.24	85.9
1959	1.17	.96	1.35	2.07	3.11	2.56	1.80	1.56	.87	.62	.89	1.46	
1960	.74	.75	.78	1.23	4.42	15.8	39.7	7.76	.75	.37	.38	.55	6.06

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	52	47	57	51	1,880	4,380	8,850	5,200	514	73	53	47	21,200
1952	51	58	62	59	254	3,640	59,290	37,100	10,360	2,940	225	122	114,200
1953	119	128	173	446	800	498	367	2,340	5,070	160	50	50	10,200
1954	56	49	49	51	53	68	59	55	47	28	25	28	568
1955	35	39	42	43	39	43	50	633	59	31	21	22	1,060
1956	36	37	417	4,530	1,200	6,130	9,730	11,610	2,030	82	43	38	35,880
1957	46	49	80	43	1,360	8,700	8,810	17,320	2,730	125	70	57	39,390
1958	54	56	70	90	8,120	8,040	26,970	13,700	4,630	275	84	74	61,400
1959	72	57	83	128	173	145	107	96	52	38	55	53	1,060
1960	45	45	48	75	254	969	2,360	477	45	23	23	33	4,400

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	6.31	4,570	
1951	1214	219	Apr. 29, 1951	0.6	29.3	21,200	29.3	21,220	
1952	1244	1,580	Apr. 27, 1952	.7	157	114,200	158	114,400	
1953	1284	163	June 8, 1953	.6	14.1	10,200	13.7	9,940	
1954	1344	1.5	Mar. 25, 1954	.3	.78	568	.73	530	
1955	1394	30	May 16, 1955	.3	1.46	1,060	1.98	1,430	
1956	1444	423	Mar. 27, 1956	.4	49.4	35,880	49.0	35,570	
1957	1514	482	May 14, 1957	.5	54.4	39,390	54.4	39,400	
1958	1564	898	Apr. 19, 1958	.8	85.9	61,400	85.9	62,200	
1959	1634	5.0	Feb. 19, 1959	.6	1.46	1,060	1.36	985	
1960	1714	90	Apr. 7, 1960	.3	6.06	4,400	-	-	

3565. Susan River at Susanville, Calif.

Location.--Lat 40°25', long 120°40', in NE $\frac{1}{4}$ sec.31, T.30 N., R.12 E., on left bank 0.5 mile west of Susanville and 1.1 miles upstream from Piute Creek.

Drainage area.--192 sq mi.

Records available.--June 1900 to December 1905 (gage heights only August 1901 to January 1903), March to May 1913 (gage heights only), February 1917 to June 1921, October 1950 to September 1960. Published as "near Susanville" 1900-1905. Discharge records for August to December 1901 and January 1903, published in WSP 300, have been found to be unreliable and should not be used.

Gage.--Water-stage recorder. Datum of gage is 4,225.72 ft above mean sea level, datum of 1929. 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.--16 years (1900-1901, 1903-5, 1917-20, 1950-60), 98.4 cfs (71,240 acre-ft per year).

Extremes.--1900-1905, 1913, 1917-21, 1950-60: Maximum discharge, 3,540 cfs Dec. 23, 1955 (gage height, 6.62 ft), from rating curve extended above 840 cfs on basis of slope-area measurement of peak flow; minimum, 0.7 cfs July 25, Aug. 22, 1960.

Remarks.--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. Records of chemical analyses for the water year 1959 are published in reports of Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	25.6	174	184	87.7	213	99.9	178	123	41.6	109	12.1	3.42	104
1952	7.94	13.9	57.9	24.9	123	153	780	858	197	103	48.9	9.25	198
1953	8.93	13.3	19.3	22.0	67.9	69.1	175	282	132	65.2	69.6	7.07	92.8
1954	8.64	19.8	17.5	22.0	65.0	158	279	166	33.9	125	59.8	4.31	79.9
1955	5.43	11.0	14.6	11.9	16.9	43.7	62.0	107	36.9	4.93	2.77	3.52	26.8
1956	4.35	9.94	328	243	89.4	272	640	655	138	75.0	62.6	10.5	211
1957	18.9	22.1	21.4	15.1	155	168	114	120	43.6	139	44.6	6.49	72.0
1958	13.5	20.2	31.8	32.2	173	138	366	588	158	76.1	69.4	8.61	139
1959	10.0	15.8	15.8	51.2	49.8	88.9	97.7	127	36.8	16.1	5.38	5.84	43.2
1960	9.66	9.72	9.65	10.3	79.9	130	98.3	57.0	102	2.81	1.72	2.22	42.3

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,570	10,380	11,330	5,400	11,810	6,140	10,610	7,590	2,480	6,720	745	204	74,980
1952	488	825	3,560	1,530	7,060	9,390	46,400	52,770	11,700	6,360	3,010	550	143,600
1953	549	790	1,190	13,540	3,770	4,250	10,420	16,130	7,880	4,010	4,220	421	67,170
1954	531	1,180	1,080	1,350	3,610	9,710	16,590	10,190	2,020	7,670	3,680	257	57,870
1955	334	655	897	734	938	2,690	3,690	6,570	2,200	303	171	209	19,390
1956	267	591	20,150	14,940	5,140	16,750	38,050	40,300	8,190	4,610	3,850	624	153,500
1957	1,170	1,320	1,310	928	8,600	10,360	6,810	7,390	2,600	8,520	2,740	386	52,130
1958	832	1,200	1,950	1,980	9,620	8,510	21,770	36,170	9,420	4,680	4,270	513	100,900
1959	616	940	972	3,150	2,770	5,460	5,820	7,830	2,190	989	208	347	31,290
1960	532	579	593	632	4,600	7,980	5,850	3,500	6,060	173	106	132	30,740

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	78.1	56,570
1951	1244, 1444	2,230	Nov. 19, 1950	2.5	104	74,980	78.1	56,570
1952	1244	1,930	Apr. 4, 1952	4.0	198	143,600	195	141,300
1953	1284, 1444	2,590	Jan. 9, 1953	6.5	92.8	67,170	93.1	67,430
1954	1344, 1444	1,620	Mar. 9, 1954	3.6	79.9	57,870	78.7	56,960
1955	1394	261	Mar. 29, 1955	2.6	26.8	19,390	53.2	38,510
1956	1444	3,540	Dec. 23, 1955	3.5	211	153,500	188	136,300
1957	1514	1,700	Feb. 24, 1957	5.6	72.0	52,130	72.3	52,320
1958	1564	3,300	Feb. 24, 1958	7.4	139	100,900	137	99,460
1959	1634	708	Jan. 12, 1959	2.6	43.2	31,290	42.1	30,470
1960	1714	1,780	Feb. 8, 1960	.8	42.3	30,740	-	-

3585. Willow Creek near Susanville, Calif.

Location.--Lat 40°29', long 120°32', in NW¼ sec.5, T.30 N., R.13 E., on left bank 4 miles upstream from Peters Valley Creek and 8 miles northeast of Susanville.

Drainage area.--92.5 sq mi, excludes that of Eagle Lake basin.

Records available.--October 1950 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 4,836.27 ft above mean sea level, unadjusted.

Average discharge.--10 years (1950-60), 32.2 cfs (23,310 acre-ft per year).

Extremes.--1950-60: Maximum discharge, 712 cfs Dec. 23, 1955 (gage height, 5.36 ft), from rating curve extended above 420 cfs on basis of logarithmic plotting; minimum, 8.1 cfs Nov. 16, 1951.

Remarks.--Diversions for irrigation of about 5,200 acres above station. Some flow at times enters Willow Creek from Eagle Lake through abandoned tunnel.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	11.4	28.5	41.8	52.6	47.6	17.3	12.1	12.6	10.3	9.91	9.57	9.53	21.8
1952	11.3	12.8	21.5	15.0	36.8	102	311	25.5	11.1	11.2	12.1	13.2	48.2
1953	17.9	27.7	30.6	97.4	34.2	15.7	12.7	15.5	16.5	11.4	11.1	11.5	25.2
1954	15.9	27.3	26.0	20.2	32.6	34.0	15.9	10.5	10.0	9.95	9.90	11.0	18.5
1955	12.8	19.6	20.3	19.4	21.1	24.9	14.6	10.8	9.90	11.0	10.4	10.3	15.4
1956	12.7	18.6	128	123	52.0	155	79.6	29.2	13.6	11.2	11.8	12.9	54.2
1957	24.7	36.4	32.7	29.6	109	72.3	23.0	22.1	14.2	16.0	14.4	14.2	33.6
1958	23.4	31.9	47.0	44.9	125	98.4	95.1	39.9	24.5	22.7	18.1	19.7	48.7
1959	18.7	32.0	35.1	43.8	67.1	42.2	16.6	19.0	15.1	14.0	13.5	14.8	27.4
1960	23.2	25.5	26.3	27.1	111	47.0	22.6	17.0	13.0	11.7	12.0	11.9	28.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	698	1,700	2,570	3,230	2,650	1,060	718	778	614	609	588	567	15,780
1952	692	760	1,320	924	2,110	6,260	18,510	1,560	660	686	742	785	35,010
1953	1,100	1,650	1,880	5,990	1,900	964	754	952	980	698	680	684	13,230
1954	978	1,620	1,600	1,240	1,810	2,090	946	648	596	612	609	653	13,400
1955	787	1,170	1,250	1,190	1,170	1,530	867	666	589	676	639	613	11,150
1956	783	1,100	7,860	7,580	2,990	9,500	4,740	1,790	811	690	724	768	39,340
1957	1,520	2,160	2,010	1,820	6,060	4,440	1,370	1,360	847	984	883	843	24,300
1958	1,440	1,900	2,890	2,760	6,940	6,050	5,660	2,450	1,460	1,400	1,110	1,170	35,230
1959	1,150	1,910	2,160	2,690	3,730	2,590	988	1,170	897	859	827	879	19,850
1960	1,420	1,520	1,610	1,660	6,400	2,890	1,340	1,050	776	720	736	706	20,830

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951	1244	216	Jan. 23, 1951	9.2	21.8	15,780	18.8	13,590
1952	1444	694	Apr. 6, 1952	10	48.2	35,010	50.8	36,870
1953	1284	410	Jan. 9, 1953	11	25.2	18,230	24.6	17,800
1954	1344	72	Feb. 18, 1954	9.6	18.5	13,400	17.1	12,410
1955	1394	62	Mar. 10, 1955	9.6	15.4	11,150	24.4	17,680
1956	1444	712	Dec. 23, 1955	11	54.2	39,340	48.6	35,280
1957	1514	564	Feb. 24, 1957	12	33.6	24,300	34.3	24,840
1958	1564	398	Feb. 25, 1958	14	48.7	35,230	47.3	34,220
1959	1634	163	Feb. 17, 1959	13	27.4	19,850	26.5	19,180
1960	1715	596	Feb. 8, 1960	11	28.7	20,830	-	-

3595. Pine Creek near Westwood, Calif.

Location.--Lat 40°35', long 121°06', in SE $\frac{1}{4}$ 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 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,700 ft (from topographic map).

Average discharge.--10 years (1950-60), 7.46 cfs (5,400 acre-ft per year).

Extremes.--1950-60: Maximum discharge, 174 cfs Dec. 23, 1955 (gage height, 3.95 ft), from rating curve extended above 90 cfs by logarithmic plotting; no flow at times in 1955, 1959-60.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.28	4.28	6.53	5.73	6	7	19.1	18.4	6.29	2.52	1.76	1.34	6.85
1952	2.66	3.42	5.26	2	3	3.13	12.1	77.8	44.8	8.88	3.78	2.45	14.1
1953	1.81	1.71	.82	3.48	3.10	3.26	12.7	32.4	22.7	6.18	3.25	2.19	7.81
1954	1.76	3.54	1.77	1.24	1.14	1.61	20.5	37.9	8.47	3.48	1.84	1.27	7.08
1955	1.09	1.65	1.89	1.02	1.0	1.45	2.68	7.87	1.96	.51	.12	.16	1.79
1956	.30	1.17	15.4	8.41	2.93	3.39	17.3	87.4	40.6	8.21	3.94	2.44	16.0
1957	2.62	2.11	1.64	1.10	2.92	3.49	3.76	15.7	7.20	2.29	1.06	1.39	3.79
1958	2.78	3.28	1.51	1.37	4.93	2.80	5.40	68.2	26.9	6.86	3.42	2.14	10.9
1959	2.01	2.19	1.52	4.59	1.81	2.29	12.6	9.22	2.62	1.08	.44	.57	3.41
1960	.45	.36	.30	.33	1.15	3.24	11.7	12.6	2.91	.99	.34	.28	2.88

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	202	254	401	352	333	430	1,140	1,130	374	155	108	80	4,960
1952	164	204	324	123	173	192	719	4,790	2,660	546	233	146	10,270
1953	111	102	50	214	172	201	752	1,990	1,350	380	200	130	5,650
1954	108	211	109	76	63	99	1,220	2,330	504	214	113	76	5,120
1955	67	98	116	63	56	89	160	484	117	32	7.1	9.3	1,300
1956	19	69	945	517	169	208	1,030	5,370	2,420	505	242	145	11,640
1957	161	126	101	68	162	214	224	967	429	141	65	83	2,740
1958	171	195	93	84	274	172	321	4,190	1,600	422	210	128	7,860
1959	124	131	93	282	101	141	747	567	156	66	27	34	2,470
1960	28	21	18	20	66	199	696	773	173	61	21	16	2,090

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950							
1951	1244	40	Oct. 30, 1950	0.7	6.85	4,960	6.62
1952	1244	154	May 26, 1952	-	14.1	10,270	13.6
1953	1284	98	May 31, 1953	.5	7.81	5,650	8.04
1954	1344	96	May 8, 1954	.7	7.08	5,120	6.87
1955	1394	24	May 10, 1955	0	1.79	1,300	2.83
1956	1444	174	Dec. 23, 1955	.1	16.0	11,640	15.1
1957	1514	143	May 18, 1957	.6	3.79	2,740	3.68
1958	1564	153	(a)	.5	10.9	7,860	10.7
1959	1634	28	Apr. 26, 1959	.1	3.41	2,470	3.02
1960	1714	33	Apr. 20, 1960	.1	2.88	2,090	-

a Feb. 25, May 21, 1958.

3660. 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 8 miles downstream from confluence of Twelvemile and Fifteenmile Creeks 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, and March 1921 to June 1922 (published as "near Warner Lake"), September 1940 to November 1944, March 1945 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 4,560.83 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Sept. 21, 1940, staff gage or water-stage recorder at sites within 1 mile downstream at various datums. Sept. 21, 1940, to Nov. 30, 1944, water-stage recorder at site 1½ miles upstream at different datums. Mar. 12, 1945, to June 28, 1952, water-stage recorder at site 70 ft upstream at datum 0.88 ft higher.

Average discharge.--25 years (1910-15, 1918-19, 1940-44, 1945-60), 49.5 cfs (35,840 acre-ft per year).

Extremes.--1910-19, 1921-22, 1940-60: Maximum discharge, 3,260 cfs Dec. 23, 1955 (gage height, 14.80 ft), from rating curve extended above 630 cfs on basis of contracted-opening measurement of peak flow; no flow for part of Sept. 7, 1955.

Remarks.--No regulation. Diversions in Oregon for irrigation of 240 acres above station; considerable diversion for irrigation in Cowhead Lake area in California.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4.50	5.67	23.7	24.0	221	87.6	92.3	110	31.8	4.51	2.81	2.75	49.7
1952	4.25	5.30	7.70	7.76	47.6	125	879	283	109	34.1	8.38	5.35	125
1953	5.71	5.73	8.46	212	66.0	90.3	55.4	127	148	29.2	5.73	4.12	63.3
1954	4.53	8.18	17.7	36.6	169	191	59.4	63.6	24.2	5.95	3.24	3.28	48.1
1955	4.37	5.69	5.77	6.35	7.43	44.0	79.1	73.5	49.4	5.83	1.15	2.25	23.8
1956	3.82	6.58	192	170	27.2	254	179	130	76.4	18.4	4.25	3.50	89.4
1957	5.21	13.9	40.2	3.98	235	145	71.7	113	53.6	5.99	3.00	3.34	56.6
1958	5.00	7.68	7.59	17.2	375	121	242	189	77.0	15.3	4.07	3.97	86.4
1959	4.17	5.13	5.89	15.5	9.25	33.9	34.5	33.5	13.3	2.92	2.06	3.02	13.6
1960	4.20	4.19	3.31	3.28	14.5	255	59.3	57.3	35.7	2.53	2.92	2.78	37.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	277	337	1,460	1,480	12,250	5,390	5,490	6,760	1,900	277	173	163	35,960
1952	261	315	473	477	2,740	7,710	52,280	17,400	6,490	2,100	515	319	91,080
1953	351	341	520	13,040	3,670	5,550	3,300	7,820	6,830	1,790	352	245	45,810
1954	278	497	1,090	2,250	9,370	11,720	3,540	3,910	1,440	366	199	195	34,840
1955	269	358	355	389	413	2,700	4,710	4,520	2,940	358	70	134	17,200
1956	235	392	11,630	10,460	1,560	15,610	10,660	7,970	4,550	1,130	261	208	64,870
1957	320	824	2,470	245	13,060	8,900	4,260	6,970	3,190	368	184	199	40,990
1958	308	457	467	1,060	20,820	7,410	14,400	11,610	4,580	941	250	236	62,540
1959	256	305	362	951	514	2,080	2,050	2,060	791	180	127	180	9,660
1960	258	249	204	202	834	15,700	3,530	3,540	2,130	155	180	165	27,150

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	50.9
1951	1214,1514	1,990	Feb. 7, 1951	2.4	49.7	35,960	48.2
1952	1244,1514	2,000	Apr. 6, 1952	3.2	125	91,080	126
1953	1284,1514	1,690	Jan. 18, 1953	3.7	63.3	45,810	64.2
1954	1344	1,480	Mar. 9, 1954	2.6	49.1	34,840	46.9
1955	1394	520	Apr. 30, 1955	.3	23.8	17,200	39.6
1956	1444	3,260	Dec. 23, 1955	2.8	89.4	64,870	77.2
1957	1514	1,850	Feb. 24, 1957	2.4	56.6	40,990	53.3
1958	1564	2,340	Feb. 24, 1958	2.4	86.4	62,540	86.0
1959	1634	204	Mar. 13, 1959	1.6	13.6	9,660	13.3
1960	1714	1,440	Mar. 7, 1960	1.2	37.4	27,150	-

3700. Camas Creek near Lakeview, Oreg.

Location.--Lat 42°13', long 120°06', in NW $\frac{1}{4}$ 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 November 1914, March to May 1915, December 1949 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 5,472.41 ft above mean sea level (State Highway Department bench mark). Sept. 11, 1912, to May 9, 1915, water-stage recorder or staff gage at site 500 ft upstream at different datum.

Average discharge.--12 years (1912-14, 1950-60), 47.6 cfs (34,460 acre-ft per year).

Extremes.--1912-15, 1949-60: Maximum discharge, 1,630 cfs Dec. 22, 1955 (gage height, 5.15 ft), from rating curve extended above 340 cfs on basis of slope-area measurement of peak flow; minimum, 0.9 cfs Aug. 16, 1960.

Remarks.--No regulation. Diversions for irrigation of 1,200 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	7.63	13.9	45.8	16.0	67.8	63.2	250	128	25.6	7.98	5.17	4.53	52.7
1952	7.47	8.16	17.4	10.6	22.0	37.1	344	245	60.9	16.5	7.35	7.38	65.1
1953	6.63	6.89	8.24	54.4	55.2	49.2	152	182	106	15.8	7.14	5.90	54.0
1954	5.52	17.2	18.8	13.4	39.3	91.4	201	75.5	29.2	7.94	4.88	4.90	42.3
1955	5.02	7.99	7.02	5.67	6.33	15.6	67.4	134	23.8	7.00	2.69	3.33	23.9
1956	4.01	10.8	152	97.0	37.5	75.2	282	237	62.3	16.7	8.06	5.35	82.6
1957	14.5	25.8	41.1	6.90	60.8	125	138	155	35.9	9.26	4.76	4.48	51.8
1958	11.7	15.6	15.4	17.3	108	45.5	223	281	57.3	15.4	6.83	6.04	66.5
1959	7.15	11.8	11.1	19.4	11.9	38.1	61.5	26.7	7.25	2.77	1.95	2.87	16.9
1960	3.26	3.27	2.31	2.68	8.62	76.8	120	73.4	15.2	3.25	1.86	2.45	26.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	469	830	2,820	983	3,770	3,890	14,910	7,890	1,530	491	318	270	38,170
1952	459	486	1,070	653	1,270	2,280	20,450	15,090	3,630	1,010	452	439	47,290
1953	408	410	507	3,340	3,060	3,030	9,050	11,210	6,310	972	439	351	39,100
1954	340	1,020	1,150	827	2,180	5,620	11,990	4,640	1,740	488	300	292	30,590
1955	309	475	432	349	351	959	4,010	8,230	1,410	431	165	198	17,320
1956	247	644	9,370	5,970	2,160	4,620	16,810	14,580	3,710	1,030	495	318	59,950
1957	891	1,530	2,530	424	3,380	7,700	8,210	9,540	2,140	569	293	267	37,470
1958	720	927	946	1,060	5,990	2,790	13,280	17,290	3,410	945	420	359	48,140
1959	439	703	680	1,190	662	2,340	3,660	1,640	432	170	120	171	12,210
1960	201	194	142	165	496	4,720	7,110	4,510	903	200	115	146	18,900

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	47.4	34,350
1951	1214	394	Apr. 10, 1951	4.2	52.7	38,170	49.6	36,070
1952	1244	660	Apr. 28, 1952	5.0	65.1	47,290	64.2	46,600
1953	1284	471	May 20, 1953	5.4	54.0	39,100	55.6	40,280
1954	1344	492	Mar. 9, 1954	4.4	42.3	30,590	40.5	29,290
1955	1394	299	May 12, 1955	1.8	23.9	17,320	36.4	26,360
1956	1444	1,630	Dec. 22, 1955	2.8	82.6	59,950	75.3	54,640
1957	1514	605	Feb. 26, 1957	4.0	51.8	37,470	48.5	35,120
1958	1564	590	(a)	5.0	66.5	48,140	65.4	47,370
1959	1634	168	Jan. 12, 1959	1.5	16.9	12,210	15.1	10,920
1960	1714	318	Apr. 7, 1960	1.4	26.0	18,900	-	-

a Apr. 21, May 12, 1958.

3710. Drake Creek near Adel, Oreg.

Location (revised).--Lat 42°12', long 120°00', near center of sec.9, T.39 S., R.23 E., on left bank 800 ft downstream from highway bridge and Parsnip Creek, 1 mile upstream from mouth, and 6½ miles west of Adel.

Drainage area.--67 sq mi (revised), approximately.

Records available.--March to May 1915, December 1922 to May 1923, December 1949 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 5,076.42 ft above mean sea level (State Highway Department bench mark). Mar. 18 to May 10, 1915, and Dec. 21, 1922, to May 9, 1923, staff gage at site 800 ft (revised) upstream at different datums. Dec. 16, 1949, to June 21, 1951, water-stage recorder at site 1,300 ft (revised) upstream at different datum.

Average discharge.--10 years (1950-60), 14.2 cfs (10,280 acre-ft per year).

Extremes.--1915, 1922-23, 1949-60: Maximum discharge, 1,100 cfs Dec. 23, 1955 (gage height, 3.93 ft), from rating curve extended above 300 cfs by logarithmic plotting; minimum, 1.6 cfs Feb. 28, 29, 1960.

Remarks.--Some regulation by two reservoirs above station with combined capacity of 436 acre-ft. Diversions for irrigation of about 620 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	6.11	6.18	6.47	6.38	40.1	34.8	21.2	11.7	7.87	7.63	7.42	7.15	13.4
1952	6.65	6.24	5.75	7.84	7.08	43.5	178	20.1	11.5	13.5	9.28	9.10	26.4
1953	8.60	7.89	9.44	32.6	20.3	22.9	9.55	19.9	10.5	6.84	6.56	6.59	13.5
1954	6.72	6.88	6.54	7.07	30.0	12.4	9.23	7.29	6.13	5.44	6.44	5.56	8.99
1955	5.70	5.68	5.68	4.57	5.00	8.49	15.9	15.3	4.52	4.64	5.82	4.32	7.14
1956	3.95	4.06	47.8	32.7	8.90	87.6	34.3	15.5	8.87	7.99	8.21	7.91	22.5
1957	7.74	6.31	9.30	5.65	81.2	25.4	13.7	11.9	8.41	8.07	6.76	6.67	15.6
1958	6.81	7.31	6.85	9.98	75.3	19.7	68.4	21.3	12.6	9.33	8.99	8.56	20.8
1959	7.92	7.52	7.39	7.57	7.54	6.04	5.28	5.39	5.59	3.47	3.52	4.23	5.94
1960	3.41	3.95	3.77	2.62	4.13	43.9	7.43	5.05	4.24	5.58	3.63	4.78	7.75

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	376	368	398	393	2,230	2,140	1,260	721	468	469	456	425	9,700
1952	409	372	353	482	407	2,680	10,620	1,240	686	831	571	541	19,190
1953	529	470	580	2,010	1,130	1,410	568	1,230	625	420	403	392	9,770
1954	413	410	402	435	1,670	762	549	448	365	334	396	351	6,520
1955	350	336	349	281	277	522	946	939	269	285	358	257	5,170
1956	243	241	2,940	2,010	512	5,380	2,040	954	528	492	505	471	16,320
1957	476	495	572	347	4,510	1,560	814	730	501	496	416	397	11,310
1958	419	435	421	614	4,180	1,210	4,070	1,310	749	573	553	510	15,040
1959	487	447	455	466	419	371	314	331	332	213	216	252	4,330
1960	209	235	232	161	238	2,700	442	310	252	343	223	284	5,630

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	12.6	-	9,110
1951	1214	750	Feb. 10, 1951	5.2	13.4	9,700	13.4	-	9,700
1952	1244	866	Apr. 5, 1952	3	26.4	19,190	27.0	-	19,640
1953	1284	436	Mar. 23, 1953	5	13.5	9,770	13.0	-	9,410
1954	1344	178	Feb. 21, 1954	4	8.99	6,520	8.73	-	6,330
1955	1394	243	May 19, 1955	2.9	7.14	5,170	10.4	-	7,560
1956	1444	1,100	Dec. 23, 1955	3.0	22.5	16,320	19.9	-	14,440
1957	1514	594	Feb. 24, 1957	4.5	15.6	11,310	15.3	-	11,050
1958	1564	542	Apr. 9, 1958	6.2	20.8	15,040	20.9	-	15,160
1959	1634	83	June 10, 1959	2.6	5.94	4,300	4.96	-	3,590
1960	1714	318	Mar. 7, 1960	2.0	7.75	5,630	-	-	-

3715. Deep Creek above Adel, Oreg.

Location.--Lat 42°11', long 119°59', in E $\frac{1}{2}$ sec.15, T.39 S., R.23 E., on right bank 0.3 mile downstream from Drake Creek and 5 miles west of Adel.

Drainage area.--249 sq mi.

Records available.--September 1922 to September 1923, October 1929 to September 1960. Monthly discharge only October 1929 to September 1932, published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 4,966.7 ft above mean sea level (State Highway Department bench mark). Prior to Dec. 21, 1922, staff gage and Dec. 21, 1922, to Sept. 30, 1923, water-stage recorder, at same site at different datum.

Average discharge.--32 years (1922-23, 1929-60), 119 cfs (86,150 acre-ft per year).

Extremes.--1922-23, 1929-60: Maximum discharge, 5,030 cfs Dec. 11, 1937 (gage height, 7.5 ft, from floodmark), from rating curve extended above 1,300 cfs on basis of velocity-area studies and verified by slope-area measurement at gage height 7.3 ft for peak of Dec. 23, 1955; minimum, 1.7 cfs July 20, 27-29, 1934.

Remarks.--No regulation. Diversions for irrigation of 5,500 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	23.6	50.7	128	44.5	230	194	609	459	125	20.0	12.7	14.2	158
1952	25.0	30.2	39.1	32.0	62.0	154	1,072	754	321	91.0	23.7	26.0	218
1953	23.9	30.0	33.6	176	150	142	338	534	489	115	28.4	20.1	173
1954	24.2	52.6	60.2	44.8	132	237	471	333	126	24.2	13.6	16.2	127
1955	19.7	25.1	21.6	18.3	19.2	43.4	159	365	190	26.0	8.57	9.37	75.7
1956	14.3	32.9	417	301	95.1	338	677	729	313	55.6	21.0	22.0	252
1957	38.8	59.0	116	40.0	255	332	362	516	216	23.5	14.0	16.5	165
1958	35.5	43.2	34.7	94.1	412	118	580	857	265	54.3	23.7	26.6	210
1959	25.8	54.1	38.5	58.9	41.8	81.9	170	152	60.9	6.70	5.18	9.84	57.2
1960	15.2	14.9	10.9	10.9	27.5	231	277	307	130	10.8	5.81	6.95	87.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,450	3,020	7,840	2,740	12,800	11,960	36,250	28,200	7,450	1,230	780	845	114,600
1952	1,540	1,800	2,400	1,970	3,570	9,480	63,780	46,350	19,110	5,590	1,460	1,550	158,600
1953	1,470	1,780	2,060	10,830	8,350	8,750	20,120	32,810	29,090	7,070	1,740	1,200	125,300
1954	1,490	3,130	3,700	2,750	7,320	14,560	28,030	20,500	7,500	1,490	835	964	92,270
1955	1,210	1,490	1,330	1,120	1,070	2,670	9,440	22,460	11,300	1,600	527	557	754,770
1956	879	1,960	25,650	18,510	5,470	20,810	40,280	44,840	18,610	3,420	1,290	1,310	183,000
1957	2,390	3,510	7,160	2,460	14,160	20,410	21,510	31,700	12,880	1,450	863	980	119,500
1958	2,180	2,570	2,130	5,790	22,890	7,250	34,520	52,670	15,800	3,340	1,460	1,580	152,200
1959	1,590	2,030	2,360	3,620	2,320	5,040	10,120	9,360	3,620	412	319	585	41,380
1960	932	887	670	672	1,580	14,180	16,450	18,880	7,720	664	357	414	63,410

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	150	-	108,800
1951	1214	1,420	Feb. 10, 1951	12	158	114,600	149	-	108,000
1952	1244	2,140	Apr. 5, 1952	18	218	158,600	218	-	158,200
1953	1284	1,620	May 19, 1953	18	173	125,300	177	-	128,300
1954	1344	1,140	Mar. 10, 1954	12	127	92,270	122	-	87,980
1955	1394	589	May 13, 1955	5.6	75.7	754,770	109	-	79,230
1956	1444	4,540	Dec. 23, 1955	11	252	183,000	231	-	167,600
1957	1514	1,690	Feb. 24, 1957	13	165	119,500	157	-	113,300
1958	1564	1,520	Apr. 17, 1958	20	210	152,200	209	-	151,300
1959	1634	332	Jan. 12, 1959	4.5	57.2	41,380	52.3	-	37,880
1960	1714	805	Mar. 7, 1960	4.5	87.4	63,410	-	-	-

† Corrected.

3785. Honey Creek near Plush, Oreg.

Location.--Lat 42°25', long 119°55', in NW¹/₄ sec.29, T.36 S., R.24 E., on right bank at mouth of canyon, 1 mile northwest of Plush and 4 miles downstream from Twelvemile Creek.

Drainage area.--170 sq mi (revised), approximately.

Records available.--May 1909 to September 1914 (prior to January 1910, gage heights only), March to May 1915, March to September 1921, March to June 1922, May 1930 to September 1960. Monthly discharge only May 1930 to September 1949, published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 4,536.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Feb. 24, 1910, staff gage at site half a mile downstream at different datum. Feb. 24, 1910, to Jan. 12, 1912, staff gage; Jan. 13, 1912, to May 16, 1915, water-stage recorder; Mar. 15 to Apr. 6, 1921, staff gage; Apr. 7 to Sept. 30, 1921, water-stage recorder; and Mar. 19 to June 30, 1922, staff gage; all at site half a mile upstream from present site at different datums. May 1, 1930, to Aug. 30, 1959, water-stage recorder at site 10 ft upstream at datum 1.53 ft higher.

Average discharge.--34 years (1910-14, 1930-60), 26.9 cfs (19,470 acre-ft per year).

Extremes.--1910-15, 1921-22, 1930-60: Maximum discharge, 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 (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.--Slight regulation by five small reservoirs upstream (combined capacity, 870 acre-ft). Diversions for irrigation of about 2,300 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2.50	7.42	24.0	11.3	50.1	48.2	140	98.4	23.7	2.70	0.19	0.47	33.8
1952	2.31	3.72	4.94	5.48	18.8	141	264	171	62.9	14.6	3.13	.78	57.6
1953	1.92	2.09	2.14	42.9	26.4	34.4	71.7	121	89.5	16.8	2.23	.95	34.3
1954	1.90	5.16	6.89	6.26	18.9	38.3	120	79.4	28.8	5.08	.90	.84	25.9
1955	2.29	5.12	4.50	4.30	5.04	6.72	13.0	90.9	25.0	6.30	.21	.23	13.8
1956	.40	2.81	86.1	65.3	16.2	95.5	182	188	75.4	13.9	1.75	1.56	61.1
1957	5.37	9.86	9.98	3.11	70.9	68.6	83.3	133	36.7	5.06	.78	.53	35.3
1958	2.24	4.01	5.00	6.90	45.0	28.8	146	175	50.5	14.7	2.53	1.34	40.2
1959	1.81	3.85	5.30	7.65	6.45	11.9	28.4	22.5	9.43	1.02	.60	.43	8.28
1960	.66	.92	.96	1.13	7.95	37.0	63.2	45.2	20.7	1.36	.21	.32	14.9

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	154	441	1,470	692	2,780	2,960	8,320	6,050	1,410	166	12	28	24,480
1952	142	222	303	337	1,080	8,640	15,680	10,520	3,740	896	193	46	41,800
1953	118	124	131	2,640	1,460	2,110	4,270	7,450	5,330	1,030	137	56	24,860
1954	117	307	424	385	1,050	2,360	7,110	4,880	1,720	512	55	50	18,770
1955	141	305	277	264	280	413	776	5,590	1,550	387	13	14	10,010
1956	25	167	5,290	4,020	930	5,930	10,840	11,580	4,550	854	108	93	44,390
1957	330	587	614	191	3,940	4,220	4,960	8,170	2,190	311	49	32	25,590
1958	137	239	307	424	2,560	1,770	8,720	10,780	3,010	903	156	80	29,090
1959	111	229	326	471	358	734	1,690	1,380	561	63	37	26	5,990
1960	41	55	59	69	457	2,280	3,760	2,780	1,230	84	13	19	10,850

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	24.5	17,740
1951	1214	852	Feb. 7, 1951	0.1	33.8	24,480	31.9	23,080
1952	1244	1,490	Mar. 25, 1952	.2	57.6	41,800	57.2	41,510
1953	1284	578	May 20, 1953	.8	34.3	24,860	35.0	25,330
1954	1344	251	Apr. 5, 1954	.4	25.9	18,770	25.7	18,640
1955	1394	320	May 20, 1955	.2	13.8	10,010	20.4	14,770
1956	1444	-	-	.1	61.1	44,390	55.7	40,440
1957	1514	720	Feb. 24, 1957	.5	35.3	25,590	34.2	24,750
1958	1564	460	May 11, 1958	.9	40.2	29,090	40.1	29,070
1959	1634	92	Apr. 6, 1959	.2	8.28	5,990	7.57	5,480
1960	1714	418	Mar. 7, 1960	.1	14.9	10,850	-	-

3840. Chewaucan River near Paisley, Oreg.

Location.--Lat 42°42', long 120°35', in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.26, T.33 S., R.18 E., on left bank $\frac{1}{2}$ miles downstream from Mill Creek and $\frac{1}{2}$ miles southwest of Paisley.

Drainage area.--275 sq mi.

Records available.--April 1912 to September 1921, May 1924 to September 1960. Published as "above Conn ditch, near Paisley" April to September 1912 and May 1924 to September 1955, as "above Mill Creek, near Paisley" October 1912 to December 1913, and as "at Chewaucan Land & Cattle Co. gage, near Paisley" January to September 1914.

Gage.--Water-stage recorder. Datum of gage is 4,430 ft above mean sea level (river-profile survey). Prior to July 14, 1912, reference point at site $\frac{1}{2}$ miles upstream at different datum. Nov. 6, 1912, to Jan. 19, 1914, staff gage and Jan. 20, 1914, to Sept. 30, 1921, water-stage recorder, at various sites within half a mile upstream from Mill Creek at various datums. May 1, 1924, to Jan. 26, 1956, water-stage recorder at sites about $\frac{1}{2}$ miles upstream at different datums. Jan. 27 to Oct. 6, 1956, staff gage at sites about 1 mile downstream at different datums.

Average discharge.--45 years (1912-21, 1924-60), 135 cfs (97,740 acre-ft per year).

Extremes.--1912-21, 1924-60: Maximum discharge, 3,260 cfs Dec. 22, 1955 (gage height, 5.45 ft, from floodmarks, present site and datum), from rating curve extended above 1,300 cfs on basis of slope-area measurement of peak flow; no flow for part of each day Dec. 7, 1927, Dec. 12, 1932, result of freezeup.

Maximum discharge known, 4,000 cfs Nov. 23, 1909, from records at site 1 mile downstream, below Conn ditch, where records are equivalent at high flows.

Remarks.--No regulation. Diversions for irrigation of about 2,500 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	52.3	86.1	188	85.9	209	208	697	569	200	49.2	31.6	31.3	200
1952	46.5	50.1	85.9	60.1	107	158	771	1,135	582	149	56.6	45.4	271
1953	41.0	39.5	59.0	190	154	142	382	669	672	168	58.8	43.9	218
1954	46.4	69.4	63.9	55.6	130	269	664	726	229	72.3	43.0	41.6	201
1955	43.6	48.5	48.1	43.4	46.6	62.5	68.9	221	148	45.7	21.5	28.5	70.6
1956	33.9	54.9	464	366	141	290	828	1,120	577	150	54.7	42.4	344
1957	63.4	65.3	91.6	37.8	185	295	350	665	276	60.9	37.0	37.9	180
1958	65.8	69.8	72.8	90.4	317	169	451	1,057	335	89.7	50.0	43.8	234
1959	45.5	53.1	60.7	71.2	54.2	87.4	215	194	87.5	30.6	27.5	34.5	80.2
1960	39.3	36.2	35.0	45.6	65.0	155	236	319	187	33.6	21.3	20.1	99.4

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3,220	5,120	11,590	5,280	11,630	12,780	41,480	35,000	11,910	3,020	1,940	1,860	144,800
1952	2,860	2,980	5,280	3,700	6,160	9,690	45,860	69,830	34,650	9,190	3,480	2,700	196,400
1953	2,520	2,350	3,630	11,680	8,570	8,750	22,710	41,120	39,960	10,360	3,610	2,610	157,800
1954	2,850	4,130	3,930	3,420	7,200	16,520	39,530	44,620	13,620	4,450	2,650	2,470	145,400
1955	2,680	2,890	2,960	2,670	2,590	3,840	5,290	13,570	8,780	2,610	1,320	1,700	51,100
1956	2,080	3,270	28,530	22,520	8,090	17,800	49,300	68,920	34,360	9,200	3,370	2,520	250,000
1957	3,900	3,890	5,630	2,330	10,270	16,120	20,830	40,870	16,410	3,740	2,280	2,260	130,500
1958	3,920	4,150	4,480	5,560	17,620	10,410	26,840	64,980	19,940	5,510	3,070	2,600	169,100
1959	2,800	3,160	3,730	4,380	3,010	5,370	12,810	11,940	5,210	1,880	1,690	2,050	58,030
1960	2,410	2,160	2,150	2,810	3,740	9,510	14,060	19,600	11,150	2,060	1,310	1,190	72,150

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	154	111,400
1951	1214	1,040	Apr. 18, 1951	28	200	144,800	188	136,000
1952	1244	1,650	May 20, 1952	32	271	196,400	267	193,800
1953	1284	1,400	May 20, 1953	25	218	157,800	221	160,300
1954	1344	1,460	Mar. 9, 1954	35	201	145,400	198	14,300
1955	1394	374	May 21, 1955	19	70.6	51,100	106	76,450
1956	1444	3,260	Dec. 22, 1955	28	344	250,000	316	229,500
1957	1514	1,750	Feb. 26, 1957	30	180	130,500	179	129,700
1958	1564	2,320	May 12, 1958	39	234	169,100	230	166,200
1959	1634	336	Apr. 6, 1959	21	80.2	58,030	76.1	55,060
1960	1714	510	May 12, 1960	13	99.4	72,150	-	-

3880. Ana River near Summer Lake, Oreg.

Location.--Lat 43°00', long 120°45', in SE $\frac{1}{4}$ sec. 6, T.30 S., R.17 E., on left bank 300 ft downstream from diversion dam and 2 miles northeast of town of Summer Lake.

Records available.--October 1929 to September 1939 (river only); June to September 1928, April 1931 to July 1938, and April 1940 to September 1942 (irrigation season records for Summer Lake Canal only); June 1951 to September 1960. Prior to June 1951 monthly discharge only, published in WSP 1314.

Gage.--Water-stage recorder. Altitude of gage is 4,160 ft (from plans of Ana River diversion dam). Oct. 1, 1929, to Sept. 30, 1939, at site 80 ft downstream at different datum.

Average discharge.--12 years (1930-32, 1935-36, 1951-60), 91.8 cfs (66,460 acre-ft per year), adjusted for diversion.

Extremes.--1929-39, 1951-60: Maximum discharge, 186 cfs Sept. 15, 1936 (gage height, 3.87 ft), no flow in canal; minimum daily, 6 cfs May 16, 1952.

Remarks.--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. Source of stream is Ana River Springs, three-quarters of a mile above station, which are flooded over by pondage behind diversion dam.

Revisions.--Revised records (river only) for water year 1938, superseding those published in WSP 1314, are given herewith:

Month	Mean	Acre-feet	Momentary maximum	
			Discharge	Date
March 1938.....	84.2	5,180	-	-
Water year 1937-38.....	72.8	52,700	104	June 29, 1938
Calendar year 1938.....	74.6	54,000	-	-

Correction.--In WSP 1314, the headings for table of monthly diversion in Summer Lake Canal (published separately) are listed in error; they should be March to October.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	87.5	81.3	84.0	-
1952	97.6	95.0	93.6	91.9	95.5	96.9	96.7	83.7	84.5	84.1	85.4	84.4	90.8
1953	87.0	92.7	89.1	89.1	92.5	89.6	80.5	82.8	84.3	85.9	85.6	85.1	87.0
1954	91.5	89.9	90.5	95.0	95.8	95.5	90.1	78.2	82.7	83.9	81.7	79.4	87.8
1955	81.9	84.3	90.4	88.4	92.6	94.5	93.1	74.7	83.6	86.8	87.4	87.8	87.1
1956	96.0	95.7	95.2	99.7	98.8	97.5	94.9	84.7	77.6	81.6	79.5	84.3	90.5
1957	92.5	91.0	91.5	92.3	88.3	93.7	93.6	80.8	84.6	86.0	85.4	86.9	88.9
1958	99.1	93.8	99.9	103	107	105	102	77.0	85.2	91.0	89.4	95.4	95.6
1959	99.2	103	102	102	102	102	83.5	85.0	84.8	85.4	87.5	91.7	94.0
1960	98.3	96.2	99.2	98.5	98.7	95.4	89.3	84.9	84.3	86.4	93.0	92.7	93.1

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	5,380	5,000	5,000	-
1952	6,000	5,650	5,760	5,650	5,490	5,960	5,750	5,150	5,030	5,170	5,250	5,020	65,880
1953	5,350	5,520	5,480	5,480	5,140	5,510	4,790	5,090	5,020	5,280	5,260	5,070	62,990
1954	5,620	5,350	5,560	5,840	5,320	5,870	5,360	4,810	4,920	5,160	5,030	4,730	63,570
1955	5,040	5,010	5,560	5,440	5,140	5,810	5,540	4,600	4,980	5,340	5,380	5,220	63,060
1956	5,900	5,690	5,860	6,130	5,680	6,000	5,650	5,210	4,620	5,020	4,890	5,010	65,660
1957	5,690	5,410	5,630	5,670	4,900	5,760	5,570	4,970	5,040	5,290	5,250	5,170	64,350
1958	6,100	5,580	6,140	6,350	5,930	6,460	6,090	4,730	5,070	5,590	5,500	5,680	69,220
1959	6,100	6,150	6,270	6,260	5,660	6,260	4,970	5,230	5,050	5,250	5,380	5,450	68,030
1960	6,040	5,730	6,100	6,060	5,680	5,860	5,310	5,220	5,010	5,310	5,720	5,510	67,550

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean		Acre-feet	
		Discharge	Date							
1950										
1951	1214	-	-	-	-	-	-	-	-	-
1952	1244	112	Oct. 5, 1951	6	90.8	65,880	89.3		64,820	
1953	1284	145	Aug. 9, 1953	38	87.0	62,990	87.3		63,170	
1954	1344	101	Oct. 3, 1953	54	87.8	63,570	86.5		62,650	
1955	1394	110	Sept. 29, 1955	25	87.1	63,060	89.6		64,900	
1956	1444	124	Oct. 16, 1955	31	90.5	65,660	89.5		64,940	
1957	1514	102	Oct. 5, 6, 1956	23	88.9	64,350	90.4		65,440	
1958	1564	118	(a)	42	95.6	69,220	96.6		69,920	
1959	1634	137	Aug. 20, 1959	48	94.0	68,030	93.1		67,380	
1960	1714	105	Oct. 1, 2, 8, 1959	41	93.1	67,550	-		-	

a Dec. 7, 1957, Mar. 21, 22, 1958.

3900. Silver Creek near Silver Lake, Oreg.

Location.--Lat 43°06'40", long 121°04'05", in SW $\frac{1}{4}$ sec.28, T.28 S., R.14 E., on right bank 1.5 miles downstream from diversion dam of Silver Lake Irrigation District, 1.5 miles southwest of town of Silver Lake, and 3 miles upstream from Bridge Creek.

Drainage area.--180 sq mi (revised), approximately.

Records available.--January 1905 to March 1907, January 1909 to September 1927, February to December 1928, February 1929 to September 1960.

Gage.--Water-stage recorder. Concrete control since Sept. 15, 1932. Datum of gage is 4,361.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to May 24, 1932, staff gage or water-stage recorder at practically same location at datum 1.00 ft higher, or staff gage at diversion dam outlet 1.5 miles upstream at different datum.

Average discharge.--48 years (1905-6, 1909-27, 1929-41, 1943-60), including diversion by Silver Lake Irrigation District Canal, 28.2 cfs (20,420 acre-ft per year).

Extremes.--1905-7, 1909-60: Maximum discharge, 1,800 cfs Mar. 20, 1907 (gage height, 10.08 ft, present datum), from rating curve extended above 700 cfs; no flow at times in 1931-32, 1934, 1937.

Remarks.--Flow regulated by reservoir (capacity, 800 acre-ft) above diversion dam 1.5 miles above station, and by Thompson Valley Reservoir (capacity, 17,400 acre-ft) 11 miles above station. Silver Lake Irrigation District Canal diverted 1.5 miles above station in 1923-43.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	4.65	7.89	41.8	26.9	49.6	53.4	205	130	54.4	40.9	23.9	17.6	54.5
1952	10.4	7.21	14.9	9.79	16.0	19.1	234	198	62.9	50.3	20.6	10.6	54.5
1953	7.35	5.94	5.96	28.3	39.4	34.8	81.6	155	68.8	55.0	30.7	16.9	45.9
1954	10.7	10.3	11.5	13.0	22.8	75.1	291	177	49.5	37.1	20.0	14.4	61.0
1955	13.0	12.4	7.92	8.06	9.84	9.67	11.0	30.8	46.8	37.1	15.1	4.94	17.3
1956	4.77	6.78	55.1	42.6	17.3	48.4	455	274	61.6	41.8	21.3	10.5	86.4
1957	5.23	4.82	4.43	3.64	34.5	114	97.6	128	47.0	33.0	14.9	14.3	41.8
1958	12.1	8.09	9.46	9.64	92.0	87.9	234	229	99.1	40.2	22.3	19.4	71.6
1959	13.0	11.0	11.1	12.5	11.1	15.5	26.9	31.9	32.9	25.2	13.8	4.74	17.5
1960	3.07	2.55	2.15	2.42	4.96	11.0	20.3	31.6	41.2	34.4	16.9	6.54	14.8

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	286	469	2,570	1,650	2,750	3,280	12,190	8,010	3,240	2,510	1,470	1,050	39,480
1952	639	429	914	602	918	1,180	13,920	12,200	3,740	3,090	1,270	630	39,530
1953	452	354	366	1,740	2,190	2,140	4,860	9,550	5,280	3,380	1,890	1,010	33,210
1954	657	614	706	799	1,270	4,620	17,310	10,860	2,950	2,280	1,230	759	44,160
1955	799	738	487	497	546	595	656	1,900	2,790	2,280	928	294	12,510
1956	293	403	3,390	2,620	994	2,980	27,050	16,840	3,670	2,570	1,310	627	62,750
1957	322	287	273	224	1,920	7,020	5,810	7,850	2,790	2,030	914	851	30,290
1958	743	482	582	593	5,110	5,400	13,950	14,070	5,890	2,470	1,370	1,150	51,810
1959	797	654	680	788	616	950	1,800	1,960	1,960	1,550	849	282	12,670
1960	169	152	132	143	285	674	1,210	1,940	2,450	2,120	1,040	389	10,730

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	23.1	16,710
1951	1214	357	Apr. 18, 1951	2.7	54.5	39,480	52.7	38,130
1952	1244	544	Apr. 26, 1952	4.8	54.5	39,530	55.4	38,720
1953	1284	225	May 21, 1953	4.2	45.9	33,210	47.0	34,020
1954	1344	434	Apr. 23, 1954	7.5	61.0	44,160	61.0	44,200
1955	1394	53	June 3-6, 1955	4.2	17.3	12,510	20.1	14,570
1956	1444	930	Dec. 22, 1955	3.9	86.4	62,750	82.0	59,540
1957	1514	366	Feb. 28, 1957	2.8	41.8	30,290	43.1	31,220
1958	1564	520	Apr. 22, 1958	6.2	71.6	51,810	72.0	52,130
1959	1634	42	May 1-2, 1959	3.6	17.5	12,670	15.2	11,010
1960	1714	54	(a)	1.9	14.8	10,730	-	-

a June 26, 27, 28, 1960.

3935. Silvies River near Burns, Oreg.

Location.--Lat 43°43', long 119°11', in NW $\frac{1}{4}$ sec.31, T.21 S., R.30 E., on left bank 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 December 1912, March 1913 to September 1917 (irrigation seasons only), March 1918 to October 1920, March 1921 to July 1922 (irrigation seasons only), October 1922 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 4,195 ft above mean sea level, datum of 1929, supplementary adjustment of 1947 (river-profile survey). 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 $\frac{1}{2}$ miles downstream at different datum. Apr. 7, 1922, to Oct. 1, 1941, water-stage recorder at present site and datum. Oct. 2, 1941, to Oct. 3, 1951, water-stage recorder at site 400 ft downstream at same datum.

Average discharge.--47 years (1903-5, 1909-12, 1917-21, 1922-60), 163 cfs (118,000 acre-ft per year).

Extremes.--1903-6, 1908-60: Maximum discharge, 4,960 cfs about Apr. 6, 1952 (gage height, 15.2 ft); no flow July 19 to Sept. 22, 1934.

Remarks.--No regulation. Diversions for irrigation above station primarily by flooding during high flow.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	20.3	39.8	71.8	65.6	254	425	1,328	483	93.7	34.6	10.9	10.0	233
1952	18.6	30.3	47.8	44.2	50.6	376	2,716	947	168	59.0	21.7	16.6	375
1953	19.6	25.9	33.5	127	243	298	861	631	473	78.2	25.6	21.3	252
1954	29.3	50.7	70.8	64.3	191	352	536	197	91.7	17.9	9.49	10.4	134
1955	17.8	28.2	25.1	23.2	30.5	51.8	193	372	87.9	25.5	6.25	7.16	72.6
1956	12.6	30.4	113	125	103	593	1,467	774	208	45.4	15.0	16.1	291
1957	33.0	52.0	66.1	40.7	649	546	944	655	142	24.0	11.4	11.1	261
1958	32.3	35.2	50.9	54.8	529	468	1,394	1,028	218	62.8	26.0	22.9	324
1959	31.7	40.9	49.2	101	80.3	111	245	124	29.4	8.56	4.89	9.29	69.5
1960	20.5	29.4	26.3	23.2	44.9	555	755	233	75.4	12.7	7.23	7.47	149

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	1,250	2,370	4,420	4,040	14,120	26,100	78,990	28,480	5,580	2,130	672	597	168,700
1952	1,140	1,800	2,940	2,720	2,910	23,120	161,600	58,240	10,000	3,630	1,330	990	270,400
1953	1,210	1,540	2,060	7,810	13,510	18,320	51,230	51,090	28,140	4,810	1,570	1,270	182,600
1954	1,800	3,010	4,360	3,950	10,620	21,620	31,860	12,110	5,460	1,100	584	622	97,100
1955	1,100	1,680	1,540	1,430	1,690	3,190	11,500	22,860	5,230	1,570	385	426	52,600
1956	777	1,810	6,980	7,690	5,930	36,460	87,270	47,610	12,360	2,790	922	956	211,600
1957	2,030	3,030	4,060	2,500	36,050	33,550	56,150	40,280	8,480	1,470	700	659	189,000
1958	1,980	2,090	3,130	3,370	29,580	28,780	82,960	63,200	12,960	3,860	1,600	1,360	234,700
1959	1,950	2,430	3,020	6,210	4,460	6,850	14,600	7,640	1,750	526	301	553	50,290
1960	1,260	1,750	1,610	1,430	2,560	34,100	44,930	14,320	4,480	781	444	444	106,100

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean
		Discharge	Date				
1950	-	-	-	-	-	-	152
1951	1214	2,180	Apr. 8, 1951	8	235	168,700	250
1952	1244	4,960	Apr. 6, 1952	12	373	270,400	371
1953	1284	1,850	Apr. 28, 1953	16	252	182,600	258
1954	1344	-	Mar. 10, 1954	7.7	134	97,100	127
1955	1394	581	May 8, 9, 1955	4.0	72.6	52,600	79.9
1956	1444	2,090	Mar. 26, 1956	7.7	291	211,600	291
1957	1514	3,110	Feb. 25, 1957	9.7	261	189,000	258
1958	1564	2,550	Apr. 21, 1958	18	324	234,700	324
1959	1634	447	Apr. 6, 1959	2.1	69.5	50,290	65.6
1960	1714	1,530	Apr. 8, 1960	4.2	149	108,100	-

3960. Donner und Blitzen River near Frenchglen, Oreg.

Location.--Lat 42°47', long 118°52', in NW $\frac{1}{4}$ sec.20, T.32 S., R.32 $\frac{1}{2}$ E., on left bank $\frac{1}{4}$ miles upstream from upper diversions for Malheur Migratory Waterfowl Refuge, 2 miles downstream from Fish Creek, and 3 $\frac{1}{2}$ miles southeast of Frenchglen.

Drainage area.--200 sq mi (revised), approximately.

Records available.--March 1911 to September 1913, March 1914 to September 1916, April 1917 to September 1921, August to November 1929, April to September 1930, December 1937 to September 1960. Monthly discharge only for some periods, published in WSP 1314. Published as "near Diamond" 1911-21. Records of discharge for January 1909 to September 1910 (published in WSP 370 as "at mouth of canyon, near Diamond") and February 1909 to July 1910 (published in WSP 270, 290, and 370, for a nonequivalent site as "near Diamond") have been found to be unreliable and should not be used.

Gage.--Water-stage recorder. Concrete control since Nov. 27, 1937. Datum of gage is 4,254 ft above mean sea level (levels by Fish and Wildlife Service). Prior to December 1937, staff gage at several sites within 2 miles downstream at different datums.

Average discharge.--30 years (1911-13, 1914-16, 1917-21, 1938-60), 125 cfs (90,500 acre-ft per year).

Extremes.--1911-21, 1929-30, 1937-60: Maximum discharge, 2,750 cfs May 19, 1953 (gage height, 6.29 ft); minimum, 8 cfs Jan. 14, 1940, result of ice jam upstream; minimum daily, 16 cfs Dec. 4, 5, 1959, Jan. 13, 18, 1960.

Remarks.--No regulation or diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	38.5	45.0	58.7	53.9	177	149	278	301	238	73.4	42.7	38.5	124
1952	46.7	44.4	42.1	42.1	43.1	157	668	610	433	196	73.7	56.2	201
1953	48.9	46.7	47.6	53.4	59.3	63.1	115	284	502	176	59.1	46.1	125
1954	44.5	46.0	61.9	55.9	92.6	150	184	256	160	66.0	40.6	37.7	99.6
1955	36.4	36.8	36.3	37.9	35.0	71.8	123	329	312	72.5	36.6	34.9	97.1
1956	38.0	43.8	138	175	63.4	155	281	456	278	96.5	46.4	41.1	151
1957	64.1	62.7	90.9	42.0	204	197	214	578	435	109	51.4	46.3	174
1958	59.5	51.8	51.5	61.2	283	84.8	206	538	272	102	54.6	46.8	150
1959	45.5	44.3	47.9	45.8	41.2	49.1	105	140	132	39.7	24.3	33.4	62.3
1960	49.4	31.3	25.2	26.5	60.2	198	209	246	259	52.6	35.7	31.7	102

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	2,370	2,680	3,610	3,310	9,850	9,180	16,560	18,480	14,190	4,510	2,630	2,290	89,660
1952	2,870	2,640	2,590	2,590	2,480	9,880	59,850	37,480	25,770	12,080	4,530	3,340	145,700
1953	3,000	2,780	2,950	3,280	5,290	3,880	6,840	17,480	29,840	10,800	5,840	2,740	90,500
1954	2,740	2,740	3,800	3,440	5,150	9,230	10,960	15,730	9,510	4,060	2,500	2,240	72,100
1955	2,240	2,190	2,230	2,330	1,940	4,410	7,340	20,230	18,580	4,450	2,250	2,080	70,270
1956	2,330	2,610	8,490	10,750	3,650	9,500	16,730	28,040	16,530	5,930	2,850	2,450	109,900
1957	3,940	3,730	5,590	2,580	11,340	12,090	12,750	35,510	25,860	6,710	3,160	2,750	126,000
1958	3,660	3,080	3,170	3,760	15,730	5,210	12,240	33,100	16,160	6,300	5,360	2,780	108,600
1959	2,790	2,640	2,940	2,810	2,290	3,020	6,230	8,610	7,880	2,440	1,500	1,990	45,140
1960	3,040	1,860	1,550	1,630	3,470	12,190	12,450	15,140	15,390	3,230	2,200	1,890	74,040

† Corrected.

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	106	76,660
1951	1214	2,000	Feb. 7, 1951	23	124	89,660	123	89,100
1952	1244, 1564	2,260	Apr. 6, 1952	21	201	145,700	202	146,300
1953	1284, 1564	2,750	May 19, 1953	27	125	90,500	126	91,070
1954	1344	1,240	Mar. 9, 1954	30	99.6	72,100	96.0	69,480
1955	1394	1,060	Apr. 22, 1955	23	97.1	70,270	106	77,040
1956	1444	2,140	Jan. 15, 1956	28	151	109,900	151	109,700
1957	1514	2,560	May 18, 1957	26	174	126,000	169	122,700
1958	1564	1,420	Feb. 15, 1958	32	150	108,600	148	107,000
1959	1634	331	May 14, 1959	22	62.3	45,140	59.7	43,220
1960	1714	1,030	Mar. 7, 1960	16	102	74,040	-	-

3970. Bridge Creek near Frenchglen, Oreg.

Location.--Lat 42°50', long 118°51', in NW $\frac{1}{4}$ sec.33, T.31 S., R.32 $\frac{1}{2}$ E., on right bank at mouth of canyon, $3\frac{1}{2}$ miles northeast of Frenchglen.

Drainage area.--30 sq mi, approximately.

Records available.--March to August 1911, January 1912 to September 1916, April to June 1930, December 1937 to September 1960. Monthly discharge only April to June 1930, published in WSP 1314. Published as "near Diamond" 1911-16.

Gage.--Water-stage recorder. Concrete control since Oct. 31, 1939. Datum of gage is 4,184.93 ft above mean sea level (levels by Fish and Wildlife Service). Prior to Dec. 21, 1937, staff gage at sites within 1 mile upstream at different datums. Dec. 21, 1937, to May 17, 1938, staff gage at site 1,000 ft downstream at different datum. May 18, 1938, to Aug. 22, 1939, staff gage at present site and datum.

Average discharge.--26 years (1912-16, 1938-60), 14.0 cfs (10,140 acre-ft per year).

Extremes.--1911-16, 1930, 1937-60: Maximum discharge, 301 cfs May 19, 1953 (gage height, 2.73 ft), from rating curve extended above 65 cfs by logarithmic plotting; minimum, 6.0 cfs sometime during period Dec. 22, 1959, to Jan. 13, 1960.

Remarks.--No regulation or diversion above station. Low-water flow is sustained by large springs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	10.9	10.3	9.89	11.0	12.4	10.9	17.2	18.2	11.0	10.6	10.3	10.4	11.9
1952	10.4	11.0	11.0	9.67	10.9	14.7	37.3	40.4	20.1	13.6	12.5	14.0	17.1
1953	14.2	14.8	14.3	15.0	14.4	12.9	12.7	21.5	21.8	13.0	13.0	12.4	15.0
1954	13.0	12.9	12.6	12.3	10.9	13.1	21.3	14.2	11.7	11.0	12.2	12.0	13.1
1955	12.0	12.0	11.6	10.5	9.10	9.29	12.3	25.4	12.6	10.5	11.1	12.0	12.4
1956	12.0	11.5	15.3	11.6	11.4	15.6	22.0	24.4	14.1	12.3	12.0	11.6	14.5
1957	12.2	11.2	12.0	12.0	24.6	21.4	26.6	43.6	14.0	13.4	14.0	14.0	18.2
1958	12.8	12.7	13.7	13.8	20.5	12.7	22.5	21.9	14.3	13.1	12.6	13.0	15.3
1959	13.0	12.5	12.0	11.6	11.0	11.0	11.4	10.3	10.3	9.76	8.30	8.42	10.8
1960	8.05	7.48	7.44	6.99	9.00	12.5	15.5	16.5	11.1	11.5	11.3	10.5	10.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	668	613	608	675	686	668	1,050	1,120	653	655	635	619	8,630
1952	658	655	676	594	627	903	2,220	2,480	1,200	855	770	833	12,430
1953	873	879	881	922	797	791	758	1,320	1,300	799	799	740	10,860
1954	799	770	774	758	605	803	1,270	873	694	676	748	714	9,480
1955	738	714	712	644	506	571	732	1,560	750	645	682	714	8,970
1956	738	684	938	715	655	962	1,310	1,500	841	756	738	692	10,530
1957	748	668	758	738	1,360	1,320	1,580	2,680	833	821	861	835	13,180
1958	787	758	845	849	1,140	783	1,340	1,350	849	805	776	774	11,060
1959	799	742	758	712	611	676	676	635	615	600	510	501	7,820
1960	495	445	457	430	517	769	921	1,010	662	708	692	622	7,730

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950	-	-	-	-	-	-	12.2	8,830
1951	1214	72	Jan. 24, 1951	7.6	11.9	8,630	13.4	8,710
1952	1244	180	May 9, 1952	8.7	17.1	12,450	18.0	13,100
1953	1264	301	May 19, 1953	12	15.0	10,860	14.6	10,570
1954	1344	91	June 10, 1954	9.9	13.1	9,480	12.8	9,300
1955	1394	215	May 19, 1955	8.3	12.4	8,970	12.7	9,160
1956	1444	169	Dec. 23, 1955	9.9	14.5	10,530	14.2	10,320
1957	1514	289	May 19, 1957	10	18.2	13,180	18.5	13,420
1958	1564	160	Feb. 12, 1958	12	15.3	11,060	15.1	10,940
1959	1634	13	(a)	8.3	10.8	7,820	9.58	6,930
1960	1714	90	Mar. 7, 1960	6.5	10.7	7,730	-	-

a Oct. 1 to Nov. 14, 1958.

4030. 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 1960.

Gage.--Water-stage recorder. Altitude of gage is 4,450 ft (by barometer).

Average discharge.--9 years (1951-60), 48.1 cfs (34,820 acre-ft per year).

Extremes.--1951-60: Maximum discharge, 1,300 cfs Apr. 6, 1952 (gage height, 6.65 ft); no flow Dec. 3, 1957, Jan. 13, 1960, result of freezeup.

Remarks.--No regulation. Diversions for irrigation of 500 acres above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	4.68	22.2	1.98	-
1952	4.42	3.49	4.35	5.53	5.97	135	711	114	24.0	10.3	5.99	3.19	84.8
1953	3.16	3.74	4.93	16.0	45.0	74.1	242	142	79.0	14.6	6.15	4.40	52.6
1954	4.93	7.04	8.54	14.7	44.5	112	145	29.8	15.5	4.33	2.23	2.06	32.4
1955	2.68	3.67	2.92	1.82	1.70	5.36	60.4	122	17.2	5.65	1.03	1.40	18.9
1956	2.26	4.82	14.6	32.6	18.7	203	345	118	28.6	11.2	4.19	2.98	65.4
1957	5.02	5.93	5.92	4.10	149	179	294	98.3	30.3	7.21	2.66	2.23	64.5
1958	6.55	5.51	9.79	21.0	169	97.0	399	128	26.4	10.9	4.07	3.33	72.2
1959	5.59	5.18	4.80	8.31	8.58	18.3	61.0	19.6	6.17	1.21	.51	1.68	11.5
1960	2.93	3.12	1.47	1.29	3.76	125	169	37.0	18.1	3.66	1.50	1.48	30.7

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	-	-	-	-	-	-	-	-	-	288	136	118	-
1952	272	208	268	340	343	8,310	42,290	7,000	1,430	634	246	190	61,530
1953	194	223	303	982	2,500	4,550	14,390	8,700	4,700	900	378	262	38,080
1954	303	419	525	902	2,470	6,910	8,630	1,830	921	266	137	123	23,440
1955	165	218	179	112	95	330	3,590	7,470	1,030	347	63	84	13,680
1956	139	287	897	2,010	1,070	12,510	20,500	7,270	1,700	687	257	177	47,500
1957	308	353	364	252	8,290	11,000	17,510	6,040	1,800	445	163	132	46,960
1958	403	328	602	1,290	9,400	5,960	23,730	7,850	1,570	668	250	198	52,250
1959	221	308	295	511	476	1,120	3,630	1,200	367	75	31	100	8,330
1960	180	186	90	79	216	7,700	10,070	2,280	1,080	225	92	88	22,290

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet
		Discharge	Date					
1950								
1951	1214	-	-	0.9	-	-	-	-
1952	1244	1,500	Apr. 6, 1952	2.6	84.8	61,530	84.7	61,500
1953	1284	415	Apr. 22, 1953	2.6	52.6	38,080	53.3	38,610
1954	1344	403	Mar. 10, 1954	1.6	32.4	23,440	31.4	22,750
1955	1394	275	May 8, 1955	.5	18.9	13,680	20.0	14,450
1956	1444	1,090	Mar. 25, 1956	1.8	65.4	47,500	65.0	47,210
1957	1514	1,120	Feb. 23, 1957	1.7	64.5	46,960	64.9	46,960
1958	1564	878	Apr. 18, 1958	2.8	72.2	52,250	71.5	51,740
1959	1634	155	Apr. 6, 1959	.2	11.5	8,330	11.0	7,970
1960	1714	499	Mar. 7, 1960	0	30.7	22,290	-	-

4065. Trout Creek near Denio, Oreg.

Location.--Lat 42°10', long 118°28', in SW $\frac{1}{4}$ sec.26, T.39 S., R.36 E., on right bank 0.4 mile upstream from bridge at mouth of canyon, 5 miles east of Trout Creek Ranch, and 14 miles northeast of Denio.

Drainage area.--88 sq mi (revised), approximately.

Records available.--March 1911 to March 1912, April 1922 to November 1923, March 1925 to September 1931 (irrigation seasons only), April 1932 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 4,351.52 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Mar. 25, 1911, to Mar. 31, 1912, staff gage at bridge 0.4 mile downstream at different datum. Apr. 28, 1922, to June 14, 1932, water-stage recorder at site 10 ft upstream at datum 0.50 ft higher.

Average discharge.--29 years (1922-23, 1932-60), 14.9 cfs (10,790 acre-ft per year).

Extremes.--1911-12, 1922-23, 1925-60: Maximum discharge, 470 cfs Aug. 1, 1933 (gage height, 5.26 ft), from rating curve extended above 230 cfs by logarithmic plotting; minimum observed, 0.1 cfs Aug. 4, 1930, Aug. 1, Sept. 12, 1934. Probably no flow at times Sept. 1-19, 1931.

Maximum stage known, 6.0 ft (caused by cloudburst), probably occurred in 1924 or 1925.

Remarks.--No regulation. Diversions for irrigation of 800 acres above station.

Corrections.--In WSP 1314, the calendar year mean for 1933 is listed in error; it should be 9.08 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	3.74	5.12	6.90	5.92	10.1	14.6	47.1	59.1	18.4	5.39	2.76	2.79	15.2
1952	4.16	4.76	5.11	4.72	4.98	17.4	105	151	92.3	40.7	9.06	6.71	37.2
1953	5.85	5.97	5.52	6.15	6.89	10.8	25.1	48.1	87.8	14.7	5.28	4.46	19.0
1954	5.68	6.63	7.15	6.39	6.80	10.4	18.6	20.9	6.54	4.35	2.67	2.78	8.41
1955	4.00	5.01	5.06	4.91	5.03	5.48	8.59	30.3	21.4	4.01	1.88	1.59	8.12
1956	2.79	3.87	5.87	12.9	6.06	15.5	38.0	63.0	27.5	10.1	3.48	3.06	16.0
1957	5.46	7.75	7.93	4.63	8.70	24.2	46.8	115	42.6	9.86	4.14	3.58	23.5
1958	6.20	6.32	5.69	5.29	21.1	15.2	44.7	93.0	52.4	14.8	5.61	4.91	22.9
1959	6.26	6.84	6.69	6.73	5.30	6.35	11.1	15.0	13.4	3.50	2.09	2.98	7.18
1960	4.80	4.88	2.92	3.12	6.13	14.4	24.7	37.9	19.3	7.75	5.36	3.09	11.0

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	230	304	424	354	563	899	2,800	3,630	1,090	331	170	166	10,970
1952	256	283	314	290	287	1,070	6,280	9,290	5,490	2,510	557	399	27,030
1953	360	355	340	501	383	664	1,490	2,960	5,230	904	325	265	13,780
1954	349	395	440	393	378	639	1,110	1,280	508	267	164	165	6,090
1955	246	298	311	302	279	337	511	1,860	1,280	247	115	94	5,880
1956	172	230	361	793	348	952	2,260	3,870	1,640	622	214	182	11,640
1957	336	461	487	284	453	1,490	2,780	7,040	2,540	606	255	213	16,960
1958	381	376	350	325	1,170	932	2,660	5,720	3,120	911	345	292	16,580
1959	385	407	411	414	294	391	660	920	795	215	129	178	5,200
1960	295	291	179	192	353	882	1,470	2,330	1,150	477	207	184	8,010

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Acre-feet	Mean	Acre-feet	
		Discharge	Date						
1950	-	-	-	-	-	-	-	-	-
1951	1214	88	May 11, 1951	2.2	15.2	10,970	10.8	7,840	
1952	1244	250	Apr. 28, 1952	3	37.2	27,030	15.0	10,870	
1953	1284	180	June 7, 1953	3.8	19.0	13,780	19.2	27,230	
1954	1344	35	Apr. 19, 1954	2.3	8.41	6,090	7.96	13,910	
1955	1394	53	May 22, 1955	.9	8.12	5,880	8.00	5,760	
1956	1444	112	May 21, 1956	2.3	16.0	11,640	16.8	5,790	
1957	1514	211	May 11, 1957	3	23.5	16,960	23.2	12,160	
1958	1564	141	May 12, 1958	3.8	22.9	16,580	23.0	16,800	
1959	1634	35	May 26, 1959	1.6	7.18	5,200	6.58	16,680	
1960	1714	80	May 13, 1960	2.0	11.0	8,010	-	4,760	

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