Surface Water Supply of the United States 1948

Part 10. The Great Basin

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

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1120

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

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PREFACE

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

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SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of stage and flow made on streams, lakes, and reservoirs in the United States during the water year ending September 30, 1948. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of the flow of streams and of the stage and contents of lakes and reservoirs have been made at about 11,370 gaging stations in the 48 States and also at many in the Territories of Alaska and Hawaii. In July 1948, 5,960 gaging stations, including those in Hawaii, were being maintained by the Geological Survey and cooperating organizations. Miscellaneous discharge measurements were made during the water year at many other points.

In the execution of the work many State and private organizations have cooperated, either by furnishing data or by assisting in collecting data. Cooperation of the first kind is acknowledged in connection with the description of each station affected; cooperation of the second kind is acknowledged, under the heading "Cooperation," in the introductory matter that precedes the gaging-station records in each volume. In the present volume, the section on cooperation of the second kind appears on page 13.

DEFINITION OF TERMS

The units in which stream-flow data are presented in this report and other terms used herein are defined as follows:

"Second-feet" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

"Second-feet per square mile" is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the runoff is distributed uniformly both as regards time and area.

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

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

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

"Stage-discharge relation" is an abbreviation for the term "relation between gage height and discharge."

"Control" is a term used to designate a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural section, a reach of the channel, or an artificial structure.

"Contents" is a term applied to the volume of water in a reservoir. It is computed on the basis of a level pool and does not include bank storage unless otherwise indicated.

EXPLANATION OF DATA

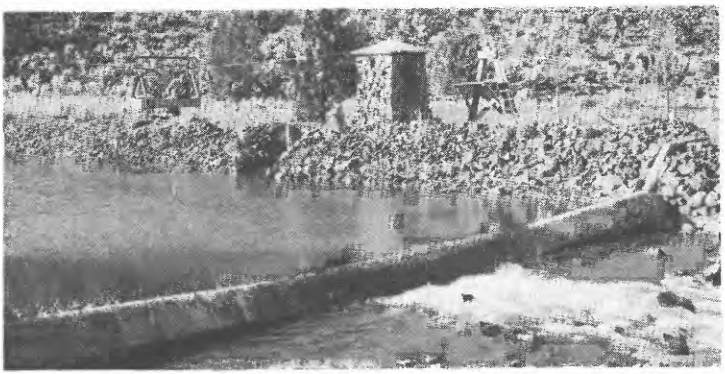
The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the records of stage and discharge measurements in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods outlined in standard textbooks on the measurement of river discharge. Typical structures in use at gaging stations are shown in figure 1.

Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily mean gage height to those rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the "shifting-control method," in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. At times the stage-discharge relation for a station may be temporarily changed by the presence of aquatic growth or debris on the control. For such times the daily mean discharge is computed by what is essentially the "shifting-control" method, described above.

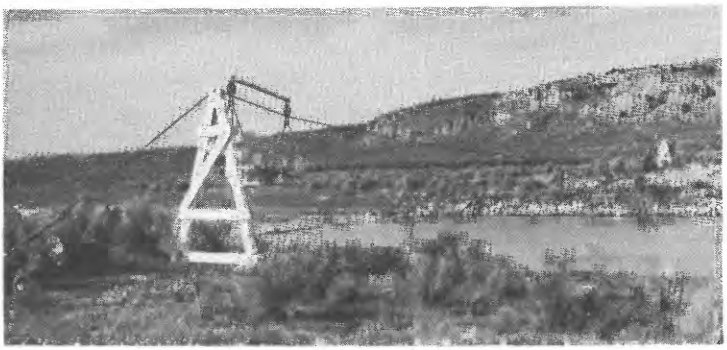
At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources, which necessitates the use of the "slope method," in which the slope or fall in a reach of the stream is a factor in the determination of discharge. Information requisite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

At most gaging stations in the northern part of the United States and at some in the mountainous regions of other parts the stage-discharge relation is affected by ice during the winter, which makes it impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for stations in the same or nearby basins. For those stations at which the stage-discharge relation is affected by ice, the days included in the periods of ice effect either are indicated in the table by symbols referring to a footnote that states this fact or are given in a general note following the table. The days on which discharge measurements were made during or between periods of ice effect, shortly before the first period, or shortly after the last period are similarly indicated by a footnote.

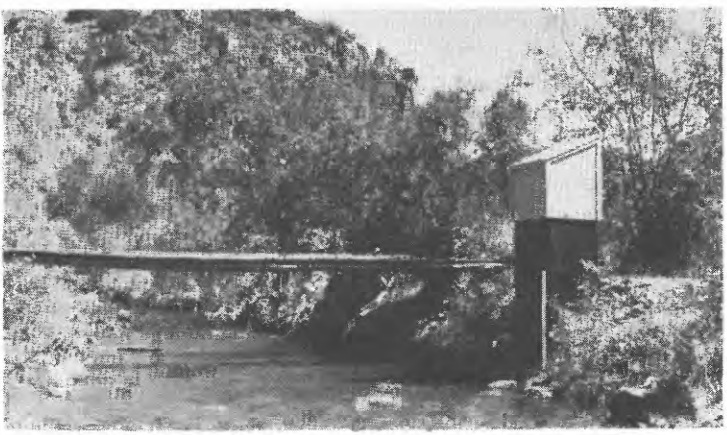
For most of the gaging stations on streams in the area covered by this report the data presented comprise a description of the station, a table showing the daily discharge of



A. DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OREG.



B. SEVIER RIVER NEAR JUAB, UTAH.



C. BEAVER RIVER NEAR BEAVER, UTAH.

FIGURE 1.—GAGING-STATION STRUCTURES.

the stream, and a table of monthly and yearly discharge and runoff. Skeleton rating tables are published for all stations except those at which the daily discharge for the greater part of the year was determined by the shifting-control method, the slope method, or other special methods.

The description of the station gives the type of gage, location, drainage area, records available, average discharge, extremes of discharge, general remarks, and notations of revisions of previously published record. The location of the gaging station and the drainage area are obtained from the most accurate maps available. Under "Average discharge" is given the average discharge for the number of years indicated. It is not given for stations having less than 10 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (unless it is of no importance). Unless otherwise qualified, the maximum discharge corresponds to the crest stage, obtained by use of a water-stage recorder or a nonrecording gage read at the time of the crest. Information pertaining to the accuracy of the records and conditions which affect the natural flow at the gaging station is given under "Remarks."

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

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

corresponding to either once-daily readings of the gage, the mean of twice-daily readings, or the mean gage height determined from gage-height graphs based on gage readings. For periods of rapidly changing stage, the daily mean discharge is determined from gage-height graphs based on gage readings, the frequency of which is stated in the station description.

In the table of monthly discharge the column headed "Second-foot-days" gives the sum for each month of the figures given in the table of daily discharge. The column headed "Maximum" gives the maximum daily discharge, not the momentary discharge when the water surface was at crest stage. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" gives the average flow in cubic feet per second during the month.

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

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

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

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

Yield at some stations as indicated by monthly means may vary widely from natural yield, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or other factors. For such stations figures of "second-feet per square mile" and "runoff in inches" are not published unless storage or diversion records are included indicating the extent of the regulation or diversion or unless satisfactory adjustments can be made for changes in contents or reservoirs or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless its inclusion is indicated. Even at those stations where adjustments are made, in some instances large errors in computed yields may occur when relatively large negative adjustments are applied or when evaporation is large in comparison with the observed discharge. Figures of second-feet per square mile and runoff in inches are also omitted if the drainage area includes large noncontributing areas or if the average annual rainfall over the drainage area is less than 20 inches.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and therefore the discharge recorded does not show the water supply available for further development, as prior appropriations below the station must first be satisfied.

The table of monthly discharge presents in summary the distribution of the flow past the station. The table of daily discharge affords opportunity for more detailed studies of the variation in flow. As further observations in each succeeding year may be expected to throw new light on data previously published, it should be borne in mind that such data are subject to revision in succeeding water-supply papers.

PUBLICATIONS

The results of stream-flow measurements are now published annually in 14 parts, each part covering an area whose boundaries coincide with natural drainage features as indicated below:

Part 1. North Atlantic slope basins (St. John River to York River).
2. South Atlantic slope and eastern Gulf of Mexico basins (James River to Mississippi River).
3. Ohio River Basin.
4. St. Lawrence River Basin.
5. Hudson Bay and upper Mississippi River Basins.
6. Missouri River Basin.
7. Lower Mississippi River Basin.
8. Western Gulf of Mexico basins.
9. Colorado River Basin.
10. The Great Basin.
11. Pacific slope basins in California.
12. Pacific slope basins in Washington and upper Columbia River Basin.
13. Snake River Basin.
14. Pacific slope basins in Oregon and lower Columbia River Basin.

Water-supply papers and other publications of the Geological Survey containing data on the water resources of the United States may be obtained or consulted as explained below.

1. Copies may be purchased at nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D. C., who will, on application, furnish lists giving prices.

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

3. Sets are available for consultation in the offices of the water resources branch of the Geological Survey as follows:

East of the Mississippi River:
Albany, N. Y., 526 Federal Building.
Asheville, N. C., 220 Post Office Building.
Atlanta, Ga., 411 Grand Theater Building.
Augusta, Maine, 420 Statehouse.
Baton Rouge, La., 538 Florida Street.
Boston, Mass., 939 Post Office Building.
Champaign, Ill., 605 South Neil Street.
Charleston, W. Va., 408 Union Building.
Charlottesville, Va., Cabell Hall, University of Virginia.
Chattanooga, Tenn., 442 Post Office Building.
College Park, Md., 106 Engineering Building, University of Maryland.
Columbia, S. C., 207 Creason Building.
Columbus, Ohio, 404 Engineering Experiment Station, Ohio State University.
Harrisburg, Pa., 490 Education Building.
Hartford, Conn., 203 Federal Building.
Indianapolis, Ind., 311 West Washington Street.
Jackson, Miss., 208 Millsaps Building.
Knoxville, Tenn., 337 Post Office Building.
Louisville, Ky., 531 Federal Building.
Madison, Wis., 666 State Office Building.
Montgomery, Ala., 507 Post Office Building.
New Philadelphia, Ohio, Muskingum Watershed Conservancy District Building.
Ocala, Fla., 302 Post Office Building.
Pittsburgh, Pa., 515 Plaza Building.
Raleigh, N. C., 908 Capitol Club Building.
St. Paul, Minn., 1427 New Post Office Building.
Trenton, N. J., 228 Federal Building.
Washington, D. C., Federal Services Administration Building.

West of the Mississippi River:
Austin, Tex., 302 West Fifteenth Street.
Bismarck, N. Dak., 7 Eltinge Building.
Boise, Idaho, 429 Federal Building.
Denver, Colo., 126 New Customhouse.
Fort Smith, Ark., 6 Post Office Building.
Helena, Mont., 408 Federal Building.
Honolulu, Hawaii, 225 Federal Building.
Idaho Falls, Idaho, 204 Federal Building.
Iowa City, Iowa, 508 Hydraulic Laboratory, University of Iowa.
Lincoln, Nebr., 510 Rudge-Guenzel Building.
Los Angeles, Calif., 429-F United States Post Office and Courthouse.
Oklahoma City, Okla., 203 Council Building.
Pierre, S. Dak., 207 Federal Building.
Portland, Oreg., 606 Post Office Building.
Rolla, Mo., 211 Ramsey Building.
St. Louis, Mo., 1004 New Federal Building.
Salt Lake City, Utah, 303 Federal Building.
San Francisco, Calif., 702 Appraisers Building.
Santa Fe, N. Mex., 204 United States Courthouse.
Tacoma, Wash., 207 Federal Building.
Topeka, Kans., 305 Federal Building.
Tucson, Ariz., 210 Post Office Building.

A list of Geological Survey publications may be obtained by applying to the Director, Geological Survey, Washington, D. C.

Prior to publication, records of discharge in provisional form for individual stations may usually be obtained from the district offices listed above.

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

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

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

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.	
11th A, pt. 2	Monthly discharge and descriptive information	1884 to September 1890.
12th A, pt. 2	....do	1884 to June 30, 1891.
13th A, pt. 3	....do	1884-92.
14th A, pt. 2	Monthly discharge	1888-93.
B 131	Descriptions, measurements, gage heights, and ratings	1893-94.
16th A, pt. 2	Descriptive information only.	
B 140	Descriptions, measurements, gage heights, ratings, and monthly discharge.	1895.
W 11	Gage heights	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge	1895-96.
W 15	Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.	1897.
W 16	Descriptions, measurements, and gage heights of stream west of the Mississippi River, except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge.	1897.
W 27	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.
W 28	Measurements, ratings, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries.	1898.
20th A, pt. 4	Monthly discharge	1898.
W 35 to 39	Descriptions, measurements, gage heights, and ratings	1899.
21st A, pt. 4	Monthly discharge	1899.
W 47 to 52	Descriptions, measurements, gage heights, and ratings	1900.
22d A, pt. 4.	Monthly discharge	1900.
W 65, 66	Descriptions, measurements, gage heights, and ratings	1901.
W 75	Monthly discharge	1901.

Papers on surface water supply containing records from 1899 to date, grouped by years and drainage basins, are listed by number on page 8. The data for any particular gaging station will, in general, be found in the reports covering the years during which the station was maintained. For example, the data for 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

Numbers of water-supply papers containing results of stream measurements, 1899-1948 (for basins included see p. 6).

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1899 a	35	b35, 36	36	36	36	c36, 37	37	37	d37, 38	38, e39	38, f39	38	38	38
1900 g	47, h48	48	48, 149	49	49	49, j50	50	50	50	51	51	51	51	51
1901	65, 75	65, 75	65, 75	65, 75	k65, 66, 75	66, 75	k65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82	b82, 83	83	m82, 83	k83, 85	84	k83, 84	84	85	85	85	85	85	85
1903	97	b97, 98	98	97	k98, 99, n100	99	k98, 99	99	100	100	100	100	100	100
1904	o124, p125, q126	q126, 127	128	129	k128, 130	130, r131	k128, 131	132	133	133, s134	134	135	135	135
1905	o165, p166, q167	q167, 168	169	170	171	172	k169, 173	174	175, t177	176, s177	177	178	178	u177, 178
1906	o201, p202, q203	q203, 204	205	206	207	208	k205, 209	210	211, t213	212, s213	213	214	214	214
1907-8	241	242	243	244	245	246	247	248	249	250, s251	251	252	252	252
1909	261	262	263	264	265	266	267	268	269	270, s271	271	272	272	272
1910	281	282	283	284	285	286	287	288	289	290	291	292	292	292
1911	301	302	303	304	305	306	307	308	309	310	311	312	312	312
1912	321	322	323	324	325	326	327	328	329	330	331	332-A	332-B	332-C
1913	351	352	353	354	355	356	357	358	359	360	361	362-A	362-B	362-C
1914	381	382	383	384	385	386	387	388	389	390	391	392	393	394
1915	401	402	403	404	405	406	407	408	409	410	411	412	413	414
1916	431	432	433	434	435	436	437	438	439	440	441	442	443	444
1917	451	452	453	454	455	456	457	458	459	460	461	462	463	464
1918	471	472	473	474	475	476	477	478	479	480	481	482	483	484
1919-20	501	502	503	504	505	506	507	508	509	510	511	512	513	514
1921	521	522	523	524	525	526	527	528	529	530	531	532	533	534
1922	541	542	543	544	545	546	547	548	549	550	551	552	553	554
1923	561	562	563	564	565	566	567	568	569	570	571	572	573	574
1924	581	582	583	584	585	586	587	588	589	590	591	592	593	594
1925	601	602	603	604	605	606	607	608	609	610	611	612	613	614
1926	621	622	623	624	625	626	627	628	629	630	631	632	633	634
1927	641	642	643	644	645	646	647	648	649	650	651	652	653	654
1928	661	662	663	664	665	666	667	668	669	670	671	672	673	674
1929	681	682	683	684	685	686	687	688	689	690	691	692	693	694
1930	696	697	698	699	700	701	702	703	704	705	706	707	708	709
1931	711	712	713	714	715	716	717	718	719	720	721	722	723	724
1932	726	727	728	729	730	731	732	733	734	735	736	737	738	739
1933	741	742	743	744	745	746	747	748	749	750	751	752	753	754
1934	756	757	758	759	760	761	762	763	764	765	766	767	768	769
1935	781	782	783	784	785	786	787	788	789	790	791	792	793	794
1936	801	802	803	804	805	806	807	808	809	810	811	812	813	814
1937	821	822	823	824	825	826	827	828	829	830	831	832	833	834
1938	851	852	853	854	855	856	857	858	859	860	861	862	863	864
1939	871	872	873	874	875	876	877	878	879	880	881	882	883	884
1940	891	892	893	894	895	896	897	898	899	900	901	902	903	904
1941	921	922	923	924	925	926	927	928	929	930	931	932	933	934
1942	951	952	953	954	955	956	957	958	959	960	961	962	963	964
1943	971	972	973	974	975	976	977	978	979	980	981	982	983	984
1944	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014
1945	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044
1946	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064
1947	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094
1948	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124

a Rating tables and index to WSP 35-39 contained in WSP 39. Monthly discharge for 1899 in 21st Annual Report, part 4.
b James River only.
c Gallatin River.
d Green and Gunnison Rivers and Colorado River above Gunnison River.
e Mojave River only.
f Kings and Kern Rivers and south Pacific slope.
g Rating tables and index to WSP 47-52 contained in WSP 52. Monthly discharge for 1900 in 22d Annual Report, part 4.
h Schuylkill River to James River.
j Scioto River.
k Tributaries of Mississippi River from east.
l Loup, Platte, and Elkhorn Rivers and tributaries below Platte River.
m Lake Ontario and tributaries to St. Lawrence River proper.
n Hudson Bay only.
o New England rivers only.
p Hudson River to Delaware River.
q Susquehanna River to Yadkin River.
r Platte and Kansas Rivers.
s The Great Basin in California, except Truckee and Carson River Basins.
t Below mouth of Gila River.
u Rogue, Umpqua, and Siletz Rivers only.

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

Each of the reports on surface water supply for the year 1939, issued as Water-Supply Papers 871 to 884 (see table on p. 8), contains, for the area covered by that report, a summary of yearly discharge at gaging stations at which 10 or more complete years of record have been collected. These summaries are available also as separate reprints.

Reports have been published that are compilations of records for various areas, usually a single State or drainage basin. These reports contain records previously published (some of which have been revised), as well as some records not contained in the annual series of water-supply papers. The following table gives the numbers and titles of these reports, arranged alphabetically, some by States and some by drainage basins.

Reports containing compilations of records of discharge by States and drainage basins

Report	Period	Water-Supply Paper
STATE		
Alabama, Water powers of, with an appendix on stream measurements in Mississippi.	1895-1903	107
California, Water resources of, part 1, Stream measurements in Sacramento River Basin.	1887-1912	298
California, Water resources of, part 2, Stream measurements in San Joaquin River Basin.	1878-1912	299
California, Water resources of, part 3, Stream measurements in the Great Basin and Pacific Coast river basins.	1891-1912	300
California, southern, Surface water supply of Pacific slope of	1890-1918	447
California, Surface water supply of Sacramento River Basin	1895-1927	597-E
California, Surface water supply of San Joaquin River Basin	1895-1927	636-D
California, southern, Surface water supply of Pacific slope basins in	1894-1927	636-E
California, Surface water supply of minor San Francisco Bay, northern Pacific, and Great basins in.	1895-1927	637-A
Colorado, Water resources of	1884-1900	74
Georgia, Water resources of	1895-1905	197
Massachusetts, Surface waters of	1848-1915	415
Massachusetts, Hydrology of, Part 1, Summary of stream-flow and precipitation records.	1863-1945	1105
Nebraska, Surface water supply of	1894-1903	230
Oregon, Surface water supply of	1878-1910	370
Texas, Summary of records of surface waters of	1898-1937	850
Vermont, Surface waters of	1875-1916	424
Washington, Summary of hydrometric data in	1878-1919	492
Washington, Summary of records of surface waters of	1919-35	870
Wisconsin, northern, Water power of	1895-1905	156
Wyoming, Surface waters of, and their utilization	1894-1921	469
DRAINAGE BASIN		
Colorado River (Ariz., Colo., N. Mex., Utah, Wyo.) and its utilization	1888-1914	395
Colorado River, upper (Colo., Utah), and its utilization	1897-1927	617
Colorado River Basin (Ariz., Calif., Colo., Utah, Wyo.), Surface waters at base stations in.	1891-1938	918
Colorado River Basin (Ariz., Calif., Nev., N. Mex., Utah), Surface waters at stations on tributaries in lower.	1888-1938	1049
Columbia River Basin, upper (Mont., Idaho), Surface waters of	1898-1938	916
Great Salt Lake Basin, Water powers of	1889-1920	517
Green River (Colo., Utah, Wyo.) and its utilization	1894-1926	618
Kennebec River Basin (Maine), Water resources of	1890-1908	198
Milk River. See St. Mary and Milk Rivers		
Missouri and St. Mary River Basins (Mont.), Surface waters of	1881-1938	917
New-Kanawha River Basin (N. C., Va., W. Va.), Surface water supply of	1895-1920	536
Penobscot River Basin (Maine), Water resources of	1904-9	279
Potomac River Basin (D. C., Md., W. Va.)	1895-1906	192
Rio Grande Basin (Colo., N. Mex., Tex.), Water resources of	1888-1913	358
St. Mary and Milk Rivers (Mont., Canada), Water supply of	1898-1917	491
St. Mary River. See St. Mary and Milk Rivers; Missouri and St. Mary River Basin.		
Sevier Lake Basin (Utah), Utilization of surface water resources of	1889-1937	920
Susquehanna River Basin (Pa., Md.) Hydrography of	1890-1904	109

Records of discharge have been published also in-State reports. Some of these are not contained in the publications of the Geological Survey or are revisions of records previously published in its water-supply papers. The following table contains a list of these reports.

State reports containing compilations of records of discharge

State	Period	Report	Issued by
Alabama	1895-1915	Bull. 17, Water powers of Alabama	Geological Survey of Alabama.
Do	1904-47	Special Report 20, Water Resources and Hydrology of southeastern Alabama.	Do
Arkansas	1857-1928	Stream-gaging Rept. 1	Arkansas Geological Survey.
Colorado	1881-1935	Water resources of Colorado, Appendix 2, Data on stream-gaging stations of Colorado.[1]	State Planning Commission, Water Conservation Board, State engineer.
Do	1881-1938	Water resources of Colorado, Appendix 3, vols. 1 and 2, Stream-flow data of Colorado.	Do.
Connecticut	1900-1927	Bull. 44, Water resources of Connecticut	State Geological and Natural History Survey.
Do	1912-33	5th biennial report	State Water Commission.
Florida	1898-1946	Bull. 31, Springs of Florida	Florida Geological Survey.
Georgia	1895-1906	Bull. 16, Water powers of Georgia	Geological Survey of Georgia.
Do	1907-19	Bull. 38, Water powers of Georgia	Do.
Illinois	1908-11	Water resources of Illinois	Rivers and Lakes Commission.
Do	1900-1934	Stream-flow data of Illinois	Division of Waterways.
Indiana	1923-27	Pub. 72, Surface water supply of Indiana	Department of Conservation.
Do	1927-30	Pub. 112, Surface water supply of Indiana	Do.
Iowa	1873-1932	Stream-flow records of Iowa	State Planning Board.
Do	1873-1940	Water-Supply Bull. 1, Summaries of yearly and flood flow relating to Iowa streams	Iowa Geological Survey.
Do	1941-42	Water-Supply Bull. 2, Surface water resources of Iowa.	Do.
Kansas	1895-1919	Surface waters of Kansas	Kansas Water Commission.
Do	1919-24	....do	Do.
Do	1924-28	Report of Division of Water Resources	State Board of Agriculture.
Do	1928-35	Stream-flow data of Kansas	Do.
Do	1935-39	....do	Do.
Kentucky	1910-20	Surface waters of Kentucky	Kentucky Geological Survey.
Louisiana	1903-38	Geol. Bull. 16, Surface water supply of Louisiana.	Department of Conservation.
Maine	1887-1920	1st annual report	Maine Water Power Commission.
Maryland	1929-37	Flow data and draft storage curves for major streams in Maryland.	State Planning Commission and Water Resources Commission.
Do	1892-1943	Bull. 1, Summary of records of surface waters of Maryland and the Potomac River Basin.	Department of Geology, Mines, and Water Resources.
Minnesota	1909-12	Water-resources investigation of Minnesota.	State Drainage Commission.
Missouri	1857-1926	Vol. 20, 2d series, Water resources of Missouri.	Missouri Bureau of Geology and Mines.
Do	1927-39	Vol. 26, 2d series, Surface waters of Missouri.	Missouri Geological Survey and Water Resources.
Montana	1889-1911	5th biennial report	Office of the State Engineer.
Do	1881-1938	Special Rept. 10, vols. 1-4, Water resources of Montana.	Montana Agricultural Experiment Station.
Nebraska	1894-1914	1st hydrographic report	Bureau of Water Power, Irrigation, and Drainage.
Do	1914-28	2d hydrographic report	Do.
New Hampshire	1889-1922	Annual and statistical report, vol. 12	Public Service Commission.
New Jersey	1892-1928	Bull. 33, Surface water supply of New Jersey.	Department of Conservation and Development.
Do	1928-34	Special Rept. 5, Surface water supply of New Jersey.	State Water Policy Commission.
Do	1934-40	Special Rept. 9, Surface water supply of New Jersey.	Do.
New Mexico	1888-1925	Surface water supply of New Mexico	Office of the State Engineer.
North Carolina	1889-1923	Bull. 34, Discharge records of North Carolina streams.	Department of Conservation and Development.
Do	1889-1936	Bull. 39, Discharge records of North Carolina streams.[2]	Do.
Do	1866-1945	Hydrologic Data on the Neuse River Basin.	Do.
Do	1820-1945	Hydrologic Data on the Cape Fear River Basin.	Do.
Do	1866-1945	Hydrologic Data on the Yadkin-Pee Dee River Basin.	Do.
Do	1872-1945	Hydrologic Data on the Catawba and Broad River Basins	Do.
North Dakota	1919-21	Report to Governor of North Dakota on flood control.	State chief engineer.
Do	1882-1938	Surface water in North Dakota	State Planning Board.
Do	1882-1944	Supplement B, 4th biennial report	State Water Conservation Commission.
Ohio	1898-1921	Bull. 73, Ohio stream flow, Part 1	Engineering Experiment Station, Ohio State University.
Do	1898-1944	Bull. 127, Ohio stream flow, Part 2	Do.
Do	1902-39	Bull. 200, Compilation of stream-flow records of Ohio.	Department of Agriculture, Division of Conservation and Natural Resources.
Do	1898-1939	Bull. 111, Ohio stream-drainage areas and flow-duration tables.	Engineering Experiment Station, Ohio State University.
Oregon	1878-1914	Bull. 4, Water resources of the State of Oregon.	Office of the State Engineer.
Do	1914-24	Bull. 7, Water resources of the State of Oregon.	Do.
Do	1924-30	Bull. 8, Water resources of the State of Oregon.	Do.
Do	1930-36	Bull. 9, Water resources of the State of Oregon.	Do.
Do	1936-41	Bull. 10, Water resources of the State of Oregon.	Do.

1 Contains records of yearly discharge only.
2 Contains records of maximum and minimum daily, weekly, and monthly discharge and yearly mean discharge.

State reports containing compilations of records of discharge--Continued

State	Period	Report	Issued by
Pennsylvania..	1890-1911	Report of the Water Supply Commission of Pennsylvania.	Water Supply Commission of Pennsylvania.
Do.....	1928-32	Stream-flow records of Pennsylvania.....	Department of Forests and Waters.
Rhode Island..	1929-41	7th annual report.....	Department of Public Works.
South Carolina	1884-1946	Bull. 17, Summary of records of surface water supply of South Carolina.	South Carolina Research, Planning and Development Board.
Tennessee.....	1874-1924	Bull. 34, Water resources of Tennessee[3]....	Department of Education.
Do.....	1920-30	Bull. 40, Surface waters of Tennessee.....	Do.
Utah.....	1889-1905	5th biennial report.....	Office of the State Engineer.
Do.....	1906-10	7th biennial report.....	Do.
Do.....	1911-16	10th biennial report.....	Do.
Virginia.....	1895-1927	Bull. 31, Water resources of Virginia.....	Virginia Geological Survey.
Do.....	1927-42	Bull. 4, Surface water supply of Virginia (Potomac, Rappahannock, and York River Basins).	Virginia Conservation Commission.
Do.....	1927-42	Bull. 5, Surface water supply of Virginia (James River Basin).	Do.
Do.....	1927-42	Bull. 6, Surface water supply of Virginia (Roanoke and Chowan River Basins).	Do.
Do.....	1927-42	Bull. 7, Surface water supply of Virginia (New, Tennessee, and Big Sandy River Basins).	Do.
Washington....	1878-1933	Bull. 5, Monthly and yearly summaries of hydrometric data.	Department of Conservation and Development.
Wisconsin.....	1888-1914	1st report of Railroad Commission of Wisconsin to Legislature on water powers.	Railroad Commission of Wisconsin.
Do.....	1914-23	2d report of Railroad Commission of Wisconsin to Legislature on water powers.	Do.

3 Includes records of discharge for all stations in North Carolina in the Tennessee River Basin.

Note.- In addition to the records contained in the reports listed above, the following States have issued annual or biennial reports in which are contained records of discharge: California, Colorado, Connecticut, Idaho, Indiana, Kansas, Maine, Missouri, Montana, Nebraska, Nevada, New Mexico, New York (also New York City Board of Water Supply and city of Rochester), North Dakota, Oregon, Pennsylvania, Rhode Island, Washington, and Wyoming.

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

Water-Supply Paper	Title
88	The Passaic flood of 1902.
92	The Passaic flood of 1903.
96	Destructive floods in the United States in 1903.
147	Destructive floods in the United States in 1904.
162	Destructive floods in the United States in 1905.
334	The Ohio Valley flood of March-April 1913.
426	Southern California floods of January 1916.
487	The Arkansas River flood of June 3-5, 1921.
488	The floods in central Texas in September 1921.
520-G	Some floods in the Rocky Mountain region.
636-C	The New England flood of November 1927.
771	Floods in the United States, magnitude and frequency.
773-E	The New York State flood of July 1935.
796-B	Flood on Republican and Kansas Rivers, May and June 1935.
796-C	Flood in La Canada Valley, Calif., January 1, 1934.
796-G	Major Texas floods of 1935.
798	The floods of March 1936, part 1, New England rivers.
799	The floods of March 1936, part 2, Hudson River to Susquehanna River region.
800	The floods of March 1936, part 3, Potomac, James, and upper Ohio Rivers.
816	Major Texas floods of 1936.
836-A	Stages and flood discharges of the Connecticut River at Hartford, Conn.
838	Floods of Ohio and Mississippi Rivers, January-February, 1937.
842	Floods in Canadian and Pecos River Basins of New Mexico, May and June 1937.
843	Floods of December 1937 in northern California.
844	Floods of March 1938 in southern California.
847	Maximum discharges at stream-measurement stations through September 1938.
867	Hurricane floods of September 1938.
869	Flood of August 1935 in Muskingum River Basin, Ohio.
914	Texas floods of 1938 and 1939.
966	Minor floods of 1938 in North Atlantic States.
967-A	Floods of September 1939 in Colorado River Basin below Boulder (Hoover) Dam.
967-B	Flood of July 5, 1939, in eastern Kentucky.
967-C	Flood of August 21, 1939, in town of Baldwin, Maine.
994	Cloudburst floods in Utah, 1850 to 1938.
997	Floods in Colorado.
1046	Texas floods of 1940.
1066	Floods of August 1940 in the southeastern States.
1080	Floods of May-June 1948 in Columbia River Basin.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The following table contains a list of gaging stations for the area covered by this report at which records of daily discharge were collected during the water year October 1947 to September 1948 by agencies other than the Geological Survey. The records for these stations are not contained in publications of the Geological Survey except as noted in footnotes to the table. Records for many canals and ditches and occasional records for several natural streams, none of which are here listed, have also been collected, and some of them have been published in the reports of irrigation projects or of the water commissioner of the drainage basin in which the streams are situated. Records of discharge in the Bear River Basin for the period 1943 to 1948 are also published by the Geological Survey in special annual investigational reports entitled "Bear River Hydrometric Data, Tri-State Investigations." These reports contain many diversion records and miscellaneous measurements not included in the annual water-supply papers.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
Centerville Creek.	Centerville, Utah, near mouth of canyon..	1937-48	Intermountain Forest & Range Experiment Station.
City Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1948a	Salt Lake City.
Cottonwood Creek..	....do.....	1898-1948a	Do.
Donner Creek.....	Above Cold Creek, near Truckee, Calif....	1929-48	Federal Court Watermaster for Truckee River.
Do.....	Below Cold Creek, near Truckee, Calif....	1902-15	Do.
East Walker River.	Near Mason, Nev.....	1940-48	Walker River.
Emigration Creek..	Salt Lake City, Utah, near mouth of canyon.	1898-1948a	Salt Lake City.
Ephraim Creek.....	Near Ephraim, Utah.....	1914-48	Intermountain Forest & Range Experiment Station.
Farmington Creek..	Near Farmington, Utah.....	1937-48	Do.
Honey Creek.....	Near Plush, Oreg.....	1909-15, 1921-22, 1930-48d	Oregon State engineer.
Little Cottonwood Creek.	Salt Lake City, Utah, near mouth of canyon.	1898-1948a	Salt Lake City.
Little Truckee River.	Above Boca Reservoir, near Boca, Calif...	1942-48	Washoe County Water Conservation District.
Do.....	Below Boca Reservoir, near Boca, Calif...	1942-48	Do.
Mill Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1948a	Salt Lake City.
Otter Creek Reservoir outlet.	Antimony, Utah, at former Geological Survey gaging station published as Otter Creek near Coyoto.	1920-48e	Sevier River water Commissioner.
Parish Creek.....	Centerville, Utah, near mouth of canyon.	1937-48	Intermountain Forest & Range Experiment Station.
Parleys Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1948a	Salt Lake City.
Prosser Creek.....	Near Boca, Calif.....	1942-48	Federal Court Watermaster for Truckee River.
Sevier River.....	Delta, Utah, at former Geological Survey gaging station.	1920-48e	Sevier River water commissioner.
Truckee River.....	At Derby Dam, Nev.....	1907-10f	Do.
Do.....	At Farad, Calif.....	1938-48b	Truckee-Carson Irrigation District.
Do.....	At Pyramid Dam, Nev.....	1928-48	Federal Court Watermaster for Truckee River.
Do.....	At Tahoe, Calif.....	1895-96	Do.
Do.....	At Vista, Nev.....	1899-1907f	Do.
Walker River.....	Near Wabuska, Nev.....	1902-8f 1920-34f 1940-48	Walker River Irrigation District.
West Walker River.	Near Hudson, Nev.....	1921-25f	Do.
Do.....	Near Wellington, Nev.....	1940-48c	Do.

a Records prior to 1913 are contained in water-supply papers published by the Geological Survey; those for 1913-30, in reports published by Salt Lake City.
b Records prior to 1944 published in water-supply papers by the Geological Survey.
c Irrigation seasons only.
d Records are published in bulletins of the Oregon State engineer (see pp. 10-11, "State reports containing compilation of records of discharge") except those subsequent to 1941, which have not been published. Records prior to 1922 are also contained in water-supply papers published by the Geological Survey.
e Published in the annual reports of Sevier River water commissioner.
f Published in water-supply papers by the Geological Survey.
Note.- Records here listed other than those cited in above notes have not been published.

COOPERATION

The work in the several States was done under cooperative agreements with the organizations listed below:

California: State Department of Public Works, C. H. Purcell, director, and Edward Hyatt, State engineer; San Bernardino County.

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

Nevada: Office of State Engineer, A. M. Smith.

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

Utah: Office of State Engineer, E. H. Watson.

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

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

Financial assistance was furnished by the Corps of Engineers for the operation of three gaging stations in Utah, two in California, and three in Nevada, and by the Bureau of Reclamation, United States Department of the Interior, for work in California and Utah.

Assistance in collecting records was rendered by the following organizations:

California: Walker River Irrigation District.

Idaho: Bureau of Reclamation of the United States Department of the Interior; Utah Power and Light Company.

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

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

DIVISION OF WORK

The stream-gaging work was conducted by the water resources division of the Geological Survey, Carl G. Paulsen, chief hydraulic engineer, and Joseph V. B. Wells, chief of the surface water branch. The data for the stations in the several States were collected and prepared for publication under supervision of district engineers as follows: In California (except for stations in Walker Lake, Carson River, and Truckee River Basins), H. D. McGlashan; in Idaho (except for stations in Bear River Basin operated in connection with Federal Power Commission projects), T. R. Newell; in Oregon, G. H. Canfield prior to Sept. 1, 1948, and K. N. Philips thereafter, the work being done in collaboration with C. E. Stricklin, State engineer; in Utah and Nevada and for stations in Walker Lake, Carson River, and Truckee River Basins in California and for stations in Bear River Basin in Idaho operated in connection with Federal Power Commission projects, M. T. Wilson; in Wyoming, Robert Follansbee until July 23, 1948, succeeded by F. M. Bell on July 26, 1948.

The records were reviewed and the manuscript prepared for publication under the direction of B. J. Peterson, chief, annual reports section.

GREAT SALT LAKE BASIN

Gages on Great Salt Lake, Utah

Location.- Water-stage recorder, lat. 40°44'15", long. 112°12'30", in NW¼ sec. 17, T. 1 S., R. 3 W., at Salt Lake County Boat Harbor, on southeast shore of lake, 17 miles west of Salt Lake City; and staff gage, lat. 41°13', long. 112°36', at Midlake, on Lucin cut-off of Southern Pacific Railroad, 30 miles west of Ogden. Datum of Boat Harbor gage is 4,186.85 feet above mean sea level; that of Midlake gage, 4,198.0 feet above mean sea level, adjustment of 1912. To reduce elevations to datum of 1929, add 0.05 foot.

Records available.- September 1875 to December 1899, March to July 1904, and October 1912 to September 1948 in reports of Geological Survey. July 1903 to December 1934 in reports of U. S. Weather Bureau. Diagram showing fluctuations of lake from 1851-1940 is published in Water-Supply Paper 880.

Extremes.- Maximum elevation during year, 4,197.75 feet June 15, at Boat Harbor gage; minimum, 4,196.1 feet Oct. 1 and 15, at Midlake gage.
1851-1948: Maximum elevation, 4,211.6 feet in 1873, computed from traditional data by E. C. LaRue (see Water-Supply Paper 880, p. 125); minimum, 4,193.65 feet Oct. 15 and Nov. 1, 1940, at Boat Harbor gage and Oct. 15, 1940, at Midlake gage.

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

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

Gage height, in feet, of Great Salt Lake, Utah
water year 1947-48

Day	Boat Harbor	Midlake
Oct. 1	9.35	-1.9
15	9.3	-1.9
Nov. 1	9.35	-1.85
15	9.4	-1.85
Dec. 1	9.6	-1.75
15	9.7	-1.6
Jan. 1	9.8	-1.5
15	9.9	-1.35
Feb. 1	9.95	-1.25
15	10.0	-1.15
Mar. 1	10.15	-1.1
15	10.25	-.9
Apr. 1	10.4	-.85
15	10.65	-.65
May 1	10.7	-.65
15	10.85	-.5
June 1	10.85	-.4
15	10.9	-.35
July 1	10.85	-.5
15	10.55	-.65
Aug. 1	10.25	-1.0
15	9.95	-1.25
Sept. 1	9.65	1.5
15	9.45	-1.75

Bear River near Utah-Wyoming State line

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

Drainage area.- 176 square miles.

Records available.- July 1942 to September 1948.

Extremes.- Maximum discharge during year, 2,200 second-feet May 19 (gage height, 4.23 feet); minimum, 28 second-feet Sept. 15, 16, but may have been less during periods of ice effect or no gage height record.

1942-48: Maximum discharge, that of May 19, 1948; minimum, 20 second-feet Apr. 2, 1944, but may have been less during period of ice effect.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	60	48				46	180	1,390	188	48	39
2	48	59	50				48	154	1,470	188	46	37
3	47	57				(*)	50	154	1,280	184	45	35
4	46	52					50	187	956	163	50	34
5	45	57		40			50	195	911	a155	70	33
6	42	52				40	48	270	947	a150	65	32
7	42	52					45	350	911	a145	54	32
8	42	56			35		46	291	824	a135	88	33
9	42	56					50	238	832	a120	71	32
10	42	54	(*)				55	200	807	a110	59	32
11	51	56					50	183	749	a100	65	31
12	54	54					48	191	661	a95	62	30
13	55	*50		(*)			45	291	580	a90	59	30
14	55	50					45	506	518	96	57	29
15	54	52					50	728	466	92	56	28
16	48	54	45				*54	985	423	88	51	28
17	50	55					71	1,220	389	86	50	88
18	48	54					82	1,400	356	3[illegible]	59	28
19	48	54					71	1,750	320	74	59	34
20	52	52					82	1,600	286	92	52	37
21	54	45		35		45	107	1,480	315	74	50	32
22	69	40					131	1,440	301	70	56	31
23	62	40			37		118	1,360	268	65	66	31
24	62	40					96	1,430	254	65	55	29
25	55	40					87	1,360	212	63	51	29
26	60	42					78	1,300	200	62	50	32
27	62	50					87	1,320	196	57	47	32
28	64	102					144	1,440	181	54	43	31
29	67	76					208	1,380	184	54	42	31
30	67	48			-		191	1,220	181	52	41	31
31	55	48			-		-	1,340	-	51	39	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,639	69	42	52.9	3,250
November	1,609	102	40	53.6	3,190
December	1,403	-	-	45.3	2,780
Calendar year 1947	83,132	1,410	-	228	164,900
January	1,135	-	-	36.6	2,250
February	1,043	-	-	36.0	2,070
March	1,340	-	-	43.2	2,660
April	2,333	208	45	77.8	4,630
May	26,123	1,750	154	843	51,810
June	17,348	1,470	181	578	34,410
July	3,100	188	51	100	6,150
August	1,706	88	39	55.0	3,380
September	951	39	28	31.7	1,890
Water year 1947-48	59,730	1,750	-	163	118,500

Peak discharge (base, 1,100 sec.-ft.).- May 19 (8 p.m.) 2,200 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for Weber River near Oakley, Utah.

Note.- Stage-discharge relation affected by ice Nov. 7-16, 18-25, 28, 29, Dec. 2 to Apr. 15 (no gage-height record Jan. 14 to Apr. 15); discharge computed on basis of 4 discharge measurements, weather records, and records for Weber River near Oakley, Utah.

Bear River above Sulphur Creek, near Evanston, Wyo.

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

Drainage area.- 282 square miles.

Records available.- October 1946 to September 1948.

Extremes.- Maximum discharge during year, 2,120 second-feet May 20 (gage height, 5.01 feet); minimum, 5.5 second-feet Sept. 16.
1946-48: Maximum discharge, that of May 20, 1948; minimum, that of Sept. 16, 1948.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	90					85	317	1,350	51	8.6	10
2	40	85					100	247	1,430	51	8.6	11
3	45	80					150	228	1,390	99	9.4	10
4	39	74					140	278	1,030	103	9.8	9.4
5	40	75					120	278	945	90	16	9.0
6	34	72	70	60		65	110	326	908	74	26	9.4
7	31	76					100	489	908	66	23	9.8
8	30	80			55		110	450	772	57	22	9.0
9	32	80	(*)				130	345	745	54	35	10
10	32	78					200	283	647	43	23	10
11	39	80					170	247	628	35	17	9.4
12	52	82				70	150	235	578	30	22	9.4
13	54	77		(*)		75	258	313	501	31	23	9.0
14	57	*75				80	336	536	433	27	23	7.4
15	54	76				75	444	752	350	21	28	6.1
16	52	80				75	560	945	308	16	20	6.7
17	57	80				75	752	1,200	251	13	19	9.4
18	62	80				75	834	1,520	210	11	19	11
19	62	78				70	686	1,700	181	11	19	11
20	57	75				70	622	1,880	168	16	16	15
21	59	72	65	55		75	628	1,640	207	19	15	19
22	78	65			60	78	745	1,820	291	18	16	15
23	88	65				80	*542	1,480	247	16	25	13
24	94	70				80	336	1,510	251	16	28	12
25	88	75			(*)	75	243	1,500	190	18	25	11
26	92	78				75	210	1,340	154	15	23	12
27	98	76				80	232	1,280	143	11	19	19
28	85	75				85	369	1,270	123	9.0	15	15
29	80	74				90	484	1,390	99	8.6	12	14
30	90	74			-	85	400	1,190	72	8.6	11	13
31	90	-			-	80	-	1,240	-	8.2	9.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,846	98	30	59.5	3,660
November	2,297	90	65	76.6	4,560
December	2,065	-	-	66.6	4,100
Calendar year 1947	88,732	1,640	23	243	176,000
January	1,755	-	-	56.6	3,480
February	1,665	-	-	57.4	3,300
March	2,263	90	-	73.0	4,490
April	10,246	834	85	342	20,320
May	28,029	1,880	228	904	55,590
June	15,510	1,430	72	517	30,760
July	1,046.4	103	8.2	33.8	2,080
August	585.8	35	8.6	18.9	1,160
September	335.0	19	6.1	11.2	664
Water year 1947-48	67,643.2	1,880	6.1	185	134,200

Peak discharge (base, 1,100 sec.-ft.).- May 20 (11 a.m.) 2,120 sec.-ft.
* Winter discharge measurement made on this day.
Note.- No gage-height record Nov. 22 to Jan. 13; discharge computed on basis of 4 discharge measurements, weather records, and records for station near Utah-Wyoming State line. Stage-discharge relation affected by ice Nov. 5-9, 11, 14-20, Jan. 14 to Apr. 12, and most of period of no gage-height record.

Bear River near Evanston, Wyo.

Location.- Water-stage recorder, lat. 41°19', long. 111°01', in sec. 1, T. 15 N., R. 121 W., 300 feet upstream from road bridge and 3½ miles northwest of Evanston.

Drainage area.- 715 square miles.

Records available.- October 1913 to September 1948.

Average discharge.- 35 years, 231 second-feet.

Extremes.- Maximum discharge during year, 2,120 second-feet Apr. 22 (gage height, 6.18 feet); no flow Sept. 2-24.

1913-48: Maximum discharge, 3,690 second-feet June 14, 1921 (gage height, 6.35 feet), from rating curve extended above 2,700 second-feet; no flow during some periods in 1924, 1931, 1933, 1934, 1939, 1940, 1942, 1946, 1948.

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

Revisions (water years).- W 1010: 1942, 1943.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	76	90				142	630	1,280	39	1.9	0.2
2	25	85	90				224	481	1,330	21	1.6	0
3	29	81	90				366	408	1,400	15	1.4	0
4	31	72	89				321	438	1,150	26	1.3	0
5	28	79	86				230	446	1,000	28	1.3	0
6	28	79	85	80		80	184	474	906	20	1.3	0
7	24	95	85				152	630	878	15	1.2	0
8	22	91	83				132	662	766	13	1.2	0
9	23	101	*87		70		168	554	710	11	1.2	0
10	24	81	87				382	463	622	11	1.0	0
11	28	87	76				299	411	578	10	.9	0
12	35	87		(*)			245	378	503	8.5	.8	0
13	42	80				85	207	404	432	7.5	.6	0
14	45	*81				90	299	602	386	6.0	.7	0
15	44	95				90	485	847	293	6.0	.8	0
16	42	85				90	739	1,060	236	4.9	.8	0
17	42	95				90	1,120	1,300	179	4.6	.8	0
18	48	83				90	1,880	1,510	139	4.3	.9	0
19	49	83				85	1,130	1,700	108	4.0	1.0	0
20	48	80		70		80	1,090	1,870	91	3.7	.9	0
21	46	70	85			80	1,440	1,850	124	3.1	1.2	0
22	58	60			75	90	1,880	1,730	309	2.8	1.3	0
23	71	63				120	1,750	1,680	287	3.1	1.8	0
24	76	64				180	1,050	1,610	296	4.3	2.5	0
25	78	95				160	650	1,800	224	4.9	2.0	.3
26	72	101			(*)	150	503	1,490	152	4.0	1.6	.6
27	81	93				140	481	1,380	124	4.0	1.3	.6
28	81	91				233	702	1,320	93	3.7	1.2	1.2
29	74	89				*404	914	1,370	69	2.8	1.2	2.4
30	76	89			-	204	784	1,280	54	2.5	.9	2.2
31	85	-			-	139	-	1,240	-	2.4	.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,480	85	22	47.7	2,940
November	2,511	101	60	83.7	4,980
December	2,848	-	-	88.4	5,250
Calendar year 1947	97,058	1,690	10	266	192,500
January	2,270	-	-	73.2	4,500
February	2,100	-	-	72.4	4,170
March	3,560	404	-	115	7,060
April	19,949	1,880	132	665	39,570
May	31,818	1,870	378	1,030	63,110
June	14,699	1,400	54	490	29,160
July	296.1	39	2.4	9.55	587
August	37.2	2.5	.6	1.20	74
September	7.5	2.4	0	.25	15
Water year 1947-48	81,375.8	1,880	0	222	161,400

Peak discharge (base, 1,200 sec.-ft.).- Apr. 22 (9:45 a.m.) 2,120 sec.-ft.; May 20 (10 p.m.) 1,970 sec.-ft.

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 13, 20-22, Dec. 1-3, 5, 6, Dec. 12 to Mar. 27.

Bear River near Woodruff, Utah

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

Drainage area.- 870 square miles.

Records available.- April 1942 to September 1948.

Extremes.- Maximum discharge during year, 1,940 second-feet Apr. 24 (gage height, 4.54 feet); no flow Aug. 13 to Sept. 30.
1942-48: Maximum discharge, 1,940 second-feet Mar. 18, 1947, Apr. 24, 1948 (gage height, 4.54 feet); no flow at times in each year.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation, including Chapman Canal which carries some water over a low divide for storage in Neponset Reservoir for irrigation in Saleratus Basin.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	83					150	684	1,130	34	0.5	0
2	21	79					200	549	1,210	26	.4	0
3	20	85					325	440	1,280	22	.2	0
4	21	81					300	408	1,240	18	.3	0
5	25	77					225	440	980	14	.4	0
			65									
6	25	77		90			180	445	834	12	.3	0
7	23	91				85	149	516	785	10	.4	0
8	23	89					130	654	733	7.0	1.0	0
9	21	79					155	563	618	6.0	1.1	0
10	20	a80	(*)				287	470	577	5.5	.8	0
11	24	a85					305	390	501	4.5	.5	0
12	26	a85		(*)			248	346	455	3.8	.2	0
13	30	a80					203	334	417	3.8	0	0
14	39	a80				90	220	422	338	2.2	0	0
15	42	a90				95	338	360	279	1.7	0	0
					80							
16	43	a85				75	501	848	227	1.3	0	0
17	42	a90				75	642	1,000	160	1.2	0	0
18	41	*83				75	877	1,230	110	1.1	0	0
19	46	81				75	1,300	1,420	87	1.7	0	0
20	47	75				70	965	1,570	77	1.0	0	0
			90									
21	47	65				68	1,090	1,770	75	.6	0	0
22	50	50		80		65	1,440	1,840	125	.5	0	0
23	59	50				80	1,800	1,710	234	.5	0	0
24	72	50				110	1,680	1,630	230	.8	0	0
25	72	55				150	820	1,520	200	1.2	0	0
26	73	65				140	543	1,520	143	1.0	0	0
27	70	65			(*)	130	480	1,390	113	.7	0	0
28	79	65				180	583	1,270	91	.6	0	0
29	79	65				250	733	1,220	70	.6	0	0
30	75	65			-	200	827	1,270	47	.6	0	0
31	77	-			-	*170	-	1,140	-	.6	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,352	79	20	43.6	2,680
November	2,250	91	50	75.0	4,460
December	2,540	-	-	81.9	5,040
Calendar year 1947	94,316.4	1,690	8.4	258	187,100
January	2,600	-	-	83.9	5,160
February	2,320	-	-	80	4,600
March	3,203	250	-	103	6,350
April	17,696	1,800	130	590	35,100
May	29,689	1,840	334	958	58,890
June	13,366	1,280	47	446	26,510
July	184.5	34	0.5	5.95	366
August	6.1	1.1	0	.20	12
September	0	0	0	0	0
Water year 1947-48	75,206.6	1,840	0	205	149,200

Peak discharge (base, 1,300 sec.-ft.).- Apr. 24 (6 a.m.) 1,940 sec.-ft.; May 22 (1 a.m.) 1,900 sec.-ft.

* Winter discharge measurement made on this day.

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

Note.- Stage-discharge relation affected by ice Nov. 20 to Apr. 6 (no gage-height record Feb. 17-27).

Bear River near Randolph, Utah

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

Drainage area.- 1,640 square miles.

Records available.- December 1943 to September 1948.

Extremes.- Maximum discharge during year, 1,410 second-feet Apr. 27 (gage height, 7.27 feet); minimum, 14 second-feet July 16.
1943-48: Maximum discharge, 1,600 second-feet June 14, 1947 (gage height, 7.85 feet); minimum, that of July 16, 1948.

Remarks.- Records good except those for period of ice effect or doubtful gage-height record, which are fair. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	106	112				200	818	953	38	26	25
2	46	109	120				250	838	892	36	21	24
3	46	113	115				300	750	882	32	27	23
4	46	113	122				361	641	946	29	27	23
5	46	116	119				380	547	1,000	26	30	23
6	45	122	120	95		95	380	514	998	24	33	23
7	45	112	113				333	511	842	28	35	24
8	45	113	97				288	514	667	37	37	24
9	45	119	90				*246	549	560	27	37	24
10	45	126	85				293	607	452	20	37	24
11	48	116					320	573	383	18	37	23
12	51	106					380	501	346	18	36	23
13	50	115					346	394	299	16	35	23
14	50	134		(*)			331	337	242	16	34	24
15	50	108					352	324	169	16	34	23
					85							
16	52	129					d500	359	142	16	33	25
17	53	129				100	d850	428	102	25	33	25
18	56	*115					d900	524	88	28	32	27
19	57	108					d900	594	71	25	30	31
20	57	95					d950	706	55	25	29	30
			95									
21	58	90		85			d1,100	795	52	25	29	29
22	64	80					d1,200	916	51	25	28	28
23	68	85				120	d1,200	1,060	49	23	28	27
24	70	90				150	d1,250	1,240	56	22	27	37
25	76	94				200	d1,300	1,310	59	21	28	32
26	96	102				180	1,350	1,320	51	24	28	28
27	96	112				160	1,280	1,330	48	26	28	28
28	94	130				250	906	1,290	45	25	27	28
29	97	138				300	744	1,260	44	26	25	28
30	104	122			-	250	750	1,210	42	26	25	28
31	108	-			-	200	-	1,070	-	32	25	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,912	108	45	61.7	3,790
November	3,347	138	80	112	6,640
December	3,073	-	-	99.1	6,100
Calendar year 1947	88,718	1,570	41	243	176,000
January	2,755	-	-	88.9	5,460
February	2,465	-	-	85	4,890
March	3,950	300	-	127	7,830
April	19,940	1,350	200	665	39,550
May	23,830	1,330	324	769	47,270
June	10,586	1,000	42	353	21,000
July	775	38	16	25.0	1,540
August	941	37	21	30.4	1,870
September	784	37	23	26.1	1,560
Water year 1947-48	74,358	1,350	16	203	147,500

Peak discharge (base, 800 sec.-ft.).- Apr. 27 (1 a.m.) 1,410 sec.-ft.; May 27 (11 a.m.) 1,340 sec.-ft.

* Winter discharge measurement made on this day.

d Doubtful gage-height record; discharge computed on basis of records for station above Sublette Creek, near Cokeville, Wyo.

Note.- Stage-discharge relation affected by ice Nov. 21-24, Dec. 9 to Apr. 3.

Bear River above Sublette Creek, near Cokeville, Wyo.

Location.- Water-stage recorder, lat. 42°02'20", long. 110°57'05", in SW¼NE¼ sec. 20, T. 24 N., R. 119 W., 1,500 feet upstream from Sublette Creek and 3½ miles south of Cokeville.

Drainage area.- 2,110 square miles.

Records available.- April to September 1948.

Extremes.- Maximum discharge during period, 1,270 second-feet Apr. 28 (gage height, 8.24 feet); minimum, 35 second-feet Aug. 29.

Remarks.- Records good except those for period of ice effect, which are fair. Many diversions above station for irrigation. No diversions between this station and Collett Creek Branch of Smiths Fork.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							b250	912	1,170	106	48	40
2							b300	912	1,050	102	48	40
3							b400	912	945	97	44	38
4							b500	840	921	93	41	37
5							b560	696	933	89	45	37
6							550	635	960	121	48	37
7							514	586	982	89	48	37
8							442	547	900	84	49	40
9							384	563	721	100	51	41
10							391	595	506	94	51	39
11							491	608	469	80	50	38
12							496	603	348	76	48	38
13							501	547	226	73	48	37
14							461	469	213	70	47	37
15							481	388	188	66	46	36
16							581	364	178	61	46	36
17							696	382	165	49	46	38
18							799	447	158	66	44	40
19							846	547	136	61	43	44
20							861	643	118	58	a42	44
21							927	770	113	55	a42	45
22							1,020	840	112	52	a42	45
23							1,080	837	112	52	42	44
24							1,090	930	113	53	41	42
25							1,100	1,040	152	51	41	43
26							1,150	1,110	150	48	41	46
27							1,210	1,180	125	46	41	43
28							1,260	1,180	118	47	40	43
29							1,190	1,200	114	48	38	43
30							996	1,200	110	48	40	43
31							-	1,210	-	48	40	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	21,527	1,260	250	718	42,700
May	23,693	1,210	364	764	46,990
June	12,506	1,170	110	417	24,810
July	2,183	121	46	70.4	4,330
August	1,381	51	38	44.5	2,740
September	1,211	46	36	40.4	2,400
The period	-	-	-	-	124,000

Peak discharge (base, 1,000 sec.-ft.).- Apr. 28 (5 p.m.) 1,270 sec.-ft.; May 31 (12 m.) 1,200 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range in stage.
b Stage-discharge relation affected by ice.

Bear River at Border, Wyo.

Location.- Water-stage recorder, lat. 42°11, long. 111°03', in NE¼NE¼ sec. 15, T. 14 S., R. 46 E., in Idaho, a quarter of a mile west of Wyoming State line and half a mile west of Border. Datum of gage is 6,051.63 feet above mean sea level, unadjusted.

Drainage area.- 2,490 square miles.

Records available.- October 1937 to September 1948.

Average discharge.- 11 years, 369 second-feet.

Extremes.- Maximum discharge during year, 2,020 second-feet May 30 (gage height, 6.86 feet); minimum daily, 91 second-feet Sept. 8.
1943-48: Maximum discharge, 2,040 second-feet Apr. 8, 1942, June 18, 1947 (gage height, 6.89 feet), maximum gage height, 7.04 feet May 1, 1946; minimum daily, 30 second-feet Aug. 18-22, 1940.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	197	265	a270	b190	b150	a220	a660	1,480	1,900	386	164	103
2	195	a270	a270	b190	b155	a210	*694	1,400	1,790	373	165	104
3	193	a275	a270	b200	b155	a215	799	1,370	1,730	344	165	100
4	191	a275	a260	b200	b155	a215	875	1,330	1,700	323	164	97
5	189	a280	a260	b200	b155	a215	903	1,200	1,650	306	167	94
6	193	*a260	a260	b210	b155	a215	748	1,110	1,600	308	167	96
7	189	253	a230	b220	b155	a190	710	1,120	1,580	294	167	93
8	197	278	a200	b220	b155	a200	710	1,190	1,560	258	164	91
9	197	283	a180	b220	b155	a200	704	1,240	1,410	247	171	98
10	199	260	a180	b220	b155	a200	691	1,180	1,220	274	173	104
11	209	b250	a160	b220	b155	a200	687	1,170	1,050	265	169	103
12	217	b170	*a190	b220	a155	a200	700	1,150	948	258	167	111
13	207	a150	b210	a200	a155	a200	700	1,070	768	240	162	111
14	205	a170	b210	b190	a155	a200	700	1,000	697	232	155	109
15	203	a220	b200	b180	a160	a200	710	976	627	225	142	109
16	203	b220	b200	b180	*b170	a200	838	976	591	217	140	109
17	207	b210	b190	b180	b170	a200	1,020	1,040	556	221	137	115
18	209	274	b200	b170	b170	a210	1,200	1,160	537	221	134	123
19	205	*265	b200	b170	b170	a210	1,210	1,310	512	232	132	142
20	209	251	b190	b170	b180	a240	1,200	1,390	477	238	122	147
21	211	b210	b200	b170	b185	a220	1,230	1,560	485	213	125	151
22	211	a180	b200	b170	b190	a220	1,320	1,680	518	213	127	147
23	215	a180	b200	b170	b190	a230	1,400	1,720	520	201	130	132
24	225	a210	b180	b180	b195	a270	1,410	1,740	504	211	134	128
25	236	a260	b170	b170	b210	a330	1,410	1,810	454	201	130	127
26	236	a260	b180	a180	b210	a420	1,420	1,850	499	199	119	130
27	242	a250	b180	a170	b210	a520	1,450	1,900	446	193	117	132
28	258	a210	b200	a170	b210	a600	1,500	1,950	413	182	119	139
29	258	a210	b190	a155	b230	a550	1,600	1,980	398	180	115	142
30	262	a220	b180	a145	-	a620	1,600	2,010	386	178	115	146
31	265	-	b190	a140	-	a660	-	1,990	-	173	112	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	6,633	265	189	214	13,160
November	7,069	283	150	236	14,020
December	6,400	270	160	206	12,690
Calendar year 1947	193,780	2,020	140	531	384,400
January	5,770	220	140	186	11,440
February	5,015	230	150	173	9,950
March	8,780	660	190	283	17,410
April	30,799	1,600	660	1,027	61,090
May	44,052	2,010	976	1,421	87,380
June	27,526	1,900	386	918	54,600
July	7,606	386	173	245	15,090
August	4,470	173	112	144	8,780
September	3,533	151	91	118	7,010
Water year 1947-48	157,653	2,010	91	431	312,700

Peak discharge (base, 1,000 sec.-ft.).- Apr. 29 (11 p.m.) 1,660 sec.-ft.; May 30 (2:30 p.m.) 2,020 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of 2 discharge measurements, weather records, and combined flow of furnished records of Bear River below Stewart, near Montpelier, Idaho, and Rainbow inlet canal near Dingle, Idaho.

b Stage-discharge record affected by ice.

Bear River at Harer, Idaho

Location.- Water-stage recorder, lat. 42°11'50", long. 111°10'05", in NW¼ sec. 23, T. 14 S., R. 45 E., 400 feet downstream from Sheep Creek, three-quarters of a mile north of Harer siding on Oregon Short Line Railroad, and 5 miles east of Dingle.

Drainage area.- 2,780 square miles.

Records available.- June 1913 to September 1916, January 1919 to September 1948.

Average discharge.- 32 years, 506 second-feet.

Extremes.- Maximum daily discharge during year, 2,290 second-feet May 31; minimum daily, 114 second-feet Sept. 9.
1913-16, 1919-48: Maximum discharge, 3,860 second-feet June 2, 1920 (gage height, 10.51 feet); minimum daily, 26 second-feet Aug. 21-27, 1934.

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

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

Rating tables, water year 1947-48, except period of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 31		Jan. 1 to Sept. 30			
2.8	204	2.6	101	3.8	470
3.2	306	2.8	147	5.0	955
3.4	370	3.2	257	8.4	2,290

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	304	315	330	245	175	270	660	1,840	2,240	554	230	137
2	261	315	320	240	190	250	660	1,760	2,140	538	224	128
3	258	322	320	245	195	*231	730	1,720	2,040	512	216	130
4	254	322	320	245	195	245	730	1,680	1,970	455	213	128
5	250	328	310	250	195	250	940	1,600	1,950	425	213	121
6	250	322	310	250	200	255	910	1,480	1,890	402	216	119
7	253	309	305	255	195	255	801	1,450	1,830	410	213	119
8	253	309	275	270	195	225	743	1,520	1,810	373	207	116
9	255	334	240	265	205	240	679	1,600	1,710	351	199	114
10	258	331	230	270	205	235	719	1,660	1,570	348	202	121
11	266	318	230	255	200	225	719	1,600	1,330	354	202	128
12	274	312	240	265	205	235	751	1,590	1,230	362	202	133
13	274	260	245	255	205	230	747	1,540	1,120	348	196	137
14	269	300	255	250	210	225	768	1,460	925	340	194	137
15	266	335	*272	*226	210	240	784	1,420	826	330	183	137
16	261	340	265	215	210	235	946	1,400	772	320	170	140
17	261	320	255	210	220	235	1,210	1,450	723	313	167	145
18	261	340	250	205	220	245	1,410	1,540	687	313	170	160
19	264	335	255	195	*224	245	1,490	1,680	667	309	167	180
20	261	330	255	190	240	280	1,480	1,810	628	323	160	191
21	266	300	245	187	240	255	1,470	1,920	620	316	154	194
22	269	*228	255	190	240	255	1,550	2,060	659	289	154	199
23	269	235	255	190	240	270	1,610	2,140	695	286	160	194
24	272	280	250	190	245	300	1,660	2,150	699	286	162	199
25	280	320	230	200	255	370	1,670	2,160	824	289	164	183
26	292	320	220	195	250	460	1,680	2,170	808	267	164	160
27	289	310	225	210	245	550	1,700	2,190	636	273	154	172
28	297	270	235	195	255	610	1,720	2,220	542	254	152	170
29	309	260	250	190	250	570	1,790	2,240	523	245	152	172
30	312	280	240	175	-	670	1,900	2,270	516	242	150	177
31	312	-	240	175	-	670	-	2,290	-	239	147	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	8,379	312	250	270	16,620
November	9,200	340	228	307	18,250
December	8,117	330	220	262	16,100
Calendar year 1947	230,448	2,300	160	631	457,100
January	6,888	270	175	222	13,730
February	6,314	255	175	218	12,520
March	9,831	670	225	317	19,500
April	34,633	1,900	660	1,154	68,690
May	55,560	2,290	1,400	1,792	110,200
June	34,180	2,240	516	1,139	67,800
July	10,666	554	239	344	21,160
August	5,657	330	147	182	11,220
September	4,541	199	114	151	9,010
Water year 1947-48	192,966	2,290	114	530	384,700

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 13 to Apr. 5 (no gage-height record during part of period); discharge computed on basis of 5 discharge measurements and records for nearby stations.

Bear River below Stewart Dam, near Montpelier, Idaho

Location.- Water-stage recorder, lat. 42°15'30", long. 111°17'30", in NE¼ sec. 34, T. 13 S., R. 44 E., 300 feet downstream from Stewart Dam and 4½ miles south of Montpelier. Prior to Dec. 27, 1947, staff gage at same site and datum.

Records available.- October 1945 to September 1948. January 1922 to September 1945 in files of Salt Lake City district office, Geological Survey.

Average discharge.- 26 years, 85.0 second-feet.

Extremes.- Maximum daily discharge during year, 161 second-feet Dec. 9; minimum daily, 1 second-foot July 28 to Aug. 2.
1923-48: Maximum daily discharge, 3,050 second-feet June 3, 1923; minimum daily, 1 second-foot on several days in 1931, 1934, 1940, 1948.

Remarks.- Records good. Many diversions above station for irrigation. Flow regulated at Stewart Dam.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	20	20	26	23	24	22	14	24	28	1	13
2	18	a20	19	25	22	24	18	14	24	28	1	12
3	18	20	20	24	22	23	18	13	24	28	7	12
4	18	20	20	24	21	23	18	13	24	28	19	11
5	a18	21	19	24	21	23	18	13	24	28	20	10
6	18	22	19	24	22	23	14	13	24	28	20	9
7	19	21	a19	25	22	23	13	13	26	27	19	8
8	19	20	h102	26	22	22	13	13	26	27	20	7
9	19	a20	161	27	22	22	12	13	26	26	20	6
10	19	21	h116	28	21	22	12	12	26	26	20	5
11	20	20	28	28	20	27	12	12	26	26	20	5
12	a20	20	28	28	22	24	13	12	26	26	20	5
13	20	20	28	30	23	22	13	12	27	26	20	6
14	20	20	a28	29	22	22	13	12	27	24	19	6
15	20	20	29	29	21	22	14	12	25	22	19	6
16	20	a20	30	29	20	22	13	11	27	22	18	6
17	20	20	30	28	21	22	15	11	29	22	18	6
18	20	a20	28	28	21	22	16	13	28	e21	16	6
19	a20	a20	29	30	22	22	16	15	28	20	16	6
20	20	a20	29	29	24	24	15	18	28	22	15	7
21	20	20	a30	27	23	24	15	18	28	22	16	8
22	20	20	31	26	24	24	14	19	28	21	17	9
23	20	a20	31	24	24	23	14	22	28	19	16	9
24	20	19	31	24	24	24	14	22	28	18	16	9
25	20	19	a30	23	24	26	14	22	28	19	16	10
26	a20	20	30	24	24	26	14	22	28	18	16	9
27	20	a20	29	24	24	26	14	22	28	9	15	9
28	a20	19	30	24	24	24	14	23	28	1	15	9
29	a20	19	29	23	24	26	14	22	28	1	15	9
30	a20	a20	29	24	-	26	14	23	28	1	14	10
31	20	-	28	24	-	25	-	24	-	1	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	604	20	18	19.5	1,200
November	601	22	19	20.0	1,190
December	1,130	161	19	36.5	2,240
Calendar year 1947	8,922	277	6	24.4	17,700
January	808	30	23	26.1	1,600
February	649	24	20	22.4	1,290
March	732	27	22	23.6	1,450
April	439	22	12	14.6	871
May	498	24	11	16.1	988
June	799	29	24	26.6	1,580
July	635	28	1	20.5	1,260
August	497	20	1	16.0	986
September	243	13	5	8.1	482
Water year 1947-48	7,635	161	1	20.9	15,140

a No gage-height record; discharge interpolated.
h Computed from staff-gage readings.

Bear River at Pescadero, Idaho

Location.- Water-stage recorder, lat. 42°24'30", long. 111°21'30", in SE¼ sec. 6, T. 12 S., R. 44 E., at Pescadero, 400 feet downstream from road bridge, 2 miles downstream from Bennington Creek, and 6½ miles northwest of Montpelier

Records available.- October 1945 to September 1948. January 1922 to September 1945 in files of Salt Lake City district office, Geological Survey.

Average discharge.- 26 years, 490 second-feet.

Extremes.- Maximum daily discharge during year, 1,500 second-feet July 15, 16; minimum daily, 95 second-feet Feb. 21 to Mar. 3.
1922-48: Maximum daily discharge, 3,840 second-feet June 10, 1923; minimum daily, 23 second-feet Mar. 14-17, 1936.

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

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

Rating table, water year 1947-48, except period of ice effect
(gage height, in feet, and discharge, in second-feet)

1.7	87	2.2	172	3.3	511	4.7	1,220
1.8	101	2.5	241	3.8	729	5.0	1,420
2.0	134	2.9	361	4.4	1,040	5.2	1,560

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	701	479	612	660	245	95	228	437	857	1,020	1,110	1,010
2	767	479	625	660	235	95	280	452	898	1,020	1,090	994
3	792	483	616	680	175	95	316	437	913	647	1,090	983
4	792	491	487	740	130	*98	407	403	908	471	1,110	934
5	658	548	426	745	220	100	414	389	724	720	882	908
6	625	569	414	745	335	100	389	372	802	913	1,200	893
7	638	586	407	625	335	100	382	358	841	1,140	1,300	882
8	344	598	396	500	340	100	348	361	802	1,180	1,290	919
9	479	607	515	420	340	100	288	378	763	1,310	1,270	972
10	612	603	550	305	335	105	306	386	739	1,380	831	972
11	652	616	600	305	365	230	319	378	724	1,460	1,000	951
12	660	612	650	300	390	360	309	375	701	1,490	1,080	934
13	688	603	750	320	390	360	288	358	678	1,480	1,070	929
14	638	598	730	350	385	365	291	328	711	1,490	1,050	919
15	625	598	730	345	385	370	341	294	734	1,500	1,030	701
16	629	433	710	255	390	375	448	277	802	1,500	1,010	720
17	460	*372	660	145	395	380	515	260	877	1,430	1,050	515
18	382	556	600	145	310	385	523	211	893	1,380	1,050	748
19	375	603	510	140	170	300	536	218	882	1,370	1,040	806
20	375	598	320	140	110	215	523	231	852	1,360	1,010	634
21	372	*609	270	205	95	225	495	218	846	1,360	1,030	683
22	368	650	270	*270	95	235	471	224	893	1,350	1,030	724
23	368	660	280	270	95	238	463	291	1,010	1,290	1,030	724
24	429	715	290	265	95	224	452	328	1,080	1,250	1,010	729
25	452	777	300	260	95	226	448	351	1,080	1,230	1,020	729
26	452	816	350	265	95	228	433	331	715	1,230	1,040	763
27	452	816	390	325	95	234	418	471	560	1,250	1,040	715
28	456	656	440	415	95	234	396	581	540	1,260	1,030	697
29	463	594	490	405	95	218	386	807	882	1,270	1,040	697
30	471	598	570	325	-	234	400	634	1,000	1,220	1,030	692
31	471	-	660	245	-	291	-	670	-	1,140	1,020	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	16,644	792	344	537	33,010
November	17,923	816	372	597	35,550
December	15,618	750	270	504	30,980
Calendar year 1947	224,096	1,490	80	614	444,500
January	11,775	745	140	380	23,360
February	6,835	395	95	236	13,560
March	6,915	385	95	223	13,720
April	11,813	536	228	394	23,430
May	11,609	670	211	374	23,030
June	24,707	1,080	540	824	49,010
July	38,111	1,500	471	1,229	75,590
August	32,883	1,300	831	1,061	65,220
September	24,477	1,010	515	816	48,550
Water year 1947-48	219,310	1,500	95	599	435,000

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 21-23, Dec. 10 to Mar. 22 (no gage-height record during part of this period); discharge computed on basis of 3 discharge measurements and records for nearby stations.

Bear River at Alexander, Idaho

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

Drainage area.- 3,840 square miles.

Records available.- March 1911 to September 1916, April 1919 to September 1948.

Average discharge.- 33 years (1911-16, 1919-20, 1921-48), 730 second-feet.

Extremes.- Maximum daily discharge during year, 1,770 second-feet July 12; minimum daily, 49 second-feet Feb. 15.
1911-16, 1919-48: Maximum discharge, 4,590 second-feet May 9, 1922; maximum gage height, 15.95 feet Dec. 11, 1919; minimum discharge, 28 second-feet at times when reservoir gates are closed.

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

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	976	577	885	202	102	354	402	507	1,160	1,050	1,030	1,220
2	920	537	815	631	543	404	413	149	1,160	1,250	1,370	1,250
3	933	817	735	473	677	355	378	877	1,100	821	1,280	1,240
4	671	734	717	317	631	515	146	817	1,030	568	1,270	1,040
5	636	822	694	791	582	409	744	821	500	651	1,220	627
6	720	730	422	780	636	174	853	843	657	1,460	1,150	a850
7	741	716	585	722	304	124	832	818	1,240	1,470	802	a1,120
8	717	578	747	796	87	661	567	602	855	1,470	946	a1,180
9	a820	541	763	651	670	671	704	296	87870	1,420	1,260	a1,080
10	a890	833	852	584	575	570	417	848	1,020	1,420	1,250	1,100
11	660	923	874	406	601	711	129	920	1,160	1,230	1,280	865
12	506	901	658	543	562	491	916	883	920	1,770	1,230	566
13	902	840	496	581	723	255	755	861	696	1,490	1,190	875
14	891	744	582	426	288	100	679	814	1,060	1,340	934	909
15	798	709	818	402	49	550	472	564	857	1,270	857	890
16	762	457	844	323	397	336	726	215	737	1,160	1,260	820
17	692	796	855	375	206	352	953	838	793	1,290	1,250	824
18	524	846	732	268	195	521	1,100	810	809	1,160	1,270	798
19	497	842	791	534	461	332	1,190	810	955	1,260	1,270	810
20	666	873	775	493	303	359	1,080	727	1,030	1,270	1,280	1,130
21	725	837	477	386	305	113	1,110	884	1,340	1,280	970	824
22	699	923	830	406	224	499	946	549	1,190	1,230	912	921
23	670	739	699	429	278	437	849	255	950	1,220	1,260	951
24	608	900	384	258	415	445	614	895	919	1,150	1,290	943
25	551	890	225	84	368	539	289	926	853	1,020	1,290	926
26	163	858	688	778	459	398	893	1,080	737	1,220	1,270	509
27	745	571	593	728	404	185	867	1,030	819	1,240	1,110	982
28	774	800	451	554	252	80	861	1,120	1,180	1,230	1,000	823
29	785	686	781	557	162	449	832	997	1,280	1,270	632	861
30	765	603	826	493	-	527	822	477	1,230	1,290	1,190	802
31	690	-	854	346	-	435	-	821	-	1,060	1,260	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	22,097	976	163	713	43,830
November	22,623	923	457	754	44,870
December	21,448	885	225	692	42,540
Calendar year 1947	289,218	1,520	56	792	573,700
January	15,317	796	84	494	30,380
February	11,459	723	49	395	22,730
March	12,351	711	80	398	24,500
April	21,539	1,190	129	718	42,720
May	23,054	1,120	149	744	45,730
June	29,107	1,340	500	970	57,730
July	38,030	1,770	568	1,227	75,430
August	35,583	1,370	632	1,148	70,580
September	27,736	1,250	509	925	55,010
Water year 1947-48	280,344	1,770	49	766	556,000

a No gage-height record; discharge computed from Soda plant output record.

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

Location.- Water-stage recorder, lat. 42°16', long. 111°45', in sec. 26, T. 13 S., R. 40 E., 200 feet below tailrace of Oneida plant and 6 miles south of Cleveland, Idaho.

Records available.- October 1945 to September 1948. January 1922 to September 1945 in files of Salt Lake City district office, Geological Survey.

Average discharge.- 26 years, 714 second-feet.

Extremes.- Maximum daily discharge during year, 2,180 second-feet Apr. 19; minimum daily, 37 second-feet Mar. 14.
1922-48: Maximum daily discharge, 5,480 second-feet May 8, 1922; minimum daily, 15 second-feet May 3, 4, 1925.

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

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a1,430	1,090	1,070	334	351	551	414	1,210	669	1,070	759	1,140
2	1,410	311	560	859	693	710	1,100	55	851	1,100	765	1,250
3	1,070	1,130	942	651	659	466	1,140	1,180	1,080	968	614	1,350
4	947	1,080	1,130	780	866	417	153	1,390	1,050	238	987	455
5	153	991	1,310	668	725	392	630	1,010	1,050	178	1,040	478
6	1,040	836	957	515	662	725	1,060	1,460	103	1,050	1,130	1,160
7	a1,300	1,130	684	996	1,160	116	591	1,560	142	1,170	1,100	1,100
8	a1,010	1,160	547	803	153	849	1,360	1,170	1,240	1,490	596	1,360
9	1,060	475	893	1,290	637	855	780	391	1,290	1,390	1,040	a880
10	650	747	1,310	737	887	1,410	1,180	1,020	550	1,180	1,230	1,260
11	948	757	733	862	790	773	391	1,670	642	1,070	1,050	1,320
12	717	1,230	1,300	834	1,060	1,190	854	1,310	716	a1,110	1,100	595
13	806	1,290	753	880	474	51	540	1,050	102	a1,150	1,260	1,390
14	1,130	1,400	268	942	a430	37	773	1,310	251	a1,160	1,070	780
15	1,360	790	861	530	203	239	852	732	a600	a1,330	916	640
16	1,500	50	873	595	450	696	1,090	332	364	752	1,490	1,030
17	995	1,080	1,190	160	472	621	1,470	1,470	521	554	907	985
18	467	1,480	1,180	223	822	483	1,030	1,240	792	731	1,180	786
19	440	1,430	1,250	678	546	728	2,180	1,270	1,060	1,230	1,100	1,150
20	733	1,070	485	520	676	650	2,030	1,210	707	1,090	915	914
21	1,090	822	1,230	971	593	185	1,790	1,270	1,250	1,170	458	1,100
22	848	1,190	946	605	337	457	1,750	1,110	882	1,250	920	1,490
23	934	801	846	619	682	399	1,410	117	515	1,560	1,110	a1,420
24	1,040	1,180	670	554	695	913	1,160	886	1,030	709	1,120	1,360
25	779	1,010	849	307	597	863	735	1,260	1,300	a420	1,120	572
26	248	877	372	1,020	948	749	1,740	1,350	939	1,230	1,070	467
27	1,030	115	825	529	478	610	1,410	1,420	254	1,140	1,460	1,000
28	1,010	1,070	756	446	794	360	1,220	830	683	1,140	980	1,150
29	1,010	1,030	1,230	709	70	566	1,210	815	728	787	263	1,060
30	1,000	889	824	859	-	591	979	188	833	798	1,550	957
31	916	-	829	671	-	564	-	402	-	1,220	1,480	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	29,071	1,500	153	938	57,660
November	28,511	1,480	50	950	56,550
December	27,673	1,310	268	893	54,890
Calendar year 1947	308,825	1,790	49	846	612,500
January	21,147	1,290	160	682	41,940
February	17,910	1,160	70	618	35,520
March	18,216	1,410	37	588	36,130
April	33,022	2,180	153	1,101	65,500
May	31,688	1,670	55	1,022	62,850
June	22,194	1,300	102	740	44,020
July	31,435	1,560	178	1,014	62,350
August	31,780	1,550	263	1,025	63,030
September	30,499	1,490	455	1,017	60,490
Water year 1947-48	323,146	2,180	37	883	640,900

a Discharge computed from output records of Oneida power plant.

Bear River near Preston, Idaho

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

Drainage area.- 4,500 square miles.

Records available.- January 1944 to September 1948. October 1889 to September 1917 (gage heights only January to September 1917) at site 5 miles downstream, records comparable.

Extremes.- Maximum discharge during year, 3,220 second-feet May 21 (gage height, 5.02 feet); minimum daily, 20 second-feet July 5; minimum, 4.7 second-feet July 5 (gage height, 0.74 foot).

1889-1916, 1944-48: Maximum discharge, about 8,500 second-feet June 9, 10, 1907, estimated on basis of records for station near Collinston, Utah; maximum gage height observed, 9.04 feet Jan. 17, 18, 1917 (backwater from ice), site and datum then in use, minimum daily, 14 second-feet July 4, 1944, July 4, 1945, July 5, 1947; minimum, 0.8 second-foot July 5, 1945 (gage height, 0.68 foot).

Remarks.- Records excellent. Station is below all irrigation diversions from Bear River in Idaho except Cub River pumps in SE¼ sec. 20, T. 16 S., R. 39 E. Flow regulated by storage in Bear Lake Reservoir and by power plants above station.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,410	1,220	1,130	388	439	453	475	1,250	755	837	703	922
2	1,340	374	712	887	742	752	1,210	260	968	961	685	1,130
3	1,110	1,160	847	730	634	497	1,270	1,130	1,160	780	472	1,270
4	1,030	1,100	1,050	714	937	418	319	1,400	1,120	290	830	326
5	244	1,070	1,460	787	756	547	580	1,080	1,140	20	780	340
6	990	929	1,020	566	643	578	1,010	1,490	355	746	1,060	974
7	1,240	1,110	944	1,040	1,080	375	562	1,650	292	1,060	1,080	932
8	996	1,100	635	810	367	755	1,320	1,260	1,110	1,220	343	1,260
9	1,110	774	880	1,300	574	844	783	688	1,320	1,170	999	798
10	726	788	1,450	902	760	1,500	1,200	1,080	743	912	1,060	1,130
11	892	754	882	979	833	802	510	1,810	583	1,090	883	1,130
12	811	1,020	1,220	930	1,330	1,120	834	1,470	691	911	964	536
13	815	1,450	851	908	473	325	567	1,160	187	1,010	1,050	1,260
14	1,030	1,300	469	1,010	407	90	767	1,420	222	995	1,050	614
15	1,350	1,000	671	579	379	178	861	941	460	1,150	792	523
16	1,650	318	963	656	413	530	1,080	547	266	830	1,330	852
17	963	997	1,320	229	455	694	1,400	1,740	430	343	859	823
18	493	1,500	1,170	228	898	445	1,380	1,580	610	559	1,020	690
19	574	1,480	1,420	727	573	728	2,260	1,350	912	1,070	923	1,080
20	774	1,070	559	546	703	636	1,930	1,460	686	807	851	806
21	1,020	867	1,240	1,040	667	248	1,960	1,560	1,170	1,010	322	977
22	854	1,160	1,120	558	488	426	1,890	1,430	944	1,080	785	1,300
23	988	915	916	688	730	445	1,440	468	557	1,410	954	1,370
24	992	1,080	624	627	664	685	1,230	1,000	1,080	715	958	1,390
25	906	1,070	956	392	621	928	838	1,490	1,290	317	875	453
26	306	898	484	961	886	766	1,660	1,500	1,140	1,000	878	359
27	939	329	690	712	692	614	1,450	1,620	341	951	1,280	898
28	1,080	904	1,000	505	700	495	1,250	1,100	629	1,060	795	1,040
29	1,060	1,010	1,240	703	311	588	1,300	1,050	689	727	163	1,070
30	1,090	1,070	1,100	866	-	572	1,050	448	821	570	1,260	892
31	974	-	934	687	-	382	-	627	-	360	1,380	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	29,757	1,650	244	960	59,020
November	29,817	1,500	318	994	59,140
December	29,957	1,460	469	966	59,420
Calendar year 1947	321,896	1,810	14	882	638,500
January	22,655	1,300	228	731	44,940
February	19,155	1,330	311	661	37,990
March	18,416	1,500	90	594	36,530
April	34,386	2,260	319	1,146	68,200
May	37,059	1,810	260	1,195	73,510
June	22,671	1,320	187	756	44,970
July	26,661	1,410	20	860	52,880
August	27,382	1,380	163	883	54,310
September	27,145	1,390	326	905	53,840
Water year 1947-48	325,061	2,260	20	888	644,800

Bear River near Collinston, Utah

Location.- Water-stage recorder, lat. 41°50', long. 112°03', in NW¼SE¼ sec. 27, T. 13 N., R. 2 W., 800 feet downstream from Cutler plant of Utah Power & Light Co., 2,000 feet downstream from Cutler Dam, and 5½ miles north of Collinston. Datum of gage is 4,276.13 feet above mean sea level (levels by Bureau of Reclamation).

Drainage area.- 6,000 square miles.

Records available.- July 1889 to September 1948.

Extremes.- Maximum discharge during year, 3,900 second-feet May 5 (gage height, 4.92 feet); minimum daily, 20 second-feet July 5, 6.
1889-1948: Maximum discharge observed, 11,600 second-feet June 7-10, 1909 (gage height, 7.70 feet, site and datum then in use); practically no flow at 12 p.m. Aug. 5, 1920.

Remarks.- Records excellent. Many canals divert above station. Flow regulated by reservoirs and power plants above station.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,490	1,840	1,830	692	375	1,480	1,140	3,680	2,610	1,170	468	334
2	1,600	212	a1,630	1,210	1,460	1,540	1,960	3,510	2,750	667	519	344
3	1,770	1,970	a1,680	1,740	1,410	1,520	2,200	3,510	2,400	1,180	719	929
4	1,480	2,420	2,130	193	1,420	1,520	1,120	2,940	2,120	25	712	269
5	684	1,940	1,550	1,210	1,800	1,570	2,310	2,610	2,270	20	275	48
6	1,030	1,970	1,300	1,110	1,440	1,210	2,420	2,430	a2,570	20	340	239
7	1,150	1,660	1,780	720	438	957	1,790	3,460	a2,470	21	424	249
8	1,600	1,760	1,670	1,900	745	1,740	2,030	3,380	2,570	60	42	256
9	1,440	1,440	2,420	2,900	1,430	1,230	2,410	3,690	2,580	22	517	227
10	1,540	1,890	2,260	1,960	1,450	677	2,650	3,700	1,880	24	418	292
11	1,390	1,960	1,890	1,330	1,960	1,510	1,480	3,700	1,940	96	342	458
12	778	1,620	1,970	1,540	1,470	1,270	2,290	3,700	2,100	127	283	361
13	886	1,900	1,590	1,280	1,260	1,060	2,590	3,710	962	128	581	1,040
14	1,430	1,660	865	1,720	625	859	2,570	3,510	1,190	100	239	502
15	1,410	2,510	1,750	1,620	366	1,710	2,430	3,520	695	92	93	424
16	1,920	2,030	1,390	1,540	a1,510	1,800	2,290	3,400	473	65	621	395
17	1,560	1,190	1,460	908	a1,260	1,710	2,120	3,310	152	32	1,240	307
18	1,400	1,160	1,370	1,310	1,770	1,550	1,900	3,420	25	44	1,240	268
19	1,030	1,470	1,740	1,170	1,640	1,710	2,610	3,430	246	345	707	659
20	1,630	1,800	1,390	1,760	1,900	1,770	3,490	3,760	336	128	291	415
21	1,530	1,700	1,060	534	2,140	1,180	3,690	3,700	1,310	294	71	1,020
22	1,140	1,340	1,710	1,120	2,400	1,580	3,690	3,700	1,960	627	300	702
23	1,630	1,260	1,850	1,310	2,930	1,460	3,700	3,700	2,240	570	461	896
24	673	1,800	2,330	1,350	2,640	1,270	3,700	3,740	2,290	176	357	1,540
25	614	1,780	1,670	1,190	2,650	1,170	3,720	3,740	2,370	29	512	1,670
26	1,630	2,020	1,190	1,560	2,540	1,320	3,720	3,710	2,360	710	428	1,480
27	525	778	726	1,300	2,690	1,660	3,720	3,330	2,320	481	675	930
28	699	1,380	861	1,030	2,160	1,480	3,700	3,490	2,190	215	256	995
29	1,480	1,120	1,450	1,010	1,230	1,820	3,700	3,490	1,990	100	28	913
30	1,870	211	1,680	872	-	a2,160	3,700	3,480	1,370	584	648	1,210
31	2,060	-	1,710	744	-	a1,160	-	3,310	-	1,080	574	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	41,069	2,060	525	1,325	81,460
November	47,791	2,510	211	1,593	94,790
December	49,902	2,420	726	1,610	98,980
Calendar year 1947	518,340	3,460	24	1,420	1,028,000
January	39,833	2,900	193	1,285	79,010
February	47,107	2,930	366	1,624	93,440
March	44,653	2,160	677	1,440	88,570
April	80,840	3,720	1,120	2,695	160,300
May	107,760	3,760	2,430	3,476	213,700
June	52,739	2,750	25	1,758	104,600
July	9,232	1,180	20	298	18,310
August	14,381	1,240	28	464	28,520
September	19,372	1,670	48	646	38,420
Water year 1947-48	554,679	3,760	20	1,516	1,100,000

a No gage-height record; discharge computed on basis of output of power plant.

Mill Creek near Evanston, Wyo.

Location.- Water-stage recorder, lat. 41°00', long. 110°52', in NW¼ sec. 20, T. 12 N., R. 119 W., 1.8 miles downstream from Utah-Wyoming State line and 18.8 miles south of Evanston.

Drainage area.- 60.6 square miles.

Records available.- July 1942 to September 1948 (discontinued).

Extremes.- Maximum discharge during year, 623 second-feet May 19 (gage height, 3.64 feet), from rating curve extended above 190 second-feet; minimum, 2.4 second-feet Sept. 5. 1942-48: Maximum discharge, that of May 9, 1948; minimum, 2 second-feet Oct. 24 to Nov. 28, 1945 (field estimate) when water was diverted above station to permit construction in stream channel.

Remarks.- Records good except those during periods of ice effect or no gage-height record, which are fair. Four canals in Wyoming and four in Utah divert water above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18					a11	a15	60	145	19	5.9	3.6
2	16					a11	a17	49	132	28	6.2	3.0
3	15	a20				(*)	a20	52	114	21	3.9	3.4
4	14						a25	66	90	12	5.2	3.2
5	14			b15			a22	70	75	10	11	3.0
6	14						a20	96	60	9.8	9.0	3.4
7	14						a18	123	51	9.8	7.3	3.6
8	14				a9	b11	a17	90	41	8.1	14	4.3
9	14						a25	66	36	7.7	11	4.3
10	14	a18	(*)				a30	53	29	6.6	8.1	3.6
11	19						a22	48	24	6.6	6.9	3.0
12	21						a18	53	20	7.3	6.9	3.5
13	18	(*)		(*)			a18	87	18	8.1	4.9	3.5
14	18						a23	145	15	6.9	4.9	3.5
15	18		b15	b12			a30	173	15	6.2	5.6	3.4
16	16	b18					*a35	217	17	4.6	4.9	3.4
17	19					b13	42	272	19	5.2	3.5	3.6
18	20						50	305	25	5.6	5.2	3.5
19	17						41	447	18	5.6	6.6	5.2
20	11						48	378	17	9.0	5.6	6.9
21	10						69	a350	24	7.3	4.3	4.6
22	15			a12		b14	81	a300	33	6.2	4.6	4.9
23	a30				a11	b16	78	a250	40	6.2	5.2	4.9
24	a25					b20	57	a280	62	6.9	3.9	4.6
25	a20					b18	42	223	45	6.9	4.9	4.6
		b15										
26	a21					b16	34	186	43	6.9	4.9	4.6
27	a22					b15	43	162	45	7.3	3.4	5.2
28	a24			a10		b18	86	158	37	6.9	4.3	5.6
29	a25					b22	113	175	30	7.7	3.6	5.9
30	a23				-	b18	82	153	15	7.3	4.3	5.6
31	a20	-			-	a16	-	162	-	6.2	3.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	559	30	10	18.0	1,110
November	520	-	-	17.3	1,030
December	465	-	-	15	922
Calendar year 1947	13,783.5	295	-	37.8	27,340
January	390	-	-	12.6	774
February	289	-	-	10.0	573
March	422	22	-	13.6	837
April	1,221	113	15	40.7	2,420
May	5,249	447	48	169	10,410
June	1,335	145	15	44.5	2,650
July	272.9	28	4.6	8.80	541
August	183.3	14	3.3	5.91	364
September	125.4	6.9	3.0	4.18	249
Water year 1947-48	11,031.6	447	3.0	30.1	21,880

Peak discharge (base, 210 sec.-ft.).- May 19 (10 p.m.) 623 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for Bear River at Utah-Wyoming State line and Sulphur Creek near Evanston.

b Stage-discharge relation affected by ice.

Sulphur Creek near Evanston, Wyo.

Location.- Water-stage recorder, lat. 41°10', long. 110°52', in SE¼ sec. 29, T. 14 N., R. 119 W., 4.8 miles upstream from mouth and 9 miles southeast of Evanston.

Drainage area.- 80.5 square miles.

Records available.- April 1942 to September 1948.

Extremes.- Maximum discharge during year, 1,070 second-feet Apr. 21 (gage height, 4.01 feet); minimum, 0.1 second-foot Aug. 27, 29-31, Sept. 3, 4, but may have been less during periods of ice effect.
1942-48: Maximum discharge, that of Apr. 21, 1948; minimum, that of Aug. 27, 29-31, Sept. 3, 4, 1948.

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

Revisions (water years).- W 1040: 1943, 1944.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	3.8	b4.0	2.5			12	74	15	6.9	.5	.2
2	2.7	3.5	b4.5	1.8			20	44	16	8.6	.5	.2
3	2.5	3.5	b4.5	2.2			92	35	20	6.6	.4	.1
4	1.8	a3.5	b4.0	2.2	a2.5		101	46	21	3.4	.4	.1
5	1.3	a3.5	b3.5	b2.5			66	40	20	1.9	1.1	.2
6	1.5	a3.5	3.5	b3.5		a3.5	a45	a40	14	1.7	.7	.1
7	1.6	a3.8	4.0	b4.5			a20	a50	9.7	1.9	.7	.1
8	2.0	a4.0	3.8	b5.0			a15	22	9.3	1.7	1.2	.1
9	2.0	a4.3	*4.0	b5.0			a20	11	9.3	1.2	.9	.1
10	1.6	a4.6	3.5	b5.0			*a90	20	7.8	1.1	.7	.1
11	2.3	4.8	3.3	b4.8	a2.0	b4.0	38	23	7.8	1.2	.7	.1
12	3.5	4.8	3.0	b4.5		b4.5	15	26	5.6	1.2	.5	.1
13	2.7	*5.3	2.2	*4.0		5.1	14	35	4.8	1.3	.4	.2
14	3.3	5.3	2.3	4.0		5.3	25	80	1.8	1.8	.4	.2
15	3.0	4.8	2.0			5.1	63	118	3.5	1.4	.3	.1
16	3.0	4.6	2.2			5.1	176	121	3.2	1.2	.2	.1
17	3.8	4.6	1.8			5.1	361	157	3.0	1.0	.2	.1
18	3.3	4.3	2.5			4.8	232	172	2.3	1.0	.2	.1
19	2.5	4.0	3.3			4.8	170	176	2.1	1.0	.2	.2
20	2.0	b3.8	3.8	b4.0		b4.5	282	143	3.6	7.2	.2	.4
21	2.3	b3.5	4.0		a3.5	b4.5	482	94	40	2.7	.2	.4
22	4.3	b3.5	3.8			b4.5	499	81	102	1.3	.2	.4
23	4.0	b3.8	3.5			b5.0	331	56	89	1.2	.3	.4
24	4.3	b4.2	3.5			b25	152	47	86	1.2	.3	.4
25	4.0	b4.7	3.3		(*)	b22	74	36	40	1.0	.2	.4
26	3.8	b5.0	3.5			b19	64	29	24	.9	.2	.4
27	4.3	b5.0	4.3			b17	114	28	21	.7	.1	.3
28	4.0	b4.8	5.3	b3.0		a35	176	24	18	.6	.1	.3
29	4.0	4.6	4.3			a70	157	20	12	.6	.1	.3
30	4.3	3.8	5.3		-	a35	98	19	8.3	.6	.1	.3
31	4.3	-	4.6		-	a20	-	18	-	.5	.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	92.2	4.3	1.3	2.97	183
November	127.2	5.3	3.5	4.24	252
December	111.1	5.3	1.8	3.58	220
Calendar year 1947	9,554.4	395	-	26.2	18,950
January	113.3	-	-	3.65	225
February	85.5	-	-	2.95	170
March	340.3	70	-	11.0	675
April	4,004	499	12	133	7,940
May	1,885	176	11	60.8	3,740
June	622.6	102	2.1	30.8	1,230
July	64.6	8.6	.5	20.8	128
August	12.3	1.2	.1	.40	24
September	6.5	.4	.1	.22	13
Water year 1947-48	7,464.6	499	-	20.4	14,800

Peak discharge (base, 300 sec.-ft.).- Apr. 17 (7 p.m.) 808 sec.-ft.; Apr. 21 (7 p.m.) 1,070 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of 2 discharge measurements, weather records, and records for stations on nearby streams.

b Stage-discharge relation affected by ice.

Chapman Canal at State line, near Evanston, Wyo.

Location.- Water-stage recorder, lat. 41°24', long. 111°02', in SE¼ sec. 36, T. 17 N., R. 121 W., at highway bridge, 6½ miles downstream from head gates and 10 miles northwest of Evanston.

Records available.- October 1945 to September 1948. April to September 1942 and May to September 1943 in Upper Bear River Water Commissioner's reports, Utah; April 1944 to September 1946 in Upper Bear River Water Commissioner's reports, Utah, and Bear River Hydrometric Data reports.

Extremes.- Maximum daily discharge during year, 99 second-feet May 17; no flow about half of time.
1942-48: Maximum daily discharge observed, 129 second-feet Apr. 14, 1946; no flow at times in each year.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Canal diverts water from Bear River in NW¼ sec. 36, T. 16 N., R. 121 W. Many diversions above station for irrigation in Wyoming. Flow at station is for storage in Neponset Reservoir, Utah, and irrigation in Saleratus Basin, Utah.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	1.4	19			0	32	3.3	52	5.5		
2	0	1.5	21			0	44	3.1	61	1.3		
3	0	1.8	22			0	58	2.6	85	0		
4	0	1.6	22			0	54	2.2	82	0		
5	0	1.5	22			0	40	2.2	64	1.2		
6	0	1.6	16			0	36	2.4	58	.5		
7	0	1.5	0			0	29	2.4	59	.2		
8	0	17	0			0	26	2.6	65	0		
9	0	22	0			0	27	14	58	0		
10	0	13	0			0	44	24	44	0		
11	a.5	24	0			0	41	27	46	0		
12	a.5	27	0			0	35	26	41	0		
13	a1.0	19	0			a10	31	26	37	0		
14	a1.0	20	0			b15	38	30	30	0		
15	1.4	22	0			a20	46	38	26	0		
16	1.4	28	0			a20	63	57	26	0		
17	1.5	22	0			a20	48	99	27	0		
18	1.5	27	0			a20	76	94	27	0		
19	1.6	29	0			a20	60	84	20	0		
20	1.6	23	0			a23	57	79	13	0		
21	1.8	22	0			h27	69	72	16	0		
22	1.8	22	0			a30	77	66	48	0		
23	1.8	24	0			a35	41	58	51	0		
24	1.6	24	0			a40	20	59	52	0		
25	1.6	22	0			a35	34	67	41	0		
26	1.8	23	0			a32	44	62	29	0		
27	1.6	23	0			a30	a30	53	19	0		
28	1.4	24	0			h42	16	48	17	0		
29	1.4	22	0			56	12	51	16	0		
30	1.2	21	0			23	3.8	58	9.7	0		
31	1.2	-	0			12	-	52	-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	29.2	1.8	0	0.94	58
November	530.9	29	1.4	17.7	1,050
December	122	22	0	3.94	242
Calendar year 1947	6,280.9	127	0	17.2	12,450
January	0	0	0	0	0
February	0	0	0	0	0
March	510	56	0	16.5	1,010
April	1,231.8	77	3.8	41.1	2,440
May	1,264.8	99	2.2	40.8	2,510
June	1,219.7	85	9.7	40.7	2,420
July	8.7	5.5	0	.28	17
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1947-48	4,917.1	99	0	13.4	9,750

a No gage-height record; discharge computed on basis of observer's notes, interpolated, or records for stations on Bear River near Woodruff, Utah, and near Evanston, Wyo.
b Stage-discharge relation affected by ice.
h Computed from staff-gage reading.

Twin Creek at Sage, Wyo.

Location.- Water-stage recorder, lat. 41°49', long. 110°58', in SE¼ sec. 7, T. 21 N., R. 119 W., at Sage, 5 miles upstream from mouth.

Drainage area.- 246 square miles.

Records available.- April 1943 to September 1948.

Extremes.- Maximum discharge during year, 246 second-feet Apr. 17 (gage height, 3.77 feet); minimum, 1.4 second-feet Aug. 28, but may have been less during period of ice effect or no gage-height record.

1943-48: Maximum discharge, 649 second-feet Mar. 18, 1947 (gage height, 6.08 feet); minimum, 1.0 second-foot Dec. 17, 1946, but may have been less during period of ice or no gage-height record.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.7	7.2				*5.5	25	55	36	12	3.6	3.1
2	8.2	7.2				6.5	86	44	37	10	4.1	3.1
3	9.7	7.7				7.0	190	36	40	10	3.6	3.1
4	10	8.2				5.1	152	38	42	8.9	4.6	2.9
5	10	8.2			4	2.9	74	41	41	8.2	4.6	3.1
6	12	5.6	7	7		2.5	52	41	35	8.9	6.2	4.1
7	13	11				2.5	28	50	31	7.7	6.7	2.7
8	11	9.7				2.9	21	65	28	6.7	7.2	3.6
9	12	8.2				4.5	31	66	26	7.2	8.2	5.1
10	13	6.7				7.0	150	59	25	7.7	9.7	5.1
11	14	7.2	(*)		3	10	91	53	24	8.2	8.2	4.6
12	16	*6.2				15	45	53	22	7.2	8.2	4.6
13	16	6.7				20	22	47	21	8.2	7.7	4.1
14	16	7.2		(*)		18	57	51	21	8.2	7.7	4.6
15	16	8.0				16	169	50	19	8.2	8.2	4.6
16	14	9.0				22	201	51	19	7.7	8.2	5.1
17	13	9.0				30	211	53	17	8.9	8.2	5.6
18	13	9.0	6	6		25	184	55	16	9.7	8.2	5.6
19	12	8.5				35	78	55	16	11	8.9	5.1
20	10	7.5				25	77	53	18	10	7.7	7.2
21	9.7	6.5			5.5	25	113	50	21	9.7	7.7	4.6
22	8.2	6.0				30	127	46	27	9.7	6.7	4.6
23	11	6.0				50	104	40	25	10	6.7	4.1
24	10	6.5				*130	65	37	27	12	6.2	4.6
25	8.9	7.5				70	60	36	21	10	5.6	4.6
26	8.2	8.5				42	41	36	16	8.9	6.7	4.6
27	7.7	8.5				30	38	38	15	7.2	6.2	5.1
28	7.7	8.0	7	5	5.5	52	66	38	13	3.6	2.7	5.6
29	7.2	7.5			5.5	109	84	40	13	3.6	3.6	6.2
30	7.7	7.0			-	51	82	40	12	3.1	2.9	6.7
31	7.7	-			-	29	-	40	-	2.9	2.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	340.6	16	7.2	11.0	676
November	230.0	11	5.6	7.67	456
December	202	-	-	6.5	401
Calendar year 1947	9,099.2	563	-	24.9	18,050
January	190	-	-	6.1	377
February	134.0	-	-	4.62	266
March	880.4	130	2.5	28.4	1,750
April	2,724	211	21	90.8	5,400
May	1,457	66	36	47.0	2,890
June	724	42	12	24.1	1,440
July	255.3	12	2.9	8.24	506
August	197.6	9.7	2.7	6.37	392
September	137.7	7.2	2.7	4.59	273
Water year 1947-48	7,472.6	211	-	20.4	14,830

Peak discharge (base, 200 sec.-ft.).- Apr. 3 (11 p.m.) 222 sec.-ft.; Apr. 17 (3 a.m.) 246 sec.-ft.

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 14 to Mar. 3, 25 (no gage-height record Jan. 13 to Feb. 27, Mar. 9-24); discharge computed on basis of 4 discharge measurements, weather records, and records for stations on nearby streams.

Smiths Fork near Border, Wyo.

Location.- Water-stage recorder, lat. 42°17', long. 110°52', in SW¼ sec. 33, T. 27 N., R. 118 W., 3½ miles upstream from Howland Creek, 7 miles downstream from Hobble Creek, and 11 miles northeast of Border.

Drainage area.- 165 square miles.

Records available.- May 1942 to September 1948.

Extremes.- Maximum discharge during year, 1,100 second-feet May 20 (gage height, 4.16 feet); minimum, 37 second-feet Mar. 11, but may have been less during period of ice effect or no gage-height record.
1942-48: Maximum discharge, 1,120 second-feet May 9, 1947 (gage height, 4.21 feet); minimum, that of Mar. 11, 1948.

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

Rating table, water year 1947-48, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

1.30	32	2.0	127	3.1	500
1.40	38.5	2.2	175	3.4	650
1.6	58	2.5	262	3.8	878
1.8	88	2.8	370	4.2	1,121

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	108		83			a75	58	382	866	324	172	106
2	106		80			*77	59	317	872	317	168	106
3	106		75	b75		72	61	299	884	306	165	104
4	106		77			65	59	320	801	295	162	102
5	104		78			64	61	320	749	288	162	104
6	102		77	74		b62	59	390	732	278	160	102
7	101		75	69		b60	55	538	738	269	155	102
8	101		77	72	a60	59	56	558	738	262	152	104
9	102		80	69		59	62	455	726	256	152	102
10	102	a86	78	71		57	68	403	699	250	150	101
11	108		(*)	72		58	62	395	661	243	148	101
12	102		-	72		b58	62	366	629	237	145	101
13	101			a65		b58	58	403	588	231	138	99
14	99			(*)		58	65	491	563	225	136	95
15	99					58	69	573	529	225	134	95
16	99					55	88	682	500	216	132	97
17	106					55	121	801	482	214	129	102
18	101					55	155	878	460	209	127	101
19	99					55	138	884	424	202	123	112
20	97	*78		b65		55	136	1,040	424	202	123	106
21	95	b72	b75			53	160	1,030	424	197	123	101
22	97	b69				59	208	1,040	478	194	123	97
23	97	b73			a70	57	211	962	437	191	123	95
24	97	b78				58	202	938	420	194	121	95
25	97	82				58	211	932	403	188	121	93
26	95	82				56	183	914	386	186	121	92
27	93	80				56	191	896	374	180	114	93
28	a93	b78		b60		56	285	926	358	183	112	93
29	a92	b78				58	451	926	347	186	112	93
30	a91	b80			-	59	420	866	335	180	110	92
31	a90	-			-	55	-	860	-	175	108	-

Month	Second-foot-days	Maximum	Minimum	Maan	Runoff in acre-feet
October	3,086	108	90	99.5	6,120
November	2,484	-	-	82.8	4,930
December	2,355	-	-	76.0	4,670
Calendar year 1947	81,445	1,080	-	223	161,600
January	2,074	-	-	66.9	4,110
February	1,180	-	-	64.8	3,730
March	1,840	77	53	59.4	3,650
April	4,074	451	55	136	8,080
May	20,765	1,040	299	670	41,190
June	17,027	884	335	568	33,770
July	7,102	324	175	229	14,090
August	4,221	172	108	136	8,370
September	2,986	112	92	100	5,920
Water year 1947-48	69,894	1,040	-	190	138,600

Peak discharge (base, 580 sec.-ft.).- May 8 (1 a.m.) 624 sec.-ft.; May 20 (4 a.m.) 1,100 sec.-ft.
* Winter discharge measurement made on this day.
a No gage-height record (stage-discharge relation affected by ice most of time Jan. 25 to Mar. 1); discharge computed on basis of 2 discharge measurements, weather records, and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

Smiths Fork at Cokeville, Wyo.

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

Drainage area.- 275 square miles.

Records available.- April 1942 to September 1948.

Extremes.- Maximum discharge during year, 1,070 second-feet May 21 (gage height, 5.38 feet); minimum daily, 30 second-feet Sept. 1, 2, 6, 7.
1942-48: Maximum discharge, 1,090 second-feet May 12, 1947; (gage height, 5.53 feet); minimum daily, that of Sept. 1, 2, 6, 7, 1948.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	104					92	a500	832	a190	55	a30
2	96	102					99	a430	822	a190	54	a30
3	96	107		a94		a94	109	a370	832	a185	53	31
4	94	102					106	397	a720	a175	46	37
5	94	a100					100	380	a670	a165	42	34
6	96	a99	b100				94	430	a660	a155	37	30
7	94	102					85	597	a640	a160	35	30
8	97	107			a80	a86	81	693	a630	a165	39	36
9	99	104					104	581	614	a165	40	51
10	99	97		a90			124	514	584	154	41	43
11	102	99	(*)				104	482	543	141	41	43
12	99	99					100	451	498	133	39	43
13	94	b95				a80	96	454	458	130	40	46
14	94	b94					116	530	439	128	42	45
15	a94	b99					147	591	403	126	41	43
16	a94	b102			(*)		191	676	377	122	40	42
17	a97	a104	b94				236	784	366	120	40	43
18	a95	a105				a74	279	906	341	116	39	44
19	a94	a102					238	972	320	a115	36	52
20	a92	*99		a86			236	1,020	320	a115	36	54
21	a91	92					255	1,060	325	a112	35	52
22	a92	83			a88	a80	302	1,050	347	104	36	53
23	a94	b90					307	1,040	325	80	37	a68
24	a94	b96					292	994	309	80	36	a69
25	a93	b102				*88	294	972	282	80	36	a70
26	a96	104	a94			83	267	962	260	77	36	a71
27	a100	102				81	264	934	248	72	49	72
28	a105	94		a80		91	320	930	229	64	53	74
29	111	97				94	600	944	213	65	43	77
30	113	b99			-	97	587	926	204	59	37	77
31	109	-			-	91	-	870	-	57	a40	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	3,014	113	91	97.2	5,980
November	2,981	107	83	99.4	5,910
December	2,980	-	-	96.1	5,910
Calendar year 1947	82,871	1,080	-	227	164,400
January	2,710	-	-	87.4	5,380
February	2,432	-	-	83.9	4,820
March	2,615	-	-	84.4	5,190
April	6,225	600	81	208	12,350
May	22,440	1,060	370	724	44,510
June	13,811	832	204	460	27,390
July	3,800	190	57	123	7,540
August	1,274	55	35	41.1	2,530
September	1,490	77	30	49.7	2,960
Water year 1947-48	65,772	1,060	30	180	130,500

* Winter discharge measurement made on this day.
a No gage-height record (stage-discharge relation affected by ice during most of winter months); discharge computed on basis of 2 discharge measurements, weather records, unpublished irrigation diversion records above station, and records for station near Border.
b Stage-discharge relation affected by ice.

Thomas Fork near Geneva, Idaho

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

Drainage area.- 45.3 square miles.

Records available.- October 1939 to September 1948.

Extremes.- Maximum discharge during year, 267 second-feet Apr. 29 (gage height, 3.39 feet), from rating curve extended above 140 second-feet; minimum, 1.7 second-feet Mar. 10, occurred during period of ice effect and may have been less during other periods of ice effect or no gage-height record.

1939-48: Maximum discharge, 279 second-feet May 3, 1947 (gage height, 3.58 feet), from rating curve extended above 140 second-feet; maximum gage height, 4.07 feet Apr. 26, 1946; minimum daily discharge, 1.3 second-feet Nov. 13, 23, 1940.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.1	4.5	4.8	b3.9			4.5	97	54	19	8.5	5.1
2	5.1	4.5	4.8	b3.9			5.3	86	54	18	8.5	5.1
3	5.4	5.4	4.8	b4.1		a3.5	7.9	82	57	19	7.9	4.7
4	5.7	5.1	4.5	b4.1			6.6	89	52	18	7.9	4.5
5	5.1	5.1	4.5	4.1		b3.2	6.3	89	48	17	8.2	4.2
6	5.1	*5.4	4.8	b3.8		b3.2	7.2	109	43	16	7.9	4.0
7	4.8	4.5	4.8	3.7		b3.3	6.3	145	42	16	7.6	3.8
8	5.4	4.8	b4.8			3.0	6.0	159	40	16	7.2	4.0
9	5.4	4.8	b4.8			b2.8	8.5	121	38	16	7.2	4.0
10	5.7	5.1	b4.8			b2.7	9.8	107	38	15	7.2	3.8
11	6.3	4.8	b4.8			b2.6	8.8	103	37	14	6.9	3.4
12	6.0	b4.5	*b4.8			b2.6	7.9	97	34	14	6.6	3.4
13	5.1	b4.3	b4.6			b2.8	6.6	101	33	14	6.6	3.2
14	5.1	b4.3	4.3			b3.0	8.2	115	32	13	6.3	3.0
15	4.8	b4.4	b4.3	(*)		b3.0	13	119	31	13	6.3	3.0
				b3.7	a3.5							
16	5.1	b4.6	4.5			b3.1	28	127	30	12	6.0	3.0
17	6.3	b5.0	b4.5			3.4	46	138	28	12	5.8	3.4
18	5.1	b5.0	b4.5		(*)	3.4	44	138	28	12	6.0	4.0
19	4.8	*b4.8	4.3			3.2	27	127	31	12	5.8	6.3
20	4.5	b4.6	b4.3			3.2	37	121	33	12	5.8	5.1
21	4.5	b4.4	b4.3			b3.3	60	111	34	12	5.8	4.0
22	4.5	b4.2	b4.3			3.4	75	101	43	11	6.3	3.6
23	4.5	b4.2	b4.3			5.3	60	93	33	11	6.6	3.6
24	4.8	b4.2	4.3	a3.7		7.9	52	86	30	11	6.0	3.6
25	4.3	b4.4	b4.3			6.0	55	82	26	10	5.8	3.6
26	4.1	b4.6	b4.3			4.7	37	78	24	9.9	5.8	3.6
27	4.1	b4.8	b4.3			4.5	48	78	23	9.5	5.6	3.6
28	4.1	b4.6	b4.1	a3.5		7.6	103	77	22	9.1	5.3	3.8
29	5.1	b4.5	b4.0			7.6	145	68	20	9.5	5.3	4.0
30	5.7	b4.5	b4.0		-	4.9	113	62	20	9.1	5.3	4.0
31	4.5	-	b3.9		-	4.7	-	59	-	8.8	5.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	156.1	6.3	4.1	5.04	310
November	139.9	5.4	4.2	4.66	277
December	138.4	4.8	3.9	4.46	275
Calendar year 1947	7,215.7	206	-	19.8	14,310
January	115.2	-	-	3.72	228
February	101.5	-	-	3.5	201
March	122.4	7.9	-	3.95	243
April	1,041.9	145	4.5	34.7	2,070
May	3,165	159	59	102	6,280
June	1,058	57	20	35.3	2,100
July	408.9	19	8.8	13.2	811
August	203.1	8.5	5.1	6.55	403
September	118.4	6.3	3.0	3.95	235
Water year 1947-48	6,768.8	159	-	18.5	13,430

Peak discharge (base, 40 sec.-ft.).- Apr. 17 (6:30 p.m.) 86 sec.-ft.; Apr. 29 (1 a.m.) 267 sec.-ft.; May 7 (10:30 p.m.) 186 sec.-ft.

* Winter discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Thomas Fork near Raymond, Idaho

Location.- Water-stage recorder, lat. 42°16', long. 111°05', in SE¼ sec. 28, T. 13 S., R. 46 E., at J. W. Mumford Ranch, 1½ miles southwest of Raymond.

Drainage area.- 202 square miles.

Records available.- May 1942 to September 1948.

Extremes.- Maximum discharge during year, 325 second-feet May 19 (gage height, 6.72 feet); minimum, 8.8 second-feet Oct. 4, but may have been less during period of ice effect.
1942-48: Maximum discharge, 359 second-feet Apr. 25, 1943 (gage height, 7.66 feet); maximum gage height, 7.82 feet Apr. 27, 1946; minimum daily discharge, 1.6 second-feet Oct. 1, 1942.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	16	17				*16	227	203	62	32	12
2	11	17	17	20			16	232	197	52	22	13
3	9.3	18	17				18	222	197	33	25	13
4	9.8	18	16				20	214	196	35	24	14
5	14	20	16				20	216	192	36	19	14
6	14	*20	16				22	216	183	37	19	13
7	13	20	16				19	225	175	34	19	15
8	13	19	15				19	244	144	30	19	17
9	12	19	15				22	268	123	30	19	16
10	12	19	18				30	286	118	31	19	16
11	12	19					33	271	123	31	19	15
12	12	19	(*)			14	29	260	122	48	20	15
13	12	20					28	252	110	54	18	15
14	12	22					33	248	108	50	16	15
15	12	24		(*)18			39	255	99	47	15	14
16	13	26			16		59	267	91	45	15	14
17	14	26					84	281	77	43	14	14
18	13	24					123	298	57	43	13	14
19	13	*24			(*)		126	319	55	42	13	15
20	13	23					116	318	60	44	13	14
21	14	22	20				129	308	69	45	14	14
22	14	20					140	297	82	43	15	15
23	14	18					147	284	102	41	15	15
24	15	18					145	271	94	41	13	14
25	15	18					142	246	86	42	13	14
26	15	18					146	239	78	42	13	14
27	15	19				16	138	236	74	41	14	15
28	15	20					143	244	73	40	15	14
29	15	20		16			167	244	73	39	15	14
30	16	17			-		202	231	69	38	12	14
31	16	-			-		-	212	-	37	11	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	410.1	16	9.3	13.2	813
November	603	26	16	20.1	1,200
December	586	-	-	18.8	1,160
Calendar year 1947	20,575.1	288	-	56.4	40,820
January	554	-	-	17.9	1,100
February	464	-	-	16	920
March	450	-	-	14.5	893
April	2,371	202	16	79.0	4,700
May	7,931	319	212	256	15,730
June	3,430	203	55	114	6,800
July	1,276	62	30	41.2	2,530
August	523	32	11	16.9	1,040
September	431	17	12	14.4	855
Water year 1947-48	19,026.1	319	-	52.0	37,740

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 13-15, 22-27, Dec. 11 to Mar. 31 (no gage-height record Jan. 31 to Feb. 19, Mar. 16-31); discharge computed on basis of 3 discharge measurements, weather records, and records for Thomas Fork near Geneva and Salt Creek near Geneva.

Salt Creek near Geneva, Idaho

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

Drainage area.- 37.6 square miles.

Records available.- October 1939 to September 1948.

Extremes.- Maximum discharge during year, 249 second-feet May 18 (gage height, 4.20 feet); minimum, 1.4 second-feet Mar. 9, but may have been less during periods of ice effect or no gage-height record.
1939-48: Maximum discharge, 309 second-feet May 4, 1947, maximum gage height, 4.78 feet Apr. 26, 1946; minimum discharge, 0.5 second-foot Aug. 18, 1940 (gage height, 1.05 feet).

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	6.2	5.7	b4.7		4.0	a3.6	113	a60	22	9.4	4.8
2	7.4	5.7	5.7	b4.7		4.2	a3.8	103	a63	22	9.1	4.7
3	7.2	6.7	5.5	b4.7		4.2	a4.2	98	a68	20	8.5	4.7
4	6.9	6.2	5.5	a4.7		3.6	a4.0	103	a63	19	8.2	4.7
5	6.9	6.2	5.5	a4.7		3.0	a3.8	a115	a58	19	8.5	4.7
6	6.9	*6.2	5.5	a4.7		3.0	a4.0	a150	a54	18	8.8	4.7
7	6.9	5.7	5.5	a4.6		3.2	a3.8	a170	a51	18	8.2	4.8
8	6.9	6.0	b5.5	a4.6		3.3	a3.7	a180	a47	17	8.0	4.5
9	7.2	6.0	b5.4	a4.6	b4.3	3.0	a4.4	a165	44	16	8.2	4.5
10	6.9	6.4	b5.4	a4.5		2.7	a4.6	a130	42	15	8.0	4.5
11	8.2	6.2	b5.3	a4.5		2.7	a4.5	a115	40	15	7.4	4.3
12	7.4	b6.0	*5.2	a4.5		2.7	a4.2	a110	39	14	7.2	4.3
13	6.9	b6.0	5.2	a4.5		3.0	a3.9	116	37	14	7.2	4.3
14	6.7	6.4	4.5	a4.4		3.2	a5.0	141	36	14	6.9	4.3
15	6.7	6.2	4.5	*a4.4		2.9	a8.0	160	35	14	6.4	4.2
16	6.7	6.4	b4.9			2.9	a15	182	34	14	6.2	4.2
17	8.2	7.2	b5.0			3.0	a30	205	32	14	6.0	4.5
18	7.2	6.4	b5.0		*4.3	3.0	a33	208	30	15	5.7	4.7
19	6.9	*5.7	b5.0		4.3	2.9	30	191	34	14	5.7	6.0
20	6.7	5.5	b5.0		4.3	3.2	31	176	a37	12	5.7	5.5
21	6.7	b5.4	b4.9		4.3	3.2	36	156	a41	12	5.7	5.0
22	6.7	b5.3	b4.9		4.3	3.2	a50	139	a48	12	6.0	4.8
23	6.7	b5.1	b4.8	b4.4	4.3	3.8	a48	120	40	11	6.0	4.7
24	6.7	5.0	b4.8		4.5	4.0	a44	a110	37	11	5.7	4.7
25	6.4	4.8	b4.8		4.3	*3.8	a44	a102	a33	11	5.7	4.5
26	6.1	5.0	b4.8		4.3	3.6	a43	a96	a32	11	5.5	4.3
27	6.0	5.2	b4.8		4.7	3.6	a67	a93	a28	10	5.5	4.5
28	6.1	b5.2	b4.8		3.8	a4.0	a102	90	a25	9.6	5.2	4.5
29	6.7	b5.1	b4.7		3.8	a4.0	a150	a84	24	10	5.2	4.7
30	6.7	b5.3	b4.7		-	a3.8	128	a75	23	9.9	5.0	4.7
31	6.7	-	b4.7		-	a3.6	-	a66	-	9.6	4.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	213.5	8.2	6.0	6.89	423
November	174.7	7.2	4.8	5.82	347
December	157.5	5.7	4.5	5.08	312
Calendar year 1947	8,340.2	249	-	22.8	16,540
January	139.2	-	-	4.49	276
February	124.3	-	-	4.29	247
March	104.3	4.2	2.7	3.36	207
April	916.5	150	3.6	30.6	1,820
May	4,062	208	66	131	8,060
June	1,235	68	23	41.2	2,450
July	443.1	22	9.6	14.3	879
August	209.6	9.4	4.8	6.76	416
September	139.3	6.0	4.2	4.64	276
Water year 1947-48	7,919.0	208	-	21.6	15,710

Peak discharge (base, 50 sec.-ft.).- Apr. 29 (9 p.m.) 158 sec.-ft.; May 8 (time unknown) about 191 sec.-ft.; May 18 (2 a.m.) 249 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for Thomas Fork near Geneva.

b Stage-discharge relation affected by ice.

Rainbow inlet canal near Dingle, Idaho

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

Records available.- October 1945 to September 1948. January 1922 to September 1945 in files of Salt Lake City district office, Geological Survey.

Extremes.- Maximum discharge during year, 1,850 second-feet Apr. 30 (gage height, 5.08 feet); minimum daily, 16 second-feet Sept. 13.
1945-48: Maximum discharge, 2,820 second-feet Mar. 29, 1946 (gage height, 6.75 feet); minimum daily, that of Sept. 13.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Canal diverts from Bear River at Stewart Dam in NE¼ sec. 34, T. 13 S., R. 44 E., for storage in Bear Lake. At times flow in canal is augmented by surplus water from Black Otter Slough about half a mile above station and by seepage and wastage from irrigated lands on both sides of canal.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	215	265	273	171	141	*b215	678	1,790	1,800	183	152	32
2	225	262	262	163	141	195	685	1,730	1,740	183	152	28
3	222	268	262	166	136	192	784	1,670	1,330	174	128	26
4	215	271	260	174	141	b195	884	1,340	1,540	177	126	25
5	215	279	252	183	146	*b200	1,060	1,600	1,560	227	144	19
6	209	276	249	192	139	b185	966	1,480	1,500	209	128	20
7	215	262	246	194	b140	180	809	1,440	1,420	192	126	22
8	222	262	131	204	b140	177	744	1,460	1,380	221	123	22
9	228	276	37	209	144	186	702	1,520	1,340	236	121	22
10	230	285	76	209	139	*b190	706	1,580	1,170	215	118	22
11	233	268	161	200	b140	b185	730	1,560	993	215	126	19
12	238	235	144	*b200	*b145	*b170	744	1,560	823	212	121	17
13	238	196	168	b185	144	166	741	1,500	702	197	116	16
14	230	241	176	*b175	146	163	766	1,440	537	160	104	18
15	222	273	189	b170	146	177	773	1,370	484	149	97	22
16	220	279	184	160	152	174	852	1,340	396	144	93	24
17	222	262	174	146	152	189	1,080	1,360	331	141	93	28
18	220	282	168	b150	160	200	1,280	1,390	282	139	58	45
19	222	276	186	*b150	166	203	1,400	1,460	254	133	54	53
20	215	268	181	a150	169	212	1,420	1,550	224	155	37	57
21	215	235	166	a150	174	b215	1,420	1,640	227	160	34	63
22	217	168	176	a150	169	206	1,460	1,680	245	136	32	78
23	220	174	176	a155	183	221	1,520	1,740	269	133	37	86
24	225	215	171	a155	186	269	1,560	1,740	291	141	37	82
25	228	260	154	*a155	b190	334	1,590	1,730	278	136	39	104
26	235	262	151	*b165	194	416	1,590	1,720	251	131	32	118
27	235	246	156	155	197	*b515	1,640	1,750	263	160	36	109
28	241	207	161	133	215	b550	1,670	1,750	230	169	34	136
29	257	204	184	123	b215	578	1,720	1,770	203	180	31	126
30	262	215	b165	123	-	657	1,800	1,780	189	171	32	126
31	262	-	*b164	133	-	*b670	-	1,800	-	155	33	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	7,053	262	209	228	13,990
November	7,472	285	168	249	14,820
December	5,603	273	37	181	11,110
Calendar year 1947	188,279	2,050	37	516	373,400
January	5,150	209	123	166	10,210
February	4,650	215	136	160	9,220
March	8,385	670	163	270	16,630
April	33,774	1,800	678	1,126	66,990
May	49,520	1,800	1,340	1,597	98,220
June	22,552	1,800	189	752	44,730
July	5,334	236	131	172	10,580
August	2,594	152	31	83.7	5,150
September	1,565	136	16	52.2	3,100
Water year 1947-48	153,652	1,800	16	420	304,800

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

Montpelier Creek at irrigators weir, near Montpelier, Idaho

Location.- Water-stage recorder and concrete rectangular weir, lat. 42°20', long. 111°14', in SE¼ sec. 31, T. 12 S., R. 45 E., 3 miles east of Montpelier and 3½ miles downstream from South Fork.

Drainage area.- 50.9 square miles.

Records available.- December 1942 to September 1948.

Extremes.- Maximum discharge during year, 126 second-feet May 8 (gage height, 1.97 feet); minimum, 3.7 second-feet Feb. 12, but may have been less during period of no gage-height record.

1942-48: Maximum discharge, 170 second-feet Apr. 19, 1946 (gage height, 2.45 feet); minimum, 1.5 second-feet Jan. 20, 1944, but may have been less during periods of ice effect.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	8.6	9.1	a7.5	a7.0	6.7	8.6	91	78	36	19	12
2	10	8.2	9.1	8.7	7.5	7.5	8.9	84	78	35	19	12
3	10	8.6	8.7	8.6	7.4	a7.0	9.6	81	82	35	18	12
4	10	10	8.5	8.4	7.2	a6.5	9.3	85	76	35	18	12
5	10	11	8.5	8.1	6.9	a6.0	8.2	90	71	34	18	12
6	10	9.3	8.7	a8.0	7.4	7.3	7.5	100	67	33	18	12
7	10	9.6	8.5	a8.0	7.0	7.8	7.2	117	64	32	17	13
8	10	9.6	8.5	a8.0	7.2	7.9	7.5	120	63	31	17	13
9	11	9.3	8.4	a8.0	7.4	7.4	9.6	103	61	30	16	13
10	10	9.3	8.0	a8.0	7.5	7.4	11	94	60	29	16	13
11	12	9.6	8.5	a7.5	7.3	6.6	10	92	58	28	16	12
12	10	7.8	7.9	a7.0	5.1	6.9	9.6	90	56	28	16	12
13	9.6	a7.5	b7.5	a7.0	b5.0	8.0	10	92	52	26	16	12
14	9.3	a7.5	b7.5	a7.0	b6.0	7.8	11	101	51	26	15	12
15	8.8	a8.5	b7.5	a7.0	b6.5	7.5	15	104	49	25	16	12
16	8.6	a9.0	b7.5	8.0	b7.0	7.3	20	109	47	24	15	12
17	11	9.1	b7.5	7.9	7.3	7.3	27	114	45	25	15	12
18	8.9	a9.0	b7.5	7.8	7.3	7.3	32	117	45	25	15	12
19	7.8	a9.0	b7.5	6.9	6.9	7.3	31	119	48	25	15	14
20	7.5	a8.5	b7.5	7.2	6.8	7.3	35	117	51	26	15	13
21	7.5	a8.0	b7.5	7.8	6.7	6.9	41	113	53	24	14	13
22	7.5	a7.5	b7.5	8.0	6.9	7.4	48	109	54	24	15	12
23	6.4	a7.0	b7.5	8.0	6.5	7.8	51	103	48	24	15	12
24	6.8	a7.0	7.6	7.9	6.0	8.0	53	100	45	24	14	12
25	7.2	a7.5	8.5	7.6	6.4	7.5	57	98	44	24	14	12
26	7.5	a8.0	8.6	6.2	6.5	7.2	52	96	41	22	14	12
27	7.5	a9.0	a8.5	b5.0	7.0	7.5	52	93	40	21	14	12
28	7.5	a9.0	a8.5	b5.0	6.9	7.8	68	92	38	21	13	12
29	7.8	a8.5	a8.0	b5.5	6.8	8.2	89	91	36	21	13	12
30	8.9	8.4	a8.0	b6.0	-	8.9	95	84	35	21	13	12
31	8.2	-	a7.5	b6.5	-	8.6	-	81	-	20	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	277.1	12	6.4	8.94	550
November	258.9	11	7.0	8.63	514
December	250.1	9.1	7.5	8.07	496
Calendar year 1947	7,861.1	83	6.4	21.5	15,590
January	228.1	8.7	5.0	7.36	452
February	197.4	7.5	5.0	6.81	392
March	230.6	8.9	6.0	7.44	457
April	894.0	95	7.2	29.8	1,770
May	3,080	120	81	99.4	6,110
June	1,636	82	35	54.5	3,240
July	834	36	20	26.9	1,650
August	481	19	12	15.5	954
September	368	14	12	12.3	730
Water year 1947-48	8,735.2	120	5.0	23.9	17,320

Peak discharge (base, 60 sec.-ft.).- May 8 (5 p.m.) 126 sec.-ft.

a No gage-height record; discharge computed on basis of weather records.

b Stage-discharge relation affected by ice.

Bear Lake at Lifton, near St. Charles, Idaho

Location.- Water-stage recorder, lat. 42°07'20", long. 111°19'20", in NE¼ sec. 16, T. 15 S., R. 44 E., in Lifton pumping plant of Utah Power & Light Co., and 3¾ miles east of St. Charles. Datum of gage is 5,900 feet above mean sea level (levels by Utah Power & Light Co.); gage readings have been reduced to elevations above mean sea level.

Records available.- October 1945 to September 1948. January 1921 to September 1945 (elevations only) in files of Salt Lake City district office, Geological Survey. October 1903 to June 1906 (gage heights only) at different site and datum, published as Bear Lake at Fish Haven.

Extremes.- Maximum contents during year, 1,290,000 acre-feet June 12-19, 24-29 (elevation, 5,921.78 feet); minimum, 1,024,000 acre-feet Jan. 5 (elevation, 5,917.98 feet).

1921-48: Maximum contents, 1,423,000 acre-feet June 10, 1923 (elevation, 5,923.68 feet); no contents Nov. 9-19, 1935 (elevation, 5,902.00 feet).

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 (see p. 38) 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 dike. Capacity, 1,421,000 acre-feet between elevations 5,902.00 feet (lower limit of pumps) and 5,923.65 feet (upper limit of storage with existing facilities). Storage water used for irrigation and power development.

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

Contents, in thousands of acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,096	1,065	1,041	1,027	1,029	1,041	1,066	1,145	1,260	1,289	1,222	1,139
2	1,095	1,064	1,041	1,026	1,029	1,041	1,068	1,148	1,264	1,289	1,219	1,137
3	1,091	1,063	1,041	1,026	1,029	1,042	1,071	1,154	1,267	1,288	1,216	1,134
4	1,088	1,062	1,041	1,025	1,029	1,042	1,074	1,159	1,268	1,287	1,214	1,131
5	1,085	1,062	1,041	1,024	1,029	1,043	1,077	1,164	1,272	1,287	1,212	1,129
6	1,084	1,060	1,041	1,026	1,029	1,044	1,081	1,168	1,275	1,287	1,210	1,127
7	1,083	1,060	1,041	1,025	1,030	1,044	1,085	1,172	1,278	1,285	1,207	1,124
8	1,083	1,058	1,041	1,025	1,030	1,046	1,090	1,175	1,282	1,285	1,204	1,121
9	1,081	1,058	1,040	1,026	1,030	1,047	1,092	1,178	1,284	1,284	1,200	1,118
10	1,081	1,057	1,040	1,026	1,030	1,047	1,095	1,180	1,287	1,282	1,196	1,114
11	1,080	1,056	1,039	1,026	1,030	1,048	1,099	1,184	1,289	1,282	1,193	1,112
12	1,079	1,056	1,038	1,026	1,029	1,049	1,103	1,187	1,290	1,280	1,190	1,110
13	1,078	1,055	1,037	1,025	1,029	1,049	1,104	1,190	1,290	1,278	1,188	1,108
14	1,077	1,054	1,037	1,025	1,029	1,049	1,106	1,193	1,290	1,276	1,185	1,106
15	1,076	1,054	1,036	1,025	1,029	1,051	1,108	1,196	1,290	1,273	1,182	1,105
16	1,076	1,054	1,034	1,025	1,029	1,051	1,109	1,201	1,290	1,270	1,180	1,103
17	1,076	1,054	1,033	1,026	1,029	1,052	1,110	1,203	1,290	1,266	1,179	1,100
18	1,075	1,052	1,032	1,026	1,029	1,054	1,111	1,207	1,290	1,264	1,175	1,099
19	1,075	1,051	1,031	1,027	1,029	1,055	1,113	1,210	1,290	1,261	1,173	1,098
20	1,074	1,050	1,031	1,028	1,029	1,056	1,115	1,214	1,289	1,259	1,170	1,097
21	1,074	1,049	1,031	1,028	1,031	1,056	1,118	1,217	1,289	1,255	1,168	1,096
22	1,073	1,048	1,031	1,028	1,032	1,056	1,120	1,220	1,289	1,252	1,166	1,094
23	1,072	1,047	1,031	1,028	1,033	1,056	1,121	1,223	1,289	1,250	1,165	1,092
24	1,072	1,045	1,031	1,028	1,036	1,057	1,122	1,227	1,290	1,249	1,161	1,090
25	1,071	1,043	1,031	1,029	1,038	1,057	1,124	1,231	1,290	1,246	1,156	1,088
26	1,070	1,042	1,031	1,029	1,040	1,058	1,127	1,236	1,290	1,243	1,152	1,086
27	1,069	1,041	1,031	1,029	1,040	1,059	1,131	1,242	1,290	1,240	1,150	1,084
28	1,067	1,040	1,031	1,029	1,040	1,060	1,135	1,246	1,290	1,236	1,148	1,081
29	1,067	1,040	1,030	1,029	1,040	1,061	1,140	1,249	1,290	1,231	1,145	1,078
30	1,066	1,040	1,029	1,029	-	1,062	1,143	1,254	1,289	1,227	1,143	1,077
31	1,065	-	1,028	1,029	-	1,065	-	1,257	-	1,225	1,140	-

Monthly elevation and contents, water year October 1947 to September 1948

Date	Elevation (feet)†	Contents (thousands of acre-feet)	Change in contents during month (thousands of acre-feet)
Oct. 1	5,919.01	1,096	-31
Nov. 1	5,918.56	1,065	-24
Dec. 1	5,918.22	1,041	-14
Calendar year 1947	-	-	+74
Jan. 1	5,918.02	1,027	+2
Feb. 1	5,918.04	1,029	+12
Mar. 1	5,918.22	1,041	+25
Apr. 1	5,918.59	1,066	+79
May 1	5,919.72	1,145	+115
June 1	5,921.36	1,260	+29
July 1	5,921.77	1,289	-67
Aug. 1	5,920.82	1,222	-83
Sept. 1	5,919.63	1,139	-64
Oct. 1	5,918.71	1,075	-
Water year 1947-48	-	-	-21

† Mean daily elevation.

Bear Lake Outlet Canal near Paris, Idaho

Location.- Water-stage recorder, lat. 42°13', long. 111°20'30", in SW¼ sec. 8, T. 14 S., R. 44 E., 2,000 feet downstream from head (at dike) and 3 miles southeast of Paris.

Records available.- October 1945 to September 1948. January 1922 to September 1945 in files of Salt Lake City district office, Geological Survey.

Average discharge.- 26 years, 292 second-feet.

Extremes.- Maximum discharge during year, 1,410 second-feet July 11 (gage height, 18.71 feet); minimum daily, 10 second-feet Apr. 21 to May 25.
1923-48: Maximum daily discharge, 1,870 second-feet Aug. 8, 1924; minimum daily, 1 second-foot May 1 to June 6, 1937.

Remarks.- Records good except those for period of no gage-height record, which are fair. Flow regulated by Bear Lake and Mud Lake.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	697	386	498	510	160	16	12	10	592	761	1,060	976
2	708	386	500	560	110	15	12	10	584	420	1,060	972
3	723	381	421	620	54	15	12	10	582	142	1,060	934
4	637	417	294	630	140	15	12	10	482	300	907	899
5	528	463	286	635	258	14	11	10	351	697	922	880
6	553	475	290	515	260	14	11	10	556	866	1,320	868
7	374	495	275	390	264	14	11	10	548	1,030	1,260	899
8	246	498	273	310	264	13	11	10	532	1,100	1,250	947
9	518	500	275	201	263	13	11	10	537	1,240	984	972
10	540	502	330	201	290	95	11	10	517	1,330	743	963
11	564	505	530	201	319	214	11	10	510	1,390	1,060	947
12	598	500	630	220	315	210	11	10	490	1,350	1,040	944
13	577	490	640	252	309	209	11	10	517	1,330	1,020	931
14	528	492	650	252	310	205	11	10	589	1,400	1,010	761
15	538	385	660	165	315	205	11	10	628	1,400	979	648
16	424	242	605	57	319	203	11	10	732	1,300	1,000	576
17	278	359	542	57	235	200	11	10	758	1,250	1,030	573
18	276	505	460	57	95	105	11	10	749	1,250	1,000	791
19	282	488	285	57	35	15	11	10	732	1,240	985	658
20	286	488	183	125	19	15	11	10	694	1,240	992	615
21	288	520	180	195	19	15	10	10	676	1,240	1,020	703
22	280	566	180	192	18	14	10	10	734	1,210	1,010	688
23	313	561	195	190	18	14	10	10	773	1,130	998	694
24	360	635	205	185	18	14	10	10	764	1,140	985	703
25	362	738	200	185	17	14	10	10	442	1,140	1,000	726
26	364	738	285	250	17	14	10	89	167	1,170	1,010	697
27	368	620	369	327	17	13	10	240	176	1,190	995	659
28	370	463	370	327	16	13	10	271	454	1,210	995	668
29	375	466	440	250	16	13	10	266	779	1,210	1,000	662
30	381	475	527	166	-	13	10	295	797	1,090	995	654
31	384	-	530	165	-	12	-	447	-	1,080	992	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	13,720	723	246	443	27,210
November	14,739	738	242	491	29,230
December	12,108	660	180	391	24,020
Calendar year 1947	166,768	1,420	8	457	330,800
January	8,447	635	57	272	16,750
February	4,490	319	16	155	8,910
March	1,954	214	12	63.0	3,880
April	324	12	10	10.8	643
May	1,858	447	10	59.9	3,690
June	17,422	797	167	581	34,560
July	33,826	1,400	142	1,091	67,090
August	31,682	1,320	743	1,022	62,840
September	23,608	976	573	787	46,830
Water year 1947-48	164,178	1,400	10	449	325,700

Note.- No gage-height record Dec. 7 to Apr. 26; discharge computed from discharge measurements and records of gate changes.

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Georgetown Creek near Georgetown, Idaho

Location.- Water-stage recorder, lat. 42°30', long. 111°19', in NE¼ sec. 4, T. 11 S., R. 44 E., 150 feet downstream from Little Right Hand Fork and 3 miles northeast of Georgetown.

Drainage area.- 22.2 square miles.

Records available.- November 1939 to September 1948. October 1911 to September 1914, fragmentary records collected at site 0.7 mile downstream just below power plant (now inoperative).

Extremes.- Maximum discharge during year, 88 second-feet May 20 (gage height, 2.10 feet); minimum daily, 25 second-feet on many days February to April.
1911-14, 1939-48: Maximum discharge observed, 162 second-feet June 8, 1912; minimum daily, 18 second-feet on many days February to May 1941.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	32	31	28	26	25	25	28	59	40	38	35
2	31	32	31	28	26	25	25	28	60	40	38	35
3	32	32	30	28	26	25	25	28	59	40	38	35
4	32	32	30	28	26	25	25	28	55	41	38	35
5	32	32	30	28	26	25	25	28	54	41	38	35
6	32	32	30	28	26	25	25	28	51	41	38	35
7	32	32	30	28	26	25	25	28	51	41	38	35
8	32	32	30	28	26	25	25	28	50	41	38	35
9	32	33	30	28	26	25	25	29	49	40	38	35
10	32	33	30	28	26	25	25	30	48	38	38	35
11	32	33	30	28	26	25	25	31	48	38	38	35
12	32	33	30	28	25	25	25	32	48	38	38	35
13	32	32	30	28	25	25	25	32	48	38	37	35
14	32	32	30	28	25	25	25	33	48	38	37	35
15	32	32	30	28	25	25	26	35	47	38	37	35
16	31	32	30	28	25	25	27	40	47	38	37	35
17	31	31	30	28	25	25	28	49	47	38	37	35
18	31	31	29	28	25	25	28	66	48	38	36	35
19	31	31	29	27	26	25	27	79	48	38	36	35
20	31	31	29	27	26	25	27	87	47	39	36	35
21	31	31	29	27	26	25	27	85	48	39	36	35
22	31	31	29	26	26	25	27	79	48	39	36	35
23	31	31	28	26	26	25	26	75	47	39	36	35
24	31	31	28	26	26	25	26	71	46	39	36	35
25	31	31	28	26	26	25	26	70	45	39	35	35
26	31	31	28	26	25	25	27	69	43	39	35	34
27	32	31	28	26	25	25	27	66	42	39	35	33
28	32	31	28	26	25	25	28	66	42	38	35	33
29	32	31	28	26	25	25	28	65	41	38	35	33
30	32	31	28	26	-	25	28	62	41	38	35	33
31	32	-	28	26	-	25	-	60	-	38	35	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	979	32	31	31.6	1,940
November	950	33	31	31.7	1,880
December	909	31	28	29.3	1,800
Calendar year 1947	11,321	41	25	31.0	22,440
January	845	28	26	27.3	1,680
February	743	26	25	25.6	1,470
March	775	25	25	25.0	1,540
April	783	28	25	26.1	1,550
May	1,535	87	28	49.5	3,040
June	1,455	60	41	48.5	2,890
July	1,209	41	38	39.0	2,400
August	1,138	38	35	36.7	2,260
September	1,041	35	33	34.7	2,060
Water year 1947-48	12,362	87	25	33.8	24,510

Cottonwood Creek near Cleveland, Idaho

Location.- Water-stage recorder, lat. 42°20', long. 111°46', in SW¼ sec. 34, T. 12 S., R. 40 E., 500 feet upstream from Cleveland irrigation canal, 2½ miles west of Cleveland, and 4 miles downstream from proposed Cottonwood Dam.

Drainage area.- 61.7 square miles.

Records available.- November 1938 to September 1948.

Extremes.- Maximum discharge during year, 680 second-feet Apr. 21 (gage height, 3.60 feet) from rating curve extended above 450 second-feet; minimum, 2.8 second-feet Sept. 1, but may have been less during periods of ice effect or no gage-height record.
1938-48: Maximum discharge, that of Apr. 21, 1948; minimum observed, 0.5 second-foot Aug. 17, 1940.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Several diversions for irrigation in upper valley above proposed Cottonwood Dam.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.7	5.8	15	b6.5		13	15	216	60	7.6	5.8	2.9
2	5.0	9.0	15	b7.0		12	20	168	61	7.6	5.6	3.0
3	4.2	10	12	b7.5		10	35	146	64	7.3	5.8	3.1
4	4.0	10	14	b8.0		b9.5	30	155	56	7.3	5.8	3.1
5	3.8	10	12	b8.5		b10	25	157	48	7.0	6.0	3.0
					5.0							
6	3.8	9.0	13	b9.0		b10	22	177	46	6.3	6.5	3.2
7	3.8	10	12	11		b10	18	238	36	6.0	6.3	3.5
8	3.8	10	11	13		9.5	20	230	24	6.0	6.3	3.9
9	3.8	9.7	11	14		9.0	27	194	22	6.0	6.5	3.9
10	3.8	*8.3	10	13		9.0	40	166	19	5.8	7.0	4.1
11	4.7	9.7	9.4	12		9.0	30	155	17	5.6	6.7	3.9
12	5.0	8.6	b9.0	11		9.0	30	134	15	5.6	6.3	4.1
13	4.4	b9.0	b9.0	*9.0	6.0	9.0	27	148	13	5.6	5.8	4.5
14	4.2	10	9.7	b8.0	6.5	9.0	37	177	12	6.5	6.3	4.5
15	4.0	10	9.7	b7.0	7.0	9.0	63	189	11	5.6	6.0	4 7
16	4.2	11	b9.0	b7.0	7.5	8.5	135	210	11	4.9	5.8	5.2
17	4.7	11	*b8.0		8.0	8.0	238	230	10	5.2	5.6	6.5
18	5.0	11	b8.0		9.0	8.0	268	224	10	7.3	5.4	11
19	4.4	10	b8.0		*10	7.5	190	232	10	6.7	5.4	20
20	4.2	9.0	b8.0		8.6	7.5	257	184	12	7.0	5.4	16
				7.0								
21	4.2	9.0	b8.0		9.0	9.0	400	157	18	7.0	5.6	10
22	4.4	b7.0	b8.0		10	11	354	136	25	6.3	5.4	8.2
23	4.4	b7.0	b9.0		8.6	14	276	118	22	6.0	5.2	6.3
24	4.7	7.6	b8.0		11	16	235	104	18	6.0	5.2	5.4
25	4.7	8.6	b7.0		11	13	210	98	15	6.3	5.0	5.6
26	4.7	10	b8.0		12	11	161	95	12	5.8	4.5	7.9
27	4.4	b8.5	b7.0		10	13	182	88	10	5.6	4.2	6.5
28	4.4	7.6	b7.0	6.0	10	16	289	81	8.7	5.2	3.8	7.3
29	5.2	8.6	b7.0		12	18	368	75	8.2	5.8	3.3	7.6
30	6.9	11	b6.5		-	*15	286	72	7.6	6.0	3.0	7.6
31	6.4	-	b6.0		-	14	-	64	-	5.8	2.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	139.9	6.9	3.8	4.51	277
November	276.0	11	5.8	9.20	547
December	294.3	15	6.0	9.49	584
Calendar year 1947	9,173.3	146	2.7	25.1	18,190
January	250.5	14	-	8.08	497
February	216.2	12	-	7.46	429
March	336.5	18	7.5	10.8	667
April	4,288	400	15	143	8,510
May	4,818	238	64	155	9,560
June	701.5	64	7.6	23.4	1,390
July	192.7	7.6	4.9	6.22	382
August	168.4	7.0	2.9	5.43	334
September	185.6	20	2.9	6.19	368
Water year 1947-48	11,867.6	400	-	32.4	23,540

Peak discharge (base, 150 sec.-ft.).- Apr. 21 (8:30 p.m.) 680 sec.-ft.; Apr. 29 (12:30 a.m.) 528 sec.-ft.; May 7 (10 p.m.) 316 sec.-ft.; May 17 (11:30 p.m.) 279 sec.-ft.

* Winter discharge measurement made on this day.

Note.- No gage-height record Jan. 17 to Feb. 19, Mar. 8 to Apr. 5, June 9-24, Aug. 25-29; discharge computed on basis of recorded range in stage, weather records, and records for stations on nearby streams.

b Stage-discharge relation affected by ice.

Mink Creek below Dry Fork, near Mink Creek, Idaho

Location.- Water-stage recorder, lat. 42°15'30", long. 111°40'30", in NE¼NW¼ sec. 33, T. 13 S., R. 41 E., 500 feet downstream from Dry Fork and 3 miles northeast of Mink Creek post office.

Drainage area.- 19.3 square miles.

Records available.- April 1947 to September 1948.

Extremes.- Maximum discharge during year, 600 second-feet May 29 (gage height, 3 65 feet); minimum, 26 second-feet Feb. 12-16.
1947-48: Maximum discharge, that of May 29, 1948; minimum, that of Feb. 12-16, 1948.

Remarks.- Records good. Two diversions above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	40	38	32	28	28	34	133	434	178	70	50
2	42	40	38	32	28	28	37	124	429	168	68	46
3	44	41	37	32	28	28	44	116	452	158	65	45
4	42	38	36	32	28	28	42	116	434	148	64	48
5	41	38	36	32	28	28	41	118	429	144	67	50
6	38	38	36	32	28	27	41	120	424	139	68	49
7	38	38	35	32	28	27	38	146	418	133	68	48
8	38	38	35	36	27	28	40	178	396	122	65	48
9	38	38	34	36	27	28	44	165	367	120	60	46
10	38	37	33	35	27	27	52	153	349	116	58	46
11	40	37	33	34	27	27	46	146	324	116	56	45
12	41	37	33	33	26	27	45	142	328	105	54	45
13	41	37	33	33	26	27	44	144	315	103	53	44
14	42	37	33	32	26	27	45	165	299	105	52	42
15	41	37	33	32	26	27	52	184	284	101	55	43
16	41	37	33	32	26	27	73	218	265	95	54	44
17	41	36	33	32	27	27	102	288	254	94	56	43
18	40	36	33	32	27	27	117	354	244	92	56	44
19	38	36	33	31	27	27	104	367	230	90	54	43
20	41	36	33	30	27	27	99	385	224	88	53	43
21	42	36	32	30	28	27	113	380	218	86	49	42
22	42	36	32	30	30	27	130	385	215	82	48	42
23	42	36	32	30	29	29	130	367	218	76	53	42
24	42	36	32	30	28	30	118	380	224	76	52	42
25	41	36	32	30	28	30	115	396	224	73	50	42
26	41	36	32	29	29	29	106	424	221	76	50	42
27	41	36	32	29	29	30	100	458	209	81	50	41
28	41	36	32	29	29	32	118	526	203	79	49	41
29	41	35	32	29	29	35	146	506	194	76	48	41
30	41	36	32	28	-	36	144	494	186	74	49	40
31	40	-	31	28	-	33	-	482	-	71	50	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,257	44	38	40.6	2,490
November	1,073	41	35	35.8	2,120
December	1,039	38	31	33.5	2,060
Calendar year 1947	-	-	-	-	-
January	974	36	28	31.4	1,930
February	801	30	26	27.6	1,590
March	885	36	27	28.6	1,760
April	2,360	146	34	78.7	4,680
May	8,560	526	116	276	16,980
June	9,011	452	186	300	17,870
July	3,265	178	71	105	6,480
August	1,744	70	48	56.3	3,460
September	1,327	50	40	44.2	2,630
Water year 1947-48	32,296	526	26	88.2	64,050

Peak discharge (base, 350 sec.-ft.).- May 29 (9:30 a.m.) 600 sec.-ft.

Mink Creek near Mink Creek, Idaho

Location.- Water-stage recorder, lat. 42°12', long. 111°46', in SE¼ sec. 15, T. 14 S., R. 40 E., 1,000 feet upstream from Bear Hollow, 1¼ miles upstream from mouth, and 3 miles southwest of town of Mink Creek. Oct. 1 to Apr. 2, recorder at site 700 feet downstream at different datum. Apr. 2 to June 6, recorder at site half a mile downstream at different datum. June 7 to Sept. 7, staff gage at site 400 feet downstream at different datum.

Drainage area.- 58.7 square miles.

Records available.- April 1943 to September 1948.

Extremes.- Maximum daily discharge during year, 413 second-feet May 28; minimum daily, 2.2 second-feet Aug. 14.
1943-48: Maximum daily discharge, 413 second-feet June 2, 1943, May 28, 1948; minimum daily, 0.7 second-foot on many days in August and September 1944.

Remarks.- Records fair. Twin Lakes Canal and Preston-Riverdale & Mink Creek Canal divert water from creek above station in SE¼ sec. 1, T. 14 S., R. 40 E., for irrigation below station. Many other small diversions above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	38	46	a37	b33	39	e15	95	a312	38	4.0	2.6
2	5.4	39	48	a37	b33	38	e25	76	a282	18	3.6	2.4
3	5.4	40	45	a37	b33	28	e48	56	a298	7.2	3.8	2.4
4	4.7	41	45	a37	b33	7.1	e9	50	a278	4.7	3.5	3.4
5	3.3	39	43	a37	b33	6.1	e4	53	a261	4.7	3.4	2.6
6	a3.3	39	43	a37	b33	6.8	e42	57	a258	6.0	3.4	2.6
7	3.3	41	42	a38	b33	6.1	e6	101	251	7.2	3.2	2.9
8	4.4	42	42	a45	b32	6.1	e5	186	244	5.6	3.2	3.2
9	5.4	39	41	a55	b31	6.4	e20	160	230	6.0	3.5	3.2
10	5.8	39	40	a55	b31	6.4	e51	131	209	6.9	2.4	3.4
11	6.4	38	40	a52	b31	7.1	e21	121	183	6.0	2.3	3.4
12	6.8	37	40	a50	b30	6.4	e16	a117	165	5.1	2.3	3.4
13	6.4	37	40	a48	b30	5.1	e19	a112	144	4.4	2.3	2.9
14	6.4	37	40	41	30	6.1	e25	a129	124	4.7	2.2	3.2
15	6.4	37	40	39	30	5.8	e39	a167	97	5.1	2.3	3.4
16	6.8	37	39	38	32	5.1	e72	a225	80	6.3	2.9	3.2
17	6.8	37	39	37	34	4.0	e122	a293	72	5.6	3.2	3.4
18	6.4	37	39	37	41	4.2	e161	a330	60	4.7	3.2	5.9
19	6.1	37	a39	b36	41	4.2	e106	a340	54	5.1	3.2	6.3
20	5.8	36	a39	b36	37	e5.0	e88	a350	57	4.7	2.9	5.9
21	5.8	36	a38	36	33	e5.0	e106	a346	116	4.7	3.0	5.5
22	5.8	38	a38	36	73	e6.0	e141	a337	129	e28	2.6	5.2
23	5.8	41	a38	36	49	e9.0	e132	a294	152	37	2.6	5.2
24	5.8	41	a38	37	40	e12	e92	a311	161	9.0	2.3	5.5
25	5.8	41	a38	36	39	e10	e71	a340	154	6.6	2.3	5.9
26	5.4	41	a38	b35	42	e9.0	e46	a361	144	3.8	2.4	6.3
27	5.8	41	a38	b35	41	e9.5	e39	a387	134	2.9	2.4	6.7
28	5.8	41	a38	b35	39	e11	e57	a413	123	3.2	3.2	6.3
29	18	41	a38	b35	39	e15	e111	a387	107	3.5	3.2	5.0
30	38	41	a38	b34	-	e13	e111	a356	85	3.8	2.6	4.7
31	38	-	a37	b33	-	e12	-	a330	-	4.2	2.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	250.7	38	3.3	8.09	497
November	1,169	42	36	39.0	2,320
December	1,247	48	37	40.2	2,470
Calendar year 1947	15,850.7	283	2.1	43.4	31,420
January	1,217	55	33	39.3	2,410
February	1,056	73	30	36.4	2,090
March	314.5	39	4.0	10.1	624
April	1,800	161	4	60.0	3,570
May	7,011	413	50	226	13,910
June	4,964	312	54	165	9,850
July	262.7	38	2.9	8.47	521
August	89.7	4.0	2.2	2.89	178
September	126.0	6.7	2.4	4.20	250
Water year 1947-48	19,507.6	413	2.2	53.3	38,690

a No gage-height record; discharge computed on basis of 5 discharge measurements, weather records, and records for Mink Creek below Dry Fork, Twin Lakes Canal near Mink Creek, and Preston-Riverdale & Mink Creek Canal near Mink Creek.
b Stage-discharge relation affected by ice.
e Part of flow bypassing gage through Egley tunnel Mar. 20 to Apr. 2; discharge computed on basis of discharge measurement Mar. 29, record of partial flow at station, field estimate of Apr. 2, weather records, and records for stations on nearby streams: estimated flow of Bear Hollow deducted Apr. 3-30: gage readings not representative of mean for day July 22; discharge computed on basis of records for Mink Creek below Dry Fork, Twin Lakes Canal near Mink Creek, and Preston-Riverdale & Mink Creek Canal near Mink Creek.
Note.- Computed from twice daily staff gage readings June 7 to Sept. 7.

Twin Lakes Canal near Mink Creek, Idaho

Location.- Water-stage recorder and concrete Parshall flume, lat. 42°14', long. 111°44', in SE¼ sec. 1, T. 14 S., R. 40 E., 200 feet downstream from head gates and 1 mile west of Mink Creek post office.

Records available.- April 1943 to September 1948.

Extremes.- Maximum daily discharge during year, 152 second-feet June 6; no flow Oct. 30 to Mar. 2.
1943-48: Maximum daily discharge, 157 second-feet May 28, 1947; no flow at times in each year.

Remarks.- Records good except those for periods of no gage-height record which are fair. Canal diverts from west side of Mink Creek, 200 feet above station, for storage in Twin Lakes Reservoir and irrigation on west side of Bear River in vicinity of Preston.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38					0	58	a135	133	101	39	22
2	40					0	66	a132	140	126	38	21
3	41					19	93	a130	144	127	36	21
4	39					30	87	a129	144	118	33	21
5	38					32	79	128	150	106	34	21
6	39					30	75	129	152	103	34	21
7	38					30	69	127	151	96	34	22
8	38					30	72	110	150	90	34	21
9	38					30	90	104	149	83	32	20
10	38					30	107	101	150	79	33	20
11	39					33	91	99	149	75	34	19
12	38					30	82	98	147	71	33	19
13	38					30	84	98	148	67	29	19
14	38					32	88	101	146	66	29	19
15	38					a32	99	103	147	64	29	19
16	38					a31	116	105	148	59	29	19
17	38					a30	122	107	145	59	30	19
18	37					a30	122	104	145	59	29	21
19	37					a29	111	100	142	55	29	18
20	38					a28	115	99	141	53	28	18
21	38					a26	123	99	127	52	26	18
22	38					a35	131	113	108	53	25	18
23	39					a50	124	136	88	51	26	17
24	39					a45	a120	139	74	51	25	17
25	38					a40	a118	132	69	47	25	16
26	38					a45	a115	129	68	47	24	16
27	38					a55	a115	133	66	48	24	16
28	38					a65	a120	134	66	47	23	16
29	14					a60	a125	132	68	45	23	23
30	0					60	a130	131	73	44	23	23
31	0					52	-	132	-	40	23	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,086	41	0	35.0	2,150
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1947	16,079	157	0	44.1	31,880
January	0	0	0	0	0
February	0	0	0	0	0
March	1,069	65	0	34.5	2,120
April	3,047	131	58	102	6,040
May	3,649	139	98	118	7,240
June	3,728	152	66	124	7,390
July	2,182	127	40	70.4	4,330
August	913	39	23	29.5	1,810
September	580	23	16	19.3	1,150
Water year 1947-48	16,254	152	0	44.4	32,230

a No gage-height record; discharge computed on basis of recorded range in stage and records for Mink Creek near Mink Creek, Mink Creek below Dry Fork, near Mink Creek, and Preston-Riverdale Mink Creek Canal near Mink Creek.

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

Location.- Water-stage recorder, lat. 42°12', long. 111°44', in NW¼ sec. 12, T. 14 S., R. 40 E., half a mile downstream from head gates and 1 mile southwest of Mink Creek post office.

Records available.- April 1943 to September 1948.

Extremes.- Maximum daily discharge during year, 43 second-feet Aug. 6; no flow Nov. 25-30, Dec.7 to May 7.
1943-48: Maximum daily discharge, 46 second-feet June 28-30, July 2, 1943; no flow at times in each year.

Remarks.- Records good except those for period of no gage-height record, which are fair. Canal diverts from east side of Mink Creek for irrigation in vicinity of Mink Creek, Riverdale, and Preston.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	6.0	0.1					0	35	32	38	34
2	8.4	6.0	.4					0	38	36	38	30
3	8.6	6.4	.4					0	38	35	39	29
4	8.4	6.4	.3					0	38	36	39	31
5	9.2	6.4	.2					0	39	38	41	32
6	9.6	6.0	.1					0	40	39	43	32
7	8.4	6.2	0					0	41	38	40	33
8	8.6	6.5	0					.2	41	35	39	33
9	8.6	6.4	0					.5	41	37	37	31
10	8.6	6.0	0					.5	40	37	35	31
11	9.0	5.8	0					.4	38	39	31	31
12	8.6	5.6	0					.4	40	37	31	31
13	8.6	5.4	0					.2	40	38	33	30
14	8.8	5.4	0					.1	40	39	33	26
15	8.8	5.2	0					.1	40	38	35	27
16	8.8	5.2	0					0	42	38	35	29
17	8.8	5.2	0					0	40	38	36	28
18	8.8	5.2	0					0	40	38	35	22
19	8.6	5.1	0					0	40	37	32	25
20	8.4	5.1	0					0	39	38	32	25
21	8.1	4.9	0					0	35	38	30	25
22	7.9	3.6	0					0	29	14	31	25
23	7.9	.2	0					0	25	10	35	25
24	7.9	.1	0					0	23	35	35	25
25	7.7	0	0					0	23	35	36	25
26	7.7	0	0					0	23	36	35	25
27	7.7	0	0					0	23	37	34	25
28	7.5	0	0					13	22	36	35	25
29	6.7	0	0					21	27	37	33	17
30	6.0	0	0					23	28	36	34	15
31	6.0	-	0					28	-	37	34	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	256.7	10	6.0	8.28	509
November	124.3	6.5	0	4.14	247
December	1.5	.4	0	.05	3.0
Calendar year 1947	4,309.9	40	0	11.8	8,540
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	00	0	0	0
May	87.4	28	0	2.82	173
June	1,048	42	22	34.9	2,080
July	1,094	39	10	35.3	2,170
August	1,094	43	30	35.3	2,170
September	822	34	15	27.4	1,630
Water year 1947-48	4,527.9	43	0	12.4	8,980

Note.- No gage-height record Sept. 8-30; discharge computed on basis of records for Mink Creek near Mink Creek, Mink Creek below Dry Fork, near Mink Creek, and Twin Lakes Canal near Mink Creek.

Cub River near Preston, Idaho

Location.- Water-stage recorder, lat. 42°08', long. 110°41', in SW¼ sec. 5, T. 15 S., R. 41 E., 0.2 mile upstream from head gates of Cub River-Worm Creek Canal, 0.7 mile upstream from forest boundary, and 10 miles east of Preston.

Drainage area.- 19.4 square miles.

Records available.- March 1940 to September 1948.

Extremes.- Maximum discharge during year, 650 second-feet May 29 (gage height, 3.66 feet); minimum daily, 1.8 second-feet Mar. 11-13, 15-18, 20.
1940-48: Maximum discharge, 705 second-feet June 2, 1943 (gage height, 3.83 feet); minimum, 14 second-feet Dec. 20, 1940.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	27	28	b23	21	21	26	133	574	166	66	44
2	31	26	28	23	21	21	28	114	569	160	65	43
3	31	27	26	23	21	21	39	102	583	153	65	43
4	30	26	26	23	21	21	36	102	503	145	64	42
5	30	27	26	23	21	21	34	109	503	136	64	42
6	29	26	26	23	21	21	34	127	499	128	63	42
7	29	27	25	23	21	20	31	189	503	122	62	42
8	30	27	24	31	20	20	30	223	503	118	61	42
9	29	26	24	30	20	19	33	184	520	112	60	42
10	30	26	24	28	20	19	41	154	516	108	59	41
11	30	26	24	27	20	b18	37	141	457	107	58	41
12	29	26	24	26	19	b18	35	131	433	102	56	40
13	28	26	24	b25	19	18	34	137	380	98	56	40
14	28	26	24	24	19	20	36	165	359	94	55	40
15	29	26	25	24	19	18	49	191	331	93	54	40
16	29	26	24	24	19	18	73	234	315	90	54	41
17	29	25	24	24	20	18	101	345	302	89	53	41
18	28	25	24	23	21	18	112	455	290	86	53	42
19	28	25	24	b23	21	19	87	479	268	84	53	42
20	28	25	24	b23	21	18	85	519	251	83	51	40
21	28	24	24	23	22	19	101	503	251	80	51	40
22	28	24	24	22	23	19	123	507	280	78	53	38
23	27	24	24	23	22	20	118	455	277	75	51	38
24	28	24	23	23	21	22	102	475	271	75	50	38
25	27	24	23	23	21	23	93	519	254	73	49	37
26	26	24	23	b22	21	23	85	566	232	73	49	36
27	26	24	24	b22	21	23	87	589	216	72	48	35
28	26	24	24	b22	21	26	111	634	200	71	47	35
29	28	24	24	22	20	29	154	587	186	70	46	34
30	27	26	24	21	-	30	147	529	177	68	45	35
31	27	-	b23	21	-	26	-	542	-	68	45	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	884	31	26	23.5	1,750
November	763	27	24	23.4	1,510
December	758	28	23	24.5	1,500
Calendar year 1947	31,070	548	19	85.1	61,600
January	737	31	21	23.8	1,460
February	597	23	19	20.6	1,180
March	647	30	18	20.9	1,280
April	2,102	154	26	70.1	4,170
May	10,140	634	102	327	20,110
June	11,003	583	177	367	21,820
July	3,077	166	68	99.3	6,100
August	1,706	66	45	55.0	3,380
September	1,196	44	34	39.9	2,370
Water year 1947-48	33,610	634	18	91.8	66,630

Peak discharge (base, 440 sec.-ft.).- May 29 (12:30 a.m.) 650 sec.-ft.
b Stage-discharge relation affected by ice.
Note.- No gage-height record Jan. 29 to Feb. 21; discharge computed on basis of weather records and records for Mink Creek below Dry Fork, near Mink Creek.

Cub River above Maple Creek, near Franklin, Idaho

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

Drainage area.- 53.7 square miles.

Records available.- March 1940 to September 1948.

Extremes.- Maximum discharge during year, 585 second-feet May 20 (gage height, 4.03 feet); minimum daily, 0.6 second-foot Sept. 16.
1940-48: Maximum discharge, 617 second-feet June 2, 1943 (gage height, 4.34 feet); minimum, that of Sept. 16, 1948.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Station is below all diversions from Cub River except Franklin-Cub River Pumping station.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	a6.5	41	25	a26	15	34	201	421	24	2.8	0.8
2	3.2	a6.0	42	25	a26	15	49	176	421	14	2.8	.7
3	3.2	a7.0	40	25	a26	15	85	158	426	10	3.0	.8
4	3.0	a6.5	38	22	a26	15	64	158	414	7.9	2.8	.8
5	3.0	a7.0	37	23	a26	13	52	162	367	6.0	2.8	.8
6	2.8	a6.5	37	16	a26	13	54	180	336	4.8	3.0	.8
7	2.8	a7.0	36	15	a26	14	53	242	324	4.2	2.8	.9
8	3.0	a7.0	36	35	a26	14	53	324	314	3.8	2.5	.9
9	3.2	a7.0	35	33	a25	12	62	273	300	3.0	2.8	.9
10	4.0	6.9	34	27	a25	12	109	231	275	2.5	3.0	.9
11	4.5	6.9	30	23	a25	9.8	82	224	246	3.5	2.8	1.8
12	4.0	6.0	28	22	a25	12	69	218	216	2.8	2.4	.8
13	4.0	4.5	25	19	a26	13	64	209	186	2.5	2.2	.8
14	3.5	3.5	24	19	28	14	78	226	156	3.0	2.0	.9
15	3.2	3.5	22	18	26	14	102	246	119	2.0	2.0	.7
16	3.5	3.5	11	17	26	13	160	277	95	2.8	1.9	.6
17	4.8	3.5	8.8	15	22	13	226	398	82	2.8	1.9	.7
18	3.5	3.5	9.8	15	14	13	246	523	57	2.5	1.8	1.3
19	3.2	3.5	9.3	11	16	14	182	536	48	2.5	1.9	1.4
20	3.5	3.2	8.4	16	18	12	170	566	83	2.5	1.8	1.9
21	3.2	3.2	9.3	16	17	10	205	542	197	2.4	1.6	2.2
22	3.5	3.2	9.3	15	35	13	259	518	220	2.4	1.4	1.4
23	3.2	3.2	8.8	15	32	18	242	466	226	2.4	1.4	.8
24	4.5	3.2	7.9	15	23	22	201	438	226	2.8	1.4	1.6
25	5.0	3.2	18	13	20	24	178	461	214	2.8	1.6	2.0
26	4.5	18	22	12	21	22	152	529	201	2.8	2.0	23
27	4.0	31	22	b16	20	22	152	518	190	42	1.6	36
28	3.8	31	23	b18	17	27	201	523	176	49	1.2	36
29	5.0	32	25	b22	16	37	257	523	146	7.4	1.2	36
30	7.4	33	21	b24	-	41	228	464	78	3.0	1.2	37
31	6.4	-	14	a26	-	31	-	418	-	2.8	1.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	119.9	7.4	2.8	3.87	238
November	270.0	33	3.2	9.00	536
December	732.6	42	7.9	23.6	1,450
Calendar year 1947	21,820.7	477	2.2	59.8	43,280
January	613	35	11	19.8	1,220
February	685	35	14	23.6	1,360
March	532.8	41	9.8	17.2	1,060
April	4,069	259	34	136	8,070
May	10,928	566	158	353	21,680
June	6,760	426	48	225	13,410
July	226.9	49	2.0	7.32	450
August	64.6	3.0	1.0	2.08	128
September	195.2	37	.6	6.51	387
Water year 1947-48	25,197.0	566	.6	68.8	49,990

a No gage-height record; discharge computed on basis of records for station near Preston, Cub River-Worm Creek, Preston-Whitney, and Cub River Canals which divert between river stations.
b Stage-discharge relation affected by ice.

Cub River-Worm Creek Canal near Preston, Idaho

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

Records available.- April 1943 to September 1948.

Extremes.- Maximum daily discharge during year, 84 second-feet June 2; no flow at times. 1943-48: Maximum daily discharge, that of June 2, 1948; no flow at times each year.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	7.4		22	24	0.4	79	64	6.6	1.1
2			0	b8.5		21	28	.3	84	64	5.1	.1
3			0	b10		21	34	.1	68	62	5.0	0
4			0	b13		21	32	.1	73	60	4.1	0
5			0	14		22	31	0	78	58	3.7	0
6			0	19		22	24	0	79	54	3.9	0
7			0	20		20	16	0	80	51	6.1	0
8			0	25		20	17	1.5	69	50	13	0
9			0	24	a3	19	18	2.4	65	50	12	0
10			0	24		20	23	2.6	73	50	8.9	0
11			0	22		20	20	2.2	71	49	7.6	0
12			0	22		21	18	1.5	73	46	7.4	0
13			a10	18		18	17	1.0	75	43	6.6	0
14			a21	29		20	19	.5	73	40	5.9	0
15			a21	26		19	22	.3	73	36	6.1	0
16			a21	24		18	24	.1	76	34	4.2	0
17			a21	25		19	22	0	76	34	3.4	0
18			21	20	a10	19	21	0	75	32	3.2	0
19			21	19	18	20	18	0	73	30	3.2	0
20			21	25	18	19	16	0	69	27	3.6	0
21			20	29	18	19	13	0	20	20	3.4	0
22			21	18	22	20	2.1	1.8	4.4	22	3.6	0
23			21	18	20	23	2.6	23	3.6	18	3.6	0
24			18	18	20	22	1.9	33	4.6	18	3.4	0
25			11	19	19	22	1.4	37	39	18	3.4	0
26			11	8.1	20	20	1.1	41	39	16	3.0	0
27			11	b3	20	22	.8	47	37	15	1.3	0
28			11		20	24	.5	49	32	15	1.1	0
29			8.9	a3	21	25	.2	57	32	14	1.0	0
30			11		-	24	.3	62	46	12	1.1	0
31			10		-	22	-	71	-	8.9	1.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	310.9	21	0	10.0	617
Calendar year 1947	5,680.2	71	0	15.6	11,280
January	520.0	29	-	16.8	1,030
February	277	22	-	9.55	549
March	644	25	18	20.8	1,280
April	467.9	34	.2	15.6	928
May	434.8	71	0	14.0	862
June	1,739.6	84	3.6	58.0	3,450
July	1,110.9	64	8.9	35.8	2,200
August	145.6	13	1.0	4.70	289
September	1.2	1.1	0	.04	2.4
Water year 1947-48	5,651.9	84	0	15.4	11,210

a No gage-height record; discharge computed on basis of records for Cub River near Preston, Cub River above Maple Creek, near Franklin, Preston-Whitney Canal near Preston, and Cub River Canal near Preston.

b Stage-discharge relation affected by ice.

Preston-Whitney Canal near Preston, Idaho

Location.- Staff gage and Cippoletti weir in concrete flume, lat. 42°06', long. 111°44', in NE¼ sec. 24, T. 15 S., R. 40 E., 500 feet downstream from head gates and 7½ miles east of Preston.

Records available.- April 1946 to September 1948. April 1944 to September 1948 (irrigation season only) in Bear River Hydrometric Data reports.

Extremes.- Maximum daily discharge during year, 60 second-feet June 20; no flow Dec. 13 to May 15, Sept. 10-25.
1946-48: Maximum daily discharge, that of June 20, 1948; no flow during winter months and at other times each year.

Remarks.- Records fair. Canal diverts from west side of Cub River for irrigation in vicinity of Preston.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	1.1	1.2					0	51	18	16	2.8
2	1.0	1.1	1.2					0	51	18	16	2.6
3	1.0	1.2	1.2					0	32	18	16	2.5
4	.8	1.2	1.2					0	33	18	16	2.3
5	.7	1.2	1.2					0	46	18	16	2.2
6	.7	1.2	1.2					0	46	18	16	2.0
7	.7	1.2	1.2					0	45	18	a12	1.8
8	.7	1.2	1.2					0	46	18	4.9	1.8
9	.7	1.2	1.2					0	52	17	4.9	1.8
10	.7	1.2	1.2					0	52	17	4.9	0
11	.7	1.2	1.2					0	52	17	4.9	0
12	.7	1.2	1.2					0	a45	16	4.9	0
13	.7	1.2	0					0	43	16	4.9	0
14	.7	1.2	0					0	43	16	4.9	0
15	.7	1.2	0					0	43	16	4.9	0
16	.7	1.2	0					3.0	42	16	4.9	0
17	.7	1.2	0					9.8	30	16	4.9	0
18	.7	1.2	0					8.0	a31	16	4.9	0
19	.7	1.2	0					7.4	a45	16	5.2	0
20	a.7	1.2	0					6.9	60	16	5.2	0
21	1.4	1.2	0					4.9	2.5	16	3.2	0
22	1.2	1.2	0					3.0	2.2	16	3.2	0
23	1.2	1.2	0					12	1.8	16	3.2	0
24	1.2	1.2	0					11	1.5	16	3.0	0
25	1.2	1.2	0					12	1.5	16	3.0	0
26	1.2	1.2	0					12	1.5	16	4.3	3.8
27	1.2	1.2	0					12	1.5	16	4.1	3.6
28	1.2	1.2	0					12	1.5	16	4.1	3.4
29	1.2	1.2	0					19	1.5	16	4.1	3.2
30	1.2	1.2	0					17	10	16	4.1	2.8
31	1.1	-	0					27	-	16	2.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	28.4	1.4	.7	0.92	56
November	35.8	1.2	1.1	1.19	71
December	14.4	1.2	0	0.46	29
Calendar year 1947	1,492.9	39	0	4.09	2,960
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	177.0	27	3.0	5.71	351
June	913.5	60	1.5	30.4	1,810
July	515	18	16	16.6	1,020
August	211.4	16	2.8	6.82	419
September	36.6	3.8	0	1.22	73
Water year 1947-48	1,932.1	60	0	5.28	3,830

a No gage-height record; discharge computed on basis of observer's notes and records for Cub River near Preston, Cub River above Maple Creek, near Franklin, Cub River-Worm Creek Canal and Cub River Canal near Preston.

Cub River Canal near Preston, Idaho

Location.- Water-stage recorder in concrete flume, lat. 42°04', long. 111°47', in SE¼ sec. 4, T. 16 S., R. 40 E., 1¼ miles downstream from head and 5½ miles southeast of Preston.

Records available.- April 1946 to September 1948. April 1944 to September 1948 (irrigation season only), in Bear River Hydrometric Data reports. Irrigation season only (fragmentary) 1927-43, in files of Cub River Irrigation Co. at Lewiston, Utah.

Extremes.- Maximum daily discharge during year, 142 second-feet June 16, 18; no flow Nov. 27 to May 17.

1946-48: Maximum daily discharge, 144 second-feet May 24-27, 1947; no flow during winter months and at other times each year.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	29						0	a60	97	45	a41
2	34	30						0	a60	89	44	a42
3	35	33						0	a100	81	44	a41
4	36	32						0	a80	78	45	a41
5	36	33						0	a90	71	44	41
6	36	31						0	a115	66	44	40
7	36	31						0	a125	58	44	40
8	36	32						0	118	55	44	39
9	34	31						0	122	52	44	39
10	35	29						0	118	48	44	38
11	36	31						0	122	45	44	39
12	34	30						0	126	46	44	39
13	34	34						0	126	44	44	39
14	34	33						0	134	43	44	39
15	34	32						0	140	43	46	38
16	34	33						0	142	43	46	39
17	35	32						0	140	42	46	41
18	35	32						5.2	142	40	45	43
19	34	32						12	131	42	44	42
20	34	32						22	110	42	44	40
21	34	31						29	43	44	46	41
22	34	33						32	66	44	45	41
23	34	33						36	66	43	45	41
24	33	30						38	60	44	44	41
25	31	31						40	32	43	44	39
26	32	13						a40	36	42	42	14
27	33	0						a60	40	13	42	7.6
28	33	0						a90	49	15	40	7.6
29	31	0						a50	65	41	41	7.6
30	30	0						a50	86	44	40	7.3
31	30	-						a60	-	44	40	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,052	36	30	33.9	2,090
November	803	34	0	26.8	1,590
December	0	0	0	0	0
Calendar year 1947	8,362.3	144	0	23.7	18,580
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	564.2	90	0	18.2	1,120
June	2,844	142	32	94.8	5,640
July	1,542	97	13	49.7	3,060
August	1,358	46	40	43.8	2,690
September	1,048.1	43	7.3	34.9	2,080
Water year 1947-48	9,211.3	142	0	25.2	18,270

a No gage-height record; discharge computed on basis of recorded range in stage and records for Cub River-Worm Creek Canal near Preston, Preston-Whitney Canal near Preston, Cub River above Maple Creek, near Franklin.

Maple Creek near Franklin, Idaho

Location.- Water-stage recorder, lat. 42°02'30", long. 111°45'00", in NW¼ sec. 14, T. 16 S., R. 40 E., 30 feet downstream from Deep Creek and 3 miles east of Franklin.

Drainage area.- 21.2 square miles.

Records available.- April 1946 to September 1948.

Extremes.- Maximum discharge during year, 229 second-feet May 17 (gage height, 2.88 feet); minimum daily, 1.0 second-feet Sept. 26-30.
1946-48: Maximum discharge, that of May 17, 1948; minimum daily, that of Sept. 26-30, 1948.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	1.6	4.8	a3.5	2.6	4.2	15	92	89	16	**4.0**	1.4
2	1.8	2.0	4.5	a4.0	a2.5	4.8	20	70	88	15	**3.8**	1.5
3	1.6	2.1	4.2	4.0	a2.5	4.5	28	56	88	14	3.6	1.5
4	1.8	2.1	4.2	4.0	a2.5	4.5	25	58	78	14	3.6	1.5
5	1.8	2.4	4.2	4.5	a2.5	4.2	24	64	74	13	3.6	1.6
6	2.0	2.1	4.5	4.5	a2.5	4.5	24	84	71	11	3.6	1.6
7	2.1	2.1	4.2	5.0	a2.5	4.5	21	129	68	10	3.2	1.6
8	2.2	2.2	4.0	15	a2.0	4.5	22	144	62	9.8	2.8	a1.5
9	2.2	2.2	3.8	9.8	a2.0	4.5	27	111	57	9.4	2.8	a1.4
10	2.2	2.1	3.5	9.4	a2.0	4.0	44	86	50	8.9	2.8	a1.4
11	2.8	2.2	3.5	9.0	a2.0	4.0	36	86	44	8.5	2.8	a1.3
12	2.7	2.0	3.8	8.6	a1.5	4.2	29	86	35	8.5	2.6	a1.3
13	2.4	2.0	3.5	6.9	a1.5	4.5	27	99	30	8.0	2.6	a1.3
14	2.2	2.1	3.8	6.9	a1.5	**4.5**	29	126	26	7.2	2.6	1.1
15	2.0	2.0	3.8	6.6	1.8	4.2	38	141	27	6.9	2.6	1.1
16	1.8	2.0	3.8	6.2	1.8	4.5	68	161	24	6.9	2.4	a1.1
17	2.2	2.1	3.5	6.6	2.2	4.2	114	190	22	6.9	2.4	a1.2
18	2.1	2.1	3.8	5.8	2.7	4.2	133	207	22	6.3	2.2	a1.2
19	2.0	2.1	3.8	**4.8**	3.2	4.5	89	198	21	6.3	2.0	a1.2
20	1.8	2.0	3.5	5.0	3.0	4.5	84	170	22	6.6	2.0	a1.2
21	1.8	2.0	3.5	5.0	2.7	4.5	113	148	26	6.3	2.0	a1.1
22	2.0	b2.0	3.8	4.8	7.2	6.2	146	142	31	5.7	1.8	a1.1
23	1.8	b2.0	3.8	4.5	4.8	9.8	133	128	30	5.4	1.7	a1.1
24	2.1	3.0	a3.5	4.5	3.5	10	100	124	29	5.4	1.7	a1.1
25	2.0	2.0	a3.0	3.8	3.8	11	80	131	26	5.4	1.8	a1.1
26	2.0	2.0	a3.5	3.2	4.2	10	65	136	25	5.1	1.7	a1.0
27	2.0	2.1	a3.0	3.2	4.5	12	61	132	23	4.5	1.7	a1.0
28	2.0	2.2	a3.0	3.2	4.2	14	97	129	22	4.2	1.6	a1.0
29	2.0	2.1	a3.0	3.0	4.0	14	140	119	19	4.5	1.6	a1.0
30	1.8	2.4	a2.5	2.7	-	14	118	96	18	4.5	1.6	a1.0
31	1.6	-	a3.0	2.6	-	13	-	92	-	4.0	1.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	62.6	2.8	1.6	2.02	124
November	62.3	2.4	1.6	2.08	124
December	114.3	4.8	2.5	3.69	227
Calendar year 1947	7,160.4	148	1.4	19.6	14,200
January	170.6	15	2.6	5.50	338
February	83.7	7.2	1.5	2.89	166
March	206.0	14	4.0	6.65	409
April	1,950	146	15	65.0	3,870
May	3,735	207	56	120	7,410
June	1,247	89	18	41.6	2,470
July	248.2	16	4.0	8.01	492
August	76.8	4.0	1.6	2.48	152
September	37.5	1.6	1.0	1.25	74
Water year 1947-48	7,994.0	207	1.0	21.8	15,860

Peak discharge (base, 150 sec.-ft.).- Apr. 18 (12:15 a.m.) 157 sec.-ft.; Apr. 22 (1 a.m.) 153 sec.-ft.; May 7 (11:30 p.m.) 167 sec.-ft.; May 17 (10:30 p.m.) 229 sec.-ft.

a No gage-height record, discharge computed on basis of recorded range in stage (Sept. 16-30), weather records, and records for High Creek near Richmond, Utah.

b State-discharge relation affected by ice.

High Creek near Richmond, Utah

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

Drainage area.- 16.2 square miles.

Records available.- April 1946 to September 1948. April 1944 to September 1948 (irrigation season only), in Bear River Hydrometric Data reports.

Extremes.- Maximum discharge during year, 242 second-feet May 19 (gage height, 2.34 feet); minimum daily, 5.0 second-feet Feb. 8-14.
1946-48: Maximum discharge, that of May 19, 1948; minimum daily, that of Feb. 8-14, 1948.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	9.9	14	b7.5	a5.5	b7.5	12	63	164	60	21	13
2	10	9.9	14	b8.0	a5.5	7.7	12	56	160	57	22	13
3	11	10	14	9.4	a5.5	7.7	15	50	166	54	21	13
4	11	9.9	14	9.4	a5.5	7.7	16	52	158	50	20	13
5	10	10	14	9.9	a5.5	b7.5	16	52	164	48	20	13
6	10	a10	13	9.0	a5.5	b7.2	17	63	158	46	20	13
7	9.9	a10	12	9.0	a5.5	7.2	16	91	156	44	19	13
8	10	a10	11	12	a5.0	7.2	16	97	145	43	19	13
9	10	a11	10	13	a5.0	6.8	18	81	138	42	19	12
10	11	a11	9.9	13	a5.0	7.2	25	72	129	41	19	12
11	11	a11	9.9	13	a5.0	b6.5	23	77	124	40	18	12
12	11	11	10	13	a5.0	b6.5	21	77	115	38	17	12
13	10	12	9.9	b12	a5.0	6.5	18	87	107	36	17	12
14	11	12	9.9	b11	a5.0	7.2	19	100	99	35	16	12
15	10	11	9.9	11	5.4	6.5	24	107	92	33	16	11
16	10	11	9.4	11	5.4	6.1	41	128	87	32	16	11
17	11	11	9.4	10	5.4	6.5	67	168	83	32	16	12
18	10	11	9.4	10	5.8	6.5	78	199	78	31	16	12
19	9.9	11	9.4	b9.5	6.1	6.8	54	211	75	30	15	12
20	9.9	11	9.0	b9.0	6.1	a6.8	51	179	72	29	16	12
21	9.9	11	9.4	b9.0	5.8	7.2	67	168	81	28	15	11
22	9.9	11	9.4	9.0	7.2	6.5	90	154	87	28	15	11
23	9.9	11	9.0	9.4	7.7	6.8	75	147	88	27	15	11
24	9.9	10	9.0	9.4	7.2	8.1	59	162	86	27	14	11
25	9.0	9.9	9.0	9.0	7.2	9.4	50	190	78	26	14	11
26	9.0	9.9	8.6	b8.0	7.2	9.4	45	192	72	25	14	11
27	8.6	9.9	9.0	b7.0	7.2	9.4	44	194	67	24	14	11
28	8.6	9.9	9.0	b7.0	7.7	11	63	199	66	24	13	11
29	9.9	10	9.4	b6.5	7.7	13	90	183	63	24	13	10
30	11	11	b8.0	a6.0	-	14	76	168	61	23	14	10
31	9.9	-	b7.0	a5.5	-	13	-	177	-	22	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	312.3	11	8.6	10.1	619
November	317.3	12	9.9	10.6	629
December	318.9	14	7.0	10.3	633
Calendar year 1947	11,323.4	191	-	31.0	22,460
January	295.5	13	5.5	9.53	586
February	172.6	7.7	5.0	5.95	342
March	247.4	14	6.1	7.98	491
April	1,218	90	12	40.6	2,420
May	3,944	211	50	127	7,820
June	3,219	166	61	107	6,380
July	1,099	60	22	35.5	2,180
August	518	22	13	16.7	1,030
September	354	13	10	11.8	702
Water year 1947-48	12,016.0	211	5.0	32.8	23,830

Peak discharge (base, 150 sec.-ft.).- May 19 (6:30 p.m.) 242 sec.-ft.
a No gage-height record; discharge computed on basis of weather records and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

Little Bear River near Paradise, Utah

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

Drainage area.- 203 square miles.

Records available.- October 1938 to September 1948 in reports of Geological Survey. January 1936 to October 1939 (fragmentary) in reports of Little Bear River water commissioner.

Average discharge.- 10 years (1938-48), 77.9 second-feet.

Extremes.- Maximum discharge during year, 766 second-feet Apr. 22 (gage height, 4.07 feet); minimum, 15 second-feet July 6.
1938-48: Maximum discharge, 926 second-feet Apr. 19, 1946 (gage height, 5.15 feet); minimum, 4 second-feet Aug. 14, 1940.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	50	66	b45	48	54	99	455	260	33	22	18
2	36	51	70	b48	47	55	162	406	271	32	22	19
3	37	52	59	52	47	54	271	430	304	30	23	18
4	39	52	55	51	47	53	179	476	247	28	22	18
5	36	54	54	58	47	52	151	485	206	27	27	19
6	36	53	54	56	47	51	143	494	184	27	23	19
7	37	53	54	59	48	53	112	624	164	23	23	19
8	39	57	53	89	48	53	112	601	143	28	21	20
9	41	60	52	74	48	53	157	497	130	27	19	20
10	43	58	46	*62	47	52	313	440	112	28	19	20
11	54	58	48	58	45	52	194	433	91	24	18	19
12	51	56	50	55	45	52	155	394	75	24	19	20
13	47	56	52	49	46	56	157	424	66	23	18	20
14	48	55	52	51	47	67	199	464	62	24	17	20
15	47	55	50	49	47	63	279	485	58	23	19	20
16	46	54	50	47	48	59	412	515	54	21	19	20
17	44	55	50	48	50	63	527	586	53	19	19	22
18	44	55	*51	b47	65	63	601	634	54	21	19	23
19	44	56	49	b45	95	62	455	648	54	21	19	26
20	43	57	50	*b45	85	58	482	651	52	21	18	27
21	44	56	50	b46	95	53	566	586	67	22	18	26
22	47	51	49	b48	110	63	669	536	102	23	19	26
23	46	52	49	50	78	111	595	491	112	23	19	24
24	50	55	48	51	66	108	488	464	91	23	19	26
25	48	54	50	50	61	82	458	446	74	23	19	27
26	48	56	49	b47	66	67	364	409	71	23	19	31
27	48	57	48	b42	66	69	364	391	56	24	19	30
28	47	58	49	b42	59	89	427	385	43	24	19	32
29	56	57	49	b44	55	105	624	355	37	22	19	39
30	56	57	b48	b46	-	95	548	315	35	21	18	40
31	51	-	*b47	*49	-	76	-	285	-	20	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,389	56	36	44.8	2,760
November	1,650	60	50	55.0	3,270
December	1,601	70	46	51.6	3,180
Calendar year 1947	27,323	350	16	74.9	54,200
January	1,603	89	42	51.7	3,180
February	1,703	110	45	58.7	3,380
March	2,043	111	51	65.9	4,050
April	10,263	669	99	342	20,360
May	14,805	651	285	478	29,370
June	3,328	304	35	111	6,600
July	752	33	19	24.3	1,490
August	611	27	17	19.7	1,210
September	708	40	18	23.6	1,400
Water year 1947-48	40,456	669	17	111	80,250

Peak discharge (base, 400 sec.-ft.).- Apr. 10 (5 p.m.) 409 sec.-ft.; Apr. 17 (11:30 p.m.) 745 sec.-ft.; Apr. 22 (1 a.m.) 766 sec.-ft.; Apr. 29 (5:30 a.m.) 678 sec.-ft.; May 7 (11 p.m.) 757 sec.-ft.; May 20 (4 a.m.) 678 sec.-ft.

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.- No gage-height record Feb. 4-22; discharge computed on basis of weather records and records for station near Hyrum.

Hyrum Reservoir near Hyrum, Utah

Location.- Mercury indicating gage, lat. 41°37'30", long. 111°52'30", in SE¼NE¼ sec. 7, T. 10 N., R. 1 E., at Hyrum Dam on Little Bear River, and 1 mile southwest of Hyrum. Datum of gage is at mean sea level.

Drainage area.- 220 square miles.

Records available.- October 1938 to September 1948.

Extremes.- Maximum contents during year, 15,420 acre-feet May 6, 7, 12-31 (elevation, 4,672.3 feet); minimum, 5,180 acre-feet Sept. 30 (elevation, 4,648.1 feet).
1938-48: Maximum contents, 15,470 acre-feet May 5, 1947 (elevation, 4,672.4 feet); minimum, 1,130 acre-feet Oct. 5, 1940 (elevation, 4,634.7 feet).

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

Cooperation.- Capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,150	8,910	-	10,390	-	10,480	10,700	14,670	15,280	14,810	10,260	7,620
2	7,220	9,000	-	-	-	-	10,700	14,670	15,280	14,720	10,260	7,460
3	7,220	9,080	-	10,480	-	-	10,830	14,860	15,280	14,620	10,260	7,300
4	7,220	9,160	-	-	-	-	10,960	14,950	15,280	14,530	10,260	6,990
5	7,260	9,250	-	-	-	-	11,090	15,090	15,280	14,430	10,220	6,910
6	7,300	9,330	10,390	-	-	10,480	11,180	15,420	15,280	14,340	10,180	6,610
7	7,340	9,410	-	-	10,480	-	11,220	15,420	15,280	13,780	10,090	6,530
8	7,380	9,500	-	-	-	-	11,270	15,280	15,280	13,680	9,960	6,230
9	7,420	9,540	-	-	-	-	11,270	15,280	15,280	13,590	9,880	6,160
10	7,460	9,620	-	10,520	-	-	11,580	15,230	15,280	13,500	9,840	5,940
11	7,540	9,710	-	-	-	-	11,900	15,190	15,280	13,400	9,790	5,900
12	7,580	9,790	-	-	-	-	12,260	15,420	15,230	13,270	9,710	5,790
13	7,660	9,880	10,390	-	-	10,480	12,300	15,420	15,190	13,080	9,670	5,760
14	7,740	9,960	-	-	10,480	-	12,480	15,420	15,190	13,080	9,580	5,720
15	7,780	10,050	-	-	-	-	13,030	15,420	15,090	13,080	9,500	5,680
16	7,860	10,090	-	-	-	-	13,500	15,420	15,040	12,620	9,410	5,650
17	7,900	10,140	-	10,480	-	-	14,010	15,420	15,000	12,030	9,290	5,610
18	7,980	10,180	-	-	-	-	14,010	15,420	14,900	12,120	9,000	5,570
19	8,020	10,260	-	-	-	-	13,920	15,420	14,860	12,210	8,950	5,540
20	8,020	10,350	10,390	-	-	10,700	13,820	15,420	14,810	12,390	8,830	5,500
21	8,100	10,350	-	-	10,480	-	13,820	15,420	14,760	11,850	8,670	5,470
22	8,180	10,350	-	-	-	-	14,010	15,420	14,760	11,670	8,580	5,430
23	8,260	10,350	-	-	-	-	14,200	15,420	14,720	11,580	8,460	5,400
24	8,300	10,390	-	10,520	-	-	-	15,420	14,720	11,400	8,220	5,360
25	8,380	10,390	-	-	-	-	-	15,420	14,760	11,400	8,180	5,320
26	8,420	10,390	-	-	-	-	-	15,420	14,810	11,140	8,100	5,290
27	8,500	10,390	10,390	-	-	10,700	13,870	15,420	14,810	11,140	7,980	5,250
28	8,580	10,390	-	-	10,480	-	14,290	15,420	14,810	11,050	7,820	5,220
29	8,670	10,390	-	-	a10,480	-	14,670	15,420	14,810	10,440	7,780	5,220
30	8,750	a10,390	-	-	-	-	14,670	15,420	14,810	10,350	7,780	5,180
31	8,830	-	10,390	10,520	-	10,700	-	15,420	-	10,260	7,620	-

a No gage-height record; contents interpolated

Monthly elevation and contents, water year October 1947 to September 1948

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	4,653.4	7,150	-
Oct. 31	4,657.6	8,836	+1,680
Nov. 30	-	a10,390	+1,560
Dec. 31	4,661.3	10,390	0
Calendar year 1947	-	-	-180
Jan. 31	4,661.6	10,520	+130
Feb. 29	-	a10,480	-40
Mar. 31	4,662.0	10,700	+220
Apr. 30	4,670.7	14,670	+3,970
May 31	4,672.3	15,420	+750
June 30	4,671.0	14,810	-610
July 31	4,661.0	10,260	-4,550
Aug. 31	4,654.6	7,620	-2,640
Sept. 30	4,648.1	5,180	-2,440
Water year 1947-48	-	-	-1,970

a No gage-height record; contents interpolated

Little Bear River near Hyrum, Utah

Location.- Water-stage recorder, lat. 41°38'00", long. 111°53'15", in NW¼SW¼ sec. 6, T. 10 N., R. 1 E., 800 feet upstream from road bridge, 1¼ miles downstream from Hyrum Dam, and 2 miles west of Hyrum.

Drainage area.- 222 square miles.

Records available.- October 1938 to September 1948.

Average discharge.- 10 years, 54.3 second-feet.

Extremes.- Maximum discharge during year, 853 second-feet May 19 (gage height, 4.31 feet); minimum daily, 1.5 second-feet Oct. 27, 28, Aug. 13.
1938-48: Maximum discharge, 885 second-feet Apr. 20, 1946 (gage height, 4.55 feet); minimum daily, 0.6 second-foot Nov. 23-25, 1943.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.2	1.6	50	45	44	64	97	429	208	6.4	2.4	3.2
2	2.4	1.6	56	48	45	62	114	429	197	5.8	2.0	6.1
3	2.0	1.6	58	51	45	58	167	418	233	4.6	1.9	12
4	1.9	1.5	54	51	45	55	189	382	284	3.6	1.9	7.9
5	1.9	1.6	54	52	45	53	187	360	114	4.9	2.8	6.1
6	2.0	1.6	52	55	46	51	167	350	36	4.9	2.6	5.8
7	2.0	1.6	50	55	46	50	95	516	63	4.3	2.6	5.8
8	2.0	1.5	51	62	46	50	63	682	62	5.2	1.9	4.9
9	2.0	1.5	51	71	46	50	76	655	52	6.7	1.8	5.5
10	2.0	1.5	51	71	47	50	93	622	43	5.8	1.7	5.5
11	2.6	1.6	50	68	46	48	102	466	29	5.8	1.8	5.2
12	2.4	1.6	49	65	43	48	107	315	16	5.5	1.6	5.8
13	2.0	1.8	49	62	44	48	109	298	9.7	4.9	1.5	4.6
14	1.8	6.7	50	56	45	52	113	387	9.2	4.6	1.6	3.8
15	1.8	16	52	54	45	58	131	553	11	4.6	1.9	3.4
16	1.9	23	52	52	46	58	193	570	10	4.3	1.9	3.4
17	2.0	29	51	51	48	59	284	461	11	4.0	2.0	3.4
18	1.8	34	50	51	51	63	380	576	9.2	3.6	4.3	3.4
19	1.8	39	50	49	70	67	469	775	8.4	3.2	3.0	3.2
20	1.8	41	50	47	83	65	474	664	7.9	2.8	3.0	2.8
21	1.7	43	51	47	78	63	485	340	7.9	3.2	3.2	2.8
22	1.8	43	51	48	97	59	502	450	9.7	2.6	3.2	2.8
23	1.8	43	51	47	120	67	513	513	13	2.6	3.2	3.4
24	1.8	44	49	48	113	98	524	352	17	3.4	3.8	3.6
25	1.8	44	48	48	98	104	505	268	16	3.4	4.9	3.4
26	1.7	46	48	46	88	95	418	347	15	2.6	4.3	3.4
27	1.5	46	47	43	83	85	322	357	12	2.6	4.6	3.4
28	1.5	47	47	42	76	85	347	344	15	2.2	4.6	3.0
29	1.6	47	48	42	70	97	364	233	14	2.2	5.5	3.8
30	1.7	48	48	42	-	107	390	199	8.4	2.8	4.3	3.6
31	1.6	-	47	43	-	102	-	212	-	2.8	3.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	59.8	3.2	1.5	1.93	119
November	660.3	48	1.5	22.0	1,310
December	1,565	58	47	50.5	3,100
Calendar year 1947	19,205.4	330	1.0	52.6	38,100
January	1,612	71	42	52.0	3,200
February	1,799	120	43	62.0	3,570
March	2,071	107	48	66.8	4,110
April	7,980	524	63	266	15,830
May	13,523	775	199	436	26,820
June	1,541.4	284	7.9	51.4	3,060
July	125.9	6.7	2.2	4.06	250
August	89.2	5.5	1.5	2.88	177
September	135.0	12	2.8	4.50	268
Water year 1947-48	31,161.6	775	1.5	85.1	61,810

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East Fork Little Bear River near Avon, Utah

Location.- Water-stage recorder lat. 41°31', long. 111°45', in NE¼ sec. 17, T. 9 N., R. 2 E., 0.2 mile downstream from Porcupine Creek, 0.4 mile upstream from Pole Creek, and 4 miles east of Avon.

Drainage area.- 50 square miles.

Records available.- January 1938 to September 1948. April 1927 to September 1930 at site 2 miles downstream, records not equivalent.

Extremes.- Maximum discharge during year, 569 second-feet May 7 (gage height, 4.80 feet); minimum, 7.3 second-feet Jan. 27 or 28 (clock stopped), from recorded range in stage and hydrographs of nearby streams.

1938-48: Maximum discharge, 960 second-feet Apr. 18, 1946 (gage height, 5.30 feet), from rating curve extended above 360 second-feet by logarithmic plotting; minimum recorded, 5.1 second-feet Dec. 5, 8, 11, 12, 16, 1940.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	12	11	10	10	11	17	271	125	35	19	14
2	13	12	11	11	10	11	20	235	129	35	19	14
3	12	12	11	11	10	11	26	256	129	34	18	14
4	12	12	11	11	10	11	26	279	111	33	19	14
5	12	12	11	11	10	9.8	26	286	100	32	19	14
6	12	12	11	11	10	10	29	309	93	31	18	14
7	12	12	11	11	10	10	26	389	87	30	18	14
8	12	12	11	12	10	10	26	303	83	30	18	14
9	12	13	11	11	10	10	26	233	76	29	17	14
10	12	12	11	11	10	10	35	230	70	27	17	14
11	13	12	11	11	10	9.3	36	219	67	27	16	13
12	12	12	11	11	10	9.8	35	219	63	27	16	13
13	12	12	11	11	10	10	33	257	62	27	16	13
14	11	12	11	11	10	11	37	289	58	26	15	13
15	11	12	11	11	10	11	45	296	55	26	16	13
16	11	12	11	11	10	11	63	313	53	25	16	13
17	12	12	11	11	10	11	93	348	51	24	16	13
18	12	12	11	11	11	11	132	348	49	24	16	14
19	11	12	11	11	12	11	120	330	49	24	16	15
20	11	12	11	10	13	11	120	303	48	24	15	14
21	11	12	11	10	15	11	147	267	52	23	15	14
22	11	11	11	10	19	11	218	242	51	23	15	13
23	12	11	11	10	17	12	245	219	49	23	15	13
24	12	11	11	10	15	14	218	202	46	23	15	13
25	12	11	11	10	12	14	202	194	44	21	15	13
26	12	11	11	9	12	14	165	183	42	21	15	14
27	12	11	11	8	12	13	137	171	40	20	14	14
28	12	11	11	8	12	14	173	163	39	20	14	13
29	13	11	11	9	11	16	361	154	37	20	14	13
30	13	11	11	10	-	17	341	142	35	19	14	13
31	13	-	10	10	-	16	-	131	-	19	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	371	13	11	12.0	736
November	352	13	11	11.7	698
December	340	11	10	11.0	674
Calendar year 1947	11,021	179	10	30.2	21,860
January	323	12	8	10.4	641
February	331	19	10	11.4	657
March	361.9	17	9.3	11.7	718
April	3,178	361	17	106	6,300
May	7,781	389	131	251	15,430
June	1,993	129	35	66.4	3,950
July	802	35	19	25.9	1,590
August	500	19	14	16.1	992
September	407	15	13	13.6	807
Water year 1947-48	16,739.9	389	8	45.6	33,190

Peak discharge (base, 130 sec.-ft.).- Apr. 23 (6 a.m.) 256 sec.-ft.; Apr. 30 (1 a.m.) 385 sec.-ft.; May 7 (5:30 p.m.) 569 sec.-ft.

Note.- No gage-height record Dec. 24 to Jan. 18, Jan. 20 to Mar. 1; Aug. 9-24; discharge computed on basis of recorded range in stage and weather records.

Logan River above State dam, near Logan, Utah

Location.- Water-stage recorder and concrete control, lat. 41°44'40", long. 111°47'00", in NE¼ sec. 36, T. 12 N., R. 1 E., at Logan plant of Utah Power & Light Co., 125 feet upstream from tailrace, half a mile upstream from State dam, and 2½ miles east of Logan.

Drainage area.- 218 square miles.

Records available.- May 1913 to September 1948. June 1896 to December 1912 at site a quarter of a mile downstream; flow at present site plus that of tailrace equivalent to flow at former site.

Average discharge.- 35 years (1913-48), 109 second-feet.

Extremes.- Maximum discharge during year, 1,110 second-feet May 28 (gage height, 3.67 feet); minimum daily, 10 second-feet Mar. 13, 22, 23.

1913-48: Maximum discharge, 2,000 second-feet Mar. 21, 1916 (gage height, 5.6 feet, datum then in use), from rating curve extended above 1,000 second-feet; minimum daily, 6 second-feet Nov. 7, 1940.

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

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

Rating table, water year 1947-48 (gage height, in feet, and discharge, in second-feet)

0.9	11	1.3	63	2.5	442
1.0	20	1.5	106	3.0	676
1.1	32	1.7	158	3.5	996
1.2	46	2.0	253		

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	h50	18	16	11	13	11	16	320	854	256	94	54
2	h50	20	14	11	14	11	15	284	854	246	92	51
3	h47	27	16	13	15	11	21	278	901	227	94	49
4	27	19	14	11	13	11	22	313	861	210	92	48
5	25	25	18	13	14	11	19	320	854	191	97	49
6	h48	17	16	12	14	11	17	370	848	179	94	49
7	h47	19	18	13	20	11	17	490	848	161	88	48
8	27	20	16	14	14	11	17	548	808	155	83	48
9	h49	16	16	13	13	11	17	430	758	147	94	45
10	h52	18	15	13	13	11	45	366	710	136	81	46
11	36	18	16	12	13	11	33	339	676	142	79	45
12	35	17	15	12	13	11	27	320	640	147	81	45
13	h56	16	14	12	11	10	24	347	600	150	85	40
14	h52	17	12	12	11	11	26	422	567	144	81	40
15	h54	16	15	12	11	11	33	481	535	139	81	40
16	28	20	15	11	11	11	65	576	498	131	77	38
17	30	19	12	12	11	11	118	727	472	126	73	42
18	32	15	12	11	11	13	194	874	446	126	73	42
19	27	14	13	11	11	16	142	835	426	121	73	53
20	27	14	11	11	11	15	167	908	409	118	71	49
21	28	15	12	11	11	12	230	894	455	118	69	45
22	26	13	13	11	12	10	295	928	481	114	69	40
23	25	13	11	12	12	10	295	888	455	111	h69	40
24	26	16	11	12	11	13	264	915	430	124	h63	40
25	25	15	12	12	11	31	246	955	405	124	63	40
26	22	14	13	12	11	18	185	942	393	116	61	43
27	21	13	11	12	11	14	198	928	378	106	61	39
28	21	13	12	12	11	16	278	962	339	108	58	42
29	24	12	11	13	11	16	409	894	313	108	56	56
30	28	13	11	13	-	17	358	854	278	106	58	53
31	24	-	11	13	-	15	-	861	-	97	58	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,069	56	21	34.5	2,120
November	502	27	12	16.7	996
December	422	18	11	13.6	837
Calendar year 1947	33,957	687	11	93	67,340
January	373	14	11	12.0	740
February	358	20	11	12.3	710
March	402	31	10	13.0	797
April	3,793	409	15	126	7,520
May	19,589	955	278	631	38,810
June	17,492	901	278	583	34,690
July	4,484	256	97	145	8,890
August	2,368	97	56	76.4	4,700
September	1,359	56	38	45.3	2,700
Water year 1947-48	52,191	955	10	143	103,500

h Computed from staff-gage readings.

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

Location.- Water-stage recorder and timber control, lat. 41°44'40", long. 111°47'00", in NE¼ sec. 36, T. 12 N., R. 1 E., 100 feet downstream from powerhouse of Utah Power & Light Co. and 2½ miles east of Logan.

Records available.- May 1913 to September 1948.

Average discharge.- 35 years, 106 second-feet.

Extremes.- Maximum daily discharge during year, 103 second-feet Apr. 23, Sept. 27-30; minimum daily, 65 second-feet Jan. 27.
1914-48: Maximum daily discharge, 198 second-feet Apr. 28-30, 1947; no flow for periods during several years.

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

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

Rating table, water year 1947-48 (gage height, in feet, and discharge, in second-feet)

1.6	57
1.8	78
2.2	127

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	h7.4	98	100	88	80	83	91	101	95	97	98	101
2	h76	100	100	97	84	83	89	100	94	98	100	101
3	h76	100	100	96	82	86	98	100	85	98	98	100
4	100	98	100	95	76	83	100	100	78	98	97	100
5	100	98	100	96	82	75	100	101	88	98	97	101
6	h75	100	98	96	82	80	100	101	83	98	101	100
7	h75	100	100	97	69	85	96	101	75	98	100	100
8	100	100	98	97	75	85	98	89	80	98	100	101
9	h73	100	98	101	89	84	97	98	94	100	101	101
10	h75	100	95	97	86	83	102	97	91	100	101	98
11	100	97	97	95	76	72	101	98	96	100	101	98
12	100	97	96	95	77	75	101	97	96	101	101	100
13	h74	98	91	78	90	85	101	100	95	97	98	101
14	h76	100	94	86	91	85	101	101	95	96	98	102
15	h76	100	97	92	82	82	101	101	96	96	98	102
16	100	b91	96	86	86	83	102	102	96	97	98	102
17	100	96	90	84	84	80	101	101	96	96	98	102
18	98	100	97	88	88	80	102	100	98	96	98	102
19	100	100	92	82	88	82	101	98	98	98	98	102
20	98	98	92	82	84	82	101	94	98	98	98	102
21	97	98	94	85	83	77	102	98	98	98	100	102
22	97	96	96	90	92	80	102	96	98	98	98	102
23	100	96	92	91	92	88	103	94	98	98	98	102
24	100	98	90	94	88	82	102	100	98	97	100	102
25	98	98	96	84	85	67	102	97	98	98	100	102
26	100	98	95	71	86	80	101	96	98	98	101	102
27	100	98	95	65	88	80	101	95	98	98	102	103
28	100	100	95	71	82	85	100	96	98	98	101	103
29	100	100	97	78	84	92	82	95	98	100	100	103
30	100	100	96	85	-	95	101	90	98	100	100	103
31	100	-	84	83	-	88	-	92	-	98	100	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,838	100	73	91.5	5,630
November	2,953	100	91	98.4	5,860
December	2,961	100	84	95.5	5,870
Calendar year 1947	42,125	198	55	115	83,560
January	2,725	101	65	87.9	5,400
February	2,431	92	69	83.8	4,820
March	2,547	95	67	82.2	5,050
April	2,979	103	82	99.3	5,910
May	3,029	102	89	97.7	6,010
June	2,807	98	75	93.6	5,570
July	3,039	101	96	98.0	6,030
August	3,079	102	97	99.3	6,110
September	3,040	103	98	101	6,030
Water year 1947-48	34,428	103	65	94.1	68,290

b Stage-discharge relation affected by ice.
h Computed from staff-gage readings.

Logan, Hyde Park & Smithfield Canal near Logan, Utah

Location.- Water-stage recorder and concrete rating flume, lat. 41°44'45", long. 111°47'05", in SE¼ sec. 25, T. 12 N., R. 1 E., 1¼ miles downstream from head of canal and 2½ miles east of Logan.

Records available.- June 1904 to December 1907, January 1909 to September 1948.

Average discharge.- 25 years (1923-48), 28.7 second-feet.

Extremes.- Maximum daily discharge during year, 135 second-feet July 8; no flow at times. 1906, 1924-48: Maximum daily discharge, 136 second-feet May 30, 31, 1930; no flow at times in most years.

Remarks.- Records excellent except those below 10 second-feet, which are good. No diversion above station. Flow regulated by head gates at diversion works. Canal diverts from Logan River in NE¼NE¼ sec. 31, T. 12 N., R. 2 E., for irrigation and domestic supply north of Logan.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	14	13	4.8	8.3	4.1	0	0	133	118	69	44
2	26	14	12	6.0	9.2	4.1	0	0	128	117	69	44
3	27	15	12	6.0	9.2	4.1	0	0	99	124	66	44
4	25	14	7.9	6.0	7.9	3.9	0	0	66	126	64	43
5	25	15	5.6	7.5	8.3	3.9	0	0	64	127	57	43
6	26	14	5.2	6.4	8.3	3.9	0	0	74	129	56	43
7	26	15	5.2	6.4	7.9	3.9	0	0	88	133	56	43
8	24	15	5.2	6.7	5.6	3.9	0	0	107	135	55	43
9	26	14	5.2	6.7	5.6	3.9	0	0	126	133	56	43
10	24	14	4.8	6.0	5.2	3.6	0	0	133	133	55	42
11	16	15	4.8	5.6	5.2	b3.6	0	0	134	120	54	42
12	16	14	4.4	5.6	b5.2	3.6	0	0	133	109	49	42
13	16	14	4.4	4.4	5.2	3.6	0	0	132	100	49	41
14	16	14	4.8	4.8	5.2	3.6	0	0	133	99	49	40
15	16	14	4.8	5.2	5.2	3.6	0	0	134	98	49	40
16	15	14	4.4	4.8	5.2	3.6	0	1.1	133	97	49	40
17	15	14	4.4	4.8	4.8	3.9	0	10	129	96	48	40
18	15	13	4.4	4.8	4.8	2.6	0	15	125	95	48	38
19	15	13	4.4	4.4	4.8	0	0	14	114	91	48	31
20	15	12	5.6	4.4	4.4	0	0	18	109	91	48	31
21	15	12	5.6	4.8	4.4	0.4	0	39	74	89	47	31
22	15	7.9	6.0	5.6	6.0	2.3	0	57	62	87	47	31
23	15	6.7	5.6	5.6	6.0	3.6	0	57	55	86	47	30
24	15	12	5.2	b5.9	4.8	1.2	0	67	54	74	46	30
25	15	12	5.2	b6.2	4.8	0.3	0	83	60	71	46	30
26	15	12	5.2	b6.5	4.4	1.9	0	102	59	67	46	29
27	14	12	5.6	b6.8	4.4	1.5	0	103	57	66	46	29
28	14	11	5.6	7.1	4.1	0	0	111	69	66	46	24
29	15	9.7	5.6	8.3	4.1	0	0.5	117	82	66	46	12
30	15	12	5.2	8.8	-	0	0	119	105	63	45	12
31	15	-	4.4	8.8	-	0.4	-	127	-	71	44	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	573	27	14	18.5	1,140
November	388.3	15	6.7	12.9	770
December	181.7	13	4.4	5.86	360
Calendar year 1947	10,459.9	127	0	28.7	20,750
January	185.7	8.8	4.4	5.99	368
February	168.5	9.2	4.1	5.81	334
March	79.0	4.1	0	2.55	157
April	0.5	0.5	0	.02	1.0
May	1,040.1	127	0	33.6	2,060
June	2,971	134	54	99.0	5,890
July	3,083	135	63	99.4	6,120
August	1,600	69	44	51.6	3,170
September	1,075	44	12	35.8	2,130
Water year 1947-48	11,345.8	135	0	31.0	22,500

b Stage-discharge relation affected by ice.

Blacksmith Fork at Hardware Ranch, near Hyrum, Utah

Location.- Water-stage recorder, lat. 41°37', long. 111°37', in NE¼ sec. 17, T. 10 N., R. 3 E., 0.6 mile upstream from South Cottonwood Canyon, 2.1 miles downstream from Rock Creek, and 12½ miles east of Hyrum.

Drainage area.- 150 square miles.

Records available.- June 1943 to September 1948.

Extremes.- Maximum discharge during year, 370 second-feet Apr. 17 (gage height, 3.50 feet); minimum, 36 second-feet Mar. 12.
1943-48: Maximum discharge, 488 second-feet Apr. 18, 1946 (gage height, 4.08 feet); minimum, that of Mar. 12, 1948.

Remarks.- Records good except those for periods of ice effect, which are fair. Some diversions above station for irrigation of meadow lands.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	67	63	58	50	56	95	181	155	93	88	83
2	67	67	63	60	50	57	114	166	159	92	88	83
3	68	67	63	60	50	56	120	166	158	93	88	83
4	68	67	62	60	50	54	92	168	147	93	89	83
5	67	67	62	63	50	54	97	164	142	92	92	83
6	67	67	62	60	51	54	89	175	134	93	89	81
7	67	67	62	60	50	55	79	209	129	93	88	80
8	67	67	62	67	52	55	80	216	123	92	89	80
9	67	67	62	63	50	55	110	178	120	92	88	80
10	67	66	58	63	50	54	143	158	116	91	88	79
11	71	66	60	62	b46	52	101	155	113	91	86	79
12	67	62	58	62	b43	52	91	147	111	91	86	79
13	67	64	58	56	b43	58	103	151	108	92	86	79
14	66	64	60	58	b45	58	118	170	107	93	88	77
15	66	64	60	58	48	57	151	180	106	93	86	79
16	67	64	62	58	48	57	197	192	104	93	86	79
17	68	63	58	57	55	57	234	210	103	93	88	79
18	67	63	60	58	64	58	181	219	101	92	86	80
19	67	63	58	52	71	57	156	212	101	92	86	81
20	67	63	58	52	62	55	173	207	101	92	86	81
21	67	62	57	54	56	54	205	200	104	92	88	79
22	67	57	57	55	97	75	217	195	103	92	86	79
23	67	59	58	56	68	107	192	186	104	92	88	77
24	67	60	56	56	58	83	171	183	103	92	88	76
25	67	62	57	56	58	64	156	186	100	91	88	77
26	67	62	58	b52	66	58	134	185	100	91	88	76
27	67	62	57	b45	60	63	155	183	99	89	86	75
28	67	62	60	b45	57	89	188	181	97	91	83	76
29	67	62	60	b48	57	79	232	176	95	91	81	75
30	68	63	59	b50	-	70	202	164	93	89	81	75
31	67	-	54	51	-	63	-	161	-	88	83	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,084	71	66	67.2	4,130
November	1,916	67	57	63.9	3,800
December	1,844	63	54	59.5	3,660
Calendar year 1947	27,444	135	54	75.2	54,430
January	1,755	67	45	56.6	3,480
February	1,605	97	43	55.3	3,180
March	1,916	107	52	61.8	3,800
April	4,376	234	79	146	8,680
May	5,624	219	147	181	11,160
June	3,436	159	93	115	6,820
July	2,844	93	88	91.7	5,640
August	2,691	92	81	86.8	5,340
September	2,373	83	75	79.1	4,710
Water year 1947-48	32,464	234	43	88.7	64,400

Peak discharge (base, 150 sec.-ft.).- Feb. 22 (2 p.m.) 170 sec.-ft.; Mar. 23 (5:30 p.m.) 250 sec.-ft.; Mar. 28 (6 p.m.) 186 sec.-ft.; Apr. 2 (6 p.m.) 248 sec.-ft.; Apr. 9 (6 p.m.) 204 sec.-ft.; Apr. 17 (7 p.m.) 370 sec.-ft.; Apr. 28 (6 p.m.) 262 sec.-ft.; May 7 (9 p.m.) 244 sec.-ft.

b Stage-discharge relation affected by ice.

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

Location.- Water-stage recorder, lat. 41°37'20", long. 111°44'25", in NE¼ sec. 8, T. 10 N., R. 2 E., three-quarters of a mile upstream from diversion dam, 3¼ miles upstream from power plant of Utah Power & Light Co., and 6 miles east of Hyrum.

Drainage area.- 260 square miles.

Records available.- July 1900 to December 1902, November 1913 to September 1948.

Average discharge.- 34 years (1914-48), 120 second-feet.

Extremes.- Maximum discharge during year, 759 second-feet May 8 (gage height, 4.48 feet); minimum daily, 52 second-feet Jan. 27.

1913-48: Maximum discharge, 1,620 second-feet May 15, 1917 (gage height, 6.5 feet, site and datum then in use), from rating curve extended above 600 second-feet; minimum daily, 29 second-feet Jan. 3, 1935.

Remarks.- Records excellent. Several small diversions above station for irrigation. Low-water flow may be regulated by power plant above station.

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

Rating table, water year 1947-48 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 1 to Sept. 30)

1.30	52	2.60	274
1.50	73	3.00	370
1.70	98	3.50	495
2.00	146	4.00	625
2.30	205	4.50	765

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85	84	78	70	69	72	98	408	a290	150	127	108
2	85	84	80	73	70	72	116	348	a300	148	126	107
3	84	84	79	73	a69	72	143	360	a300	146	126	107
4	84	84	78	72	a68	70	115	435	272	146	126	107
5	85	83	78	75	a67	69	110	450	255	146	129	107
6	86	81	78	73	a67	69	115	500	241	a145	127	107
7	86	81	78	73	a66	68	97	620	229	a145	124	107
8	86	83	78	78	a66	68	94	622	220	a144	124	106
9	86	83	78	75	a65	a70	110	470	214	a144	126	106
10	86	81	77	74	a64	a69	168	400	209	a143	124	106
11	90	83	75	73	a60	a67	134	382	203	a142	123	102
12	90	83	75	72	a55	a66	121	363	199	a141	121	102
13	86	80	74	71	a55	a74	116	400	197	a140	121	101
14	86	81	75	70	a58	a74	136	455	192	a139	119	101
15	86	81	75	70	a62	a74	160	472	190	a139	119	101
16	86	81	75	70	a62	a74	203	495	188	133	118	101
17	89	81	75	70	a70	a74	248	a525	186	133	116	101
18	88	80	75	71	a80	a75	281	a540	a180	136	115	102
19	86	81	74	68	a90	a73	218	540	a175	133	115	107
20	86	81	73	66	a80	a70	238	515	a175	136	115	104
21	85	81	73	69	a72	a70	288	478	a178	136	115	104
22	85	79	73	68	a110	a95	348	458	a180	134	115	104
23	85	77	73	69	a90	a130	336	428	178	132	115	102
24	85	77	72	68	75	a110	310	410	168	132	115	102
25	85	77	71	70	73	a85	312	398	164	132	113	102
26	85	77	73	64	77	a75	255	385	162	131	115	104
27	84	77	72	52	80	a80	257	368	160	129	113	102
28	84	77	72	57	73	a110	324	353	159	131	112	101
29	84	77	73	65	72	a100	488	339	157	131	110	101
30	86	75	72	71	-	a90	452	322	153	127	108	101
31	85	-	65	70	-	a80	-	a310	-	127	108	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,659	90	84	85.8	5,270
November	2,414	84	75	80.5	4,790
December	2,317	80	65	74.7	4,600
Calendar year 1947	38,998	294	65	107	77,370
January	2,160	78	52	69.7	4,280
February	2,065	110	55	71.2	4,100
March	2,445	130	66	78.9	4,850
April	6,391	488	94	213	12,680
May	13,549	622	310	437	26,870
June	6,074	300	153	202	12,050
July	4,286	150	127	138	8,500
August	3,680	129	108	119	7,300
September	3,113	108	101	104	6,170
Water year 1947-48	51,153	622	52	140	101,500

Peak discharge (base, 140 sec.-ft.).- Apr. 2 (11 p.m.) 205 sec.-ft.; Apr. 22 (12:30 a.m.) 408 sec.-ft.; Apr. 29 (11:30 p.m.) 522 sec.-ft.; May 8 (12:30 a.m.) 759 sec.-ft.; May 18 (about 3 a.m.) 612 sec.-ft.

a No gage-height record; discharge computed on basis of weather records and records for station at Hardware Ranch.

West Side Canal near Collinston, Utah

Location.- Water-stage recorder, lat. 41°50', long. 112°04', in SW¼ sec. 27, T. 13 N., R. 2 W., 4,200 feet downstream from Cutler Dam and 4 miles north of Collinston.

Records available.- June 1912 to September 1948.

Average discharge.- 36 years, 225 second-feet.

Extremes.- Maximum daily discharge during year, 709 second-feet July 10; no flow Mar. 9 to May 6.
1912-48: Maximum daily discharge, 729 second-feet May 19, 1946; no flow during periods in every year except 1914.

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

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	223	50	50	18	13	12		0	693	663	480	609
2	236	52	50	18	13	*12		0	673	669	487	609
3	254	24	50	18	13	12		0	514	663	522	609
4	254	24	50	18	13	12		0	520	685	520	609
5	259	35	50	18	13	12		0	514	691	533	613
6	260	36	50	18	13	12		0	541	695	525	609
7	259	40	50	18	13	12		127	594	705	542	609
8	257	40	50	18	13	5		125	590	707	544	601
9	256	40	50	18	12	0		97	615	705	529	582
10	236	46	45	18	12	0		131	669	709	527	582
11	131	53	40	18	12	0		143	685	661	529	580
12	87	50	40	18	12	0		216	693	631	527	579
13	125	40	40	18	12	0		284	693	621	527	558
14	158	40	40	18	12	0		285	693	619	544	560
15	156	53	40	18	12	0		281	691	621	542	537
16	153	62	40	18	12	0		285	703	603	552	518
17	154	63	35	18	12	0		288	697	584	565	487
18	156	57	32	18	12	0		287	691	584	582	476
19	159	53	*32	18	12	0		285	687	580	603	382
20	159	53	32	18	12	0		361	647	565	605	321
21	156	54	32	18	12	0		464	483	562	603	336
22	156	55	32	*18	12	0		500	316	563	603	363
23	155	55	32	18	12	0		501	312	558	600	360
24	156	55	32	18	12	0		548	306	542	601	339
25	159	53	32	18	12	0		575	185	546	598	337
26	160	49	18	18	12	0		647	144	535	598	336
27	161	49	18	13	12	0		685	254	514	601	337
28	161	50	18	13	12	0		681	344	510	592	328
29	117	50	18	*13	12	0		681	471	501	584	313
30	67	50	18	13	-	0		685	571	482	582	310
31	51	-	18	13	-	0		691	-	474	590	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,431	260	51	175	10,770
November	1,431	63	24	47.7	2,840
December	1,134	50	18	36.6	2,250
Calendar year 1947	83,786.5	720	0	230	166,200
January	533	18	13	17.2	1,060
February	356	13	12	12.3	706
March	89	12	0	2.9	177
April	0	0	0	0	0
May	9,853	691	0	318	19,540
June	16,189	703	144	540	32,110
July	18,748	709	474	605	37,190
August	17,337	605	480	559	34,390
September	14,389	613	310	480	28,540
Water year 1947-48	85,490	709	0	234	169,600

* Winter discharge measurement made on this day.
Note.- No gage-height record Dec. 10 to May 6; discharge computed on basis of 4 discharge measurements and notes of gate changes by Utah Power & Light Co. employee.

Hammond (East Side) Canal near Collinston, Utah

Location.- Water-stage recorder, lat. 41°50', long. 112°03', in SE¼ sec. 27, T. 13 N., R. 2 W., 3,600 feet downstream from Cutler Dam and 4 miles north of Collinston.

Records available.- June 1912 to September 1948.

Average discharge.- 31 years (1917-48), 50.9 second-feet.

Extremes.- Maximum daily discharge during year, 169 second-feet July 10; no flow Nov. 1 to May 6, June 22, 23.
1912-48: Maximum daily discharge, 182 second-feet June 28, July 1, 1932, June 27, 28, 1933; no flow for periods during each year.

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

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63							0	158	147	133	150
2	62							0	155	149	133	146
3	62							0	104	147	132	149
4	62							0	75	155	131	149
5	62							0	93	155	139	150
6	62							0	69	154	145	150
7	62							a42	83	158	144	150
8	64							a32	87	164	146	149
9	64							a38	97	166	144	146
10	54							40	130	169	144	146
11	29							30	143	166	146	142
12	23							41	143	161	152	132
13	23							41	154	162	153	132
14	24							16	158	161	154	131
15	23							54	157	161	156	128
16	23							54	156	160	154	118
17	23							57	156	160	154	103
18	24							73	159	160	156	100
19	24							80	160	155	156	83
20	24							78	146	150	156	81
21	23							79	120	153	155	81
22	23							91	0	153	155	85
23	23							108	0	151	154	87
24	23							122	.7	144	155	87
25	24							138	1.0	142	153	87
26	24							148	a15	142	154	87
27	24							158	a35	134	155	78
28	23							159	a56	132	153	64
29	12							159	a98	132	152	59
30	4.4							158	121	132	149	56
31	1.5							158	-	132	149	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,061.9	64	1.5	34.3	2,110
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1947	17,872.2	165	0	49.0	35,450
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	2,154	159	0	69.5	4,270
June	3,029.7	160	0	101	6,010
July	4,707	169	132	152	9,340
August	4,612	156	131	149	9,150
September	3,406	150	56	114	6,760
Water year 1947-48	18,970.6	169	0	51.8	37,640

a No gage-height record; discharge computed on basis of observer's notes of gate changes.

Malad River at Woodruff, Idaho

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

Records available.- November 1938 to September 1948.

Extremes.- Maximum discharge observed during year, 628 second-feet Feb. 23 (gage height, 7.80 feet, from floodmark), from rating curve extended above 380 second-feet; minimum observed, 19 second-feet Aug. 19, 20, 24; minimum gage height observed, 2.02 feet July 8, 9.

1938-48: Maximum discharge, 650 second-feet Jan. 22 or 23, 1943 (gage height, 8 feet, from information by observer), from rating curve extended above 370 second-feet by logarithmic plotting; minimum observed, 15 second-feet July 15, 16, 1940; minimum gage height observed, 1.92 feet Aug. 7, 1947.

Remarks.- Records good except those during periods of rapidly changing stage, and those below 30 second-feet, which are fair. Gage read once daily. Flow regulated by several small reservoirs above station. Many diversions above station for irrigation.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	68	97	63	61	172	172	126	32	23	24	20
2	37	68	109	62	61	165	157	133	33	23	23	21
3	36	69	108	62	62	154	165	126	32	23	23	21
4	37	71	98	63	62	133	203	120	36	23	23	21
5	38	75	97	63	d62	d130	239	103	34	23	22	21
6	38	75	105	68	d58	129	213	97	31	22	22	21
7	40	77	105	74	56	136	216	97	31	22	22	21
8	41	82	105	85	56	143	218	97	30	22	22	21
9	40	84	103	91	56	140	175	106	30	22	21	21
10	40	84	100	85	56	133	163	109	30	24	20	21
11	43	78	88	73	52	111	219	109	29	24	20	21
12	49	84	76	73	62	109	230	109	29	24	21	21
13	50	83	74	60	58	117	182	100	28	23	20	20
14	48	84	72	67	61	131	151	84	26	22	20	20
15	48	85	d62	62	61	141	146	77	27	22	20	21
16	51	90	60	63	62	142	150	70	27	22	20	21
17	51	91	61	64	79	144	157	69	27	22	20	20
18	52	90	75	62	171	153	177	67	23	22	20	20
19	52	90	70	58	252	159	206	67	23	22	19	21
20	55	90	75	61	435	161	215	66	24	22	19	23
21	54	87	75	61	383	147	187	64	24	22	20	25
22	55	84	70	61	406	139	153	63	24	23	20	24
23	55	78	70	64	555	144	159	59	27	23	20	24
24	57	74	69	81	454	174	169	58	28	24	19	25
25	58	74	69	56	407	199	154	55	28	25	20	24
26	58	78	69	51	328	209	147	54	27	25	21	26
27	60	91	69	78	279	190	138	49	27	25	21	24
28	62	93	68	87	256	172	136	36	26	23	21	21
29	63	88	63	61	220	172	126	34	26	25	21	21
30	64	87	62	61	-	199	124	34	24	24	21	21
31	68	-	62	60	-	199	-	34	-	24	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,538	68	36	49.6	3,050
November	2,452	93	68	81.7	4,860
December	2,486	109	60	80.2	4,930
Calendar year 1947	24,185	246	19	66.3	47,960
January	2,060	91	51	66.5	4,090
February	5,171	555	52	179	10,260
March	4,747	209	109	153	9,420
April	5,247	239	124	175	10,410
May	2,472	133	34	79.7	4,900
June	843	36	23	28.1	1,670
July	715	25	22	23.1	1,420
August	646	24	19	20.8	1,280
September	652	26	20	21.7	1,290
Water year 1947-48	29,029	555	19	79.3	57,580

d Doubtful gage-height record; discharge computed on basis of weather records and records for stations on Little Malad River and other nearby streams.

Little Malad River above Elkhorn Reservoir, near Malad, Idaho

Location.- Water-stage recorder and Cippoletti weir, lat. 42°20', long. 112°26', on line between secs. 35 and 36, T. 12 S., R. 34 E., three-quarters of a mile upstream from county bridge, 2 miles downstream from Wright Creek, 2½ miles downstream from springs, 2½ miles upstream from Elkhorn Dam, and 14 miles northwest of Malad.

Records available.- August 1911 to August 1913, October 1931 to September 1932, November 1940 to September 1948.

Extremes.- Maximum discharge during year, 270 second-feet Feb. 22 (gage height, 3.26 feet), from rating curve extended above 50 second-feet on basis of computation of flood flow by weir formula; minimum, 6.8 second-feet Aug. 19 (gage height, 0.31 foot).
1911-13, 1931-32, 1940-48: Maximum discharge, that of Feb. 22, 1948; minimum, that of Aug. 19, 1948.

Remarks.- Records good. Small ranch diversions from tributaries above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	16	16	13	15	22	62	23	21	17	15	15
2	14	16	15	13	16	21	65	22	22	18	14	15
3	14	16	15	14	16	18	70	22	22	18	14	15
4	15	16	16	14	16	17	51	22	22	18	14	15
5	15	16	16	14	16	18	40	21	21	18	14	15
6	15	15	15	15	16	21	31	21	20	18	15	15
7	14	16	15	25	16	21	27	22	20	17	15	15
8	14	16	15	34	16	20	30	25	20	17	15	15
9	15	16	15	18	16	19	53	24	19	17	14	15
10	15	16	14	17	15	17	68	24	18	17	15	15
11	16	16	14	17	15	18	38	23	18	17	14	15
12	15	15	13	16	15	18	33	23	18	17	14	14
13	15	15	14	14	15	24	33	22	18	17	14	14
14	16	15	14	15	14	33	61	21	18	17	14	15
15	16	16	15	15	14	26	78	21	18	17	14	14
16	16	16	15	15	24	23	74	22	17	17	14	14
17	16	15	15	16	61	20	74	23	17	17	14	15
18	16	15	15	16	67	19	52	24	17	17	14	16
19	16	15	15	15	47	18	30	26	17	16	14	17
20	16	15	15	15	31	15	30	25	17	16	14	16
21	15	14	15	15	20	15	28	25	19	16	14	16
22	15	13	15	15	110	29	27	24	20	16	14	16
23	15	14	14	21	32	62	25	23	19	16	14	16
24	15	14	14	19	23	68	24	23	19	16	14	16
25	15	14	14	16	30	32	24	23	18	16	15	16
26	15	15	15	14	31	28	22	22	18	16	15	16
27	15	15	14	14	25	50	22	23	18	15	15	16
28	15	15	14	15	20	72	22	23	17	14	14	16
29	16	15	15	15	21	69	22	23	17	15	14	16
30	16	15	14	15	-	37	23	22	16	14	14	16
31	16	-	13	15	-	26	-	22	-	15	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	472	16	14	15.2	936
November	456	16	13	15.2	904
December	454	16	13	14.6	900
Calendar year 1947	6,549	83	13	17.9	12,990
January	505	34	13	16.3	1,000
February	773	110	14	26.7	1,530
March	896	72	15	28.9	1,780
April	1,239	78	22	41.3	2,460
May	709	26	21	22.9	1,410
June	561	22	16	18.7	1,110
July	512	18	14	16.5	1,020
August	442	15	14	14.3	877
September	460	17	14	15.3	912
Water year 1947-48	7,479	110	13	20.4	14,840

Elkhorn Reservoir near Malad, Idaho

Location.- Staff gage, lat. 42°18', long. 112°25', in sec. 7, T. 13 S., R. 35 E., 50 feet upstream from left end of partly completed dam on Little Malad River, 4½ miles downstream from Wright Creek, and 11½ miles northwest of Malad.

Records available.- December 1940 to September 1948.

Extremes.- Maximum gage height observed during year, 17.0 feet Feb. 22 or 23, from high-water mark; minimum gage height observed, -3.35 feet June 25.
1940-48: Maximum gage height observed, that of Feb. 22 or 23, 1948; minimum gage height, below -3.3 feet in July 1944, for long periods in 1947, and in June 1948.

Remarks.- Reservoir is formed by partly completed multiple-arch concrete dam (capacity, about 7,600 acre-feet). Gage read once weekly. Large seepage losses from reservoir limit storage to a small range. Storage is negligible below a stage of about 3 feet.

Gage height, in feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	11.58	-	-	-2.07	-	-
3	-2.78	-	-	-1.47	-	3.45	-	-	-0.25	-	-	-1.81
4	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	8.46	-	-	-	-	-	-
6	-	-	-1.30	-	8.88	-	-	-	-	-	-2.71	-
7	-	-1.26	-	-	-	-	-	6.66	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	7.78	-	-	-2.09	-	-
10	-2.60	-	-	3.25	-	6.33	-	-	-	-2.73	-	-1.25
11	-	-	-	-	-	-	-	-	-2.03	-	-	-
12	-	-	-	-	-	5.64	-	-	-	-	-	-
13	-	-	-1.08	-	9.28	-	-	8.14	-2.05	-	-2.73	-
14	-	-1.30	-	-	-	-	9.80	8.22	-	-	-2.65	-
15	-	-	-1.28	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	11.56	-	-	-2.55	-	-
17	-1.58	-	-	2.91	-	-	-	-	-	-	-	-1.29
18	-	-	-	-	-	-	-	-	-1.97	-	-	-
19	-	-	-	-	-	8.36	-	-	-	-	-	-
20	-1.66	-	-1.14	-	13.88	-	-	-	-	-	-2.57	-
21	-	-	-	-	-	-	-	-.45	-	-	-	-
22	-	-1.38	-	-	-	-	-	-	-	-	-	-
23	-	-	-	3.48	-	-	10.14	-	-	-2.07	-	-
24	-1.38	-	-	-	-	-	-	-	-	-	-	-1.25
25	-	-	-	.99	-	-	-	-	-3.35	-	-	-
26	-	-	-	-	-	11.30	-	-	-	-	-	-
27	-	-	-1.14	-	13.10	-	-	-	-	-	-1.75	-
28	-	-.76	-	-	-	-	-	-.75	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	6.40	-	-	6.24	-	-	-2.75	-	-
31	-1.30		-	-	-	-	-	-	-	-	-	-

Little Malad River below Elkhorn Reservoir, near Malad, Idaho

Location.- Water-stage recorder, lat. 42°18', long. 112°25', in sec. 7, T. 13 S., R. 35 E., just downstream from Elkhorn Dam, 4½ miles downstream from Wright Creek and 11½ miles northwest of Malad.

Records available.- December 1940 to September 1948.

Extremes.- Maximum discharge during year, 108 second-feet May 18 (gage height, 3.43 feet); minimum, 0.1 second-foot Jan. 29 (gage height, 0.44 foot).
1940-48: Maximum discharge, 113 second-feet Aug. 23, 1946 (gage height, 3.50 feet, from floodmark), from computation of flow over weir 50 feet upstream; no flow at times during most years.

Remarks.- Records good except those for periods of partly estimated or no gage-height record and those below 5 second-feet, which are fair. Flow partly regulated by Elkhorn Reservoir (see preceding page). Small ranch diversions from tributaries above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	16	a16	13	4.4	35	21	23	a22	17	14	13
2	15	16	a16	14	4.4	18	22	23	a23	18	14	13
3	15	16	a16	15	4.4	18	38	22	f25	18	13	13
4	15	16	a16	14	4.4	17	60	20	23	18	13	13
5	15	17	a16	15	4.4	17	58	20	22	17	13	13
6	15	16	h16	15	4.4	16	56	19	20	17	14	13
7	15	16	a15	26	4.4	16	54	18	a20	16	14	14
8	15	16	a16	48	4.4	15	50	18	a20	16	14	14
9	15	16	a16	21	4.4	14	44	18	a20	16	14	14
10	15	15	a16	18	4.2	13	40	18	a19	16	14	14
11	16	16	a15	17	4.2	12	37	18	f19	16	14	13
12	16	15	a15	16	4.0	12	33	17	18	16	14	13
13	15	15	h14	13	4.0	12	30	17	18	16	14	13
14	16	16	a14	14	4.0	14	29	17	18	15	14	13
15	15	16	15	14	4.2	14	30	17	18	16	13	14
16	16	16	15	15	4.2	14	31	17	18	16	13	13
17	16	16	15	15	4.4	14	32	18	18	16	13	14
18	15	a16	15	15	19	14	37	46	18	16	14	15
19	15	a16	15	15	37	14	36	40	18	15	13	15
20	15	a16	15	14	40	14	35	30	17	15	13	15
21	15	a15	15	14	41	14	34	f29	20	15	14	14
22	16	h13	15	15	46	14	35	a27	20	15	14	14
23	16	a14	14	23	52	14	35	a24	20	15	14	14
24	15	a15	14	24	52	15	33	a24	20	14	14	14
25	16	a15	14	16	51	23	28	a24	18	14	14	14
26	16	a15	15	14	51	32	28	a23	18	14	14	14
27	16	a15	14	17	49	32	30	a24	18	14	14	14
28	16	h15	15	16	48	35	28	f24	16	14	14	14
29	16	a15	15	12	47	62	25	f24	16	14	13	14
30	17	a15	14	3.4	-	77	24	a23	16	14	13	14
31	16	-	13	4.4	-	57	-	a23	-	14	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	480	17	15	15.5	952
November	465	17	13	15.5	922
December	465	16	13	15.0	922
Calendar year 1947	5,810.9	50	0	15.9	11,520
January	505.8	48	3.4	16.3	1,000
February	605.8	52	4.0	20.9	1,200
March	688	77	12	22.2	1,360
April	1,073	60	21	35.8	2,130
May	705	46	17	22.7	1,400
June	576	25	16	19.2	1,140
July	483	18	14	15.6	958
August	423	14	13	13.6	839
September	412	15	13	13.7	817
Water year 1947-48	6,881.6	77	3.4	18.8	13,640

a No gage-height record; discharge computed on basis of records for stations above Elkhorn Reservoir and below Sand Ridge dam site and gage heights for Elkhorn Reservoir.
f Computed on basis of partly estimated gage-height record.
h Computed from staff-gage reading.

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

Location.- Water-stage recorder, lat. 42°12', long. 112°20', in SE¼ sec. 14, T. 14 S., R. 35 E., 0.6 mile below proposed Sand Ridge dam site, 1½ miles below unnamed tributary, 3½ miles west of Malad, and 9 miles downstream from Elkhorn Reservoir.

Records available.- October 1945 to September 1948.

Extremes.- Maximum discharge during year, 240 second-feet Feb. 22 (gage height, 9.6 feet, from floodmark), by submerged orifice method; minimum daily, 0.3 second-foot Aug. 8, 9, 13-20, 30, Sept. 5; minimum gage height observed, 1.56 feet Aug. 20.
1945-48: Maximum discharge, that of Feb. 22, 1948; minimum discharge recorded, 0.1 second-foot Sept. 7, 1947; minimum gage height observed, 1.53 feet Aug. 1, 1947.

Remarks.- Records fair except those for periods of ice effect or no gage-height record and those below 1 second-foot, which are poor. Flow practically all diverted above station during irrigation season; large diversions during other periods.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	8.4	11	a12		25	18	21	2.3	0.8	0.4	0.4
2	.5	8.5	11	a12		19	20	20	2.3	.8	.4	.4
3	.5	8.6	10	b12		*16	a25	19	2.4	.8	.4	.4
4	.5	8.8	10	b12		18	a35	15	2.2	.7	.4	.4
5	.5	9.1	10	b12		17	a35	12	1.9	.6	.4	.3
6	.5	9.2	10	12		15	a35	5.6	1.8	.6	.4	.4
7	.5	9.1	10	13		15	a35	12	1.6	.6	.4	.4
8	.5	9.2	10	22	b.4	14	a30	9.8	1.6	.6	.3	.4
9	.5	9.2	10	22		14	28	a3.5	1.5	.6	.3	.4
10	.6	9.3	10	16		*13	28	a3.5	1.4	.6	.4	.4
11	.6	9.3	10	15		12	28	a3.5	1.2	.5	.4	.4
12	.5	b9.0	b9.5	14		12	28	a3.5	1.3	.5	a.4	.4
13	1.8	9.3	b9.0	b12		12	a27	3.2	1.3	.6	a.3	.4
14	3.7	9.4	b10	b10		13	26	3.0	1.3	.5	h.3	.4
15	4.8	9.7	10	a12		14	26	2.9	1.2	.6	a.3	.4
16	5.7	9.8	*10	a12	b10	13	27	2.8	1.2	.5	a.3	.4
17	6.0	9.8	b11	b12	b25	13	26	2.7	1.1	.5	a.3	.4
18	6.7	9.8	12	a12	f58	13	26	2.6	1.1	.5	a.3	.7
19	6.8	10	12	a12	f64	13	27	11	1.1	.5	a.3	.7
20	6.9	10	12	a12	f57	12	27	3.1	1.1	.6	h.3	.6
21	7.1	10	12	a12	46	12	27	2.8	1.4	.5	a.4	.6
22	7.6	b9.0	12	a14	f104	13	28	2.6	1.3	.5	.4	.5
23	8.0	b9.0	b12	b25	f58	16	28	2.5	1.2	.5	a.4	.5
24	7.9	9.4	b12	b26	44	14	28	2.4	1.2	.5	.4	.5
25	8.0	9.6	b12	*19	43	14	27	2.5	1.1	.5	1.1	.5
26	8.0	9.5	b12	b15	40	20	25	2.3	1.0	.5	.6	.5
27	8.1	10	b12	b10	32	19	25	2.4	.9	.4	.4	.6
28	8.1	10	b12	b11	29	20	22	2.4	.8	.5	.4	.6
29	8.2	10	b12	b11	27	a40	21	2.9	.8	.5	.4	.6
30	8.3	10	a12	b11	-	a50	f21	2.6	.8	.4	.3	.5
31	8.3	-	a12	b10	-	a35	-	2.4	-	.4	.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	136.2	8.3	0.5	4.39	270
November	282.0	10	8.4	9.40	559
December	339.5	12	9.0	11.0	673
Calendar year 1947	2,338.0	35	.2	6.41	4,640
January	432	26	10	13.9	857
February	697	104	-	24.0	1,380
March	546	50	12	17.6	1,080
April	809	35	18	27.0	1,600
May	187.5	21	2.3	6.05	372
June	41.4	2.4	.8	1.38	82
July	17.2	.8	.4	.55	34
August	12.2	1.1	.3	.39	24
September	14.1	.7	.3	.47	28
Water year 1947-48	3,514.1	104	.3	9.60	6,960

* Winter discharge measurement made on this day.
a No gage-height record, discharge computed on basis of weather records and records for Little Malad River below Elkhorn Reservoir and Malad River at Woodruff.
b Stage-discharge relation affected by ice.
f Computed from partly estimated gage-height record.
h Computed from staff-gage reading.

Devil Creek above Campbell Creek, near Malad, Idaho

Location.- Water-stage recorder, lat. 42°18', long. 112°12', in sec. 12, T. 13 S., R. 36 E., 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.

Records available.- November 1938 to September 1948.

Extremes.- Maximum discharge during year, 72 second-feet Apr. 2 (gage height, 1.30 feet), from rating curve extended above 35 second-feet; minimum, 2.7 second-feet Dec. 10-13 (gage height, 0.45 foot); minimum daily, 2.8 second-feet Dec. 11, 12.
1938-48: Maximum discharge observed, 202 second-feet Apr. 2, 1943 (gage height, 2.10 feet), from rating curve extended above 40 second-feet; minimum recorded, that of Dec. 10-13, 1947; minimum daily, that of Dec. 11, 12, 1947.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	8.4	9.2	8.4	8.4	8.8	24	19	16	8.8	8.0	6.4
2	7.2	8.4	8.8	8.4	8.4	8.8	36	18	15	8.8	8.0	6.4
3	7.2	8.4	8.4	8.4	8.4	8.8	42	17	15	8.8	7.6	6.4
4	7.2	8.4	8.4	8.4	8.4	8.8	25	18	14	8.8	7.6	6.0
5	7.2	8.4	8.4	8.4	8.0	8.8	20	17	13	8.8	7.6	6.4
6	7.2	8.4	8.4	8.8	8.0	8.8	18	17	12	8.8	7.6	6.4
7	7.2	8.4	8.0	9.2	8.4	8.8	15	20	12	8.8	7.6	6.4
8	7.2	8.4	6.8	9.6	8.4	9.2	19	20	12	8.8	7.6	6.4
9	7.2	8.4	3.1	8.8	8.4	9.2	33	20	12	8.8	7.6	6.4
10	7.2	8.4	3.0	8.8	8.4	9.2	26	19	11	8.8	7.6	6.4
11	7.6	8.8	2.8	8.8	8.4	8.8	19	18	11	8.8	7.6	6.0
12	6.8	8.8	2.8	8.8	8.4	9.2	17	17	11	8.4	7.6	6.0
13	7.2	8.8	3.7	8.8	8.4	9.2	22	17	10	8.4	7.6	6.0
14	7.2	8.8	8.0	8.8	8.0	9.6	25	18	9.6	8.4	7.2	6.0
15	7.2	8.8	8.4	8.8	8.0	9.6	30	19	10	8.4	6.4	6.4
16	7.2	8.8	8.0	8.8	8.0	9.6	29	20	9.6	8.0	6.4	6.4
17	7.2	8.4	8.4	8.8	8.4	9.6	28	22	9.2	8.4	6.4	6.4
18	7.2	8.4	8.8	8.4	9.2	9.6	26	23	9.2	8.0	6.4	7.2
19	7.2	8.4	8.4	8.4	8.8	10	21	23	8.8	8.0	6.4	6.8
20	6.8	8.4	8.8	9.2	8.8	9.6	21	23	8.8	8.0	6.4	6.4
21	6.8	8.4	8.4	8.8	9.2	8.8	21	22	11	8.0	6.4	6.0
22	6.8	8.0	8.4	8.8	11	10	22	22	9.6	7.6	6.8	5.7
23	6.8	8.4	8.4	8.8	9.6	11	20	22	8.8	7.6	6.8	6.0
24	6.8	8.4	8.4	9.2	9.2	13	19	20	8.4	7.6	6.8	6.0
25	8.0	8.4	8.8	9.2	9.2	13	19	20	8.4	8.0	6.8	6.0
26	8.0	8.4	8.8	8.4	8.4	11	17	20	8.4	7.6	6.4	6.0
27	8.0	8.8	8.8	9.2	8.4	12	17	20	8.4	7.6	6.4	6.8
28	8.4	8.4	8.8	8.8	8.4	17	18	20	8.4	7.6	6.4	7.2
29	8.4	8.4	8.8	8.8	8.4	22	21	20	8.4	8.0	6.4	7.2
30	8.4	8.8	8.4	8.4	-	18	21	19	8.4	8.0	6.4	7.6
31	8.4	-	8.0	8.0	-	14	-	18	-	8.0	6.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	228.4	8.4	6.8	7.37	453
November	254.8	8.8	8.0	8.49	505
December	234.6	9.2	2.8	7.57	465
Calendar year 1947	3,466.9	27	2.8	9.50	6,880
January	271.2	9.6	8.0	8.75	538
February	249.4	11	8.0	8.60	495
March	333.8	22	8.8	10.8	662
April	691	42	15	23.0	1,370
May	608	23	17	19.6	1,210
June	317.4	16	8.4	10.6	630
July	256.4	8.8	7.6	8.27	509
August	217.2	8.0	6.4	7.01	431
September	191.7	7.6	6.0	6.39	380
Water year 1947-48	3,853.9	42	2.8	10.5	7,650

Devil Creek above Evans dividers, near Malad, Idaho

Location.- Water-stage recorder, lat. 42°15', long. 112°13', in sec. 35, T. 13 S., R. 36 E., at Evans Ranch, 900 feet upstream from Evans dividers, 3.1 miles downstream from Campbell Creek, and 3.6 miles northeast of Malad.

Records available.- December 1940 to December 1943, April 1946 to September 1948.

Extremes.- Maximum discharge during year, 151 second-feet Apr. 2 (gage height, 4.26 feet), from rating curve extended above 40 second-feet; minimum, 1.8 second-feet Dec. 12; minimum daily, 4.0 second-feet Dec. 12, 13.
1940-43, 1946-48: Maximum discharge, 254 second-feet Mar. 30, 1943 (gage height, 5.29 feet, present site, datum then in use), from rating curve extended above 60 second-feet; minimum, that of Dec. 12, 1947; minimum daily, 3.6 second-feet Sept. 26, 1942.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	8.8	9.5	b9.0		a9.5	f39	22	23	10	6.7	6.8
2	8.0	9.1	9.1	b9.0		a9.5	63	21	20	9.9	6.7	6.8
3	8.0	9.1	8.2	b9.0		a9.5	60	18	23	9.9	6.4	6.1
4	7.5	9.3	8.6	b9.0		*9.5	a50	19	19	9.7	6.4	6.1
5	7.5	9.3	8.6	b9.0		9.5	a36	19	17	9.5	6.6	6.7
6	7.7	8.8	8.6	9.8		11	a30	19	15	8.4	6.4	7.0
7	7.7	9.3	8.4	10		10	a25	23	16	7.9	5.6	6.8
8	8.0	9.3	8.4	12		11	a35	25	16	7.9	5.2	7.2
9	8.2	9.1	4.1	11		*11	a50	23	15	7.7	6.4	7.2
10	8.0	8.8	b4.2	10	b9.0	b10	a40	24	15	7.5	6.4	7.4
11	9.1	9.1	4.4	10		b9.5	a35	21	14	7.4	6.2	7.2
12	7.7	8.8	b4.0	9.5		b10	a30	19	14	6.8	6.2	7.4
13	8.0	9.1	b4.0			12	a40	23	14	6.2	6.2	7.5
14	7.7	9.3	9.0			17	a50	25	14	6.2	6.2	7.4
15	7.7	9.5	9.0			12	a60	26	14	6.8	6.4	7.4
16	8.0	9.5	b9.0			12	58	27	13	7.7	6.4	7.4
17	8.4	9.1	*b9.3			11	54	30	13	7.7	5.8	7.4
18	8.2	9.3	b9.3			11	39	32	13	7.7	6.4	7.5
19	8.0	9.3	b9.3			10	27	35	13	7.5	6.4	7.9
20	7.7	9.1	b9.3			9.0	26	34	12	7.5	6.4	7.9
21	8.0	8.8	9.3	b9.6	a13	9.5	29	32	14	7.5	6.4	7.4
22	8.0	b8.5	9.3			14	30	32	12	7.2	6.4	8.4
23	8.0	b8.5	b9.2			32	26	27	12	7.2	6.6	8.3
24	8.0	8.8	b9.2			25	23	24	11	7.0	6.7	8.1
25	9.8	8.8	b9.4			a22	24	28	11	7.0	6.7	8.1
26	10	8.6	b9.5	(*)		a20	21	30	11	7.0	6.7	8.3
27	10	8.6	b9.5			a22	21	29	8.4	6.6	6.6	8.1
28	9.8	8.4	b9.5		a10	f26	22	27	8.4	6.4	6.6	8.8
29	9.5	8.4	b9.5			f29	23	27	9.5	5.5	6.6	8.4
30	9.5	8.6	b8.8		-	22	22	25	10	5.4	6.7	9.5
31	8.8	-	b8.6		-	a18	-	23	-	6.4	6.7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	258.5	10	7.5	8.34	513
November	269.0	9.5	8.4	8.97	534
December	256.1	9.5	4.0	8.26	508
Calendar year 1947	4,416.2	52	4.0	12.1	8,760
January	299.7	12	-	9.67	594
February	297.0	-	-	10.2	589
March	453.5	32	9.0	14.6	900
April	1,088	63	21	36.3	2,160
May	790	35	18	25.5	1,570
June	420.3	23	8.4	14.0	834
July	233.1	10	5.4	7.52	462
August	198.1	6.7	5.2	6.39	393
September	226.5	9.5	6.1	7.55	449
Water year 1947-48	4,789.8	63	4.0	13.1	9,510

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for station above Campbell Creek and nearby streams.
b Stage-discharge relation affected by ice.
f Computed on basis of partly estimated gage-height record.

Deep Creek below First Creek, near Malad, Idaho

Location.- Water-stage recorder, lat. 42°14', long. 112°11', in sec. 7, T. 14 S., R. 37 E., just downstream from site of proposed reservoir, 1 mile north and 3½ miles east of Malad and 12 miles upstream from mouth.

Records available.- October 1931 to December 1948 (discontinued).

Average discharge.- 17 years, 9.12 second-feet.

Extremes.- 1947-48: Maximum discharge during water year, 60 second-feet Apr. 2 (gage height, 2.76 feet); minimum, 0.6 second-foot Mar. 11.

1948: Maximum discharge during period October to December, 5.2 second-feet Nov. 2; minimum recorded, 0.4 second-foot Nov. 28.

1931-48: Maximum discharge observed, 172 second-feet July 8, 1937, from rating curve extended above 40 second-feet by logarithmic plotting; minimum observed, 0.3 second-foot Aug. 29, 1934.

Remarks.- Records fair except those for periods of ice effect or no gage-height record, which are poor. Small diversions above station. Flow regulated at times by reservoir 2½ miles above station.

Discharge, in second-feet, 1947-48

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	3.1	6.0	1.7	2.8	4.4	18	22	29	14	7.8	2.1
2	2.5	3.1	5.6	1.9	2.8	4.8	24	22	28	14	7.8	1.9
3	2.5	3.7	3.4	2.1	2.8	4.0	35	20	29	17	7.8	1.7
4	2.5	3.7	4.4	2.3	2.8	*4.8	a25	19	27	18	8.2	1.7
5	2.5	4.0	4.4	2.8	2.8	3.7	a22	18	23	18	7.8	1.7
6	2.5	2.8	5.2	3.1	2.5	4.4	a20	20	21	17	6.4	1.7
7	2.5	3.7	4.0	4.4	b2.5	4.4	a17	23	21	18	7.8	1.9
8	2.5	4.0	3.7	7.3	3.1	4.4	a22	24	22	16	6.9	1.9
9	2.5	4.4	3.7	5.6	2.8	4.0	26	25	21	15	6.9	2.1
10	2.8	3.4	2.3	5.2	b2.8	3.1	20	26	20	14	6.4	1.9
11	4.8	3.7	2.5	5.2	b2.5	2.5	16	28	20	14	6.4	1.9
12	3.7	2.3	2.3	4.4	b2.5	3.4	14	27	16	15	6.0	1.9
13	3.4	2.8	2.3	2.3	3.1	4.0	15	27	15	18	4.0	1.9
14	3.1	3.1	2.5	2.5	2.5	5.6	16	31	18	17	3.4	1.7
15	2.8	3.7	3.1	3.4	2.3	4.0	18	32	19	16	3.4	1.7
16	3.1	4.0	*2.8	3.4	2.3	3.7	21	35	19	14	3.1	1.7
17	3.4	4.0	3.1	3.7	2.5	4.0	26	41	20	14	3.1	1.9
18	3.1	4.4	3.4	3.4	3.1	3.7	31	45	19	13	2.8	3.4
19	2.8	4.4	3.4	b3.2	3.4	3.7	24	47	18	12	2.5	6.4
20	2.8	3.7	3.7	3.4	3.4	2.8	21	48	18	12	2.5	3.4
21	2.8	3.4	3.4	3.4	3.1	2.1	24	46	21	12	2.3	3.1
22	2.8	1.7	3.7	3.4	12	5.2	27	45	21	11	3.1	2.5
23	2.8	1.9	3.1	3.7	8.7	11	25	41	20	11	2.8	2.3
24	2.8	2.1	2.5	3.7	5.2	13	21	40	18	11	2.5	2.3
25	2.8	2.8	2.8	3.4	5.6	8.7	20	37	14	10	2.8	2.5
26	2.5	3.4	3.1	*2.8	6.4	6.4	18	36	14	9.6	2.5	3.1
27	2.5	3.7	3.1	2.8	6.0	7.3	17	32	14	10	2.5	2.8
28	2.5	3.4	3.1	3.4	4.8	13	20	32	14	10	2.3	2.8
29	3.4	4.0	3.1	3.7	4.0	15	22	31	14	9.2	2.1	2.8
30	3.7	4.4	2.1	3.7	-	12	22	31	14	8.7	2.1	2.8
31	3.4	-	1.7	3.1	-	7.8	-	29	-	7.8	2.1	-

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for Devil Creek above Campbell Creek and other nearby streams.

b Stage-discharge relation affected by ice.

1948

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	2.8	3.4	1.7	11	1.7	3.4	2.8	21	3.4	3.1	2.0
2	2.5	4.0	1.9	12	1.6	3.4	2.8	22	3.7	2.3	2.0
3	2.5	4.0	2.1	13	1.7	3.4	2.8	23	4.0	2.5	2.0
4	2.5	4.0	2.3	14	1.7	3.4	3.1	24	4.0	2.5	2.0
5	3.1	2.8	1.9	15	2.3	3.7	2.5	25	4.0	2.5	2.0
6	2.8	3.1	2.1	16	2.3	3.7	2.0	26	4.0	2.3	2.0
7	2.5	3.7	2.3	17	2.5	4.0	2.0	27	4.0	1.3	2.0
8	2.3	2.5	2.3	18	2.8	3.1	2.0	28	4.0	1.3	2.0
9	2.1	2.5	2.3	19	2.8	2.3	2.0	29	4.0	1.4	2.0
10	1.7	3.4	2.5	20	3.1	2.8	2.0	30	3.4	1.4	2.0
								31	3.4	-	2.0

Note.- Stage-discharge relation affected by ice Dec. 16-31 (no gage-height record Dec. 18-21, 25-31; discharge computed on basis of weather records and records for nearby streams). Discharge measurement of 3.7 second-feet was made Jan. 24 1949.

Monthly discharge, in second-feet, 1947-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October 1947	90.3	4.8	2.5	2.91	179
November	102.8	4.4	1.7	3.43	204
December	103.5	6.0	1.7	3.34	205
Calendar year 1947	2,516.8	19	1.4	6.90	4,990
January 1948	108.4	7.3	1.7	3.50	215
February	111.1	12	2.3	3.83	220
March	180.9	15	2.1	5.84	359
April	647	35	14	21.6	1,280
May	980	48	18	31.6	1,940
June	587	29	14	19.6	1,160
July	416.3	18	7.8	13.4	826
August	138.1	8.2	2.1	4.45	274
September	71.5	6.4	1.7	2.38	142
Water year 1947-48	3,536.9	48	1.7	9.66	7,000
October 1948	89.2	4.0	1.6	2.88	177
November	87.2	4.0	1.3	2.91	173
December	67.4	3.1	-	2.17	134
Calendar year 1948	3,484.1	48	1.3	9.52	6,900

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Weber River near Oakley, Utah

Location.- Water-stage recorder, lat. 40°44'10", long. 111°14'45", in SE¼NE¼ sec. 15, T. 1 S., R. 6 E., 1.4 miles downstream from South Fork, 2.6 miles upstream from Weber-Provo diversion canal, and 3½ miles northeast of Oakley.

Drainage area.- 163 square miles.

Records available.- October 1904 to September 1948.

Average discharge.- 42 years (1906-48), 228 second-feet.

Extremes.- Maximum discharge during year, 1,890 second-feet May 20 (gage height, 3.76 feet); minimum recorded, 48 second-feet Sept. 15.
1904-48: Maximum discharge observed, 4,010 second-feet July 6, 1907, June 5-7, 1909; minimum recorded, 16 second-feet Mar. 12, 1941.

Remarks.- Records excellent except those for periods of ice effect, which are fair. Several small diversions above station for irrigation. Flow slightly regulated by several small lakes on headwaters and a small reservoir on Smith and Morehouse Creek. Total capacity of all reservoirs, about 3,200 acre-feet.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	74	*73			b66	73	304	1,540	215	108	58
2	78	74	72		(*)	b68	74	281	1,530	203	99	58
3	76	74	68			70	82	296	1,390	203	112	58
4	74	72	70				82	324	1,060	191	118	57
5	74	74	68	(*)			76	320	1,070	183	142	57
6	73	72	68			b70	80	360	1,090	180	116	56
7	73	72	68				b70	459	1,010	178	103	54
8	72	76	b64			(*)	b72	425	859	169	125	53
9	72	76	b58		b62	68	*b75	365	850	162	112	52
10	72	74				b66	106	328	808	154	101	51
11	78	76				b62	91	304	749	149	97	51
12	76	b70				b66	86	292	640	144	95	51
13	76	b64				b70	82	328	562	142	91	52
14	76	b66				76	93	442	524	149	84	51
15	76	b72		b64		73	103	610	475	154	80	50
16	74	b74				b72	125	782	493	154	74	51
17	74	b74				73	156	1,030	384	162	82	52
18	74	b72			*61	72	172	1,230	316	154	89	52
19	73	b72			61	67	156	1,350	312	144	89	80
20	72	b70	b66		61	b64	178	1,630	304	149	86	59
21	76	b62			b60	b66	227	1,560	342	134	84	54
22	78	b58			61	b69	267	1,530	351	128	89	53
23	78	b60			60	72	253	1,480	304	123	89	52
24	76	b66			b61	72	231	1,580	304	123	84	52
25	74	b72			b61	70	215	1,410	278	139	80	51
26	76	76			b62	70	200	1,240	260	134	76	52
27	76	74			64	72	206	1,230	253	130	73	52
28	*74	b72			b66	72	278	1,370	243	132	70	52
29	76	70			b66	73	351	1,490	227	128	70	52
30	80	70			-	72	*328	1,260	215	123	67	52
31	76	-			-	73	-	1,410	-	118	61	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,333	80	72	75.3	4,630
November	2,128	76	58	70.9	4,220
December	2,061	-	-	66.5	4,090
Calendar year 1947	79,176	1,240	-	217	157,000
January	1,984	-	-	64	3,940
February	1,798	66	-	64.0	3,570
March	2,164	76	62	69.8	4,290
April	4,588	351	70	153	9,100
May	27,020	1,630	281	872	53,590
June	18,743	1,540	215	625	37,180
July	4,751	215	118	153	9,420
August	2,846	142	61	91.8	5,640
September	1,605	80	50	53.5	3,180
Water year 1947-48	72,021	1,630	50	197	142,800

Peak discharge (base, 1,200 second-feet).- May 20 (12:45 a.m.) 1,890 sec.-ft.; June 1 (2 a.m.) 1,800 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Weber River near Coalville, Utah

Location.- Water-stage recorder, lat. 40°53'40", long. 111°24'00", in SE¼NE¼ sec. 20, T. 2 N., R. 5 E., at bridge 1½ miles upstream from high-water contour for Echo Reservoir, 1½ miles south of Coalville and 6 miles downstream from Silver Creek.

Drainage area.- 438 square miles.

Records available.- April 1927 to September 1948.

Average discharge.- 21 years, 196 second-feet.

Extremes.- Maximum discharge during year, 1,610 second-feet May 20 (gage height, 4.14 feet); minimum daily, 26 second-feet July 19, 21 (gage height, 0.08 foot).
1927-48: Maximum discharge observed, 1,960 second-feet June 17, 1928 (gage height, 4.30 feet); minimum, 6 second-feet Sept. 20, 1934 (gage height, -0.23 foot).

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. No diversions between station and Echo Reservoir. Records do not include water diverted from Weber River Basin through Weber-Provo diversion canal. Flow slightly regulated by several small reservoirs above station.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	128	*227	a110			209	493	1,200	h68	39	40
2	83	122	247	a110			369	442	1,260	h69	38	39
3	80	126	183	a110	(*)		525	428	f1,260	h76	37	38
4	77	124	167	a130			332	489	f1,040	h68	43	35
5	77	130	155	*a170			247	485	934	h64	83	33
6	72	a120	153	203			271	509	f916	h54	83	35
7	68	128	143	176			189	610	852	h54	72	37
8	69	143	134	252	b90		*198	610	625	h47	97	38
9	72	161	b120	239		(*)	324	534	552	h45	97	38
10	73	f141	a90	153			465	f469	477	h45	89	39
11	84	a155	a110	136		b111	354	f434	403	h39	82	38
12	89	a118	a110	119			242	403	f247	h38	78	37
13	86	a80		98			239	414	f172	h36	73	37
14	88	a140					314	489	f147	h36	63	33
15	86	f137					335	615	121	h34	51	33
16	84	149					491	781	86	h29	43	31
17	84	151					548	1,010	f74	h29	38	32
18	84	143					509	1,220	f54	h31	38	34
19	83	145					357	1,310	50	h26	37	38
20	80	134					386	1,490	72	h27	36	42
21	84	124	b110				461	1,450	127	h26	32	43
22	113	h77		b90		133	505	1,420	192	h27	31	42
23	112	a130			b120	230	465	1,380	165	h34	36	41
24	117	161				315	389	1,390	147	h38	35	40
25	115	163				266	363	1,350	132	h42	37	40
26	112	161				159	333	1,190	h117	h41	44	42
27	108	165				172	315	1,120	h141	h41	41	43
28	112	143				274	417	1,160	130	38	39	44
29	121	141				298	570	1,270	102	36	37	43
30	161	153			-	212	530	1,130	f95	36	39	43
31	137	-			-	149	-	1,130	-	41	41	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,901	161	68	93.6	5,750
November	4,093	165	77	136	8,120
December	3,929	247	-	127	7,790
Calendar year 1947	62,912	1,260	53	172	124,800
January	3,626	252	-	117	7,190
February	3,030	-	-	104	6,010
March	4,539	315	-	146	9,000
April	11,252	570	189	375	22,320
May	27,225	1,490	403	878	54,000
June	11,890	1,260	50	396	23,580
July	1,315	76	26	42.4	2,610
August	1,629	97	31	52.5	3,230
September	1,148	44	31	38.3	2,280
Water year 1947-48	76,577	1,490	26	209	151,900

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for Chalk Creek at Coalville.
b Stage-discharge relation affected by ice.
f Computed on basis of partly estimated gage-height record.
h Computed from staff gage reading.

Echo Reservoir at Echo, Utah

Location.- Staff gage, lat. 40°57'50", long. 111°26'00" in NW¼SW¼ sec. 30, T. 3 N., R. 5 E., near outlet works at left end of Echo Dam 1 mile southeast of Echo. Datum of gage is at mean sea level (surveys of Bureau of Reclamation).

Drainage area.- 732 square miles.

Records available.- October 1930 to September 1948.

Extremes.- Maximum contents during year, 74,240 acre-feet June 7-12 (elevation, 5,560.2 feet); minimum contents, 7,710 acre-feet Sept. 30 (elevation, 5,492.15 feet).
1930-48: Maximum contents, 74,460 acre-feet May 31, 1937 (elevation, 5,560.35 feet); no contents Sept. 12 to Dec. 3, 1931, Sept. 24 to Nov. 2, 1934, Oct. 12 to Nov. 21, 1944.

Remarks.- Reservoir is formed by earth-fill, rock-faced dam; storage began in October 1930; dam completed in 1931. Capacity, 73,940 acre-feet between elevations 5,450 feet (bottom of outlet tunnel) and 5,560 feet (top of radial gates in spillway). Dead storage negligible. Elevation of spillway crest is 5,543 feet. Water is used for irrigation on Echo project. Records give contents represented by daily gage readings to half-tenths at 6 a.m.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22,110	22,510	23,250	23,460	24,210	27,590	38,930	63,680	73,430	71,600	43,920	19,700
2	22,110	22,560	23,540	23,420	24,130	27,910	39,740	64,780	73,800	70,950	43,010	18,940
3	22,070	22,560	23,750	23,460	24,080	28,130	40,720	65,760	73,940	70,230	42,050	18,150
4	22,070	22,600	23,840	23,540	24,000	28,360	41,490	66,320	73,940	69,360	41,270	17,380
5	22,070	22,640	23,880	23,630	23,880	28,580	41,830	66,880	74,020	68,580	40,560	16,650
6	22,070	22,680	23,960	23,790	23,790	28,860	42,160	67,370	74,160	67,800	40,010	15,950
7	22,070	22,680	23,960	23,920	23,750	29,080	42,330	68,010	74,240	66,880	39,410	15,230
8	22,030	22,720	23,960	24,040	23,670	29,360	42,440	69,010	74,240	66,040	38,720	14,560
9	22,030	22,800	23,960	24,300	23,540	29,680	42,610	69,940	74,240	65,200	38,180	14,050
10	21,990	22,840	23,920	24,420	23,500	29,960	43,350	70,440	74,240	64,230	37,610	13,450
11	21,990	22,840	23,790	24,550	23,420	30,100	44,560	70,590	74,240	63,270	36,930	12,890
12	21,990	22,840	23,790	24,590	23,290	30,280	44,960	70,590	74,240	62,310	36,260	12,320
13	22,030	22,840	23,710	24,550	23,210	30,570	45,080	70,520	74,090	61,290	35,700	11,710
14	22,070	22,760	23,630	24,420	23,130	30,900	45,430	70,590	73,580	60,350	34,940	11,170
15	22,070	22,800	23,630	24,340	23,090	31,220	45,840	70,590	73,130	59,340	34,180	10,640
16	22,070	22,800	23,630	24,250	23,050	31,510	46,610	70,590	72,550	58,350	33,400	10,130
17	22,150	22,880	23,630	24,300	23,010	31,800	47,740	70,590	71,890	57,300	32,570	9,620
18	22,190	22,920	23,630	24,380	23,250	32,040	49,250	70,590	71,310	56,320	31,700	9,130
19	22,190	22,960	23,630	24,380	23,630	32,320	50,610	70,730	70,800	55,280	30,750	8,780
20	22,190	22,960	23,630	24,380	24,170	32,570	51,480	70,950	70,370	54,320	29,820	8,580
21	22,230	22,960	23,630	24,420	24,630	32,710	52,480	71,240	70,010	53,300	28,900	8,560
22	22,230	22,880	23,670	24,550	24,930	32,860	53,930	71,240	70,230	52,350	27,950	8,480
23	22,270	22,800	23,670	24,680	25,360	33,300	55,540	71,530	70,730	51,480	27,060	8,360
24	22,310	22,800	23,670	24,800	25,660	34,080	56,770	71,670	71,160	50,670	26,140	8,260
25	22,350	22,880	23,630	24,890	25,960	35,040	57,620	71,960	71,600	49,870	25,270	8,120
26	22,350	23,050	23,630	24,890	26,270	35,590	58,280	71,960	71,890	49,190	24,470	8,000
27	22,350	23,130	23,580	24,800	26,660	36,000	58,880	72,040	72,260	48,400	23,710	7,900
28	22,350	23,170	23,580	24,630	27,020	36,410	59,610	72,470	72,550	47,440	22,960	7,830
29	22,350	23,210	23,580	24,470	27,280	37,340	60,820	72,840	72,400	46,660	22,190	7,780
30	22,390	23,210	23,580	24,380	-	38,130	62,440	73,060	72,110	45,720	21,350	7,710
31	22,470	-	23,540	24,300	-	38,560	-	73,060	-	44,840	20,480	-

Monthly elevation and contents, water year October 1947 to September 1948

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	5,514.65	22,110	+400
Nov. 1	5,515.15	22,510	+740
Dec. 1	5,516.05	23,250	+210
Calendar year 1948	-	-	-11,830
Jan. 1	5,516.3	23,460	+750
Feb. 1	5,517.2	24,210	+3,380
Mar. 1	5,521.1	27,590	+11,340
Apr. 1	5,532.7	38,930	+24,750
May 1	5,552.8	63,680	+9,750
June 1	5,559.65	73,430	-1,830
July 1	5,558.4	71,600	-27,680
Aug. 1	5,537.2	43,920	-24,220
Sept. 1	5,511.6	19,700	-12,060
Oct. 1	5,492.0	7,640	-
Water year 1947-48	-	-	-14,470

Weber River at Echo, Utah

Location.- Water-stage recorder, lat. 40°58'05", long. 111°26'15", in NE¼NE¼ sec. 25, T. 3 N., R. 4 E., 900 feet upstream from Echo Creek, 2,400 feet downstream from Echo Dam, and 3,200 feet southeast of Echo.

Drainage area.- 732 square miles.

Records available.- April 1927 to September 1948.

Average discharge.- 21 years, 260 second-feet

Extremes.- Maximum discharge during year, 2,140 second-feet May 21 (gage height, 5.91 feet); minimum daily, 6.7 second-feet Feb. 19, 20, 23, 25-27.
1927-48: Maximum discharge, 2,370 second-feet June 2, 1943; maximum gage height, 6.17 feet June 2, 3, 1944; minimum daily discharge, 2 second-feet Feb. 27 to Mar. 2, Mar. 31, Apr. 3-13, 1940.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	118	149	176	137	159	7.0	11	209	1,250	470	537	439
2	118	151	174	132	159	7.0	64	209	1,410	520	520	435
3	108	153	174	132	159	7.0	222	300	1,480	550	511	416
4	102	153	174	132	159	7.0	219	516	1,260	546	486	408
5	102	153	174	151	159	7.0	209	516	1,090	533	450	397
6	102	153	176	159	159	7.0	209	511	1,080	524	435	383
7	102	153	176	159	159	7.0	206	511	1,030	520	446	380
8	102	163	176	159	159	7.0	201	516	814	550	443	362
9	102	174	176	159	159	7.3	199	520	722	564	446	348
10	102	172	176	159	159	7.3	201	591	649	555	446	338
11	102	172	176	159	159	7.3	196	659	555	559	439	332
12	101	172	176	159	159	7.3	192	659	458	555	446	332
13	101	172	176	159	159	7.3	189	654	499	550	458	325
14	102	172	176	161	159	7.7	199	832	511	546	458	316
15	102	172	159	161	159	7.7	206	1,000	491	541	466	309
16	102	172	153	124	161	7.7	206	1,200	470	550	474e	296
17	102	172	153	99	104	38	211	1,390	454	559	495	284
18	102	172	153	99	58	50	214	1,690	394	559	511	260
19	102	172	153	99	41	50	206	1,840	355	564	516	163
20	102	169	153	87	6.7	50	206	1,950	362	550	516	115
21	117	169	153	82	6.7	50	206	2,070	228	520	499	106
22	126	169	153	82	7.3	51	209	1,800	78	495	478	117
23	126	139	153	82	6.7	53	209	1,740	62	482	478	120
24	139	128	153	94	7.0	37	209	1,680	62	466	470	120
25	151	128	153	108	6.7	12	209	1,670	63	450	454	120
26	151	159	153	133	6.7	8.5	206	1,490	63	423	446	111
27	151	174	153	161	6.7	8.9	206	1,220	77	478	450	101
28	151	174	153	161	7.0	11	206	1,260	243	511	450	96
29	149	174	153	161	7.0	25	209	1,390	338	524	462	96
30	149	174	153	161	-	26	211	1,340	386	541	458	94
31	149	-	153	159	-	10	-	1,220	-	546	443	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	3,635	151	101	117	7,210
November	4,879	174	128	163	9,680
December	5,063	176	153	163	10,040
Calendar year 1947	98,910.4	1,580	7.7	271	196,200
January	4,170	161	82	135	8,270
February	2,817.5	161	6.7	97.2	5,590
March	596	53	7.0	19.2	1,180
April	5,846	222	11	195	11,600
May	33,153	2,070	209	1,069	65,760
June	16,934	1,480	62	564	33,590
July	16,301	564	423	526	32,330
August	14,587	537	435	471	28,930
September	7,719	439	94	257	15,310
Water year 1947-48	115,700.5	2,070	6.7	316	229,500

Note.- Discharge computed from staff-gage readings Oct. 1-13, Nov. 22 to Feb. 17, Mar. 10-16.

Weber River at Devils Slide, Utah

Location.- Water-stage recorder, lat. 41°03'40", long. 111°34'25", in SE¼SE¼ sec. 23, T. 4 N., R 3 E., 350 feet downstream from highway underpass on U. S. Highway 30S, 1½ miles west of Devils Slide, and 1¾ miles downstream from Lost Creek.

Drainage area.- 1,100 square miles.

Records available.- February 1905 to September 1948.

Average discharge.- 43 years, 437 second-feet.

Extremes.- Maximum discharge during year, 2,680 second-feet May 21 (gage height, 6.18 feet); minimum, 18 second-feet Mar. 6 (gage height, 0.70 foot).
1905-48: Maximum discharge observed, 6,000 second-feet May 22, 1920; minimum, 18 second-feet Sept. 23, 1934, Mar. 6, 1948.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Flow regulated by Echo Reservoir (see p. 76).

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	168	206	b176	210	48	92	686	1,360	468	550	460
2	131	168	*208	175	215	47	189	643	1,550	512	535	451
3	126	168	206	166	*204	49	526	659	1,660	545	530	435
4	117	168	204	160	200	36	485	938	1,460	554	510	426
5	116	170	204	f186	200	43	354	998	1,180	545	470	422
6	114	168	201	*206	200	44	343	1,040	1,140	535	455	418
7	117	168	201	206	200	44	303	1,110	1,090	522	460	406
8	119	180	204	224	200	48	294	1,120	896	540	460	399
9	116	204	204	230	200	45	290	1,030	774	574	460	380
10	116	204	198	211	200	40	338	1,020	675	569	460	368
11	121	204	201	201	200	36	320	1,050	603	569	450	361
12	117	201	201	198	200	40	315	1,030	485	564	460	361
13	117	196	b196	b190	200	44	310	1,070	512	559	470	354
14	116	204	201	b190	200	66	370	1,270	522	559	470	329
15	116	204	186	191	200	57	420	1,550	503	554	480	323
16	117	204	180	166	200	53	510	1,830	490	554	490	320
17	119	204	b179	126	150	63	620	2,120	472	564	510	310
18	119	206	182	129	129	96	643	2,360	426	564	520	284
19	117	204	180	b126	162	114	512	2,500	383	569	525	204
20	116	204	180	b115	112	88	517	2,510	383	574	530	142
21	127	201	180	111	70	81	574	2,640	f329	540	515	126
22	140	194	180	111	88	92	638	2,320	f160	510	495	131
23	144	b162	180	112	90	212	628	2,190	134	495	490	132
24	158	149	b175	121	62	303	588	2,050	132	485	480	131
25	168	151	b174	138	55	149	583	1,980	124	475	465	129
26	168	175	b175	b172	58	82	540	1,850	117	460	460	126
27	168	204	b178	b180	70	67	517	1,490	112	490	460	119
28	168	201	b180	b183	52	111	550	1,420	220	530	464	114
29	170	201	184	b187	53	232	702	1,560	361	550	468	111
30	173	201	182	188	-	220	702	1,510	380	555	481	110
31	168	-	b179	188	-	94	-	1,350	-	560	477	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	4,128	173	114	133	8,190
November	5,636	206	149	188	11,180
December	5,889	208	174	190	11,680
Calendar year 1947	121,006	1,820	105	332	240,000
January	5,263	230	111	170	10,440
February	4,380	215	52	151	8,690
March	2,744	303	36	88.5	5,440
April	13,773	702	92	459	27,320
May	46,894	2,640	643	1,513	93,010
June	18,633	1,660	112	621	36,960
July	16,644	574	460	537	33,010
August	15,050	550	450	485	29,850
September	8,382	460	110	279	16,630
Water year 1947-48	147,416	2,640	36	403	292,400

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
f Computed from partly estimated gage-height record.
Note.- No gage-height record Jan. 30 to Feb. 17, Apr. 9-17, July 21 to Aug. 27; discharge computed on basis of records for stations at Echo and at Gateway.

Weber River at Gateway, Utah

Location.- Water-stage recorder, lat. 41°08', long. 111°50', in NW¼SW¼ sec. 27, T. 5 N., R. 1 E., 800 feet downstream from Union Pacific Railroad bridge, 2,500 feet downstream from Strawberry Creek, and 2,500 feet east of section house at Gateway. Prior to Oct. 30, 1947, at site 50 feet downstream, at same datum.

Drainage area.- 1,610 square miles.

Records available.- June 1919 to September 1948. October 1889 to July 1903 at site 1 mile downstream, published as Weber River near Uinta.

Average discharge.- 28 years (1920-48), 573 second-feet.

Extremes.- Maximum discharge during year, 4,150 second-feet May 19 (gage height, 6.78 feet); minimum, 114 second-feet Mar. 11.
1889-1903, 1919-48: Maximum discharge observed, 7,980 second-feet May 31, 1896; minimum, 45 second-feet Sept. 24, 1934.

Remarks.- Records excellent except those for periods of ice effect or no gage-height record, which are good. Many diversions above and below station for irrigation. Flow regulated by Echo and East Canyon Reservoirs (see pp. 76, 83).

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	218	265	303	a230	b260	190	415	1,630	1,890	537	602	498
2	210	269	*311	a225	b270	184	602	1,490	2,070	587	597	498
3	212	275	296	a220	279	182	1,020	1,440	2,280	618	597	493
4	204	272	296	a220	a280	171	1,070	1,680	2,080	644	592	479
5	204	279	289	240	*b280	163	959	1,660	1,720	618	587	474
6	201	272	289	286	b270	165	924	1,740	1,610	613	552	489
7	201	282	289	*289	272	168	817	1,960	1,500	592	537	474
8	201	296	286	385		173	778	2,070	1,320	597	557	474
9	201	311	286	393		165	a750	1,820	1,150	613	547	465
10	201	303	275	337		*155	a1,000	1,670	1,030	607	552	451
11	212	311	272	311	a272	132	a940	1,650	896	623	542	442
12	212	303	269	296		132	a870	1,570	729	623	542	442
13	212	303	b255	b260		150	a840	1,610	691	613	547	446
14	210	311	272	b260		179	1,030	1,960	697	618	562	438
15	210	307	272	b260	272	187	1,190	2,360	697	613	542	424
16	210	311	255	b230	265	179	1,450	a2,700	724	607	547	424
17	215	300	252	218	293	182	1,750	3,180	691	613	547	424
18	215	300	252	227	255	204	1,830	3,630	664	607	572	410
19	210	303	246	218	356	227	1,580	3,970	633	607	572	389
20	210	293	249	a210	337	190	1,570	3,870	613	633	572	307
21	212	293	249	a208	236	163	1,720	3,820	789	618	582	275
22	227	282	249	207	337	184	1,860	3,520	681	613	562	265
23	230	a260	246	207	356	344	1,800	3,160	532	597	547	265
24	233	a250	b240	210	230	518	1,630	3,040	479	592	547	262
25	249	a250	b235	224	210	321	1,570	2,900	424	567	537	258
26	249	a265	b235	215	218	227	1,430	2,770	389	527	527	255
27	249	282	b240	a230	233	204	1,410	2,450	368	532	522	246
28	249	282	246	a240	207	293	1,490	2,180	398	582	518	240
29	272	286	249	*b250	195	456	1,820	2,250	527	592	518	233
30	279	286	249	b250	-	503	1,760	2,200	493	597	522	233
31	269	-	240	b250	-	325	-	2,010	-	607	518	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	6,887	279	201	222	13,660
November	8,602	311	250	287	17,060
December	8,192	311	235	264	16,250
Calendar year 1947	181,354	2,400	165	497	359,700
January	7,806	393	207	252	15,480
February	7,815	356	195	269	15,500
March	7,016	518	132	226	13,920
April	37,875	1,860	415	1,260	75,120
May	73,960	3,970	1,440	2,390	146,700
June	28,766	2,280	368	959	57,060
July	18,607	644	527	600	36,910
August	17,165	602	518	554	34,050
September	11,473	498	233	382	22,760
Water year 1947-48	234,164	3,970	132	640	464,500

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for other Weber River Stations.
b Stage-discharge relation affected by ice.

Weber River near Plain City, Utah

Location.- Chain gage, lat. 41°16'42", long. 112°05'30", in NW¼NE¼ sec. 8, T. 6 N., R. 2 W., at county highway bridge, 1 mile downstream from Fourmile Creek, 1½ miles south of Plain City, and 6 miles upstream from mouth.

Drainage area.- 2,060 square miles.

Records available.- May 1905 to September 1948. Records collected in 1904 by State engineer.

Extremes.- Maximum discharge observed during year, 4,930 second-feet May 20 (gage height, 18.47 feet); minimum, observed, 27 second-feet Aug. 20 (gage height, 2.08 feet).
1904-48: Maximum discharge observed, 7,580 second-feet June 6, 1909 (gage height, 19.1 feet); practically no flow during latter part of several summers since 1915.

Remarks.- Records fair. Gage read once daily. In summer practically entire flow of Weber River is diverted above station for irrigation. Flow is partly regulated by Echo, East Canyon, and Pine View Reservoirs (see ppp. 76, 83, 87).

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	448	341	288	481	364	505	2,980	1,890	78	35	34
2	87	444	371	325	413	371	695	2,640	2,060	68	36	36
3	81	456	378	312	354	378	1,180	2,150	1,880	65	36	40
4	77	456	371	306	374	374	1,460	2,160	2,510	60	35	44
5	70	437	367	357	381	367	1,190	2,180	2,180	69	38	37
6	67	448	371	395	410	268	1,300	2,440	2,270	61	40	33
7	68	479	341	406	428	297	1,040	2,790	1,490	59	37	36
8	67	475	334	469	388	344	1,060	3,710	1,280	62	34	43
9	67	498	315	515	431	344	1,080	3,830	1,020	66	31	40
10	99	486	321	439	458	337	1,860	3,640	837	73	30	38
11	129	494	328	406	462	321	1,720	3,360	598	50	33	36
12	203	505	318	378	469	310	1,280	3,020	359	49	29	42
13	133	509	277	354	500	306	1,220	2,730	290	62	31	49
14	134	548	357	361	550	315	1,500	2,700	238	49	32	42
15	137	592	337	357	522	323	1,650	3,140	208	47	33	68
16	135	642	321	361	500	331	1,860	3,250	188	46	31	77
17	138	675	312	454	507	344	2,250	3,660	197	46	29	58
18	231	688	318	309	515	352	2,720	3,990	180	44	28	70
19	285	786	315	297	522	394	2,520	4,440	169	90	31	78
20	286	750	312	288	554	395	2,390	4,930	167	103	27	99
21	291	419	318	297	439	379	2,560	4,680	352	43	32	84
22	325	372	321	312	458	352	2,950	4,320	467	41	32	70
23	323	336	325	321	492	458	3,240	4,060	496	40	33	68
24	331	339	318	421	450	743	3,220	3,680	441	38	30	70
25	337	336	312	431	492	560	3,110	3,390	366	41	31	66
26	352	320	318	446	421	458	2,980	3,160	331	61	34	68
27	385	310	306	473	417	392	2,930	3,010	268	44	32	65
28	357	290	294	488	410	426	2,750	2,790	178	41	32	64
29	505	290	306	492	388	568	3,020	2,750	138	38	30	65
30	459	308	321	484	-	739	3,150	2,450	111	42	34	62
31	410	-	291	496	-	654	-	2,110	-	36	32	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	6,641	505	67	214	13,170
November	14,136	786	290	471	28,040
December	10,135	378	277	327	20,100
Calendar year 1947	157,640	2,480	26	432	312,700
January	12,038	515	288	338	23,880
February	13,186	554	354	455	26,150
March	12,564	743	268	405	24,920
April	60,390	3,240	505	2,013	119,800
May	100,140	4,930	2,110	3,230	198,600
June	23,155	2,510	111	772	45,930
July	1,712	103	36	55.2	3,400
August	1,008	40	27	32.5	2,000
September	1,662	99	33	55.4	3,300
Water year 1947-48	256,767	4,930	27	702	509,300

Chalk Creek at Coalville, Utah

Location.- Water-stage recorder and concrete control, lat. 40°55'10", long. 111°24'00", in NE¼SE¼ sec. 8, T. 2 N., R. 5 E., 100 feet downstream from bridge on U. S. Highway 189 in Coalville and a third of a mile upstream from mouth.

Drainage area.- 253 square miles.

Records available.- October 1904 to December 1905, April 1927 to September 1948.

Average discharge.- 21 years (1927-48), 55.4 second-feet.

Extremes.- Maximum discharge during year, 725 second-feet Apr. 22 (gage height, 2.47 feet); minimum, 6.2 second-feet Sept. 18, 27.
1927-48: Maximum discharge, 884 second-feet Aug. 21, 1940 (gage height, 3.41 feet, site and datum then in use); minimum, less than 1 second-foot for several days during June to November 1934.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	28	32	21	19	20	49	258	207	52	19	10
2	16	28	34	22	19	20	93	203	203	52	18	9.4
3	16	28	30	23	19	20	110	200	203	46	19	8.0
4	16	28	30	24	21	17	73	244	191	46	23	8.0
5	14	30	23	28	21	19	52	233	169	45	50	8.0
6	14	23	25	28	20	21	57	272	145	38	50	7.3
7	12	30	28	28	19	23	41	349	131	32	37	7.3
8	13	31	17	34	22	25	43	349	120	31	43	7.3
9	12	34	24	37	20	22	89	279	113	27	38	8.7
10	12	25	12	27	20	19	120	240	106	21	34	9.4
11	15	32	21	27	19	14	84	220	96	18	32	9.4
12	17	21	23	24	21	21	63	213	89	16	31	8.7
13	18	13	23	17	21	28	63	237	77	16	28	8.0
14	17	31	24	17	20	35	86	310	75	15	23	8.0
15	18	30	24	21	20	25	106	395	73	13	23	7.3
16	19	34	23	22	22	22	172	453	63	15	22	7.3
17	20	31	23	22	27	32	298	532	55	14	20	6.6
18	21	30	23	21	35	38	457	611	53	14	19	6.2
19	19	30	22	19	50	32	237	620	59	12	18	6.6
20	18	23	23	18	43	22	244	625	65	20	19	8.7
21	20	19	23	21	30	17	345	557	73	19	16	9.4
22	25	11	23	21	32	48	499	528	84	21	14	7.3
23	25	19	23	22	30	123	399	468	80	23	16	7.3
24	25	25	23	23	23	89	216	430	77	23	17	7.3
25	24	31	22	22	23	56	166	382	73	21	17	7.3
26	23	31	22	19	27	34	145	337	67	22	19	6.6
27	23	31	22	19	43	41	145	317	69	22	18	6.6
28	24	20	22	22	22	88	261	298	71	20	15	7.3
29	25	28	22	20	27	77	390	287	67	21	13	8.0
30	28	33	22	19	-	55	329	251	57	21	12	7.3
31	28	-	21	19	-	32	-	237	-	20	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	595	28	12	19.2	1,180
November	805	34	11	26.8	1,600
December	729	34	12	23.5	1,450
Calendar year 1947	23,529	399	11	64.5	46,670
January	707	37	17	22.8	1,400
February	735	50	19	25.3	1,460
March	1,135	123	14	36.6	2,250
April	5,412	499	41	180	10,730
May	10,933	625	200	353	21,690
June	3,011	207	53	100	5,970
July	776	52	12	25	1,540
August	735	50	12	23.7	1,460
September	234.6	10	6.2	7.82	465
Water year 1947-48	25,807.6	625	6.2	70.5	51,190

Peak discharge (base, 400 sec.-ft.).- Apr. 18 (8:30 a.m.) 581 sec.-ft.; Apr. 22 (10 a.m.) 725 sec.-ft.; May 20 (6:30 a.m.) 680 sec.-ft.

Lost Creek near Croydon, Utah

Location.- Water-stage recorder, lat. 41°11', long. 111°24', in SW¼SE¼ sec. 8, T. 5 N., R. 5 E., 0.8 mile downstream from Francis Fork, 1.6 miles upstream from Hell Canyon, and 9½ miles northeast of Croydon.

Drainage area.- 133 square miles.

Records available.- February 1921 to December 1923. April 1941 to September 1948.

Extremes.- Maximum discharge recorded during year, 341 second-feet May 17 (gage height, 4.16 feet); minimum discharge, 5.3 second-feet Aug. 31, Sept. 1, 2, 3.
1921-23, 1941-48: Maximum discharge, 770 second-feet May 10, 11, 18, 1923 (gage height, 4.20 feet, datum then in use), from rating curve extended above 200 second-feet; minimum, 3 second-feet for several days in August and September 1941, 1942.

Remarks.- Records fair. No diversion above station.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.6	12	14		(*)		18	80	73	19	8.0	5.9
2	9.6	12	*14				29	70	76	18	7.7	5.9
3	9.6	12	13	b10			41	66	69	19	7.7	5.9
4	10	12	13			9	33	72	64	16	8.8	5.9
5	10	12	12				26	85	59	15	13	6.5
6	10	11	12		8		25	100	54	14	9.2	6.5
7	10	12	12	11			*18	120	50	14	8.8	6.8
8	10	12	12	12			21	103	46	14	11	7.1
9	10	12	12	12		(*)	29	80	44	13	10	6.8
10	10	11		11			52	64	42	12	8.4	6.8
11	12	b11					33	62	39	12	8.4	6.5
12	12	b10					24	62	36	12	7.7	6.5
13	11	b10					25	80	34	12	7.7	6.2
14	11	b11					35	120	34	12	7.4	6.2
15	11	12					52	150	31	12	7.1	5.9
16	11	12				b9	85	200	29	11	6.8	6.2
17	12	11		b9			114	250	28	11	6.5	6.8
18	12	12					118	310	29	10	6.8	7.1
19	11	12					75	282	28	10	7.1	8.8
20	11	12	b10		9		91	255	28	11	6.8	8.8
21	11	b11					123	227	31	10	6.8	7.7
22	12	b10				b12	148	206	33	10	6.8	7.4
23	12	b9				25	141	178	35	10	7.4	7.7
24	12	b11				24	123	157	32	10	6.8	7.7
25	12	b12				16	90	145	26	10	7.1	7.7
26	11	13				14	70	130	24	9.2	6.8	7.7
27	11	14				16	80	116	23	9.2	6.8	8.0
28	*11	12		8		22	105	105	22	8.8	6.5	8.4
29	12	12				25	110	94	21	9.2	5.9	8.4
30	13	12			-	23	70	85	19	9.2	5.9	8.4
31	12	-			-	19	-	77	-	8.8	5.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	341.8	13	9.6	11.0	678
November	347	14	-	11.6	688
December	334	14	-	10.8	662
Calendar year 1947	8,946.1	161	6.2	24.5	17,760
January	288	12	-	9.29	571
February	249	-	-	8.59	494
March	385	25	-	12.4	764
April	2,004	148	18	66.8	3,970
May	4,131	310	62	133	8,190
June	1,159	76	19	38.6	2,300
July	371.4	19	8.8	12.0	737
August	237.6	13	5.9	7.66	471
September	212.2	8.8	5.9	7.07	421
Water year 1947-48	10,060	310	5.9	27.5	19,950

Peak discharge (base, 130 sec.-ft.).- Apr. 17 (12 p.m.) 183 sec.-ft.; May 17 (11:30 p.m.) 341 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.- No gage-height record Jan. 25 to Mar. 9, Apr. 25 to May 17; discharge computed on basis of 3 discharge measurements, weather records, and records for Hardscrabble Creek near Portersville.

East Canyon Reservoir near Morgan, Utah

Location.- Staff gage, lat. 40°55'20", long. 111°35'50", in NE¼ sec. 10, T. 2 N., R. 3 E., 500 feet east of East Canyon Dam and 9 miles southeast of Morgan.

Drainage area.- 144 square miles.

Records available.- October 1937 to September 1948 in reports of Geological Survey. November 1931 to September 1948 in reports of Weber River water commissioner.

Extremes.- Maximum contents observed during year, 28,260 acre-feet June 14 (gage height, 139.92 feet); minimum observed, 17,070 acre-feet Sept. 26.
1931-48: Maximum contents, 29,170 acre-feet June 2, 1943 (gage height, 141.67 feet); no contents Nov. 1, 1931, Sept. 2 to Nov. 1, 1934, Sept. 11 to Oct. 18, 1937, Sept. 11-28, 1946.

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

Contents, in acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	23,180	-	24,060	-	-	-	23,500	-
2	-	18,960	-	-	-	-	-	22,840	-	-	-	-
3	-	-	-	-	-	-	23,890	-	-	-	-	-
4	-	-	-	22,260	-	-	23,700	-	-	27,260	-	-
5	18,760	-	-	-	-	-	-	-	-	-	-	19,480
6	-	-	-	-	-	-	-	-	28,130	-	-	-
7	-	-	20,660	-	-	23,660	22,110	-	-	-	-	-
8	-	-	-	-	23,340	-	-	-	27,990	-	22,710	-
9	-	19,100	-	-	-	-	-	25,460	27,960	-	-	-
10	-	-	-	-	-	-	-	-	27,960	-	-	-
11	-	-	-	22,800	-	-	20,940	-	28,040	26,610	-	-
12	18,770	-	-	-	-	-	-	-	28,170	-	-	18,570
13	-	-	-	-	-	-	-	-	28,220	-	-	-
14	-	-	21,000	-	-	23,620	-	-	28,260	-	-	-
15	-	-	-	-	23,340	-	-	27,650	-	-	21,870	-
16	-	19,250	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	23,160	-	-	21,420	28,090	-	25,380	-	-
19	18,800	-	-	-	-	-	-	-	-	-	-	17,740
20	-	-	-	-	-	-	-	-	27,780	-	-	-
21	-	-	21,460	-	-	23,540	-	-	-	-	-	-
22	-	-	-	-	23,660	-	-	-	-	-	20,940	-
23		19,660	-	-	-	-	-	28,090	-	-	-	-
24	-	-	-	-	23,880	-	-	-	-	-	-	-
25	-	-	-	23,180	-	-	23,260	-	-	24,460	-	-
26	18,860	-	-	-	-	-	-	-	-	-	-	17,070
27	-	-	-	-	-	24,100	-	-	27,960	-	-	-
28	-	-	21,850	-	-	-	-	-	-	-	-	-
29	-	-	-	-	23,780	-	-	-	-	-	20,220	-
30	-	20,160	-	-	-	-	a22,960	27,960	a27,660	-	-	a16,470
31	a18,930	-	a22,030	a23,180	-	a24,070	-	a27,980	-	a23,640	a20,010	-

a No gage-height record; contents interpolated.

Monthly gage height and contents, water year October 1947 to September 1948

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	-	a18,790	-
Oct. 31	-	a18,930	+140
Nov. 30	122.75	20,160	+1,230
Dec. 31	-	a22,030	+1,870
Calendar year 1947	-	-	+15,570
Jan. 31	-	a23,180	+1,150
Feb. 29	131.00	23,780	+600
Mar. 31	-	a24,070	+290
Apr. 30	-	a22,960	-1,110
May 31	-	a27,980	+5,020
June 30	-	a27,660	-320
July 31	-	a23,640	-4,020
Aug. 31	-	a20,010	-3,630
Sept. 30	-	a16,470	-3,540
Water year 1947-48	-	-	-2,320

a No gage-height record; contents interpolated.

East Canyon Creek near Morgan, Utah

Location.- Water-stage recorder and Lyman rectangular weir, lat. 40°55'20", long. 111°36'20", in NW¼ sec. 10, T. 2 N., R. 3 E., 2,500 feet downstream from East Canyon Dam, 2½ miles upstream from Sheep Canyon, and 9 miles southeast of Morgan.

Drainage area.- 145 square miles.

Records available.- October 1937 to September 1948 in reports of Geological Survey. October 1931 to September 1948 in reports of Weber River water commissioner.

Average discharge.- 17 years (1931-48), 49.2 second-feet.

Extremes.- Maximum daily discharge during year, 299 second-feet Apr. 25, minimum daily, 8.9 second-feet Nov. 24 to Dec. 17.
1931-48: Maximum daily discharge, 412 second-feet Apr. 23, 1936: minimum daily, 3.6 second-feet Jan. 5-20, Feb. 9.

Remarks.- Records good except those for period of no gage-height record, which are fair. No diversion between station and East Canyon Reservoir (see preceding page) which completely regulates flow.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	30	8.9	9.6	26	48	84	250	213	88	80	66
2	30	30	8.9	9.6	26	48	114	249	213	88	80	66
3	30	30	8.9	9.6	26	48	185	249	213	88	80	66
4	30	30	8.9	9.6	26	48	272	249	193	86	80	66
5	30	30	8.9	10	26	48	294	249	173	86	80	76
6	30	30	8.9	11	26	48	290	249	128	86	78	83
7	30	30	8.9	11	26	48	286	249	82	86	76	81
8	30	30	8.9	11	26	48	284	249	95	86	76	80
9	30	30	8.9	11	26	48	282	152	123	86	76	80
10	30	30	8.9	11	26	48	280	14	87	84	76	80
11	30	30	8.9	11	26	48	278	14	33	84	76	80
12	30	30	8.9	11	26	48	278	14	50	84	76	80
13	30	30	8.9	11	26	47	280	14	66	84	76	81
14	30	30	8.9	11	26	47	280	14	93	84	75	80
15	30	30	8.9	11	26	47	282	70	130	84	75	80
16	31	29	8.9	20	26	47	282	117	127	84	73	80
17	31	29	8.9	26	26	47	284	156	125	83	72	78
18	31	29	9.6	26	26	47	287	194	125	83	72	78
19	31	29	9.6	26	26	47	287	194	123	83	72	78
20	31	29	9.6	26	26	47	290	194	123	83	72	79
21	31	29	9.6	26	27	29	290	194	123	83	72	79
22	31	29	9.6	26	20	13	293	204	81	83	70	80
23	30	20	9.6	26	13	13	293	213	43	83	70	80
24	30	8.9	9.6	26	33	13	296	213	43	83	70	80
25	30	8.9	9.6	26	50	13	299	213	43	81	70	80
26	30	8.9	9.6	26	50	14	295	213	43	81	70	80
27	30	8.9	9.6	26	49	36	290	213	70	81	67	80
28	30	8.9	9.6	26	48	55	280	213	89	81	67	80
29	30	8.9	9.6	26	48	55	270	213	89	81	67	80
30	30	8.9	9.6	26	-	55	260	213	88	81	67	80
31	30	-	9.6	26	-	55	-	213	-	80	67	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	937	31	30	30.2	1,860
November	735.3	30	8.9	24.5	1,460
December	285.7	9.6	8.9	9.22	567
Calendar year 1947	13,283.0	134	3.6	36.4	26,340
January	568.4	26	9.6	18.3	1,130
February	858	50	13	29.6	1,700
March	1,303	55	13	42.0	2,580
April	8,065	299	84	269	16,000
May	5,435	-	14	175	10,780
June	3,227	-	33	108	6,400
July	2,598	88	80	83.8	5,150
August	2,278	80	67	73.5	4,520
September	2,337	83	66	77.9	4,640
Water year 1947-48	28,627.4	299	8.9	78.2	56,790

Note.- Daily discharge Oct. 1 to June 7, Sept. 19-22, 26-30 computed on basis of discharge measurements, periodic staff-gage readings, and record of reservoir gate changes.

Hardscrabble Creek near Porterville, Utah

Location.- Water-stage recorder, lat. 40°57'10", long. 111°43'00", in SW¼NW¼ sec. 34, T. 3 N., R. 2 E., two-thirds of a mile upstream from Tucker Hollow and 2⅝ miles southwest of Porterville.

Drainage area.- 24.9 square miles.

Records available.- October 1941 to September 1948. Fragmentary records December 1937 to August 1940 on file in State engineer's office.

Extremes.- Maximum discharge during year, 409 second-feet May 17 (gage height, 3.28 feet); minimum, 4.7 second-feet Sept. 14 (gage height, 1.23 feet).
1941-48: Maximum discharge, 631 second-feet Aug. 20, 1945 (gage height, 3.60 feet), from rating curve extended above 180 second-feet; minimum recorded, 3.0 second-feet Feb. 11, 1944, but may have been less during periods of ice effect.

Remarks.- Records good except those for periods of ice effect, which are fair. A small trans-basin canal diverts water from Arthurs Fork, a tributary of Hardscrabble Creek, to Farmington Creek for irrigation in vicinity of Farmington.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.8	9.8	a9		a7		a18	129	129	37	13	6.8
2	7.8	10	a9		*6.8		a27	109	126	35	13	6.8
3	7.8	9.8	*9.5	a8	6.8		a45	104	121	32	13	6.8
4	7.8	11	9.5				a40	111	104	30	13	6.8
5	7.8	11	8.6			a7	a35	121	97	27	15	6.5
6	7.8	b10	8.9	*10			a32	140	97	27	14	6.2
7	7.8	10	8.6	9.8			*a28	178	a90	26	13	6.2
8	8.0	11	8.9	8.9			27	159	a76	25	13	6.2
9	8.0	10	10				34	121	a71	24	12	6.2
10	8.6	10			a7	(*)	70	99	a67	24	11	6.0
11	10	10					51	91	a63	23	11	5.8
12	8.9	b9					40	95	a59	22	11	5.5
13	8.3	b9					38	113	a55	21	11	5.2
14	8.0	10				b7	43	175	a55	21	10	5.2
15	7.8	9.8		a8			59	207	a50	20	9.8	5.2
16	7.8	9.8					90	256	a43	20	9.5	5.2
17	8.9	9.5					165	324	a40	19	9.2	6.0
18	7.8	9.2	a8				162	324	a44	18	9.2	6.2
19	8.0	9.5					132	342	a42	19	8.9	8.3
20	8.0					a7	143	285	a42	19	8.9	6.8
21	8.9						196	248	a50	18	8.6	6.0
22	8.9					a8	214	233	a54	18	8.3	6.2
23	8.6					a10	165	225	55	18	8.0	6.5
24	8.3					a14	146	214	48	17	8.0	6.5
25	8.0	a9				a12	129	221	46	17	8.3	7.0
26	8.0					a11	109	214	44	16	8.6	7.5
27	8.0					a12	111	221	43	15	8.0	7.0
28	8.0			a7		a16	162	192	41	15	7.8	7.0
29	14					a22	182	152	39	15	7.5	6.8
30	12				-	a20	152	129	38	14	7.0	6.8
31	10	-			-	a18	-	126	-	14	6.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	265.4	14	7.8	8.56	526
November	287.4	11	-	9.58	570
December	258	10	-	8.32	512
Calendar year 1947	10,264.7	207	6.2	28.1	20,360
January	245.7	10	-	7.93	487
February	202.6	-	-	6.99	402
March	290	-	-	9.35	575
April	2,845	214	-	94.8	5,640
May	5,658	342	91	183	11,220
June	1,929	129	38	64.3	3,830
July	666	37	14	21.5	1,320
August	315.4	15	6.8	10.2	626
September	191.2	8.3	5.2	6.37	379
Water year 1947-48	13,153.7	342	5.2	35.9	26,090

Peak discharge (base, 220 sec.-ft.).- Apr. 21 (8 p.m.) 294 sec.-ft.; May 17 (6:30 p.m.) 409 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of 5 discharge measurements, weather records, and records for Lost Creek near Croydon.

b Stage-discharge relation affected by ice.

South Fork Ogden River near Huntsville, Utah

Location.- Water-stage recorder, lat. 41°16', long. 111°40', in SE¼ sec. 12, T. 6 N., R. 2 E., half a mile downstream from Magpie Creek, 1 mile upstream from Huntsville Mountain Canal, and 5½ miles east of Huntsville.

Drainage area.- 148 square miles.

Records available.- March 1921 to September 1948.

Average discharge.- 27 years, 104 second-feet.

Extremes.- Maximum discharge during year, 1,280 second-feet May 17 (gage height, 4.99 feet); minimum not determined, occurred during period of ice effect.
1921-48: Maximum discharge, 1,780 second-feet May 4, 1936 (gage height, 5.45 feet), from rating curve extended above 900 second-feet; minimum observed, 20 second-feet Nov. 25, 1931, July 28, 1934.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	43	45	a42	a41	41	71	493	283	84	48	41
2	42	44	44	a42	41	a41	91	416	276	81	47	40
3	41	44	43	a42	a40	a41	127	416	262	80	47	40
4	41	43	*43	a42	a40	a41	113	493	240	78	47	40
5	41	44	42	43	a40	a41	107	565	220	73	49	40
6	41	43	43	a46	a40	a41	120	644	203	71	48	40
7	40	44	44	a48	a40	a41	107	854	194	70	48	40
8	41	44	43	*51	a40	41	104	791	184	70	48	39
9	41	44	43	a50	a40	a41	118	596	176	69	48	39
10	41	42	40	a49	a40	a41	209	476	170	68	47	39
11	45	43	b39	a49	a40	*b41	166	432	164	66	46	39
12	43	41	b40	48	a40	b41	146	432	156	65	46	39
13	41	41	a41	a43	a40	a42	145	518	148	63	48	38
14	42	43	a41	a43	a40	a44	170	715	141	64	40	38
15	42	42	b41	b43	a40	45	213	822	134	62	43	38
16	41	42	a41	a43	b40	44	312	935	129	62	43	38
17	43	41	a41	a43	b39	44	439	1,110	124	60	43	40
18	42	42	a41	a43	a41	44	479	1,160	118	59	42	41
19	41	42	a41	b43	a42	45	377	1,110	115	58	41	44
20	41	41	a41	a42	41	45	401	976	113	58	42	42
21	42	41	a41	a42	41	45	496	840	120	58	41	41
22	42	b39	41	a42	48	46	573	733	117	56	42	41
23	42	a35	a42	a42	48	52	507	632	117	56	42	40
24	42	a39	a42	a42	46	59	426	577	105	56	41	40
25	42	a41	a42	a42	46	57	410	539	101	55	42	41
26	41	a41	a42	a42	47	54	357	479	96	53	41	42
27	41	41	a42	a42	48	55	343	429	95	52	41	41
28	41	41	a42	a42	a46	63	429	395	92	51	41	41
29	45	41	43	a42	a43	71	661	360	88	51	41	41
30	*48	41	a40	*b42	-	63	584	322	86	50	41	41
31	45	-	a38	a42	-	66	-	295	-	48	41	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,302	48	40	42.0	2,580
November	1,253	44	35	41.8	2,490
December	1,292	45	-	41.7	2,560
Calendar year 1947	33,682	709	-	92.3	66,820
January	1,357	51	-	43.8	2,690
February	1,218	48	-	42.0	2,420
March	1,476	71	-	47.6	2,930
April	8,801	661	71	293	17,460
May	19,555	1,160	295	631	38,790
June	4,567	283	86	152	9,060
July	1,947	84	48	62.8	3,860
August	1,365	49	41	44.0	2,710
September	1,204	44	38	40.1	2,390
Water year 1947-48	45,337	1,160	-	124	89,940

Peak discharges (base, 400 sec.-ft.).- Apr. 28 (12 p.m.) 694 sec.-ft.; May 7 (8 p.m.) 1,010 sec.-ft.; May 17 (10 p.m.) 1,280 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for nearby streams and weather records, or interpolated.

b Stage-discharge relation affected by ice.

Pine View Reservoir near Ogden, Utah

Location.- Staff gage, lat. 41°15'20", long. 111°50'25", in NW¼SE¼ sec. 16, T. 6 N., R. 1 E., at trash rack at Pine View Dam on Ogden River, 7 miles northeast of Ogden. Datum of gage is at mean sea level, datum of 1929 (levels by Bureau of Reclamation).

Drainage area.- 310 square miles.

Records available.- November 1936 to September 1948.

Extremes.- Maximum contents during year, 43,580 acre-feet May 24 to June 12 (elevation, 4,872.00 feet); minimum, 357 acre-feet Nov. 24, 25 (elevation, 4,823.07 feet).
1936-48: Maximum contents, 45,370 acre-feet May 17, 1938 (elevation, 4,873.00 feet); minimum, 80 acre-feet Feb. 19, 1937 (elevation, 4,818.99 feet).

Remarks.- Reservoir is formed by earth-fill, rock-faced dam; storage began Nov. 16, 1936. Capacity, 43,580 acre-feet between elevations 4,818 feet (sill of trash rack structure) and 4,872 feet (top of spillway gates), above mean sea level; during September 1939 sills of radial spillway gates were raised 1 foot, thus changing top of spillway gates from elevation 4,871 to 4,872 feet. Dead storage, 45 acre-feet (below elevation 4,818 feet), which must be deducted from the figures of total contents shown in tables to obtain usable contents. Water is used for irrigation on Ogden River project. Gage read daily at 8 a.m.; contents are as of that time.

Cooperation.- Capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,940	8,410	712	2,910	3,370	1,500	1,480	27,390	43,580	40,960	28,570	17,230
2	12,870	8,130	840	2,980	3,440	1,400	1,720	27,840	43,580	40,760	28,110	16,800
3	12,800	7,900	853	3,050	3,520	1,400	2,410	28,410	43,580	40,490	27,780	16,370
4	12,730	7,650	869	3,160	3,600	1,380	3,630	29,810	43,580	40,150	27,330	15,950
5	12,660	7,410	901	3,270	3,560	1,150	4,580	31,110	43,580	39,890	27,230	15,560
6	12,550	7,140	937	3,350	3,520	1,030	5,450	32,430	43,580	39,490	26,890	15,190
7	12,440	6,880	993	3,350	3,500	1,150	6,030	32,920	43,580	38,950	26,560	14,790
8	12,340	6,620	1,010	3,290	3,480	1,310	6,480	34,300	43,580	38,410	26,230	14,420
9	12,270	6,370	1,050	3,410	3,470	1,170	6,890	34,540	43,580	38,010	25,900	14,030
10	12,170	6,130	1,130	3,580	3,450	1,090	7,940	34,840	43,580	37,610	25,580	13,720
11	12,130	5,880	1,220	3,730	3,330	1,070	10,280	34,970	43,580	37,210	25,250	13,370
12	12,100	5,640	1,280	3,840	3,010	1,050	11,270	34,970	43,580	36,830	24,920	13,070
13	12,030	5,350	1,350	3,970	2,800	1,030	11,970	35,090	43,440	36,440	24,610	12,890
14	12,100	5,030	1,420	4,040	2,590	1,020	12,660	35,590	43,300	36,050	24,290	12,640
15	12,200	4,460	1,500	4,120	2,390	1,050	13,140	36,110	43,020	35,660	23,870	12,340
16	12,300	3,830	1,610	4,200	2,200	1,050	14,150	36,770	42,810	35,150	23,570	12,100
17	12,440	3,260	1,680	4,320	1,990	1,080	15,430	37,690	42,460	34,650	23,150	11,850
18	12,190	2,660	1,730	4,410	1,790	1,110	17,500	39,030	42,190	34,280	22,740	11,570
19	11,880	1,970	1,850	4,490	1,600	1,130	19,090	40,420	41,910	33,900	22,340	11,440
20	11,530	1,150	1,920	4,580	1,500	1,220	20,270	41,260	41,640	33,410	21,940	11,310
21	11,260	653	2,010	4,660	1,420	1,330	21,510	41,820	41,500	33,060	21,550	11,180
22	11,000	553	2,100	4,750	1,550	1,510	23,240	42,830	41,500	32,570	21,170	11,040
23	10,730	453	2,190	4,790	1,820	1,240	24,200	43,110	41,500	32,220	20,790	10,880
24	10,470	357	2,290	4,580	2,050	1,240	24,850	43,580	41,640	31,870	20,320	10,710
25	10,220	357	2,380	4,360	1,960	1,430	24,850	43,580	41,570	31,530	19,860	10,560
26	9,960	377	2,480	4,160	1,880	1,560	25,060	43,580	41,500	31,070	19,500	10,390
27	9,720	444	2,780	3,950	1,790	1,220	25,060	43,580	41,160	30,720	19,140	10,270
28	9,470	528	2,680	3,710	1,690	1,090	25,170	43,580	41,360	30,270	18,790	10,180
29	9,230	598	2,780	3,520	1,580	1,070	25,600	43,580	41,230	29,820	18,440	10,090
30	8,930	674	2,780	3,330	-	1,190	26,380	43,580	41,090	29,480	18,090	9,950
31	8,700	-	2,850	3,300	-	1,390	-	43,580	-	29,020	17,660	-

Monthly elevation and contents, water year October 1947 to September 1948

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	4,848.64	12,940	-4,530
Nov. 1	4,842.89	8,410	-7,698
Dec. 1	4,825.98	712	+2,198
Calendar year 1947...	-	-	-3,070
Jan. 1	4,833.10	2,910	+460
Feb. 1	4,834.13	3,370	-1,870
Mar. 1	4,829.25	1,500	-20
Apr. 1	4,829.19	1,480	+25,910
May 1	4,861.47	27,390	+16,190
June 1	4,872.00	43,580	-2,620
July 1	4,870.48	40,960	-12,390
Aug. 1	4,862.33	28,570	-11,340
Sept.1	4,852.97	17,230	-7,330
Oct. 1	4,844.94	9,900	-
Water year 1947-48...	-		-3,040

Ogden River below Pine View Dam, near Ogden, Utah

Location.- Water-stage recorder, lat. 41°15'17", long. 111°50'47", in NE¼SW¼ sec. 16, T. 6 N., R. 1 E., 1,500 feet downstream from Wheeler Creek, 2,000 feet downstream from Pine View Dam, and 6½ miles northeast of Ogden.

Drainage area.- 321 square miles.

Records available.- October 1937 to September 1948, not including flow of Pine View pipe line. 1895-96, January 1904 to October 1912, October 1931 to September 1937 at same site, including flow of pipe line, published as Ogden River near Ogden.

Extremes.- Maximum discharge during year, 1,590 second-feet May 20 (gage height, 5.84 feet); minimum not determined, occurred during period of ice effect.
1937-48: Maximum discharge, 2,290 second-feet June 7, 1945 (gage height, 6.73 feet); minimum, 0.3 second-foot at times when reservoir gates were closed.

Remarks.- Records good except those for period of ice effect, which are fair. Flow regulated by Pine View Reservoir (see preceding page). Pine View pipe line diverts water above station for use in irrigation and power development. Diversions for irrigation and municipal supply above Pine View Reservoir.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.9	4.0	2.8	1.8			9.1	755	445	21	23	33
2	4.9	4.2	3.1	1.8			18	647	445	20	21	31
3	4.9	4.4	2.3	1.9			33	330	460	20	14	23
4	3.9	4.2	*2.2	1.7			23	222	456	f23	21	23
5	3.2	4.2	2.0	5.5			18	362	445	26	21	23
6	3.2	4.0	1.9	5.1			18	860	254	46	20	23
7	3.7	4.4	1.8	4.2		1.3	14	1,167	199	57	20	23
8	4.0	4.9	1.7	*12			14	1,450	196	54	20	23
9	4.0	4.7	1.7	9.7			23	1,440	190	43	20	22
10	4.2	4.2	1.7	6.0			82	1,420	138	42	21	18
11	4.4	4.2	1.7	4.7		(*)	46	1,150	75	46	25	18
12	4.0	3.6	1.7	3.7			93	1,040	45	50	25	18
13	3.9	3.7	2.5	2.8			207	774	43	57	25	18
14	3.9	126	2.8				346	726	42	47	25	18
15	3.9	180	1.9				355	839	39	56	25	18
					1.3							
16	3.9	174	1.9			1.4	413	860	37	54	25	18
17	4.0	166	2.2			1.7	568	885	36	45	24	18
18	4.0	176	1.8			1.8	551	1,170	35	45	24	15
19	3.9	247	1.6			1.9	547	1,540	33	43	24	11
20	3.9	160	2.2			1.7	568	1,470	31	42	24	11
21	3.9	2.0	1.7	1.3		1.6	638	1,030	31	39	24	11
22	4.0	1.6	1.7			2.0	953	964	29	31	24	12
23	4.0	1.4	1.6			3.9	1,100	804	28	33	24	8.7
24	4.0	1.3	2.5			7.1	1,150	741	27	33	24	8.1
25	3.9	1.3	2.9			4.9	1,040	f605	26	31	24	6.0
26	3.9	1.3	2.3			3.7	1,100	f581	25	31	24	2.4
27	3.6	1.4	3.6			4.0	1,080	829	24	24	24	2.3
28	3.7	1.4	5.8			5.8	958	932	23	23	24	2.3
29	5.6	1.4	2.2			8.7	948	849	22	23	23	2.3
30	4.9	1.5	1.7		-	8.4	844	506	21	19	24	2.3
31	4.2	-	1.8	(*)	-	6.3	-	438	-	23	26	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	126.4	5.6	3.2	4.08	251
November	1,298.3	247	1.3	43.3	2,580
December	69.3	5.8	1.6	2.24	137
Calendar year 1947	12,289.6	543	1.3	33.7	24,370
January	84.3	12	-	2.72	167
February	37.7	-	-	1.3	75
March	84.4	8.7	-	2.72	167
April	13,757.1	1,150	9.1	459	27,290
May	27,386	1,540	222	883	54,320
June	3,900	460	21	130	7,740
July	1,147	57	19	37.0	2,280
August	712	26	14	23.0	1,410
September	462.4	33	2.3	15.4	917
Water year 1947-48	49,064.9	1,540	-	134	97,330

* Winter discharge measurement made on this day.
f Fragmentary record; gage heights partly estimated.
Note.- Stage-discharge relation affected by ice Dec. 31, Jan. 1, Jan. 14 to Mar. 15 (no gage-height record Feb. 3-27); discharge computed on basis of 2 discharge measurements, observer's notes, and weather records.

Jordan River at Narrows, near Lehi, Utah

Location.- Water-stage recorders, lat. 40°26'40", long. 111°55'20", in SE¼NW¼ sec. 26, T. 4 S., R. 1 W., at Narrows, 5½ miles northwest of Lehi and 7½ miles downstream from Utah Lake.

Drainage area.- 2,960 square miles, including 280 square miles in Cedar Valley.

Records available.- October 1934 to September 1948. May to December 1904 and July 1913 to September 1934 at outlet of Utah Lake, 7½ miles upstream.

Average discharge.- 35 years (1913-48), 359 second-feet.

Extremes.- Maximum daily discharge during year, 918 second-feet July 21; minimum daily, 1 second-foot Feb. 15-17.
1913-48: Maximum daily discharge, 1,370 second-feet June 8, 1922 (gage height, 7.78 feet, site and datum then in use); no flow at times when gates were closed.

Remarks.- Records good. They represent combined flow of Jordan River, Utah & Salt Lake Canal, and East Jordan Canal. Flow completely regulated by gates and pumps at outlet of Utah Lake, pumps at Pelican Point, and diversion dam at Narrows.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	513	22	20	20	29	142	350	294	754	815	764	835
2	518	22	20	21	29	139	363	293	715	852	772	836
3	513	21	20	21	28	132	372	338	530	887	789	837
4	518	22	20	21	28	128	336	347	584	889	814	827
5	513	22	20	22	28	139	349	548	604	894	644	823
6	515	22	19	22	27	139	333	686	693	913	575	829
7	508	21	19	22	26	137	341	729	707	909	617	814
8	462	21	19	22	26	137	349	656	649	910	613	812
9	444	21	19	22	25	128	360	609	680	907	596	790
10	402	21	19	22	19	121	333	642	675	904	667	763
11	252	21	20	22	18	124	336	660	688	904	722	755
12	152	21	19	22	18	125	339	658	727	907	756	757
13	88	21	19	22	19	126	353	655	746	896	802	757
14	82	21	20	23	8.4	125	339	649	745	904	817	756
15	45	21	20	23	1	125	341	667	743	898	815	756
16	18	21	20	23	1	126	346	658	745	905	831	758
17	21	21	20	23	1	127	342	677	737	906	845	758
18	21	20	20	24	24	126	292	680	748	918	839	738
19	21	20	20	24	17	127	359	703	750	917	812	652
20	21	20	19	27	86	135	358	744	781	889	815	564
21	21	20	18	28	258	147	374	749	628	900	821	554
22	57	20	18	28	245	155	353	742	439	900	837	564
23	54	20	18	29	178	151	302	755	373	898	839	566
24	19	20	18	29	222	149	284	761	354	899	813	553
25	13	20	18	29	267	154	323	755	394	848	827	517
26	17	20	18	28	192	147	347	758	498	818	823	502
27	22	20	19	30	141	148	357	757	476	811	822	524
28	22	20	19	30	141	147	397	753	503	780	825	501
29	22	20	19	30	141	148	318	752	646	827	834	514
30	22	20	19	30	-	178	296	748	744	801	835	561
31	22	-	19	29	-	321	-	753	-	772	833	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,918	518	13	191	11,740
November	622	22	20	20.7	1,230
December	595	20	18	19.2	1,180
Calendar year 1948	112,791.5	887	1.4	308	223,700
January	768	30	20	24.8	1,520
February	2,243.4	258	1	77.4	4,450
March	4,453	321	121	144	8,830
April	10,242	397	284	341	20,300
May	20,176	761	293	651	40,020
June	19,056	781	354	635	37,800
July	27,179	918	772	877	53,910
August	24,014	845	575	775	47,630
September	20,773	837	501	692	41,200
Water year 1948-49	136,039.4	918	1	373	269,800

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Jordan River at Salt Lake City, Utah

Location.- Water-stage recorder, lat. 40°44', long. 111°55', in SW¼SW¼ sec. 14, T. 1 S., R. 1 W., a quarter of a mile downstream from highway bridge on Twenty-first South Street, Salt Lake City, and 2 miles downstream from Mill Creek. Datum of gage is 4,220.73 feet above mean sea level (datum of 1929).

Records available.- December 1942 to September 1948.

Extremes.- Maximum discharge during year, 219 second-feet Sept. 20 (gage height, 4.07 feet); minimum daily, 44 second-feet May 2-5, 23.

Maximum combined discharge during year (Jordan River and Surplus Canal), 937 second-feet June 3; minimum daily, 182 second-feet July 7.

1942-48: Maximum discharge, 384 second-feet June 3, 1944 (gage height, 5.55 feet); minimum daily, 13 second-feet Apr. 9, 13, 14, 1943, July 19, 1944.

Maximum combined discharge (Jordan River and Surplus Canal), 1,190 second-feet June 3, 1944; minimum daily, 145 second-feet May 18, 1946.

Remarks.- Records good. Flow regulated by gates and pumps at outlet of Utah Lake. Many diversions above station for irrigation and industrial and municipal water supplies. Surplus Canal diverts water 1,000 feet above station (see p. 112). For records of combined flow see following page.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	173	165	129	143	150	140	173	d52	66	123	164	166
2	166	163	132	143	148	148	168	d44	94	128	168	166
3	171	164	129	144	144	148	167	d44	129	129	158	170
4	169	165	129	145	144	145	161	d44	103	123	152	171
5	173	166	129	150	144	145	169	d44	76	120	171	172
6	176	168	128	152	145	145	155	d52	90	125	192	178
7	177	170	128	152	144	145	154	62	114	128	173	178
8	180	176	130	154	140	146	148	58	99	122	169	183
9	179	188	131	156	143	148	147	60	114	123	168	182
10	177	183	130	152	144	151	150	53	116	114	164	187
11	192	179	127	152	139	150	143	a50	90	115	161	188
12	184	176	132	150	138	148	138	a50	96	117	154	190
13	173	174	145	148	141	150	138	a49	97	127	150	196
14	192	173	146	146	141	150	132	a47	113	168	141	192
15	185	168	147	146	138	152	129	45	122	160	119	190
16	172	168	148	146	140	150	125	45	122	154	140	187
17	162	171	148	146	140	151	125	52	125	138	142	188
18	160	136	146	146	140	152	149	51	123	134	137	192
19	158	115	145	144	142	152	134	51	123	131	137	204
20	162	126	146	143	152	157	122	52	132	148	131	215
21	183	132	145	145	150	158	123	46	145	164	119	208
22	190	131	146	147	162	162	125	46	180	170	118	205
23	183	129	146	151	160	168	123	44	152	169	138	196
24	183	129	144	154	154	162	104	47	122	185	142	195
25	182	127	141	153	158	160	74	51	104	199	143	193
26	178	130	141	146	167	162	70	53	94	196	143	203
27	173	129	141	146	165	160	66	55	107	185	148	204
28	171	127	142	152	138	160	60	67	111	176	145	203
29	172	130	145	148	125	160	66	68	121	179	145	205
30	182	129	145	148	-	166	69	55	126	177	151	198
31	168	-	142	149	-	171	-	60	-	159	155	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,446	192	158	176	10,800
November	4,587	188	115	153	9,100
December	4,303	148	127	139	8,530
Calendar year 1947	52,017	222	76	143	103,200
January	4,597	186	143	148	9,120
February	4,236	167	125	146	8,400
March	4,762	171	140	154	9,450
April	3,827	181	60	128	7,590
May	1,597	68	44	51.5	3,170
June	3,406	180	66	114	6,760
July	4,586	199	114	148	9,100
August	4,628	182	118	149	9,180
September	5,705	215	166	190	11,320
Water year 1947-48	51,680	215	44	141	102,500

a No gage-height record; discharge computed on basis of records for Surplus Canal at Salt Lake City.

d Doubtful gage-height record; discharge computed on basis of records for Surplus Canal at Salt Lake City.

Combined discharge, in second-feet, of Jordan River and Surplus Canal at Salt Lake City, Utah, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	316	280	242	218	212	224	391	297	556	228	300	251
2	280	277	251	220	209	220	414	257	668	228	315	248
3	279	277	249	221	206	218	433	229	870	227	287	261
4	275	268	243	222	208	215	474	206	831	219	257	260
5	268	279	247	228	209	215	462	204	671	225	300	265
6	264	284	244	232	211	215	449	244	599	220	344	283
7	260	290	243	232	214	211	460	354	625	182	350	289
8	288	309	239	234	210	213	440	346	588	192	329	300
9	278	349	244	234	213	217	439	364	553	206	332	304
10	269	325	241	226	214	225	461	322	576	208	303	309
11	302	308	237	223	209	221	455	303	550	224	288	317
12	284	300	230	219	208	217	446	294	499	214	265	321
13	273	292	228	214	211	219	446	266	459	226	254	337
14	292	289	227	209	211	220	437	205	415	273	237	327
15	285	263	226	208	208	224	439	200	379	281	220	338
16	272	278	227	207	210	216	436	226	302	284	217	321
17	262	288	226	206	210	218	467	334	257	258	222	320
18	260	286	220	206	210	220	542	386	260	251	208	341
19	248	290	221	204	212	217	503	389	261	238	212	380
20	252	284	221	204	228	233	502	475	265	289	212	398
21	283	277	220	207	222	236	533	517	441	292	212	381
22	290	271	216	208	301	244	588	535	661	271	213	378
23	283	264	220	213	359	260	608	502	583	273	224	343
24	279	269	221	218	317	244	521	549	469	311	237	350
25	270	269	216	218	305	243	431	598	414	353	243	341
26	270	250	228	209	337	248	431	619	356	334	236	357
27	270	243	217	210	355	241	431	652	363	298	246	363
28	259	248	216	220	286	238	386	721	339	278	234	353
29	262	245	219	213	232	237	408	693	273	283	235	346
30	309	244	220	211	-	253	385	583	292	289	248	339
31	287	-	217	211	-	292	-	579	-	290	251	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	8,569	316	248	276	17,000
November	8,396	349	243	280	16,650
December	7,116	251	216	230	14,110
Calendar year 1947	100,242	724	166	275	198,800
January	6,705	234	204	216	13,300
February	6,937	359	206	239	13,760
March	7,114	292	211	229	14,110
April	13,818	608	385	461	27,410
May	12,449	721	200	402	24,700
June	14,375	870	257	479	28,510
July	7,945	353	182	256	15,760
August	8,031	350	212	259	15,930
September	9,721	398	248	324	19,280
Water year 1947-48	111,176	870	182	304	220,500

Spanish Fork at Thistle, Utah

Location.- Water-stage recorder, lat. 40°00', long. 111°30', in SW¼ sec. 28, T. 9 S., R. 4 E., at Thistle, 600 feet downstream from confluence of Soldier Fork and Thistle Creek and 2½ miles upstream from Diamond Fork.

Drainage area.- 490 square miles.

Records available.- January 1908 to September 1925 and October 1936 to September 1948 in reports of Geological Survey. January 1933 to September 1948 in reports of Spanish Fork water commissioner.

Average discharge.- 32 years (1908-25, 1933-48), 94.7 second-feet.

Extremes.- Maximum discharge during year, 360 second-feet June 26 (gage height, 3.65 feet); minimum, 21 second-feet Sept. 14.
1908-25, 1933-48: Maximum discharge observed, 1,250 second-feet May 26, 1922; minimum observed, 10 second-feet Sept. 17, 22, 25, Oct. 25, 1934.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	40	51	b29	35	47	80	159	a131	58	34	29
2	33	40	51	35	36	46	116	143	a125	59	34	28
3	32	40	50	36	*41	46	116	137	a119	57	31	28
4	32	38	50	38	b36	b40	116	155	a113	51	28	27
5	31	41	49	40	b36	b38	87	168	109	48	32	26
6	30	39	50	*39	39	b41	79	180	102	48	42	26
7	30	39	50	41	41	46	67	206	100	47	35	26
8	28	41	48	44	b32	*50	66	197	94	44	49	27
9	27	43	46	45	b40	47	68	176	85	42	38	26
10	28	46	*38	45	42	44	97	163	74	43	35	29
11	33	46	36	44	b35	41	95	153	70	38	34	28
12	32	42	41	42	b29	48	73	147	74	39	32	26
13	32	38	b33	b35	b29	50	72	153	74	36	32	24
14	32	45	b37	b32	b37	68	82	184	68	37	31	23
15	34	42	b39	b36	41	54	89	204	66	37	32	23
16	35	46	41	b38	42	49	97	224	57	34	34	24
17	35	45	b37	b38	50	54	120	261	57	33	30	27
18	35	45	b39	40	84	59	131	288	58	34	31	28
19	35	46	39	b32	129	62	111	281	54	35	32	34
20	34	48	40	b32	87	53	118	264	57	39	30	31
21	39	41	42	b36	60	46	137	252	73	34	31	31
22	44	35	43	41	62	62	151	233	72	37	32	29
23	42	34	41	46	57	110	137	210	66	36	31	27
24	41	36	b36	49	53	174	118	199	64	37	29	28
25	40	43	b36	43	55	92	111	187	64	45	30	31
26	39	45	38	b35	66	57	104	186	108	41	29	31
27	39	49	38	b28	70	68	102	180	f78	35	29	32
28	39	47	38	b29	54	116	116	166	f68	32	26	32
29	40	49	39	b32	49	124	170	153	66	31	29	32
30	41	49	39	b34	-	95	170	145	62	31	31	30
31	40	-	b30	34	-	70	-	139	-	30	31	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,084	44	27	35.0	2,150
November	1,276	49	34	42.5	2,530
December	1,285	51	-	41.5	2,550
Calendar year 1947	29,518	451	27	80.9	58,550
January	1,168	49	-	37.7	2,320
February	1,467	129	-	50.6	2,910
March	1,997	174	-	64.4	3,960
April	3,196	170	66	107	6,340
May	5,890	288	137	190	11,680
June	2,408	131	54	80.3	4,780
July	1,248	59	30	40.3	2,480
August	1,004	49	26	32.4	1,990
September	843	34	23	28.1	1,670
Water year 1947-48	22,866	288	23	62.5	45,360

Peak discharge (base, 330 sec.-ft.).- June 26 (4:45 a.m.) 360 sec.-ft.
* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for station at Castilla.
b Stage-discharge relation affected by ice.
f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

Spanish Fork at Castilla, Utah

Location.- Water-stage recorder, lat. 40°03'00", long. 111°32'45", in SW¼NE¼ sec. 12, T. 9 S., R. 3 E., 600 feet upstream from outlet of Gold Springs, 1 mile upstream from diversion dam of Bureau of Reclamation, 1¼ miles northwest of Castilla, and 3 miles downstream from Diamond Fork.

Drainage area.- 670 square miles.

Records available.- May 1919 to September 1925 and October 1936 to September 1948 in reports of Geological Survey. January 1933 to September 1948 in reports of Spanish Fork water commissioner.

Average discharge.- 21 years (1919-25, 1933-48), 214 second-feet.

Extremes.- Maximum discharge during year, 664 second-feet July 11 (gage height, 5.25 feet); minimum recorded, 26 second-feet Feb. 8, but may have been less during period of no gage-height record.
1919-25, 1933-48: Maximum daily discharge, 1,520 second-feet May 22, 1920; minimum, 24 second-feet Jan. 19, 1943.

Remarks.- Records good except those for periods of doubtful or no gage-height record, which are fair. Several small diversions above station for irrigation. Flow is materially increased by water diverted by tunnel from Strawberry Reservoir (capacity, 250,000 acre-feet) in Colorado River Basin into Diamond Fork for irrigation in Jordan River Basin (see p. 96).

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	166	65	74	42	56	71	126	329	433	308	243	358
2	166	65	76	50	58	71	184	294	498	367	243	349
3	158	65	74	54	68	71	184	286	491	401	253	349
4	160	62	74	58	58	62	183	313	433	436	266	335
5	169	66	72	60	58	60	140	332	376	410	278	313
6	171	63	74	59	68	64	126	361	289	460	263	268
7	196	65	74	62	66	72	107	413	276	523	187	253
8	217	67	71	68	51	76	105	388	310	597	160	243
9	221	68	68	70	64	71	108	341	382	612	114	231
10	229	70	56	68	66	68	156	316	477	616	118	231
11	243	70	52	68	56	64	151	299	512	648	130	243
12	173	65	58	62	46	74	120	289	498	574	147	231
13	136	55	50	52	46	80	116	346	470	555	187	217
14	106	70	55	47	60	111	134	398	467	512	221	210
15	75	65	58	54	65	86	155	420	498	440	243	217
16	61	70	59	56	67	76	184	329	523	417	284	203
17	59	68	54	56	80	85	217	508	548	394	324	203
18	59	68	58	64	135	94	238	516	555	338	364	205
19	58	72	55	46	205	98	194	474	537	338	379	231
20	57	70	58	46	136	84	221	516	477	352	391	212
21	66	59	60	58	99	74	268	508	450	327	373	182
22	74	51	62	65	100	100	291	530	338	321	382	171
23	78	47	59	76	88	185	266	555	260	273	335	171
24	67	52	52	79	79	290	236	570	250	221	376	187
25	64	66	52	70	82	150	224	559	246	196	343	201
26	63	70	54	55	104	91	201	616	271	219	324	201
27	63	72	54	45	116	110	194	597	191	291	318	196
28	63	71	54	47	84	190	219	581	175	310	318	175
29	66	74	58	50	76	205	321	534	189	289	318	166
30	69	74	58	54	-	151	343	404	238	284	321	153
31	66	-	44	54	-	118	-	382	-	256	341	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	3,619	243	57	117	7,180
November	1,965	74	47	65.5	3,900
December	1,877	76	44	60.5	3,720
Calendar year 1947	73,663	608	44	202	146,100
January	1,795	79	42	57.9	3,560
February	2,337	205	46	80.6	4,640
March	3,202	290	60	103	6,350
April	5,712	343	105	190	11,330
May	15,304	616	286	429	26,390
June	11,658	555	175	339	23,120
July	12,285	648	196	336	24,370
August	8,544	391	114	276	16,950
September	6,905	385	153	230	13,700
Water year 1947-48	73,203	648	42	200	145,210

Note.- No gage-height record Jan. 27 to Feb. 2, Feb. 12-19, Mar. 11 to Apr. 12, doubtful gage-height record Oct. 15 to Nov. 10; discharge computed on basis of weather records and records for Spanish Fork at Thistle and Diamond Fork near Thistle.

Spanish Fork near Lake Shore, Utah

Location.- Water-stage recorder and low-water timber control, lat. 40°10', long. 111°44', in SE¼SE¼ sec. 32, T. 7 S., R. 2 E., 400 feet downstream from bridge, 1 mile upstream from mouth, and 2½ miles north of Lake Shore.

Drainage area.- 700 square miles.

Records available.- January 1938 to September 1948. December 1903 to July 1907 and March 1909 to September 1925 at site 3 miles upstream.

Average discharge.- 27 years (1904-6, 1909-19, 1920-25, 1938-48), 90.2 second-feet.

Extremes.- Maximum discharge during year, 338 second-feet Apr. 22 (gage height, 7.25 feet); no flow on several days.
1903-7, 1909-25, 1938-48: Maximum discharge observed, 1,430 second-feet May 11, 1909; practically no flow at times during irrigation season of most years.

Remarks.- Records fair except those for periods of no gage-height record, which are poor. Flow regulated by many diversions for irrigation and hydroelectric power plant. 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.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	61	82	b64	72	b82	160	272	0.1		0.8	0.2
2	1.2	74	87	b68	*76	b82	190	243	.4		1.0	.2
3	2.9	74	82	72	77	b82	200	178	.7		.2	.2
4	3.0	74	79	74	73	b74	200	148	1.4		.2	.4
5	2.9	74	79	77	80	b70	160	129	1.9		.5	.6
6	3.0	78	80	78	78	b74	140	76	2.7		1.3	.5
7	3.1	75	85	*78	78	b80	120	45	3.1	0.5	.7	.1
8	2.8	74	84	84	68	b84	115	27	3.6		.5	0
9	1.0	76	*78	89	74	b82	130	16	4.6		.4	.4
10	3.0	74	76	86	76	b78	160	9.0	5.2		.3	.4
11	9.2	76	63	85	70	*b74	160	5.8	4.8		.6	.3
12	19	76	74	81	62	75	140	3.7	4.5		.5	.3
13	16	68	67	80	62	95	126	2.1	5.5		.5	.4
14	21	79	70	72	70	108	143	2.5	5.1		.6	.4
15	43	82	76	73	b74	118	141	2.0	2.6	.5	.6	.4
16	49	82	74	75	82	93	150	1.7	3.1	.3	.3	.5
17	52	82	72	76	108	98	220	1.0	.8	.3	.2	.6
18	56	75	74	82	111	95	271	.8	1.1	.4	.1	.6
19	56	80	70	72	185	114	229	1.2	1.3	1.0	.2	.6
20	58	78	72	b68	152	104	234	.6	1.2	1.1	.2	.7
21	62	73	76	b68	112	89	267	.6	6.9	1.4	.1	.7
22	86	66	78	b80	102	93	305	.4	9.6	1.6	.7	.7
23	68	61	74	87	106	130	277	.3	6.9	1.7	.9	.8
24	65	65	71	95	93	220	220	.3	5.1	1.6	.9	.7
25	63	75	70	86	94	240	219	.3	5.6	1.4	.6	.8
26	61	79	66	76	102	130	174	.6	6.1	1.6	.3	1.0
27	61	82	72	b68	129	170	158	3.7	7.4	1.5	.3	1.2
28	60	80	71	b60	100	210	166	.2	1.0	.9	.3	1.4
29	61	82	74	b64	94	220	272	0	.9	.5	.2	1.5
30	69	82	75	b66	-	180	296	.2	.5	.4	.2	1.8
31	65	-	67	b66	-	140	-	.1	-	.6	.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,123.6	86	0.5	36.2	2,230
November	2,257	82	61	75.2	4,480
December	2,318	87	63	74.8	4,600
Calendar year 1947	23,304.6	360	0	63.8	46,240
January	2,348	95	60	75.7	4,660
February	2,660	185	62	91.7	5,280
March	3,584	240	70	116	7,110
April	5,743	305	115	191	11,390
May	1,170.9	272	0	37.8	2,320
June	103.7	9.6	.1	3.46	206
July	23.8	1.7	.3	.77	47
August	14.5	1.3	.1	.47	29
September	18.4	1.8	0	.61	36
Water year 1947-48	21,364.9	305	0	58.4	42,390

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.- No gage-height record Feb. 1, 2, 8, 9, 11-14, Mar. 24 to Apr. 12, May 6-10, July 1-14; discharge computed on basis of weather records, records for station at Castilla, or interpolated.

Diamond Fork near Thistle, Utah

Location.- Water-stage recorder, lat. 40°02'15", long. 111°29'20", in NW¼NE¼ sec. 16, T. 9 S., R. 4 E., 1½ miles upstream from mouth, 3 miles north of Thistle, and 3½ miles downstream from Little Diamond Creek.

Drainage area.- 155 square miles.

Records available.- April 1940 to September 1948, December 1907 to September 1917 at site 1 1/3 miles downstream.

Average discharge.- 11 years (1914-17, 1940-48), 107 second-feet

Extremes.- Maximum discharge during year, 586 second-feet July 10 (gage height, 3.75 feet); minimum, 1.4 second-feet Nov. 13, 22 (gage height, 1.40 feet).
1907-17, 1940-48: Maximum discharge observed, 735 second-feet May 9, 1909; minimum, that of Nov. 13, 22, 1947.

Remarks.- Records fair. Small diversions above station for irrigation. Flow is materially increased by water diverted by tunnel from Strawberry Reservoir in Colorado River Basin (capacity, 250,000 acre-feet) for irrigation in Jordan River Basin (see following page).

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	123	15	14	b7.0	b12	14	27	139	282	241	205	300
2	123	15	15	6.5	13	16	36	125	347	290	202	292
3	117	15	14	10	*13	18	46	117	344	317	215	292
4	119	14	14	13	b12	b14	44	128	290	350	233	279
5	128	15	14	14	b13	b13	37	132	238	319	241	254
6	132	14	14	*13	14	b15	34	141	152	375	202	220
7	159	16	14	13	14	b16	28	159	152	444	123	210
8	180	16	14	14	b12	*17	27	152	190	517	81	200
9	183	15	12	14	b13	15	37	136	279	547	49	185
10	185	14	*b11	14	14	14	62	123	384	585	71	180
11	188	16	11	13	b12	b13	36	119	429	526	89	190
12	115	*13	12	11	b10	b16	30	115	412	502	113	178
13	85	9.2	7.5	b9.0	b10	18	*32	161	392	493	159	164
14	52	17	9.2	b8.0	b13	20	45	178	395	481	198	168
15	26	15	14	b9.0	b15	17	55	180	423	423	212	176
16	16	15	14	b10	16	14	62	220	435	398	246	161
17	14	15	11	11	17	15	79	200	444	370	287	161
18	14	14	14	b12	20	18	85	176	447	325	319	166
19	13	15	10	b8.0	26	17	69	168	432	314	328	178
20	13	15	13	b8.0	20	14	81	225	381	317	344	161
21	17	11	14	b11	15	12	104	252	330	298	322	132
22	20	6.5	14	14	19	18	113	292	228	287	330	125
23	16	6.5	13	15	18	28	104	336	173	233	290	128
24	16	b9.0	12	17	16	32	94	372	171	159	333	148
25	14	b12	10	14	17	22	85	378	166	128	300	157
26	14	14	11	b10	24	18	76	420	148	168	282	161
27	14	14	10	b7.0	23	23	72	409	104	246	268	152
28	14	14	10	b8.0	17	34	85	409	102	276	276	134
29	16	14	13	b9.0	16	32	132	378	123	260	268	125
30	18	14	b12	b10	-	26	143	252	178	254	263	117
31	16	-	b8.0	b11	-	20	-	238	-	225	284	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,160	188	13	69.7	4,280
November	408.2	17	6.5	13.6	810
December	378.7	15	7.5	12.2	751
Calendar year 1947	40,131.2	529	6.5	110	79,590
January	343.5	17	6.5	11.1	681
February	454	26	10	15.7	900
March	577	34	12	18.6	1,140
April	1,958	143	26	65.3	3,880
May	6,830	420	115	220	13,550
June	8,571	447	102	286	17,000
July	10,648	565	128	343	21,120
August	7,133	344	49	230	14,150
September	5,492	300	117	183	10,890
Water year 1947-48	44,953.4	565	6.5	123	89,150

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

Strawberry tunnel at West Portal, near Thistle, Utah

Location.- Water-stage recorder and rectangular weir, lat. 40°09'40", long. 111°14'40", in sec. 34, T. 7 S., R. 6 E., 40 feet downstream from west portal of tunnel and 18 miles northeast of Thistle.

Records available.- October 1945 to September 1948. October 1922 to September 1925 and May 1932 to September 1945 in Spanish Fork water commissioner's reports and files of Salt Lake City district office, Geological Survey.

Extremes.- Maximum daily discharge during year, 547 second-feet July 9; minimum daily, 4.5 second-feet (seepage) Oct. 15 to Apr. 15.
1922-25, 1932-48: Maximum daily discharge, 595 second-feet July 9, 1923; minimum daily observed, 4 second-feet many times when no water is being diverted from Strawberry Reservoir.

Remarks.- Records good. Records show water diverted from Strawberry Reservoir (in Colorado River Basin) plus tunnel seepage for use on lands of Strawberry project.

Cooperation.- Records furnished by Spanish Fork Water Users' Association.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	118							6	245	232	195	318
2	117							6	306	273	195	301
3	106							6	288	306	210	306
4	115							6	221	361	228	288
5	126							6	173	306	220	259
6	129							6	84	381	185	218
7	182							6	108	451	96	202
8	180						4.5	6	149	540	50	194
9	180							6	248	547	50	181
10	177							6	349	541	68	184
11	164							6	378	497	84	202
12	89							15	351	489	111	181
13	68							67	339	487	166	167
14	28							56	347	473	196	173
15	4.5	4.5	4.5	4.5	4.5	4.5		54	383	416	214	179
16	4.5							85	407	396	257	156
17	4.5							31	429	374	297	162
18	4.5							6	431	326	322	165
19	4.5							28	423	305	329	176
20	4.5							97	363	317	347	155
21	4.5							129	303	285	323	122
22	4.5							192	196	279	327	122
23	4.5						5	243	144	215	282	123
24	4.5							280	147	136	339	148
25	4.5							293	141	115	285	156
26	4.5							352	103	187	273	152
27	4.5							345	66	253	269	142
28	4.5							340	79	274	280	120
29	4.5							309	104	252	267	115
30	4.5				-			177	173	249	270	102
31	4.5	-			-		-	200	-	210	299	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,835.5	180	4.5	59.2	3,640
November	135.0	-	-	4.5	268
December	139.5	-	-	4.5	277
Calendar year 1947	31,069.5	514	-	85.1	61,620
January	139.5	-	-	4.5	277
February	130.5	-	-	4.5	259
March	139.5	-	-	4.5	277
April	142.5	-	-	4.75	283
May	3,365	352	6	109	6,670
June	7,478	431	66	249	14,830
July	10,473	547	115	338	20,770
August	7,034	347	50	227	13,950
September	5,469	318	102	182	10,850
Water year 1947-48	36,481	547	-	99.7	72,350

Hobble Creek near Springville, Utah

Location.- Water-stage recorder, lat. 40°09'30", long. 111°31'30", in NE¼ sec. 6, T. 8 S., R. 4 E., 1,000 feet downstream from Springville hydroelectric plant, 1½ miles downstream from Right Fork, and 4 miles southeast of Springville.

Drainage area.- 105 square miles.

Records available.- March 1904 to December 1916 (1906-7, gage heights only), April 1945 to September 1948.

Average discharge.- 13 years (1904-5, 1907-16, 1945-48), 57.1 second-feet.

Extremes.- Maximum discharge during year, 378 second-feet Apr. 21 (gage height, 4.06 feet); minimum, 6.9 second-feet Aug. 12.
1904-9, 1909-16, 1945-48: Maximum discharge observed, 824 second-feet Apr. 29, 1916 (gage height, 6.40 feet, site and datum then in use); minimum, 1.4 second-feet Feb. 12, 1946.

Remarks.- Records good except those for periods of ice effect or doubtful gage-height record, which are fair. Several diversions above station for irrigation. Flow regulated by hydroelectric plant at times during low stages.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	24	28	22	21	22	25	228	76	34	18	16
2	18	25	29	23	21	23	26	184	74	33	16	16
3	19	24	28	23	22	23	28	171	78	29	18	16
4	20	24	28	23	21	21	32	181	73	26	18	16
5	21	24	26	24	22	22	31	190	62	26	19	15
6	19	24	27	24	22	22	32	198	58	26	20	15
7	18	24	27	23	22	23	32	212	58	25	19	16
8	20	25	26	24	21	23	32	184	54	22	19	17
9	21	25	26	24	22	22	35	157	52	21	16	18
10	22	24	25	24	22	22	57	139	50	22	17	16
11	25	25	25	24	22	b21	52	122	47	17	17	16
12	25	24	25	23	b21	22	45	111	47	19	18	17
13	25	24	25	22	22	22	43	112	45	17	17	17
14	25	24	25	22	22	23	49	122	45	19	17	15
15	25	24	25	22	22	23	70	130	40	18	17	15
16	24	24	25	22	23	22	125	144	35	19	15	17
17	24	24	25	22	24	23	181	166	35	19	16	18
18	25	24	25	23	24	23	184	177	35	19	19	19
19	25	25	24	20	24	23	161	161	32	19	20	18
20	24	25	24	21	24	23	186	150	36	20	19	18
21	25	24	24	22	24	21	268	130	40	20	16	18
22	25	24	24	22	24	23	259	124	37	19	17	18
23	25	23	24	23	24	24	216	114	35	18	17	17
24	25	24	24	23	24	25	175	111	34	19	17	17
25	25	24	24	23	23	24	150	108	34	20	17	15
26	24	24	24	20	23	24	127	98	34	18	16	15
27	24	25	24	20	24	25	127	92	34	17	16	15
28	24	25	23	20	24	25	188	89	34	17	16	19
29	25	25	24	20	23	26	287	92	34	15	15	19
30	26	25	23	20	-	26	257	81	34	17	17	19
31	25	-	20	21	-	25	-	81	-	18	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	717	26	18	23.1	1,420
November	729	25	23	24.3	1,450
December	776	29	20	25.0	1,540
Calendar year 1947	16,113	244	16	44.1	31,950
January	689	24	20	22.2	1,370
February	657	24	21	22.7	1,300
March	716	26	21	23.1	1,420
April	3,480	287	25	116	6,900
May	4,359	228	81	141	8,650
June	1,382	78	32	46.1	2,740
July	648	34	15	20.9	1,290
August	536	20	15	17.3	1,060
September	503	19	15	16.8	998
Water year 1947-48	15,192	287	15	41.5	30,140

Peak discharge (base, 120 sec.-ft.).- Apr. 21 (9:15 p.m.) 378 sec.-ft.; Apr. 29 (2:30 a.m.) 325 sec.-ft.

b Stage-discharge relation affected by ice.

Note.- Doubtful gage-height record June 15-30; discharge computed on basis of trend of fragmentary gage-height record and records for Deer Creek near Wildwood.

Provo River near Charleston, Utah

Location.- Water-stage recorder, lat. 40°29', long. 111°28', in SW¼ sec. 11, T. 4 S., R. 4 E., 900 feet upstream from Snake Creek and 1½ miles northeast of Charleston.

Records available.- October 1945 to September 1948. October 1938 to September 1945 collected by Bureau of Reclamation, available in files of Salt Lake City district office, Geological Survey.

Extremes.- Maximum discharge during year, 1,160 second-feet May 20 (gage height, 3.45 feet); minimum, 29 second-feet Aug. 27.
1945-48 Maximum discharge, 1,620 second-feet May 28, 1947; maximum gage height, 3.76 feet Apr. 21, 1946; minimum discharge, 25 second-feet Aug. 13, 1946.

Remarks.- Records good except those for periods of ice effect or indefinite stage-discharge relation, which are fair. Many diversions above station for irrigation. Records include flow of Weber-Provo diversion canal (see pp.103,104). Flow also slightly affected by small lakes near headwaters that serve as reservoirs.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	83	180	83	107	96	142	354	456	43	32	30
2	53	81	195	112	*105	94	205	310	763	41	32	30
3	52	84	164	129	103	101	286	268	506	38	32	30
4	52	92	154	126	98	81	221	272	396	38	35	30
5	52	101	154	129	98	84	158	242	344	40	41	30
6	51	101	158	126	101	88	170	209	300	40	56	30
7	48	103	151	121	101	92	132	290	286	43	40	31
8	48	116	145	*142	90	101	132	300	277	43	53	34
9	45	129	142	158	107	96	180	250	264	44	46	34
10	45	119	107	139	103	*92	478	202	221	43	43	34
11	49	121	119	126	92	77	221	180	198	41	41	32
12	49	114	121	121	b92	92	167	151	198	38	40	32
13	48	98	109	94	b96	101	151	145	177	36	40	33
14	48	121	139	96	b101	105	187	209	164	36	41	34
15	48	114	132	105	107	98	209	315	167	34	40	35
16	48	124	134	107	107	94	254	418	167	34	38	36
17	48	129	119	107	112	105	305	611	167	34	38	37
18	48	129	134	114	129	105	349	806	109	33	38	37
19	48	134	114	b90	173	114	254	887	94	34	34	38
20	48	132	126	b94	161	98	286	1,010	92	34	32	37
21	50	114	132	119	126	86	344	950	107	32	31	35
22	52	107	129	124	129	96	401	937	145	32	32	35
23	56	105	119	129	126	142	339	849	114	32	31	35
24	64	134	105	129	109	230	277	818	107	31	31	33
25	68	142	109	121	109	167	250	750	98	31	30	34
26	70	139	112	101	124	116	234	647	92	33	30	34
27	72	145	112	b90	129	121	217	564	84	32	30	34
28	73	139	116	b93	107	170	268	518	69	32	31	35
29	83	139	126	b96	107	184	375	564	59	36	31	35
30	98	142	116	b99	-	154	375	472	49	37	30	34
31	88	-	88	103	-	126	-	456	-	34	30	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,755	98	45	56.6	3,480
November	3,531	145	81	118	7,000
December	4,061	195	88	131	8,050
Calendar year 1947	98,755	1,520	31	271	195,900
January	3,523	158	83	114	6,990
February	3,249	173	90	112	6,440
March	3,506	230	77	113	6,950
April	7,567	478	132	252	15,010
May	14,954	1,010	145	482	29,660
June	6,270	763	49	209	12,440
July	1,129	44	31	36.4	2,240
August	1,129	56	30	36.4	2,240
September	1,008	38	30	33.6	2,000
Water year 1947-48	51,682	1,010	30	141	102,500

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.- Stage-discharge relation indefinite Oct. 16-27 (work in channel at control); discharge computed on basis of trend of undisturbed gage-height record.

Deer Creek Reservoir near Charleston, Utah

Location.- Mercury indicating gage, lat. 40°24', long. 111°32', in SW¼SW¼ sec. 5, T. 5 S., R. 4 E., at dam on Provo River, half a mile upstream from Deer Creek and 4⅘ miles southwest of Charleston. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Records available.- December 1940 to September 1948.

Extremes.- Maximum contents during year, 152,700 acre-feet May 29 to June 9 (elevation, 5,417.05 feet); minimum, 107,500 acre-feet Sept. 30 (elevation, 5,397.85 feet).
1940-48: Maximum contents observed, 154,400 acre-feet June 19, 1946 (elevation, 5,417.65 feet); minimum observed, 1,200 acre-feet Dec. 16, 1940 (elevation, 5,296.8 feet).

Remarks.- Reservoir is formed by earth-fill dam with concrete cutoff wall, completed in October 1941. Storage began in October 1940. Capacity, 152,560 acre-feet between elevations 5,280 feet (bottom of outlet tunnel) and 5,417 feet (top of 20-foot radial gates). Dead storage, 2,870 acre-feet below elevation 5,305 feet (sill of trash-rack structure). Water used for irrigation, domestic, and industrial purposes. Gage read once daily at 8 a.m.; contents given herein includes dead storage and is 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, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	124,600	124,600	125,800	124,200	121,400	120,000	131,200	146,800	152,700	147,400	131,200	117,300
2	124,400	124,700	125,900	124,100	121,300	119,800	131,900	147,200	152,700	146,900	130,800	116,900
3	124,300	124,800	125,900	123,900	121,200	119,700	132,700	147,400	152,700	146,400	130,400	116,500
4	124,200	124,800	126,000	123,700	121,100	119,500	133,500	147,400	152,700	145,900	129,900	116,100
5	124,200	124,900	126,000	123,600	120,900	119,400	134,400	147,300	152,700	145,300	129,500	115,700
6	124,200	125,000	126,000	123,500	120,700	119,200	135,000	147,300	152,700	144,800	129,100	115,200
7	124,100	125,000	126,000	123,500	120,600	119,100	135,500	147,300	152,700	144,300	128,700	114,800
8	124,000	125,300	126,000	123,400	120,400	119,400	136,100	147,400	152,700	143,600	128,300	114,400
9	123,900	125,400	126,000	123,400	120,300	119,700	138,800	147,400	152,700	143,000	127,900	114,000
10	123,800	125,500	125,900	123,300	120,200	120,100	139,800	147,400	152,600	142,400	127,500	113,700
11	123,700	125,600	125,800	123,300	120,100	120,400	140,800	147,300	152,600	141,800	127,100	113,300
12	123,700	125,600	125,800	123,200	120,000	120,800	141,200	146,900	152,600	141,200	126,700	113,000
13	123,600	125,600	125,700	123,200	119,900	121,200	141,300	146,700	152,500	140,600	126,300	112,700
14	123,600	125,600	125,700	123,100	119,900	121,600	141,300	146,700	152,400	140,000	125,800	112,300
15	123,600	125,600	125,700	123,000	119,800	122,300	141,600	146,600	152,200	139,500	125,400	112,000
16	123,600	125,700	125,600	122,900	119,800	122,800	141,800	146,700	152,100	139,000	125,000	111,700
17	123,600	125,700	125,500	122,800	119,800	123,300	141,800	147,500	152,000	138,500	124,500	111,400
18	123,600	125,800	125,400	122,700	120,100	123,700	141,800	148,700	151,700	138,000	124,000	111,100
19	123,600	125,800	125,200	122,600	120,400	124,400	141,800	149,800	151,400	137,500	123,500	110,800
20	123,600	125,800	125,100	122,600	120,400	124,800	142,100	150,400	151,000	137,000	123,000	110,500
21	123,700	125,700	125,000	122,500	120,400	125,000	142,900	150,500	150,600	136,600	122,500	110,200
22	123,700	125,600	124,900	122,500	120,400	125,300	143,500	150,200	150,400	136,100	122,000	109,900
23	123,700	125,500	124,800	122,500	120,400	125,900	143,800	150,200	150,100	135,600	121,500	109,600
24	123,800	125,500	124,700	122,400	120,400	126,700	143,900	150,700	149,800	135,100	121,000	109,300
25	123,800	125,500	124,600	122,400	120,400	127,500	143,700	151,200	149,600	134,600	120,500	109,000
26	123,900	125,500	124,500	122,300	120,300	128,000	143,800	151,600	149,300	134,100	120,000	108,700
27	123,900	125,500	124,500	122,100	120,300	128,500	144,200	152,200	149,000	133,700	119,500	108,300
28	124,000	125,500	124,500	122,000	120,200	129,000	144,800	152,600	148,700	133,200	119,100	108,100
29	124,200	125,500	124,400	121,900	120,100	129,600	145,700	152,700	148,400	132,700	118,600	107,800
30	124,500	125,600	124,400	121,700	-	130,200	146,300	152,700	148,000	132,200	118,200	107,500
31	124,500	-	124,400	121,500	-	130,700	-	152,700	-	131,700	117,800	-

Monthly elevation and contents, water year October 1947 to September 1948

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	5,405.84	124,900	-
Oct. 31	5,405.70	124,500	-400
Nov. 30	5,406.16	125,600	+1,100
Dec. 31	5,405.65	124,400	-1,200
Calendar year 1947	-	-	+27,900
Jan. 31	5,404.37	121,500	-2,900
Feb. 29	5,403.74	120,100	-1,400
Mar. 31	5,408.36	130,700	+10,600
Apr. 30	5,414.63	146,300	+15,600
May 31	5,417.05	152,700	+6,400
June 30	5,415.27	148,000	-4,700
July 31	5,408.77	131,700	-16,300
Aug. 31	5,402.66	117,800	-13,900
Sept. 30	5,397.85	107,500	-10,300
Water year 1947-48	-	-	-17,400

Provo River near Wildwood, Utah

Location.- Water-stage recorder, lat. 40°24', long. 111°32', in NE¼ sec. 7, T. 5 S., R. 4 E., 1,500 feet downstream from Deer Creek, half a mile downstream from Deer Creek Reservoir, and 2 miles northeast of Wildwood.

Records available.- October 1945 to September 1948. October 1938 to September 1945, collected by Bureau of Reclamation, available in files of Salt Lake City district office, Geological Survey.

Extremes.- Maximum discharge during year, 1,350 second feet May 22 (gage height, 4.59 feet); minimum, 16 second-feet Mar. 11.
1945-48: Maximum discharge that of May 22, 1948; minimum that of Mar. 11, 1948.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Station is below diversions for irrigation in Heber Valley and above those in vicinity of Provo. Flow regulated by Deer Creek Reservoir and small lakes at headwaters that serve as reservoirs. Small transmountain diversion from Strawberry River drainage to Daniels Creek. Records include flow of Weber-Provo diversion canal.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	306	174	264	264	242	246	37	346	581	419	393	346
2	310	174	260	264	242	246	37	376	659	424	314	334
3	242	188	264	264	246	246	40	402	815	424	397	334
4	225	189	264	260	246	242	40	561	730	419	397	338
5	221	198	264	260	246	242	38	581	561	415	397	338
6	221	195	268	260	246	242	38	508	433	428	393	326
7	221	198	264	260	246	242	35	508	437	442	393	314
8	221	195	264	260	246	53	37	508	437	446	388	310
9	221	198	264	260	246	20	40	498	581	446	380	306
10	221	195	264	260	246	19	48	498	508	437	376	294
11	218	215	264	260	246	19	74	498	376	428	371	291
12	215	228	264	260	246	20	128	503	380	437	371	291
13	198	225	260	260	246	21	198	480	380	437	371	291
14	189	246	260	257	242	21	257	469	402	437	380	283
15	183	257	260	257	242	21	a285	484	433	393	388	279
16	174	260	260	257	246	20	a369	512	428	384	384	279
17	174	257	260	257	246	21	a495	527	410	380	384	283
18	177	257	260	257	246	21	a537	566	415	384	384	294
19	180	257	260	253	246	21	a537	741	442	388	384	294
20	177	253	260	250	246	20	a406	997	437	402	384	294
21	177	257	260	250	246	20	a266	1,270	424	388	376	294
22	180	253	260	246	246	19	a285	1,340	415	384	363	283
23	180	253	260	246	246	25	a436	1,180	424	384	363	272
24	180	253	260	246	246	37	a523	968	437	393	363	275
25	177	260	260	246	242	37	a544	798	442	393	367	279
26	177	260	260	246	246	35	a441	736	442	393	367	279
27	177	260	260	242	250	35	a234	617	433	388	367	279
28	180	257	260	242	250	35	a258	512	428	388	367	272
29	183	260	260	246	246	37	a266	670	428	388	367	264
30	177	260	260	246	-	37	272	752	419	393	367	264
31	177	-	260	246	-	35	-	576	-	393	367	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	6,259	310	174	202	12,410
November	6,912	260	168	230	13,710
December	8,108	268	260	262	16,080
Calendar year 1947	132,358	891	168	363	262,500
January	7,882	264	242	254	15,630
February	7,122	250	242	246	14,130
March	2,355	246	19	75.0	4,670
April	7,199	544	35	240	14,280
May	19,962	1,340	346	644	39,590
June	14,137	815	376	471	28,040
July	12,655	446	380	403	25,100
August	11,663	397	363	376	23,130
September	8,880	346	264	296	17,610
Water year 1947-48	113,134	1,340	19	309	224,400

a No gage-height record; discharge computed on basis of records for station at Vivian Park.

Provo River at Vivian Park, Utah

Location.- Water-stage recorder, lat. 40°22', long. 111°34', in NW¼ sec. 25, T. 5 S., R. 3 E., half a mile downstream from North Fork, 3,500 feet northeast of Vivian Park, and three-quarters of a mile upstream from South Fork.

Drainage area.- 600 square miles.

Records available.- November 1911 to September 1948.

Average discharge.- 36 years, 349 second-feet. (Since 1932 flow includes that of Weber-Provo diversion canal.)

Extremes.- Maximum discharge during year, 1,500 second-feet May 23 (gage height, 5.32 feet); minimum, 23 second-feet Mar. 11.
1911-48: Maximum discharge observed, 3,180 second-feet June 11, 1921; minimum, that of Mar. 11, 1948.

Remarks.- Records excellent. Station is below diversions for irrigation in Heber Valley and above those in vicinity of Provo. Flow regulated by Deer Creek Reservoir and small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River drainage into Daniels Creek. Records include flow of Weber-Provo diversion canal (see p. 104).

Rating table, water year 1947-48 (gage height, in feet, and discharge, in second-feet)

1.0	23	2.4	257	4.3	945
1.3	50	2.8	367	5.0	1,325
1.6	92	3.4	568	5.4	1,545
2.0	165	3.8	718		

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	296	186	267	260	257	257	48	367	619	443	392	332
2	296	186	265	262	257	257	51	389	702	450	321	321
3	242	186	262	260	254	254	58	408	876	450	398	321
4	220	199	262	260	252	254	58	568	772	446	401	321
5	220	210	262	260	252	254	54	593	603	446	401	321
6	220	210	262	257	252	254	55	518	473	453	398	307
7	220	210	262	257	254	254	53	518	480	470	395	302
8	218	208	262	257	254	72	51	514	483	473	392	302
9	215	206	260	252	254	33	55	508	633	470	382	294
10	215	206	257	250	252	31	67	500	571	463	373	286
11	215	220	257	252	254	29	91	497	430	453	370	283
12	213	232	257	250	252	32	148	497	424	453	370	283
13	199	237	257	247	254	29	226	456	420	450	367	283
14	188	252	257	247	252	30	279	473	437	450	376	275
15	184	262	257	247	254	29	305	480	470	411	379	267
16	180	262	260	247	254	29	389	504	463	389	379	267
17	180	260	260	247	252	29	515	525	440	389	376	273
18	180	262	260	252	254	30	557	561	446	389	376	283
19	182	262	260	250	257	30	557	718	477	392	376	283
20	182	262	260	252	257	29	426	1,020	473	404	376	283
21	182	262	260	252	254	29	286	1,370	460	392	373	283
22	182	260	260	252	260	29	305	1,480	446	382	361	270
23	182	262	260	254	257	34	456	1,330	453	389	361	257
24	182	260	260	254	257	47	543	1,040	460	395	361	260
25	182	260	260	254	257	47	564	856	463	392	358	265
26	184	260	260	254	257	46	461	764	463	392	358	265
27	184	260	260	250	257	47	254	650	456	392	355	267
28	184	260	260	252	257	49	278	556	450	392	355	260
29	188	262	262	254	257	49	286	708	450	392	352	254
30	186	262	260	257	-	49	294	790	450	392	352	254
31	184	-	260	254	-	48	-	615	-	392	350	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	6,285	296	180	203	12,470
November	7,126	262	186	238	14,130
December	8,068	267	257	260	16,000
Calendar year 1947	137,940	985	180	378	273,600
January	7,853	262	247	253	15,580
February	7,391	260	252	255	14,660
March	2,690	257	29	86.8	5,340
April	7,770	564	48	259	15,410
May	20,773	1,480	367	670	41,200
June	15,243	876	420	508	30,230
July	13,046	473	382	421	25,880
August	11,534	401	321	372	22,880
September	8,522	332	254	284	16,900
Water year 1947-48	116,301	1,480	29	318	230,700

Provo River at Provo, Utah

Location.- Water-stage recorder, lat. 40°14'15", long. 111°41'45", in NE¼SE¼ sec. 3, T. 7 S., R. 2 E., 1,300 feet downstream from bridge on State Highway 114, 2 miles west of Provo, and 2 miles upstream from mouth.

Records available.- June 1933 to September 1934 and November 1938 to September 1948. January 1937 to November 1938 at site 1,100 feet upstream, above one small diversion. May 1903 to June 1905 at site three-quarters of a mile upstream, above three small diversions. Records equivalent when adjusted for diversions.

Average discharge.- 12 years (1934, 1938-48), 162 second-feet.

Extremes.- Maximum discharge during year, 1,010 second-feet May 22 (gage height, 5.68 feet); minimum daily, 0.3 second-foot July 15.

1903-5, 1933-34, 1937-48: Maximum discharge observed, 1,620 second-feet May 27, 1904; practically no flow during several periods.

Remarks.- Records good except those below 20 second-feet, which are fair. Station is below all diversions. At times entire flow is diverted above station for irrigation. Flow regulated by Deer Creek Reservoir and small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River drainage into Daniels Creek. Flow affected by Weber-Provo diversion canal (see p. 104). Factory race diverts water above station into Provo Bay, an arm of Utah Lake, and Provo River water commissioner furnished following records of this diverted flow for water year 1947-48:

Month	Diversion (acre-feet)	Month	Diversion (acre-feet)
October	378	May	577
November	240	June	570
December	248	July	577
January	248	August	484
February	232	September	432
March	248		
April	480	Water year 1947-48	4,714

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	198	305	275	275	275	64	57	87	2.8	1.9	1.4
2	65	205	303	281	279	275	70	65	165	2.8	1.7	6.3
3	50	205	296	279	273	273	80	56	509	2.9	1.2	4.6
4	36	217	292	279	268	266	86	121	429	1.7	1.0	4.1
5	41	230	290	279	270	266	80	173	242	1.7	1.9	4.8
6	89	232	290	277	273	268	79	118	67	2.4	2.1	3.4
7	108	236	290	273	270	262	79	128	34	1.1	2.4	2.4
8	110	238	290	277	270	180	79	121	28	.8	6.3	2.6
9	117	242	288	281	270	58	81	101	121	.8	8.3	4.4
10	124	238	281	277	270	54	101	100	135	1.4	7.6	5.4
11	184	244	283	270	268	54	111	79	35	1.2	7.3	4.4
12	196	258	281	270	268	49	165	63	11	.8	5.9	4.4
13	196	260	281	268	277	46	230	43	5.4	.6	3.8	4.1
14	196	270	283	266	275	49	301	18	4.8	.4	3.6	2.4
15	201	290	285	268	275	49	328	14	5.1	.3	5.1	1.9
16	194	292	288	270	277	46	378	11	9.8	.6	2.9	1.7
17	188	292	288	270	275	49	500	22	5.9	.8	2.1	1.6
18	184	296	288	273	279	52	562	39	4.1	.7	2.4	5.1
19	194	299	288	266	281	51	565	166	2.6	1.2	2.2	7.6
20	200	296	288	270	277	46	473	434	2.9	.7	2.4	7.3
21	208	294	283	268	279	56	299	757	6.6	1.9	2.8	8.0
22	207	288	285	268	285	51	324	979	4.4	1.2	1.6	11
23	207	288	281	273	283	50	453	911	3.8	1.4	1.0	13
24	205	288	283	277	281	63	524	631	3.4	1.7	1.6	11
25	203	290	283	277	281	62	537	345	3.4	2.2	2.9	12
26	203	290	281	270	281	61	460	264	3.4	2.1	2.4	15
27	205	290	281	264	279	61	160	178	3.6	1.6	1.2	17
28	207	292	281	262	277	62	92	104	5.4	1.6	.9	17
29	214	288	283	264	275	66	62	115	4.1	2.1	1.3	13
30	210	296	281	279	-	69	34	260	3.1	3.1	1.0	13
31	201	-	279	277	-	64	-	121	-	2.4	1.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	4,992	214	36	161	9,900
November	7,942	299	198	265	15,750
December	8,879	305	279	286	17,610
Calendar year 1947	77,642.2	591	1.7	213	154,000
January	8,448	281	262	273	16,760
February	7,991	285	268	276	15,850
March	3,333	275	46	108	6,610
April	7,357	565	34	245	14,590
May	6,594	979	11	213	13,080
June	1,944.8	509	2.6	64.8	3,860
July	47.0	3.1	.3	1.51	93
August	90.1	8.3	.9	2.91	179
September	209.9	17	1.4	7.00	416
Water year 1947-48	57,877.8	979	.3	158	114,800

Weber-Provo diversion canal at Oakley, Utah

Location.- Water-stage recorder and Parshall flume, lat. 40°42'30", long. 111°16'30", in NW¼ sec. 28, T. 1 S., R. 6 E., 1,400 feet downstream from head and three-quarters of a mile east of Oakley.

Records available.- October 1945 to September 1948. October 1938 to September 1945, collected by Bureau of Reclamation, available in files of Salt Lake City district office, Geological Survey. October 1932 to September 1939 in reports of Weber River water commissioner.

Extremes.- Maximum daily discharge during year, 201 second-feet June 12; no water diverted from Weber River for several months.

1945-48: Maximum daily discharge, 747 second-feet June 20, 1947; no water diverted from Weber River for several months each year.

Remarks.- Records excellent. Canal diverts water from Weber River in SW¼SW¼ sec. 21, T. 1 S., R. 6 E., for irrigation and water supply in Jordan River Basin. Figures given herein represent water diverted from main stem of Weber River, some of which may return to Weber River through seepage. No diversion from Weber River Oct. 1 to June 6, July 9 to Sept. 30.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									0	42		
2									0	39		
3									0	35		
4									0	32		
5									0	30		
6									0	21		
7									48	14		
8									102	2.4		
9									102	0		
10									100	0		
11									165	0		
12									201	0		
13									199	0		
14									197	0		
15									195	0		
16									195	0		
17									164	0		
18									124	0		
19									117	0		
20									110	0		
21									136	0		
22									154	0		
23									125	0		
24									121	0		
25									98	0		
26									81	0		
27									76	0		
28									66	0		
29									54	0		
30									43	0		
31									-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1947	32,009.4	747	0	87.7	63,490
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	0	0	0	0	0
June	2,973	201	0	99.1	5,900
July	215.4	42	0	6.95	427
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1947-48	3,188.4	201	0	8.71	6,330

Weber-Provo diversion canal near Woodland, Utah

Location.- Water-stage recorder and Parshall flume, lat. 40°36'40", long. 111°18'15", in SW¼SE¼ sec. 30, T. 2 S., R. 6 E., 100 feet upstream from outlet to Provo River and 4½ miles northwest of Woodland. Datum of gage is 6,318 feet above mean sea level.

Records available.- October 1931 to September 1948.

Extremes.- Maximum daily discharge during year, 186 second-feet June 12; no water diverted from Weber River or Beaver Creek for several months.
1931-48: Maximum daily discharge, 676 second-feet June 20, 1947; no water diverted from Weber River or Beaver Creek for several months during each year.

Remarks.- Canal diverts water from Weber River in SW¼SW¼ sec. 21, T. 1 S., R. 6 E., and from Beaver Creek in NE¼SE¼ sec. 17, T. 2 S., R. 6 E., to Provo River for irrigation along Provo and Jordan Rivers. Figures given herein represent quantity of water reaching Provo River during periods when water was diverted from Weber River and Beaver Creek. Not all of flow diverted reaches Provo River due to evaporation, transpiration, and seepage losses.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									0	35		
2									0	20		
3									0	23		
4									0	20		
5									0	14		
6									0	14		
7									31	6.1		
8									93	3.8		
9									93	0		
10									94	0		
11									133	0		
12									186	0		
13									181	0		
14									178	0		
15									176	0		
16									175	0		
17									160	0		
18									110	0		
19									101	0		
20									95	0		
21									109	0		
22									142	0		
23									115	0		
24									109	0		
25									95	0		
26									79	0		
27									71	0		
28									60	0		
29									38	0		
30									39	0		
31									-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1947	31,733.6	676	0	86.9	62,950
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	0	0	0	0	0
June	2,663	186	0	88.8	5,280
July	144.9	35	0	4.67	287
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1947-48	2,807.9	186	0	7.67	5,570

Snake Creek near Charleston, Utah

Location.- Water-stage recorder, lat. 40°29', long. 111°28', in SW¼ sec. 11, T. 4 S., R. 4 E., 600 feet upstream from mouth and 1½ miles northeast of Charleston.

Records available.- October 1945 to September 1948. October 1938 to September 1945 collected by Bureau of Reclamation, available in files of Salt Lake City district office, Geological Survey.

Extremes.- Maximum discharge during year, 88 second-feet May 20 (gage height, 2.37 feet); minimum, 34 second-feet May 5.
1945-48: Maximum discharge, 91 second-feet May 10, 1946 (gage height, 2.68 feet); minimum, 33 second-feet Sept. 4, 1946.

Remarks.- Records fair. Some diversions above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	57	49	44	40	40	42	40	72	50	42	38
2	51	56	50	44	40	40	43	40	75	49	41	39
3	51	56	48	43	40	39	45	38	75	46	40	38
4	50	55	47	43	40	39	46	38	70	44	41	39
5	49	50	48	43	40	38	44	36	74	45	44	40
6	48	49	47	43	39	38	45	39	70	45	45	41
7	48	49	46	43	39	38	44	41	72	47	44	41
8	46	49	46	44	39	38	43	42	71	48	47	41
9	47	49	46	44	39	38	44	40	64	47	46	42
10	46	48	46	44	38	38	53	37	57	48	46	42
11	49	48	46	43	38	38	47	36	54	48	44	42
12	47	48	46	43	38	39	46	36	54	48	44	42
13	48	47	46	42	38	39	46	37	55	48	45	41
14	48	48	46	41	38	40	46	38	55	47	46	40
15	49	48	45	42	38	40	46	41	55	46	44	41
16	49	48	44	41	38	40	46	45	58	44	43	41
17	50	47	44	41	38	40	46	50	56	45	42	42
18	49	48	45	42	38	40	46	63	57	44	41	42
19	47	48	45	41	41	40	46	73	52	44	41	42
20	47	46	45	40	40	39	45	76	50	44	41	42
21	50	47	45	40	40	40	46	73	51	45	41	43
22	50	46	45	40	40	39	46	67	54	46	41	43
23	50	44	45	41	40	40	46	67	54	45	41	43
24	51	44	44	41	39	41	45	69	50	45	41	43
25	52	44	44	41	40	40	45	66	53	46	42	44
26	55	44	44	40	41	39	43	71	53	46	42	44
27	54	44	44	40	41	40	41	72	56	46	40	45
28	52	44	44	40	40	42	38	76	54	45	40	45
29	57	44	44	40	40	42	40	81	53	45	40	45
30	58	45	44	40	-	42	40	74	52	45	39	44
31	57	-	44	40	-	41	-	71	-	44	38	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,557	58	46	50.2	3,090
November	1,440	57	44	48.0	2,860
December	1,412	50	44	45.5	2,800
Calendar year 1947	17,358	80	36	47.6	34,430
January	1,294	44	40	41.7	2,570
February	1,140	41	38	39.3	2,260
March	1,227	42	38	39.6	2,430
April	1,339	53	38	44.6	2,660
May	1,673	81	36	54.0	3,320
June	1,776	75	50	59.2	3,520
July	1,425	50	44	46.0	2,830
August	1,312	47	38	42.3	2,600
September	1,255	45	38	41.8	2,490
Water year 1947-48	16,850	81	36	46.0	33,430

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Round Valley Creek near Wallsburg, Utah

Location.- Water-stage recorder, lat. 40°24'30", long. 111°28'30", in SE¼ sec. 3, T. 5 S., R. 4 E., 1,900 feet upstream from high-water line of Deer Creek Reservoir and 3¼ miles northwest of Wallsburg.

Drainage area.- 71.9 square miles.

Records available.- October 1945 to September 1948, October 1938 to September 1945, collected by Bureau of Reclamation, available in files of Salt Lake City district office, Geological Survey.

Extremes.- Maximum discharge during year, 120 second-feet Apr. 30 (gage height, 3.48 feet); minimum, 1.8 second-feet Sept. 7-8.
1945-48: Maximum discharge, 179 second-feet Apr. 21, 1946 (gage height, 3.24 feet); minimum, that of Sept. 7-8, 1948.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	8.9	19	8.7	a9.0	12	16	104	13	5.6	3.8	2.4
2	4.5	9.2	18	a9.0	a9.0	12	16	87	10	4.7	3.6	2.4
3	4.5	9.5	15	a10	8.9	12	18	77	11	4.2	3.6	2.3
4	4.5	9.5	14	a10	8.7		22	80	12	4.2	4.0	2.2
5	4.7	10	13	a10	9.5		17	85	12	3.6	4.5	2.1
6	4.5	9.5	13	a11	9.8		17	92	9.2	3.4	3.9	2.1
7	4.5	9.5	12	a11	9.8	a12	18	110	7.0	3.4	3.6	1.8
8	4.2	11	12	a11	11		17	98	7.3	3.3	4.4	1.8
9	4.0	11	12	13	11		16	80	7.3	2.8	4.0	1.9
10	4.2	12		12	11		32	72	6.7	2.7	4.0	1.9
11	5.2	13		12	11		25	63	5.8	2.7	3.6	1.9
12	4.9	11		11	10		19	55	5.8	2.6	3.6	1.9
13	4.7	11		9.8	10	13	17	55	5.8	2.7	3.3	2.1
14	4.5	13		10	11	14	19	58	6.3	2.7	3.4	2.1
15	4.4	14	a10	10	11	14	22	78	5.2	2.6	3.3	2.2
16	4.5	15		11	14	12	35	76	5.4	2.7	3.3	2.2
17	4.5	15		11	18	12	53	74	5.8	2.9	3.4	2.9
18	4.7	15		11	50	13	72	86	5.4	3.0	3.3	2.6
19	4.5	16			58	12	52	87	5.6	3.0	3.3	2.8
20	4.7	15			20	11	57	78	5.6	3.2	3.2	2.9
21	5.4	15			15	10	71	72	5.4	3.3	3.3	2.9
22	6.3	13	9.8		18	11	86	65	5.8	3.3	3.3	2.9
23	6.3	12	10		14	24	79	54	6.3	3.6	3.3	2.9
24	7.0	13	11	a9.0	14	26	67	52	5.8	4.4	3.3	2.7
25	7.0	14	10		14	18	65	44	5.4	4.5	3.3	2.6
26	6.7	14	9.8		15	17	60	42	6.0	4.7	3.2	2.7
27	7.0	15	10		14	18	60	39	5.8	5.2	3.0	2.6
28	7.5	13	11		13	18	82	35	5.6	4.4	3.0	2.6
29	9.2	13	11		13	19	110	30	5.4	4.4	2.8	2.6
30	12	15	10		-	18	110	21	5.8	4.2	2.8	2.7
31	8.7	-	10		-	16	-	18	-	3.8	2.7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	173.7	12	4.0	5.60	344
November	375.1	16	8.9	12.5	744
December	350.6	19	9.8	11.3	695
Calendar year 1947	5,180.9	88	2.8	14.2	10,270
January	308.5	13	8.7	9.95	612
February	440.7	58	8.7	15.2	874
March	440	26	10	14.2	873
April	1,350	110	16	45.0	2,680
May	2,067	110	18	66.7	4,100
June	209.5	13	5.2	6.98	416
July	111.8	5.6	2.6	3.61	222
August	107.1	4.5	2.7	3.45	212
September	71.2	2.9	1.8	2.37	141
Water year 1947-48	6,005.2	110	1.8	16.4	11,910

a No gage-height record; discharge computed on basis of 4 discharge measurements, weather records, and records for nearby stations.

Deer Creek near Wildwood, Utah

Location.- Water-stage recorder, lat. 40°24'30", long. 111°32'00", in NE¼ sec. 7, T. 5 S., R. 4 E., 1,000 feet upstream from mouth and 2 miles northeast of Wildwood.

Drainage area.- 26 square miles.

Records available.- October 1945 to September 1948. October 1938 to September 1945 collected by Bureau of Reclamation, available in files of Salt Lake City district office, Geological Survey.

Extremes.- Maximum discharge during year, 92 second-feet Apr. 28; minimum, 8.0 second-feet Sept. 15.
1945-48: Maximum discharge, that of Apr. 28, 1948; minimum, 7.7 second-feet Sept. 11, 1946.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	12	13	12	a10	10	a11	55	16	11		9.3
2	11	12	13	a12	a10	10	a11	51	17	11		9.3
3	11	12	13	a12	11	10	a12	56	18	11		9.0
4	11	12	13	a12	11	10	a13	56	16	11		9.0
5	11	12	12	a12	11		a13	59	10	11		8.8
6	11	12	12	a12	11		a14	66	15	10		9.0
7	11	12	12	a12	11	a10	a14	62	15	10		9.0
8	11	12	12	12			a14	56	14	10		8.4
9	11	12	12	12			a15	48	14	10		8.6
10	11	12	11	12			a23	46	14	10		8.6
11	11	12	11	12		10	a21	46	14	10		8.6
12	11	12	11	12		10	a19	46	14	10	a10	8.6
13	12	11	11	11		10	a18	48	14	10		8.4
14	11	12	11	11		10	a21	50	13	11		8.2
15	11	12	12	11		10	28	49	12	11		8.4
16	11	12	12	11	a11	10	36	42	11	11		8.2
17	11	12	12	11		10	43	44	11	11		8.4
18	11	12	12	12		10	47	43	11	11		8.4
19	11	12	12			10	44	41	10	11		8.6
20	12	12	12			10	54	37	11	12		8.6
21	12	12	12			10	65	35	12	11		8.8
22	12	11	12	all		10	58	31	11	12		8.8
23	12	11	12				59	27	11	11		9.0
24	12	11	12				54	25	11	11		9.0
25	12	12	12				55	22	11	11	10	8.8
26	12	12	12		11	all	47	21	11	10	10	8.8
27	12	12	12		11		50	21	11		10	9.0
28	12	12	12		10		72	19	11		9.6	9.6
29	13	12	12	a10	10		65	18	11	a10	9.3	10
30	13	12	12		-		56	18	11		9.3	10
31	12	-	b11		-		-	18	-		9.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	356	13	11	11.5	706
November	356	12	11	11.9	706
December	370	13	11	11.9	734
Calendar year 1947	5,030.5	36	8.8	13.8	9,980
January	348	12	-	11.2	690
February	315	-	10	10.9	625
March	319	-	-	10.3	633
April	1,052	72	11	35.1	2,090
May	1,256	66	18	40.5	2,490
June	387	18	10	12.9	768
July	329	12	-	10.6	653
August	307.8	-	9.3	9.93	611
September	265.2	10	8.2	8.84	526
Water year 1947-48	5,661	72	8.2	15.5	11,230

Peak discharge (base, 50 sec.-ft.).- Apr. 28 (6 p.m.) 92 sec.-ft.
a No gage-height record; discharge computed on basis of 6 discharge measurements, weather records, and records for Hobble Creek near Springville.
b Stage-discharge relation affected by ice.

South Fork Provo River at Vivian Park, Utah

Location.- Water-stage recorder and Parshall flume, lat. 40°21', long. 111°34', in SE¼ sec. 26, T. 5 S., R. 3 E., a quarter of a mile southeast of Vivian Park and half a mile upstream from mouth.

Drainage area.- 30 square miles.

Records available.- November 1911 to September 1948.

Average discharge.- 36 years, 30.2 second-feet.

Extremes.- Maximum discharge during year, 48 second-feet May 21 (gage height, 1.25 feet); minimum, 15 second-feet July 23.
1911-48: Maximum discharge observed, 123 second-feet May 27, 1922; minimum, 13 second-feet several times in 1934, 1935, and on Apr. 2, 1937.

Remarks.- Records good. Station below all diversions.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	36	34	29	28	27	29	38	34	27	26	25
2	30	36	34	29	29	27	29	36	36	27	26	26
3	29	36	33	29	29	27	32	34	38	27	26	26
4	30	36	33	29	29	27	32	33	39	26	28	26
5	31	36	32	31	29	28	30	33	34	26	31	27
6	32	36	32	31	30	28	29	34	33	22	30	24
7	34	36	32	31	30	28	29	35	33	25	28	24
8	39	36	32	32	29	28	29	33	33	27	26	24
9	39	36	32	30	29	28	29	32	31	28	28	24
10	38	35	32	30	29	28	33	31	30	28	28	24
11	39	35	30	30	29	28	31	30	30	27	28	24
12	37	35	30	29	29	27	30	30	31	28	28	24
13	35	35	30	29	28	27	29	30	31	26	28	25
14	36	34	29	28	28	28	29	28	31	26	28	26
15	36	34	29	28	28	27	30	27	30	24	28	27
16	36	34	29	28	28	27	30	26	30	24	28	27
17	36	34	29	28	28	28	30	28	30	27	29	26
18	38	34	29	28	29	27	30	40	32	27	29	27
19	39	34	29	27	29	28	30	43	29	28	28	27
20	39	34	29	27	29	27	29	45	29	28	27	27
21	39	33	29	27	28	27	29	43	29	27	26	27
22	38	33	29	27	29	27	30	44	29	24	26	26
23	35	33	28	28	28	28	32	42	28	24	28	24
24	35	32	28	28	28	28	31	39	28	25	26	24
25	36	32	28	28	27	29	32	34	27	24	27	24
26	36	33	28	28	28	28	32	35	27	22	29	26
27	36	32	28	28	28	27	33	36	27	25	28	26
28	37	32	28	28	28	28	35	39	25	23	27	26
29	37	32	28	28	28	28	40	39	24	22	26	27
30	37	33	28	28	-	28	39	34	27	23	24	27
31	36	-	28	28	-	28	-	34	-	24	24	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,104	39	29	35.6	2,190
November	1,027	36	32	34.2	2,040
December	929	34	28	30.0	1,840
Calendar year 1947	11,350	51	22	31.1	22,520
January	889	31	27	28.7	1,760
February	828	30	27	28.6	1,640
March	856	29	27	27.6	1,700
April	932	40	29	31.1	1,850
May	1,085	45	26	35.0	2,150
June	915	39	24	30.5	1,810
July	791	28	22	25.5	1,570
August	849	31	24	27.4	1,680
September	767	27	24	25.6	1,520
Water year 1947-48	10,972	45	22	30.0	21,750

American Fork above upper power plant, near American Fork, Utah

Location.- Water-stage recorder, lat. 40°27', long. 111°41', in NE¼ sec. 26, T. 4 S., R. 2 E., 500 feet downstream from Rock Creek, 1,000 feet upstream from intake for upper power plant of Utah Power & Light Co., 4 miles upstream from mouth of canyon, and 8 miles northeast of American Fork, Utah.

Records available.- October 1945 to September 1948 published in water-supply papers. January 1927 to September 1945 available in files of Salt Lake City district office, Geological Survey.

Extremes.- Maximum discharge during year, 455 second-feet May 17 (gage height, 6.65 feet); minimum daily, 12 second-feet Mar. 20.

1927-48: Maximum discharge, that of May 17, 1948; minimum daily, 5 second-feet Feb. 3, 1936.

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

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

Rating tables, water year 1947-48 except period of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 31		Jan. 1 to Sept. 30			
4.5	14	4.4	10	5.5	115
4.6	19	4.5	14	5.8	178
4.7	25	4.7	24	6.1	264
4.8	32	4.9	37	6.4	363
		5.2	68	6.7	474

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	26	25	16	14	13	14	103	353	117	39	24
2	25	27	24	18	14	13	15	96	356	108	38	24
3	25	26	23	17	14	13	16	106	349	101	36	24
4	24	24	22	17	*b14	13	16	130	280	98	39	23
5	24	24	21	*17	14	b13	15	149	277	93	46	23
6	24	23	21	16	14	14	15	181	306	92	38	24
7	24	23	20	17	14	14	14	204	303	85	37	24
8	24	23	*18	18	b13	14	14	164	286	79	45	24
9	24	23	18	17	13	14	16	136	303	76	37	23
10	26	*23	b15	17	13	14	20	123	299	76	36	23
11	27	24	*16	17	b13	b13	a20	115	290	74	34	22
12	25	20	16	16	b13	b14	18	121	270	71	32	22
13	24	18	17	a16	13	14	19	147	252	68	32	22
14	24	23	19	a16	13	a14	20	194	233	66	31	22
15	24	24	20	a16	13	a14	25	252	216	62	30	22
16	24	24	20	a16	13	a14	34	303	201	60	29	22
17	24	24	20	a16	13	13	50	370	186	58	29	21
18	24	24	20	a16	14	13	56	349	169	57	29	21
19	24	24	19	a16	14	13	55	339	155	58	28	22
20	23	24	19	16	14	12	68	343	140	57	28	22
21	25	23	20	15	14	b14	98	332	153	55	28	21
22	24	b18	20	14	b14	14	115	319	138	53	28	21
23	24	b15	18	15	14	15	92	319	119	53	27	21
24	24	19	18	15	14	15	79	346	113	53	26	20
25	24	22	19	15	13	14	72	360	113	51	26	20
26	23	23	19	b14	14	13	62	346	121	48	26	20
27	23	22	18	b14	14	13	67	363	119	45	25	20
28	23	22	19	b14	14	15	100	399	119	44	25	20
29	30	22	19	b14	14	16	128	374	121	43	25	20
30	27	23	18	*a14	-	*15	112	346	115	42	24	20
31	25	-	b15	14	-	14	-	360	-	40	24	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	760	30	23	24.5	1,510
November	680	27	15	22.7	1,350
December	596	25	15	19.2	1,180
Calendar year 1947	22,640	341	15	62.0	44,910
January	489	18	14	15.8	970
February	395	14	13	13.6	783
March	427	16	12	13.8	847
April	1,445	128	14	48.2	2,870
May	7,789	399	96	251	15,450
June	6,455	356	113	215	12,800
July	2,083	117	40	67.2	4,130
August	977	46	24	31.5	1,940
September	657	24	20	21.9	1,300
Water year 1947-48	22,753	399	12	62.2	45,130

* Winter discharge measurement made on this day.
a No gage-height record; discharge interpolated, or computed from weather and power-plant records.
b Stage-discharge relation affected by ice.

Dry Creek near Alpine, Utah

Location.- Water-stage recorder, lat. 40°28'30", long. 111°45'30", in NE¼ sec. 18, T. 4 S., R. 2 E., 2 miles northeast of Alpine and 3½ miles upstream from Fort Creek.
Records available.- July 1947 to September 1948.
Extremes.- 1947: Maximum discharge during period, 76 second-feet July 2 (gage height, 1.58 feet); minimum, 6.4 second-feet Aug. 6-8, 11.
1947-48: Maximum discharge during water year, 187 second-feet May 17 (gage height, 2.69 feet); minimum, 4.7 second-feet Sept. 14, 22, 23.
Remarks.- Records fair except those for periods of ice effect or no gage-height record, which are poor. Flow of Grove Creek, which is usually less than 1 second-foot, is normally diverted to Dry Creek and included in flow passing station from July 10 to Oct. 1. During remainder of year it is normally not included, although it may be at times.

Discharge, in second-feet, 1947-48

1947

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	49	13	7.1	9	37	17	6.8	17	20	9.7	8.4	25	16	8.4	6.9
2	55	13	6.9	10	35	23	6.8	18	20	9.2	8.0	26	16	8.0	6.8
3	54	13	7.1	11	30	f16	6.8	19	19	9.0	7.9	27	15	8.0	6.8
4	49	14	6.9	12	f27	f12	6.9	20	19	8.8	7.6	28	15	8.0	6.9
5	45	15	6.8	13	f24	12	6.6	21	18	9.2	7.1	29	14	7.9	6.8
6	40	13	6.6	14	f22	11	6.6	22	18	12	6.9	30	14	7.6	6.8
7	41	12	6.5	15	21	11	6.6	23	17	9.0	6.8	31	13	7.4	-
8	40	12	6.6	16	21	9.9	6.8	24	17	8.6	6.9				

Peak discharge (base, 70 sec.-ft.).- July 2 (7:30 p.m.) 76 sec.-ft.
f Computed on basis of partly estimated gage-height record.
Note.- No gage-height record July 15 to Aug. 1; discharge interpolated.

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.9	9.3	10				7.9	31	96	37	9.7	5.9
2	6.8	9.2	9.9				8.0	27	121	34	9.3	5.9
3	6.8	8.6	9.7	7.4			8.0	32	74	31	9.0	5.9
4	6.6	8.4	9.7		(*)		7.9	40	46	27	9.5	5.8
5	6.6	8.0	9.7	(*)			8.0	38	79	24	12	5.8
6	6.6	7.9	9.5	7.6			8.2	52	94	23	10	5.8
7	6.6	8.4	9.7	7.6			8.0	47	79	21	9.3	5.8
8	6.6	8.2	*9.2	7.9			8.2	30	84	20	10	5.6
9	6.8	8.0	8.8	7.9		(*)	9.0	21	84	18	9.0	5.4
10	7.1	7.7	b7.4	7.9			9.9	16	80	17	8.2	5.4
11	7.9	7.9	b7.4	7.7		7.0	8.8	13	83	16	7.9	5.2
12	7.4	7.6	b7.4	7.6			*9.2	8.2	74	16	7.6	5.1
13	7.6	7.7		7.6			9.5	13	67	16	7.2	5.0
14	7.6	7.9					11	36	65	15	7.1	4.8
15	7.4	8.2					13	72	63	14	6.8	4.8
16	7.2	8.4			6.4		20	102	61	14	6.5	5.0
17	7.2	8.6					25	144	59	13	6.4	5.1
18	7.2	8.8					23	114	57	13	6.5	5.2
19	7.2	8.6					24	114	55	13	6.2	5.2
20	7.1	8.6					35	114	54	13	6.0	5.2
21	7.6	8.0	7.4				49	118	52	13	6.0	5.1
22	7.4	8.4		7.0			48	120	51	12	5.8	5.0
23	7.4	b8.0				7.7	38	122	49	12	5.5	5.1
24	7.4	b7.4				7.7	32	128	47	13	5.5	5.2
25	7.7	9.0				7.4	27	133	46	13	5.4	5.3
26	7.7	9.2				7.4	21	122	45	12	5.3	5.3
27	7.7	9.3				7.4	24	128	43	12	5.9	5.4
28	7.7	9.5				7.7	42	128	42	12	6.2	5.8
29	8.4	9.7				7.9	42	105	41	11	6.2	5.8
30	8.8	10			-	7.7	33	102	40	11	6.0	5.6
31	8.4	-			-	7.7	-	105	-	10	6.0	-

Peak discharge (base, 70 sec.-ft.).- Apr. 21 (7 p.m.) 71 sec.-ft.; May 6 (8:30 p.m.) 80 sec.-ft.; May 17 (5:30 p.m.) 187 sec.-ft.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.- No gage-height record Dec. 13 to Jan. 5, Jan. 14 to Mar. 22; doubtful gage-height record June 14-29; discharge computed on basis of 2 discharge measurements, weather records, and records for nearby streams, or interpolated.

Monthly discharge, in second-feet, 1947-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
July 1947	841	55	13	27.1	1,670
August	347.7	23	7.4	11.2	690
September	209.0	8.4	6.5	6.97	415
Water year	1,397.7	55	6.5	15.2	2,780
October 1947	227.4	8.8	6.6	7.34	451
November	254.5	10	7.6	8.48	505
December	249.0	10	-	8.03	494
January 1948	224.8	7.9	-	7.25	446
February	185.6	-	-	6.40	368
March	222.6	7.9	-	7.18	442
April	617.6	49	7.9	20.6	1,220
May	2,375.2	144	8.2	76.6	4,710
June	1,931	121	40	64.4	3,830
July	526	37	10	17.0	1,040
August	228.0	12	5.3	7.35	452
September	161.5	5.9	4.8	5 38	320
Water year 1947-48	7,203.2	144	4.8	19.7	14,280

Fort Creek at Alpine, Utah

Location.- Water-stage recorder, lat. 40°28'00", long. 111°46'45", in SW¼ sec. 13, T. 4 S., R. 1 E., three-quarters of a mile northwest of Alpine and 1½ miles above mouth.
Drainage area.- 6.1 square miles.
Records available.- July 1947 to September 1948.
Extremes.- 1947: Maximum discharge during period, 28 second-feet Aug. 9 (gage height, 1.88 feet); minimum daily, 0.4 second-foot Aug. 13.
1948: Maximum discharge during year, 172 second-feet June 2 (gage height, 3.60 feet); minimum daily, 0.5 second-foot Aug. 29.
Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. One diversion above station for irrigation.

Discharge, in second-feet, 1947-48

1947

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	5.2	4.6	3.6	9	3.0	6.4	0.9	17	0.8	4.4	3.5	25	3.9	.4.0	2.8
2	5.5	4.6	1.7	10	3.9	7.3	1.7	18	.7	4.3	3.5	26	.6	3.4	2.7
3	5.5	3.6	1.2	11	3.9	5.5	3.2	19	4.3	4.3	3.2	27	1.2	.5	2.7
4	5.4	.6	3.5	12	3.9	3.1	3.2	20	4.3	1.0	3.2	28	4.4	3.9	2.7
5	4.7	2.8	3.4	13	3.8	.4	3.1	21	4.4	2.0	3.1	29	4.6	3.9	1.1
6	4.6	4.7	3.2	14	3.8	3.1	3.0	22	4.7	4.4	2.8	30	4.6	3.8	1.7
7	4.7	4.6	3.2	15	4.4	4.6	2.5	23	4.9	4.3	1.2	31	4.4	3.8	-
8	4.1	4.6	3.1	16	4.6	4.6	.5	24	4.3	4.0	2.8				

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	5.8	6.2	4.5		4.9	7.3	20	27	4.1	3.4	4.3
2	2.1	5.0	5.7	4.5		4.7	8.9	17	45	5.0	1.2	4.3
3	2.0	4.4	5.5	4.5			9.1	20	34	6.2	1.6	4.0
4	2.1	4.4	5.2	4.5	(*)		8.9	25	18	6.0	5.2	2.4
5	2.0	4.4	5.0	*4.9			8.4	30	18	5.7	5.4	1.0
6	2.1	4.6	5.0	4.9		4.5	8.6	42	22	5.4	4.3	4.0
7	2.2	4.6	4.9	4.9			8.4	45	19	5.2	4.3	3.9
8	2.2	4.7	*4.6	5.2	4.5		8.9	31	19	5.0	5.0	3.9
9	1.8	4.7	4.6	5.2		(*)	10	24	17	4.4	.7	3.8
10	1.5	4.4	5.0	5.4		4.6	12	20	16	1.5	3.4	3.8
11	2.0	4.6	4.3	5.0		4.6	11	19	14	2.0	4.3	1.4
12	1.8	4.4	2.4	4.9		4.6	10	22	12	4.3	4.1	2.0
13	1.7	4.7	2.1			4.5	11	29	6.8	4.3	4.3	3.4
14	1.7	4.4	2.1			4.5	12	39	6.6	4.3	4.3	3.2
15	1.6	4.4	2.3			4.5	16	47	8.9	4.3	2.9	3.2
16	1.5	4.4	2.9			4.5	22	58	8.4	4.1	.8	3.2
17	1.5	4.3	3.2			4.7	26	63	7.9	4.0	4.4	2.7
18	1.5	4.4	4.0			4.9	25	48	7.5	2.6	4.6	.9
19	1.6	4.4	4.1			4.9	23	46	6.6	.6	4.6	3.6
20	1.6	4.4	4.3		5.0	4.9	26	44	6.8	1.7	4.6	3.4
21	2.0	4.3	4.4			5.8	36	46	16	3.9	4.3	3.1
22	2.5	4.3	4.4	4.5		5.5	31	39	8.1	3.8	1.4	2.9
23	3.8	4.3				6.4	24	40	7.7	3.9	1.9	2.9
24	3.8	3.8				6.4	21	42	10	4.0	4.4	1.5
25	3.8	2.7				5.8	19	40	9.4	3.9	4.7	1.1
26	3.9	4.4	4.5		5.4	5.8	14	31	9.7	2.4	4.7	3.1
27	3.9	4.7			5.4	5.8	15	33	9.7	.9	4.4	3.1
28	3.8	4.9			4.9	6.8	31	39	8.9	3.6	3.9	2.9
29	5.0	5.4			4.9	7.5	28	29	8.1	3.6	.5	2.9
30	4.7	6.0			-	6.8	21	28	6.6	3.6	4.0	2.9
31	4.9	-			-	6.6	-	28	-	3.0	4.3	-

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 23 to Jan. 4, Jan. 13 to Feb. 25, Mar. 3-9, 13-16 (no gage-height record most of periods); discharge computed on basis of 1 discharge measurement, weather records, and records for nearby streams.

Monthly discharge, in second-feet, 1947-48

Month	Second-foot-days	Maximum	Minimum	Maan	Runoff in acre-feet
July 1947	123.1	5.5	0.6	3.97	244
August	117.1	7.3	.4	3.78	232
September	78.0	3.6	.5	2.60	155
The period	-	-	-	-	631
October 1947	78.9	5.0	1.5	2.55	156
November	136.2	6.0	3.8	4.54	270
December	132.7	6.2	2.1	4.28	263
Calendar year	-	-	-	-	-
January 1948	143.9	5.4	-	4.64	285
February	138.6	5.4	-	4.78	275
March	161.5	7.5	-	5.21	320
April	512.5	36	7.3	17.1	1,020
May	1,084	63	17	35.0	2,150
June	414.7	45	6.6	13.8	823
July	117.3	6.2	.6	3.78	233
August	111.9	5.4	.5	3.61	222
September	88.8	4.3	.9	2.96	176
Water year 1947-48	3,121	63	.5	8.53	6,190

Surplus Canal at Salt Lake City, Utah

Location.- Water-stage recorder, lat. 40°44', long. 111°55', in SW¼SW¼ sec. 14, T. 1 S., R. 1 W., 300 feet 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. Since Dec. 31, 1946, auxiliary water-stage recorder about 1 mile downstream in NW¼NE¼ sec. 15, T. 1 S., R. 1 W., 20 feet upstream from bridge on Redwood Road (State Highway 68). Datum of both gages is 4,219.02 feet above mean sea level (datum of 1929).

Records available.- December 1942 to September 1948.

Extremes.- Maximum discharge during year, 814 second-feet June 3 (gage height, 7.06 feet); minimum daily, 54 second-feet July 7.
1942-48: Maximum discharge, 965 second-feet June 3, 1944 (gage height, 7.50 feet); minimum daily, 31 second-feet July 4, 1943.

Remarks.- Records good. Flow regulated by head gates at diversion dam 300 feet above station. Canal was built to bypass flood water of Jordan River around Salt Lake City residential area. (See p. 90 for records of combined flow of Jordan River and Canal.) Several diversions below station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	143	115	113	75	82	84	218	245	490	105	136	85
2	114	114	119	77	61	72	246	213	574	100	147	82
3	108	113	120	77	62		266	185	741	98	129	91
4	106	103	114	77	64		293	162	728	96	105	89
5	95	113	118	78	65	a70	293	160	595	105	129	93
6	88	116	116	80	66		294	192	509	95	162	105
7	83	120	115	80		66	306	292	511	54	177	111
8	108	133	109	80		67	292	288	489	70	160	117
9	99	161	113	78		69	292	304	439	83	164	122
10	a92	142	111	74		74	311	269	460	94	139	122
11	a110	129	110	71		71	312	253	460	109	127	129
12		124	98	69		69	308	244	403	97	111	131
13		118	83	66	a70	69	308	217	362	99	104	141
14		116	81	63		70	305	158	302	105	96	135
15	a100	95	79	62		72	310	155	257	121	101	148
16		a110	79	61		66	311	181	180	130	77	134
17		117	78	60		67	342	282	132	120	80	132
18		a150	74	60		68	393	335	137	117	71	149
19	a90	175	76	60		65	369	338	138	107	75	176
20	a90	158	75	61	76	76	380	423	133	141	81	183
21	a100	145	75	62	72	78	410	471	296	128	93	173
22	a100	140	70	61	139	82	463	489	481	101	95	173
23	a100	135	74	62	199	92	485	458	431	104	86	147
24	96	140	77	64	163	82	417	502	347	126	95	155
25	88	142	75	65	147	83	357	547	310	154	100	148
26	92	120	87	63	170	86	361	566	262	138	93	154
27	97	114	76	64	190	81	365	597	256	113	98	159
28	88	121	74	68	148	78	326	654	228	102	89	150
29	90	115	74	65	107	77	342	625	152	104	90	141
30	127	115	75	63	-	87	316	528	166	112	97	141
31	119	-	75	62	-	121	-	519	-	131	96	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	3,123	143	83	101	6,190
November	3,809	175	95	127	7,560
December	2,813	120	70	90.7	5,580
Calendar year 1947	48,225	521	45	132	95,650
January	2,108	80	60	68.0	4,180
February	2,701	199	61	93.1	5,360
March	2,352	121	65	75.9	4,670
April	9,991	485	218	333	19,820
May	10,852	654	155	350	21,520
June	10,969	741	132	366	21,760
July	3,359	154	54	108	6,660
August	3,403	177	71	110	6,750
September	4,016	183	82	134	7,970
Water year 1947-48	59,496	741	54	163	118,000

a No gage-height or fall record; discharge computed on basis of records for Jordan River at Salt Lake City.

Sevier River at Hatch, Utah

Location.- Water-stage recorder, lat. 37°39'00", long. 112°25'30", in SW¼NW¼ sec. 28, T. 36 S., R. 5 W., 100 feet downstream from bridge, 0.2 mile east of Hatch, and 2.8 miles downstream from Mammoth Creek.

Drainage area.- 260 square miles.

Records available.- June 1911 to September 1928 (many years incomplete), June 1939 to September 1948.

Average discharge.- 17 years (1912-13, 1914-16, 1917-18, 1922-23, 1924-27, 1939-48), 138 second-feet.

Extremes.- Maximum discharge during year, 488 second-feet May 18 (gage height, 2.89 feet); minimum discharge recorded, 53 second-feet Sept. 22-26, but may have been less during period of ice effect.

1911-28, 1939-48: Maximum discharge not determined, occurred May 25, 1914, when Hatchtown Dam failed; maximum recorded, 1,490 second-feet May 26, 1922 (gage height, 5.25 feet, datum then in use); minimum daily, 10 second-feet for several days in 1912 when water was stored in Hatchtown Reservoir.

Remarks.- Records good except those for periods of ice effect, which are fair. Two small diversions from Mammoth Creek above station for irrigation. No regulation since Hatchtown Dam failed in 1914.

Revisions (water years).- W 960: 1939, 1940.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	62	72				85	198	210	97	64	62
2	65	64	74				108	193	236	97	64	61
3	65	68	71				128	188	215	93	64	59
4	66	68	71				104	190	198	90	66	57
5	65	68	69				90	190	188	85	69	57
6	65	69	72			64	93	225	178	82	74	57
7	66	68	71				97	225	198	82	75	55
8	66	68	71		60		97	356	185	80	71	57
9	65	68					101	320	173	80	68	57
10	68	68					153	270	169	80	66	57
11	74	66					139	247	157	78	64	57
12	75	68	(*)			(*)	83	231	150	78	64	57
13	82	66				64	80	239	146	77	62	57
14	74	68				64	86	262	139	77	64	57
15	69	66				64	97	342	135	75	64	55
16	69	68		64		63	108	403	130	74	64	55
17	69	66		(*)		64	122	438	126	75	64	57
18	69	66				65	130	427	122	74	64	55
19	68	68				65	146	359	118	77	62	55
20	68	*68	70			65	150	317	118	75	59	55
21	72	68				65	153	292	118	72	66	55
22	75	68				65	171	282	116	71	71	54
23	75	66			70	72	190	298	114	74	71	54
24	74	66				75	171	295	116	74	66	54
25	74	68				66	139	270	110	72	66	54
26	74	71				66	130	259	108	72	65	54
27	72	71				74	141	244	110	75	64	55
28	71	69				83	169	244	106	71	65	55
29	71	71				110	198	234	101	69	62	57
30	69	71			-	112	198	223	95	69	62	55
31	64	-			-	82	-	218	-	68	61	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,165	82	64	69.8	4,290
November	2,030	71	62	67.7	4,030
December	2,181	74	-	70.4	4,330
Calendar year 1947	44,770	568	-	123	88,800
January	1,984	-	-	64.0	3,940
February	1,880	-	-	64.8	3,730
March	2,152	112	-	69.4	4,270
April	3,855	198	80	128	7,650
May	8,479	438	188	274	16,820
June	4,385	236	95	146	8,700
July	2,413	97	68	77.8	4,790
August	2,031	75	59	65.5	4,030
September	1,686	62	54	56.2	3,340
Water year 1947-48	35,241	438	54	96.3	69,920

Peak discharge (base, 500 sec.-ft.). No peaks above base.
* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 22-25, Dec. 9 to Mar. 12.

Sevier River near Kingston, Utah

Location.- Water-stage recorder and concrete control, lat. 38°12', long. 112°12', in NE¼NW¼ sec. 16, T. 30 S., R. 3 W., 1,000 feet upstream from bridge on State Highway 22, 1 mile west of Kingston, and 2 miles upstream from East Fork.

Drainage area.- 1,110 square miles.

Records available.- June 1914 to September 1948.

Average discharge.- 34 years, 146 second-feet.

Extremes.- Maximum discharge during year, 458 second-feet Mar. 24 (gage height, 2.10 feet); minimum, 8.4 second-feet July 11-14.

1914-48: Maximum discharge, about 3,000 second-feet (including estimated flow of 360 second-feet, in overflow channel bypassing station) Mar. 4, 1938 (gage height, 5.20 feet), from rating curve extended above 1,100 second-feet; minimum, 4 second-feet Sept. 9, 1943.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station; none between station and mouth of East Fork.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	129	187	121		167	201	334	34	16	13	14
2	32	129	201	123		157	239	344	31	15	13	13
3	38	132	191	126		151	254	321	38	18	13	13
4	38	132	177	141		151	266	283	53	17	13	13
5	37	135	174	148		148	243	258	70	15	88	12
6	35	132	174	148		138	224	250	48	14	45	13
7	35	138	157	151		135	205	231	48	13	41	13
8	34	135	148	154	a120	144	209	250	46	14	24	13
9	34	141	148	163		154	198	250	48	11	24	13
10	34	148	157	163		*148	278	239	43	9.8	22	14
11	46	151	*151	167		141	366	220	40	9.8	22	14
12	78	151	138	160	(*)	141	235	205	34	9.1	22	13
13	115	148		151		144	209	167	28	9.1	18	14
14	160	151		b140		177	205	129	22	9.1	18	14
15	135	144		*b130	a120	177	243	109	19	9.1	17	14
16	121	154		132	129	160	278	123	18	9.1	16	15
17	115	151		138	a170	157	312	138	16	9.8	14	15
18	121	151		138	a220	160	287	123	15	10	15	15
19	121	*157	b130	b130	a270	160	274	121	15	11	17	15
20	118	157		b130	a260	157	270	94	14	18	13	15
21	123	157		b130	a240	148	270	74	14	15	13	
22	126	157		132	a220	148	295	59	18	15	16	
23	123	154		141	198	184	362	52	21	16	34	
24	121	b150		157	177	339	371	70	17	16	32	
25	118	157		154	160	254	326	74	13	15	16	
26	118	163	135	148	163	170	295	61	19	17	15	a15
27	118	167	132	b120	235	170	283	46	27	14	15	
28	121	167	129		254	224	299	40	21	13	14	
29	121	174	135		205	287	352	40	21	13	16	
30	118	177	b130	a120	-	304	362	38	18	13	16	
31	123	-	b125		-	235	-	35	-	13	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,809	160	32	90.6	5,570
November	4,489	177	129	150	8,900
December	4,479	201	-	144	8,880
Calendar year 1947	44,402.1	516	9.1	122	88,070
January	4,316	167	-	139	8,560
February	4,701	-	-	162	9,320
March	5,530	339	135	173	10,970
April	8,211	371	198	274	16,290
May	4,778	344	35	154	9,480
June	869	70	13	29.0	1,720
July	406.9	18	9.1	13.1	807
August	671	88	13	21.6	1,330
September	425	-	12	14.2	843
Water year 1947-48	41,684.9	371	9.1	114	82,670

* Winter discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Piute Reservoir near Marysvale, Utah

Location.- Staff gage, lat. 38°20', long. 112°12', in NW¼ sec. 3, T. 29 S., R. 3 W., at Piute Dam, 9 miles south of Marysvale. Datum of gage is 5,900.8 feet above mean sea level.

Drainage area.- 2,440 square miles.

Records available.- March 1914 to September 1948.

Extremes.- Maximum contents during year, 72,250 acre-feet Apr. 24, 25 (gage height, 75.3 feet); minimum, 1,640 acre-feet Sept. 30 (gage height, 25.2 feet).
1914-48: Maximum contents, 82,300 acre-feet May 28, 1922 (gage height, 76.4 feet, original capacity table); no contents at times during several years.

Remarks.- Reservoir is formed by earth-fill dam; storage began in summer of 1910. Capacity, 74,010 acre-feet between gage height 16 feet (approximate bottom of reservoir) and gage height 76 feet (top of flashboards on spillway since 1941). Spillway crest is at gage height 70.2 feet. No dead storage. Water is used for irrigation. Contents correspond to gage readings about 4 p.m. daily.

Contents, in acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,990	12,510	25,710	38,680	47,740	57,750	70,280	70,760	55,710	48,310	27,300	16,950
2	6,450	12,940	26,280	38,850	48,120	58,170	70,030	70,520	54,910	48,120	26,860	16,020
3	5,850	13,370	26,860	39,200	48,310	58,390	70,030	70,520	54,510	47,930	d26,570	15,120
4	5,480	13,690	27,440	39,560	48,680	58,600	70,030	70,760	54,110	47,740	d26,280	14,230
5	5,120	13,910	28,020	39,910	48,870	59,030	69,780	70,520	54,110	47,380	d25,990	13,370
6	4,770	14,230	28,610	40,270	49,060	59,240	69,540	71,500	53,910	46,820	25,710	12,620
7	4,500	14,450	29,050	40,620	49,430	59,670	69,050	71,750	53,710	46,080	25,420	11,780
8	4,230	14,670	29,500	40,980	49,810	60,100	68,810	71,500	53,510	44,980	25,280	10,970
9	3,910	15,010	29,950	41,340	50,000	60,540	68,330	71,260	53,120	44,060	25,140	10,180
10	3,600	15,340	30,410	41,700	50,390	60,980	67,850	70,520	52,720	42,780	25,280	9,430
11	3,420	15,680	30,860	42,060	50,580	61,420	67,610	69,780	52,330	41,700	25,420	8,720
12	3,730	16,140	31,330	42,420	50,780	61,860	67,850	69,050	51,740	40,620	25,280	8,040
13	4,640	16,720	31,790	42,780	50,970	62,310	68,090	68,330	51,550	39,560	25,280	7,390
14	4,700	17,310	32,250	42,970	51,160	62,760	68,330	67,610	50,390	38,510	25,140	6,760
15	5,200	17,920	32,570	43,330	51,350	63,210	68,570	66,650	49,620	37,470	24,990	6,150
16	5,700	18,410	32,880	43,690	51,740	63,660	68,810	65,960	48,870	36,460	24,850	5,550
17	6,220	18,910	33,200	43,880	52,130	64,110	69,300	65,260	47,930	35,450	24,710	4,980
18	6,760	19,410	33,670	44,240	52,330	64,570	70,030	64,570	47,000	34,480	24,570	4,440
19	7,310	20,060	33,990	44,420	52,720	65,260	70,760	64,110	46,080	33,510	24,290	3,910
20	7,870	20,710	34,480	44,790	53,120	65,730	71,260	63,440	45,160	32,570	24,000	3,420
21	8,460	21,380	34,800	44,980	53,710	66,190	71,500	62,980	44,610	31,790	23,720	2,980
22	8,810	22,060	35,130	45,160	54,310	66,650	71,750	62,530	44,610	31,480	23,300	2,570
23	9,340	22,470	35,450	45,340	54,710	67,130	72,000	61,860	44,980	31,330	22,890	2,200
24	9,710	22,890	35,790	45,710	55,110	67,610	72,250	60,980	45,160	31,480	22,470	1,850
25	10,090	23,300	36,290	46,080	55,510	68,090	72,250	60,320	45,710	31,630	22,060	1,850
26	10,280	23,720	36,630	46,260	55,710	68,570	72,000	59,450	46,080	31,330	21,520	1,850
27	10,670	24,000	37,130	46,450	56,120	69,300	71,750	58,600	46,640	30,710	20,840	1,850
28	11,070	24,290	37,650	46,640	56,730	69,540	71,750	57,960	47,190	29,800	20,060	1,890
29	11,470	24,570	37,990	46,820	57,340	69,780	71,260	57,340	47,740	28,910	19,410	1,760
30	11,780	25,140	38,330	47,000	-	70,030	71,010	56,930	48,120	28,170	18,540	1,640
31	12,090	-	38,510	47,380	-	70,280	-	56,320	-	27,730	17,680	-

d Doubtful gage-height record: contents interpolated.

Monthly gage height and contents, water year October 1947 to September 1948

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	34.7	7,550	-
Oct. 31	39.6	12,090	+4,540
Nov. 30	50.2	25,140	+13,050
Dec. 31	58.8	38,510	+13,370
Calendar year 1947	-	-	+3,870
Jan. 31	63.7	47,380	+8,870
Feb. 29	68.8	57,340	+9,960
Mar. 31	74.5	70,280	+12,940
Apr. 30	74.8	71,010	+730
May 31	68.3	56,320	-14,690
June 30	64.1	48,120	-8,200
July 31	52.0	27,730	-20,390
Aug. 31	44.6	17,680	-10,050
Sept. 30	25.2	1,640	-16,040
Water year 1947-48	-	-	-5,910

Sevier River below Piute Dam, near Marysvale, Utah

Location.- Water-stage recorder, lat 38°20', long. 112°11', in NE¼ sec. 34, T. 28 S., R. 3 W., three-quarters of a mile downstream from Piute Dam and 8 miles south of Marysvale.

Drainage area.- 2,440 square miles.

Records available.- May 1911 to September 1948.

Average discharge.- 36 years (1912-48), 248 second-feet.

Extremes.- Maximum discharge during year, 797 second-feet July 6 (gage height, 2.96 feet); minimum daily, 6.9 second-feet Oct. 18-21.
1911-48: Maximum discharge, 2,600 second-feet May 23, 24, 1922; practically no flow at times when reservoir gates were closed.

Remarks.- Records good except those for periods of no gage-height record, which are fair. One small diversion between gage and Piute Reservoir. Flow regulated by Piute Reservoir (see preceding page).

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	355	50					504	682	358	345	484	519
2	349	50					504	621	355	349	484	606
3	314	50					319	519	243	388	466	598
4	275	56					508	498	132	452	452	584
5	266	61	a7.6	a14		a13	508	74	112	548	411	573
6	227	61			a12		504	323	156	625	394	576
7	224	61					504	418	238	792	391	587
8	218	61					490	442	238	792	352	576
9	216	61					476	501	249	784	320	562
10	221	61				h13	504	598	336	776	299	533
11	224	h14	h7.6				504	697	381	768	296	522
12	71	a14	h7.6		h12		504	720	411	764	361	448
13	37	a14		a12			445	689	476	756	374	414
14	30	a14					305	647	480	756	378	414
15	a26	h14		h12			302	576	508	752	378	418
16	h19	a14	a7.6				302	508	515	752	394	374
17	a12	a14					302	459	580	748	466	381
18	h6.9	a13				a13	305	442	636	744	501	384
19	a6.9	h13					311	428	573	740	558	384
20	a6.9	h7.6					342	411	540	736	558	384
21	h6.9		h42		a12		487	384	293	736	551	391
22	h28		a27				498	391	156	732	504	388
23	31		h13	a12			555	459	43	533	515	352
24	55		h11				598	459	22	358	522	324
25	69	a7.6	a11			64	636	466	22	394	522	235
26	69		a20			116	647	508	14	512	555	202
27	56		37			176	682	482	10	693	587	202
28	46		52			210	697	482	12	689	587	208
29	47	h7.6	54			213	701	442	40	689	569	232
30	50	a7.6	a34			223	689	411	287	651	586	241
31	50	-	h14		-	404	-	368	-	515	515	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	3,612.6	355	6.9	117	7,170
November	779.6	61	7.6	23.0	1,550
December	467	54	7.6	15.1	926
Calendar year 1947	63,464	761	-	174	125,900
January	392	-	-	12.6	778
February	348	-	-	12	690
March	1,718	404	-	55.4	3,410
April	14,633	701	302	483	29,020
May	15,065	720	74	483	29,880
June	8,416	636	10	281	16,690
July	19,869	792	345	641	39,410
August	14,310	587	296	462	28,380
September	12,612	606	202	420	25,020
Water year 1947-48	92,222.2	792	6.9	252	182,900

a No gage-height record; discharge computed on basis of records of gate openings at Piute Dam, or interpolated.
h Computed from staff-gage reading.

Sevier River above Clear Creek, near Sevier, Utah

Location.- Water-stage recorder, lat. 38°34'20", long. 112°15'25", in NW¼NE¼ sec. 5, T. 26 S., R. 4 W., 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 square miles.

Records available.- April 1939 to September 1948. May 1911 to September 1929 at site 0.8 mile downstream, published as Sevier River at Sevier; those for Nov. 16, 1916, to September 1929 include flow of Clear Creek and are not equivalent.

Average discharge.- 13 years (1912-16, 1939-48), 301 second-feet.

Extremes.- Maximum discharge during year, 829 second-feet July 9 (gage height, 3.18 feet); minimum, 12 second-feet Jan. 20.
1911-29, 1939-48: Maximum discharge, 2,800 second-feet during last week in May 1922, computed on basis of records for station near Marysvale; minimum, 10 second-feet Nov. 27, 1919 (including flow of Clear Creek).

Remarks.- Records excellent except those for periods of ice effect, which are fair. Many diversions above station for irrigation. Flow regulated by Piute and Otter Creek Reservoirs.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	392	75	38	b80	b32	40	444	710	467	351	524	519
2	388	74	40	b80	b32	39	486	704	490	410	514	569
3	380	74	38	b50	b32	38	444	595	467	410	510	605
4	328	75	37	b50	b32	36	359	534	347	467	490	600
5	320	84	36	49	b32	b35	495	331	280	529	472	584
6	297	88	37	b45	b32	b35	500	206	246	600	422	569
7	278	90	35	44	b32	b36	500	444	335	721	414	579
8	271	90	b35	43	b32	38	505	476	368	817	410	584
9	271	88	b35	40	b32	39	462	514	388	823	355	579
10	271	88	*b35	42	b32	*38	495	574	410	823	335	559
11	290	78	b35	42	b32	37	514	664	481	817	308	534
12	243	49	b35	39	*b32	38	510	744	500	810	339	524
13	152	46	b35	38	b32	39	505	756	544	804	380	436
14	91	45	b35	*b40	b32	40	363	732	579	804	388	418
15	74	44	b35	b40	b32	40	312	687	579	798	384	418
16	66	42	b35	b40	b35	40	312	642	605	798	384	397
17	57	42	b35	b40	b39	40	316	605	600	792	427	376
18	53	*42	b35	42	44	43	316	590	681	786	510	384
19	50	44	b35	39	43	43	320	534	681	786	529	388
20	45	42	b35	b39	40	42	328	519	632	792	574	380
21	42	37	49	b39	38	39	414	476	584	780	569	392
22	39	b35	66	b39	40	42	510	462	328	774	544	392
23	48	b35	b90	38	44	42	534	510	254	692	519	376
24	56	b35	b80	38	39	40	600	559	141	495	539	347
25	82	b35	b70	37	39	40	632	564	103	392	539	304
26	90	35	b72	33	39	77	654	590	99	462	544	250
27	90	36	74	b32	43	110	670	590	97	626	574	248
28	77	35	112	b32	46	214	704	579	91	715	600	246
29	70	35	138	b32	46	226	715	569	88	721	579	254
30	72	36	114	b32	-	226	715	534	174	715	595	260
31	75	-	110	b32	-	287	-	505	-	642	554	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,058	392	39	163	10,030
November	1,654	90	35	55.1	3,280
December	1,691	138	35	54.5	3,350
Calendar year 1947	79,750	756	-	218	158,200
January	1,286	80	32	41.5	2,550
February	1,055	46	32	36.4	2,090
March	2,119	287	35	68.4	4,200
April	14,634	715	312	488	29,030
May	17,499	756	206	564	34,710
June	11,619	681	88	387	23,050
July	20,952	823	351	676	41,560
August	14,825	600	308	478	29,400
September	13,039	605	246	436	25,920
Water year 1947-48	105,461	823	32	288	209,200

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

Sevier River near Sigurd, Utah

Location.- Water-stage recorder, lat. 38°52', long. 111°57', in SW¼ sec. 19, T. 22 S., R. 1 W., 200 feet 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 square miles.

Records available.- July to September 1912, July 1914 to September 1948.

Average discharge.- 34 years (1914-48), 113 second-feet.

Extremes.- Maximum discharge during year, 582 second-feet Apr. 9 (gage height, 3.36 feet); minimum, 1.4 second-feet July 24.

1914-48: Maximum discharge, 2,400 second-feet May 30, 1922 (gage height, 8.1 feet, datum then in use), from rating curve extended above 600 second-feet on basis of maximum discharge for other Sevier River stations; practically no flow (seepage only) when Rockyford Reservoir gates are closed.

Remarks.- Records good above 10 second-feet and fair below. The extreme low flow during irrigation season represents seepage and return flow from canals. Flow also regulated by dams and reservoirs above station.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	123	139	107	87	145	353	507	9.0	8.2	2.6	5.0
2	23	120	145	111	92	152	360	471	4.8	7.0	2.6	5.4
3	30	123	158	109	90	158	445	388	4.4	5.0	2.6	5.4
4	34	121	156	111	88	152	519	259	6.6	4.2	2.6	5.4
5	39	125	147	114	88	149	487	127	24	4.0	2.4	5.4
6	44	129	141	116	95	147	479	107	50	4.0	2.0	5.8
7	44	131	137	116	88	145	491	102	27	3.8	2.2	6.2
8	40	133	133	118	87	145	507	41	17	3.4	2.4	6.2
9	42	135	131	118	93	145	547	15	14	3.4	2.2	6.2
10	55	135	129	118	97	149	555	6.2	7.0	3.4	2.4	12
11	76	137	127	118	95	154	535	3.6	4.2	3.2	8.3	20
12	137	139	125	116	90	152	535	3.2	3.8	3.2	30	22
13	143	143	123	111	90	149	539	3.2	3.4	3.0	30	23
14	121	143	121	102	98	152	519	3.6	3.6	2.8	31	24
15	125	141	120	95	112	158	491	18	3.6	3.0	31	24
16	131	141	121	95	112	165	374	38	3.8	2.8	18	26
17	131	141	120	95	116	158	350	53	3.8	2.8	10	23
18	129	139	114	95	127	154	445	51	3.8	2.2	11	22
19	121	139	104	93	149	154	483	42	3.6	2.2	12	35
20	109	141	97	84	181	149	445	41	3.6	2.2	6.2	86
21	100	141	97	92	190	149	357	34	3.6	2.0	4.4	86
22	98	141	97	100	178	152	265	22	3.2	1.8	4.4	86
23	102	139	93	104	167	152	311	12	61	2.0	5.4	69
24	105	129	90	105	160	154	456	6.6	121	1.6	7.8	36
25	107	121	88	104	154	154	531	4.8	104	1.6	3.8	30
26	121	123	88	97	141	154	535	4.8	80	1.8	4.0	30
27	133	125	90	88	137	113	527	4.2	72	2.4	4.0	33
28	137	127	90	80	139	3.2	523	4.6	61	3.0	4.4	34
29	139	129	95	86	143	7.8	519	6.6	39	3.0	4.8	34
30	137	135	97	87	-	163	511	12	26	2.8	4.8	35
31	131	-	105	87	-	327	-	15	-	2.6	4.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,905	143	21	93.7	5,760
November	3,989	143	120	133	7,910
December	3,618	158	88	117	7,180
Calendar year 1947	25,603.3	282	1.2	70.1	50,780
January	3,172	118	80	102	6,290
February	3,484	190	87	120	6,910
March	4,561	327	3.2	147	9,050
April	15,994	555	265	466	27,760
May	2,406.4	507	3.2	77.6	4,770
June	771.8	121	3.2	25.7	1,530
July	98.4	8.2	1.6	3.17	195
August	264.1	31	2.0	8.52	524
September	841	86	5.0	28.0	1,670
Water year 1947-48	40,104.7	555	1.6	110	79,550

Sevier River below San Pitch River, near Gunnison, Utah

Location.- Water-stage recorder, lat. 39°09', long. 111°52', in NE¼ sec. 14, T. 19 S., R. 1 W., 1,000 feet downstream from San Pitch River and 3 miles west of Gunnison.

Drainage area.- 4,880 square miles.

Records available.- October 1917 to September 1948.

Average discharge.- 31 years, 230 second-feet.

Extremes.- Maximum discharge during year, 905 second-feet May 1 (gage height, 4.28 feet); minimum, 42 second-feet July 28 (gage height, 1.09 feet).
1917-48: Maximum discharge, 2,620 second-feet June 1, 1922 (gage height, 5.68 feet, present datum); minimum daily, 8 second-feet July 13-17, Sept. 6, 1934.

Remarks.- Records excellent. Flow regulated by reservoirs and by many diversions for irrigation above station. Most of flow diverted above station during irrigation season.

Rating table, water year 1947-48, except period of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Mar. 1 to June 5)

1.3	70	2.5	333
1.5	101	3.0	488
1.8	158	3.5	669
2.1	227	4.0	885

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	294	327	262	247	313	485	895	268	133	53	91
2	131	283	348	268	250	311	529	885	255	116	52	90
3	137	286	350	275	252	311	543	834	305	110	53	91
4	152	292	350	283	247	311	564	763	305	108	56	98
5	165	289	345	292	242	294	646	685	292	99	73	98
6	165	294	336	300	250	292	669	554	273	93	88	93
7	158	294	330	300	250	289	650	557	255	88	82	85
8	160	300	319	308	244	300	630	612	242	78	82	93
9	158	302	316	308	244	305	626	449	205	78	99	99
10	167	302	311	305	257	297	612	359	182	76	90	99
11	205	302	297	305	255	289	669	313	160	76	88	95
12	255	305	294	297	255	283	681	297	139	76	93	91
13	311	305	289	283	244	297	669	316	113	76	104	91
14	316	308	289	283	250	316	677	404	113	76	108	88
15	297	308	297	273	268	342	705	505	101	73	113	87
16	294	311	294	268	268	319	709	543	96	84	110	90
17	292	311	289	262	281	313	689	612	95	79	101	90
18	292	308	286	268	322	311	586	673	95	73	104	88
19	289	313	281	255	389	308	608	730	90	73	111	91
20	281	322	273	242	383	297	657	661	88	76	93	96
21	270	316	273	242	371	292	657	532	106	73	91	118
22	273	302	270	257	365	292	650	508	201	73	88	150
23	281	292	262	273	365	325	623	472	198	59	87	141
24	273	289	255	283	336	389	604	458	196	53	87	133
25	275	292	252	283	325	389	600	423	232	53	87	118
26	275	305	257	275	325	383	650	383	240	51	88	103
27	273	305	260	b250	339	377	673	353	244	48	87	104
28	289	311	260	b235	336	342	673	339	220	47	88	108
29	292	316	268	244	322	286	767	327	192	47	91	118
30	300	319	270	242	-	278	838	319	152	46	90	122
31	300	-	268	242	-	380	-	294	-	51	91	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	7,455	316	129	240	14,790
November	9,076	322	283	303	18,000
December	9,116	350	252	294	18,080
Calendar year 1947	79,524	717	72	218	157,700
January	8,463	308	235	273	16,790
February	8,482	389	242	292	16,820
March	9,831	389	278	317	19,500
April	19,339	838	485	645	38,360
May	16,055	895	294	518	31,840
June	5,653	305	88	188	11,210
July	2,342	133	46	75.5	4,650
August	2,728	113	52	88.0	5,410
September	3,059	150	85	102	6,070
Water year 1947-48	101,599	895	46	278	201,500

b Stage-discharge relation affected by ice.

Sevier Bridge Reservoir near Juab, Utah

Location.- Staff gage, lat. 39°22', long. 112°02', in NW¼ sec. 1, T. 17 S., R. 2 W., at Sevier Bridge Dam and 13 miles southwest of Juab.

Drainage area.- 5,120 square miles.

Records available.- January 1914 to September 1948.

Extremes.- Maximum contents during year, 235,500 acre-feet Apr. 13-15, 17 (gage height, 79.95 feet); minimum, 110,600 acre-feet Sept. 19, 20 (gage height, 63.55 feet).
1914-48: Maximum contents, 251,000 acre-feet Apr. 19, 20, 1922 (gage height, 80.0 feet), from former capacity table; no contents at times during 1927-28, 1930-36.

Remarks.- Reservoir was formed by a 30-foot earth-fill dam and storage began about 1904; dam ultimately raised to 90 feet by June 1916. Capacity, 236,000 acre-feet between gage heights 6 feet (approximate bottom of outlet tunnel) and 80.0 feet (top of flashboard on spillway). No dead storage. Figures given herein represent total contents. Water is used for irrigation. Gage read to half-tenths between 7 and 8 a.m. daily; contents are as of that time.

Revisions (water years).- W 960: 1940, 1941.

Contents, in acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	119,300	131,900	148,700	167,000	182,900	200,600	222,500	231,800	204,800	180,800	138,200	123,700
2	119,000	132,500	149,800	167,400	183,300	201,600	223,500	231,200	202,600	179,800	137,600	122,500
3	119,300	132,800	150,500	167,800	183,800	202,100	224,500	231,800	202,100	178,300	136,900	122,000
4	119,900	133,400	151,200	168,600	184,200	203,000	225,500	231,800	201,100	176,600	136,300	121,500
5	119,800	133,800	152,300	169,400	185,000	203,400	227,000	230,700	201,100	175,000	136,300	120,900
6	120,100	134,100	152,700	169,800	185,400	203,900	228,100	230,200	200,200	172,600	136,300	119,800
7	120,400	134,700	153,400	170,100	185,900	204,400	229,700	229,700	200,200	171,800	135,800	118,800
8	120,400	135,300	152,800	170,500	186,700	204,800	230,700	228,600	199,300	168,600	136,300	117,700
9	120,600	135,600	154,500	171,400	187,200	205,800	231,800	228,100	199,300	166,200	136,300	116,400
10	120,900	136,300	155,200	172,200	187,600	206,200	232,800	227,600	197,400	163,900	136,300	115,200
11	121,500	136,900	155,600	172,600	188,000	207,200	233,900	226,500	196,500	162,300	136,300	114,100
12	121,800	137,200	156,300	173,000	188,500	208,200	234,900	225,500	195,600	160,100	136,300	113,100
13	122,200	137,900	157,100	173,800	189,400	208,700	235,500	224,500	193,800	157,800	136,600	112,200
14	123,100	138,200	157,800	174,200	189,800	209,200	235,500	223,000	192,900	154,900	136,300	111,700
15	123,700	138,900	158,200	174,600	190,300	209,600	235,500	221,500	191,200	154,100	136,300	111,200
16	124,200	139,500	158,600	175,400	190,800	210,600	234,900	221,500	190,300	152,700	136,000	111,200
17	124,800	139,800	159,300	175,800	191,200	211,600	235,500	221,500	188,500	151,200	135,000	110,800
18	125,400	140,500	160,100	176,600	191,600	212,000	234,900	220,500	187,600	150,500	135,000	110,800
19	126,000	140,800	160,400	176,600	192,000	212,500	234,900	220,500	185,900	149,800	134,400	110,600
20	126,500	141,500	160,800	177,000	192,900	213,500	234,900	219,500	184,200	147,700	133,800	110,600
21	127,100	142,600	161,200	177,400	193,400	214,500	234,900	219,000	184,200	147,700	133,100	110,800
22	127,700	143,200	161,600	178,300	194,200	215,000	234,400	217,500	183,300	147,000	131,900	111,000
23	127,100	143,500	162,300	179,100	195,200	215,400	233,400	216,400	183,300	145,600	130,700	111,000
24	127,700	144,200	162,700	179,500	196,000	216,400	232,800	216,400	183,300	144,900	129,500	111,200
25	128,300	144,900	163,100	179,900	196,900	217,000	232,800	214,500	183,300	143,500	128,800	111,400
26	128,800	145,600	163,900	180,800	197,400	217,500	233,400	213,500	183,300	142,900	128,000	111,400
27	129,500	146,300	164,700	180,800	198,300	218,500	232,800	212,500	182,500	142,200	127,100	111,400
28	130,100	147,000	164,700	181,200	199,300	219,500	232,800	211,100	182,500	140,800	126,500	111,700
29	130,400	147,400	165,000	181,600	200,200	220,500	232,800	209,200	182,500	140,200	126,000	112,000
30	130,700	148,000	165,400	182,500	-	221,000	232,300	208,700	181,600	139,500	125,400	112,100
31	131,300	-	166,200	182,500	-	221,500	-	204,800	-	138,900	124,800	-

Monthly gage height and contents, water year October 1947 to September 1948

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	65.3	119,300	+12,600
Nov. 1	67.5	131,900	+16,800
Dec. 1	70.05	148,700	+18,300
Calendar year 1947	-	-	+9,200
Jan. 1	72.5	167,000	+15,900
Feb. 1	74.45	182,900	+17,700
Mar. 1	76.45	200,600	+21,900
Apr. 1	78.7	222,500	+9,300
May 1	79.6	231,800	-27,000
June 1	76.9	204,800	-24,000
July 1	74.2	180,800	-42,600
Aug. 1	68.5	138,200	-14,500
Sept. 1	66.1	123,700	-11,300
Oct. 1	63.95	112,400	-
Water year 1947-48	-	-	-8,900

Sevier River near Juab, Utah

Location.- Water-stage recorder, lat. 39°22', long. 112°02', in NE¼ sec. 2, T. 17 S., R. 2 W., 1,600 feet downstream from Sevier Bridge Dam and 11 miles southwest of Juab.

Drainage area.- 5,120 square miles.

Records available.- September 1911 to September 1948.

Average discharge.- 37 years, 251 second-feet.

Extremes.- Maximum discharge during year, 1,230 second-feet May 27 (gage height, 5.07 feet); minimum, 4.7 second-feet Sept. 23 (gage height, 1.16 feet).
1911-48: Maximum discharge, 2,140 second-feet June 2, 1922 (gage height, 8.50 feet); practically no flow at times when reservoir gates were closed.

Remarks.- Records good except those for period of no gage-height record, which are fair. No diversions between this station and station near Gunnison. Flow regulated by Sevier Bridge Reservoir (see preceding page).

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	126	51	8.1					932	824	721	326	442
2	55	51	8.1					965	599	725	326	496
3	14	51	8.1					921	571	725	326	554
4	14	51	6.2					887	557	769	276	621
5	14	51	6.2				a16	958	506	954	205	676
6	14	51	6.2					1,000	448	996	200	676
7	14	51	5.4					969	448	1,120	89	739
8	14	51	6.2			(*)		943	448	1,190	9.2	736
9	12	51	6.2				129	873	596	1,200	8.1	688
10	51	53	5.4		(*)		226	828	714	1,200	8.1	688
11	42	53	5.4				226	828	699	1,190	8.1	684
12	12	53	5.4				240	828	702	1,190	49	451
13	11	53	9.2				457	828	702	1,110	80	278
14	12	55	14				*813	824	702	1,000	82	278
15	12	57	14	a15	a15	a16	824	788	699	810	171	278
16	12	57	14				699	747	647	557	298	281
17	12	57	14				603	747	614	490	339	205
18	14	57	*14				599	824	706	451	334	107
19	14	57	14				592	906	706	451	334	85
20	14	55	14				669	902	439	448	420	87
21	15	55	14				869	924	281	526	509	44
22	15	55	14	(*)			977	943	281	603	509	5.4
23	15	30	14				873	943	281	599	509	5.4
24	15	11	14				762	981	281	599	509	6.2
25	15	11	14				736	1,040	278	467	509	6.2
26	15	11	14				739	1,090	278	387	509	7.1
27	49	9.2	15				750	1,220	278	387	390	7.1
28	115	8.1	15				821	1,190	361	387	306	8.1
29	80	8.1	15				887	1,190	436	390	303	8.1
30	57	8.1	15		-		891	1,190	578	390	381	9.2
31	55	-	15		-		-	1,130	-	358	442	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	929	126	11	30.0	1,840
November	1,272.5	57	8.1	42.4	2,520
December	345.1	15	5.4	11.1	681
Calendar year 1947	70,637.6	1,200	5.4	194	140,100
January	465	-	-	15	922
February	435	-	-	15	863
March	496	-	-	16	984
April	14,511	977	-	484	28,780
May	29,339	1,220	747	946	58,190
June	15,660	824	278	522	31,060
July	22,390	1,200	358	722	44,410
August	8,764.5	509	8.1	283	17,380
September	9,156.8	739	5.4	305	18,160
Water year 1947-48	103,761.9	1,220	5.4	284	205,800

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of 4 discharge measurements and records of gate operation for Sevier Bridge Reservoir.

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Sevier River near Lynndyl, Utah

Location.- Water-stage recorder, lat. 39°29', long. 112°24', in SE¼ sec. 27, T. 15 S., R. 5 W., 1½ miles downstream from highway bridge and 3½ miles southwest of Lynndyl.

Drainage area.- 6,270 square miles.

Records available.- April 1914 to October 1919. November 1942 to September 1948.

Average discharge.- 10 years (1914-19, 1943-48), 236 second-feet.

Extremes.- Maximum discharge during year, 1,080 second-feet June 1 (gage height, 6.96 feet); minimum daily, 17 second-feet Jan. 1, 19, 27.
1914-19, 1942-48: Maximum daily discharge, 1,820 second-feet June 9, 1914, based on records at Leamington; minimum recorded, 9.6 second-feet Jan. 22, 1945.

Remarks.- Records good except those for period of ice effect, which are fair. Flow regulated by Sevier Bridge Reservoir (see p. 120). Several diversions for irrigation between reservoir and station.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	114	112	28	b17	b20	72	18	765	1,060	346	231	201
2	160	109	30	b18	b20	71	18	777	947	504	199	203
3	156	105	27	b20	b21	71	18	777	681	514	185	210
4	95	99	26	b21	b22	69	18	740	484	494	177	264
5	61	96	26	22	b22	68	18	816	400	482	173	289
6	55	96	26	21	b20	68	18	805	340	574	120	393
7	52	103	26	30	b18	71	18	805	280	651	94	415
8	51	104	24	20	b20	70	18	686	272	724	93	429
9	49	104	24	19	b18	71	18	632	253	807	98	499
10	52	103	22	19	b20	72	18	613	295	838	93	474
11	57	105	22	18	b19	71	134	608	476	852	85	474
12	75	106	b20	18	b18	70	180	600	486	866	81	484
13	78	108	b18	b18	b19	70	184	561	466	866	78	391
14	70	108	20	b18	b20	73	260	546	462	855	95	214
15	70	106	20	b18	b21	75	574	535	449	727	116	190
16	75	105	20	b18	23	42	646	504	449	630	123	170
17	73	106	20	b18	22	26	716	446	429	388	249	175
18	70	106	*b20	b18	20	22	616	444	365	311	328	160
19	69	106	b19	b17	20	22	616	496	422	262	331	95
20	70	110	19	b16	*21	23	619	585	432	243	328	76
21	70	110	19	b20	21	22	651	590	376	233	344	77
22	74	106	18	*b23	21	20	779	605	199	247	376	82
23	79	106	b18	20	22	20	905	635	190	340	388	90
24	76	110	b18	19	20	20	894	657	185	335	379	79
25	74	76	b18	19	20	20	782	673	194	353	351	75
26	73	*37	b18	b18	19	20	751	730	194	337	302	72
27	74	32	b18	b17	30	19	740	735	208	241	280	71
28	74	28	b18	b18	63	19	724	847	205	197	225	71
29	112	28	19	b19	68	18	743	833	225	187	124	65
30	168	26	b21	b19	-	18	763	813	322	189	121	62
31	127	-	b18	b20	-	18	-	835	-	214	132	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,553	168	49	82.4	5,060
November	2,756	112	26	91.9	5,470
December	660	30	18	21.3	1,310
Calendar year 1947	61,612	818	-	169	122,200
January	586	23	17	18.9	1,160
February	688	68	18	23.7	1,360
March	1,411	75	18	45.5	2,800
April	12,457	905	18	415	24,710
May	20,694	847	444	668	41,050
June	11,746	1,060	185	392	23,300
July	14,807	866	187	478	29,370
August	6,299	388	78	203	12,490
September	6,550	499	62	218	12,990
Water year 1947-48	81,207	1,060	17	222	161,100

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

East Fork Sevier River near Kingston, Utah

Location.- Water-stage recorder, lat. 38°12', long. 112°09', in SW¼NW¼ sec. 13, T. 30 S., R. 3 W., 1,000 feet downstream from bridge on State Highway 22, 1.7 miles east of Kingston, and 4.1 miles upstream from mouth.

Drainage area.- 1,260 square miles.

Records available.- March 1913 to September 1948. May to September 1912 at site 2½ miles downstream, below all diversions.

Average discharge.- 35 years, 89.3 second-feet.

Extremes.- Maximum discharge during year, 401 second-feet Apr. 23 (gage height, 2.57 feet); minimum, 9.8 second-feet Jan. 13.
1913-48: Maximum discharge, 2,030 second-feet May 12, 1941 (gage height, 5.05 feet); minimum, 3.8 second-feet Jan. 7, 1946.

Remarks.- Records good except those for periods of ice effect, which are fair. Diversions above and below station for irrigation. Station is above diversions in vicinity of Kingston. Flow regulated by Otter Creek Reservoir (see p. 125).

Revisions (water years).- W 750: 1931, 1932.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	66	80	51		26	156	247	42	281	302	135
2	18	66	81	62		26	174	220	46	275	302	134
3	18	66	77	51		26	164	220	46	293	302	134
4	19	64	74	34		27	162	213	46	253	305	130
5	19	66	74	24		27	156	186	44	240	308	127
6	20	66	76	21		40	99	178	40	244	305	126
7	19	68	69	21		108	95	215	41	230	302	126
8	19	69	73	21	20	108	84	227	42	224	299	126
9	29	67	72	21		106	103	186	41	255	293	126
10	43	67	73	21		*105	138	144	40	325	287	126
11	56	67	(*)	21		103	174	134	38	325	284	129
12	56	68		21	(*)	101	166	121	35	325	281	99
13	56	66		19		99	151	68	37	325	278	43
14	58	66				98	154	55	114	325	275	37
15	58	64		(*)		98	176	62	132	328	269	37
16	58	66	60			96	242	56	132	328	264	36
17	57	66				95	278	50	132	328	261	37
18	63	66				95	272	44	130	328	264	43
19	63	*72				94	261	45	129	331	261	138
20	64	72			25	92	267	73	129	335	258	158
21	63	71				91	278	72	130	331	255	195
22	64	71		20		92	356	72	132	328	253	195
23	64	68			26	91	390	71	132	325	253	193
24	64	67			24	102	382	69	134	325	253	191
25	66	71			24	110	302	74	182	325	201	191
26	66	73	50		26	109	275	73	242	315	142	191
27	67	73			26	112	258	51	240	315	142	184
28	67	74			26	114	269	45	253	315	142	105
29	67	74			26	120	315	41	269	312	142	99
30	66	76			-	145	296	41	284	308	137	96
31	66	-	34		-	162	-	40	-	305	135	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,531	67	18	49.4	3,040
November	2,056	76	64	68.5	4,080
December	1,883	81	-	60.7	3,730
Calendar year 1947	15,966	156	-	43.7	31,670
January	748	62	-	24.1	1,480
February	653	-	-	22.5	1,300
March	2,818	162	26	90.9	5,590
April	6,593	390	84	220	13,080
May	3,393	247	40	109	6,730
June	3,434	284	35	114	6,810
July	9,402	335	224	303	18,650
August	7,755	308	135	250	15,380
September	3,687	195	36	123	7,310
Water year 1947-48	43,953	390	-	120	87,180

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 11-30, Jan. 14 to Feb. 22 (no gage-height record Jan. 18 to Feb. 22); discharge computed on basis of 4 discharge measurements, weather records, and records for nearby stations.

Antimony Creek near Antimony, Utah

Location.- Water-stage recorder, lat. 38°06', long. 111°53', in NW¼ sec. 22, T. 31 S., R. 1 W., 5 miles upstream from mouth and 5 miles southeast of Antimony.

Drainage area.- 26 square miles.

Records available.- October 1946 to September 1948 (discontinued).

Extremes.- Maximum discharge during year, 215 second-feet May 7 (gage height, 3.80 feet); minimum, 14 second-feet Mar. 26, 29, 30.
1946-48: Maximum discharge, that of May 7, 1948; minimum, 11 second-feet Aug. 22, 1947.

Remarks.- Records good.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	17	20	18	18	17	16	42	26	18	18	19
2	17	17	20	18	18	17	19	59	47	18	18	19
3	18	17	20	18	18	18	19	72	40	18	18	19
4	18	18	20	18	19	18	20	79	32	17	19	19
5	18	18	20	18	19	18	20	107	29	17	20	19
6	18	18	20	18	19	18	20	141	27	17	19	19
7	18	18	20	18	19	17	20	175	28	17	19	19
8	18	18	20	17	19	17	19	135	29	16	18	19
9	18	18	20	17	18	18	20	77	26	17	18	19
10	18	19	20	17	19	17	20	58	25	16	18	19
11	18	19	20	17	19	16	20	42	24	16	18	19
12	18	19	19	17	19	16	19	38	24	16	18	19
13	18	19	19	17	19	17	19	75	23	16	18	19
14	18	19	19	17	19	17	20	113	23	16	18	19
15	17	19	19	17	19	16	20	115	23	16	18	19
16	17	19	18	16	19	16	21	97	22	16	18	19
17	17	19	18	16	19	17	21	90	21	17	18	19
18	17	20	18	16	19	17	21	72	21	17	18	19
19	17	20	18	16	18	17	20	53	21	17	18	19
20	17	20	18	16	19	17	21	43	21	18	18	19
21	17	20	18	16	18	17	21	43	22	18	18	19
22	17	20	18	16	19	17	22	40	23	18	20	19
23	17	20	18	16	18	16	21	37	22	18	19	19
24	17	20	18	16	18	16	20	34	20	18	18	20
25	17	20	18	16	18	15	21	32	20	18	18	19
26	17	20	18	16	17	15	20	34	20	18	18	20
27	17	20	18	16	17	15	21	34	21	18	18	20
28	17	20	18	17	17	15	24	33	19	18	18	20
29	17	20	18	17	17	15	31	29	19	18	18	20
30	17	20	18	17	-	15	40	27	19	18	18	20
31	17	-	18	17	-	15	-	26	-	18	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	539	18	17	17.4	1,070
November	571	20	17	19	1,130
December	584	20	18	18.8	1,160
Calendar year 1947	8,370	119	12	22.9	16,600
January	522	18	16	16.8	1,040
February	534	19	17	18.4	1,060
March	512	18	15	16.5	1,020
April	638	40	16	21.2	1,260
May	2,052	175	26	66.2	4,070
June	737	47	19	24.6	1,460
July	534	18	16	17.2	1,060
August	568	20	18	18.3	1,120
September	576	20	19	19.2	1,140
Water year 1947-48	8,363	175	15	22.8	16,590

Otter Creek Reservoir near Antimony, Utah

Location.- Staff gage, lat. 38°10'15", long. 112°00'00", in NW¼ sec. 28, T. 30 S., R. 2 W., near spillway on right side of dam on Otter Creek, 5 miles northwest of Antimony and 12 miles east of Kingston.

Records available.- January 1914 to September 1914, October 1945 to September 1948 published in water-supply papers. 1915, 1934-45 available in files of Salt Lake City district office, Geological Survey (will be furnished upon application).

Extremes.- Maximum contents observed during year, 55,000 acre-feet May 20 (gage height, 37.0 feet); minimum observed, 12,260 acre-feet Sept. 20 (gage height, 15.2 feet).
1914-15, 1934-48: Maximum contents observed, 55,000 acre-feet May 1, 1946, May 20, 1948 (gage height, 37.0 feet); minimum, 400 acre-feet Aug. 1, Sept. 1, 2C, Oct. 1, 1934.

Remarks.- Reservoir formed in 1891 by a 40-foot earth-fill, rock-faced dam, 5 feet added to height in 1901. Capacity, 52,500 acre-feet between gage height zero (bottom of outlet gate) and gage height 36.0 feet (top of flashboards on spillway). Spillway crest is at gage height of 33.5 feet. Reservoir stores water from Otter Creek and also water diverted from East Fork Sevier River, for irrigation in Sevier River Basin.

Contents, in acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42,560	42,560	43,040	43,760	47,120	51,500	52,500	51,500	54,750	47,840	30,000	15,300
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-
10	42,800	42,560	43,760	44,960	48,080	52,500	52,500	50,750	54,750	43,280	25,500	13,560
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	42,800	42,800	43,520	45,920	49,280	52,000	52,250	55,000	52,500	36,600	19,200	12,260
21	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-

Monthly elevations and contents, water year October 1947 to September 1948

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	31.9	42,560	0
Nov. 1	31.9	42,560	+480
Dec. 1	32.1	43,040	+720
Calendar year 1947	-	-	+19,340
Jan. 1	32.4	43,760	+3,360
Feb. 1	33.8	47,120	+4,380
Mar. 1	35.6	51,500	+1,000
Apr. 1	36.0	52,500	-1,000
May 1	35.6	51,500	+3,250
June 1	36.9	54,750	-6,910
July 1	34.1	47,840	-17,840
Aug. 1	28.6	30,000	-14,700
Sept. 1	17.5	15,300	-5,200
Oct. 1	15.5	10,100	-
Water year 1947-48	-	-	-32,460

Clear Creek at Sevier, Utah

Location.- Water-stage recorder, lat. 38°34'55", long. 112°15'35", in SW¼NE¼ sec. 32, T. 25 S., R. 4 W., 400 feet upstream from bridge on U. S. Highway 89, 1,000 feet upstream from mouth, and 0.3 mile south of Sevier.

Drainage area.- 169 square miles.

Records available.- February 1912 to September 1919 and October 1940 to September 1948 in reports of Geological Survey. April 1934 to September 1948 in reports of Sevier River water commissioner.

Average discharge.- 13 years (1912-17, 1940-48), 35.4 second-feet.

Extremes.- Maximum discharge during year, 400 second-feet Apr. 18 (gage height, 4.43 feet), from rating curve extended above 213 second-feet by logarithmic plotting; minimum, 1.4 second-feet Sept. 20.
1912-19, 1940-48: Maximum discharge observed, 487 second-feet Aug. 7, 1941 (gage height, 4.05 feet); no flow Aug. 26, 1913.

Remarks.- Records good. Practically entire flow is diverted above station each year during latter part of irrigation season.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	7.9	20	12	15	18	27	188	127	43	7.6	3.1
2	1.9	8.6	22	16	18	13	35	149	136	38	7.1	2.6
3	1.8	11	20	18	15	18	44	136	146	37	6.0	2.6
4	1.8	9.3	19	16	13	18	47	146	127	36	6.8	2.5
5	1.8	12	18	17	15	18	47	156	121	32	7.1	2.5
6	1.8	10	18	16	17	15	46	161	121	28	7.1	2.6
7	2.6	15	12	16	16	17	44	181	120	26	7.1	2.3
8	3.5	13	16	18	13	18	45	178	119	26	7.3	2.2
9	2.2	14	17	18	17	19	58	146	113	22	7.3	2.1
10	2.2	14	17	17	16	17	114	128	108	20	7.3	2.1
11	9.3	15	13	17	16	12	99	112	106	20	6.5	1.9
12	12	18	16	13	11	16	63	104	102	16	5.7	2.6
13	11	14	13	13	15	19	58	109	97	13	5.4	2.1
14	11	18	16	11	17	20	73	127	96	11	4.3	2.1
15	10	15	15	14	16	18	144	151	112	12	2.8	2.1
16	10	17	14	15	16	16	210	168	109	12	3.6	1.9
17	10	16	13	14	17	19	255	185	104	11	3.6	2.1
18	9.6	11	14	17	19	18	300	202	102	11	3.9	2.1
19	9.6	10	13	11	29	18	225	207	96	11	2.5	2.2
20	9.3	12	14	12	28	18	197	182	90	12	2.9	2.1
21	10	13	16	17	23	15	207	160	96	11	2.8	1.6
22	12	13	15	18	24	18	253	149	92	12	2.5	1.8
23	11	13	13	18	20	24	223	148	82	11	2.5	2.5
24	11	13	13	17	18	28	164	150	75	12	2.5	2.2
25	10	17	14	16	16	24	139	149	73	11	2.3	2.3
26	11	17	14	14	20	22	128	140	79	10	2.3	2.3
27	11	18	15	8.6	24	23	139	136	78	8.6	2.3	2.3
28	11	18	14	9.3	22	29	164	136	68	9.6	2.3	2.2
29	11	18	16	13	21	35	200	138	59	9.6	2.5	2.2
30	10	18	16	15	-	29	182	131	50	8.6	2.5	2.2
31	8.3	-	13	14	-	30	-	126	-	7.9	2.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	239.6	12	1.8	7.73	475
November	418.8	18	7.9	14.0	831
December	479	22	12	15.5	950
Calendar year 1947	15,280.8	226	1.8	41.9	30,310
January	460.9	18	8.6	14.9	914
February	527	29	11	18.2	1,050
March	622	35	12	20.1	1,230
April	3,930	300	27	131	7,800
May	4,659	207	104	150	9,240
June	3,004	146	50	100	5,960
July	584.3	43	7.9	17.7	1,090
August	136	7.6	2.3	4.39	270
September	67.4	3.1	1.6	2.25	134
Water year 1947-48	15,092	300	1.8	41.2	29,940

Salina Creek at Salina, Utah

Location.- Water-stage recorder and concrete control, lat. 38°57', long. 111°52', in NW¼ sec. 25, T. 21 S., R. 1 W., at Salina, 150 feet upstream from bridge on U. S. Highway 89 and three-quarters of a mile upstream from mouth.

Drainage area.- 298 square miles.

Records available.- April 1914 to September 1919, November 1942 to September 1948. July 1900 to April 1901 at site 5 miles upstream, published as Salina Creek near Salina.

Extremes.- Maximum discharge during year, 926 second-feet May 15 (gage height, 3.87 feet), from rating curve extended above 400 second-feet; minimum daily, 0.3 second-foot Aug. 19, 27, 28, Sept. 4, 22.

1914-19, 1942-48: Maximum discharge, that of May 15, 1948; minimum, 0.1 second-foot Aug. 9, 1946.

Remarks.- Records fair. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	21	28			29	27	f141	76		1.7	0.4
2	1.5	21	28			22	43	f119	106		1.7	.4
3	1.7	21	26	b22		20	52	f114	112		1.5	.4
4	1.7	18	23			20	62	f232	85		12	.3
5	1.9	23	24			21	50	f260	68		5.5	.4
6	2.2	16	24	24		16	50	306	47		1.1	.4
7	2.4	22	16	24	b21	16	36	435	36	2.0	1.1	.4
8	1.9	25	15	23		*23	36	316	36		1.3	.4
9	1.7	22	*22	24		22	40	144	29		1.5	.5
10	2.2	23	18	24		20	64	f164	21		.9	.9
11	13	21	21	24	(*)	13	56	109	12		.5	.5
12	7.6	21	24	16		17	30	130			1.1	.5
13	1.7	17	17	(*)		22	27	271		f1.3	.9	.5
14	2.2	22	21		b25	25	68	435		1.3	.7	.5
15	1.9	20	26		b30	23	72	f534		1.3	.5	.7
16	1.7	24	26		b35	17	104	f578	4.0	1.7	.4	.7
17	1.5	*22	22	b21	b40	21	150	f582		1.1	.4	.9
18	1.5	22	21		b50	22	180	f506		.9	.4	.9
19	1.3	25	26		b50	20	130	f395		1.3	.3	1.1
20	1.3	21	24		48	18	100	285		1.3	.5	.7
21	1.9	23	23		39	16	120	282	f40	1.7	.7	.5
22	12	21			40	20	160	268	55	1.7	.9	.3
23	20	b21		37	35	37	140	236	22	1.3	.5	.7
24	20	b23		27	27	55	110	229	8.7	1.1	.4	.4
25	18	b30	b22	25	20	37	90	192	9.4	1.1	.5	.4
26	18	33		22	31	23	80	167	12	1.1	.5	.5
27	18	36			43	26	100	155	13	1.1	.3	.9
28	20	28			42	47	140	141	8.7	1.5	.3	1.3
29	22	29	22	b21	36	53	f228	124	7.5	1.1	.4	.7
30	23	29	22		-	33	f195	97	2.0	.9	.5	.4
31	22	-	b22		-	27	-	81	-	1.3	.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	246.9	23	1.1	7.96	490
November	700	36	16	23.3	1,390
December	695	28	15	22.4	1,380
Calendar year 1947	8,255.3	278	.7	22.6	16,380
January	695	37	16	22.4	1,380
February	864	50	-	29.8	1,710
March	781	55	13	25.2	1,550
April	2,738	226	27	91.3	5,430
May	8,028	582	81	259	15,920
June	842.3	112	2.0	28.1	1,670
July	48.1	-	.9	1.55	95.4
August	39.4	12	.3	1.27	78.1
September	17.6	1.3	.3	.59	34.9
Water year 1947-48	15,695.3	582	.3	42.9	31,130

Peak discharge (base, 120 sec.-ft.).- Mar. 28 (11 p.m.) 141 sec.-ft.; Apr. 17 (1 a.m.) 208 sec.-ft.; May 7 (11:30 p.m.) 655 sec.-ft.; May 15 (12:05 a.m.) 926 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

f Computed on basis of partly estimated gage-height record.

Note.- Fragmentary or no gage-height record Apr. 2-5, 16-28, June 12-20, June 30 to July 12; discharge computed on basis of available fragments of gage-height record and records for Clear Creek at Sevier.

Chalk Creek near Fillmore, Utah

Location.- Water-stage recorders, lat. 38°58', long. 112°18', in NE¼ sec. 28, T. 21 S., R. 4 W., 1 mile east of Fillmore and 2¼ miles downstream from South Fork.

Drainage area.- 60 square miles.

Records available.- March 1944 to September 1948. May to July 1914 at site 1¼ miles upstream.

Extremes.- Maximum discharge during year, 288 second-feet May 17; minimum daily, 7.4 second-feet Jan. 27.
1914, 1944-48: Maximum discharge, 490 second-feet May 9, 1914 (gage height, 3.40 feet, site and datum then in use); minimum daily, that of Jan. 27, 1948.

Remarks.- Records good. Records include flow of Fillmore Canal which diverts on left bank at flood control dam 400 feet upstream. During low-water periods flow is diverted 2 miles upstream and carried in a lined ditch to the head of the Fillmore Canal. One small irrigation diversion above gage.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	14	20	14	14	21	36	184	107	28	16	12
2	13	14	21	16	14	21	38	169	108	29	15	12
3	13	14	20	14	14	21	42	158	103	28	16	12
4	13	13	19	14	12	21	47	167	91	27	20	11
5	13	14	19	14	14	20	51	184	88	27	21	12
6	13	13	19	14	14	20	52	206	82	26	18	12
7	13	15	18	14	13	21	50	242	77	26	17	12
8	13	14	17	14	a12	21	48	238	71	25	19	12
9	13	15	17	14	a13	21	51	204	68	24	17	12
10	15	14	17	14	a14	22	74	180	63	24	16	12
11	20	14	15	15	a13	19	77	166	61	23	15	11
12	18	14	15	14	a12	18	67	159	57	23	15	11
13	16	13	15	12	a14	21	61	167	54	22	15	11
14	15	14	15	13	a14	22	66	192	52	21	14	11
15	14	14	15	13	a15	24	86	231	50	21	14	11
16	14	14	15	14	a15	25	118	255	47	20	14	11
17	14	14	14	13	a16	26	158	278	45	19	16	12
18	14	14	14	14	a17	26	178	283	40	19	18	11
19	13	15	14	10	a17	26	157	257	40	20	15	12
20	13	11	14	13	a17	26	153	218	40	20	14	12
21	15	13	14	14	a17	25	173	198	55	19	14	11
22	15	12	14	14	18	28	202	190	49	19	14	11
23	15	16	14	14	18	29	185	180	44	19	13	11
24	14	13	13	14	18	32	150	176	40	19	13	11
25	14	19	13	14	18	32	129	167	36	18	13	11
26	14	16	13	13	19	31	114	162	35	17	13	11
27	13	18	13	7.4	20	30	110	153	34	17	13	11
28	13	18	13	8.6	22	32	128	143	31	17	12	11
29	14	16	13	12	21	37	171	132	30	17	12	11
30	18	17	14	14	-	38	188	121	28	17	12	10
31	14	-	10	14	-	36	-	111	-	16	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	438	20	13	14.1	869
November	431	19	11	14.4	855
December	477	21	10	15.4	946
Calendar year 1947	17,746	304	10	48.6	35,190
January	412	18	7.4	13.3	817
February	455	22	12	15.7	902
March	790	38	18	25.5	1,570
April	3,180	202	36	105	6,270
May	5,871	283	111	189	11,640
June	1,726	108	28	57.5	3,420
July	667	29	16	21.5	1,320
August	466	21	12	15.0	924
September	341	12	10	11.4	676
Water year 1947-48	15,254	283	7.4	41.8	30,210

a No gage-height record on creek; discharge computed on basis of weather records and records for nearby stations.

Three Creeks near Beaver, Utah

Location.- Water-stage recorder, lat. 38°17'40", long. 112°25'30", in SE¼ sec. 9, T. 29 S., R. 5 W. Salt Lake meridian, three-quarters of a mile upstream from Merchant Creek and 16 miles east of Beaver. Prior to Aug. 24, 1947, water-stage recorder at site 0.2 mile downstream at different datum.
Drainage area.- 19.2 square miles.
Records available.- July 1947 to September 1948.
Extremes.- 1947: Maximum discharge during period July to September, 290 second-feet Aug. 9 (gage height, 4.35 feet, site and datum then in use), by slope-area measurement; minimum not determined, occurred during period of backwater from beaver dam.
1947-48: Maximum discharge during water year, 153 second-feet May 17 (gage height, 3.48 feet); minimum not determined, occurred during period of no gage-height record.
Remarks.- Records poor. Flow affected by storage in Puffer Lake.

Discharge, in second-feet, 1947-48

1947

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	a20	11	9.6	11	17	a15	8.6	21	14	a13	7.8
2	a20	11	11	12	16	a35	8.6	22	15	a12	7.8
3	a20	11	9.6	13	16	a15	8.6	23	13	a12	7.8
4	a20	11	9.4	14	16	a15	8.4	24	12	12	7.8
5	a20	11	9.4	15	16	a14	8.1	25	12	12	7.8
6	a20	11	9.4	16	15	a14	8.1	26	12	11	7.8
7	a20	10	8.8	17	14	a14	8.1	27	11	12	7.8
8	a20	10	9.1	18	14	a14	7.8	28	11	11	7.8
9	a20	38	8.8	19	14	a13	7.8	29	11	10	7.8
10	18	a20	8.8	20	14	a13	7.8	30	10	9.8	7.8
								31	11	9.6	-

a No gage-height record; discharge computed on basis of records for Beaver R ver near Beaver.

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								15	27	14	8.8	7.1
2								15	30	13	8.6	7.1
3								15	32	13	9.0	6.9
4								20	28	12	9.4	6.9
5								38	26	12	10	7.0
6								30	25	12	9.4	7.0
7								35	25	12	9.0	7.0
8							4.5	32	23	11	8.6	7.0
9								28	23	11	8.4	7.0
10								26	22	11	8.2	7.0
11								23	21	11	8.0	7.0
12								21	20	10	8.0	7.0
13								24	20	10	8.0	6.9
14								38	19	10	8.0	7.1
15	7.0	6.0	5.0	4.0	3.5	3.5		70	18	10	8.0	7.1
16							6.0	101	18	10	8.0	7.1
17							8.0	111	17	10	8.6	7.1
18							9.0	91	16	10	8.6	7.1
19							10	63	16	14	8.1	7.1
20							11	53	16	12	7.9	6.9
21							12	56	18	11	8.1	6.5
22							14	60	16	11	8.1	6.3
23							12	65	16	10	7.9	6.3
24							11	51	15	10	7.7	6.2
25							9.2	43	15	9.8	7.7	6.0
26							8.0	38	16	9.6	7.5	6.0
27							10	36	16	9.6	7.5	6.2
28							12	34	14	9.4	7.5	6.0
29							15	32	14	9.4	7.3	5.8
30					-		15	29	14	9.2	7.1	5.8
31		-			-		-	27	-	9.0	7.1	-

Note.- No gage-height record Nov. 6 to May 10, Sept. 5-12; discharge computed on basis of 2 discharge measurements, gage-height record, weather records, and records for Beaver River near Beaver.

Monthly discharge, in second-feet, 1947-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
July 1947	482	-	10	15.5	956
August	430.4	38	9.6	13.9	854
September	253.8	11	-	8.46	503
The period	-	-	-	-	2,310
October 1947	217	-	-	7.00	430
November	180	-	-	6.00	357
December	155	-	-	5.00	307
January 1948	124	-	-	4.00	246
February	101.5	-	-	3.50	201
March	108.5	-	-	3.50	215
April	229.7	15	-	7.66	456
May	1,307	111	15	42.2	2,590
June	596	32	14	19.9	1,180
July	336	14	9.0	10.8	666
August	254.1	10	7.1	8.20	504
September	201.5	7.1	5.8	6.72	400
Water year 1947-48	3,810.3	111	-	10.4	7,550

Beaver River near Beaver, Utah

Location.- Water-stage recorder, lat. 38°17', long. 112°34', in SW¼SW¼ sec. 17, T. 29 S., R. 6 W., at Fishlake National Forest boundary, three-quarters of a mile downstream from Bakers Canyon and 4¼ miles east of Beaver.

Drainage area.- 82 square miles.

Records available.- June to September 1906, March 1914 to September 1948.

Average discharge.- 34 years (1914-48), 56.6 second-feet.

Extremes.- Maximum discharge during year, 501 second-feet May 17 (gage height, 3.86 feet); minimum daily, 16 second-feet on several days in January and February.
1914-48: Maximum discharge, 1,080 second-feet July 22, 1936 (gage height, 7.27 feet, site and datum then in use), from rating curve extended above 500 second-feet; minimum, 5 second-feet Aug. 29, 1931, Nov. 30, 1939.

Remarks.- Records good except those for period of ice effect or no gage-height record, which are fair. No diversions above station for irrigation. Water diverted for hydroelectric power, but returned to stream above station. Some regulation by power plants and several small reservoirs.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	24	25	b18	a18	b20	23	116	133	75	32	24
2	27	23	26	b19	18	b19	24	111	162	72	31	21
3	26	22	25	21	b17	b19	24	109	169	69	32	23
4	27	21	25	21	b16	b18	23	136	147	66	34	24
5	27	22	24	21	18	b18	23	169	140	60	34	22
6	28	23	24	20	18	b19	23	207	136	53	37	22
7	26	24	25	20	18	b19	24	235	138	50	35	24
8	26	25	24	21	b16	20	24	207	136	47	32	23
9	27	24	b22	21	b17	20	25	166	129	44	30	23
10	29	24	b20	22	18	20	29	149	124	43	30	22
11	35	24	b20	22	b18	b18	26	131	124	41	29	21
12	33	22	b20	21	a16	b19	*22	131	116	40	29	21
13	39	b21	b22	b20	a18	20	26	159	111	40	28	21
14	34	23	24	b18	a19	20	27	213	107	38	27	22
15	33	24	26	b19	a20	*21	35	297	99	38	27	21
16	33	23	*b25	b20	*20	b20	52	342	93	37	27	20
17	32	24	b24	b19	19	20	62	385	89	37	28	21
18	30	22	b23	b17	20	20	60	362	84	36	33	24
19	30	23	b22	b17	20	19	68	286	91	49	27	26
20	30	24	22	*b19	20	19	74	241	93	56	27	22
21	31	b22	22	b20	20	b19	82	229	118	43	26	21
22	32	a20	24	20	21	21	99	222	97	41	26	21
23	32	a20	b22	20	20	24	91	232	89	39	26	21
24	33	*b21	b21	20	20	24	70	222	82	41	26	21
25	23	a23	23	19	20	20	62	196	82	39	26	21
26	34	26	24	b18	20	22	52	179	86	36	25	20
27	33	26	23	b17	23	22	60	166	91	34	25	20
28	*32	25	22	b16	21	23	87	154	79	33	24	21
29	26	24	21	a16	20	22	122	145	77	34	24	21
30	26	26	b19	a17	-	23	111	133	74	33	25	21
31	24	-	b18	a18	-	22	-	136	-	33	26	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	924	39	23	29.8	1,830
November	695	26	20	23.2	1,380
December	707	26	18	22.8	1,400
Calendar year 1947	25,598	450	18	70.1	50,770
January	597	22	16	19.3	1,180
February	549	23	16	18.9	1,090
March	630	24	18	20.3	1,250
April	1,530	122	22	51.0	3,030
May	6,166	385	109	199	12,230
June	3,296	169	74	110	6,540
July	1,397	75	33	45.1	2,770
August	888	37	24	28.6	1,760
September	655	26	20	21.8	1,300
Water year 1947-48	18,034	385	16	49.3	35,760

Peak discharges (base, 250 sec.-ft.).- May 6 (8:30 p.m.) 283 sec.-ft.; May 17 (10 p.m.) 501 sec.-ft.

* Winter discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Beaver River at Adamsville, Utah

Location.- Water-stage recorder, lat. 38°16', long. 112°48', in S½ sec. 30, T. 29 S., R. 8 W., 600 feet downstream from bridge on State Highway 21, a quarter of a mile upstream from Indian Creek, and three-quarters of a mile south of Adamsville.

Drainage area.- 272 square miles.

Records available.- December 1913 to September 1936, October 1937 to September 1948.

Average discharge.- 32 years (1914-36, 1938-48), 38.1 second-feet.

Extremes.- Maximum discharge during year, 198 second-feet May 18; minimum, 2.7 second-feet Aug. 17.
1913-36, 1937-48: Maximum discharge, 1,090 second-feet July 23, 1941, from rating curve extended above 500 second-feet; no flow during periods in 1924, 1931, 1934, 1935, 1939.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. No diversion between station and Rockyford Reservoir. Several ditches above station divert practically entire flow during irrigation season to supply Adamsville and Beaver districts.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	38	80	51	b45	54	51	18	5.8	18	4.9	4.3
2	13	39	76	51	a48	49	54	17	16	14	4.3	4.0
3	12	47	60	48	a50	50	53	14	34	10	4.8	4.0
4	11	49	58	46	a50	50	52	15	35	8.6	6.4	3.8
5	12	52	57	48	a50	50	49	18	23	6.4	9.0	3.6
6	12	54	56	48	b48	51	41	32	20	4.9	9.5	3.4
7	13	57	54	48	47	51	28	37	22	3.8	9.0	3.4
8	13	58	54	50	a40	49	27	30	19	3.6	9.0	3.6
9	13	57	54	50	a43	50	27	20	14	3.4	6.1	4.9
10	18	54	56	48	a46	47	35	14	18	5.8	6.4	4.3
11	47	54	54	46	a45	a47	34	14	14	5.8	4.6	3.6
12	35	52	54	38	a40	a49	28	14	11	7.0	4.3	4.0
13	34	53	53	35	b42	51	29	14	8.2	6.4	3.6	4.0
14	36	58	54	36	b44	47	33	14	9.5	6.4	3.4	3.8
15	29	57	56	40	a47	48	34	45	7.4	6.7	3.2	4.9
16	26	58	54	43	a50	49	36	96	5.2	7.0	3.0	4.6
17	26	54	*54	41	54	51	36	136	5.8	6.1	3.0	4.9
18	29	56	52	40	*67	60	33	140	6.1	4.9	3.4	5.5
19	31	57	52	b40	76	61	29	92	11	5.8	4.9	6.7
20	33	58	51	*b43	59	56	22	67	12	12	4.3	6.4
21	34	54	52	b45	54	56	16	59	27	6.7	4.3	5.5
22	39	52	51	45	56	59	21	48	39	6.1	6.1	6.4
23	38	51	49	46	53	56	39	37	30	9.0	4.3	5.8
24	36	50	49	45	52	54	38	28	20	9.9	3.6	4.9
25	36	60	49	44	56	51	35	29	18	9.5	3.6	4.3
26	36	68	48	41	59	52	29	29	24	8.2	3.4	4.3
27	36	68	49	b38	58	67	28	20	49	7.4	3.4	4.9
28	36	68	48	a37	56	53	23	14	33	7.0	3.6	5.8
29	36	68	47	a39	58	56	26	11	24	7.0	3.8	6.1
30	36	71	46	b41	-	53	18	7.8	26	7.0	4.0	6.1
31	37	-	44	b43	-	50	-	6.1	-	6.1	4.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	858	47	11	27.7	1,700
November	1,672	71	38	55.7	3,320
December	1,671	80	44	53.9	3,310
Calendar year 1947	17,186.5	323	6.1	47.1	34,060
January	1,354	51	35	43.7	2,690
February	1,493	76	40	51.5	2,960
March	1,627	67	47	52.5	3,230
April	1,004	54	16	33.5	1,990
May	1,135.9	140	6.1	36.6	2,250
June	587.0	49	5.2	19.6	1,160
July	230.5	18	3.4	7.44	457
August	151.0	9.5	3.0	4.87	300
September	141.8	6.7	3.4	4.73	281
Water year 1947-48	11,925.2	140	3.0	32.6	23,650

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of 2 discharge measurements and weather records.
b Stage-discharge relation affected by ice.

Rockyford Reservoir near Minersville, Utah

Location.- Staff gage, lat. 38°14', long. 112°50', in NE¼ sec. 11, T. 30 S., R. 9 W., at Rockyford Dam on Beaver River and 5 miles east of Minersville.

Drainage area.- 510 square miles.

Records available.- October 1937 to September 1948.

Extremes.- Maximum contents observed during year, 20,130 acre-feet Dec. 23, 31, Apr. 12, 21, 27, 30 (gage height, 48.0 feet); minimum observed, 3,950 acre-feet Sept. 24, 30 (gage height, 28.6 feet).
1937-48: Maximum contents observed, 23,810 acre-feet Apr. 22, 25, 28, 30, May 1, 1945; no contents Oct. 16, 31, 1939.

Remarks.- Reservoir is formed by earth-fill dam completed in 1914. Capacity, 23,260 acre-feet between gage heights 0.0 foot (bottom of outlet tunnel) and 51.0 feet (spillway crest). Prior to fall of 1937 spillway crest was at elevation 52.5 feet. Dead storage negligible. Water is used for irrigation on lands of Delta Land & Water Co.

Contents, in acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	18,990	-	19,650	-	19,930	19,930	-	-	-	-
6	14,080	-	-	19,550	-	-	-	-	-	-	-	-
7	-	16,100	-	-	-	19,930	19,930	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	19,550	-	-	-	-	-	11,820	-	-
10	-	-	-	-	-	-	-	-	15,290	-	-	-
11	-	-	-	-	-	-	-	-	-	-	7,870	4,710
12	-	-	19,650	19,550	19,650	-	20,120	-	-	-	-	-
13	-	-	-	19,550	-	19,950	-	-	-	-	-	-
14	14,400	16,720	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	19,930	19,550	19,650	-	-	19,180	-	-	-	-
17	14,640	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	7,050	-
19	-	-	-	-	-	-	-	-	-	-	-	4,290
20	-	-	-	19,550	-	-	-	-	13,110	-	-	-
21	14,800	17,570	-	-	19,650	-	20,120	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	20,120	-	-	-	-	-	-	9,720	-	-
24	-	-	-	-	-	-	-	17,760	-	-	-	3,950
25	-	-	-	-	19,840	-	-	-	-	-	-	-
26	15,210	18,040	-	-	-	-	-	-	-	-	-	-
27	-	-	-	19,650	-	19,650	20,120	-	-	-	-	-
28	-	-	-	-	19,930	-	-	17,760	-	-	-	-
29	-	18,220	-	-	a19,930	-	-	-	-	-	-	-
30	-	a18,430	-	-	-	-	20,120	-	12,780	-	-	3,950
31	15,530	-	20,120	19,650	-	19,840	-	16,910	-	8,910	5,590	-

a No gage-height record; contents interpolated.

Monthly gage height and contents, water year October 1947 to September 1948

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	41.5	14,160	-
Oct. 31	43.0	15,530	+1,370
Nov. 30	-	a18,430	+2,900
Dec. 31	48.0	20,120	+1,690
Calendar year 1947	-	-	+8,160
Jan. 31	47.5	19,650	-470
Feb. 29	-	a19,930	+280
Mar. 31	47.7	19,840	-90
Apr. 30	48.0	20,120	+280
May 31	44.8	16,910	-3,210
June 30	39.8	12,780	-4,130
July 31	34.0	8,910	-3,870
Aug. 31	27.8	5,590	-3,320
Sept. 30	22.6	3,950	-1,640
Water year 1947-48	-	-	-10,210

a No gage-height record; contents interpolated.

Beaver River at Rockyford Dam, near Minersville, Utah

Location.- Water-stage recorder and concrete control, lat. 38°14', long. 112°50', in NW¼ sec. 11, T. 30 S., R. 9 W., half a mile downstream from Rockyford Dam and 4¾ miles east of Minersville.

Drainage area.- 512 square miles.

Records available.- December 1913 to September 1948.

Average discharge.- 33 years (1914-36, 1937-48), 40.2 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 128 second-feet May 28-31; minimum daily, 7.6 second-feet Oct. 17.
1913-48: Maximum discharge, 727 second-feet June 10, 1921 (gage height, 3.53 feet); minimum, 0.3 second-foot Mar. 19, 20, 1914.

Remarks.- Records good. One small diversion between dam and station. Flow regulated by Rockyford Reservoir (see preceding page). Several diversions above reservoir for irrigation and municipal supply.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	10	10	a67	46	64	21	31	126	91	70	63
2	22	10	10	a64	46	64	22	31	118	91	68	63
3	22	10	10	a62	46	f63	22	49	114	91	66	63
4	22	10	11	a59	46	f63	23	66	114	86	63	63
5	16	10	12	a57	46	f63	24	68	114	80	61	60
6	17	10	11	53	46	f63	22	79	112	78	57	56
7	16	10	11	50	45	63	20	76	109	94	31	44
8	17	10	11	48	44	63	20	58	109	100	31	44
9	17	10	11	49	45	64	20	73	109	100	36	44
10	f18	10	11	49	44	f64	21	74	105	100	53	45
11	f14	10	11	49	43	f64	22	101	103	98	54	48
12	f8.8	9.4	11	49	43	f64	22	107	105	98	56	48
13	f8.8	9.4	11	49	43	64	22	107	105	98	67	48
14	9.4	f9.4	11	49	43	63	22	107	105	98	70	42
15	8.8	f8.8	11	49	43	61	24	116	103	93	73	30
16	8.2	f8.8	12	50	42	61	25	116	100	89	56	37
17	7.6	f8.8	12	50	42	63	26	116	103	82	60	37
18	8.2	f8.8	15	50	43	63	28	116	105	70	73	36
19	8.8	f8.8	16	51	46	63	26	114	105	68	68	35
20	8.8	f8.8	19	51	46	61	27	109	110	67	68	44
21	9.4	f8.8	35	51	46	63	26	118	109	68	70	72
22	8.8	9.4	60	51	46	61	31	118	94	70	70	72
23	8.8	9.4	64	51	46	61	35	128	89	67	67	40
24	8.8	9.4	76	51	46	60	36	128	91	57	66	12
25	8.8	10	76	50	46	60	37	128	91	49	66	12
26	8.8	10	73	50	49	60	37	128	98	50	67	12
27	f10	10	72	49	50	60	35	128	78	56	66	12
28	f10	10	72	49	50	60	34	128	67	61	66	12
29	f10	10	72	49	54	61	32	128	88	67	66	12
30	10	10	72	48	-	48	32	128	94	74	64	12
31	10	-	a69	48	-	22	-	128	-	72	60	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	383.8	22	7.6	12.4	761
November	288	10	8.8	9.6	571
December	978	76	10	31.5	1,940
Calendar year 1947	12,887.8	124	7.0	35.3	25,560
January	1,602	67	48	51.7	3,180
February	1,321	54	42	45.6	2,620
March	1,877	64	22	60.5	3,720
April	794	37	20	26.5	1,570
May	3,102	128	31	100	6,150
June	3,073	126	67	102	6,100
July	2,443	100	49	78.8	4,850
August	1,909	73	31	61.6	3,790
September	1,218	72	12	40.6	2,420
Water year 1947-48	18,988.8	128	7.6	51.9	37,670

a No gage-height record; discharge interpolated.
f Fragmentary gage-height record; gage heights partly estimated.

North Fork North Creek above Pole Creek, near Beaver, Utah

Location.- Water-stage recorder, lat. 38°23'30", long. 112°30'35", in NE¼ sec. 10, T. 28 S., R. 6 W., 2½ miles upstream from Pole Creek, 4½ miles upstream from confluence with South Fork, and 11 miles northeast of Beaver.
Records available.- July 1947 to September 1948.
Extremes.- 1947: Maximum discharge during period July to September, 6.4 second-feet Aug. 10 (gage height, 1.35 feet); minimum, 1.0 second-foot Sept. 30.
1947-48: Maximum discharge during water year, 26 second-feet May 18 (gage height, 1.38 feet); minimum, 0.6 second-foot Sept. 17.
Remarks.- Records fair except those for periods of ice effect or no gage-height record, which are poor.

Discharge, in second-feet, 1947-48

1947

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1		2.6	2.1	11	4.8	4.8	2.1	21	3.3	2.6	1.9
2		2.6	2.1	12	4.5	4.1	2.1	22	3.3	2.6	1.9
3		2.4	1.9	13	4.5	3.5	1.9	23	3.0	2.4	1.7
4		2.6	1.9	14	4.5	3.3	1.9	24	3.0	2.4	1.7
5		2.4	1.9	15	4.5	3.3	1.9	25	2.8	2.4	1.7
6	a5.3	2.4	1.9	16	4.1	3.0	1.9	26	3.0	2.1	1.7
7		2.1	1.9	17	3.8	3.3	1.9	27	3.0	2.4	1.7
8		2.1	2.4	18	3.6	2.8	1.9	28	2.8	2.1	1.7
9		2.8	1.9	19	3.5	2.6	1.9	29	2.8	2.1	1.7
10		5.7	1.9	20	3.3	2.6	1.9	30	2.6	1.9	1.7
								31	2.6	1.9	-

Peak discharge (base, 15 sec.-ft.).- No peak above base.
a No gage-height record; discharge interpolated.

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.7	1.9					2.6	8.4	18	5.1	2.1	1.0
2	1.7	1.9					3.3	8.4	19	4.8	2.1	1.0
3	1.7	1.9					3.3	8.0	18	4.8	2.4	1.0
4	1.7	1.9					2.8	9.3	17	4.5	2.4	.9
5	1.7	1.9					2.6	12	19	4.5	2.4	.9
			1.5									
6	1.7	1.9					2.4	11	17	4.1	2.4	1.2
7	1.7	1.9		1.2			2.4	15	16	4.1	2.4	1.2
8	1.7	1.7				1.5	2.4	12	16	3.8	2.6	1.2
9	1.7	1.7					3.0	10	15	3.5	2.4	1.0
10	2.1	1.7			1.0		3.8	8.4	14	3.5	2.1	1.0
11	2.4	1.7					3.3	7.6	14	3.5	1.7	1.0
12	1.9	1.7					2.8	8.8	13	3.3	1.7	1.0
13	2.1	1.7					2.8	13	12	3.3	1.4	1.0
14	1.9	1.7					3.5	17	12	3.0	1.4	1.0
15	1.4	1.7					4.1	19	10	3.0	1.4	1.0
16	1.4	1.7	(*)			*1.9	5.7	19	9.7	2.8	1.4	1.2
17	1.4	1.7				1.9	7.1	22	9.3	2.8	1.4	1.2
18	1.4	1.7			(*)	1.9	7.6	22	8.4	2.8	1.4	1.2
19	1.4	1.7				1.7	7.6	21	8.0	3.8	1.2	1.4
20	1.4					1.7	8.0	19	7.6	3.3	1.2	1.2
			1.2									
21	1.9				(*)	1.4	8.4	20	8.0	3.0	1.2	1.0
22	1.9					1.4	9.3	20	8.0	3.0	1.4	1.0
23	1.7			1.0		2.1	7.6	20	6.7	3.0	1.2	1.0
24	1.7	(*)			1.5	3.0	6.1	22	6.4	3.0	1.2	1.0
25	1.4	1.5				2.8	4.8	20	6.1	2.8	1.2	1.0
26	1.7					2.4	4.5	19	6.4	2.8	1.4	1.0
27	1.7					2.1	5.4	19	6.1	2.8	1.4	1.0
28	*1.7					2.8	8.0	20	5.7	2.8	1.4	1.2
29	1.9					3.3	9.7	20	5.4	2.6	1.2	1.2
30	1.9				-	2.8	8.0	17	5.1	2.4	1.2	1.2
31	1.9	-			-	2.6	-	18	-	2.4	1.2	-

Peak discharge (base, 15 sec.-ft.).- May 18 (1:30 a.m.) 26 sec.-ft.
* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 20 to Mar. 15 (no gage-height record Nov. 20 to Feb. 17, Mar. 1-15; discharge computed on basis of 4 discharge measurements, weather records, and records for nearby streams).

Monthly discharge, in second-feet, 1947-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
July 1947	126.2	-	2.6	4.07	250
August	85.9	5.7	1.9	2.77	170
September	56.7	2.4	1.7	1.89	112
The period	-	-	-	-	532
October 1947	53.5	2.4	1.4	1.73	106
November	50.2	1.9	-	1.67	100
December	40.2	-	-	1.30	80
Calendar year	-	-	-	-	-
January 1948	33.6	-	-	1.08	67
February	34.5	-	-	1.19	68
March	58.3	3.3	1.4	1.88	116
April	152.9	9.7	2.4	5.10	303
May	485.9	22	7.6	15.7	964
June	336.9	19	5.1	11.2	668
July	104.9	5.1	2.4	3.38	208
August	51.5	2.6	1.2	1.66	102
September	32.2	1.4	.9	1.07	64
Water year 1947-48	1,434.6	22	.9	3.92	2,850

Indian Creek near Beaver, Utah

Location.- Water-stage recorder, lat. 38°25'50", long. 112°35'20", in SE¼ sec. 25, T. 27 S., R. 7 W., 2½ miles downstream from Grassy Creek and 11 miles north of Beaver.
Drainage area.- 19.4 square miles.
Records available.- June to August 1906, July 1947 to September 1948.
Extremes.- 1947: Maximum discharge during period July to September, 16 second-feet July 23 (gage height, 1.30 feet); minimum, 2.0 second-feet Sept. 30.
1947-48: Maximum discharge during water year, 22 second-feet May 22 (gage height, 1.43 feet); minimum, 1.4 second-feet Sept. 12-14.
Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Flow affected by Beaver Dam Reservoir, capacity about 400 acre-feet.

Discharge, in second-feet, 1947-48

1947

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1		4.9	2.5	11	12	4.5	2.8	21	11	3.6	3.0
2		4.7	2.5	12	12	4.2	2.8	22	12	a3.4	2.8
3		4.7	2.5	13	12	4.0	2.8	23	16	a3.3	2.8
4		4.7	2.7	14	12	4.0	2.8	24	14	a3.1	2.8
5	a12	4.5	2.7	15	12	3.8	2.8	25	11	a3.0	2.8
6		4.2	2.7	16	12	3.6	2.7	26	11	2.8	2.8
7		4.0	2.7	17	12	4.2	2.7	27	11	2.8	2.8
8		4.0	2.8	18	12	3.8	2.8	28	10	3.0	2.8
9		4.2	2.7	19	12	3.6	3.0	29	10	2.8	2.8
10	12	5.3	2.7	20	11	3.6	3.0	30	5.1	2.7	2.8
								31	4.9	2.7	-

a No gage-height record; discharge extrapolated or interpolated.

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	2.8					3.0	13	16	9.9	3.2	1.9
2	2.8	3.0					3.0	12	16	10	3.2	1.9
3	2.8	3.0					3.2	11	18	9.9	3.3	1.9
4	2.8	3.3					3.3	11	15	9.6	4.2	1.9
5	2.8	2.8	3.0				3.3	12	14	9.6	7.0	1.8
6	2.8						3.3	13	14	9.6	6.5	1.8
7	2.8						3.3	15	14	9.6	6.3	1.6
8	2.8						3.5	16	13	9.6	6.5	1.8
9	3.0						3.8	15	12	9.6	6.3	1.8
10	3.6				2.5		5.3	14	12	9.2	6.0	1.6
11	4.2						5.3	12	12	8.9	6.0	1.6
12	3.5						4.9	11	11	8.9	5.8	1.6
13	3.5					2.5	4.7	11	10	7.6	5.6	1.6
14	3.5						6.3	11	9.9	6.5	5.6	1.6
15	3.3					(*)	8.1	14	12	6.3	5.3	1.6
16	3.0			2.5			11	17	12	6.3	4.2	1.6
17	3.0		(*)				13	18	12	6.0	3.3	1.6
18	3.0	3.0					14	20	12	6.0	3.2	1.6
19	3.0				*2.7		13	20	11	5.3	2.8	1.8
20	2.8			(*)	2.7		14	20	11	4.0	2.7	1.8
21	3.0		2.5		2.7		16	21	12	4.0	2.7	1.6
22	3.2				2.7		16	22	11	4.0	2.5	1.6
23	3.0				2.8		16	20	11	4.0	2.4	1.6
24	3.0				2.8		12	20	10	3.8	2.5	1.6
25	3.0	(*)			3.0	2.2	11	20	10	3.6	2.4	1.6
26	3.0				2.8	2.8	9.6	20	11	3.5	2.2	1.5
27	3.0				2.7	2.8	10	19	10	3.5	2.1	1.5
28	3.0				2.7	2.7	12	19	10	3.5	2.1	1.5
29	3.0				2.5	2.8	14	19	9.9	3.5	2.1	1.5
30	3.0				-	2.8	13	18	9.6	3.3	2.1	1.5
31	2.8	-			-	3.0	-	16	-	3.2	2.1	-

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 6 to Feb. 18, Feb. 29 to Mar. 24 (no gage-height record Nov. 26 to Feb. 18, Mar. 1-24); discharge computed on basis of 4 discharge measurements, weather records, and records for Beaver River near Beaver.

Monthly discharge, in second-feet, 1947-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
July 1947	355.0	16	4.9	11.5	704
August	117.7	5.3	2.7	3.80	233
September	82.9	3.0	2.5	2.76	164
The period	-	-	-	-	1,100
October 1947	94.8	4.2	2.8	3.06	188
November	89.9	3.3	2.8	3.00	178
December	82.5	-	-	2.66	164
Calendar year	-	-	-	-	-
January 1948	77.5	-	-	2.50	154
February	75.1	3.0	2.5	2.59	149
March	79.1	3.0	2.2	2.55	157
April	258.9	16	3.0	8.63	514
May	500	22	11	16.1	992
June	361.4	18	9.6	12.0	717
July	202.3	10	3.2	6.53	401
August	122.2	7.0	2.1	3.94	242
September	49.9	1.9	1.5	1.66	99
Water year 1947-48	1,993.6	22	1.5	5.45	3,960

Center Creek near Parowan, Utah

Location.- Water-stage recorder, lat. 37°50', long. 112°49', in SE¼ sec. 24, T. 34 S., R. 9 W., 600 feet downstream from Parowan municipal power plant, 1½ miles south of Parowan, and 2¼ miles downstream from Left Fork.

Drainage area.- 60 square miles.

Records available.- October 1942 to September 1948.

Extremes.- Maximum discharge during year, 194 second-feet May 15 (gage height, 3.38 feet), from rating curve extended above 50 second-feet; minimum, 5.7 second-feet Feb. 23.
1942-48: Maximum discharge, 386 second-feet Aug. 5, 1945 (gage height, 4.59 feet), from rating curve extended above 50 second-feet by logarithmic plotting; minimum, 3.9 second-feet Mar. 5, 1944.

Remarks.- Records good. Flow slightly regulated by Yankee Meadows Reservoir (capacity, about 700 acre-feet) and by power plant above station.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	10	12	9.8	9.8	9.4	12	30	42	32	25	17
2	15	10	12	10	9.8	b9.4	13	29	60	33	25	16
3	15	10	11	10	9.4	9.4	14	25	52	30	25	17
4	15	9.4	11	10	9.4	9.8	15	29	46	28	25	17
5	15	10	11	10	9.8	b9.8	15	34	42	28	28	17
6	15	9.8	11	9.8	9.4	b9.8	15	42	41	27	27	18
7	15	10	b11	9.8	9.8	b9.8	15	65	63	26	25	17
8	15	10	12	9.4	b9.8	9.8	16	80	51	25	37	17
9	15	11	11	9.1	9.8	10	17	59	47	30	24	17
10	16	10	10	9.4	9.4	10	25	52	45	30	23	17
11	20	10	b10	9.1	9.4	b10	*23	47	44	29	23	17
12	21	11	10	8.5	9.1	b10	18	48	43	28	23	16
13	22	b11	10	b8.5	9.8	11	17	63	44	28	23	14
14	18	11	11	b8.7	9.8	*11	20	85	44	28	22	12
15	14	10	11	b8.8	9.4	11	25	104	42	27	21	12
16	13	11	*11	8.8	*9.8	10	28	92	42	27	21	12
17	a13	11	11	b8.8	9.8	10	36	90	41	26	20	13
18	a12	11	11	8.8	9.8	10	39	75	41	25	19	14
19	a12	11	11	b8.8	10	10	35	61	41	25	19	14
20	a12	11	11	*b8.8	10	10	35	55	43	25	18	14
21	a11	b10	11	10	9.4	b10	42	51	45	29	18	12
22	a11	*b9.6	10	9.8	9.8	10	49	49	42	28	18	12
23	a11	b9.3	10	9.4	9.4	12	38	53	40	29	18	12
24	a11	9.4	11	9.1	9.4	12	28	48	40	28	17	12
25	a11	12	11	8.8	9.4	11	21	48	38	27	17	12
26	a10	12	10	9.1	9.8	b11	20	45	40	26	18	12
27	a10	11	11	8.2	10	11	30	42	40	25	17	13
28	*10	11	10	b8.6	10	12	40	41	35	25	18	14
29	10	11	11	9.1	9.8	13	38	43	31	24	18	13
30	10	11	11	9.8	-	12	31	42	29	24	18	13
31	10	-	10	9.4	-	12	-	42	-	23	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	423	22	10	13.6	839
November	314.5	12	9.3	10.5	624
December	335	12	10	10.8	664
Calendar year 1947	6,659.3	68	7.5	18.2	13,220
January	286.2	10	8.2	9.2	568
February	280.2	10	9.1	9.7	556
March	326.2	13	9.4	10.5	647
April	770	49	12	25.7	1,530
May	1,670	104	25	53.9	3,310
June	1,294	63	29	43.1	2,570
July	845	33	23	27.3	1,680
August	667	37	17	21.5	1,320
September	433	18	12	14.4	859
Water year 1947-48	7,644.2	104	8.2	20.9	15,170

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

Coal Creek near Cedar City, Utah

Location.- Water-stage recorder, lat. 37°40'15", long. 113°00'20", in SE¼ sec. 17, T. 36 S., R. 10 W., 2 miles downstream from South Creek and 3.3 miles southeast of Cedar City.

Records available.- May 1935 to September 1948. May 1915 to November 1919 at approximately same site as May 1935 to May 1945, but records do not include flow of power canal operated during this period (abandoned since 1919). Records for May 1915 to November 1919 equivalent if flow of power canal is added.

Average discharge.- 12 years (1935-37, 1938-48), 34.5 second-feet.

Extremes.- Maximum discharge during year, 408 second-feet May 6 (gage height, 3.72 feet), from rating curve extended above 220 second-feet; minimum recorded, 6.5 second-feet, but may have been less during period of ice effect or no gage-height record.

1935-48: Maximum discharge observed, 2,910 second-feet July 9, 1936 (gage height, 6.4 feet, site and datum then in use), from rating curve extended by broad-crested weir formula; minimum observed, 4 second-feet Dec. 15, 1935, but may have been less during periods of ice effect or no gage-height record.

Remarks.- Records poor. No diversions above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.3	11	16			11	23	141	70	a16	9.7	8.3
2	8.3	11	15			10	f34	141	89	a14	11	7.9
3	8.3		11				a30	147	73	a13	18	7.6
4	8.3		14				a27	189	59	12	15	7.6
5	8.7		11				f24	211	54	12	55	7.2
6	8.7		12				f25	257	47	12	29	7.6
7	9.0		13				28	277	106	12	20	7.6
8	9.0					a11	f30	202	51	12	15	7.9
9	9.0				10		f34	162	a49	12	10	7.2
10	13						f51	156	a47	12	a9.9	7.6
11	20						33	137	a45	11	a9.8	7.2
12	20						f25	149	a43	13	a9.6	7.2
13	a17						f24	189	a42	13	a9.5	6.9
14	a15					(*)	f38	216	40	13	a9.4	6.9
15	a13		(*)			12	f65	225	36	13	a9.2	
16	a12	11		11	(*)	12	f82	232	a35	13	9.0	
17	a11			(*)	13	13	f72	216	a35	13	9.0	
18	a11				12	12	f80	183	a35	14	8.3	
19	a11				16	12	87	141	a35	15	7.9	
20	a11		12		17	9.7	87	125	35	f14	7.9	
21	a11				16	12	100	120	38	f10	7.9	
22	a11	(*)			15	15	118	120	33	9.4	9.7	a7.0
23	a11				12	19	97	120	29	10	8.3	
24	a11				21	18	65	112	27	11	7.9	
25	a11				15	a18	60	109	25	10	7.9	
26	a11				13	a18	75	102	25	9.4	7.6	
27	*11				14	18	109	98	23	9.4	8.3	
28	10				14	27	147	95	a21	9.4	8.7	
29	10				9.7	23	149	85	a19	9.7	7.9	
30	11				-	a23	137	79	a17	9.7	7.9	
31	10	-			-	a23	-	72	-	9.7	7.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	349.6	20	8.3	11.3	693
November	330	-	-	11.0	655
December	380	16	11	12.3	754
Calendar year 1947	13,397.6	322	-	36.7	26,560
January	341	-	-	11	676
February	347.7	21	9.7	12.0	690
March	437.7	27	9.7	14.1	868
April	1,956	149	23	65.2	3,880
May	4,808	277	72	155	9,540
June	1,283	106	17	42.8	2,540
July	366.7	16	9.4	11.8	727
August	372.2	55	7.6	12.0	738
September	216.7	8.3	6.9	7.22	430
Water year 1947-48	11,188.6	277	6.9	30.6	22,190

Peak discharge (base, 400 sec.-ft).- May 6 (9:00 p.m.) 408 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of 4 discharge measurements, weather records, records for nearby streams, or interpolated.

f Computed on basis of partly estimated gage-height record.

Note.- Stage-discharge relation affected by ice Nov. 3-30, Dec. 8 to Feb. 16.

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Baker Creek at Narrows, near Baker, Nev.

Location.- Water-stage recorder, lat. 38°59', long. 114°13', in sec. 22, T. 13 N., R. 69 E., half a mile downstream from Pole Canyon, 1 mile downstream from the Narrows, and 4¾ miles southwest of Baker.

Records available.- December 1947 to September 1948.

Extremes.- Maximum discharge during period December 1947 to September 1948, 42 second-feet June 10 (gage height, 1.78 feet); minimum recorded, 0.6 second-foot Mar. 11, but may have been less during periods of ice effect.

Remarks.- Records good except those for periods of ice effect, which are poor. Records not equivalent to those obtained 1913-15 at site three-quarters of a mile downstream, because of channel losses.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-	2.1	2.1	1.7	2.5	6.8	22	13	4.9	3.0
2			-	1.9	2.1	1.7	2.7	6.6	27	13	4.9	2.9
3			-	1.9	2.1	1.7	2.7	6.6	24	12	5.2	2.9
4			-	2.0	2.0	1.7	2.6	7.0	23	12	6.0	2.8
5			-	2.0	2.0	1.7	2.6	7.5	24	11	7.0	2.8
6			-	2.0	2.0	1.8	2.6	8.3	25	11	5.6	2.8
7			-	2.1	1.9	1.8	2.6	8.9	30	10	5.8	2.8
8			-	2.1	1.7	1.9	2.5	8.9	31	10	5.8	2.9
9			-	2.1	1.7	1.8	2.9	8.9	36	10	5.6	2.8
10			-	2.1	1.8	1.7	3.9	8.9	38	9.1	5.5	2.7
11			-	2.0	1.8	1.6	3.5	8.9	36	8.9	5.4	2.7
12			-	2.0	1.7	1.6	3.3	8.7	33	8.7	5.2	2.7
13			2.1	2.0	1.8	1.7	3.3	8.9	31	8.5	5.0	2.6
14			2.1	2.0	1.8	1.8	3.8	10	30	8.3	4.9	2.6
15			2.1	2.1	1.8	1.8	4.3	11	27	8.1	4.6	2.6
16			2.2	2.1	1.5	1.8	4.9	14	26	7.9	4.4	2.8
17			2.2	2.1	1.4	1.9	6.0	17	23	7.5	4.3	2.8
18			2.2	2.0	1.4	1.9	6.1	20	22	7.3	3.9	3.5
19			2.1	1.9	1.5	1.8	6.0	20	20	7.2	3.8	3.3
20			2.1	1.9	*1.4	1.9	6.0	18	18	7.2	3.9	3.1
21			2.0	*2.0	1.4	2.0	6.5	18	18	7.0	3.8	3.0
22			1.9	2.1	1.6	2.0	6.8	16	17	7.8	3.7	2.8
23			1.9	2.2	1.6	2.3	6.5	16	15	7.0	3.6	2.7
24			2.0	2.4	1.5	2.2	6.1	17	14	6.6	3.7	2.8
25			2.0	2.2	1.8	2.2	6.3	19	14	6.3	3.6	2.9
26			2.1	2.0	1.8	2.3	6.1	21	14	6.1	3.5	3.0
27			2.1	1.9	1.7	2.3	6.5	22	14	5.8	3.3	3.0
28			2.1	2.0	1.8	2.5	6.8	26	13	5.8	3.2	3.0
29			2.0	2.1	1.9	2.5	7.0	25	13	5.6	3.1	2.9
30			2.0	2.1	-	2.4	6.8	23	13	5.5	3.0	2.9
31			2.0	2.1	-	2.5	-	23	-	5.2	3.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	-	-	-	-	-
November	-	-	-	-	-
December 13-31	39.2	2.2	1.9	2.06	78
Calendar year	-	-	-	-	-
January	63.5	2.4	1.9	2.05	126
February	50.6	2.1	1.4	1.74	100
March	60.5	2.5	1.6	1.95	120
April	140.2	7.0	2.5	4.67	278
May	440.9	26	6.6	14.2	875
June	691	38	13	23.0	1,370
July	259.4	13	5.2	8.37	515
August	139.2	7.0	3.0	4.49	276
September	86.1	3.5	2.6	2.87	171
The period	-	-	-	-	3,910

Peak discharge (base, 20 sec.-ft.).- May 19 (1:30 a.m.) 21 sec.-ft.; May 29 (5 a.m.) 27 sec.-ft.; June 2 (9 a.m.) 37 sec.-ft.; June 10 (4 a.m.) 42 sec.-ft.; June 21 (4 a.m.) 21 sec.-ft.

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 13 to Jan. 23, Jan. 26 to Feb. 14, Mar. 1-7, 12, 13 (no gage-height record Dec. 28, Jan. 14-20; discharge computed on basis of 2 discharge measurements, weather records, and records for Lehman Creek near Baker).

Lehman Creek near Baker, Nev.

Location.- Water-stage recorder, lat. 39°01', long. 114°13', in sec. 10, T. 13 N., R. 69 E., 4¾ miles west of Baker.
Records available.- December 1947 to September 1948.
Extremes.- Maximum discharge during period December 1947 to September 1948, 15 second-feet June 2, 7, 10-14, 21 (maximum gage height, 1.31 feet June 7, 13, 21); minimum not determined, occurred during period of ice effect.
Remarks.- Records good except those for periods of ice effect, which are poor.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-		b2.0	b1.5	2.0	3.3	12	11	5.7	3.8
2			-		b1.9	b1.5	2.3	3.1	13	11	5.7	3.8
3			-		b1.9	b1.4	2.3	2.8	12	11	5.7	3.8
4			-		b1.8	b1.4	2.1	3.1	12	11	6.0	4.1
5			-		b1.8	b1.4	2.3	3.6	12	11	5.7	3.8
6			-	b1.8	1.8	b1.5	2.1	4.3	12	11	5.7	3.8
7			-		1.5	b1.5	2.1	4.8	13	10	5.7	3.8
8			-		1.5	b1.5	2.1	4.3	13	9.8	5.7	3.8
9			-		1.5	1.3	2.3	4.1	13	9.4	6.0	3.6
10			-		1.5	b1.3	2.6	4.1	15	9.0	6.0	3.6
11			-		1.5	b1.3	2.4	4.3	15	9.0	5.7	3.6
12			-		1.5	b1.4	2.8	4.3	15	8.7	5.7	3.3
13			-		1.6	b1.5	2.4	4.8	15	8.3	5.7	3.3
14			(*)		1.5	b1.5	2.6	5.4	14	8.3	5.7	3.1
15				b1.7	1.3	b1.5	2.8	6.0	14	8.3	5.7	3.1
16					1.3	b1.4	3.1	7.6	14	8.0	5.4	2.8
17					1.3	1.3	3.6	11	14	8.0	5.4	2.8
18			b1.9		1.3	1.5	3.6	12	14	7.6	5.1	3.1
19					1.3	1.6	3.3	11	14	7.6	5.4	3.1
20					*1.3	b1.5	3.3	11	13	7.3	5.4	3.3
21					1.3	b1.5	3.6	11	14	7.3	5.4	3.8
22					1.4	b1.6	3.6	11	13	7.3	5.4	3.3
23					b1.4	1.6	3.3	11	13	7.3	5.4	3.3
24					b1.3	1.6	2.8	11	12	7.0	5.4	3.3
25				b1.6	b1.4	b1.5	2.8	12	12	6.7	5.1	3.3
26			b1.8		b1.5	b1.5	2.8	12	12	6.4	5.1	3.3
27					b1.4	b1.6	2.8	12	11	6.4	4.8	3.3
28					b1.4	b1.7	3.3	13	11	6.4	4.6	3.3
29				1.5	b1.5	1.8	3.6	12	11	6.4	4.3	3.3
30				*1.8	-	1.8	3.3	12	11	6.0	4.3	3.1
31				1.8	-	b1.8	-	12	-	5.7	4.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	-	-	-	-	-
November	-	-	-	-	-
December 14-31	33.2	-	-	1.84	66
Calendar year	-	-	-	-	-
January	52.9	-	-	1.71	105
February	43.7	2.0	1.3	1.51	87
March	46.8	1.8	1.3	1.51	93
April	84.0	3.6	2.0	2.80	167
May	243.9	13	2.8	7.87	484
June	389	15	11	13.0	772
July	258.2	11	5.7	8.33	512
August	167.0	6.0	4.1	5.39	331
September	102.7	4.1	2.8	3.42	204
The period	-	-	-	-	2,820

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

SALTON SEA BASIN

Salton Sea, Calif.

Location.- Bench mark set by Imperial Irrigation District, lat. 33°26'55", long. 116°02'20", in NW¼ sec. 27, T. 8 S., R. 9 E., 1 mile northeast of Figtree John Spring and about 9 miles south of Mecca. Elevation is 242.44 feet below mean sea level.
Drainage area.- 8,360 square miles.
Records available.- November 1904 to September 1948. Records prior to September 1932 are published in Water-Supply Paper 735.
Extremes.- Maximum stage, 195.0 feet below mean sea level in February and March 1907; minimum since 1906, 250.7 feet below mean sea level in November 1924; bottom of sea (from 1904-5 determinations), 273.5 feet below mean sea level.
Remarks.- Area of water surface of sea at elevation 250 feet below mean sea level, 266 square miles; area at 240 feet below mean sea level, 328 square miles. See Water-Supply Paper 735 for condensed history of Salton Sea. Elevations in the following table, furnished by Imperial Irrigation District, were determined by leveling from above mentioned bench mark.

Elevation, in feet, below mean sea level, of Salton Sea, Calif., water year October 1947 to September 1948

Oct. 1.....	240.80	Jan. 31.....	240.20	June 1.....	240.10
Nov. 1.....	240.75	Mar. 1.....	239.95	July 1.....	240.30
Dec. 1.....	240.70	Apr. 1.....	239.90	31.....	240.55
31.....	240.45	30.....	239.90	Aug. 31.....	240.80

Tahquitz Creek near Palm Springs, Calif.

Location.- Water-stage recorder, lat. 33°47'40", long. 116°33'45", in SW¼ sec. 22, T. 4 S., R. 4 E., 1½ miles southwest of Palm Springs, Riverside County. Prior to Mar. 26, 1948, staff gage only. Altitude of gage, about 800 feet (from topographic map).

Records available.- October 1947 to September 1948.

Extremes.- Maximum discharge during year, 65 second-feet July 22 (gage height, 3.92 feet); no flow for many months.

Remarks.- Records good except those for periods of no gage-height record and those for July 22, 23, which are fair. No diversion or regulation above station.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	0.7	1.4	3.1	d0.6	0		
2					0	a.6	1.5	2.8	f.6	0		
3					0	.6	1.6	2.6	.6	0		
4					0	.6	3.1	2.6	a.5	0		
5					a.2	.6	2.3	2.6	a.4	0		
6					a1.5	a.6	1.9	2.6	a.3	0		
7					a1.0	a.6	1.8	2.6	f.2	0		
8					a.9	.6	1.7	2.4	.2	0		
9					a.9	.6	2.0	2.4	.2	0		
10					a.8	.6	2.8	2.1	.2	0		
11					a.8	.6	3.8	2.0	.2	0		
12					.8	.6	3.0	1.8	.1	0		
13					.7	a.7	2.7	1.6	f.1	0		
14					a.7	a.9	2.7	1.6		0		
15					a.7	1.0	3.2	1.5		0		
16					.7	.9	3.7	1.4		0		
17					.7	.8	4.5	1.2		0		
18					.7	.8	4.9	1.2	a.05	0		
19					a.7	.7	4.5	1.3		0		
20					.8	a.7	4.2	1.3		0		
21					a.8	a.7	4.0	1.2		0		
22					a.8	.7	3.9	1.0		1.0		
23					a.9	.7	3.6	.9		2.1		
24					.9	.8	3.2	.8				
25					.9	1.3	3.0	.7		d.03		
26					a.8	1.3	3.1	f.6				
27					.8	1.2	3.4	a.6	d.01			
28					a.7	1.1	3.3	a.6		0		
29					a.7	1.1	4.0	a.6		0		
30					-	1.5	3.5	a.6		0		
31					-	1.5	-	a.6	-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year	-	-	-	-	-
January	0	0	0	0	0
February	19.9	1.5	0	.69	39
March	25.7	1.5	.6	.83	51
April	92.3	4.9	1.4	3.08	183
May	48.9	3.1	.6	1.58	97
June	4.69	.6	-	.156	9.3
July	3.22	2.1	0	.104	6.4
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1947-48	194.71	4.9	0	.532	386

a No gage-height record; discharge interpolated.

d Doubtful gage-height record: discharge computed on basis of 2 discharge measurements and recession curves.

f Discharge computed on basis of partly estimated gage-height record.

Palm Canyon Creek near Palm Springs, Calif.

Location.- Water-stage recorder, lat. 33°44'55", long. 116°32'15", in S½ sec. 11, T. 5 S., R. 4 E., three-quarters of a mile upstream from Murray Canyon Creek and 6 miles south of Palm Springs. Former gage at same site, but at datum 0.2 foot higher. Altitude of gage, about 700 feet.

Drainage area.- 94.0 square miles.

Records available.- January 1930 to January 1942, October 1947 to September 1948.

Average discharge.- 12 years (1930-41, 1947-48), 7.13 second-feet.

Extremes.- Maximum discharge during year, 150 second-feet July 23 (gage height, 2.81 feet), from velocity-area determination; no flow during several months.
1930-42, 1947-48: Maximum discharge, 3,850 second-feet Feb. 6, 1927 (gage height, 5.60 feet, datum then in use), from rating curve extended above 120 second-feet on basis of velocity-area studies; no flow for several months during most years.

Remarks.- Records poor.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0.6	0.4			0		
2					a0.05	.6	.5	0.02		0		
3						.5	.8			0		
4					f.1	.5	1.2	0		0		
5					2.4	.5	1.2	0		0		
6					4.2	.4	1.2	0		0		
7					d2.1	.3	1.2	0		0		
8					d2.0	.3	1.0	0		0		
9					d1.9	.3	.9	0		0		
10					d1.8	.3	.9	0		0		
11					f1.6	.2	1.0	0		0		
12					1.2	.2	.9	0		0		
13					1.0	.2	.7	0		0		
14					.9	1.1	.6	0		0		
15			a0.05	a0.05	.9	4.2	.5	0		0		
16					.9	1.5	.4	0		0		
17					.9	1.2	.4	0		0		
18					1.0	1.2	.4	0		0		
19					1.0	.9	.3	0		0		
20					1.0	.7	.3	0		0		
21					1.0	.6	.2	0		0		
22					.9	.6	.3	0		.1		
23					.9	.6	.3	0		7.7		
24					.9	2.0	.3	0		0		
25					.8	5.0	.2	0		0		
26					.8	2.3	.1	0		0		
27					.7	1.3	.1	0		0		
28					.7	.9	.1	0		0		
29					.7	.8	.1	0		0		
30					-	.6	.1	0		0		
31					-	.5	-	0		0		

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	1.55	-	-	.05	3.1
Calendar year	-	-	-	-	-
January	1.55	-	-	.05	3.1
February	32.45	4.2	-	1.12	64
March	30.9	5.0	.2	1.00	61
April	16.6	1.2	.1	.55	33
May	.06	-	0	.002	.1
June	0	0	0	0	0
July	7.8	7.7	0	.25	15
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1947-48	90.91	7.7	0	.248	179

Peak discharge (base, 100 sec.-ft.).- July 23 (1:30 a.m.) 150 sec.-ft.
a No gage-height record; discharge computed on basis of weather records.
d Doubtful gage-height record; discharge computed on basis of probable recession curve.
f Computed on basis of partly estimated gage-height record.

Deep Creek near Hesperia, Calif.

Location.- Water-stage recorder and broad-crested weir, lat. 34°20'30", long. 117°13'40", in SE¼ sec. 18, T. 3 N., R. 3 W., 0.5 mile upstream from confluence with West Fork Mojave River and 8 miles southeast of Hesperia. Altitude of gage, about 3,050 feet.

Drainage area.- 137 square miles.

Records available.- December 1929 to September 1948.

Average discharge.- 18 years (1930-48), 65.8 second-feet.

Extremes.- Maximum discharge during year, 840 second-feet Apr. 4 (gage height, 3.36 feet); minimum daily, 0.4 second-foot Sept. 6-8.
1929-48: Maximum discharge, 46,600 second-feet Mar. 2, 1938, by slope-area method; minimum, 0.1 second-foot at times during 1932-34, 1936.

Remarks.- Records good except those between 5 and 10 second-feet, which are fair. Minor regulation by storage in Lake Arrowhead. Hesperia Water Co.'s canal diverts water about 2 miles above station for irrigation and domestic use.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	1.6	3.4	8.3	2.9	16	52	73	5.1	1.4	0.5	0.6
2	1.3	1.7	7.7	9.0	4.0	10	69	59	8.0	1.2	.6	.5
3	1.1	1.8	8.0	9.1	3.9	9.0	160	50	7.0	1.2	.6	.5
4	1.0	1.8	7.3	8.5	3.3	8.0	421	44	4.8	1.2	.6	.5
5	1.0	1.9	39	8.7	11	7.7	142	37	3.5	1.5	.7	.5
6	1.1	1.9	24	7.8	8.6	7.9	88	33	3.2	1.4	.7	.4
7	1.1	1.9	13	5.7	4.5	7.1	67	32	11	1.5	.6	.4
8	1.1	2.0	10	5.8	8.4	7.0	59	29	12	1.4	.6	.4
9	1.2	2.1	9.0	6.2	16	7.1	65	26	6.1	1.4	.6	.5
10	1.2	2.2	8.0	6.8	19	8.2	96	24	2.1	1.4	.6	.6
11	1.3	2.2	7.2	7.1	15	7.8	112	21	2.1	1.2	.6	.6
12	1.5	2.2	f7.5	7.1	14	7.4	78	20	2.1	1.1	.6	.6
13	1.8	2.2		6.8	13	7.7	63	18	1.9	1.0	.6	.6
14	2.1	2.2		6.6	16	16	65	17	1.7	1.0	.6	.6
15	2.0	2.4	a7.0	6.5	17	16	80	16	1.6	.9	.6	.6
16	1.7	2.5		6.9	19	16	92	15	1.4	.8	.6	.6
17	1.7	2.6		7.1	22	19	95	12	1.4	.8	.6	.7
18	1.6	2.6	f7.9	7.0	27	22	98	9.1	1.4	.8	.6	.7
19	1.5	2.6	8.0	6.8	32	18	85	8.5	1.4	.8	.6	.7
20	1.5	2.2	7.5	6.5	29	20	80	9.0	1.4	.7	.5	.7
21	1.5	2.2	7.5	7.0	29	18	67	7.8	1.5	.7	.5	.7
22	1.6	2.7	7.7	7.8	34	17	61	6.6	1.6	.7	.5	.8
23	1.6	2.8	7.5	6.3	34	21	52	5.8	1.9	.8	.5	.8
24	1.7	2.7	7.5	5.5	21	37	44	5.1	1.8	.8	.6	.8
25	1.7	2.8	7.7	4.9	16	68	37	4.6	1.8	.8	.6	.9
26	1.6	2.9	8.3	4.5	16	53	38	4.2	1.8	.7	.6	1.1
27	1.6	3.1	8.7	4.0	14	47	41	3.6	1.8	.7	.6	1.2
28	1.5	3.1	8.7	2.6	19	45	39	2.8	1.7	.6	.6	1.2
29	1.4	3.1	8.7	2.5	25	42	200	2.7	1.6	.6	.6	1.2
30	1.4	3.1	9.0	3.2	-	44	118	2.7	1.5	.6	.6	1.2
31	1.5	-	7.2	3.3	-	42	-	2.9	-	.6	.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	45.1	2.1	1.0	1.45	89
November	71.1	3.1	1.6	2.37	141
December	291.0	39	3.4	9.39	577
Calendar year 1947	5,898.9	194	.7	16.2	11,700
January	195.9	9.1	2.5	6.32	389
February	493.6	34	2.9	17.0	979
March	671.9	68	7.0	21.7	1,330
April	2,764	421	37	92.1	5,480
May	601.4	73	2.7	19.4	1,190
June	96.2	12	1.4	3.21	191
July	30.3	1.5	.6	.98	60
August	18.3	.7	.5	.59	36
September	21.2	1.2	.4	.71	42
Water year 1947-48	5,300	421	.4	14.5	10,500

Peak discharge (base, 400 sec.-ft.).- Apr. 4 (1:30 a.m.) 840 sec.-ft.; Apr. 29 (7:30 a.m.) 416 sec.-ft.

a No gage-height record Dec. 13 to 17; discharge computed on basis of recorded range in stage.
f Computed on basis of partly estimated gage-height record.

Mojave River at lower narrows, near Victorville, Calif.

Location.- Water-stage recorder, lat. 34°34'25", long. 117°19'10", in SW¼SE¼ sec. 29, T. 6 N., R. 4 W., 500 feet upstream from bridge on U. S. Highway 66 and 3 miles northwest of Victorville.

Drainage area.- 530 square miles.

Records available.- October 1936 to September 1948. February 1899 to July 1906 and November 1930 to September 1936 at site 3 miles upstream.

Average discharge.- 12 years (1936-48), 107 second-feet.

Extremes.- Maximum discharge during year, 130 second-feet Apr. 4 (gage height, 1.96 feet); minimum daily, 13 second-feet Aug. 9.
1930-48: Maximum discharge, 70,600 second-feet Mar. 2, 1938 (gage height, 18.7 feet, present datum), by slope-area method; minimum, 9 second-feet July 28, 1942.

Remarks.- Records fair. Diversions above station, principally for irrigation. Minor regulation by Lake Arrowhead.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	39	45	55	51	43	50	32	47	25	19	18
2	23	43	45	47	57	39	47	32	47	20	19	19
3	23	45	43	50	51	34	47	32	41	20	18	16
4	25	43	45	52	51	39	73	32	34	22	16	16
5	25	45	65	50	62	30	52	30	32	20	16	18
6	25	41	52	55	55	39	41	26	34	19	16	20
7	23	41	55	55	50	43	50	26	32	19	16	22
8	30	41	45	55	47	43	50	26	28	19	15	22
9	36	41	52	52	52	39	47	25	32	19	13	22
10	a35	41	47	50	43	47	50	23	28	19	15	23
11	a34	41	45	47	41	47	45	25	36	19	15	20
12	a33	41	45	47	41	50	43	25	32	20	15	22
13	a33	43	55	41	43	52	43	25	30	20	16	20
14	a32	45	63	47	45	50	41	25	34	20	16	22
15	a31	47	60	43	52	50	36	25	26	19	16	23
16	30	43	60	50	50	45	39	32	32	19	16	22
17	34	43	60	47	55	47	32	28	32	19	16	23
18	34	41	55	47	65	43	34	32	26	19	18	23
19	39	47	57	52	57	45	30	34	30	19	18	25
20	34	47	50	52	60	50	30	36	25	19	19	23
21	39	47	50	50	63	45	34	41	25	19	19	23
22	39	50	41	55	55	45	39	41	25	18	19	25
23	41	47	41	57	60	34	34	39	23	16	19	23
24	39	47	41	57	52	45	34	41	23	16	19	25
25	43	47	45	55	52	39	41	41	25	16	18	28
26	41	45	47	55	47	36	30	36	23	16	18	28
27	45	45	45	55	50	36	30	32	23	16	16	34
28	41	47	47	57	50	45	41	34	22	16	16	34
29	41	45	47	57	43	47	36	36	26	16	18	26
30	39	45	50	55	-	45	36	34	26	19	18	26
31	34	-	52	55	-	50	-	39	-	19	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,041	45	20	33.6	2,060
November	1,323	50	39	44.1	2,620
December	1,550	65	41	50.0	3,070
Calendar year 1947	13,545	250	13	37.1	26,850
January	1,602	57	41	51.7	3,180
February	1,500	65	41	51.7	2,980
March	1,342	52	30	43.3	2,660
April	1,235	73	30	41.2	2,450
May	985	41	23	31.8	1,950
June	899	47	22	30.0	1,780
July	582	25	16	18.8	1,150
August	526	19	13	17.0	1,040
September	691	34	16	23.0	1,370
Water year 1947-48	13,276	73	13	36.3	26,310

Peak discharge (base, 200 sec.-ft.).- No peak above base.
a No gage-height record; discharge interpolated.

Mojave River at Barstow, Calif.

Location.- Water-stage recorder, lat. 34°54'25", long. 117°01'20", in SW¼SE¼ sec. 21, T. 10 N., R. 1 W., 75 feet upstream from bridge on U. S. Highway 91 at Barstow. Altitude of gage, about 2,090 feet.
Records available.- October 1930 to September 1948.
Average discharge.- 18 years, 41.8 second-feet.
Extremes.- No flow during year.
1930-46: Maximum discharge, 64,300 second-feet Mar. 3, 1938 (gage height, 8.60 feet), by slope-area method; no flow for several months each year.
Remarks.- No flow since Mar. 23, 1947. Minor storage and many diversions above station.
Figures for calendar year 1947 are as follows: total second-foot-days, 353.8; maximum daily discharge, 78 second-feet; minimum daily, no flow; mean, 0.97 second-foot; runoff, 701 acre-feet.

West Fork Mojave River near Hesperia, Calif.

Location.- Water-stage recorder, lat. 34°20'20", long. 117°14'35", in SE¼ sec. 13, T. 3 N., R. 4 W., at highway bridge 0.5 mile upstream from confluence with Deep Creek and 7 miles southeast of Hesperia. Altitude of gage, about 3,050 feet.
Drainage area.- 74.8 square miles.
Records available.- January 1930 to September 1948.
Average discharge.- 18 years, 34.4 second-feet.
Extremes.- Maximum discharge during year, 700 second-feet Apr. 3 (gage height, 4.11 feet); no flow during several months
1930-48: Maximum discharge, 26,100 second-feet Mar. 2, 1938, by slope-area method; no flow during several months of each year.
Remarks.- Records fair. One small diversion above station for irrigation; water diverted from Lake Gregory above station for domestic use and fire protection. No regulation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	0.4	14	24				
2					0	.1	14	20				
3					0		164	18	e0.01			
4					0		205	16				
5					.8		86	15				
6					5.1		63	11	0			
7					2.5		48	10	0			
8					3.0	e.01	35	11	0			
9					2.0		28	8.7	0			
10					1.1		25	4.0	0			
11					1.0		28	2.0	0			
12					1.3		24	.9	0			
13					1.7	.1	18	.6	0			
14					1.2	13	16	.5	0			
15					1.0	9	15	.4	0			
16					.7	17	13	.4	0			
17					.5	20	12	.3	0			
18					.1	18	12	.2	0			
19					1.1	14	12	.2	0			
20					3.2	17	11	.1	0			
21					3.5	15	8.2	.1	0			
22					3.5	14	9.7	.1	0			
23					3.2	12	15		0			
24					1.8	33	7.4		0			
25					1.4	62	5.8		0			
26					1.1	30	4.9	e.05	0			
27					.5	21	4.0		0			
28					.3	19	4.5		0			
29					3.5	17	74		0			
30					-	15	37		0			
31					-	14	-		-			

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1947	3,601.91	140	0	9.87	7,140
January	0	0	0	0	0
February	45.1	5.1	0	1.56	89
March	371.70	62	-	12.0	737
April	1,011.5	203	4.0	33.7	2,010
May	143.95	24	-	4.64	286
June	.05	-	0	.002	.1
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1947-48	1,572.30	203	0	4.30	3,120

Peak discharge (base, 500 sec.-ft.).- Apr. 3 (10:30 p.m.) 700 sec.-ft.
e Daily discharge less than 0.1 second-foot.

Rock Creek near Valyermo, Calif.

Location.- Water-stage recorder, lat. 34°25'10", long. 117°50'25", in NE¼ sec. 20, T. 4 N., R. 9 W., 1.8 miles southeast of Valyermo. Altitude of gage, about 4,050 feet.

Drainage area.- 23.0 square miles.

Records available.- January 1923 to September 1937, May 1938 to September 1948.

Average discharge.- 24 years (1923-37, 1938-48), 10.7 second-feet.

Extremes.- Maximum discharge during year, 84 second-feet Apr. 29 (gage height, 2.63 feet); minimum daily, 2.9 second-feet Sept. 25-30.
1923-48: Maximum discharge, 8,300 second-feet Mar. 2, 1938, by slope-area method; minimum, 1.2 second-feet Aug. 22, 1925.

Remarks.- Records good. No diversion above station.

Cooperation.- Nineteen discharge measurements furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	4.9	5.6	5.3	4.2	5.6	6.8	13	10	4.5	3.5	3.5
2	5.6	4.9	5.6	5.3	4.2	5.6	6.8	15	10	4.2	3.5	3.5
3	5.3	4.9	5.6	5.3	4.2	6.0	7.6	14	10	4.2	3.5	3.5
4	5.3	4.9	6.0	5.3	4.5	6.0	9.0	13	9.5	4.2	3.5	3.5
5	5.3	4.9	6.0	5.3	5.6	6.0	10	13	9.5	4.2	3.2	3.5
6	5.3	4.9	6.0	5.3	5.6	6.4	10	13	9.5	4.2	3.2	3.8
7	5.3	4.5	6.0	5.3	5.6	6.4	10	13	9.5	4.2	3.2	3.8
8	5.3	4.5	6.0	4.9	5.3	6.4	10	13	9.5	4.2	3.2	4.2
9	5.3	4.5	5.6	4.9	5.3	6.8	11	12	9.0	4.2	3.5	4.2
10	5.3	4.5	5.6	4.9	5.6	6.8	13	12	9.0	4.5	3.8	4.2
11	5.3	4.5	5.6	4.9	5.3	6.4	16	12	8.5	4.9	3.8	4.2
12	5.3	4.5	5.6	4.9	5.3	6.4	15	11	8.0	4.9	3.8	4.2
13	5.3	4.5	5.6	4.9	5.3	7.2	14	10	7.6	4.9	3.8	3.8
14	5.3	4.5	5.6	4.9	5.3	7.6	14	10	7.6	4.9	3.8	3.8
15	5.3	4.5	5.6	4.9	5.6	8.0	14	10	7.2	4.9	3.8	3.8
16	5.3	4.5	5.6	4.9	5.6	8.0	15	10	6.8	4.5	3.8	3.5
17	5.3	4.5	5.6	4.9	6.0	8.5	15	10	6.4	4.5	3.8	3.8
18	5.3	4.5	5.6	4.9	6.4	8.5	15	10	6.0	4.5	3.5	3.8
19	5.3	4.5	6.0	4.9	6.4	8.5	14	10	6.0	4.5	3.5	3.2
20	5.3	4.5	6.0	4.9	6.8	8.5	13	9.5	5.6	4.5	3.5	3.2
21	5.3	4.9	6.0	4.9	7.2	8.0	13	9.5	5.6	4.5	3.2	3.2
22	5.3	4.9	6.0	4.9	7.2	8.0	13	9.0	5.6	4.5	3.2	3.2
23	5.3	4.9	6.0	4.9	7.6	8.0	13	9.0	5.3	4.5	3.5	3.2
24	5.3	4.9	6.0	4.9	7.6	9.0	12	9.0	5.3	4.5	3.5	3.2
25	5.3	4.9	6.0	4.9	7.6	9.0	12	8.5	5.3	4.5	3.5	2.9
26	4.9	4.9	6.0	4.9	7.4	7.6	11	8.5	4.9	4.5	3.5	2.9
27	4.9	4.9	5.6	4.5	7.2	7.2	10	8.5	4.9	4.2	3.5	2.9
28	4.9	4.9	5.6	4.5	6.4	6.8	15	8.5	4.5	4.2	3.5	2.9
29	4.9	4.9	5.6	4.5	5.6	6.8	45	8.5	4.5	4.2	3.5	2.9
30	4.9	4.9	5.6	4.5	-	6.8	24	9.0	4.5	3.8	3.5	2.9
31	4.9	-	5.6	4.2	-	6.8	-	9.0	-	3.8	3.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	162.5	5.6	4.9	5.24	322
November	141.4	4.9	4.5	4.71	280
December	178.8	6.0	5.6	5.77	355
Calendar year 1947	5,340.1	69	4.5	14.6	10,590
January	152.4	5.3	4.2	4.92	302
February	171.9	7.6	4.2	5.93	341
March	223.6	9.0	5.6	7.21	444
April	407.2	45	6.8	13.6	808
May	335.5	18	8.5	10.8	665
June	215.6	10	4.5	7.19	428
July	136.8	4.9	3.8	4.41	271
August	109.1	3.8	3.2	3.52	216
September	105.2	4.2	2.9	3.51	209
Water year 1947-48	2,340.0	45	2.9	6.39	4,640

Peak discharge (base, 50 sec.-ft.).- Apr. 29 (1 a.m.) 84 sec.-ft.

Little Rock Creek near Little Rock, Calif.

Location.- Water-stage recorder, lat. 34°27'50", long. 118°01'05", 0.2 mile upstream from Santiago Creek and 5 miles south of Little Rock, Los Angeles County. Altitude of gage, about 3,290 feet.

Drainage area.- 49.0 square miles.

Records available.- October 1930 to September 1948 (1937-38, 1938-39 incomplete).

Average discharge.- 16 years (1930-37, 1939-48), 21.7 second-feet.

Extremes.- Maximum discharge during year, 122 second-feet Apr. 29 (gage height, 4.86 feet); no flow during several months.
1930-48: Maximum discharge, 17,000 second-feet (estimated) Mar. 2, 1938; no flow during periods in most years.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	1.3	1.9	2.2	5.6	11	24	3.0	0.1		
2		0	1.8	2.0	2.2	5.0	11	19	3.4	.1		
3		0	1.8	2.2	2.2	5.0	14	16	2.4	.1		
4		0	3.2	2.4	2.2	4.7	24	14	1.9	.1		
5		0	6.0	2.6	5.7	4.4	17	12	1.4	.1		
6		0	4.2	2.4	4.7	4.2	14	11	1.3	.1		
7		0	3.4	2.6	4.2	4.2	12	9.6	.8	.1		
8		0	3.0	2.6	4.2	4.2	12	8.3	.6	.1		
9		0	2.8	3.2	4.2	4.2	11	7.5	.5	.1		
10		0	2.2	3.4	4.4	4.4	15	6.9	.4	.1		
11		0	2.2	3.2	4.2	4.4	19	6.6	.5	.1		
12		0	2.0	3.0	3.8	4.4	15	6.0	.4	.1		
13		0	2.0	2.8	3.6	5.0	13	5.3	.4	.1		
14		0	2.2	2.8	3.6	6.6	13	5.0	.3	.1		
15		.1	2.2	3.0	3.6	5.6	13	4.4	.2	.1		
16		.2	2.4	3.0	4.2	5.3	15	4.2	.1	.1		
17		.2	2.6	3.0	6.0	5.6	17	3.8	.1	.1		
18		.4	2.8	2.8	8.7	6.0	17	3.8	.1	.1		
19		.4	3.0	2.8	10	6.0	15	4.0	.1	0		
20		.5	3.0	2.6	9.6	6.9	14	4.2	.1	0		
21		.6	3.0	2.6	9.6	6.3	12	4.2	.1	0		
22		.6	2.8	2.4	11	6.0	10	3.8	.1	0		
23		.7	2.6	2.4	10	7.2	10	3.6	.1	0		
24		.7	2.2	2.4	8.7	11	10	3.4	.1	0		
25		.8	2.4	2.6	7.5	12	9.1	2.8	.1	0		
26		.8	2.8	2.6	6.9	9.6	8.3	2.8	.1	0		
27		.8	2.8	2.4	6.3	9.1	7.9	2.6	.1	0		
28		.8	2.8	3.0	6.3	9.6	8.8	2.6	.1	0		
29		.8	2.6	2.0	6.0	10	62	2.6	.1	0		
30		.8	2.4	2.2	-	11	33	2.4	.1	0		
31		-	1.8	2.2	-	11	-	2.6	-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	9.2	.8	0	.31	18
December	82.3	6.0	1.3	2.65	163
Calendar year 1947	2,372.8	82	0	6.50	4,700
January	80.1	3.4	1.9	2.58	159
February	165.8	11	2.2	5.72	329
March	204.5	12	4.2	6.60	406
April	463.1	62	7.9	15.4	919
May	209.0	24	2.4	6.74	415
June	19.0	3.4	.1	.63	38
July	1.8	.1	0	.06	3.6
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1947-48	1,234.8	62	0	3.37	2,450

Mono Lake near Mono Lake, Calif.

Location.- Staff gage, lat. 38°00', long. 119°08', in NE¼ sec. 31, T. 2 N., R. 26 E., 1 mile south of Mono Lake post office. Datum of gage is 6,410.73 feet above mean sea level (datum of 1929); gage readings have been reduced to elevations above mean sea level.

Records available.- June 1912 to September 1948; records prior to September 1934 are published in Water-Supply Paper 765.

Extremes.- 1912-48: Maximum elevation observed, 6,428.1 feet July 18, 1919; minimum observed, 6,414.1 feet Sept. 28, 1948.

Cooperation.- Gage-height record furnished by city of Los Angeles.

Elevation, in feet, above mean sea level, water year October 1947 to September 1948

Oct. 3	6,416.3	Mar. 22	6,415.7
6	6,416.3	29	6,415.7
10	6,416.3	Apr. 5	6,415.7
13	6,416.2	12	6,415.7
24	6,416.1	19	6,415.7
29	6,416.0	May 5	6,415.6
Nov. 7	6,415.9	10	6,415.6
14	6,415.8	17	6,415.5
17	6,415.8	24	6,415.5
24	6,415.8	June 2	6,415.5
Dec. 2	6,415.8	7	6,415.5
10	6,415.8	18	6,415.4
17	6,415.8	25	6,415.4
24	6,415.8	July 2	6,415.3
31	6,415.7	8	6,415.2
Jan. 1	6,415.7	12	6,415.2
12	6,415.8	19	6,415.1
15	6,415.7	26	6,415.1
23	6,415.7	30	6,415.0
26	6,415.7	Aug. 4	6,415.0
28	6,415.7	13	6,414.8
Feb. 5	6,415.7	17	6,414.7
12	6,415.6	24	6,414.6
19	6,415.7	Sept. 2	6,414.4
25	6,415.7	8	6,414.4
Mar. 4	6,415.7	14	6,414.3
10	6,415.7	21	6,414.2
15	6,415.7	28	6,414.1

WALKER LAKE BASIN

Walker Lake near Hawthorne, Nev.

Location.- Bench mark at United States naval depot, lat. 38°35', long. 118°42', in NE¼NE¼ sec. 2, T. 8 N., R. 29 E., 3 miles northwest of Hawthorne. Bench mark is 4,053.41 feet above mean sea level, adjustment of 1912.

Records available.- August 1928 to September 1948. Occasional readings prior to August 1928.

Extremes.- 1928-48: Maximum elevation observed, 4,051.8 feet Mar. 13, 1928 (Indian Service); minimum observed, 4,005.8 feet Sept. 30, 1948.

An elevation of 4,078.0 feet, 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, above mean sea level, water year October 1947 to September 1948

Oct. 9	4,009.4	Mar. 31	4,008.0
21	4,009.1	May 3	4,007.7
Nov. 1	4,009.0	June 1	4,007.4
Dec. 1	4,008.7	30	4,007.2
Jan. 7	4,008.3	Aug. 2	4,007.0
Feb. 2	4,008.2	Sept. 1	4,006.4
Mar. 2	4,008.1	30	4,005.8

Bridgeport Reservoir near Bridgeport, Calif.

Location.- Reference point, lat. 38°19'30", long. 119°12'50", in SE¼ sec. 34, T. 6 N., R. 25 E., at Bridgeport Dam on East Walker River and 4½ miles north of Bridgeport. Datum of gage is at mean sea level.

Drainage area.- 362 square miles.

Records available.- October 1931 to September 1948 in reports of Geological Survey. March 1926 to September 1948 in files of Walker River Irrigation District.

Extremes.- Maximum contents during year, 22,680 acre-feet Mar. 31, Apr. 1 (elevation, 6,452.05 feet); minimum, 3,480 acre-feet Sept. 25, 26 (elevation, 6,436.05 feet).
1926-48: Maximum contents, 44,580 acre-feet June 12, 1938 (elevation, 6,460.7 feet); no contents during fall of 1929, 1930.

Remarks.- Reservoir is formed by earth-fill, rock-faced dam; storage began Dec. 8, 1923; dam completed in November 1924. Capacity, 42,460 acre-feet between elevations 6,412 feet (sill of outlet gate) and 6,460 feet (crest of spillway). No dead storage. Water is used for irrigation in Walker River Irrigation District. Contents correspond to gage readings made about 8 a.m. daily.

Cooperation.- Elevations and capacity table furnished by Walker River Irrigation District.

Contents, in acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,540	9,600	11,820	15,170	18,440	20,910	22,680	20,620	15,870	18,610	14,430	6,160
2	8,590	9,600	11,880	15,320	18,520	21,010	22,580	20,620	15,950	18,870	14,080	6,000
3	8,620	9,700	12,000	15,470	18,610	21,110	22,580	20,530	16,030	19,240	13,790	5,840
4	8,640	9,820	12,130	15,550	18,610	21,210	22,580	20,440	16,030	19,520	13,510	5,720
5	8,690	9,870	12,260	15,630	18,690	21,310	22,580	20,250	15,870	19,700	13,170	5,580
6	8,740	9,920	12,320	15,630	18,780	21,400	22,580	20,250	15,950	19,880	12,830	5,440
7	8,790	9,980	12,380	15,790	18,870	21,500	22,580	20,160	16,030	19,880	12,570	5,330
8	8,840	10,040	12,440	15,950	18,870	21,600	22,580	20,070	15,950	19,880	12,380	5,220
9	8,900	10,090	12,570	16,110	18,960	21,700	22,580	19,880	15,950	19,880	12,130	5,110
10	8,950	10,140	12,700	16,260	19,060	21,800	22,580	19,700	16,030	19,420	11,820	4,930
11	9,000	10,260	12,770	16,340	19,150	21,890	22,580	19,520	16,030	19,240	11,570	4,860
12	9,000	10,320	12,900	16,500	19,240	21,890	22,480	19,330	16,190	19,060	11,200	4,780
13	8,950	10,380	12,970	16,660	19,330	21,890	22,480	19,150	16,260	18,870	10,910	4,680
14	8,950	10,500	13,040	16,820	19,420	21,990	22,480	18,960	16,260	18,780	10,610	4,610
15	8,950	10,550	13,170	16,980	19,520	21,990	22,480	18,780	16,260	18,780	10,380	4,450
16	8,950	10,670	13,310	17,150	19,610	22,090	22,380	18,260	16,340	18,610	10,040	4,310
17	9,000	10,730	13,450	17,230	19,700	22,090	22,190	17,920	16,580	18,440	9,760	4,150
18	9,000	10,850	13,580	17,400	19,800	22,190	22,090	-	16,740	18,440	9,320	4,020
19	9,050	10,910	13,650	17,490	19,880	22,290	21,990	17,320	16,900	18,520	9,000	3,870
20	9,100	10,970	13,790	17,580	19,980	22,380	21,990	17,060	16,740	18,440	8,640	3,750
21	9,160	11,030	13,850	17,660	20,070	22,380	21,890	16,740	16,740	18,260	8,390	3,690
22	9,160	11,080	13,990	17,750	20,160	22,480	21,890	16,500	16,820	18,010	8,080	3,630
23	9,160	11,140	14,140	17,830	20,250	22,580	21,800	16,260	16,900	17,750	7,890	3,570
24	9,160	11,200	14,210	17,920	20,340	22,580	21,700	16,110	17,060	17,400	7,500	3,510
25	9,210	11,260	14,290	18,010	20,440	22,580	21,500	15,870	17,230	16,900	7,360	3,480
26	9,270	11,320	14,430	18,090	20,530	22,580	21,110	15,630	-	16,580	7,170	3,480
27	9,320	11,380	14,580	18,180	20,620	22,580	21,110	15,470	17,660	16,110	6,990	3,540
28	9,380	11,500	14,730	18,260	20,720	22,580	20,910	15,710	17,830	15,790	6,860	3,570
29	9,430	11,630	14,880	18,260	20,820	22,580	20,720	15,710	18,090	15,400	6,680	3,630
30	9,490	11,760	14,950	18,350	-	22,580	20,620	15,790	18,350	15,100	6,460	3,660
31	9,540	-	15,030	18,440	-	22,680	-	15,790	-	14,730	6,330	-

Monthly elevation and contents, water year October 1947 to September 1948

Date	Elevation (feet)	Contents (acre-feet)	Change in conterts during month (acre-feet)
Oct. 1	6,442.45	8,540	+1,060
Nov. 1	6,445.45	9,600	+2,220
Dec. 1	6,445.35	11,820	+3,350
Calendar year 1947...	-	-	-13,760
Jan. 1	6,447.80	15,170	+3,270
Feb. 1	6,449.80	18,440	+2,470
Mar. 1	6,451.15	20,910	+1,770
Apr. 1	6,452.05	22,680	-2,060
May 1	6,451.90	20,620	-4,750
June 1	6,448.25	15,870	+2,740
July 1	6,449.90	18,610	-4,180
Aug. 1	6,447.30	14,430	-8,270
Sept.1	6,439.90	6,160	-2,470
Oct. 1	6,436.40	3,690	-
Water year 1947-48...	-	-	-4,850

East Walker River near Bridgeport, Calif.

Location.- Water-stage recorder, lat. 38°19'40", long. 119°12'50", in SW¼NE¼ sec. 34, T. 6 N., R. 25 E., 1,500 feet downstream from Bridgeport Reservoir, 5 miles north of Bridgeport, and 10 miles upstream from Sweetwater Creek.

Drainage area.- 362 square miles.

Records available.- October 1921 to September 1948. July 1911 to September 1914 at site 1½ miles upstream (gage heights only).

Average discharge.- 25 years (1922-24, 1925-48), 128 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 249 second-feet June 19, 20; minimum daily, 4.0 second-feet Dec. 4.
1921-48: Maximum discharge, 1,240 second-feet Jan. 22, 1943; minimum daily recorded, 1.8 second-feet Nov. 20-24, 1944.

Remarks.- Records excellent. Diversions for irrigation of meadow and pasture lands near Bridgeport. Flow regulated by Bridgeport Reservoir (see preceding page).

Rating table, water year 1947-48 (gage height, in feet, and discharge in second-feet)
(Shifting-control method used Dec. 3 to May 14, Sept. 17-30)

0.2	4.0	0.6	30	1.3	154
.3	7.5	.7	42	1.6	229
.4	13	.8	56	1.7	258
.5	20	1.0	91		

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	5.0	6.1	6.8	6.4	5.8	45	73	105	216	207	119
2	25	6.4	6.1	6.8	6.8	6.1	43	73	105	216	207	113
3	25	6.4	4.4	6.8	6.8	6.1	43	73	117	207	207	107
4	25	6.4	4.0	6.8	6.8	6.1	42	73	141	200	205	107
5	25	6.4	5.8	6.8	6.8	6.4	42	73	141	200	213	107
6	25	6.4	5.8	6.8	6.8	6.4	52	78	141	202	216	107
7	25	6.4	5.8	6.8	6.8	6.4	70	95	141	202	207	107
8	24	6.4	5.8	6.8	6.8	6.4	70	99	143	210	197	101
9	24	6.4	5.8	6.8	6.8	6.4	70	105	143	224	197	89
10	30	6.4	5.8	6.8	6.8	6.4	75	105	150	224	194	87
11	41	6.4	5.8	6.8	6.8	6.4	82	113	161	224	192	87
12	41	6.4	5.8	6.8	6.8	6.4	82	139	187	218	192	86
13	40	6.4	5.8	6.8	6.8	6.4	84	139	205	205	197	86
14	38	6.4	5.8	6.8	6.8	6.4	84	145	226	200	213	82
15	38	6.4	5.8	6.8	6.8	6.4	87	182	224	177	213	101
16	37	6.4	5.8	6.8	6.8	6.4	103	229	202	177	213	117
17	33	6.4	5.8	6.8	6.8	6.4	103	226	202	177	205	97
18	26	6.4	5.8	6.8	6.4	6.1	103	221	229	187	190	86
19	25	6.1	5.8	6.8	6.1	6.1	103	205	249	194	187	84
20	24	6.1	5.8	6.8	6.1	6.1	93	197	249	213	177	84
21	25	6.1	6.1	6.8	5.8	6.1	84	180	244	213	177	71
22	24	6.1	6.4	6.8	5.8	6.1	84	172	229	213	177	59
23	24	6.1	6.4	6.8	5.8	6.1	84	161	229	218	172	59
24	24	5.8	6.4	6.8	5.8	22	87	161	224	232	154	59
25	23	5.8	6.8	6.8	5.8	36	95	156	210	235	139	46
26	23	5.8	6.8	6.8	5.4	36	93	141	210	229	132	33
27	23	5.8	6.8	6.8	5.4	36	87	113	213	210	132	35
28	23	6.1	6.8	6.8	5.4	35	73	105	213	210	130	33
29	17	6.1	6.8	6.8	5.8	35	73	105	213	210	130	33
30	5.8	6.1	6.8	6.8	-	40	73	105	213	210	130	35
31	4.4	-	6.8	6.4	-	45	-	105	-	210	130	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	812.2	41	4.4	26.2	1,610
November	185.8	6.4	5.0	6.19	369
December	186.3	6.8	4.0	6.01	370
Calendar year 1947	38,381.4	279	3.6	105	76,140
January	210.4	6.8	6.4	6.79	417
February	184.8	6.8	5.4	6.37	367
March	428.9	45	5.8	13.8	851
April	2,309	103	42	77.0	4,580
May	4,147	229	73	134	8,230
June	5,659	249	105	189	11,220
July	6,463	235	177	208	12,820
August	5,632	216	130	182	11,170
September	2,417	119	33	80.6	4,790
Water year 1947-48	28,635.4	249	4.0	78.2	56,790

East Walker River above Strosnider ditch, near Mason, Nev.

Location.- Water stage recorder, lat. 38°49', long. 119°03', in sec. 14, T. 11 N., R. 26 E., 0.9 mile upstream from head of Strosnider ditch, 12 miles southeast of Mason, and 13½ miles southeast of Yerington.

Records available.- January 1947 to September 1948.

Extremes.- 1947: Maximum discharge during period January to September, 246 second-feet May 28 (gage height, 2.30 feet); minimum not determined, occurred during period of ice effect.

1947-48: Maximum discharge during water year, 197 second-feet June 21 (gage height, 2.08 feet); minimum, 3.1 second-feet Mar. 21.

Remarks.- Records good except those for periods of ice effect, which are fair. Diversions above and below station for irrigation. Flow regulated by Bridgeport Reservoir (capacity, 42,460 acre-feet).

Rating table, Jan. 22, 1947, to Sept. 30, 1948, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Apr. 16 to July 7, 1947,
Oct. 1, 1947, to Jan. 10, 1948, Sept. 18-30, 1948)

0.6	2.8	1.0	24	1.7	118
.7	6.5	1.1	33	2.0	179
.8	11	1.3	56	2.3	251
.9	17	1.5	84		

Discharge, in second-feet, 1947-48

1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				-	29	29	113	221	234	145	181	159
2				-	28	30	116	209	226	153	179	157
3				-	29	31	107	200	224	149	175	153
4				-	29	30	97	193	219	141	168	155
5				-	28	30	85	190	219	190	172	155
6				-	29	31	84	184	214	190	159	157
7				-	28	30	88	197	200	197	151	155
8				-	28	31	100	212	204	212	147	157
9				-	28	31	102	219	197	209	145	151
10				-	28	29	104	200	195	209	139	131
11				-	28	31	105	202	190	212	135	118
12				-	27	31	122	214	175	216	128	114
13				-	28	34	141	212	172	216	126	100
14				-	30	42	151	197	172	216	126	97
15				-	29	52	161	193	168	219	113	92
16				-	29	61	166	193	161	221	107	90
17				-	31	73	166	190	157	221	102	84
18				-	33	85	151	190	153	214	102	85
19				-	32	*104	129	190	151	209	104	72
20				-	31	113	124	179	151	207	107	62
21				-	30	114	122	195	147	202	104	54
22				*b22	30	120	124	207	151	197	98	51
23				b24	30	126	124	200	155	195	100	47
24				b26	30	135	126	204	157	195	100	42
25				b28	30	126	139	209	161	195	104	37
26				31	30	118	184	241	153	195	104	35
27				31	30	114	202	226	143	200	104	34
28				29	30	113	212	241	147	204	124	33
29				29	-	113	226	236	151	195	139	31
30				26	-	114	226	234	143	200	153	33
31				30	-	114	-	236	-	190	151	-

Peak discharge (base, 500 sec.-ft.).- No peak above base.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Discharge, in second-feet, of East Walker River above Strosnider ditch near Mason, Nev., 1947-48--Continued

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	31	28	30	27	15	10	62	102	157	147	98
2	32	30	27	29	25	15	25	60	98	157	147	93
3	32	28	27	31	23	*15	35	61	97	157	147	87
4	32	27	26	31	22	15	36	61	97	157	147	82
5	33	30	25	29	23	14	36	58	111	155	147	82
6	32	31	25	28	24	14	34	52	111	155	145	84
7	33	29	29	28	22	14	34	48	107	157	147	81
8	31	28	25	28	23	13	44	57	116	153	143	78
9	33	30	26	28	26	12	53	61	118	143	137	78
10	33	31	27	27	29	14	54	66	118	161	139	70
11	35	*29	27	25	29	12	52	70	120	157	137	68
12	44	30	29	24	28	11	60	75	129	153	137	68
13	47	31	30	23	28	11	64	95	139	153	137	65
14	46	29	28	22	29	10	69	95	151	143	139	64
15	45	31	28	22	30	9.2	76	93	166	139	145	61
16	43	28	29	23	30	6.9	78	120	161	126	147	68
17	43	31	27	25	29	6.1	93	166	147	118	149	90
18	44	31	30	25	28	5.3	102	172	159	116	147	79
19	42	30	26	23	26	4.5	105	170	175	122	139	72
20	37	31	26	23	25	4.1	102	168	190	141	133	69
21	37	31	*28	24	24	3.4	95	168	193	159	126	68
22	36	29	27	25	23	3.4	82	151	190	168	129	66
23	37	29	29	26	22	3.4	75	147	172	172	133	65
24	40	29	29	25	22	3.4	70	141	172	166	133	65
25	38	28	31	24	19	3.8	75	141	159	179	128	72
26	36	30	31	23	20	3.8	82	135	157	179	118	73
27	36	29	31	21	18	4.5	78	131	153	170	107	60
28	36	30	27	21	17	6.1	76	116	151	147	102	53
29	36	30	27	*23	18	6.1	66	102	157	145	98	52
30	36	29	33	24	-	5.7	64	97	159	143	97	50
31	35	-	34	26	-	7.4	-	104	-	141	97	-

Peak discharge (base, 500 sec.-ft.).- No peak above base.
* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 23, 24, Dec. 9, 10, 12, 13, Jan. 11 to Feb. 8, Feb. 12, 13.

Monthly discharge, in second-feet, 1947-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January 22-31, 1947	276	31	22	27.6	547
February	822	33	28	29.4	1,630
March	2,235	135	29	72.1	4,430
April	4,097	226	84	1,335	8,130
May	6,414	241	179	207	12,720
June	5,290	234	143	176	10,490
July	6,114	221	141	197	12,130
August	4,047	181	98	131	8,030
September	2,841	159	31	94.7	5,640
The period	-	-	-	-	63,740
October 1947	1,151	47	31	37.1	2,280
November	890	31	27	29.7	1,760
December	872	34	25	28.1	1,730
Calendar year	-	-	-	-	-
January 1948	786	31	21	25.4	1,560
February	709	30	17	24.4	1,410
March	271	15	3.4	8.8	540
April	1,925	105	10	64.2	3,820
May	3,243	172	48	105	6,430
June	4,275	193	97	142	8,480
July	4,689	179	116	151	9,300
August	4,124	149	97	133	8,180
September	2,161	98	50	72.0	4,290
Water year 1947-48	25,097	193	3.4	68.6	49,780

West Walker River below East Fork, Near Coleville, Calif.

Location.- Water-stage recorder, lat. 38°22'45", long. 119°27'00", in SE¼ sec. 9, T. 6 N., R. 23 E., 75 feet downstream from East Fork, 200 feet upstream from bridge on U. S. Highway 395, and 13 miles southeast of Coleville.

Drainage area.- 182 square miles.

Records available.- April 1938 to September 1948. October 1905 to July 1908 at site 9½ miles downstream; March 1909 to August 1910 and June 1915 to March 1938 at site 10 miles downstream, published as West Walker River near Coleville.

Average discharge.- 10 years (1938-48), 252 second-feet.

Extremes.- Maximum discharge during year, 1,250 second-feet May 26 (gage height, 4.45 feet); minimum occurred during period of ice effect.

1938-48: Maximum discharge, 2,490 second-feet June 9, 1938 (gage height, 4.90 feet, site and datum then in use), from rating curve extended above 1,600 second-feet; minimum, 6 second-feet Dec. 10, 1940.

Maximum discharge known, 5,800 second-feet Dec. 11, 1937, by slope-area method.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Station is above diversions except a few small ranch ditches. Flow very slightly regulated by Poor Lake Reservoir (capacity unknown), 7 miles upstream.

Cooperation.- Five discharge measurements made by Sierra Pacific Power Co.

Revisions (water years).- W 880: 1917 (runoff in acre-feet).

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	62	42			33	59	146	435	897	129	48
2	28	59	38			34	66	144	640	762	125	47
3	28	56	35			33	58	165	865	649	118	44
4	28	59	40			33	53	222	816	561	107	43
5	28	50	42			33	48	315	574	454	98	40
6	28	44	43			32	50	446	559	409	98	38
7	27	51	40			33	34	493	694	420	95	36
8	33	51	36		30	34	58	343	822	428	90	34
9	32	49	32			32	a58	285	987	443	88	34
10	44	44	30			33	53	264	981	462	91	33
11	47	46	31			31	54	285	903	473	87	29
12	41	48	32			33	55	330	939	424	85	30
13	*39	55	34			34	58	446	903	384	85	29
14	41	48	35			31	71	518	939	360	83	32
15	41	47	35			34	107	607	862	367	76	29
16	53	43	35	25	31	35	148	750	839	363	77	29
17	118	40	35		32	36	217	792	812	353	77	29
18	93	41	35		33	34	191	669	790	304	77	29
19	79	39	35		34	35	177	432	773	285	73	31
20	76	31	35		36	34	201	343	891	264	71	29
21	83	31	35		36	35	228	298	951	247	70	28
22	74	31	35		38	39	194	327	851	244	67	28
23	64	31	35		39	39	172	488	795	230	66	26
24	59	*41	35		37	36	172	667	891	196	64	26
25	54	43	30		40	36	219	842	987	184	60	31
26	53	43	30		*34	39	250	978	981	174	58	33
27	53	41	30		31	40	233	1,010	945	157	58	34
28	50	42	30		32	47	228	752	945	150	56	34
29	50	44	30		32	48	182	602	862	148	55	31
30	53	43	30	(*)	-	48	161	534	897	142	53	29
31	58	-	30		-	53	-	435	-	133	50	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,571	118	26	50.7	3,120
November	1,353	62	31	45.1	2,680
December	1,070	43	30	34.5	2,120
Calendar year 1947	66,893	1,130	25	183	132,700
January	775	-	-	25	1,540
February	935	40	-	32.2	1,850
March	1,125	53	31	36.3	2,230
April	3,855	250	34	128	7,650
May	14,926	1,010	144	481	29,610
June	25,129	987	435	838	49,840
July	11,067	897	133	357	21,950
August	2,487	129	50	80.2	4,930
September	993	48	26	33.1	1,970
Water year 1947-48	65,286	1,010	-	178	129,500

Peak discharge (base, 1,120 sec.-ft.).- May 26 (11 p.m.) 1,250 sec.-ft.; June 10 (11:30 p.m.) 1,140 sec.-ft.; June 25 (11 p.m.) 1,180 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for nearby stations.

Note.- Stage-discharge relation affected by ice Nov. 20-23, Dec. 7 to Feb. 18.

West Walker River near Hudson, Nev.

Location.- Water-stage recorder. lat. 38°49', long. 119°14', in SW¼ sec. 18, T. 11 N., R. 25 E., half a mile upstream from Wilson Canyon and 3 miles southeast of Hudson.

Records available.- May 1921 to March 1925, January 1947 to September 1948.

Extremes.- 1947: Maximum discharge during period January to September, 527 second-feet May 3 (gage height, 2.44 feet): minimum daily, 35 second-feet Mar. 23.
1947-48: Maximum discharge during water year, 419 second-feet May 18, June 27 (gage height, 2.22 feet); minimum, 17 second-feet Feb. 12.
1921-25, 1947-48: Maximum discharge, 2,530 second-feet June 7, 1922; minimum, 14 second-feet Sept. 27 to Oct. 3, 1924.

Remarks.- Records good except those for periods of ice effect, which are fair. Flow somewhat regulated by storage in Poor Lake (capacity unknown), and by off-channel storage in Topaz Reservoir (capacity, 59,440 acre-feet). Many diversions above and some below station for irrigation.

Discharge, in second-feet, 1947-48

1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				-	42	43	47	279	339	264	162	96
2				-	43	47	58	360	331	279	159	111
3				-	45	45	63	474	310	287	159	98
4				-	45	45	68	339	287	287	159	94
5				-	43	43	74	314	253	257	162	85
6				-	42	42	89	291	253	249	159	78
7				-	42	42	136	331	246	253	144	78
8				-	42	42	130	298	302	238	133	74
9				-	42	42	116	249	331	238	133	72
10				-	41	41	130	190	295	228	138	61
11				-	41	43	150	187	287	214	130	61
12				-	42	46	156	232	279	210	130	58
13				-	42	46	150	253	253	221	130	67
14				*43	41	46	147	302	249	200	124	67
15				42	41	47	138	314	279	200	127	67
16				b43	41	46	144	326	298	210	133	68
17				b42	43	46	168	364	302	238	116	63
18				b42	47	45	194	400	287	249	116	63
19				b42	*45	45	207	392	264	235	119	61
20				b43	45	42	228	392	238	210	122	51
21				b43	45	39	283	369	249	235	116	46
22				b43	45	39	287	369	235	246	127	45
23				b43	45	38	232	352	257	246	130	45
24				42	45	39	218	343	279	257	136	46
25				42	45	39	207	343	279	264	130	43
26				43	45	39	214	400	249	242	133	41
27				43	43	47	228	448	242	207	133	42
28				43	43	58	232	479	246	194	138	45
29				b43	-	56	249	378	246	210	144	51
30				45	-	56	246	326	257	197	147	49
31				42	-	54	-	326	-	168	133	-

Peak discharge (base, 500 sec.-ft.).- May 3 (8 p.m.) 527 sec.-ft.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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Discharge, in second-feet, of West Walker River near Hudson, Nev., 1947-48--Continued

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	38	36	b33	33	31	53	138	221	343	144	122
2	42	37	37	34	b33	32	49	133	264	335	150	104
3	42	36	36	35	b32	*32	51	122	331	283	144	111
4	47	36	36	35	b32	b32	50	130	310	257	141	130
5	50	36	37	34	b33	32	56	130	298	228	184	133
6	53	36	36	34	34	32	53	136	228	228	200	111
7	54	35	b35	34	b33	35	53	159	190	253	190	119
8	56	36	b34	33	b33	37	53	200	235	283	194	108
9	58	36	b34	33	33	37	51	197	287	298	190	111
10	54	36	34	33	33	36	60	190	310	295	204	138
11	51	*36	34	b33	b32	36	65	171	272	275	204	141
12	54	36	b33	b33	b32	37	68	162	210	291	181	138
13	46	b36	b33	b33	b31	37	67	168	221	264	165	138
14	42	36	33	b33	31	37	60	187	238	238	162	127
15	42	36	33	b33	32	38	61	210	253	228	153	124
16	42	36	b33	b34	32	42	63	291	228	224	144	108
17	41	36	33	b34	31	42	68	374	275	232	138	85
18	42	36	35	b34	30	38	68	374	287	238	150	85
19	45	36	38	b34	30	38	78	343	310	232	159	89
20	46	b35	36	b34	28	38	85	279	306	197	153	96
21	45	35	*36	b34	28	41	85	249	364	207	156	89
22	45	35	33	b34	30	42	98	238	374	210	147	85
23	46	b34	b32	35	31	41	111	218	314	204	144	67
24	46	b34	b32	b35	31	38	111	238	275	200	124	65
25	43	34	b32	b35	30	37	108	306	331	181	108	68
26	42	35	b32	b35	30	36	114	364	369	184	89	72
27	41	35	b32	b35	30	37	114	352	356	177	72	80
28	43	35	32	b35	31	43	119	260	335	168	78	83
29	43	36	33	*b35	31	42	136	181	335	150	91	76
30	42	36	b33	b35	-	49	147	162	318	159	89	61
31	41	-	b33	b35	-	53	-	194	-	147	101	-

Peak discharge (base, 500 sec.-ft.).- No peak above base.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Monthly discharge, in second-feet, 1947-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January 14-31, 1947	769	45	42	42.7	1,530
February	1,211	47	41	43.2	2,400
March	1,388	58	38	44.8	2,750
April	4,989	287	47	166	9,900
May	10,420	479	187	336	20,670
June	8,222	339	235	274	16,310
July	7,233	287	168	233	14,350
August	4,222	162	116	136	8,370
September	1,926	111	41	64.2	3,820
The period	-	-	-	-	80,100
October 1947	1,426	58	41	46.0	2,830
November	1,070	38	34	35.7	2,120
December	1,056	38	32	34.1	2,090
Calendar year	-	-	-	-	-
January 1948	1,056	35	33	34.1	2,090
February	910	34	28	31.4	1,800
March	1,178	53	31	38.0	2,340
April	2,355	147	49	78.5	4,670
May	6,856	374	122	221	13,600
June	8,645	374	190	288	17,150
July	7,209	343	147	233	14,300
August	4,549	204	72	147	9,020
September	3,064	141	51	102	6,080
Water year 1947-48	39,374	374	28	108	78,090

East Fork West Walker River near Bridgeport, Calif.

Location.- Water-stage recorder, lat. 38°21'30", long. 119°26'30", in NW¼NW¼ sec. 22, T. 6 N., R. 23 E., three-quarters of a mile north of Sonora Junction, 1½ miles upstream from mouth, and 14 miles northwest of Bridgeport.

Drainage area.- 63 square miles.

Records available.- October 1944 to September 1948. April to August 1910 at site 1 mile upstream.

Extremes.- Maximum discharge during year 218 second-feet June 25 (gage height, 1.79 feet); minimum daily, 8.4 second-feet Nov. 3.
1910, 1944-48: Maximum discharge recorded, 660 second-feet Feb. 2, 1945 (gage height, 2.69 feet), from rating curve extended above 270 second-feet on basis of velocity-area study; minimum daily, that of Nov. 3, 1947.

Remarks.- Records good except those for periods of ice effect or doubtful gage-height record, which are fair. Small diversions above station.

Cooperation.- Results of five discharge measurements furnished by Sierra Pacific Power Co.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	11	11			14	20	19	d52	146	29	14
2	14	11	12			14	22	19	d74	127	27	14
3	13	11				14	19	20	104	111	24	14
4	13	11				14	17	27	104	100	24	13
5	13	11				14	20	37	88	84	24	13
6	13	11				14	19	45	82	76	24	13
7	14	11				15	24	45	88	76	24	13
8	15	11			11	16	23	34	107	74	23	12
9	15	11				16	19	29	124	74	22	12
10	17	11				14	19	30	121	74	22	12
11	15	11				18	19	23	124	74	20	12
12	14	11				15	20	36	127	68	19	11
13	14	11				12	20	43	127	65	20	11
14	14	11				14	26	46	130	62	20	11
15	13	12			11	15	36	53	127	62	20	11
16	14	12		12	11	13	49	70	124	60	19	12
17	14	14	12		13	17	62	80	124	53	19	12
18	13	17			12	17	42	78	121	52	19	13
19	12	14			13	14	39	55	119	50	18	13
20	13	12	(*)		15	18	45	52	138	48	18	13
21	13	10			13	19	38	46	149	45	17	12
22	11	10			13	16	30	48	135	46	15	13
23	10	14			14	15	27	60	138	45	16	12
24	11	*19			14	14	28	d66	152	39	17	13
25	10	17			14	23	33	d70	165	38	16	14
26	10	16			*14	22	37	d75	165	35	16	15
27	10	15			14	20	30	d84	162	34	15	14
28	10	14			14	19	23	d70	158	34	15	14
29	11	13			14	18	19	d64	149	34	15	12
30	10	13		(*)	-	18	19	d58	152	33	14	12
31	11	-			-	19	-	d51	-	29	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	393	17	10	12.7	778
November	376	19	10	12.5	746
December	371	-	-	12	736
Calendar year 1947	13,365	181	-	36.6	26,510
January	372	-	-	12	738
February	353	15	-	12.2	700
March	501	23	12	16.2	994
April	844	62	17	28.1	1,670
May	1,533	84	19	49.5	3,040
June	3,730	165	52	124	7,400
July	1,948	146	29	62.8	3,860
August	605	29	14	19.5	1,200
September	380	15	11	12.7	754
Water year 1947-48	11,406	165	-	31.2	22,620

Peak discharge (base, 150 sec.-ft.).- June 11 (11 p.m.) 165 sec.-ft.; June 25 (8 p.m.) 218 sec.-ft.; June 30 (7:30 p.m.) 185 sec.-ft.

* Winter discharge measurement made on this day.

d Doubtful gage-height record; discharge computed on basis of 2 discharge measurements and records for nearby stations.

Note.- Stage-discharge relation affected by ice Nov. 5-14, 20-27, Dec. 3 to Feb. 14, Feb. 23 to Mar. 6.

Topaz Reservoir near Topaz, Calif.

Location.- Float and staff gages at outlet works of Topaz Reservoir, lat. 38°41', long. 119°31', in sec. 28, T. 10 N., R. 22 E., 6 miles north of Topaz. Datum of gage is at mean sea level (levels by Walker River Irrigation District).

Records available.- October 1931 to September 1948.

Extremes.- Maximum contents observed during year, 45,850 acre-feet July 5, 6 (elevation, 4,998.82 feet); minimum, 8,830 acre-feet Sept. 30 (elevation, 4,977.95 feet).
1931-48: Maximum contents observed, 60,240 acre-feet June 30, 1941 (elevation, 5,005.35 feet); minimum observed, 505 acre-feet Oct. 22-25, 1931 (elevation, 4,972.63 feet).

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-feet between elevation 4,972.3 feet (lowest practical elevation for diversion through tunnel, bottom of outlet tunnel at elevation 4,970 feet) and 5,005 feet (3 feet below top of levee). Capacity of reservoir increased from about 45,000 acre-feet to 59,440 acre-feet in October 1937 by an earth-fill, rock-faced levee at south end. Water is used for irrigation in Walker River Irrigation District.

Cooperation.- Elevations furnished by Walker River Irrigation District.

Contents, in acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,680	-	-	16,880	-	23,890	24,780	22,180	25,590	43,700	34,360	17,950
2	9,650	-	-	17,130	20,590	-	-	21,960	25,720	44,660	33,910	17,580
3	9,580	10,110	-	-	-	-	-	21,780	26,050	45,280	33,340	17,150
4	9,570	-	-	-	-	-	-	21,510	26,660	45,590	32,730	16,590
5	9,520	-	13,840	-	-	24,250	-	21,270	27,490	45,850	32,080	16,160
6	-	-	-	-	21,080	-	24,680	21,050	-	45,850	31,370	15,790
7	9,390	10,440	-	-	-	-	24,660	-	28,830	45,640	30,870	15,300
8	9,380	10,470	-	-	-	-	24,660	21,000	29,370	45,300	30,160	14,900
9	9,360	-	-	17,980	-	-	-	-	30,200	44,950	29,510	14,580
10	9,360	-	14,580	-	-	24,400	-	20,750	31,120	44,660	28,830	14,150
11	9,330	-	-	-	-	-	-	20,530	32,160	44,340	28,180	13,760
12	9,300	-	14,810	-	-	24,470	24,590	20,330	32,780	44,030	27,510	13,350
13	9,340	11,210	-	18,550	21,830	-	24,500	20,290	34,010	43,720	26,990	13,010
14	9,460	-	-	-	-	-	-	20,220	34,820	43,250	26,410	12,650
15	9,460	11,370	-	-	-	24,490	-	20,190	35,600	42,940	25,950	12,130
16	-	-	-	18,850	-	-	24,230	20,160	36,230	42,630	25,400	11,810
17	9,460	-	-	-	-	24,520	-	20,280	36,730	42,310	24,860	11,520
18	-	-	-	-	-	-	24,090	20,530	37,070	41,980	23,850	11,160
19	-	-	15,480	-	-	24,570	23,990	20,730	37,400	41,570	23,310	10,930
20	9,520	-	-	-	22,760	-	23,890	20,730	37,630	41,070	22,810	10,680
21	-	-	-	-	-	-	-	20,710	37,960	40,590	22,370	10,400
22	9,570	12,200	-	-	-	24,570	23,620	20,590	38,470	40,080	21,850	10,080
23	-	-	-	19,590	-	-	23,440	20,580	38,980	39,390	-	9,980
24	9,710	-	-	-	-	24,590	23,320	20,630	39,450	38,800	20,880	-
25	-	-	-	-	-	-	23,200	20,880	39,890	38,170	20,490	9,550
26	-	-	16,270	-	-	24,740	-	21,340	40,550	37,550	20,160	9,390
27	9,790	-	-	-	23,530	-	-	22,180	41,290	36,980	19,800	9,230
28	-	-	-	-	-	-	22,810	23,020	41,920	36,390	19,470	9,090
29	-	-	-	-	23,790	-	-	23,960	42,670	35,840	19,220	8,940
30	-	13,270	-	20,310	-	-	22,440	24,640	43,350	35,170	18,920	8,830
31	9,920	-	16,800	20,430	-	24,810	-	25,090	-	34,780	18,470	-

Monthly elevation and contents, water year October 1947 to September 1948

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	4,978.54	9,780	-
Oct. 31	4,978.63	9,920	+140
Nov. 30	4,980.70	13,270	+3,350
Dec. 31	4,982.85	16,800	+3,530
Calendar year 1947	-	-	-18,760
Jan. 31	4,985.02	20,430	+3,630
Feb. 29	4,987.00	23,790	+3,360
Mar. 31	4,987.60	24,810	+1,020
Apr. 30	4,986.21	22,440	-2,370
May 31	4,987.76	25,090	+2,650
June 30	4,997.62	43,350	+18,260
July 31	4,993.25	34,780	-8,570
Aug. 31	4,983.85	18,470	-16,310
Sept. 30	4,977.95	8,830	-9,640
Water year 1947-48	-	-	-950

CARSON RIVER BASIN

East Fork Carson River above Soda Springs ranger station, near Markleeville, Calif.

Location.- Water-stage recorder, 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.

Records available.- September 1946 to September 1948.

Extremes.- 1946-47: Maximum discharge during period September 1946 to September 1947, 447 second-feet May 2 (gage height, 3.80 feet); minimum, 4.7 second-feet Sept. 26, 1947.
1947-48: Maximum discharge during water year, 528 second-feet May 26 (gage height, 4.06 feet); minimum, 5.1 second-feet Oct. 1, 3.

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

Rating table, Sept. 15, 1946, to Sept. 30, 1948, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Sept. 15 to Oct. 1, 1946, Aug. 27 to Nov. 5, 1947, Sept. 16-30, 1948)

0.7	4.1	1.5	27	2.4	129
1.0	7.8	1.7	42	2.8	199
1.2	12	1.9	63	3.2	285
1.4	22	2.1	87	3.5	361

Discharge, in second-feet, 1946-48

1946

Day	Discharge	Day	Discharge	Day	Discharge	Day	Discharge
Sept. 15	7.4	Sept. 19	8.3	Sept. 23	8.0	Sept. 27	7.5
16	8.2	20	8.2	24	7.8	28	7.5
17	8.7	21	7.8	25	7.7	29	7.4
18	8.5	22	8.0	26	7.5	30	8.0

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	11	20			20	*39	226	139	50	12	6.4
2	19	7.5	19			20	36	309	137	47	11	6.0
3	16	8.5	19		10	19	36	327	129	44	11	5.8
4	15	9.6	19			18	32	311	118	42	11	5.8
5	14	9.6	23			16	32	329	113	40	10	5.7
6	12	10	20			16	31	335	108	38	10	5.5
7	12	10	18			16	29	290	217	37	10	5.8
8	14	9.6	18		11	16	29	230	166	34	9.2	6.3
9	13	9.5	17			16	28	176	143	32	9.4	6.3
10	13	10	17			17	30	154	143	30	9.4	6.1
11	12	10	17			16	38	134	131	29	9.4	6.0
12	12	10	16			16	44	128	117	28	9.2	6.0
13	12	10	16		22	18	63	131	129	26	9.2	5.8
14	*11	11	17			22	88	145	135	25	11	5.7
15	11	11	17			26	108	171	142	24	9.4	5.7
16	13	11	16	10		32	129	201	128	23	9.1	5.5
17	12	11	15			38	147	219	122	22	8.9	6.1
18	12	12	14		15	42	140	228	123	21	9.1	7.0
19	12	11	14			44	150	251	134	20	9.1	6.9
20	12	6.3	15			48	157	260	120	19	8.5	6.8
21	12	11	15			49	137	274	95	18	8.5	6.8
22	15	18	15			54	110	285	83	18	8.9	7.4
23	16	47	14		20	51	96	274	82	17	8.9	8.7
24	15	30	15			43	95	276	81	16	8.5	9.8
25	14	25	15			42	88	262	75	16	8.2	5.5
26	13	26	15			44	87	223	69	15	8.2	5.2
27	12	24	14		21	47	88	176	65	14	11	5.2
28	12	22	13			44	91	145	62	14	7.0	5.1
29	11	21	12			42	113	162	56	13	7.0	5.2
30	9.6	20	12		-	42	154	173	52	12	6.9	5.3
31	11	-	11		-	39	-	142	-	12	6.5	-

Peak discharge (base, 300 sec.-ft.).- May 2 (7:30 p.m.) 447 sec.-ft.; May 22 (9 p.m.) 386 sec.-ft.; June 7 (10:30 a.m.) 322 sec.-ft.

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 9, Dec. 18-20, Dec. 29 to Jar. 25. No gage-height record Jan. 26 to Mar. 20; stage discharge relation affected by ice during most of period; discharge computed on basis of weather records and records for nearby streams.

Discharge, in second-feet, of East Fork Carson River above Soda Springs ranger station near Markleysville, Calif., 1946-48--Continued

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.3	16	11	8.7			20	52	162	253	25	9.4
2	5.3	15	10	9.9			22	54	220	213	23	9.2
3	5.4	14	9.6	10			21	66	264	184	22	9.4
4	5.4	15	11	12			21	91	235	157	21	9.1
5	5.5	*12	9.9	12			20	136	180	128	20	9.1
6	5.7	12	8.9				19	194	201	117	19	9.1
7	6.1	b12	8.9				18	172	230	113	19	9.1
8	8.2	12	b9				17	114	285	110	18	8.9
9	8.7	11	b8.5				18	101	322	108	18	8.9
10	20	10	8.9				18	104	297	110	19	8.7
11	13	11	8.9			11	17	117	285	107	16	8.5
12	9.2	10	9.4				18	140	285	97	15	8.3
13	9.2	11	9.4				19	184	285	88	15	8.2
14	9.6	11	9.4				22	205	285	87	14	8.0
15	9.9	11	9.2				28	248	264	82	14	8.0
16	56	11	9.2		10		45	288	260	77	14	8.0
17	32	11	9.2				85	283	253	70	13	7.8
18	19	11	9.2				70	220	251	63	12	8.0
19	16	9.9	9.1	15			60	147	240	61	12	8.5
20	16	8.9	9.1				70	122	274	55	12	8.3
21	16	9.6	8.7			12	72	107	285	52	12	8.2
22	13	b9.5	8.7			13	62	128	249	48	12	8.3
23	12	b9.0	8.9			13	54	190	242	44	12	8.3
24	12	10	8.7			13	58	260	260	40	13	8.5
25	12	11	8.7			12	77	313	297	38	11	9.4
26	12	11	8.7			14	82	348	292	35	11	9.9
27	11	11	8.9			16	76	329	290	32	11	10
28	11	11	8.9			*18	77	247	280	31	11	10
29	12	12	8.5			18	64	203	287	30	10	9.9
30	14	12	8.3		-	17	55	180	271	28	9.9	9.1
31	14	-	b8		-	19	-	148	-	26	9.6	-

Peak discharge (base 300 sec.-ft.).- May 17 (8:30 p.m.) 389 sec.-ft.; May 26 (8:30 p.m.) 528 sec.-ft.; June 3 (8:30 p.m.) 345 sec.-ft.; June 9 (7:30 p.m.) 429 sec.-ft.; June 29 (7 p.m.) 435 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice Nov. 7, 22, 23, Dec. 8, 9, 31.

Note.- No gage-height record Jan. 6 to Mar. 27 (stage-discharge relation affected by ice during most of period) Apr. 1-20; discharge computed on basis of weather records and records for nearby streams.

Monthly discharge, in second-feet, 1946-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
September 1946	126.5	8.7	7.4	7.91	251
Water year	-	-	-	-	-
October 1946	444.6	57	9.6	14.3	882
November	442.6	47	6.3	14.8	878
December	498	23	11	16.1	988
Calendar year	-	-	-	-	-
January 1947	310	-	-	10	615
February	453	-	-	16.2	899
March	973	54	16	31.4	1,930
April	2,455	157	28	81.8	4,870
May	6,957	335	128	224	13,800
June	3,414	217	52	114	6,770
July	796	50	12	25.7	1,580
August	285.5	12	6.5	9.21	566
September	185.4	9.8	5.1	6.18	368
Water year 1946-47	17,214.1	335	-	47.2	34,150
October 1947	404.5	56	5.3	13.0	802
November	340.9	16	8.9	11.4	676
December	282.8	11	8	9.12	561
Calendar year 1947	16,857.1	335	-	46.2	33,440
January 1948	442.6	-	-	14.3	878
February	290	-	-	10	575
March	385	-	-	12.4	764
April	1,305	82	17	43.5	2,590
May	5,491	348	52	177	10,890
June	7,831	322	162	261	15,530
July	2,684	253	26	86.6	5,320
August	463.5	25	9.6	15.0	919
September	264.1	10	7.8	8.80	524
Water year 1947-48	20,184.4	348	-	55.1	40,030

East Fork Carson River near Gardnerville, Nev.

Location.- Water-stage recorder, lat. 38°51'30", long. 119°41'50", in NE¼ sec. 2, T. 11 N., R. 20 E., 2 miles east of Mud Lake Reservoir, 3 miles downstream from Leviathan Creek, and 7 miles southeast of Gardnerville.

Drainage area.- 344 square miles.

Records available.- May 1939 to September 1948. April 1890 to December 1893, October 1900 to December 1906, June to October 1917, December 1924 to September 1929, and October 1935 to December 1937 at site 2 miles downstream; March 1908 to December 1910 at site 2 miles upstream.

Average discharge.- 21 years (1890-93, 1901-3, 1908-10, 1925-28, 1935-37, 1939-48), 408 second-feet.

Extremes.- Maximum discharge during year, 2,120 second-feet May 27 (gage height, 4.25 feet); minimum, 35 second-feet Dec. 31.

1890-93, 1900-1906, 1908-10, 1917, 1924-29, 1935-37, 1939-48: Maximum discharge, 12,000 second-feet Dec. 11, 1937 (gage destroyed by flood) computed on basis of slope-area determinations of flow of tributaries, 14 miles upstream; minimum observed, 8 second-feet Dec. 4-10, 19-23, 1904.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Station is above all diversions in Carson Valley. Diversions above station for irrigation. Flow slightly regulated by several small reservoirs (total capacity, about 5,000 acre-feet).

Rating table, water year 1947-48, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Aug. 13 to Sept. 30)

0.7	39	1.4	178	3.0	950
.8	51	1.7	274	3.4	1,260
.9	66	2.0	390	3.8	1,620
1.0	83	2.3	529		
1.2	125	2.7	752		

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	85	85	65	78	81	145	341	808	746	121	71
2	41	91	80	101	76	89	184	333	1,080	635	125	58
3	41	87	66	105	74	76	161	370	1,310	581	121	56
4	41	87	65	95	74	71	140	490	a1,250	514	114	56
5	40	85	62	99	72	78	125	648	a1,000	448	107	52
6	40	69	60	83	70	81	125	983	a1,150	399	110	58
7	41	73	58	146	68	78	121	1,120	a1,100	378	107	58
8	57	81	54	382	72	80	128	675	a1,150	370	101	60
9	56	89	56	208	76	78	158	565	a1,250	349	101	62
10	76	69	58	156	70	80	167	545	a1,200	349	95	60
11	97	76	60	116	60	73	150	619	1,150	345	93	62
12	76	83	60	95	66	81	142	704	1,160	318	97	57
13	68	64	62	90	70	80	161	875	1,080	299	93	54
14	69	83	68	88	74	78	240	1,020	1,100	285	81	51
15	68	83	71	84	81	73	357	1,120	988	267	89	47
16	113	81	64	82	81	81	407	1,390	922	247	95	44
17	257	76	76	80	87	74	765	1,460	887	237	95	40
18	132	74	68	80	97	74	658	1,260	880	214	91	39
19	101	76	68	76	91	83	539	796	841	208	78	47
20	89	60	68	78	83	73	550	669	867	199	71	58
21	95	*55	64	84	85	76	608	565	894	184	64	58
22	89	60	63	84	99	93	509	576	834	164	58	58
23	81	70	62	80	95	91	403	812	777	156	57	60
24	76	75	64	76	*81	105	365	1,110	809	150	58	60
25	73	80	64	72	78	81	464	1,330	880	142	83	69
26	73	75	64	62	91	81	597	1,570	894	138	81	80
27	71	76	66	52	91	101	524	1,570	867	125	76	76
28	68	78	68	*70	87	118	576	1,140	828	121	74	76
29	73	81	63	74	76	121	462	965	790	135	73	73
30	85	87	*58	78	-	114	386	936	790	138	71	68
31	80	-	47	82	-	123	-	777	-	125	74	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,408	257	40	77.7	4,780
November	2,309	91	55	77.0	4,580
December	1,992	85	47	64.3	3,950
Calendar year 1947	85,486	1,610	34	234	169,600
January	3,123	382	52	101	6,190
February	2,303	99	60	79.4	4,570
March	2,666	123	71	86.0	5,290
April	10,317	765	121	344	20,460
May	27,334	1,570	333	882	54,220
June	29,636	1,310	777	988	58,780
July	8,986	746	121	289	17,780
August	2,754	125	57	88.8	5,460
September	1,768	80	39	58.9	3,510
Water year 1947-48	95,576	1,570	39	261	189,600

Peak discharge (base, 1,300 sec.-ft.).- May 7 (3 a.m.) 1,480 sec.-ft.; May 17 (1:30 a.m.) 1,810 sec.-ft.; May 27 (1 a.m.) 2,120 sec.-ft.; June 3 or 4 (time unknown) about 1,500 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for West Fork Carson River at Woodfords, Calif., and Carson River near Carson City, Nev.

Note.- Stage-discharge relation affected by ice Nov. 21-26, Dec. 4-14, Jan. 1, 12-26, Jan. 28 to Feb. 14.

Carson River near Carson City, Nev.

Location.- Water-stage recorder, lat. 39°06'30", long. 119°42'30", in NW¼ sec. 2, T. 14 N., R. 20 E., 2 miles downstream from Clear Creek, 2½ miles upstream from bridge on road to Mexican Dam, and 5 miles southeast of Carson City.

Drainage area.- 876 square miles.

Records available.- May 1939 to September 1948.

Extremes.- Maximum discharge during year, 1,870 second-feet May 27 (gage height, 4.01 feet); minimum, 8.8 second-feet Sept. 5.
1939-48: Maximum discharge, 8,500 second-feet Jan. 22, 1943 (gage height, 8.40 feet), by slope-area method; minimum, 4 second-feet (estimated) Aug. 17, 1939.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Flow slightly regulated by several small reservoirs on tributaries.

Rating table, water year 1947-48, except periods of ice effect
(gage height in feet, and discharge, in second-feet)
(Shifting-control method used Apr. 9 to May 6, June 4-12, Aug. 8 to Sept. 30)

-0.2	8.0	0.5	40	1.8	321
-.1	11	.7	57	2.2	488
0.0	14	.9	80	2.6	709
.1	18	1.1	112	3.0	995
.2	22	1.3	158	3.5	1,390
.3	27	1.5	217	3.9	1,760

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	69	129	95	131	90	a105	250	980	735	22	11
2	25	73	129	133	127	94	a110	202	1,000	596	20	10
3	24	76	112	178	120	94	a115	198	1,250	508	17	10
4	27	74	104	169	120	88	a105	237	1,370	429	14	10
5	29	69	102	164	114	80	a90	314	1,290	371	16	9.4
6	30	79	102	164	112	78	a80	528	1,110	303	17	11
7	31	88	95	138	109	76	a75	958	1,170	230	17	12
8	35	98	92	260	107	75	a70	1,000	1,080	202	18	13
9	41	120	84	391	112	74	a73	641	1,180	183	19	12
10	43	133	88	282	116	70	a90	503	1,310	148	18	14
11	42	122	90	224	110	62	a110	442	1,250	120	19	15
12	48	112	92	170	105	64	a100	479	1,130	107	19	15
13	52	112	90	155	115	64	a90	579	1,170	100	20	13
14	48	*109	95	150	125	61	95	768	1,130	97	16	14
15	46	122	100	140	138	62	100	950	942	83	14	17
16	46	127	94	135	148	52	164	1,130	803	76	15	15
17	61	122	100	135	140	52	284	1,440	729	76	13	17
18	133	116	102	135	129	55	479	1,580	678	65	10	12
19	88	107	*98	130	129	52	420	1,350	630	50	11	10
20	68	105	100	135	114	56	391	950	596	46	10	12
21	52	102	100	140	100	57	383	831	601	46	12	18
22	51	90	97	148	98	52	391	742	636	42	13	19
23	52	102	95	150	102	51	336	697	636	42	15	17
24	56	104	95	148	107	74	278	988	618	40	16	16
25	58	112	100	133	100	110	211	1,300	653	35	14	18
26	57	127	100	130	98	114	310	1,520	722	31	12	19
27	62	129	100	120	*92	127	399	1,740	735	26	17	19
28	69	127	100	a115	89	125	363	1,670	697	22	21	20
29	61	125	100	a115	82	118	375	1,290	607	24	19	23
30	64	122	100	a120	-	a110	325	1,060	690	21	16	26
31	65	-	95	*129	-	a100	-	1,140	-	19	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,587	133	23	51.2	3,150
November	3,173	133	69	106	6,290
December	3,080	129	84	99.4	6,110
Calendar year 1947	78,043.7	1,620	8.6	214	154,800
January	4,931	391	95	159	9,780
February	3,289	148	82	113	6,520
March	2,437	127	51	78.6	4,830
April	6,517	479	70	217	12,930
May	27,477	1,740	198	886	54,500
June	27,393	1,370	596	913	54,330
July	4,873	735	19	157	9,670
August	493	22	10	15.9	978
September	447.4	26	9.4	14.9	887
Water year 1947-48	85,697.4	1,740	9.4	234	170,000

Peak discharge (base, 1,600 sec.-ft.).- May 18 (7 to 8 p.m.) 1,640 sec.-ft.; May 27 (10 p.m.) 1,870 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of 1 discharge measurement, recorded range in stage and records for East Fork Carson River near Gardnerville, Nev., and West Fork Carson River at Woodfords, Calif.

Note.- Stage-discharge relation affected by ice Nov. 22-24, Dec. 7-13, Dec. 24 to Jan. 1, Jan. 12-20, 26, 27, Feb. 3, 4, 11-14.

Carson River near Fort Churchill, Nev.

Location.- Water-stage recorder, lat. 39°17', long. 119°18', in SE¼ sec. 32, T. 17 N., R. 24 E., 2 miles west of Fort Churchill and 6 miles east of Clifton.

Drainage area.- 1,450 square miles.

Records available.- January 1934 to September 1948. April 1911 to December 1933 at site 8 miles upstream.

Average discharge.- 37 years (1911-48), 359 second-feet.

Extremes.- Maximum daily discharge during year, 1,520 second-feet May 28; no flow Oct. 1 to Nov. 8, July 16 to Sept. 30.
1911-48: Maximum discharge, 6,300 second-feet Jan. 24, 1943; no flow during some periods in nearly every year since 1923.

Remarks.- Several diversions above station for irrigation, including diversions for irrigation of 720 acres between present site and site used prior to Jan. 1, 1934. Practically entire flow is diverted during late irrigation season.

Cooperation.- Records of daily discharge furnished by Truckee-Carson Irrigation District.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	144	176	176	114	74	286	952	655		
2		0	144	163	176	114	69	210	823	634		
3		0	144	134	152	116	59	163	901	523		
4		0	144	171	165	118	56	149	1,120	444		
5		0	142	173	154	112	59	163	1,260	388		
6		0	142	171	149	104	59	210	1,100	344		
7		0	133	171	139	104	57	366	1,020	277		
8		0	131	173	136	100	59	885	1,100	210		
9		18	140	255	128	99	60	730	970	183		
10		30	131	362	132	97	62	510	1,100	154		
11		63	129	290	139	95	70	397	1,200	139		
12		97	129	237	120	87	87	366	1,100	112		
13		99	150	190	149	81	78	388	1,080	99		
14		99	133	176	136	80	74	473	1,080	70		
15		100	137	171	141	76	85	634	997	12		
16		104	131	163	165	76	80	770	1,080	0		
17		116	129	176	171	76	99	970	730	0		
18		135	129	203	168	78	143	1,180	634	0		
19		137	129	255	154	60	411	1,310	620	0		
20		140	127	237	132	50	353	1,120	542	0		
21		140	129	203	136	47	353	861	523	0		
22		137	123	176	126	49	344	754	542	0		
23		137	123	163	120	46	344	655	555	0		
24		140	129	154	122	45	286	690	555	0		
25		150	133	154	124	46	232	952	542	0		
26		150	135	145	126	67	186	1,150	575	0		
27		150	140	118	122	76	255	1,400	620	0		
28		146	135	193	122	85	308	1,520	620	0		
29		144	140	149	122	89	304	1,400	607	0		
30		144	140	160	-	89	322	1,060	607	0		
31		-	140	160	-	89	-	997	-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	2,576	150	0	85.9	5,110
December	4,185	150	123	135	8,300
Calendar year 1947	71,279	1,450	0	195	141,400
January	5,822	362	118	188	11,550
February	4,102	176	120	141	8,140
March	2,565	118	45	82.7	5,090
April	5,028	411	56	168	9,970
May	22,719	1,520	149	733	45,060
June	25,155	1,260	523	838	49,890
July	4,244	655	0	137	8,420
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1947-48	76,396	1,520	0	209	151,500

Silver King Creek near Coleville, Calif.

Location.- Water-stage recorder, lat. 38°31', long. 119°36', in sec. 30, T. 8 N., R. 22 E., 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 square miles.

Records available.- September 1946 to September 1948.

Extremes.- 1946-47: Maximum discharge during period September 1946 to September 1947, 172 second-feet May 2 (gage height, 2.39 feet); minimum recorded, 5.0 second-feet Nov. 3, but may have been less during period of ice effect.
1947-48: Maximum discharge during water year, 160 second-feet May 5 (gage height, 2.33 feet); minimum recorded, 4.0 second-feet Nov. 3, but may have been less during period of ice effect.

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

Rating table, Sept. 14, 1946, to Sept. 30, 1948, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Apr. 4-29, 1947,
Sept. 17 to Nov. 4, 1947, Apr. 21 to May 10, 1948)

1.1	8.5	1.6	46
1.3	20	1.8	72
1.4	26	2.0	103
1.5	35	2.3	156

Discharge, in second-feet, 1946-48

1946

Day	Discharge	Day	Discharge	Day	Discharge
Sept. 14	12	Sept. 20	13	Sept. 26	12
15	12	21	12	27	12
16	14	22	12	28	12
17	14	23	12	29	13
18	14	24	12	30	14
19	14	25	12		

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36						*36	112	76	34	14	11
2	18						36	133	74	33	14	10
3	18						35	143	71	32	14	10
4	18						32	142	68	31	14	10
5	18						31	147	65	30	14	9.5
6	17						30	149	64	28	13	9.5
7	17						29	138	86	27	12	9.5
8	17					16	30	125	75	26	12	10
9	16						28	108	71	25	12	9.5
10	16						30	105	69	24	12	9.5
11	15						34	95	66	24	12	9.5
12	15						40	87	65	24	12	9.5
13	15						53	84	64	23	14	9.5
14	15						65	84	65	22	14	9.5
15	*15	17	16	10	15		76	87	68	22	14	9.5
16	17					20	87	92	66	21	12	9.0
17	16					25	93	98	64	21	12	10
18	17					30	90	103	64	21	13	10
19	19					32	98	110	66	20	12	10
20	17					34	100	113	62	18	12	10
21	17					36	86	120	57	18	12	9.5
22	18					38	76	124	52	18	12	10
23	18					42	72	124	49	18	12	10
24	16					40	68	122	48	17	12	9.0
25	16					32	65	120	47	17	12	8.5
26	15					34	66	110	44	16	12	8.5
27	15					36	62	100	42	16	12	8.5
28	15					36	66	89	40	16	12	8.5
29	14				-	37	78	87	39	15	12	8.5
30	12				-	38	90	89	36	15	12	9.0
31	14	-			-	36	-	80	-	15	12	-

Peak discharge (base, 100 sec.-ft).-Apr. 19 (6:30 p.m.) 140 sec.-ft.; May 2 (7 p.m.) 172 sec.-ft.; May 5 (7 p.m.) 170 sec.-ft.; May 22 (8 p.m.) 138 sec.-ft.
* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Oct. 28 to Jan. 10. No gage-height record Jan. 11 to Mar. 23 (stage-discharge relation affected by ice during most of period); discharge computed on basis of weather records and records for nearby streams.

Discharge, in second-feet, of Silver King Creek near Coleville, Calif., 1946-48--Continued

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.5	14					15	40	84	98	22	10
2	8.5	15					16	38	92	90	22	10
3	8.5	13					15	53	103	82	22	10
4	8.5	14					15	72	100	74	20	10
5	8.5	13					14	95	95	65	20	10
6	9.0	*12					13	105	92	59	19	9.5
7	9.5						13	87	90	57	19	10
8	14						12	68	100	54	19	10
9	13						13	66	110	54	18	9.5
10	18						13	72	108	54	17	9.5
11	14						12	76	105	53	16	9.5
12	12						13	84	108	50	16	9.0
13	12						14	92	105	48	15	9.0
14	12						16	95	103	46	15	9.0
15	12						20	105	98	42	15	8.5
			9	13	9	12						
16	22						30	108	97	41	14	8.5
17	18						60	110	93	39	14	9.0
18	15						50	98	92	36	14	9.5
19	14	10					45	80	90	35	14	10
20	14						50	75	98	33	14	9.5
21	14						*52	66	103	32	13	9.5
22	13						41	69	97	32	13	9.5
23	13						35	82	93	30	13	9.5
24	13						40	93	98	28	14	10
25	13						59	108	106	28	13	12
26	12						64	122	110	26	12	12
27	12						62	120	108	26	12	12
28	13						57	106	103	24	12	12
29	15						44	95	98	24	12	11
30	14				-		36	95	98	24	11	10
31	14	-			-		-	86	-	22	10	-

Peak discharge (base, 100 sec.-ft.).- May 5 (6:30 p.m.) 160 sec.-ft.; May 15 (7 p.m.) 151 sec.-ft.; May 26 (7 to 8 p.m.) 149 sec.-ft.

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 5 to Feb. 6. No gage-height record Feb. 7 to Apr. 20 (stage-discharge relation affected by ice during most of period); discharge computed on basis of weather records and records for nearby streams.

Monthly discharge, in second-feet, 1946-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
September 14-30, 1946	216	14	12	12.7	428
Water year	-	-	-	-	-
October 1946	522	36	12	16.8	1,040
November	510	-	-	17	1,010
December	496	-	-	16	984
Calendar year	-	-	-	-	-
January 1947	310	-	-	10	615
February	420	-	-	15	833
March	786	42	-	25.4	1,560
April	1,782	100	28	59.4	3,530
May	3,420	149	80	110	6,780
June	1,823	86	36	60.8	3,620
July	687	34	15	22.2	1,360
August	390	14	12	12.6	774
September	285.0	11	8.5	9.50	565
Water year 1946-47	11,431.0	149	-	31.3	22,670
October 1947	397.0	22	8.5	12.8	787
November	321	-	-	10.7	637
December	279	-	-	9	553
Calendar year 1947	10,900	149	-	29.9	21,610
January 1948	403	-	-	13	799
February	261	-	-	9	518
March	372	-	-	12	738
April	939	64	12	31.3	1,860
May	2,661	122	38	85.8	5,280
June	2,977	110	84	99.2	5,900
July	1,367	98	20	44.1	2,710
August	463	20	10	14.9	918
September	297.5	12	8.5	9.92	590
Water year 1947-48	10,737.5	122	-	29.3	21,290

Wolf Creek near Markleeville, Calif.

Location.- Water-stage recorder, lat. 38°32', long. 119°43', in sec. 24, T. 8 N., R. 20 E., three-quarters of a mile downstream from Bull Canyon Creek and 12 miles southwest of Markleeville.

Records available.- September 1946 to September 1948.

Extremes.- 1946-47: Maximum discharge during period September 1946 to September 1947, 218 second-feet May 3 (gage height, 3.90 feet); minimum, 2.6 second-feet Nov. 2.
1947-48: Maximum discharge during water year, 224 second-feet May 26 (gage height, 3.89 feet); minimum, 3.9 second-feet Oct. 4.

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

Rating table, Sept. 23, 1946, to Sept. 30, 1948, except periods of ice effect (gage height, in feet, and discharge, in second-feet) (Shifting-control method used Apr. 11-20, 1947, Mar. 28 to Sept. 30, 1948)

1.2	2.6	1.6	12	2.4	48
1.3	4.5	1.8	19	2.7	72
1.4	6.8	2.0	28	3.0	105
1.5	9.5	2.2	37	3.6	179

Discharge, in second-feet, 1946-48

1946

Day	Discharge	Day	Discharge
Sept.23	5.9	Sept.27	5.6
24	5.9	28	5.6
25	5.9	29	5.9
26	5.6	30	6.8

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	6.6	12			12	17	110	66	25	7.6	5.2
2	12	4.7	11			12	16	150	64	24	7.3	5.0
3	11	5.0	11		5.5	12	16	164	57	22	7.1	4.7
4	9.8	6.1	11			12	15	154	53	22	6.8	4.5
5	9.2	6.3	12			11	14	159	51	21	6.6	4.3
6	8.7	6.6	11			11	14	163	53	20	6.3	4.1
7	8.4	6.6	11			10	14	139	99	19	6.1	4.5
8	8.7	6.0	10			10	*14	107	71	18	6.1	4.7
9	7.9	6.5	10		6.5	9.8	14	89	63	16	6.1	4.5
10	7.6	7.1	10			10	15	76	61	16	5.9	4.5
11	7.6	7.3	9.5			9.5	17	67	53	15	5.9	4.3
12	7.6	7.6	9		16	9.5	21	62	50	14	5.2	4.1
13	7.3	7.6	9		13	10	27	62	53	14	5.6	4.1
14	7.3	7.3	9		12	11	35	67	54	11	5.9	4.1
15	7.3	7	*8.4		12	12	42	80	56	12	5.6	4.1
16	*9.0	7.3	8	5.5	11	14	50	93	52	11	5.6	4.3
17	8.7	7.6	7.5		10	16	56	100	50	11	5.4	5.2
18	8.2	7.6	7		9.5	18	56	103	49	11	5.6	5.0
19	8.4	7	7.5		9.5	19	66	113	54	11	5.6	5.0
20	8.4	6	7		10	20	76	119	47	10	5.4	4.7
21	9.0	7	7		10	21	64	125	38	10	5.4	4.5
22	11	10	7		11	22	51	127	34	9.5	5.4	5.6
23	11	28	7		12	22	45	121	34	9.0	5.4	4.7
24	9.2	17	7		14	19	44	119	33	9.0	5.2	4.7
25	8.7	16	7		14	18	41	113	34	9.2	5.2	4.3
26	8.4	15	7		14	20	46	92	32	8.7	5.4	4.3
27	8.2	14	7		13	21	44	76	30	8.4	5.4	4.3
28	7.3	13	6.5		12	19	46	64	29	8.2	5.4	4.1
29	7.1	13	6		-	19	58	67	28	7.9	5.6	4.1
30	6.3	13	6		-	19	79	71	26	7.9	5.6	4.5
31	7.1	-	5.5		-	18	-	63	-	7.6	5.4	-

Peak discharge (base, 150 sec.-ft.).- May 3 (5 p.m.) 218 sec.-ft.: May 21 (6 p.m.) 158 sec.-ft. June 7 (8 a.m.) 154 sec.-ft.

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 8, 9, 15, 19-22, Dec. 2 to Feb. 11, Feb. 14-22, Mar. 2, 10-12.

Discharge, in second-feet, of Wolf Creek near Markleeville, Calif., 1946-48

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.5	9.5	8.7	6.3			8.2	22	91	99	16	5.6
2	4.5	9.5	7.3	7.1			8.7	23	116	85	15	5.9
3	4.3	8.7	6.8	7.9			8.2	28	137	76	14	5.9
4	4.3	8.4	7.9	8.5			8.2	39	115	66	14	5.6
5	4.3	8.2	7.6	8.2			b8	58	90	56	14	5.9
6	4.3	8.2	b7	8.2			b7.5	89	108	53	13	5.9
7	4.5	*8.4	b7	21			b7	74	115	49	13	5.9
8	6.3	9.2	b7	22			6.6	53	129	47	12	5.9
9	6.6	9.0	b7	15			7.3	48	146	47	11	5.9
10	11	8.7	7.3	12			b7	52	140	48	8.2	5.9
11	9.2	9.0	7.3	11			6.6	58	135	47	8.4	5.6
12	7.9	9.0	b7				6.6	73	134	44	9.0	5.2
13	8.4	b8.5	6.8				6.6	93	135	41	9.2	5.4
14	8.7	8.4	6.6			6	9.2	99	130	40	9.0	5.4
15	9.2	9.0	6.6				11	121	121	38	8.7	5.2
16	34	8.7	6.6		5.5		18	140	117	36	8.7	5.4
17	20	8.2	6.6				31	146	112	34	8.7	5.4
18	13	8.2	7.1				28	106	111	32	8.4	5.9
19	11	7.9	6.6				27	74	109	30	8.2	5.9
20	11	b7	6.3				30	60	117	28	8.2	5.6
21	10	b7	6.3	b6.5			31	56	118	26	7.6	5.9
22	9.0	b7.5	6.3				26	68	106	25	7.9	5.9
23	8.7	b7.5	6.3				*22	99	104	24	7.9	5.9
24	8.7	8.2	6.6				25	125	113	23	7.9	6.1
25	8.4	8.2	6.6				33	153	119	22	7.6	7.3
26	8.4	7.9	6.3				34	170	117	21	6.8	7.9
27	8.2	8.2	6.3				34	146	115	20	6.3	7.1
28	8.4	8.2	6.3			6.6	32	116	110	19	6.3	6.6
29	9.2	9.2	b6			6.6	26	104	110	18	6.3	6.3
30	9.2	9.0	b6		-	6.6	24	88	106	17	5.9	6.3
31	10	-	b6		-	7.1	-	74	-	16	5.9	-

Peak discharge (base, 150 sec.-ft.).- May 16 (5 p.m.) 192 sec.-ft.; May 26 (6 p.m.) 224 sec.-ft.; June 3 (5:30 p.m.) 175 sec.-ft.; June 9 (6 p.m.) 182 sec.-ft.; June 28 (5 p.m.) 165 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.- No gage-height record Feb. 2 to Mar. 27 (stage-discharge relation affected by ice during most of period); discharge computed on basis of weather records and records for nearby streams.

Monthly discharge, in second-feet, 1946-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
September 23-30, 1946	47.2	6.8	5.6	5.90	94
Water year	-	-	-	-	-
October 1946	288.4	32	6.3	9.30	572
November	279.8	28	4.7	9.33	555
December	263.9	12	5.5	8.51	523
Calendar year	-	-	-	-	-
January 1947	170.5	-	-	5.5	338
February	269.5	16	-	9.62	535
March	466.8	22	9.5	15.1	926
April	1,113	79	14	37.1	2,210
May	3,215	164	62	104	6,380
June	1,474	99	26	49.1	2,920
July	418.4	25	7.6	13.5	830
August	181.1	7.6	5.2	5.84	359
September	136.0	5.6	4.1	4.53	270
Water year 1946-47	8,276.4	164	-	22.7	16,420
October 1947	285.2	34	4.3	9.20	566
November	252.6	9.5	7	8.42	501
December	210.1	8.7	6	6.78	417
Calendar year 1947	8,192.2	164	-	22.4	16,250
January 1948	258.2	22	-	8.33	512
February	159.5	-	-	5.5	316
March	188.9	-	-	6.09	375
April	537.7	34	6.6	17.9	1,070
May	2,655	170	22	85.6	5,270
June	3,526	146	90	118	6,990
July	1,227	99	16	39.6	2,430
August	293.1	16	5.9	9.45	581
September	178.7	7.9	5.2	5.96	354
Water year 1947-48	9,772.0	170	-	26.7	19,380

Silver Creek below Pennsylvania Creek, near Markleeville, Calif.

Location.- Water-stage recorder, lat. 38°56', long. 119°47', in sec. 28, T. 9 N., R. 20 E., a quarter of a mile downstream from Pennsylvania Creek and 6½ miles south of Markleeville.

Records available.- December 1946 to September 1948.

Extremes.- 1946-47: Maximum discharge during period December 1946 to September 1947, 365 second-feet May 2 (gage height, 3.64 feet); minimum, 2.2 second-feet Sept. 6, 15, 16.

1947-48: Maximum discharge during water year, 411 second-feet May 26 (gage height, 3.84 feet); minimum, 2.1 second-feet Nov. 20.

Remarks.- Records good except those for periods of ice effect, which are fair. No diversions above station. Flow partly regulated by three small reservoirs (total capacity, about 1,700 acre-feet).

Rating table, Dec. 1, 1946, to Sept. 30, 1948 (gage height in feet, and discharge, in second-feet) (Shifting-control method used Dec. 12, 1946 to Feb. 2, 1947, Oct. 18 to Nov. 22, 1947, Dec. 21, 1947, to July 4, 1948)

1.0	2.0	1.4	7.7	2.0	34	2.7	103
1.1	2.7	1.5	11	2.2	48	2.9	146
1.2	3.8	1.7	19	2.4	65	3.2	224
1.3	5.5	1.8	23	2.6	87	3.4	284

Discharge, in second-feet, 1946-48

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			a10	7.0	5.5	14	*27	178	97	20	5.3	2.6
2			a10	6.4	5.7	14	25	236	92	20	4.8	2.5
3			a9.5	b6.2	5.3	13	24	244	82	17	4.3	2.5
4			a9.5	6.2	5.7	12	22	247	75	31	4.1	2.5
5			a15	6.2	5.9	12	22	268	67	42	4.0	2.5
6			a14	6.4	5.9	11	21	262	70	34	3.7	2.5
7			a12	6.2	6.8	11	20	227	128	15	3.6	2.5
8			a11	6.2	7.0	11	20	168	92	14	3.5	2.6
9			a10	6.2	6.8	11	20	130	80	13	3.5	2.6
10			a9.5	6.2	6.6	12	22	109	75	24	3.5	2.6
11			a9.5	6.2	6.6	11	29	97	64	36	3.5	2.6
12			*8.9	5.9	24	11	36	95	60	35	3.4	2.6
13			8.9	5.9	15	12	51	103	61	33	3.5	2.5
14			8.9	5.9	14	14	70	115	64	32	3.7	2.5
15			8.6	b5.8	13	18	84	128	65	30	3.5	2.4
16			8.3	b5.8	12	22	100	148	58	31	3.2	2.4
17			7.5	5.7	11	26	103	158	56	34	3.1	2.8
18			7.0	5.5	10	28	100	161	54	33	3.1	2.9
19			7.7	5.5	10	31	112	171	58	32	3.1	2.9
20			7.5	5.5	11	33	128	168	47	31	2.9	2.9
21			7.5	5.3	11	34	100	189	38	33	3.1	2.8
22			7.5	5.3	12	36	76	192	35	36	3.2	2.9
23			7.5	5.5	14	35	68	181	36	38	3.1	3.0
24			7.5	5.7	15	29	67	176	33	44	2.9	2.6
25			7.5	5.7	17	28	63	166	31	42	2.9	2.6
26			7.5	5.7	16	30	68	139	30	38	2.8	2.6
27			7.5	*5.7	14	33	70	111	27	34	2.9	2.5
28			7.1	5.7	14	29	75	90	22	21	2.9	2.4
29			6.8	5.9	-	29	98	100	22	16	2.9	2.4
30			6.4	5.7	-	29	127	103	21	12	2.9	2.5
31			5.9	5.5	-	27	-	86	-	6.8	2.7	-

Peak discharge (base, 190 sec.-ft.).- May 2 (4 p.m.) 365 sec.-ft.; May 22 (6 p.m.) 253 sec.-ft. June 7 (7:15 a.m.) 192 sec.-ft.

* Winter discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Discharge, in second-feet, of Silver Creek below Pennsylvania Creek, near Markleeville, Calif., 1946-48--Continued

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	2.5	7.7	6.8	4.3	5.9	5.9	16	34	141	111	11	18
2	2.7	8.6	5.2	5.9	b6	5.7	15	37	200	89	10	16
3	2.6	7.0	5.6	5.2	b5.5	5.5	12	50	220	76	9.6	16
4	2.6	6.8	*5.9	8.3	5.5	5.3	10	76	179	66	9.2	16
5	2.6	5.7	5.3	6.2	5.5	5.7	9.9	119	141	55	8.9	18
6	2.6	5.8	4.8	*6.2	5.7	5.7	9.2	179	176	50	8.3	20
7	2.9	6.2	5.0	35	*b5.5	5.7	8.6	130	186	49	8.3	20
8	3.8	6.2	b5	34	5.0	5.7	8.6	75	214	46	8.0	22
9	3.7	5.7	b5	18	5.0	5.7	8.9	69	248	46	7.7	22
10	8.6	5.3	5.3	13	4.8	5.9	8.6	78	217	45	7.5	21
11	6.2	5.5	5.3	9.9	4.8	5.9	8.3	93	213	42	7.3	19
12	4.8	5.5	5.0	8.6	b4.8	*5.9	8.9	115	208	38	7.0	18
13	5.3	*5.7	5.0	7.3	4.8	5.9	10	159	204	34	6.8	17
14	5.7	5.5	5.2	7.7	4.8	5.9	20	172	192	33	18	15
15	6.2	5.7	4.8	7.5	4.8	5.7	30	200	161	30	33	12
16	68	5.3	4.8	7.5	5.3	5.7	60	229	141	29	39	6.2
17	24	5.3	4.8	7.3	5.9	5.7	130	232	154	25	38	4.1
18	11	5.3	4.8	7.0	5.7	5.5	72	165	156	23	28	4.0
19	8.6	4.8	4.6	6.2	5.5	5.7	62	113	151	22	18	3.8
20	8.6	4.6	4.6	6.8	5.5	5.5	75	82	151	20	15	3.5
21	8.6	4.6	4.3	6.8	6.2	6.2	67	73	158	19	5.9	3.4
22	6.6	4.8	4.1	7.0	6.8	7.0	50	103	144	18	5.9	3.4
23	6.2	b4.8	4.3	7.5	6.2	6.8	42	164	139	17	5.9	3.4
24	5.7	5.2	4.3	7.3	5.9	6.6	48	210	148	15	19	4.0
25	5.7	5.5	4.3	7.3	5.7	6.4	72	248	156	15	32	4.5
26	5.5	6.2	4.1	5.7	6.4	6.4	68	274	148	15	28	4.1
27	5.2	6.2	4.1	5.2	6.2	8.0	66	226	146	14	28	4.5
28	5.3	6.2	4.3	5.9	5.9	9.6	60	161	130	14	27	4.1
29	6.6	8.0	4.1	6.2	5.9	7.5	46	144	123	13	28	3.7
30	7.3	7.5	b4	6.2	-	8.0	39	130	119	12	28	3.7
31	8.0	-	b4	5.7	-	10	-	100	-	12	30	-

Peak discharge (base, 190 sec.-ft.).- May 6 (6 p.m.) 287 sec.-ft.; May 16 (4 p.m.) 331 sec.-ft.; May 26 (5 to 6 p.m.) 411 sec.-ft.; June 3 (5 to 6 p.m.) 304 sec.-ft.; June 9 (5 to 6 p.m.) 320 sec.-ft.; June 25 (6 p.m.) 194 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Monthly discharge, in second-feet, 1946-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	-	-	-	-	-
November	-	-	-	-	-
December 1946	272.0	15	5.9	8.77	540
Calendar year	-	-	-	-	-
January 1947	182.6	7.0	5.3	5.89	362
February	300.8	24	5.3	10.7	597
March	666	36	11	21.5	1,320
April	1,848	128	20	61.6	3,670
May	4,946	268	86	160	9,810
June	1,740	128	21	58.0	3,450
July	877.8	44	6.8	28.3	1,740
August	105.6	5.3	2.7	3.41	209
September	78.2	3.0	2.4	2.61	155
The period	-	-	-	-	21,850
October 1947	253.7	68	2.5	8.18	503
November	177.2	8.6	4.6	5.91	351
December	148.7	6.8	4	4.80	295
Calendar year 1947	11,324.6	268	2.4	31.0	22,460
January 1948	282.7	35	4.3	9.12	561
February	161.5	6.8	4.8	5.57	320
March	196.7	10	5.3	6.35	390
April	1,141.0	130	8.3	38.0	2,260
May	4,240	274	34	137	8,410
June	5,064	248	119	169	10,040
July	1,093	111	12	35.3	2,170
August	563.3	39	5.9	17.3	1,060
September	330.4	22	3.4	11.0	655
Water year 1947-48	13,625.2	274	2.5	37.2	27,020

Markleeville Creek above Grover Hot Springs, near Markleeville, Calif.

Location.- Water-stage recorder, lat. 38°42', long. 119°51', in SE¼NE¼ sec. 23, T. 10 N., R. 19 E., half a mile upstream from Buck Creek, 4 miles upstream from mouth, and 4 miles west of Markleeville.

Drainage area.- 14 square miles.

Records available.- October 1946 to September 1948.

Extremes.- 1946-47: Maximum discharge during water year, 316 second-feet May 2 (gage height, 4.73 feet); minimum, 0.3 second-foot part of each day July 30 to Aug. 13, Aug. 15-20, Aug. 23 to Sept. 17, Sept. 23-29.
1947-48: Maximum discharge during water year, 399 second-feet May 26 (gage height, 5.17 feet); minimum, 0.3 second-foot Oct. 1, Aug. 31, Sept. 13, 14, 15, 16.

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

Discharge, in second-feet, 1946-48

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.5	1.6	6.1	3.6	2.9	7.9	15	139	41	5.2	0.5	0.3
2	2	1.1	5.9	3.4	3.2	9.0	14	205	37	4.5	.5	.3
3	2	1.1	5.6	3.3	3.2	8.4	14	209	34	3.9	.5	.3
4	1.8	1.3	5.6	3.3	3.3	7.9	13	207	30	3.6	.5	.3
5	1.6	1.4	8.7	3.4	3.3	7.4	13	203	30	3.3	.4	.3
6	1.5	1.6	8.2	3.3	3.4	7.2	13	199	28	2.8	.4	.3
7	1.5	1.6	6.7	3.2	3.8	7.2	12	170	42	2.3	.4	.3
8	1.4	1.6	6.1	3.2	3.9	7.2	13	131	33	2.1	.4	.4
9	1.4	1.5	5.9	3.2	3.9	7.0	13	104	28	2.0	.4	.4
10	1.4	1.6	5.4	3.2	3.8	8.7	14	84	26	2.0	.4	.4
11	1.3	1.6	5.4	3.3	3.9	8.4	17	74	23	1.9	.4	.4
12	1.3	1.6	5.0	3.3	14	8.2	21	74	21	1.7	.4	.4
13	1.3	1.7	4.8	3.3	11	8.2	28	79	21	1.6	.5	.3
14	1.3	1.7	4.7	3.2	9.0	8.7	38	79	21	1.5	.5	.3
15	1.3	1.7	4.5	3.2	8.2	9.7	46	84	20	1.3	.5	.3
16	1.5	1.6	4.3	2.9	7.9	12	56	97	18	1.2	.4	.3
17	1.5	1.7	4.1	2.9	7.4	13	65	94	19	1.1	.4	.4
18	1.5	2.3	3.9	2.9	7.4	13	78	91	18	1.0	.4	.5
19	1.5	12	3.9	2.9	7.2	15	87	95	18	.8	.4	.5
20	1.6	7.9	3.9	2.9	7.0	15	102	92	15	.8	.4	.5
21	1.8	4.1	3.9	2.9	7.0	15	85	92	12	.7	.4	.5
22	2	6.7	3.8	2.9	6.7	16	59	88	11	.7	.5	.4
23	2	27	3.8	2.9	7.0	18	54	78	11	.7	.4	.4
24	1.8	10	3.9	2.9	7.2	15	54	73	10	.7	.4	.4
25	1.6	7.9	3.9	2.9	7.4	14	48	66	13	.7	.4	.4
26	1.6	7.9	3.9	3.0	7.7	15	48	54	12	.6	.4	.4
27	1.5	7.2	3.9	2.9	7.4	16	51	47	9.5	.6	.4	.4
28	1.5	6.5	3.6	3.0	7.2	16	54	41	8.4	.5	.4	.4
29	1.5	6.3	3.8	3.0	-	17	76	42	7.0	.5	.4	.4
30	1.5	6.1	3.4	2.9	-	18	102	41	6.1	.5	.4	.5
31	1.5	-	3.6	2.9	-	16	-	37	-	.5	.4	-

Peak discharge (base, 175 sec.-ft.).- May 2 (7:30 p.m.) 316 sec.-ft.
Note.- No gage-height record Oct. 1-28; discharge computed on basis of 1 discharge measurement and records for nearby streams.

Discharge, in second-feet, of Markleeville Creek above Grover Hot Springs, near Markleeville, Calif., 1946-48--Continued

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	a3	2.7	1.7	3.2	3.9	8.4	30	124	36	1.6	0.5
2	.5	a3.5	2.4	2.7	3.3	3.8	10	30	172	30	1.4	.5
3	.5	a2.8	2.1	2.6	3.0	3.8	8.4	35	185	27	1.3	.5
4	.4	2.6	2.3	5.6	2.9	3.8	7.9	44	153	23	1.1	.5
5	.4	2.1	2.2	5.4	3.0	3.6	7.4	79	119	19	1.1	.6
6	.5	2.1	2.1	*4.8	3.0	3.6	7.2	131	147	18	1.0	.6
7	.6	2.3	2.0	21	3.0	3.8	7.2	107	147	17	1.0	.6
8	.9	2.2	2.0	22	2.9	3.8	7.4	63	151	16	1.0	.6
9	1.0	2.1	2.0	16	3.0	3.8	7.9	54	168	15	1.0	.6
10	3.6	2.0	2.0	12	2.9	3.8	7.9	54	155	15	1.0	.6
11	2.8	2.2	2.0	9.2	b2.9	3.9	7.7	68	143	14	1.0	.5
12	1.6	2.1	2.0	7.9	b2.9	3.8	7.9	86	138	12	.9	.5
13	1.4	1.9	2.0	6.7	2.9	3.8	8.4	121	127	11	.9	.5
14	1.3	2.1	2.0	6.3	2.9	3.8	14	131	115	11	.8	.5
15	1.1	2.3	2.0	5.9	2.9	3.6	19	164	102	9.7	.8	.5
16	17	2.3	1.9	5.4	3.2	3.9	32	201	90	9.2	.7	.5
17	12	2.3	1.9	5.0	3.3	3.8	59	205	82	7.9	.7	.5
18	4.3	2.2	2.0	4.7	3.4	3.9	46	123	76	6.7	.7	.5
19	2.8	2.0	2.0	4.7	3.4	3.8	38	74	69	6.1	.7	.6
20	2.3	1.7	2.0	4.3	3.4	3.9	42	58	66	5.4	.7	.5
21	3.0	1.7	1.9	4.3	*3.8	4.1	42	53	66	4.7	.7	.5
22	2.4	2.0	1.9	4.3	4.5	4.7	36	80	57	4.3	7	.5
23	2.0	1.9	1.8	4.1	3.9	4.7	32	128	55	3.8	7	.5
24	2.0	1.9	1.8	4.1	3.8	5.0	35	169	56	3.2	.8	.6
25	1.8	2.1	1.8	3.9	4.1	4.5	51	208	54	2.9	.8	.8
26	1.7	2.1	1.8	3.3	4.1	4.7	50	245	53	2.4	.7	.8
27	1.6	2.1	1.8	3.2	3.9	5.0	49	205	48	2.0	.6	.8
28	1.7	2.2	1.8	3.2	3.9	5.9	48	134	42	2.0	.6	.7
29	a2	2.8	1.8	3.3	3.9	5.6	37	115	41	1.9	.6	.6
30	a2.5	2.8	1.7	3.3	-	5.6	32	106	39	1.7	.6	.6
31	a3	-	1.7	3.2	-	6.3	-	82	-	1.6	.5	-

Peak discharge (base, 175 sec.-ft.).- May 6 (7 p.m.) 185 sec.-ft.
* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of recorded range in stage and records for nearby streams.
b Stage-discharge relation affected by ice.

Monthly discharge, in second-feet, 1946-48

Month	Second-feet-days	Maximum	Minimum	Mean	Runoff in acre-feet
October 1946	52.5	5.5	1.3	1.69	104
November	137.9	27	1.1	4.60	274
December	150.2	8.7	3.4	4.85	298
Calendar year	-	-	-	-	-
January 1947	96.1	3.6	2.9	3.10	191
February	175.3	14	2.9	6.26	348
March	365.1	18	7.0	11.8	724
April	1,303	102	12	43.4	2,580
May	3,169	209	37	102	6,290
June	623.0	42	6.1	20.8	1,240
July	51.3	5.2	.5	1.65	102
August	13.2	.5	.4	.43	26
September	11.4	.5	.3	.38	23
Water year 1946-47	6,148.0	209	.3	16.8	12,200
October 1947	79.2	17	.4	2.55	157
November	67.4	3	1.7	2.25	134
December	61.4	2.7	1.7	1.98	122
Calendar year 1947	6,015.4	209	.3	16.5	11,940
January 1948	194.1	22	1.7	6.26	385
February	97.3	4.5	2.9	3.36	193
March	132.0	6.3	3.6	4.26	262
April	765.7	59	7.2	25.5	1,520
May	3,383	245	30	109	6,710
June	3,040	185	39	101	6,030
July	339.5	36	1.6	11.0	673
August	26.7	1.6	.5	.86	53
September	17.1	.8	.5	.57	34
Water year 1947-48	8,203.4	245	.4	22.4	16,270

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Pleasant Valley Creek above Raymond Canyon Creek, near Markleeville, Calif.

Location.- Water-stage recorder, lat. 38°39', long. 119°50', in SE¼ sec. 12, T. 9 N., R. 19 E., 1½ miles upstream from Raymond Canyon Creek, 4½ miles above mouth, and 5 miles southwest of Markleeville.

Records available.- October 1946 to September 1948.

Extremes.- 1946-47: Maximum discharge during water year, 402 second-feet May 2 (gage height, 3.44 feet); minimum, 0.3 second-foot Sept. 13, 14.
1947-48: Maximum discharge during water year, 495 second-feet May 26 (gage height, 3.78 feet); minimum, 0.5 second-foot Oct. 4-6.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Flow partly regulated by four small reservoirs (total capacity, about 850 acre-feet).

Rating table, Oct. 1, 1946, to Sept. 30, 1948, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 29 to Nov. 22, 1946, Apr. 11-15, May 25 to June 27, July 1-29, 1947, May 5 to July 4, July 28 to Aug. 13, 1948

1.0	0.3	1.8	11	2.5	75
1.1	.7	1.9	15	2.6	93
1.3	1.7	2.0	21	2.7	115
1.4	2.3	2.1	29	2.8	141
1.5	3.3	2.2	38	2.9	172
1.6	5.1	2.3	48	3.0	210
1.7	7.6	2.4	60	3.3	339

Discharge, in second-feet, 1946-48

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		1.2	4.9	3.7	3.5	10	28	194	53	7.4	12	0.6
2		.7	4.7	b3.5	3.7	11	26	256	49	6.8	2.9	.5
3		.8	4.7	b3.5	3.7	10	24	261	43	6.6	2.2	.5
4		.8	4.4	3.5	3.7	10	22	256	37	6.1	2.1	.5
5		1.0	7.6	3.7	3.8	9.5	21	244	35	6.1	2.1	.4
6		1.0	6.8	3.5	4.2	9.5	20	244	37	5.4	2.0	.4
7		1.0	6.1	3.3	4.6	9.8	19	195	64	4.9	3.8	.4
8		1.0	5.4	3.3	4.7	9.8	19	156	47	4.6	30	.5
9		1.0	4.9	3.3	4.7	9.2	19	123	39	4.2	31	.5
10		1.1	4.9	3.3	4.6	9.5	21	104	34	4.0	34	.4
11		1.2	4.7	3.3	4.4	9.5	29	100	28	3.7	28	.4
12		1.2	4.6	3.3	11	9.5	39	91	28	3.3	19	.4
13		1.2	4.6	3.3	9.5	10	53	100	25	3.2	14	.4
14		1.2	4.6	3.2	9.2	11	72	108	24	2.9	20	.4
15	a1.6	1.2	4.4	b3.1	8.9	13	95	125	24	2.8	19	.5
16		1.4	4.4	b3.1	8.6	17	113	136	21	2.5	17	.5
17		1.4	3.8	3.1	7.9	22	125	138	21	2.3	15	.7
18		1.7	b3.8	3.1	7.6	25	113	136	20	2.2	12	.8
19		5.8	3.8	3.1	7.6	27	133	138	20	2.1	1.9	.8
20		3.8	3.7	3.1	7.9	32	153	136	17	1.9	1.2	.8
21		2.3	3.5	3.1	7.9	34	120	133	14	1.9	1.0	.7
22		4.0	3.5	3.1	8.2	38	88	125	13	1.8	1.0	.7
23		17	3.5	3.1	8.6	40	77	113	12	1.7	.8	.8
24		7.1	3.7	*3.3	9.8	33	79	106	12	1.7	16	.7
25		5.6	3.8	3.3	11	30	70	91	12	1.6	25	.7
26		6.1	4.0	3.5	12	32	72	75	12	1.6	15	.7
27		5.6	4.0	3.5	11	36	79	60	10	1.5	2.6	.6
28		5.8	b3.8	3.3	10	34	80	53	9.8	1.4	1.5	.6
29	1.2	5.4	3.8	3.7	-	31	111	54	8.6	3.4	1.2	.6
30	1.0	*5.1	b3.6	3.5	-	32	150	54	7.9	13	1.0	.6
31	1.2	-	b3.6	3.5	-	28	-	49	-	13	.8	-

Peak discharge (base, 275 sec.-ft.).- May 2 (7:15 p.m.) 402 sec.-ft.
* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for nearby streams.
b Stage-discharge relation affected by ice.

Discharge, in second-feet, of Pleasant Valley Creek above Raymond Canyor Creek, near Markleeville, Calif., 1946-48--Continued

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	a5	4.2	2.1	4.2	b5	10	43	153	46	28	1.2
2	.6	a6	3.1	2.8	4.2	4.7	13	44	216	39	32	1.1
3	.6	a5	3.0	3.2	b4	b4.5	11	54	237	34	30	1.1
4	.6	*4.4	3.1	6.4	4.0	b4.5	9.8	80	180	29	26	1.0
5	.6	3.3	2.8	6.6	4.0	b4.5	9.2	120	133	27	24	1.0
6	.6	3.3	2.7	*6.1	4.0	4.6	8.9	180	180	24	28	1.0
7	.8	3.5	2.5	19	3.7	4.4	8.9	160	172	23	22	1.0
8	1.1	3.5	bz.5	23	3.7	4.6	8.9	104	180	21	22	1.0
9	1.3	3.2	b2.5	17	3.7	4.4	9.2	82	205	20	25	1.0
10	3.0	3.1	2.6	13	3.8	4.2	8.9	88	180	19	22	1.0
11	2.0	3.1	2.6	10	3.7	b4.2	8.9	104	169	16	26	1.0
12	1.6	3.0	b2.4	9.8	3.5	4.4	8.9	128	156	15	28	.9
13	1.6	2.9	2.3	8.6	3.5	4.6	9.5	166	153	14	15	.9
14	1.8	2.8	2.3	8.6	3.5	4.6	14	183	136	13	4.2	.9
15	1.9	2.9	2.2	7.4	3.7	*4.7	22	212	125	12	2.7	.9
16	22	3.0	2.2	7.1	3.8	4.9	41	263	113	11	2.1	.9
17	11	2.8	2.2	7.1	4.4	4.9	82	249	106	10	1.9	.9
18	4.9	2.9	2.2	7.1	4.4	4.9	84	153	104	9.2	1.8	1.0
19	3.2	2.7	2.2	b6.5	4.4	4.7	84	100	91	7.9	1.7	1.0
20	3.2	2.5	2.2	6.1	4.4	4.7	89	74	89	7.1	1.6	1.0
21	3.1	b2.5	2.2	5.6	*4.7	5.1	95	64	91	6.8	1.5	.9
22	2.6	2.6	2.2	5.6	5.8	6.1	74	91	79	6.4	1.5	.9
23	2.2	b2.5	2.1	5.6	4.9	6.1	54	163	74	5.8	1.5	1.0
24	2.1	2.4	2.1	5.6	4.7	b6	53	211	77	5.1	1.5	1.0
25	2.0	2.5	2.2	5.6	b5	b6	72	272	79	4.7	1.6	1.4
26	1.9	2.7	2.2	b5	5.1	6.4	77	303	72	4.4	1.6	1.4
27	1.8	2.9	2.1	b4.5	5.1	6.6	75	223	69	4.0	1.6	1.4
28	2.1	3.0	2.1	b4.5	5.1	7.6	75	141	56	14	1.4	1.2
29	3.0	*4.2	2.1	4.7	b5	7.4	56	131	52	30	1.4	1.1
30	3.5	4.6	b2.1	4.4	-	7.4	48	118	49	28	1.3	1.0
31	a5	-	b2.1	4.2	-	8.2	-	95	-	26	1.2	-

Peak discharge (base, 275 sec.-ft.).- May 6 (8 p.m.) 282 sec.-ft.; May 16 (7 p.m.) 398 sec.-ft.; May 26 (7:30 p.m.) 495 sec.-ft.; June 2 (7 p.m.) 362 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of recorded range in stage and weather records.

b Stage-discharge relation affected by ice.

Monthly discharge, in second-feet, 1946-48

Month	Seocnd-foot-days	Maximum	Minimum	Mean	Runcff in acre-feet
Octcber 1946	48.2	-	-	1.55	96
Mcvember	93.7	17	0.7	3.12	186
December	137.6	7.6	3.5	4.44	273
Calendar year	-	-	-	-	-
January 1947	103.2	3.7	3.1	3.33	205
February	202.3	12	3.5	7.22	401
March	642.3	40	9.2	20.7	1,270
April	2,070	153	19	69.0	4,110
May	4,154	261	49	134	8,240
June	777.3	53	7.9	25.9	1,540
July	125.6	13	1.4	4.05	249
August	335.1	34	.8	10.8	665
September	17.1	.8	.4	.57	34
Water year 1946-47	8,706.4	256	.4	23.9	17,270
Octcber 1947	92.3	22	.6	2.98	183
Mcvember	98.8	6	2.4	3.29	196
December	75.3	4.2	2.1	2.43	149
Calendar year 1947	8,693.3	256	.4	23.8	17,240
January 1948	232.8	23	2.1	7.51	462
February	124.0	5.8	3.5	4.28	246
March	164.9	8.2	4.2	5.32	327
April	1,220.1	95	8.9	40.7	2,420
May	4,399	303	43	142	8,730
June	3,776	237	49	126	7,490
July	532.4	46	4.0	17.2	1,060
August	360.1	32	1.2	11.6	714
September	31.1	1.4	.9	104	62
Water year 1947-48	11,106.8	303	.6	30.3	22,040

West Fork Carson River above Woodfords, Calif.

Location.- Water-stage recorder, lat. 38°47', long. 119°54', in sec. 31, T. 11 N., R. 19 E., 1 mile above Horsethief Canyon Creek and 4 miles west of Woodfords.

Records available.- December 1946 to September 1948.

Extremes.- 1946-47: Maximum discharge during period December 1946 to September 1947, 602 second-feet May 2 (gage height, 4.75 feet); minimum, 5.4 second-feet Aug. 8.
1947-48: Maximum discharge during water year, 674 second-feet May 16 (gage height, 5.00 feet); minimum, 4.2 second-feet Dec. 2.

Remarks.- Records good except those for periods of ice effect, which are fair. Flow slightly regulated by several small reservoirs (total capacity, about 1,500 acre-feet).

Rating table, Dec. 1, 1946, to Sept. 30, 1948, except periods of ice effect (gage height, in feet, and discharge in second-feet) (Shifting-control method used Sept. 19 to Dec. 4, 1947, Sept. 19-30, 1948)

0.8	5.2	1.2	15	1.8	50	3.0	206
.9	7.2	1.4	23	2.0	68	3.5	302
1.0	9.5	1.5	28	2.2	89	4.0	411
1.1	12	1.6	34	2.6	140	4.4	509

Discharge, in second-feet, 1946-48

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			a27	b14	19	30	90	342	120	41	10	8.4
2			a26	b14	18	30	84	435	109	46	9.0	7.9
3			a25	b13	18	27	80	449	100	61	8.4	7.7
4			a26	b14	19	33	71	440	89	58	7.9	7.4
5			a28	b16	18	29	69	445	89	54	7.4	7.4
6			a27	b20	19	32	68	445	86	43	7.0	7.4
7			a26	b19	19	28	66	386	136	22	6.6	7.0
8			a25	b18	19	28	71	310	116	20	6.4	6.8
9			a22	b19	19	26	76	249	97	19	7.2	7.0
10			a22	b19	19	25	86	226	87	28	6.6	7.2
11			a22	b19	19	28	116	204	79	20	16	7.2
12			a23	18	26	29	146	188	72	15	25	7.0
13			22	b17	26	28	186	183	67	15	25	7.0
14			*22	b15	32	32	235	176	67	26	26	6.4
15			22	b14	32	36	274	178	68	65	24	6.4
16			b20	b14	30	42	310	190	66	69	18	6.6
17			b18	b16	28	*52	331	195	64	63	9.0	7.0
18			b16	18	27	58	304	197	63	54	8.1	7.4
19			b17	18	b26	65	323	206	76	47	7.9	8.1
20			b19	18	b25	73	329	204	81	22	8.1	8.4
21			b20	18	b24	82	278	211	68	13	9.0	8.6
22			b19	18	b24	94	230	208	52	11	9.3	8.8
23			20	18	26	100	206	192	47	16	9.5	8.8
24			21	18	28	77	202	181	43	22	9.5	7.9
25			21	18	30	75	190	169	50	22	17	7.4
26			20	19	30	85	190	154	59	27	20	7.0
27			20	*b17	*31	97	199	137	45	16	18	6.8
28			b16	14	28	93	197	117	40	34	13	7.0
29			b15	b17	-	100	234	116	35	45	9.8	7.2
30			b15	18	-	100	284	118	32	42	9.3	7.2
31			b14	18	-	90	-	116	-	29	8.8	-

Peak discharge (base, 450 sec.-ft.).- May 2 (10 p.m.) 602 sec.-ft.
* Winter discharge measurement made on this day.
a No gage-height record, discharge computed on basis of records for station at Woodfords.
b Stage-discharge relation affected by ice.

Discharge, in second-feet, of West Fork Carson River above Horse Thief Canyon, near Woodfords, Calif., 1946-48--Continued

1947-48

Day	Oct.	Nov.	Deo.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	19	16	b12	b10	b14	b20	94	221	148	21	20
2	7.9	19	14	b16	b10	b14	23	114	305	127	27	19
3	8.4	18	15	b24	b11	b13	19	174	358	107	46	17
4	8.1	19	*14	b36	b11	b14	18	259	322	91	42	17
5	7.9	16	b13	24	b11	b13	15	350	272	77	45	16
6	7.9	18	b12	*23	b11	b13	b15	432	286	67	38	9.3
7	8.4	19	b12	65	*b12	b13	b16	333	292	65	36	7.9
8	12	18	b13	73	b12	b13	b16	204	292	64	29	7.2
9	12	16	b13	38	b12	13	17	171	304	62	22	7.0
10	20	16	b14	27	10	13	17	185	310	61	22	7.7
11	19	15	b14	b20	b10	b12	18	229	274	63	21	7.7
12	14	b14	b12	b19	b11	*13	b25	279	274	58	21	7.9
13	13	*b14	b12	b17	13	13	*b20	342	258	54	21	12
14	12	b15	b13	b16	13	13	27	361	251	50	24	18
15	13	15	b12	b16	14	b14	47	400	219	50	16	18
16	44	15	b12	b15	15	14	80	475	204	47	16	17
17	48	14	b13	b15	15	b13	202	486	186	44	42	16
18	25	13	b12	b15	14	b14	234	364	180	41	42	15
19	20	13	b12	b13	14	13	222	235	169	36	41	12
20	19	b11	b12	b14	14	b14	232	202	180	50	39	8.8
21	22	b12	b11	b15	16	b14	239	180	190	54	37	8.6
22	19	b13	b11	b15	17	14	176	214	178	49	30	9.0
23	17	b12	b11	b15	b15	13	136	282	163	50	11	10
24	16	b13	b11	b15	b15	13	146	355	169	64	9.0	10
25	15	b15	b11	b14	b15	b14	230	414	176	50	8.8	12
26	14	b14	b11	b13	b15	b16	241	454	176	20	8.4	12
27	14	14	b11	b12	b15	b15	264	442	173	19	7.7	12
28	14	14	11	b11	14	b16	228	308	160	17	7.4	12
29	17	16	b10	b10	b14	16	133	243	152	16	7.0	11
30	18	16	b10	b10	-	16	107	249	154	23	19	10
31	18	-	b10	b10	-	b18	-	204	-	24	22	-

Peak discharge (base, 450 sec.-ft.).- May 6 (8:30 p.m.) 627 sec.-ft.; May 16 (10:30 p.m.) 674 sec.-ft.; May 26 (12 p.m.) 599 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Monthly discharge, in second-feet, 1946-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	-	-	-	-	-
November	-	-	-	-	-
December 1946	656	28	14	21.2	1,300
Calendar year	-	-	-	-	-
January 1947	526	20	13	17.0	1,040
February	679	32	18	24.2	1,350
March	1,724	100	25	55.6	3,420
April	5,525	331	66	184	10,960
May	7,367	449	116	238	14,610
June	2,203	136	32	73.4	4,370
July	1,065	69	11	34.4	2,110
August	376.8	26	6.4	12.2	747
September	222.4	8.8	6.4	7.41	441
The period	-	-	-	-	40,350
October 1947	511.0	48	7.4	16.5	1,010
November	456	19	11	15.2	904
December	378	16	10	12.2	750
Calendar year 1947	21,033.2	449	6.4	57.6	41,710
January 1948	638	73	10	20.6	1,270
February	379	17	10	13.1	752
March	431	18	12	13.9	855
April	3,183	264	15	106	6,310
May	9,034	486	94	291	17,920
June	6,848	358	152	228	13,580
July	1,748	148	16	56.4	3,470
August	778.3	46	7.0	25.1	1,540
September	367.1	20	7.0	12.2	728
Water year 1947-48	24,751.4	486	7.0	67.6	49,090

West Fork Carson River at Woodfords, Calif.

Location.- Water-stage recorder, lat. 38°46'00", long. 119°50'00", in SE¼SW¼ sec. 34, T. 11 N., R. 19 E., 0.3 mile downstream from bridge on State Highway 8, 0.8 mile west of Woodfords, and 3¾ miles downstream from Willow Creek.

Drainage area.- 68 square miles

Records available.- October 1900 to May 1907, 1910-11 (fragmentary), October 1938 to September 1948. April 1890 to March 1892 and June 1907 to September 1920 at site 0.7 mile downstream and below three diversions for irrigation.

Average discharge.- 25 years (1901-3, 1905-15, 1916-20, 1939-48), 127 second-feet.

Extremes.- Maximum discharge during year, 708 second-feet May 16 (gage height, 4.65 feet); minimum, 8.8 second-feet Nov. 20, Dec. 7, but may have been less during period of ice effect; minimum daily, 12 second-feet Sept. 21, 22.

1900-1920, 1938-48: Maximum discharge, 1,570 second-feet May 9, 10, 1906 (gage height, 6.8 feet, datum then in use); minimum (1900-1907, 1938-48), that of Nov. 20, Dec. 7, 1947.

Maximum discharge known, 3,500 second-feet Dec. 11, 1937 (gage height, 9.0 feet, present datum, from floodmarks), by slope-area method.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. One small diversion above station for irrigation. Flow slightly regulated by several small reservoirs (total capacity, about 1,500 acre-feet).

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	26	22	18	17	24	35	114	232	157	28	25
2	13	26	20	22	17	24	40	135	313	138	30	22
3	12	25	19	34	a18	23	32	195	364	116	52	21
4	12	26	*21	47	a18	26	28	288	324	101	51	20
5	12	23	19	33	19	22	25	383	279	88	52	20
6	12	22	18	28	19	22	26	474	299	77	48	15
7	12	24	17	72	20	22	28	364	299	73	45	13
8	16	24	19	87	20	23	28	226	306	71	38	12
9	16	24	19	*49	20	24	30	195	319	69	28	12
10	24	21	20	36	17	23	28	212	314	67	28	12
11	25	22	20	27	16	22	29	256	281	69	28	12
12	19	20	18	27	18	24	30	302	281	64	28	12
13	18	19	18	24	22	24	32	368	263	60	28	13
14	17	21	19	23	22	23	44	390	252	57	33	19
15	17	23	18	23	22	24	72	434	224	56	26	19
16	43	23	17	22	23	24	109	512	212	53	20	18
17	64	21	19	22	24	23	228	512	206	52	48	17
18	33	21	18	22	24	24	250	386	196	48	50	16
19	27	20	18	19	24	23	239	252	188	45	49	15
20	26	17	18	21	23	24	252	220	195	53	48	13
21	29	17	17	22	25	24	258	195	204	61	45	12
22	27	19	17	22	29	26	198	231	189	57	39	12
23	24	17	17	22	24	25	157	301	176	57	18	13
24	22	20	17	21	*25	22	167	373	177	70	16	14
25	22	22	17	21	25	24	248	433	189	62	15	16
26	21	21	17	19	25	28	263	476	189	28	14	16
27	20	20	17	18	25	26	285	458	184	26	14	16
28	20	21	18	a17	24	27	250	319	170	24	14	16
29	23	23	16	a16	24	28	157	254	161	24	13	15
30	24	23	16	a16	-	28	125	263	161	28	21	14
31	24	-	16	a16	-	30	-	215	-	31	26	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	686	64	12	22.1	1,360
November	651	26	17	21.7	1,290
December	562	22	16	18.1	1,110
Calendar year 1947	23,922	494	10	65.5	47,430
January	866	87	16	27.9	1,720
February	629	29	16	21.7	1,250
March	756	30	22	24.4	1,500
April	3,693	285	25	123	7,320
May	9,736	512	114	314	19,310
June	7,147	364	161	238	14,180
July	1,982	157	24	63.9	3,930
August	993	52	13	32.0	1,970
September	470	25	12	15.7	932
Water year 1947-48	28,171	512	12	77.0	55,870

Peak discharge (base, 500 sec.-ft.).- May 6 (8 p.m.) 678 sec.-ft.; May 16 (10 p.m.) 708 sec.-ft.; May 26 (11:30 p.m.) 621 sec.-ft.

* Winter discharge measurement made on this day.

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

Note.- Stage-discharge relation affected by ice Dec. 31, Jan. 26-31, Feb. 2, 11, 12 (no gage-height record Jan. 28-31).

Clear Creek near Carson City, Nev.

Location.- Water-stage recorder, lat. 39°07', long. 119°49', in sec. 1, T. 14 N., R. 19 E., 3 miles upstream from mouth and 4 miles southwest of Carson City.

Drainage area.- 15 square miles.

Records available.- March to September 1948.

Extremes.- Maximum discharge during period, 23 second-feet May 6 (gage height, 0.93 foot); minimum, 1.2 second-feet Aug. 30.

Remarks.- Records fair. No diversions or regulation above station. Practically all flow diverted below station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						a4	5.4	a7	6.2	2.6	1.5	1.3
2						4.1	5.6	a7	6.9	2.4	1.4	1.3
3						3.8	5.2	a7.5	7.2	2.2	1.5	1.3
4						4.1	5.2	6.2	5.9	2.2	1.6	1.3
5						4.1	5.2	8.5	5.4	2.2	1.6	1.3
6						4.1	5.4	15	6.2	2.4	1.6	1.3
7						4.1	4.9	14	5.4	2.4	1.5	1.3
8						3.8	4.9	8.5	5.4	2.4	1.5	1.3
9						3.8	a4.6	6.6	5.4	2.0	1.5	1.4
10						3.6	a5	6.2	5.4	2.0	1.5	1.4
11						3.6	a4.8	7.2	4.8	1.9	1.4	1.4
12						3.8	a4.8	7.8	4.3	1.9	1.3	1.4
13						4.1	a5	8.5	4.3	1.9	1.3	1.5
14						4.3	5.6	6.9	3.8	1.9	1.3	1.4
15						4.3	6.9	6.6	3.6	1.9	1.3	1.4
16						4.3	7.5	6.9	3.6	1.7	1.3	1.4
17						4.3	10	6.2	3.6	1.7	1.3	1.4
18						4.1	7.8	6.9	3.4	1.7	1.4	1.5
19						4.1	6.6	6.2	3.4	1.7	1.6	1.5
20						3.8	7.5	9.6	3.2	1.6	1.5	1.5
21						3.8	7.5	6.9	3.4	1.5	1.5	1.5
22						3.8	6.9	6.9	3.2	1.4	1.6	1.5
23						3.8	6.9	7.2	3.1	1.5	1.6	1.5
24						4.3	5.2	8.2	3.1	1.4	1.6	1.5
25						4.1	7.5	8.5	2.9	1.4	1.6	1.7
26						4.5	9.6	10	2.9	1.3	1.6	1.7
27						4.9	8.8	f9	2.7	1.4	1.5	1.5
28						4.9	8.5	f5.5	2.6	1.5	1.5	1.5
29						4.9	a8	5.2	2.7	1.5	1.4	1.4
30						a4.9	a7.5	6.6	2.7	1.5	1.2	1.5
31						4.9	-	5.4	-	1.4	1.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	129.0	4.9	3.6	4.16	256
April	194.3	10	4.6	6.48	385
May	238.7	15	5.2	7.70	473
June	126.7	7.2	2.6	4.22	251
July	56.5	2.6	1.3	1.82	112
August	45.3	1.6	1.2	1.46	90
September	42.9	1.7	1.3	1.43	85
The period	-	-	-	-	1,650

Peak discharge (base, 12 sec.-ft.).- Apr. 17 (6 p.m.) 13 sec.-ft.; Apr. 26 (10 p.m.) 16 sec.-ft.; May 6 (11 p.m.) 23 sec.-ft.; May 20 (5 p.m.) 16 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range of stage and records for nearby streams.

f Fragmentary gage-height record; discharge computed on basis of records for nearby streams.

Humboldt River near Elko, Nev.

Location.- Water-stage recorder, lat. 40°56', long. 115°38', in SE¼NE¼ sec. 11, T. 35 N., R. 56 E., 1 mile southeast of Ryndon, 6 miles downstream from North Fork, and 10 miles northeast of Elko.

Records available.- October 1944 to September 1948. June 1895 to October 1902 at site 11 miles downstream.

Extremes.- Maximum discharge during year, 1,020 second-feet June 7 (gage height, 5.68 feet); no flow several days in August and September.
1895-1902, 1944-48: Maximum discharge, 2,530 second-feet June 9, 1945; no flow several days in August and September 1948.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	12	59	36	56	130	*203	230	492	219	0.5	0
2	1.4	14	73	39	52	125	201	223	505	203	.5	0
3	1.2	15	83	40	*56	110	207	217	532	193	.6	.1
4	1.2	20	84	51	52	115	232	207	608	187	.8	.2
5	1.4	22	73	*65	54	115	232	189	734	158	.7	.2
6	1.6	26	68	74	52	120	228	156	902	129	.8	.3
7	2.1	31	62	84	52	134	215	117	983	103	.9	.4
8	1.6	28	56	82	54	125	197	115	902	84	1.1	.4
9	1.6	27	50	78	58	129	189	103	850	80	1.2	.5
10	1.9	31	48	70	59	120	199	110	801	73	1.2	.5
11	1.9	31	46	64	56	105	226	108	734	68	1.2	.7
12	1.6	30	46	60	56	115	247	122	701	60	1.1	.7
13	1.4	28	48	58	54	124	226	131	680	72	1.1	.7
14	1.6	28	50	56	56	124	203	125	a660	59	1.0	.7
15	1.6	31	52	56	56	122	181	118	a640	48	.9	.7
16	2.1	34	50	54	57	122	185	105	a620	36	.8	.7
17	1.6	*36	50	54	56	122	189	103	a600	32	.6	.8
18	1.6	45	48	54	64	124	199	100	a580	28	.5	.8
19	1.6	45	46	54	72	129	203	106	a560	22	.3	.9
20	2.3	42	46	56	78	129	203	140	a550	21	.2	.8
21	1.6	40	44	58	86	122	199	149	a540	14	.2	.8
22	1.6	38	42	60	96	120	209	158	a530	11	.1	.8
23	1.6	36	40	60	110	127	228	175	513	7.9	0	.8
24	1.6	34	42	62	130	181	236	189	527	7.4	0	.9
25	1.6	34	44	64	*145	223	238	177	465	3.2	0	1.2
26	2.1	36	*44	60	151	223	240	185	392	2.1	0	1.1
27	1.9	39	42	56	150	195	256	191	328	1.4	0	1.0
28	1.9	40	40	52	140	181	256	211	294	1.1	0	.9
29	2.1	*48	38	54	130	197	240	285	265	1.0	0	.9
30	6.1	54	34	54	-	230	228	378	236	.8	0	.9
31	12	-	32	56	-	223	-	455	-	.5	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	66.8	12	1.2	2.15	132
November	975	54	12	32.5	1,930
December	1,580	84	32	51.0	3,130
Calendar year 1947	43,152.0	671	.8	118	85,580
January	1,821	84	36	58.7	3,610
February	2,288	151	52	78.9	4,540
March	4,461	230	105	144	8,850
April	6,495	256	181	216	12,880
May	5,378	455	100	173	10,670
June	17,724	983	236	591	35,160
July	1,925.4	219	.5	62.1	3,820
August	16.3	1.2	0	.53	32
September	19.5	1.2	0	.65	39
Water year 1947-48	42,750.0	983	0	117	84,790

Peak discharge (base, 550 sec.-ft.).- June 7 (12 m.) 1,020 sec.-ft.
* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for station near Carlin.
Note.- Stage-discharge relation affected by ice Nov. 21-26, Dec. 6 to Jan. 1, Jan. 6 to Feb. 9, Feb. 11-15, 17-25, Feb. 27 to Mar. 6.

Humboldt River near Carlin, Nev.

Location.- Water-stage recorder, lat. 40°43', long. 116°00', in sec. 28, T. 33 N., R. 53 E., 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 square miles.

Records available.- October 1943 to September 1948.

Extremes.- Maximum discharge during year, 1,370 second-feet June 10 (gage height, 4.84 feet); minimum, 3.6 second-feet Sept. 7.
1943-48: Maximum discharge, 3,640 second-feet June 10, 1945 (gage height, 7.78 feet); minimum, that of Sept. 7, 1948.
High water of February 1943 reached a stage of 9.8 feet (discharge, 5,900 second-feet, by slope-area method).

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

Rating table, water year 1947-48, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 9 to Aug. 18)

0.5	2.0	0.9	20	1.6	108	3.0	501
.6	4.0	1.0	28	1.9	167	3.5	698
.7	8.0	1.2	48	2.2	242	4.0	930
.8	13	1.4	76	2.6	363	4.8	1,350

Discharge, in second-feet, water year October 1947 to September 1949

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	22	80	60	94	183	279	344	664	423	19	6.4
2	16	22	94	79	92	181	288	309	724	396	17	8.0
3	16	23	94	79	90	181	288	303	842	357	14	8.5
4	12	23	100	80	80	165	300	288	1,020	312	12	6.8
5	13	19	105	88	80	152	303	264	1,120	282	12	4.4
6	15	22	105	96	84	152	306	253	1,160	267	10	4.0
7	16	31	107	110	86	163	306	239	1,200	239	9.5	3.8
8	17	33	94	122	88	*172	294	231	1,270	220	9.0	4.4
9	13	35	91	154	93	172	279	220	1,340	198	8.5	5.6
10	12	34	76	146	96	167	291	205	1,340	172	10	4.4
11	14	34	70	138	88	163	319	174	1,280	154	9.5	4.8
12	16	35	66	115	82	159	316	159	1,220	150	10	6.0
13	13	37	74	110	80	154	325	146	1,170	146	7.6	6.0
14	12	41	82	100	84	156	331	144	1,140	132	8.5	5.2
15	12	47	80	96	90	163	328	144	1,090	119	10	5.2
16	14	52	78	92	96	163	331	126	1,030	103	7.6	4.0
17	17	56	79	86	96	165	331	154	970	90	7.2	4.4
18	17	58	84	82	103	172	344	198	910	78	9.5	5.6
19	16	57	82	80	113	176	347	231	880	76	6.8	5.6
20	12	*65	80	80	121	174	347	239	837	66	5.6	5.6
21	12	61	80	88	132	167	357	226	823	59	5.2	5.6
22	14	63	78	100	169	165	363	223	800	58	5.2	6.0
23	16	a60	74	106	185	174	373	208	768	47	5.6	6.0
24	17	56	74	110	178	183	370	212	715	44	5.6	5.2
25	18	60	78	112	165	195	376	226	677	37	6.0	6.4
26	18	62	*82	94	185	220	366	279	660	35	5.6	7.2
27	19	63	80	84	198	245	347	366	615	31	5.2	6.4
28	19	65	76	*109	192	259	331	437	553	26	5.2	6.8
29	20	70	70	110	185	250	337	516	490	22	4.8	7.2
30	21	75	54	105	-	253	347	557	448	25	5.6	9.0
31	21	-	46	100	-	270	-	596	-	21	5.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	484	21	12	15.6	960
November	1,381	75	19	46.0	2,740
December	2,509	105	46	80.9	4,980
Calendar year 1947	70,017.0	1,060	8.5	192	138,900
January	3,111	154	60	100	6,170
February	3,425	198	80	118	6,790
March	5,714	270	152	184	11,330
April	9,820	376	279	327	19,480
May	8,217	596	126	265	16,300
June	27,756	1,340	448	925	55,050
July	4,385	423	21	141	8,700
August	262.5	19	4.8	8.47	521
September	174.5	9.0	3.8	5.82	346
Water year 1947-48	67,239.0	1,340	3.8	184	133,400

Peak discharge (base, 900 sec.-ft.).- June 10 (3:30 a.m.) 1,370 sec.-ft.
* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for station at Palisade.
Note.- Stage-discharge relation affected by ice Nov. 24-26, Dec. 10-13, 15, 16, Dec. 21 to Jan. 1, Jan. 12-22, Jan. 26 to Feb. 8, Feb. 11-15, Mar. 4.

Humboldt River at Palisade, Nev.

Location.- Water-stage recorder, lat. 40°38', long 116°12', in sec. 36, T. 32 N., R. 51 E., 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 square miles.

Records available.- November 1902 to October 1906, July 1911 to September 1948.

Average discharge.- 40 years (1903-6, 1911-48), 362 second-feet.

Extremes.- Maximum discharge during year, 1,530 second-feet June 9 (gage height, 5.16 feet); minimum, 8.0 second-feet Oct. 2.
1902-6, 1911-48: Maximum discharge, 6,250 second-feet Feb. 26, 1943 (gage height, 9.92 feet); minimum, 2 second-feet Aug. 25-28, 1931.

Remarks.- Records excellent except those for periods of ice effect, which are fair. Diversion above station for irrigation of about 150,000 acres of hay and pasture lands.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	38	*95	b78	110	207	300	381	642	449	34	15
2	12	33	97	89	113	*204	330	357	718	427	32	15
3	24	33	110	89	b100	204	353	326	777	365	29	17
4	28	34	110	93	b95	192	338	308	982	338	26	17
5	26	31	124	99	102	181	334	297	1,100	297	25	17
6	25	30	122	110	104	173	334	276	1,170	276	24	15
7	27	28	124	119	b100	178	338	265	1,220	248	22	14
8	29	33	122	167	b100	187	323	232	1,270	222	21	14
9	29	37	110	164	110	192	312	219	1,420	198	21	14
10	28	38	b80	187	b100	189	330	222	1,420	167	20	16
11	29	38	b75	164	b95	181	353	213	1,350	151	21	15
12	27	39	b70	151	b90	178	361	164	1,280	134	21	14
13	28	45	b85	141	b90	175	357	141	1,220	131	21	16
14	29	49	102	129	b90	173	373	134	1,200	127	19	17
15	28	46	97	b125	95	175	385	124	1,160	117	19	15
16	28	51	95	b115	102	178	398	129	1,100	106	21	16
17	30	58	95	b110	110	181	394	124	1,030	95	19	16
18	33	62	95	b105	122	181	410	146	968	89	17	17
19	34	62	97	b100	146	187	414	187	956	82	19	20
20	31	62	95	b100	164	187	361	228	910	82	17	19
21	29	68	95	b110	162	178	353	225	880	74	17	17
22	28	66	99	b120	210	173	381	216	850	71	17	16
23	29	62	93	136	245	216	394	216	816	66	17	17
24	30	59	86	136	228	216	377	207	766	59	17	18
25	31	66	86	134	204	225	385	216	739	56	17	21
26	32	73	89	b105	210	222	394	235	703	51	17	21
27	33	74	87	b90	225	245	381	304	662	46	17	21
28	34	76	b85	b100	225	279	357	390	599	45	17	20
29	37	78	b80	*117	216	319	342	471	538	40	16	21
30	38	84	b65	115	-	308	369	533	484	39	16	22
31	38	-	*b52	108	-	297	-	580	-	38	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	911	38	12	29.4	1,810
November	1,553	84	28	51.8	3,080
December	2,917	124	52	94.1	5,790
Calendar year 1947	79,343	1,050	12	217	157,400
January	3,726	187	78	120	7,390
February	4,063	245	90	140	8,060
March	6,381	319	173	206	12,660
April	10,831	414	300	361	21,480
May	8,066	580	124	260	16,000
June	28,930	1,420	484	964	57,380
July	4,706	449	38	152	9,330
August	632	34	16	20.4	1,250
September	513	22	14	17.1	1,020
Water year 1947-48	73,229	1,420	12	200	145,200

Peak discharge (base, 560 sec.-ft.).- June 9 (2 a.m.) 1,530 sec.-ft.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Humboldt River near Argenta, Nev.

Location.- Water-stage recorder, lat. 40°40', long. 116°40', in NW¼ sec. 2, T. 32 N., R. 47 E., 2½ miles east of Argenta and 15½ miles east of Battle Mountain.

Records available.- February 1946 to September 1948.

Extremes.- Maximum discharge during year, 974 second-feet June 12 (gage height, 6.62 feet); minimum, 0.6 second-foot Oct. 4.
1946-48: Maximum discharge, 1,780 second-feet Apr. 27, 28, 1946 (gage height, 8.58 feet); minimum, 0.6 second-foot Sept. 13, 14, 15, Oct. 4, 1947.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	26	75	82	120	207	283	306	347	454	a27	1.6
2	.8	27	80	103	120	204	285	316	394	425	a26	1.6
3	.7	27	87	105	115	204	306	301	466	401	25	1.6
4	.7	28	95	108	110	190	320	283	551	372	24	1.6
5	.7	27	98	102	105	185	316	260	637	327	22	1.6
6	.7	20	105	105	110	190	320	245	701	295	20	1.3
7	.8	17	108	111	110	184	316	219	759	271	17	1.3
8	.8	21	110	117	105	186	314	204	795	249	14	1.3
9	.8	24	110	132	110	194	312	189	831	223	13	1.3
10	.9	27	92	157	110	198	308	183	892	205	11	1.1
11	.9	31	84	172	105	196	314	184	941	170	9.5	1.1
12	.8	32	78	158	100	192	327	176	966	149	8.6	1.3
13	.8	34	74	145	96	190	331	161	970	132	7.2	1.3
14	.8	37	86	140	98	186	327	140	948	124	4.7	1.3
15	.8	36	98	130	105	184	336	124	913	92	4.0	1.3
16	2.6	35	100	125	115	190	340	111	902	85	3.3	1.1
17	1.6	36	100	120	125	190	347	104	882	82	3.0	1.1
18	.9	44	96	115	139	190	336	97	848	76	3.0	1.1
19	1.6	*46	*92	110	140	193	340	99	808	68	2.6	1.3
20	8.7	49	105	110	149	196	338	111	795	58	2.6	1.3
21	13	51	100	115	163	198	312	128	795	55	2.6	1.3
22	15	53	100	125	169	194	295	130	765	64	2.3	1.3
23	17	50	105	135	184	193	306	126	749	62	2.3	1.1
24	17	48	94	*145	219	211	316	123	714	57	1.9	1.1
25	18	46	92	142	213	219	310	121	670	48	1.6	1.1
26	19	52	90	120	*208	*226	323	117	640	44	1.6	1.1
27	20	58	84	105	202	226	327	145	611	42	1.6	1.0
28	20	62	84	110	215	238	316	157	575	35	1.6	1.0
29	21	65	82	110	215	260	299	205	538	a31	1.9	1.0
30	17	67	68	120	-	295	293	258	494	a29	1.9	.8
31	24	-	66	125	-	285	-	297	-	a28	1.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	228.2	24	0.7	7.36	453
November	1,176	67	17	39.2	2,330
December	2,838	110	66	91.5	5,630
Calendar year 1947	64,414.1	766	.7	176	127,800
January	3,799	172	82	123	7,540
February	4,075	219	96	141	8,080
March	6,394	295	184	206	12,680
April	9,513	347	283	317	18,870
May	5,620	316	97	181	11,150
June	21,897	970	347	730	43,430
July	4,753	454	28	153	9,430
August	268.4	27	1.6	8.66	532
September	37.3	1.6	.8	1.24	74
Water year 1947-48	60,598.9	970	.7	166	120,200

Peak discharge (base, 400 sec.-ft.).- June 12 (6 p.m.) 974 sec.-ft.
* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of recorded range in stage and records for stations at Palisade and at Battle Mountain.
Note.- Stage-discharge relation affected by ice Nov. 23-26, Dec. 11 to Jan. 1, Jan. 3, 13-23, Jan. 26 to Feb. 17, Mar. 4, 5.

Humboldt River at Battle Mountain Nev.

Location.- Water-stage recorder, lat. 40°39', long. 116°56', in SE¼ sec. 8 T. 32 N., R. 45 E., 1 mile northeast of Battle Mountain. Reese River when flowing enters Humboldt River several miles below station.

Records available.- July 1896 to December 1897 (gage heights only), March 1921 to April 1924, January 1946 to September 1948.

Extremes.- Maximum discharge during year, 909 second-feet June 15 (gage height, 6.62 feet); no flow Sept. 8-30.
1921-24, 1946-48: Maximum discharge observed, 1,560 second-feet June 19, 20, 1921, May 11-13, 1922; no flow Sept. 8-30, 1948.

Remarks.- Records good except those for period of ice effect or no gage-height record which are fair. Records do not include flow in secondary channels or ditches, much of which is used for irrigation. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	17	66	78	120	209	278	305	287	469	25	0.1
2	.1	20	70	94	115	205	276	281	319	434	23	.1
3	.1	21	*78	100	115	203	287	293	360	406	21	.1
4	.1	21	84	105	110	198	303	278	430	378	20	.1
5	.1	24	92	98	105	192	305	244	476	337	19	.1
6	.1	27	98	96	*100	192	301	230	507	301	18	.1
7	.1	19	100	*101	98	184	295	198	548	272	16	.1
8	.1	16	105	107	96	180	295	188	587	249	13	0
9	.1	16	105	112	100	188	293	184	627	229	12	0
10	.2	20	96	141	105	192	291	159	661	203	9.8	0
11	.2	23	88	155	100	194	295	132	692	185	8.1	0
12	.2	27	82	159	96	190	307	136	735	153	6.7	0
13	.2	29	76	144	92	188	319	137	773	138	6.1	0
14	.2	35	74	114	90	184	317	135	812	126	4.9	0
15	.2	37	90	130	94	180	319	135	843	109	3.5	0
16	.2	36	94	125	98	180	331	131	819	90	2.3	0
17	.2	36	96	120	110	185	337	127	814	84	1.6	0
18	.2	36	92	115	120	185	333	115	793	80	1.4	0
19	.2	42	90	110	130	186	327	107	776	74	1.1	0
20	.2	45	96	110	138	186	335	111	766	36	1.0	0
21	.2	47	98	110	151	191	323	126	773	58	.9	0
22	.2	48	100	115	163	191	301	138	750	56	.7	0
23	6.1	47	100	120	167	186	297	137	731	62	.7	0
24	6.7	45	92	130	202	191	276	133	704	56	.6	0
25	6.1	44	88	140	209	206	283	128	677	51	.5	0
26	10	50	86	110	*211	214	293	126	649	45	.4	0
27	*12	54	82	92	198	219	329	128	637	40	.4	0
28	13	57	82	90	205	227	327	148	606	38	.3	0
29	14	59	78	94	211	240	311	167	560	34	.2	0
30	14	62	70	105	-	254	303	214	516	32	.2	0
31	13	-	66	115	-	274	-	254	-	28	.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	98.4	14	0.1	3.17	195
November	1,060	62	16	35.3	2,100
December	2,714	105	66	87.5	5,380
Calendar year 1947	61,494.8	661	.1	169	122,000
January	3,535	159	78	114	7,010
February	3,849	211	90	133	7,630
March	6,194	274	180	200	12,290
April	9,187	337	276	303	18,220
May	5,325	305	107	172	10,560
June	19,228	843	287	641	38,140
July	4,883	469	28	158	9,690
August	218.6	25	.2	7.05	434
September	.7	.1	0	.02	1.4
Water year 1947-48	56,292.7	843	0	154	111,700

Peak discharge (base, 350 sec.-ft.).- Apr. 27 (3:45 p.m.) 408 sec.-ft.; June 15 (11:30 a.m.) 909 sec.-ft.

* Winter discharge measurement made on this day.

Note.- No gage-height record Dec. 4 to Jan. 6; discharge computed on basis of records for station at Argenta. Stage-discharge relation affected by ice Nov. 23-27, Jan. 15 to Feb. 19.

Humboldt River at Comus, Nev.

Location.- Water-stage recorder, lat. 41°00', long. 117°19', in SE¼ sec. 14, T. 36 N., R. 41 E., at Comus section house of Southern Pacific Railroad, 9 miles northeast of Golconda and 32 miles northwest of Battle Mountain.

Records available.- September 1917 to June 1923, May 1925 to May 1926, February 1946 to September 1948.

Extremes.- Maximum discharge during year, 748 second-feet June 17 (gage height, 5.78); minimum 0.1 second-foot Oct. 19, 20, 23, 24.
1917-23, 1925-26, 1946-48: Maximum discharge, 2,700 second-feet June 24-26, 1921 (gage height, 10.9 feet, site and datum then is use, based on discharge measurement made 5 miles downstream); no flow during periods in 1918, 1919, 1920.

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

Rating table, water year 1947-48, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Nov. 25, Dec. 16 to Jan. 17)

1.5	0.1	1.9	12	3.3	221
1.6	.6	2.0	21	4.0	347
1.7	1.4	2.2	44	5.1	576
1.8	5.0	2.5	86		

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.2	a44	77	104	185	219	261	172	499	29	0.3
2	.4	1.1	a45	70	116	190	234	257	204	467	25	.3
3	.5	.5	47	76	119	189	235	257	237	436	22	.3
4	.5	.4	48	78	119	b175	235	248	259	410	19	.3
5	.6	.4	53	91	114	b170	261	235	271	387	17	.3
6	.6	.4	*57	99	*b108	182	275	232	309	368	16	.3
7	.6	.4	80	*104	b100	180	279	172	374	336	14	.3
8	.8	.4	84	100	b94	180	343	177	408	315	12	.3
9	.8	.4	72	94	b100	*175	318	165	448	291	11	.2
10	.8	.4	68	92	b105	172	230	156	442	268	9.9	.2
11	.8	.4	56	97	b98	175	228	156	434	244	8.5	.2
12	.8	.4	b60	b105	b90	178	225	151	446	225	7.1	.2
13	.7	.4	b64	b110	b88	178	259	168	440	204	5.0	.2
14	.8	.4	a66	b115	b86	180	279	153	436	182	3.6	.2
15	.6	.5	a70	b110	b90	178	279	153	444	165	1.8	.2
16	.4	.8	70	110	104	177	282	146	457	144	1.2	.2
17	.2	.7	88	107	b110	177	284	139	542	128	.9	.2
18	.2	.5	71	b115	b120	175	289	138	560	110	.6	.3
19	.1	.5	b74	119	b130	175	293	134	560	100	.4	.3
20	.1	2.5	b79	116	b135	172	293	119	544	89	.4	.3
21	.2	7.8	b76	121	b140	153	291	112	548	86	.4	.2
22	.2	7.1	82	116	144	163	297	112	546	84	.4	.3
23	.1	11	b78	110	143	151	293	116	548	68	.4	.3
24	.1	13	b82	*102	146	148	279	124	553	61	.4	.3
25	.2	16	b78	112	151	148	273	122	553	58	.3	.4
26	.2	a20	b82	b110	175	148	264	117	542	53	.3	.3
27	.2	a24	b80	b105	184	156	262	112	530	49	.3	.3
28	.2	a28	83	b105	185	158	248	110	519	42	.2	.2
29	.2	a32	83	b100	180	156	262	110	519	38	.2	.2
30	.2	a38	b78	99	-	202	268	122	508	37	.2	.2
31	.2	-	b74	99	-	202	-	143	-	32	.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	12.5	0.8	0.1	0.40	25
November	208.6	38	.2	6.95	414
December	2,109	83	4.4	68.0	4,180
Calendar year 1947	52,932.7	495	.1	145	105,000
January	3,164	121	70	102	6,280
February	3,576	185	86	123	7,090
March	5,348	202	148	173	10,610
April	7,877	297	218	233	15,620
May	4,917	261	110	159	9,750
June	13,351	560	172	445	26,480
July	5,976	499	32	193	11,850
August	207.7	29	.2	6.70	412
September	7.8	.4	.2	.26	15
Water year 1947-48	46,754.6	560	.1	128	92,730

Peak discharge (base, 330 sec.-ft.).- Apr. 13 (7:30 p.m.) 391 sec.-ft.; June 17 (12 m.) 748 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on baais of recorded range in stage, weather records, and records for station at Battle Mountain.

b Stage-discharge relation affected by ice.

Humboldt River near Rose Creek, Nev.

Location.- Water-stage recorder, lat. 40°52', long. 118°00', in NW¼ sec. 37 T. 35 N., R. 35 E., 5½ miles southwest of Rose Creek and 15½ miles southwest of Winnemucca.

Records available.- April to September 1948.

Extremes.- Maximum discharge during period, 708 second-feet June 24 (gage height, 4.86 feet); minimum, 18 second-feet Sept. 14, 20, 22, 23.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	105	74	341	71	28
2							-	90	78	333	69	28
3							-	76	90	331	64	26
4							-	103	107	349	59	26
5							-	99	92	346	54	24
6							-	98	99	336	54	24
7							-	122	105	323	54	24
8							-	120	114	318	54	23
9							-	107	160	308	54	23
10							-	120	152	298	53	23
11							-	152	144	289	53	23
12							-	221	142	274	54	22
13							-	170	185	256	54	22
14							-	150	180	245	51	20
15							-	140	191	236	51	19
16							-	135	162	221	49	19
17							-	129	172	204	49	19
18							-	123	204	191	61	19
19							-	112	191	176	53	20
20							-	96	230	164	48	18
21							-	89	187	152	43	20
22							-	80	265	140	42	20
23							156	78	276	135	40	18
24							131	83	400	125	38	19
25							131	76	455	120	38	19
26							140	69	446	105	37	19
27							139	69	422	92	36	19
28							114	69	401	87	34	19
29							122	69	375	83	32	22
30							114	81	357	76	30	30
31							-	81	-	76	28	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April 23-30	1,047	156	114	131	2,080
May	3,312	221	69	107	6,570
June	6,456	455	74	215	12,810
July	6,730	349	76	217	13,350
August	1,507	71	28	48.6	2,990
September	655	30	18	21.8	1,300
The period	-	-	-	-	39,100

Peak discharge (base, 350 sec.-ft.).- June 24 (7:15 p.m.) 708 sec.-ft.

Humboldt River near Imlay, Nev.

Location.- Water-stage recorder, lat. 40°41'30", long. 118°12'10", in SE¼ sec. 25, T. 33 N., R. 33 E., 1 mile upstream from old Calahan Dam and 4 miles northeast of Imlay.

Drainage area.- 13,500 square miles.

Records available.- June 1935 to September 1941, April 1945 to September 1948.

Extremes.- Maximum discharge during year, 430 second-feet June 25 (gage height, 4.25 feet); minimum, 14 second-feet Sept. 14-28.
1935-41, 1945-48: Maximum discharge, 2,220 second-feet May 31, June 1, 1945; (gage height, 10.49 feet, present datum); no flow at times in several years.

Remarks.- Records good except those for periods of ice effect, which are fair. Humboldt-Lovelock Irrigation Light & Power Co.'s feeder canal diverts water from river above station to Pitt-Taylor Reservoirs. This water is ordinarily released during irrigation season through Rye Patch Reservoir to Humboldt River for irrigation in Lovelock district. Flow also affected by many other diversions above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	26	30	62	100	102	158	110	65	364	63	18
2	27	28	30	70	100	114	159	97	54	349	61	18
3	26	29	32	86	98	123	170	74	51	341	55	17
4	22	28	*36	100	96	125	185	64	85	340	50	17
5	29	29	40	92	94	130	192	84	96	352	46	17
6	26	28	42	89	*97	131	203	84	73	354	43	17
7	24	27	43	85	100	131	206	84	73	346	44	16
8	23	28	45	84	100	139	210	104	85	333	43	16
9	23	28	43	*87	96	146	220	88	96	327	42	16
10	24	27	40	92	100	*149	230	88	131	314	41	15
11	24	27	46	98	100	161	234	102	129	304	40	15
12	24	27	56	100	96	157	218	124	124	291	38	15
13	24	27	54	105	88	152	210	179	122	276	39	15
14	24	26	58	110	90	168	209	167	148	260	38	15
15	24	31	62	86	92	188	214	142	150	246	38	14
16	23	30	66	84	94	193	216	132	166	231	37	14
17	22	28	64	90	98	196	224	120	145	217	36	14
18	23	28	64	96	105	189	236	114	144	202	27	14
19	23	28	68	92	108	186	238	112	178	185	28	14
20	23	28	66	86	106	185	242	110	181	171	33	14
21	22	28	66	92	110	186	244	96	221	157	30	14
22	21	26	70	*96	117	189	234	87	206	145	28	14
23	21	26	72	105	123	183	171	80	246	134	28	14
24	21	28	70	110	129	178	166	74	267	124	28	14
25	21	30	76	105	136	176	140	73	352	116	27	15
26	20	32	74	100	140	171	135	68	411	109	23	15
27	20	32	78	70	139	165	145	61	414	99	21	14
28	20	31	82	82	142	161	142	61	409	87	21	15
29	21	34	86	96	137	156	99	58	397	73	20	15
30	26	31	70	94	-	157	114	57	380	75	19	15
31	26	-	64	98	-	157	-	61	-	63	19	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	723	29	20	23.3	1,430
November	856	34	26	28.5	1,700
December	1,793	86	30	57.8	3,560
Calendar year 1947	40,363	376	19	111	80,070
January	2,842	110	62	91.7	5,640
February	3,131	142	88	108	6,210
March	4,944	196	102	159	9,810
April	5,764	244	99	192	11,430
May	2,955	179	57	95.3	5,860
June	5,599	414	51	187	11,110
July	6,994	364	66	226	13,870
August	1,106	63	19	35.7	2,190
September	456	18	14	15.2	904
Water year 1947-48	37,163	414	14	102	73,710

Peak discharge (base, 350 sec.-ft.).- June 25 (11 p.m.) 430 sec.-ft.
* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 23-29, Dec. 7 to Jan. 5, Jan. 13 to Feb. 18, Mar. 4, 5.

Rye Patch Reservoir near Rye Patch, Nev.

Location.- Mercury indicating gage, lat. 40°28'15", long. 118°18'20", in NE¼ sec. 18, T. 30 N., R. 33 E., at control works at left end of Rye Patch Dam, 2 miles northwest of Rye Patch. Datum of gage is at mean sea level (Southern Pacific Railroad datum).

Drainage area.- 13,700 square miles.

Records available.- February 1936 to September 1948.

Extremes.- Maximum contents during year, 121,200 acre-feet Apr. 6 (elevation, 4,127.18 feet); minimum, 51,970 acre-feet Sept. 30 (elevation, 4,117.72 feet).
1936-48: Maximum contents, 196,900 acre-feet Apr. 9, 1946 (elevation, 4,134.62 feet); minimum since operation began, 1,760 acre-feet Oct. 15, 1937.

Remarks.- Reservoir is formed by earth-fill, rock-faced dam; storage began Feb. 20, 1936. Capacity, 179,100 acre-feet between elevations 4,072.5 feet (sill of trash-rack structure) and 4,133.0 feet (top of spillway gates). Dead storage negligible. Elevation of spillway (gate sill) is 4,116 feet. Water is used for irrigation on Humboldt project.

Elevation, in acre-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	107,200	105,100	107,600	109,400	110,800	114,500	120,300	112,300	98,780	90,130	74,170	61,260
2	107,200	105,200	107,800	109,400	111,100	114,700	120,500	111,400	98,290	90,130	73,820	61,070
3	107,200	105,400	107,800	109,400	111,400	114,800	120,700	110,900	97,640	90,210	72,910	60,820
4	107,000	105,200	107,800	109,400	111,800	115,100	120,800	110,500	97,160	90,210	72,065	60,510
5	106,400	105,300	107,900	109,400	112,300	115,200	121,100	110,100	97,160	89,980	71,530	60,320
6	105,700	105,400	108,000	109,600	112,600	115,200	121,200	109,400	97,240	89,820	71,200	60,200
7	105,800	105,200	108,200	109,900	112,600	115,400	121,100	108,900	97,240	89,820	70,740	60,200
8	106,000	105,600	108,000	110,000	112,700	115,500	120,900	108,500	97,320	89,740	70,010	59,950
9	106,800	105,600	107,900	110,200	112,700	115,700	120,300	108,200	97,320	89,510	69,410	59,700
10	107,000	105,600	108,000	110,200	112,800	115,900	119,700	107,800	97,240	89,280	68,880	59,390
11	107,000	105,600	108,100	110,400	112,900	116,100	119,700	107,000	97,320	89,280	68,280	58,740
12	106,900	106,500	108,100	110,500	112,900	116,200	119,900	106,000	97,320	89,200	67,480	58,340
13	106,800	105,800	108,200	110,500	113,000	116,400	119,600	105,600	97,160	88,740	66,820	57,880
14	106,900	106,400	108,200	110,400	113,000	116,600	119,100	105,300	97,160	88,120	66,090	57,700
15	106,800	105,800	108,300	110,500	113,100	116,800	119,100	105,100	96,430	87,340	65,490	57,420
16	106,700	105,800	108,300	110,500	113,100	117,000	119,100	104,300	95,620	86,570	64,860	57,010
17	106,700	105,900	108,400	110,500	113,200	117,200	119,000	103,600	95,050	85,750	64,620	56,840
18	106,600	105,900	108,500	110,200	113,300	117,400	118,400	102,900	94,240	84,940	64,430	56,550
19	106,700	105,900	108,600	110,000	113,300	117,700	118,000	101,900	93,540	84,270	64,180	56,320
20	106,400	105,900	108,600	109,600	113,400	117,900	117,400	101,800	92,840	83,610	63,930	56,150
21	106,600	106,000	108,600	109,700	113,700	118,000	116,800	101,700	92,380	83,000	63,740	55,460
22	106,000	106,000	108,700	109,900	113,700	118,100	116,200	101,700	91,990	82,130	63,560	54,710
23	105,800	106,100	108,800	110,000	113,700	118,300	115,700	101,600	91,600	81,680	63,310	54,480
24	105,700	106,200	108,800	110,110	113,700	118,400	115,400	101,500	91,330	81,170	63,000	54,360
25	105,600	106,400	108,900	110,500	113,700	118,700	114,900	101,400	90,980	80,350	62,750	54,250
26	105,500	106,700	108,900	110,600	114,000	119,000	114,300	101,300	90,600	79,240	62,310	53,840
27	105,600	106,800	109,000	110,500	114,100	119,200	114,000	101,100	90,360	78,250	62,000	53,440
28	105,700	107,000	109,000	110,600	114,300	119,400	113,800	101,000	90,360	77,340	61,690	52,970
29	105,600	107,200	109,000	110,600	114,300	119,700	113,400	100,500	90,290	76,350	61,500	52,550
30	105,400	107,300	109,200	110,600	-	119,900	113,100	99,910	90,290	75,370	61,500	51,970
31	105,100	-	109,400	110,600	-	120,000	-	99,270	-	74,600	61,380	-

Monthly elevation and contents, water year October 1947 to September 1948

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	4,125.58	107,200	-2,100
Nov. 1	4,125.32	105,100	+2,500
Dec. 1	4,125.62	107,600	+1,800
Calendar year 1947	-	-	-53,400
Jan. 1	4,125.83	109,400	+1,400
Feb. 1	4,126.00	110,800	+3,700
Mar. 1	4,126.42	114,500	+5,800
Apr. 1	4,127.08	120,300	-8,000
May 1	4,126.17	112,300	-13,520
June 1	4,124.56	98,780	-8,650
July 1	4,123.47	90,130	-15,960
Aug. 1	4,121.30	74,170	-12,910
Sept. 1	4,119.33	61,260	-9,550
Oct. 1	4,117.67	51,710	-
Water year 1947-48	-	-	-55,490

Humboldt River near Rye Patch, Nev.

Location.- Water-stage recorder, lat. 40°27'30", long. 118°18'30", in NE¼ sec. 18, T. 30 N., R. 33 E., 1,000 feet downstream from Rye Patch Dam and 1½ miles northwest of Rye Patch.

Drainage area.- 13,700 square miles.

Records available.- October 1935 to September 1941, October 1943 to September 1948. January 1896 to December 1909, September 1910 to September 1922, and September 1924 to September 1932 (fragmentary) at site near Oreana, 7 miles downstream, published as Humboldt River near Oreana.

Average discharge.- 34 years (1899-1909, 1910-16, 1917-22, 1930-32, 1935-41, 1943-48), 205 second-feet.

Extremes.- Maximum daily discharge during year, 481 second-feet July 16; minimum daily, 1.8 second-feet Jan. 25 (gage height, 0.97 foot).
1896-1922, 1924-32, 1935-41, 1943-48: Maximum discharge, 3,050 second-feet May 12, 1897 (gage height, 12.0 feet, site and datum then in use); practically no flow during some periods in 1905, 1915, 1918-20, 1931-32, 1935-41, 1943-45.

Remarks.- Records good. Flow completely regulated by Rye Patch Reservoir (see preceding page) and slightly regulated by Humboldt (Pitt-Taylor) Reservoirs. Many diversions above station for irrigation.

0.9	0.8	1.4	24	2.2	145
1.0	2.3	1.5	34	2.8	269
1.1	4.6	1.6	46	3.2	367
1.2	9.0	1.7	60	3.7	507
1.3	16	1.9	91		

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	3.9	3.0	3.2	2.2	2.3	105	314	258	394	324	122
2	31	3.7	3.0	3.2	2.2	2.3	137	318	262	386	285	122
3	31	3.7	3.0	3.2	2.2	2.3	149	309	240	326	245	130
4	41	3.7	3.0	3.2	2.3	2.3	191	309	76	262	243	126
5	57	3.7	3.0	3.2	2.3	2.3	212	290	4.1	204	243	72
6	42	3.7	3.0	3.4	2.3	2.3	225	285	3.9	236	254	32
7	25	3.7	3.0	3.4	2.3	2.3	249	299	12	309	269	39
8	25	3.4	3.0	3.4	2.3	2.3	254	299	50	359	256	78
9	25	3.2	3.0	3.4	2.3	2.3	256	302	100	349	223	121
10	21	3.4	3.0	3.4	2.2	2.3	254	321	141	341	212	180
11	18	3.2	3.0	3.4	2.0	2.2	254	326	184	378	219	188
12	29	3.2	3.0	3.4	2.2	2.3	267	328	227	408	234	190
13	40	3.4	3.0	3.4	2.3	2.8	306	338	251	464	217	210
14	40	3.4	3.0	3.4	2.3	2.3	357	338	287	478	172	217
15	25	3.2	3.2	3.4	2.3	5.5	391	338	338	469	137	202
16	29	3.2	3.2	3.4	2.3	15	386	341	375	481	128	178
17	38	3.2	3.2	3.4	2.3	16	338	338	399	466	115	164
18	40	3.2	3.2	3.4	2.3	16	375	328	435	441	101	153
19	63	3.2	3.2	3.4	2.3	21	399	297	435	449	83	149
20	64	3.2	3.2	3.7	2.3	25	416	111	443	469	77	143
21	63	3.2	3.2	3.7	2.3	16	421	38	421	466	108	112
22	50	3.2	3.2	3.7	2.5	11	389	105	410	455	132	69
23	22	3.2	3.2	3.0	2.3	12	357	183	429	455	143	75
24	29	3.2	3.2	2.0	2.3	12	346	206	413	455	154	93
25	44	3.0	3.2	1.8	2.3	49	359	223	399	432	124	106
26	44	3.0	3.2	2.0	2.5	81	372	251	413	399	105	106
27	29	3.0	3.2	3.0	2.3	81	359	267	405	399	105	113
28	21	3.0	3.2	2.2	2.3	81	359	287	346	413	115	121
29	22	3.0	3.2	2.2	2.2	83	344	294	410	394	101	113
30	18	3.0	3.2	2.2	-	86	316	294	416	338	101	75
31	9.5	-	3.2	2.2	-	86	-	185	-	328	105	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,066.5	64	9.5	34.4	2,120
November	99.3	3.9	3.0	3.31	197
December	96.4	3.2	3.0	3.11	191
Calendar year 1947	56,057.6	554	3.0	154	111,200
January	95.3	3.7	1.8	3.07	189
February	66.2	2.5	2.0	2.28	131
March	729.1	86	2.2	23.5	1,450
April	9,143	421	105	305	18,130
May	8,462	341	38	273	16,780
June	8,583.0	443	3.9	286	17,020
July	12,203	481	204	394	24,200
August	5,330	324	77	172	10,570
September	3,799	217	32	127	7,540
Water year 1947-48	49,672.8	481	1.8	136	98,520

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Marys River below Hot Springs Creek, near Deeth, Nev.

Location.- Water-stage recorder, lat. 41°14', long. 115°17', in NW¼ sec. 25, T. 39 N., R. 59 E., 300 feet downstream from Hot Springs Creek, 7¼ miles north of Cross Ranch, and 12¼ miles north of Deeth.

Drainage area.- 415 square miles.

Records available.- October 1943 to September 1948.

Extremes.- Maximum discharge during year, 259 second-feet May 30, June 5; maximum gage height, 5.29 feet May 20; minimum, 0.2 second-foot Aug. 29 to Sept. 8.
1943-48: Maximum discharge, 676 second-feet May 9, 1945 (gage height, 5.99 feet); minimum, 0.2 second-foot Aug. 20-25, 1944, Aug. 29 to Sept. 8, 1948. Flood in January 1943 reached a stage of 7.2 feet, from floodmarks (discharge, 1,030 second-feet by slope-area method).

Remarks.- Records fair. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	3.8	11	13	15	27	41	122	183	30	1.2	0.2
2	1.5	3.6	11	12	16	27	35	122	165	27	1.2	.2
3	1.5	3.8	12	13	15	25	46	96	175	22	1.0	.2
4	1.5	4.0	14	14	14	*26	65	73	218	19	.9	.2
5	1.6	4.4	18	14	13	23	58	67	246	19	.9	.2
6	1.7	4.1	20	*15	13	19	47	71	226	18	.8	.2
7	1.6	4.1	18	16	13	20	38	82	224	16	.7	.2
8	1.9	4.4	16	17	14	16	30	105	238	16	.6	.2
9	1.9	4.4	14	18	14	22	26	129	218	22	.6	.3
10	2.3	4.2	13	17	14	16	29	125	189	20	.6	.3
11	2.5	*4.2	12	16	13	13	35	116	172	19	.5	.3
12	2.1	4.2	12	16	12	19	37	110	158	15	.5	.3
13	2.0	4.1	11	15	12	30	32	99	147	13	.4	.3
14	2.0	4.2	12	14	13	32	30	97	132	11	.4	.3
15	2.0	4.6	13	13	13	32	35	104	125	9.5	.4	.3
16	2.4	5.0	13	13	14	29	47	121	112	8.4	.4	.3
17	2.2	4.6	*13	12	14	29	62	139	100	7.4	.5	.3
18	2.2	4.6	14	12	14	28	89	169	84	6.0	.3	.6
19	2.5	4.8	15	11	15	29	120	206	72	5.0	.3	1.0
20	2.5	4.5	15	11	15	24	114	241	66	4.6	.3	.9
21	2.6	4	16	11	16	23	120	232	92	4.1	.3	.8
22	2.7	4	15	13	18	23	145	207	98	3.8	.3	.6
23	2.7	4	14	14	20	24	176	190	86	3.4	.3	.6
24	2.8	4.5	14	15	24	42	171	172	72	3.0	.3	.8
25	2.8	4.6	13	15	28	52	148	158	62	2.6	.3	1.6
26	2.9	4.6	13	14	30	50	130	168	51	2.5	.3	1.3
27	3.0	4.8	13	13	28	37	125	206	41	1.9	.3	1.2
28	3.0	5.2	14	13	28	30	112	226	34	1.7	.3	1.0
29	3.6	6.4	15	13	28	32	104	236	29	1.6	.2	1.0
30	3.6	7.6	15	*14	-	54	117	254	30	1.6	.2	1.0
31	3.5	-	14	15	-	52	-	226	-	1.4	.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	72.5	3.6	1.4	2.34	144
November	135.1	7.6	3.6	4.50	268
December	433	20	11	14.0	859
Calendar year 1947	11,685.9	195	.4	32.0	23,180
January	432	18	11	13.9	857
February	496	30	12	17.1	984
March	905	54	13	29.2	1,800
April	2,364	176	26	78.8	4,690
May	4,669	254	67	151	9,260
June	3,845	246	29	128	7,630
July	335.5	30	1.4	10.8	665
August	15.3	1.2	.2	.49	30
September	16.7	1.6	.2	.56	33
Water year 1947-48	13,719.1	254	.2	37.5	27,220

Peak discharge (base, 200 sec.-ft.).- May 20 (10 a.m.) 249 sec.-ft.; May 30 (4 to 6 a.m.) 259 sec.-ft.; June 5 (2 to 5 a.m.) 259 sec.-ft.
* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 20-24, Dec. 6 to Feb. 29.

Lamoille Creek near Lamoille, Nev.

Location.- Water-stage recorder, lat. 40°41'30", long. 115°28'30", in NE¼ sec. 6, T. 32 N., R. 58 E., at Lamoille Creek bridge at mouth of canyon, 300 feet downstream from Elko-Lamoille power plant and 3 miles south of Lamoille.

Drainage area.- 25 square miles.

Records available.- May 1915 to June 1923, October 1943 to September 1948.

Average discharge.- 11 years (1915-16, 1917-22, 1943-48), 44.3 second-feet.

Extremes.- Maximum discharge during year, 383 second-feet May 27; minimum, 3.2 second-feet Mar. 19.
1915-23, 1943-48: Maximum discharge, probably exceeded 500 second-feet in June 1917 when gage was washed out; minimum, 1 second-foot Jan. 24, 1918.

Remarks.- Records good except those for periods of ice effect, which are fair. Records include flow of McDermott ditch which diverts about 200 feet upstream from gage. Elko-Lamoille power plant diverts about 6 miles upstream but flow is returned to channel at power plant 300 feet upstream from station.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	7.4	9.2	7	7.5	*6.8	6.8	24	233	152	19	5.9
2	5.6	7.1	8.9	7	7.5	5.9	7.4	24	255	145	19	5.9
3	5.6	7.1	8.1	7.4	7.5	6	7.8	24	233	130	18	5.6
4	5.3	8.1	8.5	7.8	7	6	7.1	24	299	116	18	5.3
5	5.9	7.8	8.5	8.1	7	6	7.4	27	293	103	19	5.3
6	6.5	8.1	8.9	7.8	7	6.2	7.4	32	279	96	17	5.3
7	6.5	8.5	8.5	8.5	6.5	5.9	7.4	38	259	90	15	5.3
8	7.8	9.2	8.9	9.6	6.5	5.9	*7.1	38	259	89	14	5.0
9	7.1	9.2	8.9	8.5	6	5.9	7.8	38	275	86	14	5.0
10	9.2	8.5	8.5	8.1	6	5.6	7.8	38	264	83	13	5.0
11	9.6	8.5	8.9	7.1	6	6	8.1	37	254	82	12	4.7
12	8.9	7.8	8.5	6.8	5.5	6.2	8.1	38	267	79	12	4.7
13	7.8	7.4	8.5	6.5	5.5	5.9	8.9	44	271	72	12	4.4
14	6.8	8.9	8.1	7.1	5.5	5.9	10	57	257	66	11	4.2
15	6.8	8.9	8.1	7.1	6	5.9	11	73	253	64	11	4.2
16	7.8	8.9	*7.8	7.1	6	5.9	13	109	247	60	10	4.2
17	10	8.9	7.8	7.1	6	6.2	16	165	233	56	10	4.2
18	8.5	8.5	7.8	6.5	6	5.9	16	161	205	54	10	7.1
19	8.1	8.5	7.8	7.1	6	4.7	16	140	177	51	10	8.1
20	8.1	8.5	7.8	7.1	6	4.2	16	130	171	49	10	6.2
21	9.2	7.4	7.4	6.8	5.9	4.7	18	127	179	45	7.6	5.6
22	8.1	6.2	7.8	6.2	6.5	5.3	20	125	145	38	6.9	5.3
23	8.1	8.1	7.8	6.2	6.2	5.9	20	140	125	33	7.2	5.0
24	7.8	8.5	7.4	6.2	6.2	6.2	20	171	138	32	8.5	5.3
25	7.4	8.1	7.4	5.9	6.5	5.6	21	223	156	28	8.1	5.9
26	7.4	7.8	7.1	6	6.2	5.9	21	229	160	25	7.8	5.6
27	7.4	7.8	7.1	6.5	7.1	5.3	22	304	160	23	7.4	5.6
28	7.4	7.8	7.1	*7	7.1	6.2	23	294	162	22	7.1	5.6
29	7.8	8.1	7.1	7.5	7.4	6.2	26	239	164	25	6.8	5.3
30	7.8	8.5	6.5	7.5	-	6.2	25	210	149	24	6.5	5.0
31	7.1	-	6.5	7.5	-	6.2	-	216	-	23	6.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	233.0	10	5.3	7.52	462
November	244.1	9.2	6.2	8.14	484
December	247.2	9.2	6.5	7.97	490
Calendar year 1947	14,865.1	250	5.3	40.7	29,490
January	222.6	9.6	5.9	7.18	442
February	186.1	7.5	5.5	6.42	369
March	180.7	6.8	4.2	5.83	358
April	413.1	26	6.8	13.8	819
May	3,539	304	24	114	7,020
June	6,522	299	125	217	12,940
July	2,041	152	22	65.8	4,050
August	354.1	19	6.2	11.4	702
September	159.8	8.1	4.2	5.33	317
Water year 1947-48	14,342.7	304	4.2	39.2	28,450

Peak discharge (base, 310 sec.-ft.).- May 27 (7:30 p.m.) 383 sec.-ft.; June 12 (9 p.m.) 332 sec.-ft.

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 30 to Jan. 2, Jan. 26 to Feb. 20, Mar. 3-5, 11.

North Fork Humboldt River at Devils Gate, near Halleck, Nev.

Location.- Water-stage recorder, lat. 41°11', long. 115°29', in SE¼ sec. 13, T. 38 N., R. 57 E., 3 miles north of Devils Gate Ranch, 16 miles north of Halleck, and 26 miles upstream from mouth.

Drainage area.- 830 square miles.

Records available.- November 1913 to September 1921, October 1943 to September 1948.

Extremes.- Maximum discharge during year, 215 second-feet June 5 (gage height, 2.99 feet); minimum, 1.7 second-feet Aug. 19.
1913-21, 1943-48: Maximum discharge, 1,600 second-feet Mar. 2 or 3, 1921; minimum, 1 second-foot Aug. 20-28, Sept. 30, 1913.

Remarks.- Records good except those for periods of ice effect or doubtful gage-height record, which are fair. Many diversions above and below station.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.7	11	13	8	19	31	45	65	101	29	3.6	2.6
2	6.4	11	13	10	18	28	59	70	85	24	3.6	2.6
3	6.7	11	11	12	19	24	73	60	80	19	4.6	2.6
4	7.0	11	11	15	18	24	68	55	135	19	4.0	2.8
5	7.0	12	11	*19	19	25	55	50	204	17	4.0	2.8
6	7.0	10	11	22	18	25	45	45	190	16	3.8	2.8
7	7.0	10	11	23	18	27	39	45	148	12	3.6	3.0
8	7.5	10	10	21	18	22	36	46	125	12	3.6	3.0
9	7.5	10	9	19	19	26	35	55	134	9.5	3.4	3.0
10	8.5	10	8	18	20	23	45	72	124	9.0	3.0	3.2
11	8.5	*10	8	16	19	20	48	71	103	7.5	3.0	3.6
12	8.5	10	9	14	19	21	44	66	95	7.0	2.6	3.4
13	8.0	10	9	13	18	22	40	52	94	6.4	2.2	3.4
14	8.5	11	10	12	19	24	39	44	92	6.7	2.0	3.6
15	8.5	13	11	12	19	23	48	37	88	6.4	2.0	3.6
16	8.5	12	11	12	20	23	55	34	88	6.4	2.0	3.6
17	9.5	12	11	12	19	22	66	39	80	6.1	2.2	3.6
18	9.0	11	10	11	21	22	77	45	73	6.7	2.2	4.0
19	9.0	11	10	10	23	23	72	57	66	6.1	2.0	4.9
20	9.0	10	10	11	24	20	75	67	64	5.8	2.0	5.2
21	9.0	10	9	12	27	20	85	74	70	5.8	2.2	4.6
22	9.5	10	9	13	30	20	95	69	94	5.8	2.0	4.3
23	9.0	10	8	15	33	45	90	67	129	5.8	2.2	4.3
24	9.5	10	9	19	38	80	80	65	109	5.2	2.4	4.6
25	9.5	10	10	18	*42	65	75	49	86	5.2	2.4	5.5
26	9.5	11	10	18	41	58	70	43	67	4.0	2.4	5.8
27	9.5	11	10	17	40	54	65	42	54	4.0	2.4	6.1
28	10	*12	9	17	36	64	60	43	45	4.0	2.4	6.1
29	10	12	9	17	34	96	60	48	38	4.3	2.6	5.5
30	10	12	8	*17	-	82	65	69	33	4.0	2.4	5.8
31	10	-	7	18	-	*57	-	96	-	4.0	2.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	263.8	10	6.4	8.51	523
November	324	13	10	10.8	643
December	305	13	7	9.84	605
Calendar year 1947	8,459.3	128	2.6	23.2	16,780
January	471	23	8	15.2	934
February	708	42	18	24.4	1,400
March	1,116	96	20	36.0	2,210
April	1,809	95	35	60.3	3,590
May	1,740	96	34	56.1	3,450
June	2,894	204	33	96.5	5,740
July	283.7	29	4.0	9.15	563
August	85.2	4.6	2.0	2.75	169
September	119.9	6.1	2.6	4.00	238
Water year 1947-48	10,119.6	204	2.0	27.6	20,060

Peak discharge (base, 170 sec.-ft.).- June 5 (8:30 p.m.) 215 sec.-ft.
* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 6, 10, 12-15, 20-28, Dec. 3, 4, Dec. 7 to Jan. 8, Jan. 10 to Feb. 24, Feb. 27 to Mar. 6, Mar. 10-12, 21, 23-26. Doubtful gage-height record Apr. 20 to May 7; discharge computed on basis of records for nearby streams.

South Fork Humboldt River near Lee, Nev.

Location.- Water-stage recorder, lat. 40°34', long. 115°33', in SE¼ sec. 16, T. 31 N., R. 57 E., 400 feet downstream from Kleckner Creek and 2½ miles east of Lee.

Drainage area.- 54 square miles.

Records available.- February 1945 to September 1948.

Extremes.- Maximum discharge during year, 529 second-feet May 27 (gage height, 3.06 feet); minimum, 4.1 second-feet Sept. 14.
1945-48: Maximum discharge, 815 second-feet June 23, 1945 (gage height, 3.70 feet); minimum, 4.1 second-feet Sept. 24, 1946, Sept. 14, 1948.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.4	9.9	16	b10	15	*b12	*23	65	348	202	21	6.8
2	6.4	10	14	12	16	12	29	60	382	184	19	6.4
3	6.4	9.5	14	12	b15	b11	28	55	369	166	18	6.4
4	6.0	12	15	12	b14	b10	26	58	428	149	21	6.4
5	6.0	12	14	13	b15	b10	25	65	454	132	21	6.4
6	6.0	13	14	12	b14	11	25	80	443	121	18	6.4
7	6.0	13	14	13	b12	11	26	94	414	111	16	6.4
8	8.3	13	13	19	b11	11	26	87	410	105	16	6.0
9	7.6	13	b12	16	9.1	12	29	79	432	100	16	6.0
10	9.9	12	b11	15	9.1	b11	31	71	421	96	14	5.7
11	10	12	b10	13	b8.5	b11	29	72	421	91	12	5.2
12	9.1	*11	b9	b12	b8.5	b11	30	75	425	84	12	4.9
13	9.1	b11	b10	b11	9.5	11	34	89	425	80	12	4.9
14	8.7	13	12	b11	9.1	11	40	103	418	74	11	4.9
15	8.7	13	12	b11	8.7	11	45	127	404	68	11	4.6
16	8.7	13	*12	b10	9.1	12	55	187	386	63*	11	4.9
17	9.1	13	12	b10	9.1	12	71	255	359	59	10	5.5
18	8.7	13	12	b9.5	9.5	12	75	264	342	56	9.9	9.1
19	8.7	13	b12	b9.5	9.5	12	69	230	313	51	9.5	10
20	10	12	12	b9	9.5	11	74	202	291	48	9.5	7.2
21	11	12	12	b9.5	9.5	b12	84	187	316	46	9.5	6.4
22	9.9	b11	11	b11	12	13	87	171	276	43	9.1	6.0
23	10	b10	b11	12	11	16	75	189	246	41	9.1	6.0
24	9.9	b11	b10	12	b12	16	69	246	227	40	9.1	7.2
25	9.5	b12	b10	b12	b12	15	68	319	227	37	9.1	9.1
26	9.5	11	b10	b11	12	b15	60	379	232	34	8.7	8.3
27	9.5	12	b11	*b11	12	b17	59	436	227	31	8.3	8.0
28	9.1	12	11	b11	b12	20	66	439	232	31	8.3	8.0
29	9.9	13	10	b12	b12	22	72	386	230	29	8.0	7.6
30	9.9	14	b9	b12	-	20	69	352	221	26	7.6	7.2
31	9.5	-	b8	15	-	22	-	332	-	23	7.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	267.5	11	6.0	8.63	531
November	359.4	14	9.5	12.0	713
December	363	16	8	11.7	720
Calendar year 1947	21,626.8	369	5.7	59.3	42,900
January	368.5	19	9	11.9	731
February	325.7	16	8.5	11.2	646
March	413	22	10	13.3	819
April	1,499	87	23	50.0	2,970
May	5,754	439	55	186	11,410
June	10,319	454	221	344	20,470
July	2,421	202	23	78.1	4,800
August	381.9	21	7.2	12.3	757
September	197.9	10	4.6	6.60	393
Water year 1947-48	22,[illegible].9	454	4.6	61.9	44,960

Peak discharge (base, 450 sec.-ft.).- May 27 (7:30 p.m.) 529 sec.-ft.; June 4 (7 p.m.) 514 sec.-ft.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

South Fork Humboldt River near Elko, Nev.

Location.- Water-stage recorder, lat. 40°43'15", long. 115°49'50", in NW¼ sec. 30, T. 33 N., R. 55 E., a quarter of a mile upstream from head of canyon, 1.5 miles downstream from highway bridge, 9 miles upstream from mouth, and 10 miles southwest of Elko.

Drainage area.- 1,150 square miles.

Records available.- August 1896 to September 1922, October 1923 to September 1932, October 1936 to September 1948.

Average discharge.- 40 years (1896-1903, 1904-9, 1910-18, 1923-26, 1927-32, 1936-48), 131 second-feet.

Extremes.- Maximum discharge during year, 736 second-feet June 5 (gage height, 3.80 feet); no flow Aug. 31 to Sept. 16.
1896-1922, 1923-32, 1936-48: Maximum discharge, 2,400 second-feet Jan. 26, 1914, from rating curve extended above 1,200 second-feet; practically no flow during some periods in nearly every year since 1915.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Station is below all diversions except those of Hunter & Banks ranch, 3 miles downstream.

Revisions (water year).- W 1090: 1932.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	22	46	32	28	48	81	128	393	184	5.0	0
2	8.8	24	51	36	28	*47	93	122	400	170	3.6	0
3	9.4	27	43	40	*27	38	96	113	484	155	3.5	0
4	9.9	28	43	42	26	32	98	104	584	136	3.2	0
5	9.9	31	42	42	26	34	95	100	684	118	2.8	0
6	9.9	29	40	*44	26	36	91	102	644	105	8.8	0
7	9.9	28	38	46	24	43	81	111	600	96	6.2	0
8	11	29	36	48	24	40	80	120	556	88	7.0	0
9	12	30	34	50	26	40	77	122	552	75	6.2	0
10	14	*27	32	48	24	37	98	118	532	69	5.4	0
11	19	30	30	44	24	34	113	109	496	62	4.6	0
12	22	30	28	40	22	39	104	100	460	51	3.8	0
13	18	29	30	38	22	43	93	88	480	48	3.6	0
14	17	29	32	34	24	44	95	86	460	42	3.4	0
15	17	32	34	32	24	43	105	93	444	35	2.9	0
16	17	35	36	30	26	40	122	113	404	28	2.8	a0
17	17	36	38	28	28	46	134	166	366	21	2.4	a.5
18	16	35	*42	28	32	46	150	204	344	18	2.2	a1.5
19	16	36	40	26	36	50	146	207	341	22	1.6	a2.5
20	16	35	40	26	38	46	146	194	310	18	1.5	a3
21	17	34	38	28	42	42	150	182	355	19	1.3	3.0
22	19	32	38	30	46	50	166	152	320	20	1.2	3.2
23	20	32	36	32	48	69	166	142	291	21	1.0	2.6
24	20	34	36	32	46	77	152	152	245	17	1.6	2.4
25	20	36	36	30	44	75	144	197	223	17	1.2	5.0
26	20	36	38	28	46	68	134	269	217	15	1.0	8.8
27	20	36	34	22	48	68	124	348	210	12	.9	7.0
28	21	36	32	24	48	74	117	464	202	9.9	.7	6.6
29	22	38	28	28	48	85	122	464	192	9.9	.3	5.8
30	23	38	24	30	-	86	130	436	189	7.8	.1	5.4
31	23	-	22	30	-	80	-	404	-	7.0	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	502.2	23	7.4	16.2	996
November	954	38	22	31.8	1,890
December	1,117	51	22	36.0	2,220
Calendar year 1947	30,972.2	580	1.5	84.9	61,450
January	1,088	50	22	34.5	2,120
February	951	48	22	32.8	1,890
March	1,600	86	32	51.6	3,170
April	3,503	166	77	117	6,950
May	5,710	464	86	184	11,330
June	11,978	684	189	399	23,760
July	1,696.6	184	7.0	54.7	3,370
August	89.8	8.8	0	2.90	178
September	57.3	8.8	0	1.91	114
Water year 1947-48	29,226.9	684	0	79.9	57,990

Peak discharge (base, 410 sec.-ft.).- May 28 (3 to 4 p.m.) 504 sec.-ft.; June 5 (7 p.m.) 736 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for station near Lee.

Note.- Stage-discharge relation affected by ice Nov. 22-29, Dec. 7 to Feb. 29, Mar. 4-6.

Pine Creek near Palisade, Nev.

Location.- Water-stage recorder, lat. 40°35'30", long. 116°10'30", in SW¼ sec. 1, T. 31 N., R. 51 E. 1 mile upstream from mouth and 1½ miles southeast of Palisade. Prior to July 18, 1946, water-stage recorder at site 1,000 feet downstream at different datum.

Records available.- November 1902 to December 1904 (gage heights only), January 1912 to September 1914, January 1946 to September 1948.

Extremes.- Maximum discharge during year, 28 second-feet Jan. 9 (gage height, 1.54 feet); minimum, 0.1 second-foot July 12-19.
1912-14, 1946-48: Maximum discharge, 785 second-feet Jan. 25, 26, 1914; minimum, 0.1 second-foot July 6, 7, 13, 14, 1947, July 12-19, 1948.

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

Correction.- The mean discharge for calendar year 1946 has been corrected to 32.1 second-feet, superseding figure published in Water-Supply Paper 1090.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	11	*19	b12	b14	15	15	8.2	0.8	0.4	0.2	0.2
2	1.3	11	18	b16	15	*16	15	6.8	.8	.4	.2	.2
3	1.6	12	15	19	b13	15	15	6.8	.9	.3	.2	.2
4	1.5	12	16	18	b11	b14	14	4.3	.9	.3	.2	.2
5	1.2	13	16	20	b14	b13	11	1.5	.9	.3	.2	.2
6	1.2	b13	15	22	b13	16	10	1.5	.8	.3	.2	.2
7	1.3	13	14	22	b12	15	9.2	1.5	.8	.3	.2	.2
8	2.1	13	13	25	b12	15	8.8	1.5	1.0	.3	.2	.2
9	2.1	14	b12	25	b13	16	9.7	1.5	.9	.3	.2	.2
10	4.3	12	b10	21	b14	16	11	1.3	1.0	.3	.2	.2
11	6.5	13	b10	b17	b12	b15	11	1.3	.4	.3	.2	.2
12	4.5	13	b10	b15	b10	15	9.7	1.2	.2	.3	.2	.3
13	4.5	*b11	b11	b13	b11	15	8.8	1.1	.2	.1	.2	.3
14	6.5	12	b13	b12	b13	16	7.4	1.1	.3	.1	.2	.3
15	7.1	14	b13	b11	b15	15	6.8	1.0	.2	.1	.2	.3
16	7.1	15	b13	b12	17	15	6.2	.9	.2	.1	.2	.3
17	7.1	14	14	b11	18	16	6.5	.8	.2	.1	.2	.3
18	7.4	14	14	b11	20	18	6.5	.8	.2	.1	.2	.3
19	8.8	13	13	b10	19	18	6.5	.8	.3	.1	.3	.3
20	8.8	13	14	b11	18	16	6.5	.6	.3	.2	.3	.3
21	9.2	13	14	b12	19	14	6.5	.7	.9	.2	.3	.3
22	8.8	b12	14	b15	22	16	6.8	.8	.7	.2	.3	.3
23	9.7	b12	b13	17	22	17	6.2	.7	.7	.2	.3	.4
24	8.8	b13	b12	17	*17	18	5.5	.7	.7	.2	.2	.4
25	9.2	b13	b11	15	18	18	5.8	.8	.7	.2	.2	1.5
26	9.7	13	b11	b13	18	16	6.2	.8	.5	.2	.3	.9
27	10	14	b12	b11	16	16	6.5	.7	.5	.2	.2	.5
28	10	14	b13	b10	16	17	6.5	.7	.5	.2	.2	.4
29	11	15	b12	*b10	15	*16	6.2	.8	.5	.2	.2	.4
30	11	15	b11	b11	-	17	6.2	.8	.5	.2	.2	.4
31	11	-	*b10	b12	-	16	-	.8	-	.2	.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	194.5	11	1.2	6.27	386
November	390	15	11	13.0	774
December	406	19	10	13.1	805
Calendar year 1947	3,182.6	64	.1	8.72	6,300
January	466	25	10	15.0	924
February	447	22	10	15.4	887
March	491	18	13	15.8	974
April	255.0	15	5.5	8.50	506
May	50.8	6.8	.7	1.64	101
June	17.5	1.0	.2	.58	35
July	6.9	.4	.1	.22	14
August	6.8	.3	.2	.22	13
September	10.4	1.5	.2	.35	21
Water year 1947-48	2,741.9	25	.1	7.49	5,440

Peak discharge (base, 50 sec.-ft.).- No peak above base.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Rock Creek near Battle Mountain, Nev.

Location.- Water-stage recorder, lat. 40°51', long. 116°36', in NE¼ sec. 17, T. 34 N., R. 48 E., at mouth of canyon and 22 miles northeast of Battle Mountain.

Records available.- March 1918 to September 1923, 1924, 1925, 1927-29 (fragmentary), January 1946 to September 1948.

Extremes.- Maximum discharge during year, 134 second-feet Mar. 25 (gage height, 2.00 feet); no flow Oct. 1, 6, 7, July 5 to Sept. 26.
1918-25, 1927-29, 1946-48: Maximum discharge, 2,240 second-feet Feb. 11, 1921; no flow at times during October, July, August, and September nearly every year.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Several irrigation diversions in valleys upstream. Station is above all diversions in Boulder Flat and is below all tributaries. Flow slightly affected by small reservoir in Squaw Valley, 30 miles upstream.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.6	4.1	0.6	1.4	12	18	33	13	0.5		0
2	.1	.9	3.2	1.6	1.3	11	24	29	14	.6		0
3	.3	1.0	2.7	1.6	1.3	11	43	22	19	.5		0
4	.4	1.0	2.9	1.9	1.4	6.7	44	19	38	.1		0
5	.1	1.6	2.4	2.1	1.5	8.0	33	17	40	0		0
6	0	1.0	2.7	2.6	1.5	8.0	26	15	35	0		0
7	0	1.3	2.1	4.9	1.5	7.0	27	18	22	0		0
8	.6	1.0	2.1	5.8	1.5	7.7	22	26	14	0		0
9	.9	.8	2.1	12	1.5	8.6	19	30	9.9	0		0
10	1.2	.6	1.4	8.6	1.5	6.7	26	28	8.0	0		0
11	1.4	1.0	1.7	4.4	1.6	5.8	37	22	6.0	0		0
12	1.0	.8	1.0	2.4	1.7	6.7	35	24	4.9	0		0
13	.9	.6	.5	2.7	2.0	5.1	33	23	3.9	0		0
14	.6	.8	.9	2.7	2.3	3.7	33	22	3.0	0		0
15	.6	1.4	1.0	2.7	2.6	2.7	41	23	2.4	0		0
16	.6	2.4	.9	2.9	2.9	2.7	59	18	1.7	0		0
17	.6	3.2	.9	2.3	3.2	3.0	74	12	1.2	0		0
18	.8	3.4	1.3	1.7	4.9	2.7	97	8.9	1.0	0		0
19	.6	3.6	1.4	1.3	5.3	2.9	92	9.6	1.9	0		0
20	.5	2.0	1.6	1.3	12	2.6	82	11	2.4	0		0
21	.6	2.0	1.6	1.4	26	2.4	86	20	4.6	0		0
22	.6	1.3	1.6	1.4	28	4.2	92	24	7.7	0		0
23	.6	1.0	1.0	2.0	49	33	92	27	8.3	0		0
24	.6	.8	.9	5.1	56	44	78	24	7.0	0		0
25	.6	.9	.9	2.1	28	68	59	12	5.8	0		0
26	.5	1.0	.8	1.2	19	38	52	8.3	3.9	0		0
27	.5	1.6	.8	1.2	14	25	51	7.7	2.4	0		.4
28	.6	2.0	1.0	1.1	12	38	49	7.0	1.7	0		.4
29	.9	2.4	1.0	.9	20	45	47	8.6	1.0	0		.3
30	1.0	2.9	.9	1.0	-	45	38	8.9	.6	0		.1
31	.9	-	.9	1.3	-	38	-	9.9	-	0		-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	18.6	1.4	0	0.60	37
November	44.9	3.6	.6	1.50	89
December	48.3	4.1	.5	1.56	96
Calendar year 1947	2,341.2	111	0	6.41	4,640
January	84.8	12	.6	2.74	168
February	304.9	56	1.3	10.5	605
March	505.2	68	2.4	16.3	1,000
April	1,509	97	18	50.3	2,990
May	567.9	33	7.0	18.3	1,130
June	284.3	40	.6	9.48	564
July	1.7	.6	0	.05	3.4
August	0	0	0	0	0
September	1.2	.4	0	.04	2.4
Water year 1947-48	3,370.8	97	0	9.21	6,680

Peak discharge (base, 75 sec.-ft.).- Feb. 24 (9:30 a.m.) 108 sec.-ft.; Mar. 25 (10 a.m.) 134 sec.-ft.; Apr. 19 (1 to 2 a.m.) 110 sec.-ft.

Little Humboldt River at Chimney dam site, near Paradise Valley, Nev.

Location.- Water-stage recorder, lat. 41°24', long. 117°11', in NE¼ sec. 36, T. 41 N., R. 42 E., at Chimney dam site, 300 feet downstream from confluence of North and South Forks and 25 miles east of Paradise Valley.

Records available.- October 1941 to September 1948.

Extremes.- Maximum discharge during year, 112 second-feet Apr. 19 (gage height, 4.02 feet); no flow during most of October, July, August, and September.
1941-48: Maximum discharge, 4,000 second-feet about Jan. 22, 1943 (gage height, 14.4 feet, from floodmarks), by slope-area method; no flow for several days in 1942, 1945, 1946, 1947, 1948.

Remarks.- Records good except those for periods of ice effect, which are fair. Several small diversions above and below station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	.5	2.3	2.0	.6	8.3	30	44	30	4.1	0	.3
2	0	.5	2.3	2.0	.6	7.7	58	40	27	3.8	0	.3
3	0	.4	2.1	2.0	.6	6.5	87	37	28	3.7	0	.3
4	0	.9	2.4	2.0	.6	9.8	72	35	32	3.9	0	.3
5	0	1.3	*2.0	2.0	.6	6.6	39	35	38	3.8	0	.3
6	0	1.1	1.8	2.0	.6	6.6	29	36	37	3.4	0	.3
7	0	1.1	1.9	2.6	*.6	7.2	26	42	30	3.1	0	3
8	0	1.2	2.1	*3.1	.6	8.1	22	53	27	3.2	0	3
9	0	.9	1.8	5.7	.6	*8.1	18	53	24	3.4	0	.3
10	0	.8	.9	8.7	.6	6.5	26	48	22	3.2	0	.2
11	0	1.4	1.3	6.1	1.2	5.8	32	42	19	3.1	0	.2
12	0	1.3	.8	7.0	1.4	5.9	25	40	16	2.9	0	.1
13	0	1.0	1.3	5.7	2.4	6.6	22	39	15	2.6	0	.1
14	0	1.4	1.7	4.9	2.0	8.3	26	40	14	2.5	0	.1
15	0	1.8	1.1	3.4	3.8	6.5	33	41	13	2.3	0	0
16	0	1.7	1.7	3.5	7.2	6.6	52	41	12	2.0	0	0
17	0	1.7	1.7	3.2	5.6	7.5	68	41	11	1.9	0	0
18	0	1.9	1.8	2.4	6.1	6.8	90	42	9.2	1.4	0	0
19	0	1.9	2.3	2.5	20	7.2	98	48	10	.6	0	0
20	0	1.9	2.5	2.4	15	5.9	76	50	12	.1	0	0
21	0	1.6	2.5	2.4	10	5.9	70	46	12	0	.3	0
22	0	1.0	2.4	2.7	9.8	8.3	70	44	12	0	.4	0
23	0	.9	1.7	3.2	11	8.8	67	43	11	0	.4	0
24	0	1.3	1.5	3.1	9.6	9.0	56	38	9.6	0	.5	0
25	0	1.4	1.6	.6	9.4	20	46	36	8.1	0	.5	0
26	0	1.6	1.9	.6	9.2	25	43	36	7.0	0	.4	0
27	0	2.3	2.3	.6	6.8	15	42	37	5.8	0	.4	0
28	0	2.3	3.5	.6	7.2	14	39	37	5.1	0	.4	0
29	0	2.1	3.0	.6	8.7	34	40	38	4.5	0	.4	0
30	0	2.1	1.5	.6	-	82	48	36	4.7	0	.3	0
31	.4	-	2.0	.6	-	50	-	34	-	0	.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0.4	0.4	0	0.01	0.8
November	41.3	2.3	.4	1.38	82
December	59.7	3.5	.8	1.93	118
Calendar year 1947	2,839.3	82	0	7.78	5,630
January	88.8	8.7	.6	2.86	176
February	152.4	20	.6	5.26	302
March	394.5	62	5.8	12.7	782
April	1,450	98	18	48.3	2,880
May	1,272	53	34	41.0	2,520
June	506.0	38	4.5	16.9	1,000
July	55.0	4.1	0	1.77	109
August	4.3	.5	0	.14	8.5
September	3.4	.3	0	.11	6.7
Water year 1947-48	4,027.8	98	0	11.0	7,980

Peak discharge (base, 80 sec.-ft.).- Apr. 3 (5:30 a.m.) 106 sec.-ft.; Apr. 19 (5 a.m.) 112 sec.-ft.
* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 31 to Jan. 6, Jan. 25 to Feb. 10.

Little Humboldt River near Paradise Valley, Nev.

Location.- Water-stage recorder, lat. 41°25', long. 117°22', in SE¼ sec. 20, T. 41 N., R. 41 E., 3⅔ miles downstream from Bullshead Ranch and 9½ miles southeast of Paradise Valley. Prior to Nov. 21, 1946, at site 1 mile downstream.

Drainage area.- 1,030 square miles.

Records available.- October 1921 to June 1928 (fragmentary), October 1943 to September 1948.

Extremes.- Maximum discharge during year, 62 second-feet June 4 (gage height, 2.34 feet); minimum daily, 6.1 second-feet on several days in August.
1921-28, 1943-48: Maximum discharge, 500 second-feet Feb. 23, 1927 (gage height, 12.1 feet, datum then in use), from rating curve extended above 150 second-feet; minimum, 5 second-feet Dec. 28, 1924.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Bullshead Ranch diverts water above station for irrigation. Station is above all diversions in Paradise Valley.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	7.2	7.6	7.2	7.2	7.6	29	35	35	a9.0	6.4	6.8
2	7.2	7.6	7.6	9.4	7.2	7.9	26	38	30	a9.0	6.4	6.8
3	7.2	7.6	7.6	9.0	7.2	7.9	29	37	30	8.7	6.4	6.8
4	7.2	7.6	7.9	9.0	7.2	7.2	30	36	36	7.9	6.1	6.4
5	7.2	7.6	7.9	8.7	7.2	7.2	37	32	39	7.9	6.4	6.4
6	7.2	7.6	7.9	8.3	7.2	7.2	35	31	35	7.9	6.4	6.8
7	7.2	7.6	7.9	8.3	7.2	8.3	28	31	36	7.9	6.4	6.8
8	7.2	7.6	7.9	8.3	7.6	8.3	25	35	36	7.9	6.4	6.8
9	7.2	7.6	7.6	8.3	7.6	8.3	23	39	30	7.9	6.4	6.8
10	7.2	7.6	7.6	8.3	7.9	7.9	21	43	27	7.6	6.4	6.8
11	7.2	7.6	7.6	7.9	7.9	7.6	23	42	25	7.6	6.4	6.8
12	7.2	7.6	7.6	7.9	7.6	7.6	27	39	23	7.6	6.1	6.8
13	7.2	7.6	7.6	7.9	7.2	7.9	25	37	20	7.6	6.1	6.8
14	7.2	7.9	7.6	7.6	7.2	7.9	22	37	19	7.6	6.1	6.8
15	7.2	7.9	7.6	7.6	7.6	7.9	22	33	17	7.6	6.1	6.8
16	7.2	7.9	7.6	7.6	7.6	8.3	26	35	18	7.2	6.1	6.8
17	7.2	7.6	7.6	7.6	7.6	8.3	31	35	17	7.2	6.4	7.2
18	7.2	7.6	7.6	7.6	7.6	8.3	38	35	14	6.8	6.1	7.2
19	7.2	7.6	7.6	7.6	7.2	8.3	44	39	14	6.8	6.1	7.2
20	7.2	7.6	7.6	7.2	7.2	7.9	52	42	15	6.8	6.4	6.8
21	7.2	7.6	7.6	7.6	9.0	7.9	55	45	a15	6.8	6.1	6.8
22	7.2	7.6	7.9	7.6	11	8.3	55	50	a15	6.8	6.1	6.8
23	7.2	7.6	7.9	7.6	9.0	8.3	55	44	a14	6.8	6.1	6.8
24	7.2	7.6	7.9	7.6	7.9	9.0	54	40	a13	6.8	6.1	6.8
25	7.2	7.6	7.9	7.6	8.3	9.4	50	37	a12	6.4	6.4	6.8
26	7.2	7.6	7.9	7.6	8.7	13	43	35	a11	6.4	6.4	6.8
27	7.2	7.6	7.9	7.2	8.7	17	37	32	a10	6.4	6.8	6.8
28	7.2	7.6	7.9	7.2	7.9	14	36	32	a9.0	6.4	6.8	6.8
29	7.2	7.6	7.9	7.2	7.9	16	36	32	a9.0	6.4	6.8	7.2
30	7.2	7.6	7.6	7.2	-	18	33	35	a9.0	6.4	6.4	7.2
31	7.2	-	7.6	7.2	-	26	-	37	-	6.8	6.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	223.2	7.2	7.2	7.20	443
November	228.5	7.9	7.2	7.62	453
December	239.5	7.9	7.6	7.73	475
Calendar year 1947	4,480.8	45	6.4	12.3	8,880
January	242.9	9.4	7.2	7.84	482
February	226.6	11	7.2	7.55	449
March	304.7	26	7.2	9.83	604
April	1,047	55	21	34.9	2,080
May	1,150	50	31	37.1	2,280
June	633.0	39	9.0	21.1	1,260
July	226.9	9.0	6.4	7.32	450
August	196.0	6.8	6.1	6.32	389
September	205.2	7.2	6.4	6.84	407
Water year 1947-48	4,923.5	55	6.1	13.5	9,770

Peak discharge (base, 35 sec.-ft.).- Apr. 5 (6 to 8 p.m.) 38 sec.-ft.; Apr. 22 (3 to 4 p.m.) 58 sec.-ft.; May 13 (10 p.m.) 43 sec.-ft.; May 22 (10 to 11 a.m.) 51 sec.-ft.; June 4 (1:30 p.m.) 62 sec.-ft.

a No gage-height record; discharge computed on basis of records for station at Chimney dam site, near Paradise Valley.

Martin Creek near Paradise Valley, Nev.

Location.- Water-stage recorder, lat. 41°32'00", long. 117°25'40", in NW¼SW¼ sec. 12, T. 42 N., R. 40 E., 0.6 mile upstream from Humboldt County Fish Hatchery and 7 miles northeast of Paradise Valley.

Drainage area.- 172 square miles.

Records available.- October 1921 to September 1948.

Average discharge.- 25 years (1921-26, 1927-48), 27.8 second-feet.

Extremes.- Maximum discharge during year, 201 second-feet Jan. 7 or 8 (gage height, 2.50 feet), from rating curve extended above 130 second-feet; minimum, 4.7 second-feet Aug. 4-8, 17, 19.

1921-48: Maximum discharge, 9,000 second-feet Jan. 21, 1943 (gage height, 11.1 feet, datum then in use), by slope-area method; minimum, 1.8 second-feet Feb. 6, 1945.

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

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	6.8	19	7.5	9.7	11	51	65	86	20	5.4	5.8
2	5.4	7.2	15	9.5	9.7	11	75	59	87	19	5.4	5.8
3	5.4	7.2	12	15	9.7	8.6	55	56	107	18	5.4	5.8
4	5.4	8.0	10	20	8.0	9.2	32	56	107	17	5.0	5.8
5	5.4	8.6	9.2	35	8.0	9.7	27	59	109	16	5.0	5.8
6	5.4	7.5	8.0	90	7.2	12	26	75	92	14	5.0	5.8
7	5.4	8.0	7.5	110	7.2	11	21	104	86	14	5.0	5.8
8	5.8	8.0	9.2	74	7.2	11	23	97	78	12	5.0	5.4
9	5.8	8.0	8.0	32	9.2	11	25	81	83	11	5.4	5.4
10	6.1	8.0	7.5	28	9.2	9.2	31	75	76	11	5.4	5.4
11	6.8	8.0	7	22	7.2	8.6	30	72	69	10	5.4	5.4
12	6.4	8.0	6.5	18	6.8	11	29	70	63	9.7	5.4	5.4
13	6.4	7.2	6	15	7.5	12	34	81	59	9.7	5.4	5.4
14	6.4	9.7	6	13	9.7	13	48	84	53	9.2	5.4	5.4
15	6.4	9.7	6.5	15	10	11	78	87	50	8.0	5.4	5.4
16	6.8	10	6	17	10	11	89	97	46	8.0	5.0	5.4
17	7.2	9.7	6	13	19	12	146	106	42	7.5	5.0	5.8
18	6.8	9.7	6.5	10	26	12	119	112	40	7.2	5.0	6.4
19	6.8	9.2	6	8	14	12	97	114	46	6.8	5.0	6.8
20	6.8	8.0	8.5	9	12	9.7	95	94	42	6.8	5.0	6.1
21	6.8	8.6	9	14	11	11	99	89	47	6.8	5.0	6.1
22	6.8	7	10	28	22	13	95	92	38	6.4	5.4	5.8
23	6.8	6	9	15	15	22	83	86	34	6.1	5.4	5.8
24	6.8	7	8	12	11	40	72	89	31	6.1	5.8	6.1
25	6.8	8	9	9.7	11	27	69	102	28	5.8	5.8	6.4
26	6.8	9	10	6.8	12	17	65	114	26	5.8	5.8	6.4
27	6.8	11	11	8.0	13	21	59	123	25	5.8	5.8	6.4
28	6.8	13	11	7.5	11	50	60	123	23	5.4	5.8	6.1
29	7.2	15	12	9.2	10	49	72	107	22	5.8	5.8	6.1
30	7.2	17	9	11	-	38	69	97	20	5.8	5.8	6.1
31	6.8	-	6.5	10	-	22	-	87	-	5.4	5.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	197.9	7.2	5.4	6.38	393
November	268.1	17	6	8.74	532
December	274.9	19	6	8.87	545
Calendar year 1947	6,293.9	78	4.2	17.2	12,480
January	692.2	110	6.8	22.3	1,370
February	323.3	26	6.8	11.1	641
March	526.0	50	8.6	17.0	1,040
April	1,874	146	21	62.5	3,720
May	2,753	123	56	88.8	5,460
June	1,715	109	20	57.2	3,400
July	300.1	20	5.4	9.68	595
August	166.2	5.8	5.0	5.36	330
September	175.6	6.8	5.4	5.85	348
Water year 1947-48	9,266.3	146	5.0	25.3	18,370

Peak discharge (base, 100 sec.-ft.).- Jan. 7 or 8 (time unknown) 201 sec.-ft.; Mar. 28 (11 p.m.) 138 sec.-ft.; Apr. 12 (12:15 a.m.) 184 sec.-ft.; Apr. 17 (7 p.m.) 188 sec.-ft.; May 7 (5:30 a.m.) 109 sec.-ft.; May 19 (5 to 6:30 a.m.) 119 sec.-ft.; May 28 (3 to 5 a.m.) 132 sec.-ft.; June 5 (4 to 5 a.m.) 125 sec.-ft.

Note.- No gage-height record Nov. 22 to Dec. 4, Dec. 10 to Jan. 7, Jan. 10-22; discharge computed on basis of recorded range in stage and records for nearby streams.

Cottonwood Creek at Paradise Valley, Nev.

Location.- Water-stage recorder, lat. 41°31'00", long. 117°32'30", in NW¼ sec. 25, T. 42 N., R. 39 E., at highway bridge, 300 feet west of Paradise Valley Post Office.

Drainage area.- 62 square miles.

Records available.- October 1944 to September 1948.

Extremes.- Maximum discharge during year, 88 second-feet Jan. 8 (gage height, 1.52 feet); minimum daily, 0.1 second-foot on numerous days in winter.
1944-48: Maximum discharge, 264 second-feet Dec. 28, 1945 (gage height, 2.14 feet); minimum daily, 0.1 second-foot Dec. 31, 1946, Aug. 17, 18, Sept. 2-6, 1947, and numerous days in winter of 1947-48.

Remarks.- Records fair. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.1	0.1	0.1	0.4	0.5	2.2	4.2	14	2.5	0.3	0.3
2	.2	.1	.1	.1	.4	.5	4.6	3.3	8.8	1.9	.3	.3
3	.2	.1	.1	.1	.4	.7	5.0	2.2	16	1.9	.3	.2
4	.2	.1	.1	.3	.4	.7	1.3	3.7	34	1.9	.3	.3
5	.2	.1	*.1	.7	.4	.5	.4	6.3	36	1.0	.4	.2
6	.2	.1	.1	.5	.4	.4	.3	12	25	.7	.4	.2
7	.2	.1	.1	22	*.4	.4	.3	16	25	1.0	.3	.2
8	.2	.1	.1	34	.4	.4	.3	13	22	1.0	.3	.2
9	.2	.1	.1	9.3	.4	*.4	.3	8.8	22	1.3	.4	.2
10	.2	.1	.1	5.8	.4	.4	.3	6.3	16	1.3	.3	.2
11	.2	.1	.1	2.2	.4	.4	.3	6.3	12	1.3	.3	.2
12	.2	.1	.1	2.2	.4	.3	.3	4.6	9.9	1.3	.2	.2
13	.2	.1	.1	2.2	.4	.3	.3	5.0	8.2	1.0	.3	.2
14	.2	.1	.1	1.3	.4	.4	.3	7.7	6.7	1.0	.3	.2
15	.2	.1	.1	3.3	.4	.3	.5	11	4.2	1.0	.3	.2
16	.2	.1	.1	1.0	.7	.2	8.2	13	3.3	1.0	.3	.2
17	.1	.2	.1	1.0	.5	.2	25	17	2.5	1.0	.3	.2
18	.1	.2	.1	1.0	.4	.2	18	25	3.7	1.0	.3	.2
19	.1	.2	.1	1.0	.4	.2	15	28	4.2	.7	.3	.2
20	.1	.1	.1	1.0	.3	.2	18	18	1.9	.7	.3	.2
21	.1	.1	.1	1.0	.4	.5	18	19	2.9	.7	.3	.2
22	.1	.2	.1	1.0	1.3	9.3	16	24	2.9	.5	.3	.2
23	.1	.2	.1	*.5	1.3	17	10	20	2.9	.4	.3	.2
24	.1	.2	.1	.5	.7	12	6.3	19	2.9	.4	.3	.2
25	.1	.2	.1	.4	.7	13	4.2	22	2.5	.4	.3	.2
26	.1	.2	.1	.4	.4	7.7	3.7	26	2.9	.4	.3	.2
27	.1	.1	.1	.4	.3	2.5	2.9	33	2.5	.4	.4	.2
28	.1	.1	.1	.4	.4	2.5	5.0	34	2.5	.5	.3	.2
29	.1	.1	.1	.4	.4	4.6	9.3	29	2.9	.4	.4	.2
30	.1	.1	.1	.4	-	2.9	8.2	26	2.5	.4	.4	.2
31	.1	-	.1	.4	-	1.3	-	22	-	.3	.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	4.7	0.2	0.1	0.15	9.3
November	3.8	.2	.1	.13	7.5
December	3.1	.1	.1	.10	6.1
Calendar year 1947	411.4	13	.1	1.13	818
January	94.9	34	.1	3.06	188
February	14.2	1.3	.3	.49	28
March	80.9	17	.2	2.61	160
April	184.5	25	.3	6.15	366
May	485.4	34	2.2	15.7	963
June	302.8	36	1.9	10.1	601
July	29.3	2.5	.3	.95	58
August	9.8	.4	.2	.32	19
September	6.3	.3	.2	.21	12
Water year 1947-48	1,219.7	36	.1	3.33	2,420

Peak discharge (base, 50 sec.-ft.).- Jan 8 (2 a.m.) 88 sec.-ft.; June 4 (7:30 p.m.) 70 sec.-ft.
* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 10-15, Dec. 30 to Jan. 3, Jan. 16 to Feb. 14.

Humboldt-Lovelock Irrigation, Light & Power Co.'s feeder canal near Imlay, Nev.

Location.- Water-stage recorder, lat. 40°40', long. 118°12', in NE¼ sec. 1, T. 32 N., R. 33 E., 3 miles northwest of Imlay and 9 miles downstream from head gates.
Records available.- October 1946 to September 1948.
Extremes.- No flow during year.
1946-48: Maximum discharge, 102 second-feet Feb. 27, Mar. 9, 1947; maximum gage height, 3.50 feet Feb. 9, 1947 (backwater from ice); no flow for long periods.
Remarks.- No flow since May 15, 1947. This canal diverts water from Humboldt River in NW¼ sec. 29, T. 33 N., R. 35 E., for storage in Taylor-Pitt Reservoir near Humboldt. Water is released during irrigation season, about 3 miles west of Humboldt, and conveyed through Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal to Rye Patch Reservoir, from which it is later released and carried in natural river channel to Lovelock district for irrigation. Figures for calendar year 1947 are as follows: total second-foot-days, 5,002.9; maximum daily discharge, 101 second-feet; minimum daily, no flow; mean, 13.7 second-feet; runoff, 9,920 acre-feet.

PYRAMID AND WINNEMUCCA LAKES BASIN

Franktown Creek at Franktown, Nev.

Location.- Water-stage recorder, lat. 39°16', long. 119°51', in sec. 9, T. 16 N., R. 19 E., half a mile west of Franktown and 3 miles upstream from Washoe Lake.
Records available.- April to September 1948.
Extremes.- Maximum discharge during period April to September 1948, 65 second-feet May 6 (gage height, 2.37 feet); minimum daily, 1.0 second-foot Sept. 14, 15.
Remarks.- Records good. Small diversions on tributaries above station for irrigation. During summer, flow sometimes supplemented by diversion from North Creek, a tributary to Lake Tahoe.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	24	18	14	2.6	1.4
2							-	23	18	13	2.6	1.3
3							-	24	18	12	2.6	1.2
4							-	29	16	11	2.5	1.2
5							-	34	14	9.5	2.5	1.2
6							-	42	14	9.5	2.5	1.4
7							-	28	14	9.0	2.4	1.4
8							-	21	16	8.3	2.5	1.4
9							-	19	19	8.0	2.5	1.4
10							-	22	18	8.0	2.5	1.4
11							-	23	16	7.4	2.4	1.2
12							-	22	16	7.2	2.1	1.1
13							-	25	14	6.9	2.0	1.2
14							-	21	13	6.5	1.9	1.0
15							-	25	9.0	6.1	1.6	1.0
16							-	27	8.5	6.1	1.6	1.1
17							-	25	7.8	5.6	1.6	1.2
18							38	29	7.8	5.6	1.7	1.5
19							31	26	8.0	5.2	1.7	1.7
20							36	26	8.3	4.8	1.8	1.6
21							34	24	8.3	4.2	1.6	1.5
22							29	18	7.6	3.8	1.7	1.7
23							24	18	6.9	3.7	2.4	1.7
24							23	18	6.5	3.4	2.1	2.0
25							36	16	6.3	3.1	2.0	2.5
26							25	18	10	2.9	1.7	2.5
27							39	21	13	2.9	1.6	2.5
28							35	23	12	3.1	1.5	2.5
29							23	22	12	3.1	1.4	2.6
30							23	27	12	3.0	1.4	2.5
31							-	20	-	2.9	1.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April 18-30	396	39	23	30.5	785
May	740	42	16	23.9	1,470
June	368.0	19	6.3	12.3	730
July	199.8	14	2.9	6.45	396
August	62.5	2.6	1.4	2.02	124
September	47.9	2.6	1.0	1.60	95
The period	-	-	-	-	-

Peak discharge (base, 50 sec.-ft.).- Apr. 20 (6:30 p.m.) 58 sec.-ft.; Apr. 25 (4:30 p.m.) 59 sec.-ft.; Apr. 27 (5 p.m.) 63 sec.-ft.; May 6 (7 p.m.) 65 sec.-ft.

Pyramid Lake near Nixon, Nev.

Location.- Bench mark N 21 of U. S. Coast and Geodetic Survey, lat. 39°50'30", long. 119°28'00", in SE¼SE¼ sec. 24, T. 23 N., R. 22 E., at southwest corner of concrete bridge No. 296 B, 150 feet southwest of milepost 297, 11.5 miles south along Southern Pacific Railroad from station at Sutcliffe, and 6 miles west of Nixon. Elevation of bench mark is 3,940.04 feet above mean sea level, datum of 1929.
Records available.- 1867 to 1925 (occasional elevations in some years). June 1926 to September 1948. Prior to January 1934, elevations were determined from bench mark No. 1 of General Land Office referred to general adjustment of 1912. To convert lake elevations prior to January 1934 to datum of 1929, add 0.56 foot.
Extremes.- 1926-48: Maximum elevation observed, 3,848.5 feet, datum of 1929, June 1926; minimum observed, 3,809.68 feet Mar. 8, 1948.
Cooperation.- Records furnished by Office of Indian Affairs, and Federal Court Watermaster for Truckee River.

Elevation, in feet, above mean sea level, water year 1947-48

Oct. 30	3,811.05	Feb. 25	3,809.72
Jan. 20	3,809.87	Mar. 8	3,809.68

Truckee River near Truckee, Calif.

Location.- Water-stage recorder, lat. 39°17'30", long. 120°12'30", in SW¼NE¼ sec. 28, T. 17 N., R. 16 E., 1.4 miles upstream from Donner Creek and 2½ miles southwest of Truckee.
Drainage area.- 548 square miles.
Records available.- December 1944 to September 1948.
Extremes (regulated).- Maximum discharge during year, 708 second-feet Oct. 16 (gage height, 2.75 feet); minimum, 11 second-feet Jan. 27.
1944-48: Maximum discharge, 1,110 second-feet Feb. 2, 1945 (gage height, 3.34 feet); minimum, that of Jan. 27, 1948.
Remarks.- Records excellent. Flow regulated by Lake Tahoe.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	389	334	325	163	38	261	274	157	252	183	468	374
2	389	320	325	228	38	256	261	166	349	150	468	369
3	389	292	320	205	42	261	256	190	404	130	462	374
4	389	296	325	296	34	256	310	244	334	110	457	374
5	389	292	325	224	37	261	301	306	265	132	457	374
6	389	287	320	157	37	261	287	430	301	201	457	379
7	399	292	325	377	b37	261	274	354	349	256	457	379
8	410	292	330	334	38	261	252	244	389	287	457	379
9	404	292	325	194	38	256	180	208	415	306	451	379
10	420	283	330	150	67	256	163	212	354	330	446	379
11	410	283	325	94	b86	261	163	236	334	330	446	379
12	379	283	320	85	b110	256	180	261	315	320	446	379
13	369	278	320	78	b110	261	170	354	287	310	451	379
14	379	278	320	74	112	261	183	334	283	310	446	384
15	379	287	320	71	110	261	208	354	261	183	446	379
16	529	287	320	69	110	261	261	425	248	157	446	374
17	415	287	320	67	102	261	563	389	244	115	441	379
18	384	287	320	63	102	256	374	301	236	349	451	384
19	379	287	320	54	130	252	292	236	232	349	457	389
20	384	292	320	43	154	248	306	205	248	369	425	384
21	389	301	320	42	166	248	292	187	256	399	399	384
22	379	310	320	42	194	252	240	194	228	394	394	384
23	379	310	320	*43	180	252	194	220	216	394	404	384
24	369	320	320	43	190	256	190	349	232	420	399	389
25	379	320	320	43	*201	244	248	436	232	462	394	389
26	374	320	310	37	201	244	244	489	236	473	394	384
27	369	320	265	40	224	252	287	441	228	473	389	379
28	379	320	270	43	252	252	287	339	212	473	379	379
29	359	320	265	42	252	240	232	278	212	468	374	384
30	330	320	265	39	-	236	180	256	198	468	369	334
31	330	-	244	38	-	240	-	228	-	468	374	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	12,010	529	330	387	23,820
November	8,990	334	278	300	17,830
December	9,674	330	244	312	19,190
Calendar year 1947	104,894	529	67	287	208,100
January	3,478	377	37	112	6,900
February	3,392	252	34	117	6,730
March	7,884	261	236	254	15,640
April	7,652	563	163	255	15,180
May	9,023	489	157	291	17,900
June	8,350	415	198	278	16,560
July	9,769	473	110	315	19,380
August	13,304	468	369	429	26,390
September	11,360	389	334	379	22,530
Water year 1947-48	104,886	563	34	287	208,000

Peak discharge (base, 700 sec.-ft.).- Oct. 16 (4 p.m.) 708 sec.-ft.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Truckee River at Reno, Nev.

Location.- Water-stage recorder, lat. 39°32', long. 119°47', in sec. 12, T. 19 N., R. 19 E., half a mile east of Reno and 5 miles upstream from Steamboat Creek.

Records available.- January 1947 to September 1948. July 1906 to September 1919 at site 1 mile upstream at different datum.

Extremes.- 1947: Maximum discharge during period January to September, 1,840 second-feet Feb. 12 (gage height, 4.58 feet); minimum, 56 second-feet Aug. 5.
1947-48: Maximum discharge during water year, 1,700 second-feet June 9 (gage height, 4.42 feet); minimum, 72 second-feet July 22.
1906-19, 1947-48: Maximum discharge observed, 14,600 second-feet Mar. 18, 1907 (gage height, 8.2 feet, site and datum then in use); minimum observed, 18 second-feet July 2, 3, 1912.

Remarks.- Records excellent except those below 200 second-feet which are good, and those for period of no gage-height record, which are fair. Flow regulated by Lake Tahoe, Boca Reservoir, Donner and Independence Lakes, and by several power plants. Many diversions above station.

Rating table, Jan. 1, 1947, to Sept. 30, 1948 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Aug. 21 to Sept. 30, 1948)

1.7	114	2.3	303	3.0	650
1.9	167	2.5	390	3.5	970
2.1	230	2.8	540	4.2	1,510

Discharge, in second-feet, 1947-48
1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				510	400	425	415	400	223	185	145	164
2				450	405	584	385	634	200	164	153	164
3				500	405	520	395	828	167	159	167	207
4				595	400	470	385	861	161	164	145	214
5				578	400	505	336	783	153	153	150	161
6				500	400	480	292	764	188	150	150	153
7				450	395	490	292	764	217	150	145	159
8				450	385	490	280	634	207	139	145	164
9				455	390	465	303	465	234	132	145	170
10				445	410	584	276	358	173	134	150	170
11				455	400	562	234	288	159	167	161	194
12				440	1,170	510	248	234	164	142	161	197
13				445	991	530	248	188	153	147	170	182
14				455	716	540	292	197	170	145	194	185
15				465	510	530	344	207	150	161	185	182
16				500	495	540	332	230	156	150	170	182
17				530	465	568	450	276	142	147	161	179
18				530	440	530	353	303	132	139	161	197
19				500	445	485	336	273	147	129	164	210
20				568	445	475	353	376	145	126	159	210
21				480	440	475	376	390	153	139	167	220
22				460	435	490	a360	400	139	136	176	220
23				465	425	590	a260	385	124	139	173	223
24				460	420	485	a190	332	126	145	167	220
25				430	415	445	a195	324	147	147	164	214
26				435	415	440	a200	276	145	153	161	214
27				455	405	400	a210	240	134	161	161	217
28				445	405	385	217	214	139	161	156	223
29				430	-	430	230	185	147	159	161	220
30				425	-	475	288	191	170	142	159	234
31				410	-	450	-	207	-	142	164	-

Peak discharge (base, 1,600 sec.-ft.).- Feb. 12 (11 a.m.) 1,840 sec.-ft.
a No gage-height record; discharge computed on basis of unpublished records at Fernad, Calif., and Vista, Nev., collected by Federal Court Watermaster for Truckee River.

Discharge, in second-feet, of Truckee River at Reno, Nev., 1947-48--Continued

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	223	390	395	430	385	292	288	210	668	332	207	156
2	179	395	385	410	390	295	303	214	868	269	200	153
3	176	376	372	420	395	284	280	230	1,240	210	191	164
4	179	372	385	385	400	280	273	297	1,410	167	191	167
5	185	385	376	568	381	273	254	420	1,070	182	191	170
6	185	372	372	395	362	280	230	634	921	210	197	176
7	200	376	376	450	362	273	185	937	1,060	223	207	191
8	244	376	395	970	372	292	161	515	1,180	200	220	182
9	262	358	395	540	381	307	217	400	1,480	185	220	164
10	273	372	400	410	344	315	210	303	1,440	194	191	170
11	292	385	410	430	358	307	164	324	1,200	185	188	181
12	265	385	390	440	390	292	207	336	1,120	191	173	161
13	258	376	390	425	395	284	220	415	874	150	176	164
14	258	367	395	425	395	292	251	620	848	156	179	164
15	276	367	405	440	372	303	460	505	686	156	179	167
16	336	385	410	420	367	303	510	733	668	164	173	170
17	662	376	420	415	367	299	982	867	668	153	176	167
18	400	400	405	430	349	284	1,050	710	662	167	179	173
19	353	390	395	425	332	284	634	562	634	167	179	185
20	349	367	400	425	336	265	515	520	674	161	182	185
21	385	385	400	435	307	284	520	460	656	159	173	179
22	415	395	400	420	319	307	430	372	606	200	179	185
23	415	381	395	415	353	311	303	425	500	204	188	188
24	410	381	395	405	295	340	262	593	480	217	167	207
25	390	400	395	410	295	295	251	840	535	227	164	217
26	395	400	395	395	299	288	384	997	520	227	167	220
27	385	405	381	415	295	292	319	1,100	485	210	173	220
28	400	410	367	415	284	288	425	776	440	204	156	214
29	415	405	367	405	262	273	372	600	395	204	161	217
30	410	395	353	410	-	237	244	790	395	207	159	227
31	395	-	376	390	-	269	-	809	-	207	159	-

Peak discharge (base, 1,600 sec.-ft.).- June 4 (6:30 to 7:30 a.m.) 1,610 sec.-ft.; June 9 (7 a.m.) 1,700 sec.-ft.

Monthly discharge, in second-feet, 1947-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January 1947	14,716	595	410	475	29,190
February	13,427	1,170	385	480	26,630
March	15,348	590	385	495	30,440
April	9,075	450	190	302	18,000
May	12,207	861	185	394	24,210
June	4,865	234	124	162	9,650
July	4,607	185	126	149	9,140
August	4,990	194	145	161	9,900
September	5,849	234	153	195	11,600
The period	-	-	-	-	168,800
October 1947	9,970	662	176	322	19,780
November	11,527	410	358	384	22,860
December	12,095	420	353	390	23,990
Calendar year 1947	118,676	1,170	124	325	235,400
January 1948	13,768	970	385	444	27,310
February	10,142	400	262	350	20,120
March	8,988	340	237	290	17,830
April	10,904	1,050	161	363	21,630
May	17,514	1,100	210	565	34,740
June	24,383	1,480	395	813	48,360
July	6,088	332	150	196	12,080
August	5,645	220	156	182	11,200
September	5,443	227	153	181	10,800
Water year 1947-48	136,467	1,480	150	373	270,700

Little Truckee River near Hobart Mills, Calif.

Location.- Water-stage recorder, lat. 39°30', long. 120°16', in sec. 14, T. 19 N., R. 15 E., half a mile upstream from Independence Creek and 7½ miles northwest of Hobart Mills.

Records available.- December 1946 to September 1948.

Extremes.- 1946-47: Maximum discharge during period December to September, 569 second-feet May 2 (gage height, 3.91 feet); minimum, 1.4 second-feet Aug. 7, 8, 9.
1947-48: Maximum discharge during water year, 699 second-feet May 27 (gage height, 4.28 feet); minimum, 2.3 second-feet Sept. 11, 12, 13, 15.

Remarks.- Records excellent except those below 10 second-feet, which are good, and those for periods of ice effect, which are fair. One transmountain diversion to Sierra Valley above station.

Rating table, Dec. 18, 1946, to Sept. 30, 1948, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 13 to Sept. 30, 1948)

0.9	0.9	1.5	18	2.2	101
1.0	2.1	1.6	25	2.6	191
1.1	4.1	1.8	42	3.2	350
1.2	6.5	1.9	53	3.9	566
1.3	9.5	2.0	66		

Discharge, in second-feet, 1946-48

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-	b14	b14	b32	76	298	122	2.7	1.6	1.7
2			-	b13	14	b30	72	420	88	2.5	1.7	1.7
3			-	b12	14	b30	72	463	52	2.5	1.7	1.7
4			-	b13	*14	b28	61	438	38	2.5	1.7	1.7
5			-	b14	13	b28	58	402	39	2.5	1.7	1.7
6			-	b15	14	b28	58	396	45	2.3	1.7	1.7
7			-	b14	14	b30	57	356	86	2.1	1.6	1.7
8			-	b13	14	30	58	276	116	2.0	1.5	1.9
9			-	b14	14	30	60	204	92	1.9	1.5	1.9
10			-	b15	14	37	63	169	53	1.9	1.5	1.9
11			-	16	16	37	76	174	36	1.9	1.5	1.9
12			-	15	122	32	99	162	27	1.9	1.6	2.0
13			-	b14	93	31	129	151	25	1.7	1.6	2.0
14			-	b13	62	*31	172	153	22	1.7	1.7	2.1
15			-	b12	*46	34	211	160	14	1.7	1.7	2.1
16			-	b12	39	40	226	179	8.6	1.7	1.6	2.1
17			-	b13	38	48	226	184	8.0	1.7	1.6	2.1
18			*b18	b15	32	52	224	177	7.7	1.7	1.6	2.3
19			14	16	34	56	229	174	7.4	1.7	1.6	2.5
20			13	16	34	63	258	165	6.5	1.7	1.6	2.3
21			17	14	36	71	242	165	5.3	1.7	1.6	2.3
22			18	14	35	86	174	160	4.6	1.7	1.6	2.5
23			18	14	35	101	153	148	4.3	1.6	1.6	2.7
24			17	14	36	80	162	124	4.3	1.6	1.6	2.5
25			17	14	36	76	169	107	4.3	1.6	1.6	2.3
26			16	14	38	76	177	86	3.9	1.6	1.6	2.3
27			16	13	38	76	177	71	3.5	1.6	1.6	4.3
28			b13	12	35	90	169	49	3.1	1.6	1.7	4.3
29			b12	b11	-	93	198	48	2.9	1.6	1.9	4.1
30			b12	b12	-	97	245	43	2.7	1.6	1.9	4.3
31			b13	b13	-	82	-	50	-	1.6	1.7	-

Peak discharge (base, 500 sec.-ft.).- May 2 (12 p.m.) 569 sec.-ft.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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Discharge, in second-feet, Little Truckee River near Hobart Mills, Calif., 1946-48--Continued

1947-48

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.3	16	10	8.9	27	b18	27	95	268	124	4.6	2.9
2	4.3	16	8.9	16	b24	18	31	97	370	95	4.6	2.7
3	4.6	14	8.9	26	b20	18	30	118	441	77	5.3	2.7
4	4.3	16	9.5	76	b18	b16	27	169	394	58	4.8	2.7
5	4.1	14	b9	65	b16	b15	28	229	276	43	4.8	2.7
6	4.1	12	b8.5	77	b16	14	29	319	298	38	4.8	2.7
7	5.1	12	b8	172	b14	b14	31	330	362	36	4.6	2.7
8	8.3	12	b8	184	b14	b14	29	206	408	33	4.3	2.9
9	7.4	12	b7.5	118	18	b15	27	153	457	29	4.3	2.9
10	12	10	b8	82	b16	15	31	140	414	27	4.3	2.7
11	11	11	8.9	b60	b15	b14	29	167	379	27	4.6	2.5
12	8.0	8.9	b9	b52	b14	14	*27	214	353	24	4.3	2.7
13	7.1	9.2	b8.5	b40	16	16	24	308	308	21	4.1	2.5
14	7.1	9.5	8.3	b36	16	18	38	336	295	20	4.3	2.7
15	7.1	10	8.6	b32	17	b17	77	344	273	18	3.1	2.5
16	64	10	b9	b28	20	18	129	444	260	17	2.9	2.5
17	29	9.9	8.9	b24	19	b18	273	469	250	14	2.9	2.7
18	16	*9.2	*b9.5	b22	18	18	237	325	242	13	3.1	2.9
19	13	8.9	9.2	b20	18	16	265	229	239	12	3.1	2.9
20	13	8.3	8.6	b20	18	b16	284	189	247	11	3.1	2.7
21	18	b8	9.2	b22	20	16	279	167	250	9.9	3.1	2.7
22	14	b7.5	b9.5	b24	31	*16	208	174	221	8.9	3.3	2.9
23	13	b7.5	b9	*b24	b28	16	156	234	211	8.3	3.5	2.9
24	12	8.0	b8.5	b23	b24	b16	149	344	216	7.4	3.3	3.1
25	11	8.6	b8	b22	*b20	b15	184	460	206	6.8	3.5	3.1
26	10	8.6	b8	b20	20	b14	184	552	194	5.8	3.3	3.1
27	9.5	8.6	b9	b18	20	b16	191	546	181	5.8	3.3	2.9
28	9.9	8.9	9.5	b20	20	b18	189	376	169	5.8	3.3	2.7
29	16	9.2	b8.5	b22	b18	20	135	295	158	5.5	3.1	2.7
30	18	9.9	b8	b24	-	21	103	271	149	4.8	3.1	2.7
31	15	-	b8	b26	-	22	-	237	-	4.8	2.9	-

Peak discharge (base, 500 sec.-ft.).- May 17 (12:30 a.m.) 600 sec.-ft.; May 27 (12:30 a.m.) 699 sec.-ft.; June 4 (12:30 a.m.) 516 sec.-ft.; June 9 (12:30 a.m.) 539 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Monthly discharge, in second-feet, 1946-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	-	-	-	-	-
November	-	-	-	-	-
December 18-31, 1946	214	18	12	15.3	424
Calendar year	-	-	-	-	-
January 1947	424	16	11	13.7	841
February	944	122	14	33.7	1,870
March	1,655	101	28	53.4	3,280
April	4,351	258	57	145	8,630
May	6,150	463	43	198	12,200
June	932.1	122	2.7	31.1	1,850
July	58.1	2.7	1.6	1.87	115
August	50.7	1.9	1.5	1.64	101
September	70.6	4.3	1.7	2.35	140
The period	-	-	-	-	29,450
October 1947	380.2	64	4.1	12.3	754
November	313.7	16	7.5	10.5	623
December	270.0	10	7.5	8.7	536
Calendar year 1947	15,599.4	463	1.5	42.7	30,940
January 1948	1,403.9	184	8.9	45.3	2,780
February	555	31	14	19.1	1,100
March	512	22	14	16.5	1,020
April	3,451	284	24	115	6,840
May	8,537	552	95	275	16,930
June	8,489	457	149	283	16,840
July	810.8	124	4.8	26.2	1,610
August	117.6	5.3	2.9	3.79	233
September	83.0	3.1	2.5	2.77	165
Water year 1947-48	24,903.2	552	2.5	68.0	49,390

Twentymile Creek near Adel, Oreg.

Location.- Water-stage recorder, lat. 42°04', long. 119°57', in NE¼ sec. 25, T. 40 S., R. 23 E., 2 miles downstream from Twelvemile Creek and 8 miles southwest of Adel.

Records available.- March 1910 to July 1916, December 1917 to September 1919, March 1921 to June 1922 (published as Twentymile Creek near Warner Lake), March 1945 to September 1948. September 1940 to November 1944 at site 1½ miles upstream.

Average discharge.- 13 years (1910-15, 1918-19, 1940-44, 1945-48), 41.8 second-feet.

Extremes.- Maximum discharge during year, 1,340 second-feet June 5 (gage height, 7.58 feet), from rating curve extended above 550 second-feet by logarithmic plotting; minimum, 1.2 second-feet Sept. 3.

1910-16, 1917-19, 1921-22, 1940-48: Maximum discharge, 3,000 second-feet Dec. 27, 1942 (gage height, 4.28 feet, site and datum then in use), from rating curve extended above 400 second-feet by logarithmic plotting; minimum, 0.9 second-foot Aug. 19, 23, 24, 1942.

Remarks.- Records fair except those above 800 second-feet and those for periods of ice effect or no gage-height record, which are poor. Many diversions above station for irrigation; no regulation.

Revisions (water years).- W 1090: 1945.

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	5.0	5.2	4.2		9.0	125	52	100	23	2.6	1.6
2	2.7	5.2	5.2	6.9		8.2	76	35	113	20	2.6	1.6
3	2.7	5.0	5.2	6.4		7.9	29	26	146	18	2.4	1.4
4	2.7	5.8	5.5	26		7.6	20	37	168	17	2.4	1.6
5	2.7	5.8	5.2	82		7.6	16	32	606	16	2.6	1.8
6	2.7	5.2	4.4	209		7.2	16	56	308	16	2.6	2.0
7	2.7	5.0	4.2	*158	b2.5	6.6	18	63	164	15	2.6	2.0
8	2.9	4.7	5.0	86		5.4	23	49	134	13	2.6	2.0
9	2.9	4.4	4.2	22		6.4	38	36	232	11	2.6	2.0
10	2.9	4.2	b4.7	12		6.4	55	37	162	a10	2.8	2.0
11	3.1	4.4	b4.0	9.6		6.1	58	39	131	a9.0	2.8	1.8
12	3.1	4.2	b3.6	8.6		6.1	58	48	110	a8.0	2.6	1.8
13	3.1	4.0	b3.5			6.1	92	63	98	a7.0	2.6	1.8
14	3.1	4.4	b3.7			6.1	273	68	85	a6.5	2.4	1.6
15	3.1	4.7	b4.0		3.1	*5.8	401	75	76	a6.0	2.4	1.8
16	5.2	5.0	4.4		6.4	6.6	178	90	68	a5.5	2.4	1.8
17	5.2	5.0	5.0		18	6.4	129	103	62	a5.0	2.2	2.0
18	4.2	4.4	4.4		37	6.6	76	80	64	a4.5	2.0	2.2
19	3.8	4.2	*4.7		27	6.9	52	110	56	a4.0	2.0	2.4
20	3.8	3.8	4.7		18	6.6	51	212	56	a4.0	2.2	2.2
21	4.2	b3.8	5.0	b4.5	15	6.4	50	490	68	a3.5	2.2	2.0
22	4.2	3.8	5.2		167	25	37	338	54	3.2	2.0	2.0
23	4.0	b3.8	5.0		46	54	33	125	47	2.8	2.2	2.4
24	4.0	5.0	4.2		22	44	26	120	40	3.0	2.6	2.6
25	4.4	4.4	4.0		18	54	26	134	36	3.0	2.6	3.0
26	4.4	4.4	4.2		51	27	25	198	33	2.8	2.2	3.2
27	4.4	4.7	4.4		30	59	24	182	30	2.8	2.0	3.0
28	4.4	4.7	4.7		14	149	26	136	27	2.8	2.0	2.8
29	5.2	5.0	4.2		11	198	25	117	24	3.0	1.8	2.8
30	5.8	5.0	b3.2		-	154	26	110	20	2.8	1.6	2.8
31	5.2	-	b4.0		-	119	-	99	-	2.8	1.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	115.5	5.8	2.7	3.73	229
November	139.0	5.8	3.8	4.63	276
December	139.3	5.5	3.5	4.49	276
Calendar year 1947	5,354.9	750	1.7	14.7	10,620
January	716.2	209	-	23.1	1,420
February	518.5	167	-	17.9	1,030
March	1,026.0	198	5.8	33.1	2,040
April	2,082	401	16	69.4	4,130
May	3,361	490	26	108	6,670
June	3,318	606	20	111	6,580
July	251.0	23	2.8	8.10	498
August	72.2	2.8	1.6	2.33	143
September	64.0	3.2	1.4	2.13	127
Water year 1947-48	11,802.7	606	1.4	32.2	23,420

Peak discharge (base, 350 sec.-ft.).- Mar. 29 (10 p.m.) 439 sec.-ft.; Apr. 14 (9 p.m.) 742 sec.-ft.; May 21 (6 p.m.) 678 sec.-ft.; June 5 (1:30 a.m.) 1,340 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for Chewaucan River above Conn ditch, near Paisley.

b Stage-discharge relation affected by ice.

Deep Creek above Adel, Oreg.

Location.- Water-stage recorder, lat. 42°11', long. 119°59', in E½ sec. 15, T. 39 S., R. 23 E., a third of a mile downstream from Drake Creek and 5 miles west of Adel. Datum of gage is 4,965 feet above mean sea level (from river-profile survey).
Drainage area.- 249 square miles.
Records available.- September 1922 to September 1923 and October 1932 to September 1948 in reports of Geological Survey. September 1922 to September 1923 and October 1929 to September 1936 in reports of State engineer.
Average discharge.- 20 years (1922-23, 1929-48), 102 second-feet.
Extremes.- Maximum discharge during year, 1,350 second-feet June 5 (gage height, 4.65 feet); minimum discharge, 7 second-feet Sept. 15.
1922-23, 1932-48: Maximum discharge, 5,030 second-feet Dec. 11, 1937 (gage height, 7.5 feet, from floodmark), from rating curve extended above 1,200 second-feet on basis of velocity-area studies; minimum, 1.7 second-feet July 20, 27-29, 1934.
Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above station for irrigation.

Rating tables, water year 1947-48, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to June 5

0.4	8.0	1.2	58	2.9	440
.5	11	1.4	83	3.4	630
.6	15	1.6	111	3.9	885
.7	20	1.8	147	4.4	1,180
.8	25	2.1	213		
1.0	39	2.5	316		

June 6 to Sept. 30

0.4	6	0.9	38	2.3	280
.5	11	1.1	59	2.8	430
.6	16	1.3	84	3.3	610
.7	22	1.6	129	3.9	880
.8	29	1.9	186		

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9	27		b16	29	40	172	266	458	108	14	12
2	9	29		b15	28	35	220	286	450	104	14	11
3	9	27		16	27	37	141	297	518	92	14	10
4	9	29		33	b26	36	98	396	570	65	14	10
5	9	29		80	b25	34	74	354	1,150	67	13	10
6	10	27		452	b24	31	73	486	845	76	12	11
7	9	26		582	b23	29	74	562	650	76	12	11
8	11	27		468	b22	31	70	433	560	67	12	12
9	12	28	a23	230	21	29	76	366	626	59	12	11
10	12	25		177	b21	a29	79	375	610	52	12	10
11	17	25		134	b20	a29	92	372	521	46	12	10
12	14	23		118	b20	a29	102	422	448	42	12	10
13	12	21		680	b20	a29	160	538	421	39	12	9
14	12	20		*b60	b21	a28	235	550	367	34	12	9
15	12	23			26	*28	475	538	328	32	11	8
16	34	24			27	29	518	594	301	29	11	10
17	48	24			30	30	598	685	275	28	11	11
18	23	24			88	30	464	610	295	24	11	13
19	18	24	*22		116	31	408	542	328	22	11	13
20	17	27	21		86	29	464	657	286	23	12	12
21	24	24	20	b35	70	30	510	775	448	21	12	12
22	25		23		260	60	390	796	280	20	12	12
23	22		21		130	96	348	534	238	18	15	15
24	21		20		84	78	284	503	192	17	15	18
25	19		22		79	63	279	554	182	17	14	21
26	19	a25	22		102	53	245	622	166	17	14	18
27	19		22		64	124	240	690	153	16	12	18
28	18		22	29	62	152	230	657	134	16	12	19
29	21		b20	30	46	123	237	582	115	16	12	19
30	30		b18	30	-	111	220	526	102	16	12	18
31	31	-	17	29	-	100	-	522	-	15	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	555	48	9	17.9	1,100
November	758	-	-	25.3	1,500
December	684	-	-	22.1	1,360
Calendar year 1947	24,006	422	4	65.8	47,620
January	3,034	582	-	97.9	6,020
February	1,597	260	20	55.1	3,170
March	1,613	152	28	52.0	3,200
April	7,576	598	70	253	15,030
May	16,090	796	266	519	31,910
June	12,017	1,150	102	401	23,840
July	1,274	108	15	41.1	2,530
August	386	15	11	12.5	766
September	383	21	8	12.8	760
Water year 1947-48	45,967	1,150	8	126	91,190

Peak discharge (base, 350 sec.-ft.).- Jan. 7 (11 p.m.) 858 sec.-ft.; Apr. 16 (2 a.m.) 622 sec.-ft.; May 7 (6 to 7 a.m.) 639 sec.-ft.; May 21 (11 p.m.) 1,100 sec.-ft.; June 5 (8 to 10 a.m.) 1,350 sec.-ft.; June 21 (6:30 a.m.) 563 sec.-ft.
* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of recorded range in stage and records for Twentymile Creek near Adel and Chewaucan River near Paisley.
b Stage-discharge relation affected by ice.

Chewaucan River above Conn ditch, near Paisley, Oreg.

Location.- Water-stage recorder, lat. 42°41', long. 120°35', in SW¼ sec. 27, T. 33 S., R. 18 E., at bridge 20 feet downstream from former power plant of Paisley Electric Co., 700 feet upstream from diversion dam of Conn ditch, a quarter of a mile downstream from Mill Creek, and 2½ miles west of Paisley. Datum of gage is 4,504.9 feet above mean sea level (river-profile survey).
Drainage area.- 275 square miles.
Records available.- April to September 1912, May 1924 to September 1948. January 1905 to December 1907 and January 1909 to April 1912 at site 2 miles downstream, below Conn ditch. November 1912 to September 1921 at site half a mile upstream, above Mill Creek. Records of yearly runoff at these sites practically equivalent.
Average discharge.- 38 years (1905-7, 1909-21, 1924-48), 131 second-feet.
Extremes.- Maximum discharge during year, 1,160 second-feet June 9 (gage height, 4.40 feet); minimum discharge recorded, 10 second-feet Jan. 26.
1905-7, 1909-21, 1924-48: Maximum discharge, 4,000 second-feet Nov. 23, 1909 (gage height, 9.40 feet, site and datum then in use), from rating curve extended above 900 second-feet; no flow part of Dec. 7, 1927, Dec. 12, 1932 (frozen).
Remarks.- Records good except those for periods of ice effect or no gage-height record, and below 25 second-feet, which are poor. About 160 acres are irrigated above station.

Rating tables, water year 1947-48, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Jan. 7				Jan. 8 to Sept. 30					
1.5	21	2.4	147	1.5	24	2.1	92	3.1	370
1.6	28	2.6	199	1.6	32	2.3	125	3.5	560
1.8	46	2.8	265	1.7	42	2.5	170	3.9	790
2.0	71	3.0	345	1.9	65	2.8	255	4.2	1,000
2.2	104	3.2	430						

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	35	40	b25		51	112	139	659	219	61	36
2	23	38	30	b25		53	118	133	659	204	55	35
3	24	34	39	b60		50	94	155	712	190	54	33
4	23	34	37	b50		51	79	266	811	170	52	33
5	23	35	34	71		51	73	234	916	155	50	33
6	22	32	27	230		52	72	350	874	168	49	33
7	22	32	24	408	b20	46	70	415	804	a150	48	34
8	29	32	b25	252		51	61	326	748	a140	46	34
9	30	31	30	116		49	78	302	804	a135	50	34
10	35	27	b26	95		41	84	318	742	a125	48	33
11	46	31	b25	88		44	77	302	669	a115	48	32
12	33	29	*b24	68		51	86	350	593	a110	46	31
13	30	28	b24	59		50	112	415	545	a105	45	30
14	28	28	b25	b50		50	133	428	500	a100	44	30
15	27	37	30	b48	b25	45	201	446	470	a95	43	30
16	60	35	30	*b44	b50	49	222	495	438	a90	41	30
17	58	35	41		91	44	272	778	402	h81	40	37
18	37	32	34		127	46	222	760	530	a78	40	61
19	33	30	32		131	46	219	760	535	a75	40	55
20	31	26	36		79	41	246	742	451	a80	42	43
21	39	24	38		73	46	280	797	456	a75	41	39
22	34	21	30		·182	55	240	730	379	a70	40	38
23	33	27	35		95	64	201	724	338	65	41	45
24	32	56	e7	b30	75	53	168	778	310	63	42	49
25	30	53	33		73	49	168	839	286	61	42	55
26	30	41	33		88	43	158	937	276	61	41	57
27	30	38	36		74	52	152	993	276	58	39	58
28	30	38	36		64	68	150	951	262	58	39	59
29	35	36	34		57	111	150	860	225	58	39	58
30	41	38	b30		-	121	141	778	228	55	37	53
31	37	-	b28		-	101	-	742	-	57	37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,008	60	22	32.5	2,000
November	1,013	56	21	33.8	2,010
December	974	41	24	31.4	1,930
Calendar year 1947	28,149	443	16	77.1	55,840
January	2,139	408	-	69.0	4,240
February	1,564	182	-	53.9	3,100
March	1,724	121	41	55.6	3,420
April	4,439	280	61	148	8,800
May	17,243	993	133	556	34,200
June	15,898	916	225	530	31,530
July	3,266	219	55	105	6,480
August	1,380	61	37	44.5	2,740
September	1,228	61	30	40.9	2,440
Water year 1947-48	51,876	993	-	142	102,900

Peak discharge (base, 500 sec.-ft.).- Jan. 7 (9 p.m.) 520 sec.-ft.; May 27 (8 a.m.) 1,100 sec.-ft.; June 9 (4 p.m.) 1,160 sec.-ft.; June 18 (6 p.m.) 881 sec.-ft.
* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Deep Creek above Adel.
b Stage-discharge relation affected by ice.
h Computed from staff-gage reading.

Silver Creek near Silver Lake, Oreg.

Location.- Water-stage recorder, lat. 43°07', long. 121°04', in SW¼ sec. 28, T. 28 S., R. 14 E., 1½ miles downstream from diversion dam of Silver Lake Irrigation District, 1½ miles southwest of Silver Lake post office, and 3 miles upstream from Bridge Creek. Datum of gage is 4,361.28 feet above mean sea level, datum of 1929.
Drainage area.- 221 square miles.
Records available.- December 1904 to March 1907, January 1909 to September 1948.
Average discharge.- 36 years (1905-6, 1909-27, 1929-41, 1943-48), including Silver Lake Irrigation District canal, 23.7 second-feet.
Extremes.- Maximum discharge during year, 69 second-feet May 27 (gage height, 2.69 feet); minimum, 0.6 second-foot Dec. 25.
1904-7, 1909-48: Maximum discharge, 1,800 second-feet Mar. 20, 1907 (gage height, 9.08 feet, datum then in use), from rating curve extended above 700 second-feet; no flow at times in 1931, 1932, 1934, 1937.
Remarks.- Records good except those for periods of backwater from moss, which are fair, and those for periods of ice effect or no gage-height record, which are poor. Flow regulated by reservoir (capacity, 800 acre-feet) above diversion dam 1½ miles above station, and by Thompson Valley Reservoir (capacity, 17,400 acre-feet) 11 miles above station, both of which are owned by Silver Lake Irrigation District. No water was diverted above station by Silver Lake Irrigation District canal during year; canal out of repair.

Rating table, water year 1947-48, except periods of ice effect or backwater from moss (gage height, in feet, and discharge, in second-feet)

1.5	0.5	2.0	15
1.6	1.5	2.1	21
1.7	3.4	2.2	27
1.8	6.3	2.4	42
1.9	10	2.7	70

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	5.4	1.7	0.9	2.8	5.7	12	18	51	32	34	10
2	7.4	5.4	1.5	1.0	2.8	5.7	12	17	48	33	33	9.6
3	7.4	5.4	1.5	.9	2.6	b5.4	12	16	47	36	35	9.6
4	7.4	5.4	1.5	1.7		b5.1	12	15	47	41	34	9.6
5	7.4	5.4	1.7	1.4		b4.8	10	16	49	46	34	9.6
6	7.4	5.4	1.7	2.4		4.3	9.3	17	50	47	26	9.6
7	7.4	5.1	1.7	33		4.3	8.2	19	51	46	8.5	9.6
8	7.4	5.1	1.5	47		4.0	7.8	23	50	43	8.5	9.6
9	7.4	4.6	1.5	30		4.0	7.8	23	48	43	10	9.6
10	7.8	4.8	1.3	23		3.7	8.2	23	47	42	10	9.6
11	7.8	4.8	1.3	b17	a2.5	3.4	8.9	24	46	41	9.6	9.3
12	7.8	4.8	1.3	b14		3.2	a9.2	24	45	40	9.3	8.9
13	7.4	4.8	1.1	b11		3.2	a9.6	24	43	40	9.6	8.9
14	7.4	4.8	1.1	b9.6		3.2	10	25	40	40	18	8.9
15	7.0	4.8	1.1	b8.2		3.0	11	29	39	39	18	8.9
16	7.8	4.8	1.1	b7.8		3.0	14	36	39	38	18	9.3
17	8.2	4.8	1.1	b7.0		3.0	19	41	37	37	18	9.3
18	8.2	4.8	1.1	b6.3		2.8	21	49	38	36	17	9.3
19	7.8	4.8	1.1	b6.0	2.8	2.8	21	58	36	35	10	9.3
20	7.4	4.8	1.1	b5.4	b3.2	2.8	22	61	36	36	10	9.3
21	7.4	4.6	1.1	b4.8	3.7	2.6	22	63	34	36	10	8.9
22	7.4	3.7	1.0	4.6	5.4	2.6	26	59	32	36	10	8.9
23	6.7	3.4	.9	4.3	b9.3	2.8	25	57	32	36	10	8.9
24	6.3	2.8	*1.0	4.3	9.3	3.0	22	57	30	35	11	9.3
25	6.0	2.6	.9	b4.3	8.2	3.0	20	57	26	35	11	9.6
26	6.0	2.3	.9	b4.0	7.4	3.0	19	57	28	34	11	9.?
27	5.7	2.1	.9	b3.8	7.0	3.2	19	63	27	34	11	9.3
28	5.4	1.9	.9	b3.5	7.0	3.2	19	65	27	34	10	9.3
29	5.4	1.9	.8	b3.3	6.3	4.3	19	60	26	34	10	9.3
30	5.4	1.7	1.0	b3.1	-	8.5	18	57	27	34	10	9.3
31	5.4	-	1.0	b3.0	-	11	-	55	-	34	10	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	218.3	8.2	5.4	7.04	433
November	127.0	5.4	1.7	4.23	252
December	37.4	1.7	.8	1.21	74
Calendar year 1947	4,388.0	48	.8	12.0	8,700
January	276.6	47	.9	8.92	549
February	115.3	9.3	-	3.98	229
March	124.4	11	2.6	4.01	247
April	454.0	26	7.8	15.1	900
May	1,208	65	15	39.0	2,400
June	1,176	51	26	39.2	2,330
July	1,173	47	32	37.8	2,330
August	484.5	35	8.5	15.6	961
September	279.9	10	8.9	9.33	555
Water year 1947-48	5,674.4	65	.8	15.5	11,260

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Chewaucan River above Conn ditch, near Paisley and Deep Creek above Adel.
b Stage-discharge relation affected by ice.
Note.- Backwater from moss Oct. 1 to Jan. 7, Aug. 19 to Sept. 16.

Silvies River near Burns, Oreg.

Location.- Water-stage recorder, lat. 43°43', long. 119°11', in NW¼ sec. 31, T. 21 S., R. 30 E., 1 mile downstream from dam site for proposed lower Silvies Reservoir and 11 miles northwest of Burns.

Drainage area.- 934 square miles.

Records available.- May 1903 to July 1906, December 1908 to September 1948.

Average discharge.- 35 years (1903-5, 1909-12, 1917-21, 1922-48), 148 second-feet.

Extremes.- Maximum discharge during year, 1,360 second-feet May 23 (gage height, 11.18 feet); minimum, 9 second-feet Oct. 1, 2.
1903-6, 1908-48: Maximum discharge, 4,730 second-feet Apr. 15, 1904 (gage height, 17.12 feet, site and datum then in use); no flow July 19 to Sept. 22, 1934.

Remarks.- Records fair except those for periods of ice effect, which are poor. Small areas on Silvies River above station are irrigated with flood water.

Rating table, water year 1947-48, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

0.6	8.9	1.6	55	4.0	297	8.0	810
.8	14	2.0	87	5.0	416	9.0	960
1.0	23	2.5	135	6.0	539	10.0	1,120
1.3	37	3.2	209	7.0	669	11.1	1,340

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9	23	42	47	b35	240	266	904	808	158	36	16
2	10	22	46	48	b35	229	299	962	736	134	36	16
3	10	20	46	50	b37	190	322	978	675	118	36	15
4	10	20	49	52	b36	161	345	960	680	117	34	14
5	10	19	43	54	b35	138	325	960	680	119	34	14
6	10	19	b42	58	b34	137	289	942	634	119	32	14
7	11	20	b40	88	*b34	138	260	1,040	625	119	32	14
8	11	22	b45	170	b35	126	246	1,110	592	117	30	16
9	12	23	b40	129	b38	123	243	1,110	557	111	29	21
10	13	23	b35	112	b40	111	250	1,140	503	106	28	19
11	14	23	b40	b80	b42	97	253	1,130	478	100	28	18
12	18	24	44	b70	b41	88	262	1,030	475	95	28	15
13	19	25	45	b65	b40	93	266	946	446	92	28	14
14	19	27	*44	b60	b38	100	292	898	430	89	28	14
15	19	28	45	b55	b50	105	421	873	397	88	28	13
16	19	31	43	b50	b70	106	558	852	367	87	27	13
17	19	34	42	b47	85	105	696	846	369	82	26	13
18	19	37	43	b45	187	103	819	850	356	75	25	14
19	18	39	43	b45	286	100	873	870	368	72	24	19
20	17	40	43	b45	188	91	964	936	376	69	23	19
21	17	38	43	b50	197	92	1,060	1,020	376	66	21	18
22	18	b35	40	b60	598	95	1,120	1,130	376	63	23	17
23	19	b36	42	b70	530	102	1,120	1,340	350	58	24	17
24	19	38	42	88	375	115	1,110	1,330	319	54	29	22
25	19	40	40	b70	342	197	1,050	1,340	292	49	29	27
26	18	40	38	b50	376	194	994	1,220	265	46	25	29
27	18	39	40	b35	336	183	915	1,100	240	43	21	31
28	18	b38	42	b38	240	199	840	1,020	214	42	18	32
29	18	35	44	b40	240	222	802	957	198	40	17	32
30	20	38	45	b38	-	249	873	924	184	39	16	34
31	22	-	42	b35	-	249	-	860	-	38	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	493	22	9	15.9	978
November	896	40	19	29.9	1,780
December	1,318	49	35	42.5	2,610
Calendar year 1947	45,059	664	6	123	89,370
January	1,944	170	35	62.7	3,860
February	4,620	598	34	159	9,160
March	4,478	249	88	144	8,880
April	18,133	1,120	243	604	35,970
May	31,578	1,340	846	1,019	62,630
June	13,366	808	184	446	26,510
July	2,605	158	38	84.0	5,170
August	832	36	16	26.8	1,650
September	570	34	13	19.0	1,130
Water year 1947-48	80,833	1,340	9	221	160,300

Peak discharge (base, 500 sec.-ft.).- Feb. 22 (4 p.m.) 639 sec.-ft.; Apr. 22 (5 a.m.) 1,130 sec.-ft.; May 11 (1 a.m.) 1,160 sec.-ft.; May 23 (1 to 2 p.m.) 1,360 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Donner und Blitzen River near Frenchglen, Oreg.

Location.- Water-stage recorder and concrete control, lat. 42°47', long. 118°52', in NW¼ sec. 20, T. 32 S., R. 32½ E., 1½ miles upstream from upper diversions for Malheur Migratory Waterfowl Refuge, 2 miles downstream from Fish Creek, and 3½ miles southeast of Frenchglen.

Drainage area.- 180 square miles.

Records available.- December 1937 to September 1948. January 1909 to November 1910, fragmentary records at sites downstream, below several irrigation diversions. May 1910 to September 1921 at site 1½ miles downstream, in SW¼ sec. 8, above diversions, published as Donner und Blitzen River near Diamond. July 1929 to September 1930 in reports of State engineer.

Average discharge.- 18 years (1911-13, 1914-16, 1917-21, 1938-48), 126 second-feet.

Extremes.- Maximum discharge during year, 2,000 second-feet May 19 (gage height, 5.26 feet), from rating curve extended above 1,100 second-feet by velocity-area studies and logarithmic plotting; minimum, 12 second-feet (ice jam upstream) Feb. 7 (gage height, 1.60 feet).

1909-21, 1937-48: Maximum discharge, 2,870 second-feet May 5, 1942 (gage height, 5.85 feet), from rating curve extended as described above; minimum, 8 second-feet (ice jam upstream) Jan. 14, 1940.

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

Cooperation.- Water-stage recorder inspected by employee of Fish and Wildlife Service.

Revisions.- W 330: Drainage area (former site). W 860: Drainage area (present site).

Rating tables, water year 1947-48, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Jan. 5

1.9	23	2.2	43	2.7	126
2.0	28	2.3	54	2.9	180
2.1	35	2.5	84	3.1	245

Jan. 6 to Sept. 30

1.7	15	2.3	50	3.5	425
1.8	19	2.5	78	4.0	730
2.0	29	2.7	120	4.5	1,130
2.1	35	2.9	177		
2.2	41	3.1	245		

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	37	99	b40	b38	38	177	231	582	249	56	39
2	30	38	57	b50	b32	37	159	187	704	210	52	39
3	31	37	48	b60	b31	36	102	174	989	184	51	38
4	30	38	46	137	b35	34	76	187	822	171	50	39
5	30	37	44	237	b35	37	65	220	1,020	156	49	39
6	30	37	41	540	b26	39	65	375	838	134	49	39
7	31	37	39	362	b28	36	62	436	772	128	48	39
8	34	38	41	194	43	36	68	312	691	128	49	39
9	33	38	b41	82	*42	37	62	261	730	123	51	39
10	34	36	b39	b62	b34	33	64	269	652	120	49	39
11	38	38	b41	b53	b29	35	72	308	510	118	48	38
12	36	34	*b25	b45	b29	39	58	344	430	111	46	38
13	35	37	b36	b38	b35	37	78	400	400	104	46	38
14	34	37	b39	b37	42	39	139	375	362	95	46	37
15	34	39	b36	b38	39	43	228	425	330	91	44	37
16	41	39	b35	b38	38	40	249	510	a320	89	43	39
17	45	44	b40	b38	39	40	285	588	308	84	42	40
18	37	51	b39	b35	47	41	234	552	442	84	42	42
19	37	38	b38	b32	41	41	224	1,010	357	80	42	41
20	36	b35	b36	b40	40	39	277	639	395	78	42	40
21	38	b32	b34	48	39	58	298	588	405	73	41	39
22	36	b24	b32	46	75	254	245	822	312	70	41	39
23	36	b26	b34	48	43	261	220	582	290	67	45	42
24	34	39	b34	46	37	289	187	652	285	64	44	43
25	34	45	b32	b28	38	174	177	800	269	62	42	46
26	34	54	b34	b18	48	118	171	931	253	61	40	45
27	34	51	b33	b22	46	147	165	1,060	245	60	40	44
28	34	46	b35	b30	38	209	180	875	228	58	40	46
29	37	47	b35	b41	38	288	257	698	228	58	40	45
30	37	60	b28	b48	-	176	214	588	231	58	39	43
31	36	-	b26	b39	-	113	-	564	-	55	39	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,075	45	29	34.7	2,130
November	1,189	60	24	39.6	2,360
December	1,217	99	25	39.3	2,410
Calendar year 1947	28,285	492	24	77.5	56,090
January	2,572	540	18	83.0	5,100
February	1,125	75	26	38.8	2,230
March	2,844	289	33	91.7	5,640
April	4,858	298	58	162	9,640
May	15,963	1,060	174	515	31,660
June	14,400	1,020	228	480	28,560
July	3,221	249	55	104	6,390
August	1,396	56	39	45.0	2,770
September	1,211	46	37	40.4	2,400
Water year 1947-48	51,071	1,060	18	140	101,300

Peak discharge (base, 650 sec.-ft.).- Jan. 6 (8 p.m.) 758 sec.-ft.; Mar. 22 (7 p.m.) 758 sec.-ft.; May 19 (5 p.m.) 2,000 sec.-ft.; May 26 (10 p.m.) 1,250 sec.-ft.; June 5 (3 a.m.) 1,330 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

Bridge Creek near Frenchglen, Oreg.

Location.- Water-stage recorder and concrete control, lat. 42°50', long. 118°51', in NW¼ sec. 33, T. 31 S., R. 32½ E., at mouth of canyon, 1,000 feet upstream from road crossing and 3½ miles northeast of Frenchglen.

Records available.- March 1911 to September 1916, December 1937 to September 1948.

Average discharge.- 14 years (1912-16, 1938-48), 14.3 second-feet.

Extremes.- Maximum discharge during year, 143 second-feet May 19 (gage height, 1.98 feet), from rating curve extended above 55 second-feet by logarithmic plotting; minimum, 7.6 second-feet Dec. 13-16.
1911-16, 1937-48: Maximum discharge, 332 second-feet Feb. 22, 1943 (gage height, 2.55 feet), from rating curve extended above 55 second-feet by logarithmic plotting; minimum observed, 7 second-feet Feb. 24, 25, 1912, Dec. 30, 1937, to Jar. 4, 1938.

Remarks.- Records good. No diversion or regulation above station. Low flow is maintained by large springs.

Cooperation.- Water-stage recorder inspected by employees of Fish and Wildlife Service.

Rating table, water year 1947-48 (gage height, in feet, and discharge, in second-feet)
(Backwater from moss Oct. 1 to Dec. 16, June 6 to Aug. 14)

0.9	6.3	1.3	29
1.0	10	1.4	39
1.1	15	1.5	52
1.2	22	1.6	67

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.7	10	8.8	8.4	8.4	8.4	22	23	22	12	11	15
2	9.7	10	8.8	8.8	8.0	8.4	22	20	21	12	11	15
3	9.7	11	8.8	8.8	8.4	8.4	20	23	24	12	11	15
4	9.7	11	8.4	10	8.4	8.4	14	27	25	11	11	15
5	9.7	10	8.4	18	8.4	8.4	12	30	27	11	11	15
6	9.7	10	8.4	23	8.4	8.4	11	44	21	11	11	15
7	10	10	8.4	23	8.4	8.4	9.7	44	20	11	11	16
8	9.7	10	8.4	17	8.4	8.4	10	35	18	11	11	16
9	9.7	10	8.4	9.2	8.4	8.4	9.7	30	18	11	11	16
10	9.7	10	8.4	9.2	8.0	8.4	11	29	15	11	11	16
11	9.7	10	8.0	8.8	8.0	8.4	12	29	15	11	11	16
12	9.7	9.7	8.0	8.4	8.0	8.4	15	31	15	11	11	16
13	9.7	9.7	7.6	8.4	8.0	8.4	23	38	14	10	11	17
14	9.7	9.2	7.6	8.4	8.0	8.8	47	39	12	10	11	17
15	9.7	9.2	7.6	8.4	8.0	8.8	52	39	12	10	12	17
16	9.7	9.2	7.6	8.4	8.0	8.8	34	43	11	11	12	17
17	9.7	9.2	8.4	8.4	8.0	8.8	34	44	11	11	12	17
18	9.7	9.2	8.8	8.4	8.0	8.8	30	42	19	11	12	17
19	9.7	8.8	8.8	8.4	8.0	8.8	30	67	19	11	12	17
20	10	8.8	8.4	8.4	8.0	8.8	44	90	26	11	13	17
21	10	8.8	8.4	8.4	8.0	8.8	36	49	23	11	13	17
22	10	8.8	8.4	8.0	8.4	15	29	61	17	11	14	17
23	10	8.8	8.4	8.0	8.4	23	25	47	15	11	14	17
24	10	8.8	8.4	8.0	8.0	25	22	46	15	11	14	16
25	10	8.4	8.4	8.0	8.0	20	22	43	13	11	14	16
26	10	9.2	8.4	8.4	9.2	14	20	39	12	11	14	15
27	10	9.2	8.4	8.0	8.8	16	20	38	12	11	14	14
28	10	8.8	8.4	8.0	8.4	20	23	34	12	11	14	14
29	10	8.4	8.4	8.0	8.4	22	28	31	12	11	14	14
30	10	8.8	8.4	8.0	-	19	24	28	12	11	15	13
31	10	-	8.4	8.0	-	14	-	24	-	11	15	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	304.6	10	9.7	9.83	604
November	283.0	11	8.4	9.43	561
December	258.4	8.8	7.6	8.34	513
Calendar year 1947	4,032.9	18	7.6	11.0	8,000
January	308.6	23	8.0	9.95	612
February	238.8	9.2	8.0	8.23	474
March	367.6	25	8.4	11.9	729
April	711.4	52	9.7	23.7	1,410
May	1,177	67	20	38.0	2,330
June	508	27	11	16.9	1,010
July	341	12	10	11.0	676
August	382	15	11	12.3	758
September	475	17	13	15.8	942
Water year 1947-48	5,355.4	67	7.6	14.6	10,620

Peak discharge (base, 30 sec.-ft.).- Apr. 1 (5 p.m.) 49 sec.-ft.; Apr. 14 (6 p.m.) 113 sec.-ft.; Apr. 20 (8 p.m.) 70 sec.-ft.; May 6 (9 p.m.) 61 sec.-ft.; May 19 (5 p.m.) 143 sec.-ft.; June 4 (10 p.m.) 54 sec.-ft.; June 20 (7 p.m.) 78 sec.-ft.

Trout Creek near Denio, Oreg.

Location.- Water-stage recorder, lat. 42°10', long. 118°28', in SW¼ sec. 26, T. 39 S., R. 36 E., 0.4 mile upstream from bridge at mouth of canyon, 5 miles east of Trout Creek Ranch, and 14 miles northeast of Denio. Datum of gage is 4,351.59 feet above mean sea level, datum of 1929.

Records available.- March 1911 to March 1912, April 1922 to November 1923, April 1925 to September 1948.

Average discharge.- 17 years (1922-23, 1932-48), 14.2 second-feet.

Extremes.- Maximum discharge during year, 131 second-feet June 4 (gage height, 3.38 feet); minimum, 1.1 second-feet Mar. 3.

1911-12, 1922-23, 1925-48: Maximum discharge, 343 second-feet Aug. 1, 1933, from rating curve extended above 125 second-feet; probably no flow at times.

Maximum stage known, 6.0 feet (caused by cloudburst) sometime between 1922 and 1932.

Remarks.- Records fair except those for periods of ice effect, which are poor. Small diversions above station for irrigation.

Rating table, water year 1947-48, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

1.5	1.6	2.0	11	2.7	54
1.6	2.8	2.1	14	2.9	73
1.7	4.5	2.2	18	3.1	96
1.8	6.4	2.3	24		
1.9	8.7	2.5	37		

Discharge, in second-feet, water year October 1947 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	5.4	8.0	7.8	b6.0	5.3	11	34	56	16	5.4	2.1
2	2.8	6.4	7.3	11	b6.5	6.0	11	33	55	23.	5.3	2.1
3	3.0	5.8	7.3	8.2	b6.5	4.2	11	30	70	20	5.1	2.0
4	3.3	6.6	8.0	7.6	b6.0	6.4	9.7	31	83	19	4.9	2.2
5	3.3	6.4	7.8	7.8	b6.0	7.3	9.2	33	90	17	4.7	2.4
6	3.3	6.0	7.3	8.2	6.4	6.9	9.2	42	76	17	4.3	2.4
7	3.5	6.4	6.2	8.7	b7.0	6.0	8.9	56	73	16	4.2	2.6
8	4.9	6.4	7.8	11	*b7.0	5.8	8.2	53	66	15	4.2	2.6
9	4.5	6.0	7.3	9.2	b6.5	5.8	8.0	48	66	13	4.9	2.6
10	4.9	5.4	5.3	b8.0	b6.0	4.3	8.2	44	62	9.2	4.7	2.6
11	5.8	6.2	7.6	b7.0	5.1	4.7	7.1	40	58	10	4.5	2.3
12	5.3	6.0	7.6	b6:0	b5.0	6.6	5.8	39	53	12	4.2	2.6
13	4.7	5.6	b6.0	b5.5	b5.0	5.6	3.3	43	48	11	3.6	2.6
14	4.5	6.0	b6.5	b5.0	b5.0	6.0	3.6	45	43	11	2.8	2.3
15	4.3	6.9	7.3	b4.7	b5.5	5.4	9.2	52	39	10	2.6	2.3
16	4.9	6.9	7.3	b4.5	b6.0	5.6	12	62	38	10	2.6	2.6
17	5.8	6.6	7.1	b4.3	6.9	6.0	20	84	35	9.7	2.7	2.8
18	5.1	6.6	6.6	b4.2	6.9	5.4	23	89	50	9.4	2.8	3.3
19	4.7	6.9	6.4	b4.0	5.8	5.8	28	78	37	8.9	3.0	3.3
20	4.5	6.6	6.4	b4.0	5.8	5.3	38	65	39	8.7	3.1	3.1
21	4.7	6.9	6.0	b4.0	6.2	5.4	39	61	40	8.7	3.0	3.1
22	4.9	5.4	5.6	b4.5	7.1	5.8	40	57	31	8.2	2.7	3.3
23	5.1	4.3	6.2	b5.5	5.8	5.8	37	57	28	8.0	3.8	3.5
24	5.1	6.9	6.4	6.4	5.4	6.0	34	62	25	8.0	3.6	4.7
25	5.1	7.8	6.0	4.3	6.6	5.8	33	66	23	8.0	3.3	5.6
26	5.3	7.3	b5.5	4.3	6.9	5.4	32	73	21	7.8	3.0	6.2
27	5.1	7.6	b5.0	b4.5	6.2	6.9	31	80	18	7.1	2.8	6.0
28	5.1	7.3	b4.0	b5.0	5.4	7.6	30	72	18	6.9	2.6	5.8
29	5.4	7.3	5.1	b5.5	5.6	9.2	36	61	18	7.1	2.2	5.4
30	5.8	7.6	b4.7	b5.5	-	9.2	36	54	18	6.9	2.2	5.3
31	5.6	-	4.3	b5.0	-	8.9	-	59	-	6.2	2.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	143.3	5.8	2.8	4.62	284
November	193.5	7.8	4.3	6.45	384
December	199.9	8.0	4.0	6.45	396
Calendar year 1947	2,973.1	46	.8	8.15	5,900
January	191.2	11	4.0	6.17	379
February	176.1	7.1	5.0	6.07	349
March	190.4	9.2	4.2	6.14	378
April	592.4	40	3.3	19.7	1,180
May	1,703	89	30	54.9	3,380
June	1,377	90	18	45.9	2,730
July	348.8	23	6.2	11.3	692
August	110.9	5.4	2.1	3.58	220
September	99.7	6.2	2.0	3.32	198
Water year 1947-48	5,326.2	90	2.0	14.6	10,570

Peak discharge (base, 50 sec.-ft.).- May 7 (9 a.m., 12 m., 9 p.m.) 56 sec.-ft.; May 19 (3:30 a.m.) 98 sec.-ft.; May 27 (4:30 a.m.) 91 sec.-ft.; June 4 (10:30 p.m.) 131 sec.-ft.; June 18 (1 p.m.) 125 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Measurements of stream flow in the Great Basin made at points other than gaging stations are given in the following table:

Miscellaneous discharge measurements in the Great Basin during the water year October 1947 to September 1948

Great Salt Lake Basin

Date	Stream	Tributary to or diverting from--	Locality	Discharge (sec.-ft.)
Dec. 16	Malad River.....	Bear River.....	Sec. 10, T. 14 S., R. 35 E., at springs, at flow line and 1 mile upstream from dam on Samaria Reservoir No. 2, 5¾ miles northwest of Malad, Idaho, and 8¾ miles upstream from Little Malad River.	8.99
Jan. 25	....do.....	....do.....	....do.....	8.37
Mar. 3	....do.....	....do.....	....do.....	11.0
Apr. 14	....do.....	....do.....	....do.....	14.8
May 13	....do.....	....do.....	....do.....	14.5
June 14	....do.....	....do.....	....do.....	12.2
July 11	....do.....	....do.....	....do.....	9.79
Aug. 14	....do.....	....do.....	Sec. 10, T. 14 S., R. 35 E., ½ mile upstream from dam on Samaria Reservoir No. 2, ½ mile downstream from springs and flow line of reservoir, 5¾ miles northwest of Malad, Idaho, and 8¼ miles upstream from Little Malad River.	9.72
June 9	Paris Creek.....	Bear Lake Outlet Canal.	Sec. 13, T. 14 S., R. 42 E., 50 feet below power canal diversion, 600 feet below Paris Creek Spring, and 6 miles southwest of Paris, Idaho.	48.6
9	Paris power canal	Paris Creek.....	Sec. 13, T. 14 S., R. 42 E., at head of canal, 6 miles southwest of Paris, Idaho.	42.3
May 25	Big Cottonwood Creek.	Jordan River.....	Sec. 8, T. 2 S., R. 1 E., at 9th East Street, 7 miles southeast of Salt Lake City, Utah.	212
25	....do.....	....do.....	Sec. 1, T. 2 S., R. 1 W., at 2nd West Street, 6 miles south of Salt Lake City, Utah.	241
25	Little Cottonwood Creek.	....do.....	Sec. 12, T. 2 S., R. 1 W., at 2nd West Street, 7 miles south of Salt Lake City, Utah.	133
June 23	South Willow power plant tailrace.	South Willow Creek	Sec. 27, T. 3 S., R. 6 W., at Utah Power & Light Co.'s power plant 6 miles southwest of Grantsville, Utah.	7.86

Mojave River Basin

July 15	Hesperia Water Co. canal.	Deep Creek.....	Sec. 18, T. 3 N., R. 3 W., at Hesperia Water Co.'s weir box at mouth of Canyon, near Hesperia, Calif.	2.22
29	....do.....	....do.....	....do.....	.50
Aug. 5	....do.....	....do.....	....do.....	.48
12	....do.....	....do.....	....do.....	.48
19	....do.....	....do.....	....do.....	.53
26	....do.....	....do.....	....do.....	.46

Walker Lake Basin

Mar. 8	West Walker River	Walker River.....	NE¼ sec. 16, T. 10 N., R. 23 E., 50 feet above diversion dam for Sarori ditch and 2½ miles southwest of Wellington, Nev.	33.1
8	....do.....	....do.....	SE¼ sec. 3, T. 11 N., R. 24 E., 125 feet below highway bridge at Hudson, Nev.	38.5

Malheur and Harney Lakes Basin

Apr. 30	Rattlesnake Creek	Malheur Lake.....	Sec. 18, T. 22 S., R. 32½ E., a mile northeast of Harney, Oreg.	22.1
18	Coffee-Pot Creek.	....do.....	Near line between secs. 14 and 23, T. 22 S., R. 32 E., ¼ mile below confluence with Mill Creek and 2 miles northwest of Harney, Oreg.	21.7
20	....do.....	....do.....	....do.....	44.9
30	....do.....	....do.....	....do.....	20.6
Feb. 9	Donner und Blitzen River.	....do.....	Former gaging station in SW¼ sec. 2, T. 27 S., R. 31 E., near Voltage, Oreg.	72.5
Apr. 20	....do.....	....do.....	....do.....	34.9
Aug. 14	....do.....	....do.....	....do.....	32.0

Alvord Lake Basin

May 18	Trout Creek.....	Alvord Lake.....	Near SE¼ sec. 4, T. 39 S., R. 35 E., in relocated creek channel at McLean Ranch, Oreg.	4.68
31	....do.....	....do.....	....do.....	27.8
Apr. 18	South Branch Trout Creek.	Distributary of Trout Creek.	Sec. 29, T. 39 S., R. 36 E., at head, near Fields, Oreg.	5.91
May 17	....do.....	....do.....	....do.....	10.3
18	....do.....	....do.....	....do.....	16.2

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