UNITED STATES DEPARTMENT OF THE INTERIOR
HAROLD L. ICKES, Secretary
GEOLOGICAL SURVEY
W. C. MENDENHALL, Director

Water-Supply Paper 900

SURFACE WATER SUPPLY *of the* UNITED STATES 1940

PART 10
THE GREAT BASIN

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In cooperation with the States of
CALIFORNIA, IDAHO, NEVADA, OREGON
UTAH, AND WYOMING
and other agencies

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1941

For sale by the Superintendent of Documents, Washington, D. C. - - Price 20 cents (paper cover)

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ILLUSTRATION

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, 1940. 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 8,800 gaging stations in the United States and also at many gaging stations in Alaska and Hawaii. In July 1940, 4,760 gaging stations were being maintained by the Geological Survey and cooperating organizations. Miscellaneous discharge measurements were made 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 on page 11.

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 run-off is distributed uniformly both as regards time and area.

"Run-off 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 run-off 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 run-off of 0.0372 inch from one square mile.

"Stage-discharge relation" is an abbreviation for the term "relation of gage height to discharge."

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

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 on plate 1.

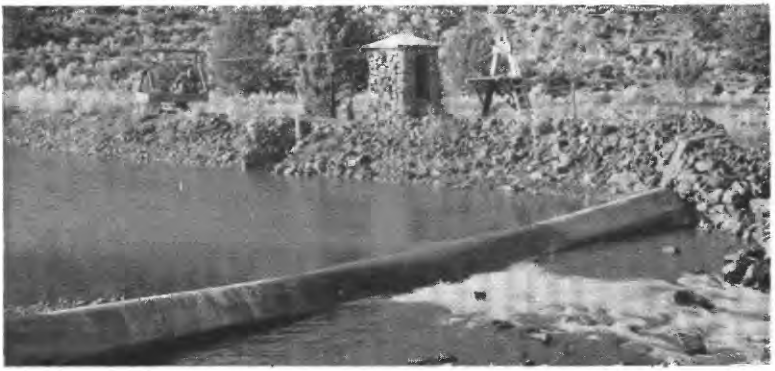
Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the mean daily gage height to these rating tables gives the mean daily discharge, from which the monthly and yearly mean discharge are computed.

For most of the gaging stations in the area covered by this report the data presented comprise a description of the station, a table showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off. Skeleton rating tables are published except for those stations whose 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, its latitude and longitude determined from the best available maps, and information in regard to diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Under "Average discharge" is given the average discharge for the number of years indicated. It is given only for stations for which there are 10 or more complete years of record. 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. Likewise the minimum discharge represents the lowest stage, unless otherwise qualified. The peak discharge for the year with the time of its occurrence is given below the table of monthly discharge for some stations. Selected lower peaks are also given if the peak discharge exceeded the mean discharge for that day by more than 10 percent. This supplementary information is generally not given for stations having drainage areas of less than 10 square miles or more than 10,000 square miles.

The table of daily discharge gives, for stations equipped with nonrecording gages, the discharge in second-feet corresponding to once-daily readings of the gage or the mean of twice-daily readings. For flashy floods the mean daily discharge is determined from gage-height graphs based on gage readings made once or twice daily or oftener, as stated in the station description. 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 mean daily gage height. For stations subject to such fluctuation the mean daily gage height may not indicate the true mean daily discharge, which must be obtained by averaging the discharge for intervals of the day or by using the discharge integrator, an instrument for obtaining the mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

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 or fall in a reach of the stream as a factor in the determination of discharge. Information requisite for determining the slope or fall is obtained by means of an auxiliary



A. DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OREG.

B. SEVIER RIVER NEAR JUAB, UTAH.

C. BEAVER RIVER NEAR BEAVER, UTAH.

GAGING-STATION STRUCTURES.

gage set at some distance from the base gage. The auxiliary gage, if one is used, is described under "Location." 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 occasional winter discharge measurements and gage heights, 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. The days included in the periods of ice effect and the days during the winter period on which discharge measurements were made are indicated in the table by symbols referring to footnotes.

In the table of monthly discharge the column headed "Second-foot-days" gives the sum for each month of the figures for that month given in the table of daily discharge. The column headed "Maximum" gives the maximum daily discharge and not the instantaneous 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.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily on (1) the permanency of the stage-discharge relation and (2) the accuracy of observation 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 daily records are accurate within 5 percent; "good," within 10 percent; "fair," within 15 percent; and "poor," within 20 or a higher percent.

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 "run-off 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 of reservoirs or for other changes incident to use and control. Figures of second-feet per square mile and run-off 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 gives a general idea of the flow at the station. The table of daily discharge allows more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected

to throw new light on data previously published, and that greater degrees of refinement in computations and records may be warranted with the increase in data and the use of improved equipment.

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 in regard to 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 local 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., 5 North Rhodes Center.
Augusta, Maine, Statehouse.
Boston, Mass., 945 Post Office Building.
Charlottesville, Va., House G, Dawson Row, University of Virginia.
Chattanooga, Tenn., 442 Post Office Building.
College Park, Md., Engineering Building, University of Maryland.
Columbia, S. C., 119 United States Courthouse.
Columbus, Ohio, 404 Engineering Experiment Station, Ohio State University.
Harrisburg, Pa., 490 Education Building.
Hartford, Conn., 225 Capitol Building, 410 Asylum Street.
Indianapolis, Ind., 316 Federal Building.
Louisville, Ky., 652 Federal Building.
Madison, Wis., 666 State Office Building.
Montgomery, Ala., 507 Post Office Building.
Ocala, Fla., 302 Post Office Building.
St. Paul, Minn., 808 New Post Office Building.
South Charleston, W. Va., Armor Park School Building.
Trenton, N. J., 228 Federal Building.
Urbana, Ill., 14 Post Office Annex, Elm Street.

West of the Mississippi River:
Austin, Tex., 300 State Highway Building.
Boise, Idaho, 429 Federal Building.
Denver, Colo., 230 Customhouse.
Fort Smith, Ark., 6 Post Office Building.
Helena, Mont., 406 Federal Building.
Honolulu, Hawaii, 225 Federal Building.
Idaho Falls, Idaho, 204 Federal Building.
Iowa City, Iowa, 508 Hydraulic Laboratory, University of Iowa.
Los Angeles, Calif., G-31 United States Post Office and Courthouse.
Portland, Oreg., 606 Post Office Building.

Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines and Metallurgy.
St. Louis, Mo., 926 New Federal Building.
Salt Lake City, Utah, 303 Federal Building.
San Francisco, Calif., 465 Federal Office Building.
Santa Fe, N. Mex., 204 United States Courthouse.
Tacoma, Wash., 1100 Washington Building.
Topeka, Kans., 305 Federal Building.
Tucson, Ariz., 210 Post Office Building.

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

Records of flow of streams in the United States have been published in the reports tabulated as follows:

Stream-flow data 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 Sept. 1890.
12th A, pt. 2	....do.....	1884 to June 30, 1891.
13th A, pt. 3	....do.....	1884 to Dec. 31, 1892.
14th A, pt. 2	Monthly discharge (long-time records, 1871-93)..	1888 to Dec. 31, 1893.
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 (also many data covering earlier years).	1895.
W 11.....	Gage heights (also gage heights for earlier years).	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years).	1895-96.
W 15.....	Descriptions, measurements, and gage heights of streams east of the Mississippi River and Missouri River and tributaries above Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights of streams west of the Mississippi River except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River and Missouri River and tributaries.	
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 (also for many earlier years).	1898
W 35 to 39...	Descriptions, measurements, gage heights, and ratings.	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52...	Descriptions, measurements, gage heights, and ratings.	1900.
22d A, pt. 4	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.	1901.
W 75.....	Monthly discharge.....	1901.

Note.- Reports containing records for years after 1901 are given in table on page 6.

The table on the following page gives, by years and drainage basins, the numbers of the papers on surface water supply published from 1899 to 1940. The data for any particular 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, 503, which contain records for the Ohio River Basin for those years.

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.

Numbers of water-supply papers containing results of stream measurements, 1899-1940

(For basins included see p. 4)

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

a Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Tables of 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 basins.
g Rating tables and index to Water-Supply Papers 47-52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52. Monthly discharge for 1900 in 22d Annual Report, part 4.
h Wissahickon and Schuylkill Rivers to James River.
i Scioto River.
j Loup, Platte, and Elkhorn Rivers and tributaries below Platte River.
k Tributaries of Mississippi River from east.
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, inclusive.
q Susquehanna River to Yadkin River, inclusive.
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.

From time to time 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 in alphabetical order by States and drainage basins.

Reports containing compilation of discharge by States and drainage basins

Water-Supply Paper	Year ending	State or drainage basin and title
		STATE
107	1903	Alabama, Water powers of, with an appendix on stream measurements in Mississippi.
298	1912	California, Water resources of, part 1, Stream measurements in Sacramento River Basin.
299	1912	California, Water resources of, part 2, Stream measurements in San Joaquin River Basin.
300	1912	California, Water resources of, part 3, Stream measurements in the Great Basin and Pacific coast river basins.
447	1918	California, southern, Surface water supply of Pacific slope of.
597-E	1927	California, Surface water supply of Sacramento River Basin.
636-D	1927	California, Surface water supply of San Joaquin River Basin.
636-E	1927	California, southern, Surface water supply of Pacific slope basins in.
637-A	1927	California, Surface water supply of minor San Francisco Bay, northern Pacific, and Great basins in.
74	1900	Colorado, Water resources of.
197	1905	Georgia, Water resources of.
415	1915	Massachusetts, Surface waters of.
230	1906	Nebraska, Surface water supply of.
370	1910	Oregon, Surface water supply of.
850	1937	Texas, Summary of records of surface waters of.
424	1916	Vermont, Surface waters of.
492	1919	Washington, Summary of hydrometric data in.
870	1935	Washington, Summary of records of surface waters of.
469	1921	Wyoming, Surface waters of, and their utilization.
		DRAINAGE BASIN
395	1914	Colorado River (Ariz., Colo., N. Mex., Utah, Wyo.) and its utilization.
617	1927	Colorado River, upper (Colo., Utah), and its utilization.
517	1920	Great Salt Lake Basin, Water powers of.
618	1926	Green River (Utah, Wyo.) and its utilization.
198	1906	Kennebec River Basin (Maine), Water resources of.
491	1917	Milk River. (See St. Mary and Milk Rivers.)
536	1920	New-Kanawha River Basin (N. C., Va., W. Va.), Surface water supply of.
279	1909	Penobscot River Basin (Maine), Water resources of.
192	1906	Potomac River Basin (D. C., Md., W. Va.)
358	1913	Rio Grande Basin (Colo., N. Mex., Tex.), Water resources of, 1888-1913.
491	1917	St. Mary and Milk Rivers (Mont., Canada), Water supply of.
109	1904	Susquehanna River Basin (Pa., Md.), Hydrography of.

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 compilation of records of discharge

State	Year ending	Report	Issued by
Alabama.....	1915	Bull. 17, Water powers of Alabama....	Geological Survey of Alabama.
Arkansas....	1928	Stream-gaging report 1.....	Arkansas Geological Survey.
Connecticut	1926	Bull. 44, Water resources of Connecticut.	State Geological and Natural History Survey.
Do.....	1933[a]	5th biennial report.....	Connecticut State Water Commission.
Georgia.....	1907	Bull. 16, Water powers of Georgia....	Geological Survey of Georgia.
Do.....	1920[b]	Bull. 38, Water powers of Georgia....	Do.

a Includes records of monthly discharge in second-feet per square mile for years 1912-33.
b Includes records for years 1907-18.

State reports containing compilation of records of discharge--Continued

State	Year ending	Report	Issued by
Illinois....	1911	Water resources of Illinois.....	Rivers and Lakes Commission.
Do.....	1934	Stream-flow data of Illinois.....	Division of Waterways.
Indiana.....	1927	Pub. 72, Surface water supply of Indiana.	Department of Conservation.
Do.....	1930[c]	Pub. 112, Surface water supply of Indiana.	Do.
Iowa.... ...	1932	Stream-flow records of Iowa.....	Iowa State Planning Board.
Kansas.....	1919	Surface waters of Kansas.....	Kansas Water Commission.
Do.....	1924[d]	....do.....	Do.
Do.....	1928[e]	....do.....	Kansas State Board of Agriculture.
Do.....	1935[f]	Stream-flow data of Kansas.....	Do.
Do.....	1939[g]	....do.....	Do.
Kentucky....	1920	Surface waters of Kentucky.....	Kentucky Geological Survey.
Minnesota...	1912	Water-resources investigation of Minnesota.	State Drainage Commission.
Missouri....	1926	Vol. 20, 2d series, Water Resources of Missouri.	Missouri Geological Survey and Water Resources.
Do.....	1939[h]	Vol. 26, 2d series, Surface waters of Missouri.	Do.
Nebraska....	1914	1st hydrographic report.....	Bureau of Water Power, Irrigation, and Drainage.
Do.....	1928[i]	2d hydrographic report.....	Do.
New Jersey..	1928	Bull. 33, Surface water supply of New Jersey.	Department of Conservation and Development.
Do.....	1934[j]	Special Report 5, Surface Water Supply of New Jersey.	State Water Policy Commission.
New Mexico..	1925	Surface water supply of New Mexico...	Office of the State Engineer.
North Carolina.	1923	Bull. 34, Discharge records of North Carolina Streams.	Department of Conservation and Development.
Do.....	1936[k]	Bull. 39, Discharge records of North Carolina streams.	Do.
Ohio.....	1921[l]	Bull. 73, Ohio stream flow.....	Engineering Experiment Station, Ohio State University.
Do.....	1939[m]	Bull. 200, Compilation of stream-flow records of Ohio.	Department of Agriculture, Division of Conservation and Natural Resources.
Oregon.....	1914	Bull. 4, Water resources of the State of Oregon.	Office of the State Engineer.
Do.....	1924[n]	Bull. 7, Water resources of the State of Oregon.	Do.
Do.....	1930[o]	Bull. 8, Water resources of the State of Oregon.	Do.
Do.....	1936[p]	Bull. 9, Water resources of the State of Oregon.	Do.
Pennsylvania	1911	Report of the Water Supply Commission of Pennsylvania.	Water Supply Commission of Pennsylvania.
Do.....	1932[q]	Stream-flow records of Pennsylvania..	Department of Forests and Waters.
Tennessee...	1924	Bull. 34, Water resources of Tennessee.	Department of Education.
Do.....	1930[r]	Bull. 40, Surface waters of Tennessee.	Do.
Utah.....	1905	5th biennial report, State Engineer..	Office of the State Engineer.
Virginia....	1927	Bull. 31, Water resources of Virginia.	Conservation and Development Commission.
Washington..	1933	Bull. 5, Monthly and yearly summaries of hydrometric data.	Department of Conservation and Development.
Wisconsin...	1914	1st report of Railroad Commission of Wisconsin to Legislature on water powers.	Railroad Commission of Wisconsin.
Do.....	1923[s]	2d report of Railroad Commission of Wisconsin to Legislature on water powers.	Do.

c Includes records for years 1927-30.
d Includes records for years 1919-24.
e Includes records for years 1924-28.
f Includes records for years 1928-35.
g Includes records for years 1935-39.
h Includes records for years 1927-39.
i Includes records for years 1914-28.
j Includes records for years 1928-34.
k Includes records for years 1889-1936: records of daily and monthly discharge are not included.
l Includes all available records prior to 1921.
m Includes records for years 1902-39.
n Includes records for years 1914-24.
o Includes records for years 1924-30.
p Includes records for years 1930-36.
q Includes records for years 1928-32.
r Includes average weekly discharge for years 1920-30.
s Includes records for years 1914-23.

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, Missouri, Montana, Nebraska, New Mexico, New York (also New York City Board of Water Supply), North Dakota, Oregon, Pennsylvania, Utah, 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 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, California, January 1, 1934.
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.
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.

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 1939 to September 1940 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 on many canals and ditches and occasional records on 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 daily discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
Ana River.....	About 6 miles northeast of Summer Lake, Oreg.	1929-40*	Oregon State engineer.
Beaver Creek.....	Near Logan, Utah, in Logan Canyon	1939-40	Bureau of Reclamation.
Big Creek.....	Smiths Ranch near Randolph, Utah.	1939-40	Do.
Center Creek.....	Near Heber, Utah.....	1940	Do.
Centerville Creek..	Centerville, Utah, near mouth of canyon.	1937-40	Intermountain Forest & Range experiment station.
Centerville Creek tributaries.	Near Centerville, Utah (at several gaging stations).	1937-40	Do.
City Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1940†	Salt Lake City.
Clarkston Creek....	Near Clarkston, Utah, below Newton Reservoir.	1939-40	Bureau of Reclamation.
Do.....	Near Newton, Utah, below diversions.	1939	Do.
Collett Creek.....	Near Cokeville, Wyo.....	1939-40	Do.
Collett enlargement	....do.....	1939-40	Do.

*Records prior to 1936 are published in bulletins of the Oregon State engineer as follows: For 1910-14, in Bulletin 4; for 1915-22, in Bulletin 7; for 1930, in Bulletin 8; and for 1931-36 (some to December 1936) in Bulletin 9.

†Records prior to 1913 are contained in water-supply papers published by the Geological Survey; those for 1913-30, in reports published by Salt Lake City.

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

Stream	Location	Period	Collected by
Cottonwood Creek...	Salt Lake City, Utah, near mouth of canyon.	1898-1940†	Salt Lake City.
Do.....	Sec. 16, T. 12 S., R. 39 E., near Swanlake, Idaho.	1939-40	Bureau of Reclamation.
Do.....	Near Swanlake, Idaho.....	1939-40	Do.
Cub River.....	Near Preston, Idaho, above diversions.	1940	Do.
Do.....	Near Franklin, Idaho, below diversions.	1940	Do.
Daniels Creek.....	Near Heber, Utah.....	1940	Do.
Deer Creek.....	Near Provo, Utah, in Provo Canyon.	1938-40	Do.
Emigration Creek...	Salt Lake City, Utah, near mouth of canyon.	1898-1940†	Salt Lake City.
Ephraim Creek tributaries.	Near Ephraim, Utah (at two gaging stations).	1914-40	Intermountain Forest & Range experiment station.
Farmington Creek tributaries.	Near Farmington, Utah (at several gaging stations).	1937-40	Do.
Honey Creek.....	Near Plush, Oreg.....	1910-15, 1921-22, 1930-40*	Oregon State engineer.
Lake Creek.....	Near Heber, Utah.....	1940	Bureau of Reclamation.
Little Bear River, East Fork of.	Near Avon, Utah, at dam site....	1939-40	Do.
Little Cottonwood Creek.	Salt Lake City, Utah, near mouth of canyon.	1898-1940†	Salt Lake City.
Little Pine Creek..	Near Enterprise, Utah, below reservoir.	1939-40	Bureau of Reclamation.
Mill Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1940†	Salt Lake City.
Otter Creek.....	Rex Ranch, near Randolph, Utah..	1939-40	Bureau of Reclamation.
Otter Creek, Middle Fork of.	....do.....	1939-40	Do.
Otter Creek, North Fork of.	....do.....	1939-40	Do.
Otter Creek outlet.	Antimony, Utah, at former Geological Survey gaging station near Coyote.	1920-40**	Sevier River water commissioner.
Otter Creek, South Fork of.	Rex Ranch, near Randolph, Utah..	1939-40	Bureau of Reclamation.
Parish Creek.....	Centerville, Utah, near mouth of canyon.	1937-40	Intermountain Forest & Range experiment station.
Parish Creek tributaries.	Near Centerville, Utah (at several gaging stations).	1937-40	Do.
Parleys Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1940†	Salt Lake City.
Pinto Creek.....	Near Newcastle, Utah.....	1939-40	Bureau of Reclamation.
Provo River.....	Below Charleston, Utah, at middle of Deer Creek Reservoir area.	1938-40	Do.
Do.....	Below Deer Creek Dam, in Provo Canyon, Utah.	1938-40	Do.
Do.....	Near Hailstone, Utah.....	1940	Do.
Do.....	Near Olmsted, Utah, in Provo Canyon, above irrigation diversions.	1938-40	Do.
Provo River and streams tributary to Deer Creek Reservoir area.	Near Charleston, Utah, above backwater of reservoir.	1938-40	Do.
Provo River, North Fork of.	Wildwood, Utah, in Provo Canyon.	1938-40	Do.
Ross Creek.....	Near Hailstone, Utah.....	1940	Do.
Sevier River.....	Delta, Utah, at former Geological Survey gaging station.	1920-40**	Sevier River water commissioner.
Silver Creek.....	Near Atkinson, Utah.....	1939-40	Bureau of Reclamation.
Smiths Fork.....	Near Cokeville, Wyo.....	1939-40	Do.
Strawberry tunnel outlet.	At West Portal, Utah.....	1913-40††	Spanish Fork Water Users' Association.
Treasureton canal.	Sec. 8, T. 12 S., R. 39 E., near Swanlake, Idaho.	1939-40	Bureau of Reclamation.
Woodruff Creek, North Fork of.	Near Woodruff, Utah, above diversions.	1939	Do.
Woodruff Creek, South Fork of.	Near Woodruff, Utah, at dam site	1939-40	Do.
Yellow Creek.....	Near Evanston, Wyo.....	1940	Do.

*Records prior to 1936 are published in bulletins of the Oregon State engineer as follows: For 1910-14, in Bulletin 4; for 1915-22, in Bulletin 7; for 1930, in Bulletin 8; and for 1931-36 (some to December 1936) in Bulletin 9.

†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.

**Published in the annual reports of Sevier River water commiseioner.

††Published in reports of the Strawberry Valley project and of the Spanish Fork water commissioner.

Note.- Records here listed other than those cited in above notes have not been published. The Soil Conservation Service began in 1938 to make studies of run-off from six areas of less than 1,030 acres each in the vicinity of Safford, Ariz. Records of these studies are in the files of that organization.

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

California: State Department of Public Works, F. W. Clark, director, and Edward Hyatt, State engineer; San Bernardino and Los Angeles Counties.

Idaho: State Department of Reclamation, James Spofford, commissioner.

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

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

Utah: Office of State engineer, T. H. Humpherys.

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

Assistance in collecting records was rendered also by the following organizations and corporations:

California: Walker River Irrigation District.

Idaho: Bureau of Reclamation.

Oregon: Fish and Wildlife Service.

Utah: Bureau of Reclamation; Utah Power & Light Co.; Logan, Hyde Park & Smithfield Canal Co.

DIVISION OF WORK

The stream-gaging work was conducted by the water resources branch of the Geological Survey, Glenn L. Parker, chief hydraulic engineer, Carl G. Paulsen, assistant chief hydraulic engineer, and Rudolph G. Kasel, chief of the division of surface waters. 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 and Carson River Basins), H. D. McGlashan. In Idaho (except for stations on Bear River), T. R. Newell. In Oregon, G. H. Canfield, the work being done in collaboration with C. E. Stricklin, State engineer. In Utah and Nevada and for stations in Walker Lake and Carson River Basins in California and on Bear River in Idaho, A. B. Purton. In Wyoming, Robert Follansbee.

The records were reviewed and the manuscript prepared for publication under the direction of B. J. Peterson, engineer in charge, and M. C. Boyer, associate engineer, section of reports.

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. 40°13', long. 112°36', at Midlake, on Lucin cut-off of Southern Pacific Railroad, 30 miles west of Ogden, Weber County. 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 (general adjustment of 1912). To reduce elevations to general adjustment of 1929, add 0.05 foot.

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

Extremes.- Maximum elevation during year, 4,195.75 feet Apr. 15 at Midlake gage; minimum, 4,193.69 feet Sept. 15 at Boat Harbor gage.
1851-1940: Maximum elevation, 4,211.6 feet in 1873, computed from traditional data by E. C. La Rue (see Water-Supply Paper 880, p. 125); minimum, 4,193.68 feet Sept. 15, 1940, at Boat Harbor 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.

Cooperation.- Records for Boat Harbor gage collected and prepared in cooperation with Thomas C. Adams; those for Midlake gage furnished by Southern Pacific Railroad.

Gage height, in feet, water year 1939-40

Day	Boat Harbor	Midlake
Oct. 1	7.84	-3.25
15	7.81	-3.35
Nov. 1	7.73	-3.4
15	7.66	-3.5
Dec. 1	7.68	-3.5
15	7.74	-3.4
Jan. 1	7.73	-3.35
15	8.13	-3.1
Feb. 1	8.21	-2.9
15	8.44	-2.65
Mar. 1	8.59	-2.5
15	8.69	-2.4
Apr. 1	8.82	-2.35
15	8.89	-2.25
May 1	8.84	-2.35
15	8.72	-2.4
June 1	8.52	-2.6
15	8.34	-2.85
July 1	8.06	-3.1
15	7.85	-3.25
Aug. 1	7.54	-3.6
15	7.30	-3.85
Sept. 1	6.98	-4.1
15	6.84	-4.25

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 highway bridge and 3½ miles northwest of Evanston.

Drainage area.- 645 square miles.

Records available.- October 1913 to September 1940.

Average discharge.- 27 years, 234 second-feet.

Extremes.- Maximum discharge during year, 1,180 second-feet May 16 (gage height, 4.34 feet); no flow July 21-23, July 28 to Sept. 6.
1913-40: 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.

Remarks.- Records good except those for periods of ice effect and those below 500 second-feet, which are fair. Some diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	17	20	26	26	100	197	202	518	6.4		0
2	23	19	21	26	29	88	166	213	464	6.4		0
3	21	18	20	25	34	78	120	287	402	5.6		0
4	21	17	20	24	33	76	145	446	334	5.2		0
5	24	17	20	24	32	61	145	491	321	3.6		0
6	24	17	24	21	34	52	152	419	305	3.2		0
7	24	17	22	19	36	50	159	398	241	2.2		.2
8	24	17	24	19	33	50	122	428	195	1.9		2.2
9	27	17	24	22	38	52	128	522	187	1.7		2.0
10	26	17	24	23	45	53	141	653	145	1.3		1.7
11	23	16	24	20	40	47	141	761	106	1.0		1.4
12	20	14	20	20	36	42	112	895	91	1.0		1.6
13	20	17	17	15	*39	40	110	980	83	.6		1.7
14	20	17	19	16	42	41	118	945	81	.3		2.3
15	20	17	20	*16	45	42	137	945	81	.2		3.2
16	20	14	23	18	34	50	137	1,050	76	.2		6.0
17	20	13	21	20	30	64	122	1,100	69	.3		5.6
18	18	13	20	16	28	49	116	1,040	58	.4		7.0
19	17	13	18	12	31	53	132	930	47	.2		9.8
20	17	13	16	13	35	59	156	833	31	.1		16
21	17	14	15	14	32	66	185	756	21	0		25
22	18	17	16	13	38	79	197	671	16	0		31
23	19	16	15	14	45	93	202	644	13	0		27
24	17	19	16	15	56	122	244	662	11	.6		30
25	16	19	15	16	68	173	299	653	9.8	.6		26
26	17	21	13	19	74	284	290	707	8.6	.3		24
27	18	24	15	22	84	334	278	910	7.5	.1		25
28	17	22	14	24	90	195	261	851	6	0		25
29	16	20	17	20	94	178	252	712	5.2	0		52
30	16	17	20	20	-	152	247	599	5.2	0		72
31	17	-	24	23	-	187	-	572	-	0		-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	613	27	16	19.8	1,220
November	509	24	13	17.0	1,010
December	597	24	13	19.3	1,180
Calendar year 1939	50,181.5	964	0	137	99,540
January	595	26	12	19.2	1,180
February	1,281	94	26	44.2	2,540
March	3,010	334	40	97.1	5,970
April	5,211	299	110	174	10,340
May	21,275	1,100	202	686	42,200
June	3,938.3	518	5.2	131	7,810
July	43.4	6.4	0	1.40	86
August	0	0	0	0	0
September	397.7	72	0	13.3	789
Water year 1939-40	37,470.4	1,100	0	102	74,320

*Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 19, 22, Dec. 24 to Mar. 1, and Mar. 12-14.

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9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

Bear River at Border, Wyo.

Location.- Water-stage recorder, lat. 42°11', long. 111°03', in 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 1940.

Extremes.- Maximum gage height during year, 2.67 feet Feb. 29 (period of ice effect, discharge not determined); minimum daily discharge, 30 second-feet Aug. 18-22. 1937-40: Maximum discharge, 1,950 second-feet Mar. 23, 1939, (gage height, 6.69 feet); minimum daily, that of Aug. 18-22, 1940.

Remarks.- Records good except those for periods of ice effect and those below 100 second-feet, which are fair. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	120	149	144	140	100	240	132	98	167	61	65	31
2	128	147	133	140	110	202	136	97	174	64	61	32
3	136	145	128	130	115	172	132	97	193	65	67	33
4	137	144	137	125	115	167	125	98	202	70	66	e35
5	144	142	139	120	105	167	124	91	201	90	66	34
6	158	142	139	110	110	174	127	93	201	77	61	33
7	158	141	137	105	115	160	125	81	190	74	60	33
8	157	145	131	105	110	168	121	77	181	74	59	33
9	155	144	131	110	110	172	121	74	184	73	55	34
10	153	137	129	110	120	165	124	72	170	70	50	34
11	165	129	128	115	115	149	119	67	172	67	48	34
12	162	131	117	110	105	140	115	70	151	67	39	34
13	167	136	120	90	110	140	114	74	135	69	39	36
14	172	134	131	60	*115	145	116	77	125	65	36	36
15	164	133	133	65	120	157	127	93	119	64	34	36
16	162	133	133	*67	110	165	130	100	107	69	32	36
17	155	128	131	80	100	152	130	109	104	77	32	36
18	156	131	129	70	95	148	125	107	98	93	30	36
19	158	137	123	65	105	144	128	94	86	91	30	39
20	158	139	128	70	110	144	136	104	77	91	30	41
21	153	147	139	70	120	146	144	102	70	87	30	41
22	152	142	123	70	130	149	146	102	65	84	30	41
23	152	141	126	75	140	151	141	100	64	74	31	42
24	152	141	125	80	150	151	144	116	64	74	32	42
25	150	145	120	85	160	151	140	133	62	79	34	41
26	149	153	105	90	175	152	144	133	62	80	34	43
27	145	142	110	95	200	167	143	143	60	73	33	46
28	145	136	100	100	210	156	148	151	59	72	32	50
29	150	138	120	90	220	143	141	164	58	69	32	53
30	149	141	125	90	-	135	112	160	58	80	32	59
31	149	-	135	95	-	133	-	151	-	79	32	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,710	172	120	152	9,340
November	4,193	153	128	140	8,320
December	3,949	144	100	127	7,830
Calendar year 1939	104,604	1,840	56	287	207,500
January	2,927	140	60	94.4	5,810
February	3,700	220	95	128	7,340
March	4,905	240	133	158	9,730
April	3,910	148	112	130	7,760
May	3,228	164	67	104	6,400
June	3,659	202	58	122	7,260
July	2,322	93	61	74.9	4,610
August	1,312	67	30	42.3	2,600
September	1,154	59	31	38.5	2,290
Water year 1939-40	39,969	240	30	109	79,290

eWinter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 29, Dec. 24 to Mar. 1, and Mar. 12-14.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. al Survey

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 D'ngle.

Drainage area.- 2,780 square miles.

Records available.- June 1913 to September 1916, January 1919 to September 1940.

Average discharge.- 24 years, 515 second-feet.

Extremes.- Maximum daily discharge during year, 227 second-feet Mar. 6; minimum daily, 44 second-feet Aug. 20-22.
1913-16, 1919-40: 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 period of ice effect, which are fair. Numerous diversions above station for irrigation.

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

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	152	187	180	175	160	220	183	137	167	87	85	48
2	152	187	180	180	160	210	183	126	178	91	73	48
3	158	184	171	180	165	195	181	118	188	91	68	49
4	173	184	160	180	165	205	176	120	202	92	77	53
5	177	184	189	175	165	215	169	116	225	92	82	54
6	180	182	177	170	170	227	165	114	225	105	81	54
7	189	177	184	170	170	223	165	113	220	101	76	53
8	194	175	180	165	170	215	160	111	204	96	74	53
9	194	177	173	165	170	220	158	107	199	94	73	53
10	189	180	173	160	170	213	158	107	202	91	67	52
11	192	177	173	160	170	206	154	111	190	91	63	54
12	202	171	171	155	170	199	147	109	178	89	61	74
13	200	171	158	155	170	192	141	109	174	87	60	73
14	205	173	152	156	170	190	139	111	160	87	56	65
15	213	173	175	155	170	188	141	111	152	84	54	65
16	202	173	173	155	170	183	147	120	147	85	52	65
17	202	169	170	150	170	176	145	126	143	92	49	63
18	197	166	170	150	170	172	145	130	143	114	47	63
19	197	152	165	150	170	167	147	132	139	118	46	64
20	200	160	160	145	170	165	152	122	128	118	44	67
21	200	180	160	145	170	163	156	128	114	113	44	68
22	197	175	160	145	170	158	163	128	111	111	44	68
23	197	177	160	145	170	154	167	126	101	105	45	67
24	197	184	160	150	170	149	160	126	98	98	47	64
25	192	216	160	150	170	145	158	134	96	92	49	64
26	189	187	155	150	169	145	154	152	94	92	53	65
27	189	182	155	155	200	158	156	154	92	92	53	70
28	187	182	150	155	200	172	154	160	87	89	52	74
29	187	175	145	160	200	172	156	169	87	85	50	77
30	187	166	155	160	-	181	152	178	87	84	49	82
31	187	-	165	160	-	188	-	176	-	85	49	-

Month	Second-feet-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,877	213	152	190	11,660
November	5,326	216	152	178	10,560
December	5,159	213	152	166	10,230
Calendar year 1939	128,466	2,360	87	352	254,800
January	4,926	180	145	159	9,770
February	4,984	202	160	172	9,890
March	5,756	227	145	186	11,440
April	4,732	183	139	158	9,390
May	3,981	178	107	128	7,900
June	4,531	225	87	151	8,990
July	2,951	118	84	95.2	5,850
August	1,823	85	44	58.8	3,620
September	1,869	82	48	62.3	3,710
Water year 1939-40	51,925	227	44	142	103,000

Note.- Stage-discharge relation affected by ice Dec. 17 to Mar. 5.

9-232 February 1936

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 25 years (1911-16, 1919-20, 1921-40), 783 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 1,340 second-feet June 27-29; minimum daily, 35 second-feet Dec. 31.
1911-16, 1919-40: 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 except those for periods of no gage-height record, which are fair. Many diversions above station for irrigation. Storage in Bear Lake Reservoir and regulation by Soda hydroelectric plant.

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

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	193	311	182	36	225	371	550	290	760	1,290	921	430
2	351	248	284	152	196	300	447	295	432	1,240	863	534
3	472	267	104	152	86	415	270	324	800	830	799	640
4	370	150	297	148	91	540	221	270	843	409	730	480
5	238	148	258	a150	195	524	167	260	669	1,030	921	383
6	280	265	260	a80	210	658	80	257	551	1,280	912	385
7	99	235	420	a40	269	528	36	74	515	1,190	841	306
8	94	189	296	a115	277	597	88	77	376	1,210	862	125
9	96	213	254	a115	236	402	213	486	301	1,260	809	451
10	264	194	104	138	219	306	175	595	a530	1,190	722	468
11	357	160	219	147	50	620	131	549	a590	1,030	501	402
12	284	116	259	92	255	654	226	357	a630	796	1,010	430
13	268	193	221	107	279	551	49	a610	a630	831	788	447
14	99	193	223	167	253	225	50	a640	a650	871	870	257
15	102	192	239	163	241	52	222	a670	a560	1,050	661	121
16	227	188	176	167	285	54	302	a680	a440	994	849	432
17	270	225	49	200	179	97	309	752	a730	829	851	382
18	271	113	170	165	55	276	169	667	a910	903	464	296
19	200	113	235	255	253	304	145	482	a940	949	859	344
20	130	227	265	163	263	317	101	778	924	784	835	110
21	197	266	310	156	292	319	58	817	1,070	886	976	107
22	136	262	261	342	382	294	167	764	1,030	1,150	1,010	124
23	175	110	186	290	550	504	181	797	936	1,020	1,030	195
24	206	190	42	275	317	457	217	818	1,170	1,130	795	377
25	312	107	42	244	280	558	225	861	1,150	1,110	275	396
26	312	107	246	278	366	557	214	879	1,210	1,000	839	283
27	201	257	302	304	187	642	148	872	1,340	912	741	281
28	157	261	334	134	52	577	169	858	1,340	1,040	726	158
29	130	290	300	352	406	646	296	873	1,340	1,180	831	116
30	317	238	198	298	-	560	293	598	1,230	1,160	913	283
31	232	-	35	292	-	298	-	842	-	1,100	778	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	7,040	472	94	227	13,960
November	6,028	311	107	201	11,960
December	6,771	420	35	218	13,430
Calendar year 1939	172,259	1,240	35	472	341,700
January	5,720	352	36	185	11,350
February	6,949	550	50	240	13,780
March	13,203	658	52	426	26,190
April	5,919	550	36	197	11,740
May	18,092	879	74	584	35,880
June	24,597	1,340	301	820	48,790
July	31,654	1,290	409	1,021	62,780
August	24,967	1,050	464	805	49,520
September	9,743	640	107	325	19,320
Water year 1939-40	160,683	1,340	35	439	318,700

a No gage-height record; discharge computed on basis of output of hydroelectric plant 600 feet above station.

Bear River near Weston, Idaho

Location.- Water-stage recorder, lat. 42°01'50", long. 111°55'15", in SW¼SE¼ sec. 17, T. 16 S., R. 39 E., at Weston-Fairview highway bridge, 3 miles east of Weston.

Records available.- October 1919 to December 1932 and February 1934 to September 1940. October 1889 to January 1917, at site near Preston, 12 miles upstream, published as Bear River near Preston, Idaho.

Average discharge.- 19 years (1919-32, 1934-40), 930 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 1,200 second-feet June 29; minimum daily, 46 second-feet May 9.
1919-32, 1934-40: Maximum discharge, 6,100 second-feet May 8 or 9, 1922 (gage height, 12.1 feet, from floodmarks), from rating curve extended above 4,000 second-feet; minimum daily, 30 second-feet Apr. 29, 1934, and June 27, 1937.

Remarks.- Records fair. West Cache canal and many irrigation ditches divert water above station. Storage in Bear Lake Reservoir and regulation by power plants above gage.

Cooperation.- Records furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	498	416	353	476	619	553	940	335	457	902	835	651
2	489	298	452	318	371	733	856	154	203	815	596	467
3	438	367	306	374	560	767	706	311	398	480	642	448
4	498	367	346	418	563	480	302	132	383	808	645	560
5	469	365	302	457	311	784	576	470	672	359	521	439
6	558	269	346	427	476	1,010	616	65	359	842	626	528
7	393	315	594	383	528	835	374	102	230	835	672	405
8	313	287	401	157	531	685	268	97	228	602	632	445
9	228	343	546	454	433	835	599	46	196	651	566	263
10	246	358	444	470	629	733	383	314	152	723	642	268
11	320	300	355	439	341	791	277	344	75	1,020	512	329
12	326	256	295	335	513	616	515	329	282	596	675	531
13	367	242	427	405	512	1,020	405	280	311	672	753	424
14	334	258	427	294	341	589	174	556	418	801	767	356
15	432	360	311	332	442	421	110	544	311	757	651	365
16	250	311	382	317	448	489	206	528	260	596	405	302
17	278	331	455	476	553	365	395	856	139	730	859	368
18	398	350	220	326	445	241	645	436	550	815	408	445
19	336	336	372	a330	398	524	576	305	359	408	424	353
20	282	234	519	a500	368	473	454	271	531	534	891	433
21	446	334	458	a550	508	356	347	582	774	962	915	395
22	254	343	254	a350	439	414	496	585	818	470	905	159
23	267	385	510	a420	951	582	280	408	645	622	808	198
24	284	338	501	a570	709	668	402	508	723	645	451	288
25	309	336	489	a610	699	569	329	784	716	515	362	723
26	372	355	353	556	377	944	451	521	651	572	534	288
27	353	258	432	483	524	902	252	518	696	757	470	448
28	329	315	a300	467	679	1,110	329	835	891	828	638	411
29	341	424	a300	569	709	1,170	374	849	1,200	534	770	257
30	336	455	a560	534	-	947	486	716	1,030	835	794	154
31	260	-	a570	464	-	804	-	451	-	859	706	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	11,004	558	228	355	21,830
November	9,906	455	234	330	19,650
December	12,580	594	220	406	24,950
Calendar year 1939	202,671	1,950	-	555	402,000
January	13,161	610	157	425	26,100
February	14,976	951	311	516	29,700
March	21,410	1,170	241	691	42,470
April	13,123	940	110	437	26,030
May	13,232	856	46	427	26,250
June	14,658	1,200	75	489	29,070
July	21,545	1,020	359	695	42,730
August	20,075	915	362	648	39,820
September	11,701	651	154	390	23,210
Water year 1939-40	177,371	1,200	46	485	351,800

a No gage-height record; discharge computed on basis of unpublished records for station at Oneida.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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.

Drainage area.- 6,000 square miles.

Records available.- July 1889 to September 1940.

Extremes.- Maximum discharge during year, 3,610 second-feet (regulated) Jan. 17 (gage height, 4.72 feet); minimum daily, 18 second-feet (regulated) on several days during June to September.
1889-1940: 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 (regulated) at midnight Aug. 5, 1920.

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

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

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	560	704	694	364	936	1,410	2,080	1,410	20	18	21	18
2	1,040	538	665	981	653	1,540	1,920	1,130	20	18	20	18
3	1,100	554	654	937	1,150	1,090	1,140	744	20	19	20	19
4	1,010	201	1,080	1,350	480	1,630	1,080	728	19	20	20	19
5	1,540	34	1,000	741	1,320	1,700	1,240	498	18	20	20	20
6	1,780	523	1,090	643	1,680	1,080	1,050	1,060	18	20	20	22
7	814	479	1,360	357	1,610	2,050	610	1,150	18	20	20	21
8	341	592	1,330	1,060	1,370	1,240	1,580	779	18	20	20	20
9	1,010	376	1,140	1,130	1,050	1,300	1,240	20	19	20	20	21
10	640	491	382	1,090	775	1,150	1,290	20	490	21	20	26
11	803	631	869	1,230	218	1,610	1,300	19	19	21	20	25
12	126	541	1,000	1,330	1,490	1,600	1,190	20	19	21	20	23
13	655	566	1,030	651	1,540	1,400	1,350	19	19	21	20	21
14	442	549	1,000	391	1,230	1,460	214	20	19	21	20	20
15	148	960	801	1,110	938	1,790	860	20	19	21	20	21
16	1,110	825	394	1,080	535	1,360	934	21	19	20	20	21
17	510	907	444	680	894	500	1,350	21	20	20	19	20
18	712	832	1,280	1,640	289	1,490	1,310	21	18	19	19	21
19	1,050	212	923	1,020	1,400	875	1,340	21	18	20	20	21
20	876	910	947	456	1,150	1,050	1,520	21	19	19	20	783
21	288	1,080	983	197	1,190	938	1,030	20	19	19	21	406
22	142	932	990	440	1,470	861	1,370	20	19	20	20	146
23	952	288	445	878	1,600	1,390	1,710	20	20	22	19	1,180
24	801	794	314	935	1,600	494	1,540	20	20	21	19	130
25	344	971	24	1,170	1,040	1,440	1,320	20	20	21	19	544
26	354	198	637	1,100	1,190	1,670	1,220	20	19	22	20	870
27	987	1,100	840	1,080	1,410	1,800	880	21	19	21	20	880
28	748	1,260	1,040	550	1,500	1,860	894	20	22	21	18	820
29	47	1,020	576	1,200	1,500	2,130	1,640	20	18	21	19	527
30	736	980	298	1,200	-	1,900	1,610	20	18	21	18	1,070
31	1,020	-	222	879	-	1,530	-	20	-	20	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	22,686	1,780	47	732	45,000
November	20,048	1,260	34	668	39,760
December	24,452	1,360	24	789	48,500
Calendar year 1939	288,190	3,680	24	790	571,600
January	27,250	1,350	197	879	54,050
February	33,208	1,680	218	1,145	65,870
March	43,338	2,130	494	1,398	85,960
April	36,912	2,080	214	1,230	73,210
May	7,963	1,410	19	257	15,790
June	1,043	490	18	34.8	2,070
July	628	22	18	20.3	1,250
August	609	21	18	19.6	1,210
September	7,753	1,180	18	258	15,380
Water year 1939-40	225,890	2,130	18	617	448,000

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog al Survey

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.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during period of record, 23 second-feet Sept. 28 (from rating curve extended above 14 second-feet); maximum gage height, 2.43 feet Jan. 11 (ice present); minimum discharge not determined.

Remarks.- Records good except those for period of ice effect, which are poor. Practically no diversions above station; no regulation. Many diversions below station, near State line, for irrigation.

Cooperation.- Water-stage recorder inspected by John H. Boehme, postmaster at Geneva.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.7	0.3	2.1	7.2
1.8	.9	2.2	12.3
1.9	2.0	2.3	19.0
2.0	3.8		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	3.1				3.3	11	9.2	6.5	6.5	1.6	1.4
2	-	3.3				3.3	9.2	10	6.2	5.2	1.7	1.4
3	-	3.1				2.9	6.2	11	6.5	3.8	1.6	1.6
4	-	3.3				2.5	6.5	11	6.5	3.4	1.6	1.7
5	-	2.9				2.5	8.2	11	7.7	3.1	1.6	1.6
6	-	2.9				3.1	7.7	10	7.2	2.9	1.6	1.6
7	-	2.9				2.7	6.5	10	6.5	2.7	1.6	1.6
8	-	2.7				2.7	7.2	9.2	6.2	2.7	1.6	1.6
9	-	2.9				2.7	8.2	9.2	6.2	2.5	1.6	1.6
10	-					2.5	8.2	9.2	5.8	2.5	1.6	1.6
11	-					2.5	6.9	9.2	5.5	2.5	1.4	1.6
12	-					2.5	6.5	9.2	5.2	2.4	1.4	1.6
13	-				(*)	2.5	7.7	10	5.2	2.4	1.6	1.7
14	-					2.5	9.2	9.2	4.8	2.2	1.4	1.9
15	-					2.5	9.8	9.2	4.5	2.2	1.4	1.8
16	-		2.0	2.0	1.5	2.5	11	9.2	4.1	2.4	1.4	1.7
17	-					2.7	a9.0	8.7	4.1	2.5	1.4	1.6
18	-					2.7	a9.0	8.7	4.5	2.4	1.4	1.6
19	-		(*)			2.9	a10	8.7	4.1	2.4	1.4	1.8
20	-	2.5				2.9	all	8.7	4.1	2.2	1.6	2.2
21	-					3.3	a12	8.7	3.8	2.0	1.6	2.0
22	-					3.6	all	8.2	3.6	2.0	1.6	1.9
23	h3.1					4.1	all	8.2	3.6	1.9	1.6	1.8
24	h3.1					4.8	11	8.2	3.6	1.9	1.6	1.7
25	h3.1					5.5	12	8.2	3.6	1.8	1.7	1.7
26	3.1					7.2	12	8.2	3.4	1.9	1.7	1.7
27	3.1					9.8	12	8.2	3.1	1.8	1.6	2.0
28	3.1					8.2	11	8.2	3.1	1.8	1.6	4.8
29	3.1					5.8	10	9.8	2.9	1.8	1.4	3.6
30	2.9				-	6.9	9.8	7.7	3.8	1.7	1.4	2.4
31	2.9	-			-	10	-	7.2	-	1.7	1.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 23-31	27.5	3.1	2.9	3.06	55
November	79.6	3.3	-	2.65	158
December	62.0	-	-	2.0	123
Calendar year	-	-	-	-	-
January	62.0	-	-	2.0	123
February	43.5	-	-	1.5	86
March	123.6	10	2.5	3.99	245
April	280.8	12	6.2	9.36	557
May	281.4	11	7.2	9.08	558
June	145.9	7.7	2.9	4.86	289
July	79.2	6.5	1.7	2.55	157
August	47.7	1.7	1.4	1.54	95
September	56.8	4.8	1.4	1.89	113
The period	-	-	-	-	2,560

*Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of recorded stage and weather records.
h Computed from staff-gage reading.
Note.- Stage-discharge relation affected by ice Nov. 10 to Feb. 29, Mar. 11-15.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. al Survey

BEAR RIVER BASIN

Salt Creek near Geneva, Idaho

Location.- Water-stage recorder, lat. 42°24'00", long. 110°59'30", in NW¼ sec. 21, T. 2S N., R. 119 W., 800 feet upstream from bridge on U. S. Highway 89, 1,000 feet upstream from confluence with Thomas Fork, 3.0 miles east of Idaho-Wyoming State line, and 4¾ miles northeast of Geneva post office.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during year, 37 second-feet May 4 (gage height, 2.13 feet), from rating curve extended above 30 second-feet; minimum, 0.5 second-foot Aug. 18 (gage height, 1.05 feet).

Remarks.- Records good except those for periods of ice effect, which are fair. Several small irrigation diversions from stream and tributaries above station. No diversion between station and Thomas Fork.

Cooperation.- Water-stage recorder inspected by John H. Boehme, postmaster at Geneva.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	3.4	2.5	2.7	2.9	2.9	8.0	20	10	5.7	1.5	0.7
2	-	3.4	2.6	2.5	2.9	2.7	8.3	25	10	5.9	1.3	.7
3	-	3.4	2.5	2.5	2.7	2.7	7.4	30	10	5.3	1.2	1.0
4	-	3.4	2.5	2.4	2.7	2.6	7.2	31	10	4.6	1.1	1.4
5	-	3.4	2.5	2.4	2.6	2.7	7.7	28	12	4.4	1.1	1.5
6	-	3.2	2.5	2.4	2.6	*2.9	8.6	25	11	4.4	1.1	1.3
7	-	3.2	2.5	2.4	2.6	3.0	8.6	24	10	4.1	1.2	1.2
8	-	3.4	2.5	2.4	2.6	2.6	8.8	23	9.7	4.1	1.4	1.2
9	-	3.4	2.5	2.4	2.5	2.7	9.7	22	9.4	3.7	1.3	1.2
10	-	3.0	2.6	2.4	2.5	2.7	9.7	22	8.8	3.7	1.0	1.2
11	-	3.0	2.3	2.4	2.5	2.7	9.7	21	8.6	3.6	.9	1.3
12	-	3.0	2.5	2.4	2.5	2.7	9.7	20	8.3	3.6	.9	1.3
13	-	3.0	2.5	*2.4	2.5	2.7	11	22	8.0	3.4	.7	1.6
14	-	3.0	2.5	2.4	2.5	2.7	13	20	7.4	3.0	.7	2.1
15	-	3.0	2.5	2.4	2.5	2.7	14	18	7.4	3.0	.7	1.9
16	-	3.0	2.5	2.4	2.5	3.0	15	18	7.2	3.9	.7	1.6
17	-	3.0	2.5	2.4	2.5	3.2	14	17	6.9	4.1	.7	1.5
18	-	3.0	2.5	2.4	2.5	3.2	14	16	6.6	3.7	.7	1.6
19	-	3.0	*2.3	2.0	2.5	3.4	16	16	6.4	3.6	.7	2.3
20	-	3.0	2.3	2.4	2.5	3.6	18	15	5.9	3.0	.6	2.9
21	-	3.0	2.3	2.4	2.5	3.9	19	15	5.7	2.7	.8	2.3
22	-	3.0	2.3	2.4	2.5	4.2	18	14	5.7	2.5	.8	2.0
23	-	3.0	2.3	2.4	2.5	4.6	19	14	5.5	2.2	.8	1.9
24	-	3.0	2.3	2.5	2.5	5.1	20	14	5.3	2.0	1.1	1.7
25	-	3.0	2.3	2.6	2.5	5.7	22	13	5.1	1.9	1.4	1.7
26	-	3.0	2.3	2.6	2.6	6.4	25	14	4.8	1.9	1.9	1.6
27	-	3.0	2.3	2.6	3.4	8.0	26	13	4.6	1.7	1.7	1.9
28	3.4	3.0	2.5	2.5	3.6	7.4	24	12	4.4	1.9	1.3	3.4
29	3.4	2.5	2.6	2.5	3.0	6.4	22	14	4.4	1.9	1.1	3.4
30	3.4	2.7	2.9	2.5	-	6.2	20	12	5.1	1.7	.9	2.6
31	3.4	-	2.7	2.6	-	7.4	-	11	-	1.6	.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-	-
November	92.4	3.4	2.5	3.08	183
December	76.4	2.9	2.3	2.46	152
Calendar year	-	-	-	-	-
January	75.7	2.7	2.0	2.44	150
February	76.7	3.6	2.5	2.64	152
March	122.7	8.0	2.6	3.96	243
April	433.4	26	7.2	14.4	860
May	579	31	11	18.7	1,150
June	224.2	12	4.4	7.47	445
July	102.8	5.9	1.6	3.32	204
August	32.6	1.9	.7	1.05	65
September	52.0	3.4	.7	1.73	103
The period	-	-	-	-	3,710

*Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 10-26, 29, Dec. 3-8, 12-27, Jan. 4-18, 20-28, Feb. 11-25, Mar. 11-15.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Montpelier Creek near Montpelier, Idaho

Location.- Water-stage recorder, lat. 42°21', long. 111°11', in NE¼ sec. 34, T. 12 S., R. 45 E., 150 feet upstream from bridge on U. S. Highway 89, 275 feet upstream from South Fork, and 6.8 miles northeast of Montpelier.

Drainage area.- 28.2 square miles.

Records available.- November 1939 to September 1940.

Extremes.- Maximum discharge during period of record, 35 second-feet July 1 (gage height, 1.88 feet), from rating curve extended above 25 second-feet; minimum, 2.7 second-feet Feb. 21 (gage height, 0.84 foot).

Remarks.- Records good except those for periods of no gage-height record or ice effect, which are fair. One irrigation diversion from tributary about 2 miles above station. Many irrigation diversions below.

Cooperation.- Water-stage recorder inspected by employee of the local irrigation association.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.80	2.3	1.10	6.6	1.60	22.5
.90	3.4	1.20	8.9	1.80	31.0
1.00	4.8	1.40	14.9	1.90	35.5

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		5.7	4.8	4.8	5.2	5.3	13	18	14	16	4.4	3.7
2			4.5	4.7	5.0	5.0	13	18	14	12	4.4	3.8
3			4.8	4.7	4.8	5.2	12	18	14	11	4.1	a3.8
4			4.5	4.5	4.8	4.8	11	17	14	11	4.1	a4.0
5		a5.5	4.5	4.5	5.0	4.8	11	17	15	9.5	4.0	a3.8
6			4.5	4.5	4.8	4.7	13	17	15	9.2	4.1	a3.4
7			4.5	4.5	4.7	4.2	12	17	13	8.7	4.1	a3.4
8			4.5	4.5	4.8	4.2	13	17	13	8.4	4.2	a3.4
9			4.5	4.5	4.7	4.2	14	17	13	8.0	4.1	a3.4
10			4.5	4.8	4.5	4.4	16	17	13	7.3	4.1	3.4
11			4.5	4.5	4.5	4.4	16	18	12	6.8	4.0	3.4
12			4.5	4.5	4.5	4.5	16	18	11	6.6	4.0	3.5
13			4.5	*4.5	4.5	4.5	17	19	11	6.2	4.0	4.1
14			4.5	4.5	4.5	4.5	a19	19	11	6.1	4.0	4.5
15			4.5	4.5	4.5	4.5	a21	19	11	5.9	4.0	4.0
16			4.5	4.5	4.5	4.8	a23	18	11	a6.6	4.0	4.0
17			4.5	4.5	4.5	4.8	a22	18	10	a6.8	4.0	4.1
18			4.5	4.5	4.5	4.8	a19	18	9.7	a6.5	3.8	4.1
19			*4.0	3.8	4.5	4.8	a19	18	9.7	a6.2	3.7	4.1
20		5.0	4.0	4.5	4.5	5.0	a21	18	9.7	a6.0	3.8	4.7
21			4.0	4.5	4.5	5.3	22	18	9.2	5.9	3.8	4.2
22			4.0	4.5	4.5	5.7	22	17	9.2	5.9	3.8	4.0
23			4.0	4.5	4.5	6.6	22	17	9.5	5.7	3.8	3.8
24			4.0	5.0	4.5	7.5	22	17	8.9	5.5	4.4	4.0
25			3.8	5.0	4.5	8.4	22	18	9.5	5.3	4.7	4.0
26			4.0	5.0	4.5	10	20	18	9.5	5.3	4.8	3.8
27			4.0	4.8	5.2	13	20	17	9.2	5.0	4.8	4.0
28			4.0	4.5	5.9	13	20	16	8.9	4.8	4.4	4.5
29			4.5	4.5	5.7	12	20	16	8.4	4.7	4.1	5.3
30			4.5	4.5	-	12	19	15	9.7	4.7	4.0	4.5
31		-	4.8	5.0	-	12	-	15	-	4.4	4.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-	-
November	154.7	-	-	5.16	307
December	135.2	4.8	3.8	4.36	268
Calendar year	-	-	-	-	-
January	142.1	5.0	3.8	4.58	282
February	137.1	5.9	4.5	4.73	272
March	198.9	13	4.2	6.42	395
April	530	23	11	17.7	1,050
May	540	19	15	17.4	1,070
June	336.1	15	8.4	11.2	667
July	222.0	16	4.4	7.16	440
August	127.5	4.8	3.7	4.11	253
September	118.7	5.3	3.4	3.96	235
The period	-	-	-	-	5,240

*Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of recorded range in stage, weather records, and records for nearby streams.
Note.- Stage-discharge relation affected by ice Nov. 10-30, Dec. 4-9, 12-24, 26, 27, 29, 30, Jan. 11-15, 17, 18, 20-25, 28-31, Feb. 12-24, Mar. 12-15.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940. Fragmentary records collected at site 0.7 mile downstream just below power plant (now inoperative) October 1911 to September 1914.

Extremes.- Maximum discharge during year, 38 second-feet June 30 (gage height, 1.64 feet), from rating curve extended above 30 second-feet; minimum daily, 19 second-feet Mar. 2-15, 18.

Remarks.- Records good. No diversions above station; many irrigation diversions below. 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 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	a23	22	21	20	20	24	29	25	24	24
2		-	23	22	21	19	20	24	29	25	24	24
3		-	23	22	21	19	20	25	29	25	24	24
4		-	23	21	21	19	20	26	29	25	24	24
5		-	22	22	21	19	20	26	31	26	24	24
6		-	22	22	21	19	20	26	30	26	24	24
7		-	23	22	21	19	20	26	29	26	24	24
8		h23	23	22	20	19	20	27	29	26	24	24
9		23	22	22	20	19	20	27	29	25	24	24
10		23	22	22	20	19	20	27	29	25	24	24
11		23	22	22	20	19	20	28	29	26	24	24
12		a23	22	22	20	19	20	28	28	26	24	24
13		a23	22	21	20	19	20	29	28	25	24	24
14		a23	22	21	21	19	20	30	28	25	24	23
15		a23	22	21	21	19	21	30	28	25	24	24
16		a23	22	21	20	20	21	31	28	26	24	24
17		23	22	21	20	20	21	32	28	24	24	24
18		23	22	21	20	19	a21	32	28	24	24	24
19		23	22	21	20	20	a21	32	28	24	24	24
20		a23	a22	21	20	20	21	32	27	24	24	24
21		23	a22	21	20	20	21	31	26	24	24	24
22		23	a22	21	20	20	21	30	26	24	24	24
23		23	22	21	20	20	21	30	26	24	24	24
24		23	21	21	20	20	21	30	26	24	24	24
25		23	21	21	20	20	22	30	26	24	24	24
26		23	21	21	20	20	23	31	26	24	24	24
27		a23	22	21	21	20	23	30	26	24	24	24
28		a23	22	21	20	20	23	30	26	24	24	24
29		a23	22	21	20	20	23	29	26	24	24	24
30		a23	22	21	-	20	23	29	26	24	24	24
31		-	22	21	-	20	-	29	-	24	24	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-	-
November 8-30	529	23	23	23.0	1,050
December	685	23	21	22.1	1,360
Calendar year	-	-	-	-	-
January	662	22	21	21.4	1,310
February	590	21	20	20.3	1,170
March	605	20	19	19.5	1,200
April	627	23	20	20.9	1,240
May	891	32	24	28.7	1,770
June	833	31	26	27.8	1,650
July	767	26	24	24.7	1,520
August	744	24	24	24.0	1,480
September	719	24	24	24.0	1,430
The period	-	-	-	-	15,180

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

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Stauffer Creek near Nounan, Idaho

Location.- Water-stage recorder, lat. 42°28', long. 111°25', in N½ sec. 15, T. 11 S., R. 43 E., 0.5 mile downstream from check dam, 0.6 mile upstream from mouth, 2 miles east of Nounan post office, and 2½ miles west of Georgetown.

Records available.- November 1939 to September 1940.

Extremes.- Maximum discharge during period of record, 122 second-feet May 27 (gage height, 3.43 feet), from rating curve extended above 30 second-feet; minimum, 0.2 second-foot June 22, 24-28; minimum gage height, 0.50 foot June 26.

Remarks.- Records poor to Feb. 24, good thereafter except those for periods of ice effect or no gage-height record, which are fair. Many irrigation diversions from stream and tributaries above station; none below. A substantial check dam has been constructed 0.5 mile above station which is used to irrigate meadows above by flooding. During periods of operation, effects of check-dam operation are pronounced.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.5	0.2	1.1	10.5	2.4	65
.6	.5	1.3	17	2.7	80
.7	1.5	1.5	25	3.0	95
.8	3.0	1.8	37	3.3	113
.9	5.0	2.1	50	3.5	125

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-				36	17	18	11	0.3	1.4	1.1
2		-				b45	16	17	11	.3	1.3	1.0
3		-				25	15	18	12	16	1.4	1.1
4		-				b25	14	21	13	7.0	1.2	1.2
5		-				b20	14	22	20	3.2	1.2	1.1
6		-				b18	15	22	33	2.7	1.2	1.0
7		-				b15	13	22	25	a2.5	1.2	.9
8		-				12	12	21	17	a2.3	1.1	.9
9		-				b15	18	21	13	a2.1	1.2	1.0
10		-				b15	23	21	11	a1.9	1.0	1.0
11		(*)				b15	17	20	9.3	a1.7	1.1	.9
12				(*)	b3.5	b15	14	23	7.5	a1.5	1.1	.9
13						b15	14	31	6.2	1.3	1.0	.9
14						15	14	34	5.0	1.3	1.0	.9
15			b3.0	b3.0		15	22	32	1.5	1.3	.8	.9
16						20	29	30	.4	1.5	.7	.9
17						29	22	29	.5	1.5	.7	.9
18						b28	19	28	.4	1.6	.7	1.0
19			(*)			24	17	29	.4	1.6	.7	1.5
20		b3.0				23	20	29	.3	1.6	.8	2.2
21						22	21	32	.3	1.5	.9	2.0
22						19	20	29	.2	1.4	1.0	2.0
23						18	19	19	.3	1.3	1.1	1.8
24						17	23	.9	.2	1.3	1.1	1.8
25					5.0	16	23	.5	.2	1.3	.9	1.5
26					4.8	20	21	.5	.2	1.4	1.0	1.5
27					6.5	42	21	51	.2	1.4	1.0	1.5
28					15.0	33	21	f37	.2	1.5	1.0	2.1
29					b25	23	21	f15	.3	1.4	1.0	2.1
30					-	22	20	f12	.3	1.4	1.1	2.1
31		-			-	19	-	f11	-	1.3	1.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-	-
November 11-30	60.0	-	-	3.0	119
December	93.0	-	-	3.0	184
Calendar year	-	-	-	-	-
January	93.0	-	-	3.0	184
February	140.3	25	-	4.84	278
March	676	45	12	21.8	1,340
April	555	29	12	18.5	1,100
May	695.9	51	.5	22.4	1,380
June	199.9	33	.2	6.66	396
July	68.4	16	.3	2.21	136
August	31.9	1.4	.7	1.03	63
September	39.7	2.2	.9	1.32	79
The period	-	-	-	-	5,260

*Winter discharge measurement made on this day.
a No gage-height record; discharge interpolated.
b Stage-discharge relation affected by ice.
f Computed on basis of estimated gage-height record.

. 9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

Skinner Creek at Nounan, Idaho

Location.- Staff gage, lat. 42°29', long. 111°28', in SW¼ sec. 8, T. 11 S., R. 43 E., 330 feet downstream from point where flow through Minnig mill is returned to creek and three-quarters of a mile west of Nounan post office.

Drainage area.- 5.1 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge observed during year, 20 second-feet May 13, from rating curve extended above 14 second-feet; maximum gage height observed, 1.60 feet during period of ice effect Mar. 14; minimum discharge observed, 0.2 second-foot Aug. 4 (gage height, 0.48 foot).

Remarks.- Records good except those for periods of no gage-height record and ice effect, which are fair. Gage read once daily Oct. 17 to Jan. 15 and twice daily Jan. 16 to Sept. 30. One small irrigation diversion about half a mile above station; many irrigation diversions below. Water which operates Minnig mill is diverted about a third of a mile above station and returns to creek above. Possibly some regulation at low stages but observations are made when none is effective. There are facilities to permit a small diversion from Coop Creek to Skinner Creek about 2½ miles above the station to augment low-water supply for Minnig mill. None was so diverted during 1940.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	1.8			1.8	2.6	3.3	7.6	8.4	2.9	1.2	1.1
2	-	1.8			1.9	b2.5	3.3	10	8.8	3.9	1.3	1.2
3	-	1.4			1.8	2.4	2.9	12	8.4	2.3	1.2	1.1
4	-	1.8			1.8	b2.0	2.6	11	8.4	2.1	.4	1.3
5	-	1.8			1.8	b2.0	2.8	7.1	10	2.0	1.2	1.2
6	-	1.8			1.8	b2.0	2.6	6.3	8.1	2.0	1.2	1.2
7	-	1.6			1.8	2.1	2.6	5.8	7.6	1.9	1.3	1.2
8	-	1.8			1.8	1.8	2.8	6.1	7.4	1.8	1.1	1.4
9	-	1.6			1.8	b1.8	3.5	6.6	7.1	1.7	1.2	1.4
10	-				1.8	1.8	2.8	8.8	5.8	1.8	1.3	1.3
11	-				b1.7	b1.8	2.9	11	6.1	1.7	1.2	1.2
12	-			(*)	b1.7	b1.8	2.8	16	2.6	1.7	1.2	1.4
13	-				b1.7	b1.8	4.1	19	3.9	1.9	1.2	1.4
14	-				b1.7	b1.8	5.0	14	4.7	.9	1.2	1.4
15	-				b1.7	b1.8	5.2	11	4.8	1.2	1.2	1.3
16	-		b1.8	b1.8	b1.7	1.8	4.1	13	4.5	.8	.7	1.2
17	1.6				b1.7	1.9	3.9	14	3.9	2.0	1.1	1.4
18	1.6				b1.7	2.0	4.1	13	3.9	1.7	1.2	1.7
19	1.2		(*)		b1.7	1.9	4.8	14	3.8	1.4	1.2	1.8
20	a1.5	b1.8			b1.7	1.9	5.0	16	3.6	1.5	1.2	1.5
21	a1.8				b1.7	2.3	5.6	14	3.5	1.7	1.2	1.5
22	1.8				b1.7	2.5	4.8	13	3.3	1.0	1.2	1.3
23	1.8				b1.7	2.4	4.7	12	3.3	1.3	1.1	1.3
24	1.6				1.8	2.9	7.9	12	3.1	1.5	1.4	1.3
25	1.8				1.9	3.2	9.1	12	2.8	1.4	.7	1.3
26	1.8				2.0	3.6	8.8	10	3.3	1.4	1.2	1.3
27	1.8				3.6	5.8	8.1	9.5	1.1	1.5	1.2	1.4
28	1.8				3.6	3.2	8.4	12	.8	1.4	1.1	1.4
29	1.8				2.9	2.8	7.4	9.8	2.5	1.4	1.0	1.4
30	1.8				-	3.2	6.3	9.5	4.3	1.3	1.0	1.4
31	1.8	-			-	3.1	-	8.8	-	1.3	1.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 17-31	25.5	1.8	1.2	1.70	51
November	53.2	-	-	1.77	106
December	55.8	-	-	1.8	111
Calendar year	-	-	-	-	-
January	55.8	-	-	1.8	111
February	56.0	3.6	1.7	1.93	111
March	74.5	5.8	1.8	2.40	148
April	142.2	9.1	2.6	4.74	282
May	344.9	19	5.8	11.1	684
June	149.8	10	.8	4.99	297
July	52.4	3.9	.8	1.69	104
August	35.3	1.5	.4	1.14	70
September	40.3	1.8	1.1	1.34	80
The period	-	-	-	-	2,160

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

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Cottonwood Creek near Cleveland, Idaho

Location.- Staff gage, lat. 42°20', long. 111°46', in sec. 34, T. 12 S., R. 40 E., 500 feet upstream from Cleveland irrigation canal, 2⅔ miles west of Cleveland, and 4 miles downstream from proposed Cottonwood Dam.

Records available.- November 1938 to September 1940.

Extremes.- Maximum discharge observed during year, 186 second-feet Mar. 27 (gage height, 2.40 feet), from rating curve extended above 120 second-feet; minimum observed, 0.5 second-foot Aug. 17 (gage height, 0.46 foot).
1938-40: Maximum discharge observed, 330 second-feet Apr. 1, 1939 (gage height, 3.00 feet), from rating curve extended above 120 second-feet; minimum observed, that of Aug. 17, 1940.

Remarks.- Records fair. Several irrigation diversions in upper valley above proposed Cottonwood Dam. Gage read once daily.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.4	0.20	1.2	21.5	2.0	109
.6	1.5	1.4	35.5	2.2	145
.8	5.0	1.6	54	2.4	186
1.0	11.5	1.8	78.5		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.9	7.9	6.7	8.4	7.9	24	78	42	10	2.3	0.6	0.6
2	3.3	7.9	6.7	10	7.9	24	66	36	10	2.6	.8	.6
3	5.0	7.9	5.0	12	7.9	24	73	44	8.6	2.1	1.0	.8
4	5.6	7.9	5.0	7.9	7.9	24	66	42	7.9	2.3	1.0	.8
5	6.2	7.9	6.2	7.9	7.9	18	59	39	13	2.1	1.0	.8
6	6.7	7.9	6.7	7.9	7.9	14	59	34	10	2.3	1.0	.8
7	7.3	7.9	7.9	8.6	7.9	17	54	31	7.9	2.3	1.0	.6
8	6.7	8.6	7.9	8.6		10	59	27	8.6	2.3	1.0	.6
9	6.7	8.6	7.3	9.3		9.3	62	22	10	2.1	.8	.6
10	6.7	7.9	7.3	8.6		11	66	20	9.3	2.1	.8	.6
11	6.7	7.9	6.7	8.6		6.2	66	16	8.6	2.1	.8	.8
12	6.7	5.7	3.7	7.9		3.7	59	15	7.9	2.3	.8	.8
13	6.7	5.6	3.7	7.9		3.7	61	34	7.9	2.6	.8	.6
14	7.3	5.6	4.2	7.9		4.2	61	17	7.9	2.1	.6	.6
15	7.3	5.6	4.6	7.9		4.6	62	10	6.7	2.3	.6	.6
16	7.3	6.7	5.0	7.9	8.0	7.9	66	9.3	5.6	2.3	.6	1.0
17	7.3	7.3	7.6	7.9		19	76	8.6	5.6	2.3	.5	1.5
18	7.3	8.6	3.7			22	76	7.9	5.0	2.3	.6	4.6
19	7.9	9.3	5.6			23	81	7.9	5.0	2.3	.6	8.3
20	7.9	10	4.8	7.5		30	93	8.6	5.6	2.3	.6	6.2
21	7.9	8.6	5.0			30	81	8.6	5.6	2.3	.6	5.6
22	7.9	9.3	5.6			39	78	7.9	5.0	2.3	.6	4.2
23	7.3	7.9	6.7	7.9		42	84	12	3.7	2.3	.6	4.6
24	7.3	5.0	4.2	7.9	7.9	51	93	9.0	2.9	1.3	.6	4.6
25	7.3	5.0	4.1	7.9	7.9	61	81	8.6	2.6	1.1	.6	4.8
26	6.7	4.6	4.1	7.9	12	65	81	10	2.6	1.0	.6	5.0
27	7.3	4.6	4.0	7.9	23	186	75	9.3	2.2	1.0	.6	5.0
28	7.9	5.0	4.6	7.9	23	78	68	7.9	2.1	1.0	.6	5.6
29	7.9	5.6	5.6	7.9	23	78	61	7.9	1.8	1.0	.6	6.2
30	7.9	6.7	5.0	7.9	-	78	48	9.3	2.3	.9	.6	6.7
31	7.9	-	6.7	7.9	-	78	-	11	-	1.0	.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	212.8	7.9	2.9	6.86	422
November	215.0	10	4.6	7.17	426
December	171.9	7.9	3.7	5.55	341
Calendar year 1939	8,731.7	330	1	23.9	17,320
January	253.8	12	-	8.19	503
February	280.1	23	-	9.66	556
March	1,085.6	186	3.7	35.0	2,150
April	2,093	93	48	69.8	4,150
May	572.8	44	7.9	18.5	1,140
June	191.9	13	1.8	6.40	381
July	60.6	2.6	.9	1.95	120
August	22.1	1.0	.5	.71	44
September	84.1	8.3	.6	2.80	167
Water year 1939-40	5,243.7	186	.5	14.3	10,400

Note.- Stage-discharge relation affected by ice Dec. 25, 26, Jan. 18-22, 29-31, Feb. 8-23.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940, in reports of Geological Survey. January 1936 to October 1939 (fragmentary), in reports of Little Bear River water commissioner.

Extremes.- Maximum discharge during year, 390 second-feet Mar. 27 (gage height, 2.77 feet); minimum, 4 second-feet Aug. 14.
1938-40: Maximum discharge, 491 second-feet Apr. 4, 1939 (gage height, 3.17 feet); minimum, that of Aug. 14, 1940.

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

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	40	33	45	38	75	138	88	17	11	7	5
2	22	40	33	46	38	68	146	76	16	12	7	6
3	35	40	33	47	41	66	124	86	18	12	7	8
4	37	40	33	44	44	58	109	91	18	10	7	8
5	35	40	32	42	40	58	114	88	18	10	7	8
6	29	40	32	40	39	55	126	84	17	10	7	8
7	32	38	32	37	41	53	109	81	15	9	6	8
8	32	35	32	39	39	55	109	83	15	9	6	8
9	32	35	34	40	37	55	126	84	16	9	6	8
10	32	34	35	41	38	53	142	90	15	8	7	9
11	32	35	35	40	40	52	126	93	14	8	7	9
12	31	35	35	40	38	48	120	98	13	8	7	10
13	32	35	36	37	34	50	128	107	13	8	6	10
14	32	35	36	37	38	48	149	90	14	8	5	9
15	32	34	36	34	38	48	176	78	12	9	5	10
16	33	34	36	b34	35	50	178	75	12	10	5	9
17	31	34	36	36	34	53	151	63	12	8	7	9
18	34	33	35	39	37	58	149	53	12	8	8	9
19	40	34	33	b34	37	63	157	47	10	8	7	9
20	41	34	35	35	36	75	168	42	10	8	7	9
21	41	35	35	38	35	86	172	35	11	8	7	11
22	40	35	32	b37	38	95	155	31	10	9	6	12
23	40	35	35	b36	41	105	151	26	11	9	7	12
24	40	35	37	38	41	120	155	22	10	9	7	11
25	40	35	35	38	42	134	159	20	10	8	7	12
26	41	34	b33	37	48	142	159	19	10	5	7	12
27	40	35	b34	38	78	287	146	20	11	5	7	13
28	40	34	b32	38	120	178	132	18	12	5	7	14
29	41	34	b34	38	96	140	120	16	11	7	6	14
30	41	33	b36	37	-	134	103	17	11	8	6	12
31	41	-	41	37	-	142	-	18	-	7	6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,086	41	17	35.0	2,150
November	1,070	40	33	35.7	2,120
December	1,066	41	32	34.4	2,110
Calendar year 1939	21,536	381	8	59.0	42,700
January	1,199	47	34	38.7	2,380
February	1,301	120	34	44.9	2,580
March	2,704	287	48	87.2	5,360
April	4,197	178	103	140	8,320
May	1,839	107	16	59.3	3,650
June	394	18	10	13.1	781
July	263	12	5	8.5	522
August	204	8	5	6.6	405
September	292	14	5	9.7	579
Water year 1939-40	15,615	287	5	42.7	30,960

b Stage-discharge relation affected by ice.

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

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, 1 mile southwest of Hyrum. Datum of gage is at mean sea level.

Drainage area.- 220 square miles.

Records available.- October 1938 to September 1940.

Extremes.- Maximum contents during year, 18,680 acre-feet Apr. 24 to May 15 (elevation, 4,672.0 feet); minimum, 4,570 acre-feet Sept. 30 (elevation, 4,634.9 feet).
1938-40: Maximum contents, 18,680 acre-feet for periods in each year (elevation, 4,672.0 feet); minimum, that of Sept. 30, 1940.

Remarks.- Reservoir is formed by earth-fill dam; storage began in 1935. Capacity, 18,680 acre-feet between elevations 4,590 feet (bottom of reservoir) and 4,672 feet (top of spillway gates) above mean sea level. Dead storage, 3,370 acre-feet (below elevation 4,629.6 feet, sill of outlet canal). Figures given herein represent total contents. Elevation of spillway crest is 4,660 feet. Water is used for irrigation on the Hyrum project.

Contents, in acre-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	-	17,960	18,680	17,150	13,510	-	-
2	-	-	-	-	-	13,640	-	-	-	13,250	-	-
3	-	-	-	-	12,360	-	18,540	-	17,060	-	-	5,650
4	-	-	-	10,130	-	-	-	18,680	-	12,990	8,700	-
5	-	-	-	-	-	-	-	-	16,970	-	-	5,540
6	-	-	-	10,360	-	-	-	-	-	-	8,520	-
7	5,790	-	-	-	-	-	-	-	16,820	12,610	8,410	-
8	-	-	-	-	-	-	18,540	18,680	-	12,450	-	-
9	-	-	-	-	-	-	-	-	16,730	-	8,200	5,380
10	-	-	8,450	-	12,990	13,640	-	-	-	-	8,070	-
11	-	-	-	-	-	-	-	18,680	-	12,030	-	5,320
12	-	6,840	-	-	-	-	-	-	16,450	-	7,830	-
13	5,940	-	-	10,990	-	-	-	-	-	-	-	5,220
14	-	-	-	-	13,210	-	18,540	-	-	11,550	-	-
15	-	-	-	-	-	-	-	18,680	16,080	-	7,490	-
16	-	-	8,870	-	-	-	-	-	15,950	11,270	7,360	5,080
17	-	-	-	-	13,380	14,290	-	-	-	-	7,260	5,000
18	-	7,070	-	-	-	-	-	18,590	-	11,030	-	-
19	-	-	-	11,350	-	-	-	-	15,490	-	7,070	4,900
20	-	-	-	-	-	-	18,590	18,390	-	10,750	6,940	-
21	6,050	-	-	-	-	-	-	-	15,130	-	6,840	4,820
22	-	-	9,240	-	-	-	-	18,200	-	-	-	-
23	-	-	-	-	-	15,310	-	18,060	-	10,330	-	-
24	-	-	-	-	13,550	-	18,680	17,910	14,640	-	6,530	4,720
25	-	7,490	-	-	-	15,760	-	-	-	-	-	-
26	-	-	-	-	-	-	-	17,630	14,290	9,940	-	-
27	-	-	-	11,950	-	-	-	17,530	-	-	6,230	-
28	6,080	-	9,610	-	-	-	-	-	13,900	9,790	6,140	4,620
29	-	-	-	-	13,640	17,480	-	17,250	-	-	-	-
30	-	7,890	-	-	-	-	-	-	13,510	-	-	4,570
31	6,110	-	9,870	12,280	-	17,960	-	-	-	9,240	5,880	-

Monthly elevation and contents, water year October 1939 to September 1940

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,639.0	5,650	-
Oct. 31	4,640.6	6,110	+460
Nov. 30	4,646.2	7,890	+1,780
Dec. 31	4,651.7	9,870	+1,980
Calendar year 1939	-	-	-2,620
Jan. 31	4,657.8	12,280	+2,410
Feb. 29	4,661.0	13,640	+1,360
Mar. 31	4,670.5	17,960	+4,320
Apr. 30	(a)	18,680	+720
May 31	(a)	17,180	-1,500
June 30	4,660.7	13,510	-3,670
July 31	4,650.0	9,240	-4,270
Aug. 31	4,639.8	5,880	-3,360
Sept.30	4,634.9	4,570	-1,310
Water year 1939-40	-	-	-1,080

a No record of elevation; 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 bridge, 1½ miles downstream from Hyrum Dam, and 2 miles west of Hyrum.

Drainage area.- 222 square miles.

Records available.- October 1938 to September 1940.

Extremes (regulated).- Maximum discharge during year, 199 second-feet Apr. 16, 17 (gage height, 2.49 feet); minimum, 1 second-foot or less for several days during year.
1938-40 (regulated): Maximum discharge, 421 second-feet Mar. 25, 1939 (gage height, 3.38 feet); minimum, 1 second-foot or less for periods in each year.

Remarks.- Records good except those below 5 second-feet, which are fair. Flow affected by many diversions upstream for irrigation and regulated by Hyrum Reservoir (see p. 27).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7	10	2	5	5	100	6	30	2	1	1	1
2	6	10	2	5	5	88	6	20	2	1	1	1
3	2	11	2	5	5	80	27	19	1	1	1	2
4	4	11	2	5	5	72	140	33	1	1	2	2
5	4	11	2	5	5	62	100	34	1	1	2	2
6	4	10	2	5	6	61	100	38	1	1	2	1
7	5	10	1	5	6	50	108	38	1	1	2	2
8	5	10	1	5	6	28	123	37	1	1	2	2
9	5	10	1	5	6	21	125	29	1	1	2	2
10	5	10	1	5	6	6	127	11	1	1	2	2
11	6	9	1	5	6	5	140	9	1	1	1	2
12	10	9	1	5	6	5	139	10	1	1	1	1
13	10	9	1	5	6	5	132	10	1	1	1	1
14	10	9	1	5	6	5	122	14	1	1	1	1
15	10	9	1	5	6	5	125	10	1	1	1	1
16	10	9	1	5	9	5	165	5	1	1	1	1
17	10	9	1	5	16	5	195	4	1	1	1	1
18	10	6	1	5	22	5	162	3	1	1	1	1
19	10	2	1	5	26	5	130	3	1	1	1	1
20	10	2	1	5	29	5	128	2	1	1	1	1
21	10	2	1	5	32	5	162	2	1	1	1	2
22	10	2	1	5	40	5	171	2	1	1	1	2
23	10	2	1	5	47	5	153	3	1	1	1	1
24	10	2	1	5	45	5	142	2	1	1	1	1
25	10	2	1	5	44	5	144	2	1	1	1	1
26	10	2	1	5	44	5	144	2	1	1	1	1
27	11	2	1	5	52	6	155	2	1	1	1	1
28	11	2	1	5	84	6	169	2	1	2	1	1
29	11	2	2	5	103	6	156	2	1	1	1	1
30	10	2	4	5	-	6	81	2	1	1	1	2
31	11	-	5	5	-	6	-	2	-	1	1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	257	11	2	8.3	510
November	196	11	2	6.5	389
December	45	5	1	1.5	89
Calendar year 1939	14,168	398	1	38.8	28,090
January	155	5	5	5.0	307
February	678	103	5	23.4	1,340
March	678	100	5	21.9	1,340
April	3,777	195	6	126	7,490
May	382	38	2	12.3	758
June	32	2	1	1.1	63
July	32	2	1	1.0	63
August	38	2	1	1.2	75
September	41	2	1	1.4	81
Water year 1939-40	6,311	195	1	17.2	12,500

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940. 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.- 27 years (1913-40), 115 second-feet.
Extremes.- Maximum daily discharge during year, 310 second-feet May 13, 14; minimum daily, 6 second-feet Nov. 7.
1913-40: Maximum discharge, 2,000 second-feet (estimated) Mar. 21, 1916 (gage height, 5.6 feet, former datum); minimum daily, that of Nov. 7, 1940.
Remarks.- Records good except those for period when the intake to well was partly clogged, which are fair. Water diverted from river and springs above station for power, irrigation, and municipal supply. Flow regulated by power plants above station.
Cooperation.- Water-stage recorder graph and seven discharge measurements furnished by Utah Power & Light Co.

Rating table, water year 1939-40, except for period when intake was clogged (gage height, in feet, and discharge, in second-feet)

0.8	4	1.4	75	2.4	306
.9	10.5	1.6	114	2.6	360
1.0	19	1.8	157	2.7	388
1.1	30	2.0	204		
1.2	43	2.2	254		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	10	10	13	11	20	13	11	80	13	15	13
2	13	9	10	14	10	17	14	15	70	14	12	12
3	13	7	10	13	10	16	15	28	55	14	13	14
4	11	9	13	13	10	16	19	96	46	15	14	12
5	10	8	16	13	16	16	21	92	104	14	13	13
6	11	7	16	13	13	16	28	86	92	13	13	14
7	10	6	15	12	10	13	27	81	73	14	14	13
8	10	7	11	12	10	10	27	81	70	13	13	13
9	12	9	11	12	10	10	33	64	50	13	15	14
10	12	12	10	12	12	10	19	129	38	13	13	13
11	11	9	10	12	12	10	13	175	34	13	14	13
12	10	9	10	12	12	9	13	205	30	13	15	12
13	10	9	10	12	12	9	14	310	30	13	14	20
14	10	9	11	12	12	9	16	310	30	13	15	20
15	10	9	10	12	12	9	17	250	35	12	14	14
16	10	9	10	12	12	9	17	240	36	13	14	11
17	10	9	10	14	12	9	16	240	33	14	13	12
18	14	9	10	13	12	10	16	220	23	14	13	12
19	16	9	10	13	12	15	17	220	22	12	15	12
20	15	9	10	11	11	15	20	190	19	13	13	12
21	16	9	10	11	12	16	29	190	17	12	14	12
22	16	11	10	10	12	17	19	170	16	11	14	12
23	16	10	10	10	12	16	16	155	15	12	12	11
24	15	10	11	10	11	21	28	130	15	13	13	12
25	14	10	11	10	10	33	52	135	14	14	14	12
26	13	9	12	10	12	36	40	155	13	15	13	12
27	14	9	12	10	12	42	40	160	13	15	13	12
28	13	9	30	10	10	16	33	139	13	16	13	12
29	13	9	14	11	19	16	44	105	12	16	13	10
30	14	9	12	11	-	16	20	100	13	15	14	9
31	11	-	12	11	-	12	-	90	-	14	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	385	16	10	12.4	764
November	269	12	6	9.0	534
December	367	30	10	11.8	728
Calendar year 1939	15,270	320	6	41.8	30,290
January	364	14	10	11.7	722
February	330	19	10	12.1	694
March	488	42	9	15.7	968
April	696	52	13	23.2	1,380
May	4,593	310	11	148	9,110
June	1,111	104	12	37.0	2,200
July	419	16	11	13.5	831
August	421	15	12	13.6	835
September	383	20	9	12.8	760
Water year 1939-40	9,846	310	6	26.9	19,530

Note.- Discharge for period when intake to well was partly clogged, May 11 to June 2, computed on basis of gage heights, gage-height record of flow over diversion dam above station, and records for nearby streams.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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

Location.- Water-stage recorder and wooden 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 1940.

Average discharge.- 27 years, 103 second-feet.

Extremes.- Maximum daily discharge during year, 183 second-feet June 2 (gage height, 2.62 feet); minimum daily, 54 second-feet Dec. 28.
1914-40: Maximum daily discharge, 194 second-feet Apr. 15, 1926; 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.- Water-stage recorder graph and seven discharge measurements furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	91	80	86	77	87	115	166	182	147	96	80
2	88	90	82	83	76	79	114	160	183	146	95	78
3	88	90	82	81	78	81	114	169	182	147	92	78
4	86	90	83	82	76	74	102	172	182	142	94	79
5	87	91	82	77	60	76	94	177	182	130	94	80
6	84	89	81	71	77	72	92	179	182	130	95	80
7	84	88	82	74	76	76	92	180	182	132	94	78
8	82	89	80	78	76	77	92	180	182	130	94	77
9	83	90	79	80	76	78	92	180	180	125	92	77
10	83	82	82	80	76	82	115	180	179	121	91	79
11	81	88	87	80	75	72	126	180	179	120	90	76
12	80	89	79	77	74	72	115	179	179	122	90	76
13	80	91	80	76	72	72	120	173	179	121	90	79
14	77	88	78	75	72	75	142	180	177	118	89	81
15	78	87	79	69	74	74	153	179	177	118	89	79
16	79	86	79	66	72	74	153	180	176	120	89	78
17	77	87	80	74	69	79	139	182	176	121	89	76
18	84	84	81	74	69	71	139	182	174	114	84	72
19	89	h82	78	61	69	74	155	180	176	114	84	76
20	88	h81	77	70	69	77	167	182	177	113	84	75
21	89	h88	78	74	69	87	169	182	170	109	84	75
22	89	h86	75	66	69	88	172	182	169	108	84	75
23	89	h83	74	71	71	87	173	180	167	108	86	75
24	89	h86	77	76	72	94	173	180	163	104	83	72
25	90	h86	76	75	72	94	174	180	152	103	86	69
26	90	h81	71	75	74	94	173	180	155	98	87	69
27	90	84	77	74	78	129	173	180	158	98	83	74
28	90	83	54	74	89	142	173	180	156	98	81	86
29	90	82	74	74	88	116	173	180	147	98	81	89
30	90	81	83	74	-	114	172	182	143	98	81	87
31	91	-	84	74	-	116	-	182	-	97	80	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,647	91	77	85.4	5,250
November	2,593	91	81	86.4	5,140
December	2,434	87	54	78.5	4,830
Calendar year 1939	41,226	174	54	113	81,780
January	2,321	86	61	74.9	4,600
February	2,145	89	60	74.0	4,250
March	2,683	142	71	86.5	5,320
April	4,156	174	92	139	8,240
May	5,528	182	160	178	10,960
June	5,166	183	143	172	10,250
July	3,650	147	97	118	7,240
August	2,731	96	80	88.1	5,420
September	2,325	89	69	77.5	4,610
Water year 1939-40	38,379	183	54	105	76,110

h Computed on basis of daily staff-gage readings.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 17 years (1923-40), 29.7 second-feet.

Extremes.- Maximum daily discharge during year, 131 second-feet May 13; no flow Mar. 7-9, 19-31 and Apr. 16-21.
1906, 1924-40: Maximum daily discharge, 136 second-feet May 30, 31, 1930; no flow during periods of practically every year.

Remarks.- Records excellent except those for period Oct. 1 to Apr. 24, which are fair. No diversions above gage. Flow regulated by head gates at diversion works. Canal diverts water from Logan River in NE¼NE¼ sec. 31, T. 12 N., R. 2 E., for irrigation and domestic supply in territory north of Logan.

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

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26					5	2	21	117	38	30	23
2	26					5	2	28	116	38	29	23
3	26					5	2	37	116	37	29	23
4	26					5	2	52	113	36	29	23
5	25					5	2	59	64	35	29	23
6	25					2	2	68	54	36	29	22
7	25					0	2	85	58	36	29	22
8	25					0	2	102	58	36	29	22
9	24					0	2	122	61	36	26	22
10	24					1	2	124	64	35	24	22
11	24					†5	2	127	68	35	24	21
12	24					5	2	130	70	34	24	21
13	24					5	2	131	72	34	24	16
14	24					5	2	127	65	34	24	12
15	24					5	2	123	54	33	24	21
16	24	5	5	5	5	5	0	120	46	34	24	21
17	24					5	0	115	48	34	24	21
18	15					2	0	116	46	34	25	21
19	6					0	0	110	44	34	24	21
20	6					0	0	116	44	33	24	21
21	6					0	0	123	40	32	24	20
22	6					0	1	124	42	32	23	20
23	6					0	4	126	40	32	23	20
24	6					0	4	130	42	30	23	21
25	6					0	7	130	43	31	24	21
26	6					0	19	121	40	32	24	21
27	6					0	24	118	39	32	23	20
28	6	(†)				0	24	121	39	31	23	10
29	6					0	25	119	38	31	23	6
30	6				-	0	24	122	38	31	23	7
31	6	-			-	0	-	118	-	30	23	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	513	26	6	16.5	1,020
November	150	5	5	5	298
December	155	5	5	5	307
Calendar year 1939	9,865	119	0	27.0	19,580
January	155	5	5	5	307
February	145	5	5	5	288
March	65	5	0	2.1	129
April	162	25	0	54.0	321
May	3,265	131	21	105	6,480
June	1,779	117	38	59.3	3,530
July	1,046	38	30	33.7	2,070
August	780	30	23	25.2	1,550
September	587	23	6	19.6	1,160
Water year 1939-40	8,802	131	0	24.0	17,460

†Discharge measurement.

Note.- Discharge for periods when recorder was not operating, Oct. 1, 7-9, 11-17, 21-23, Oct. 25 to Apr. 4, computed on basis of three daily gage readings, two discharge measurements, observer's notes, and records for station on Logan River.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 26 years (1914-40), 125 second-feet.

Extremes.- Maximum discharge during year, 134 second-feet May 12 (gage height, 1.87 feet); minimum daily, 45 second-feet Sept. 19, 20, 22-25.
1913-40: Maximum discharge, about 1,620 second-feet May 15, 1917 (gage height, 6.5 feet, site and datum then in use); minimum daily, 29 second-feet Jan. 3, 1935.

Remarks.- Records good. Several small diversions above station for irrigation. Low flow may be affected by power plant above station.

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

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.0	36
1.2	51
1.4	70
1.6	95
1.8	123

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	60	57	57	55	66	90	92	71	61	49	47
2	a59	60	58	60	55	65	91	91	70	59	49	49
3	a60	56	59	60	56	63	83	92	71	60	49	49
4	a61	60	58	60	56	65	82	99	70	59	49	50
5	a62	60	56	60	56	63	82	99	72	56	49	49
6	63	58	57	59	56	61	85	99	74	56	49	49
7	63	58	58	58	56	60	82	99	69	56	49	49
8	63	60	58	58	56	61	81	98	67	55	49	49
9	63	61	57	58	56	64	87	99	66	54	49	49
10	63	60	57	58	56	60	96	99	66	53	49	49
11	63	60	57	58	55	60	88	95	65	52	49	49
12	62	60	58	58	56	58	86	105	65	53	48	49
13	62	59	58	58	53	59	90	102	63	53	48	51
14	62	60	58	57	55	57	91	98	63	52	48	62
15	61	58	58	54	56	57	95	96	63	52	48	50
16	61	57	58	51	55	57	98	92	62	55	49	48
17	61	58	57	52	53	58	92	87	62	56	49	46
18	59	61	57	54	54	60	88	87	61	56	48	46
19	60	60	57	64	54	61	92	85	61	54	48	45
20	57	57	56	54	52	62	99	83	60	53	48	45
21	63	61	56	54	54	64	101	81	60	53	49	46
22	62	58	56	52	55	66	98	77	60	51	49	45
23	62	60	56	56	55	65	98	76	59	51	49	45
24	56	60	57	57	55	69	101	80	59	51	49	45
25	60	59	56	57	55	72	105	80	59	50	49	45
26	58	58	56	56	56	75	105	78	58	50	49	46
27	58	56	56	56	62	106	102	78	57	49	49	46
28	60	58	55	56	66	98	99	77	57	49	49	49
29	58	58	54	56	66	87	98	75	56	49	49	48
30	58	58	56	56	-	83	96	72	56	49	48	47
31	58	-	56	56	-	85	-	71	-	49	48	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,876	63	56	60.5	3,720
November	1,769	61	56	59.0	3,510
December	1,763	59	54	56.9	3,500
Calendar year 1939	29,493	171	54	80.8	58,500
January	1,760	64	51	56.8	3,490
February	1,625	66	52	56.0	3,220
March	2,087	106	57	67.3	4,140
April	2,781	105	81	92.7	5,520
May	2,742	105	71	88.5	5,440
June	1,902	74	56	63.4	3,770
July	1,656	61	49	53.4	3,280
August	1,510	49	48	48.7	3,000
September	1,442	62	45	48.1	2,860
Water year 1939-40	22,913	106	45	62.6	45,450

a No gage-height record; discharge interpolated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

West Side canal near Collinston, Utah

Location.- Water-stage recorder, lat. 49°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 1940.

Average discharge.- 28 years, 224 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 700 second-feet June 25, 26; no flow Feb. 25 to Apr. 30.
1912-40: Maximum daily discharge, that of June 25, 26, 1940; no flow during periods of each year except 1914.

Remarks.- Records excellent except those for period when recorder was not operating, 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 seven discharge measurements furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	252	87	56	40	17			99	573	533	596	548
2	154	89	57	40	17			100	548	537	623	513
3	152	82	57	40	16			134	552	584	637	290
4	152	76	54	40	16			240	556	540	653	51
5	150	79	50	40	16			258	376	539	655	26
6	147	83	49	38	16			264	237	539	653	26
7	146	83	49	38	16			260	334	566	651	24
8	150	84	48	38	16			321	263	603	653	23
9	162	83	58	38	20			436	266	607	655	89
10	165	83	63	36	20			490	384	643	655	529
11	165	83	67	36	20			563	420	641	655	544
12	165	83	69	38	20			603	445	627	653	415
13	166	83	68	38	20			601	558	629	655	374
14	166	83	67	38	20			651	659	629	657	314
15	166	83	66	38	20			690	635	627	665	310
16	165	83	66	38	20			694	615	613	649	280
17	164	82	67	38	4			698	661	584	615	266
18	164	82	67	29	4			698	671	575	613	267
19	165	82	67	28	4			694	692	552	611	195
20	166	82	67	28	4			688	696	531	605	104
21	166	82	64	28	4			659	694	531	588	171
22	166	81	57	27	4			665	694	531	588	154
23	167	81	57	27	b4			665	698	490	586	158
24	167	81	57	27	b4			688	696	493	588	180
25	158	80	57	26	0			694	700	579	588	153
26	145	80	57	26	0			665	700	665	586	139
27	143	80	58	25	0			655	696	609	577	167
28	142	78	58	24	0			609	677	605	563	150
29	142	71	58	22	0			575	675	605	567	128
30	132	55	40	18	-			517	675	603	573	113
31	92	-	40	18	-			552	-	592	558	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,902	252	92	158	9,720
November	2,424	89	55	80.8	4,810
December	1,815	69	40	58.5	3,600
Calendar year 1939	89,511	664	0	245	177,600
January	1,009	40	18	32.5	2,000
February	322	20	0	11.1	639
March	0	0	0	0	0
April	0	0	0	0	0
May	16,126	698	99	520	31,990
June	17,046	700	237	568	33,810
July	18,002	665	490	581	35,710
August	19,171	665	558	618	38,030
September	6,701	548	23	223	13,290
Water year 1939-40	87,518	700	0	239	173,600

Note.- Discharge for period when recorder was not operating, Dec. 27 to Feb. 24, computed on basis of once-daily gage readings.
b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 23 years (1917-40), 51.4 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 165 second-feet June 23; no flow Nov. 20 to Dec. 8, Dec. 16 to Apr. 30, Sept. 4-8.
1912-40: 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 four discharge measurements furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	28	0					30	120	118	142	127
2	23	25	0					33	121	122	142	121
3	22	25	0					65	120	125	151	37
4	22	25	0					85	120	120	158	0
5	22	24	0					84	78	122	158	0
6	21	25	0					84	31	128	157	0
7	21	25	0					91	30	128	153	0
8	23	25	0					101	33	127	154	0
9	33	25	20					123	33	140	155	8
10	38	22	34					148	87	143	155	89
11	34	22	31					152	121	143	155	122
12	32	22	28					152	125	143	152	90
13	54	22	28					142	134	142	150	56
14	67	22	27					135	133	142	150	35
15	52	22	22					135	132	142	147	56
16	46	21	0					149	135	142	143	41
17	40	21	0					149	143	142	142	36
18	40	21	0					150	143	142	141	38
19	40	8	0					149	151	141	142	37
20	42	0	0					149	154	134	141	30
21	44	0	0					149	161	135	138	28
22	44	0	0					149	163	134	138	27
23	44	0	0					150	165	133	138	19
24	44	0	0					143	163	135	138	15
25	44	0	0					139	162	141	138	15
26	44	0	0					139	162	141	134	15
27	44	0	0					138	161	141	128	25
28	44	0	0					125	154	143	129	8
29	44	0	0					122	152	142	129	8
30	42	0	0					111	153	141	130	11
31	29	-	0					115	-	142	128	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,187	67	21	38.3	2,350
November	430	28	0	14.3	853
December	190	34	0	6.1	377
Calendar year 1939	20,086	150	0	55.0	39,840
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	3,786	152	30	122	7,510
June	3,740	165	30	125	7,420
July	4,214	143	118	136	8,360
August	4,456	158	128	144	8,840
September	1,094	127	0	36.5	2,170
Water year 1939-40	19,097	165	0	52.2	37,880

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Extremes.- Maximum discharge observed during year, 199 second-feet Feb. 5-8; maximum gage height observed, 4.80 feet Feb. 5; minimum discharge observed, 15 second-feet July 15, 16; minimum gage height observed, 1.98 foot July 16.
1938-40: Maximum discharge observed, 360 second-feet Mar. 20, 21, 1939 (gage height, 6.70 feet), from rating curve extended above 250 second-feet; minimum observed, that of July 15, 16, 1940; minimum gage height observed, 1.98 feet May 20, 1939, July 16, 1940.

Remarks.- Records good. Gage read once daily. Flow regulated by several small reservoirs above station. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	36	46	50	62	125	71	41	18	17	16	16
2	22	37	46	53	65	111	90	36	18	17	16	16
3	22	37	43	68	83	111	97	36	18	17	17	17
4	22	37	43	86	183	100	90	36	18	17	17	18
5	22	37	46	132	199	94	71	28	18	17	17	19
6	28	38	48	100	199	94	83	27	18	16	18	19
7	28	36	48	94	199	94	83	27	18	17	18	19
8	28	36	48	100	199	94	77	27	18	17	18	19
9	30	36	48	139	139	97	71	27	18	17	19	19
10	30	37	48	118	132	94	71	27	18	16	19	20
11	30	37	48	125	125	90	71	23	18	16	19	20
12	28	37	48	132	118	80	68	21	18	16	17	20
13	28	37	48	111	104	77	59	20	18	16	17	20
14	28	37	48	104	104	77	59	20	18	16	16	20
15	28	37	50	104	104	77	71	21	18	15	16	20
16	29	37	50	71	104	74	80	22	18	15	16	20
17	29	37	53	56	97	71	80	21	18	17	16	20
18	34	38	50	48	97	74	71	22	18	18	16	20
19	34	38	50	48	97	71	71	22	18	18	17	20
20	36	38	50	48	97	71	62	22	19	18	17	20
21	36	38	50	48	83	71	62	22	18	16	18	19
22	36	38	50	50	83	71	62	22	18	16	19	20
23	36	38	50	50	90	71	62	22	18	16	19	20
24	37	38	46	50	90	59	68	20	18	16	19	20
25	37	38	46	50	97	56	68	22	18	16	19	20
26	38	43	46	50	97	59	62	22	18	17	19	20
27	38	43	46	53	118	71	48	21	17	17	19	20
28	38	43	46	53	146	83	46	20	17	17	17	20
29	40	46	48	53	146	90	48	18	17	17	17	20
30	40	46	48	59	-	100	43	18	17	17	16	20
31	36	-	50	59	-	86	-	18	-	16	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	969	40	21	31.3	1,920
November	1,151	46	36	38.4	2,280
December	1,485	53	43	47.9	2,950
Calendar year 1939	18,936	360	17	51.9	37,550
January	2,362	139	48	76.2	4,680
February	3,457	199	62	119	6,860
March	2,593	125	56	83.6	5,140
April	2,065	97	43	68.8	4,100
May	751	41	18	24.2	1,490
June	537	19	17	17.9	1,070
July	514	18	15	16.6	1,020
August	540	19	16	17.4	1,070
September	581	20	16	19.4	1,150
Water year 1939-40	17,005	199	15	46.5	33,730

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

Devil Creek above Campbell Creek, near Malad, Idaho

Location.- Staff gage, 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 1940.

Extremes.- Maximum discharge observed during year, about 90 second-feet Mar. 27 (gage height, about 1.65 feet, from floodmark); minimum observed, 4.1 second-feet Aug. 16-19 (gage height, 0.54 foot).
1938-40: Maximum discharge observed, that of Mar. 27, 1940; minimum observed, 4.1 second-feet July 5, 1939, Aug. 16-19, 1940.

Remarks.- Records good except those for period of ice effect, which are fair. Gage read once daily. 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 may cause slight diurnal fluctuations.

Rating table, water year 1939-40, except period of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method Oct. 1-7, May 6 to Sept. 30)

0.5	3.7	0.8	13.3	1.2	44
.6	5.8	.9	19.3	1.4	64
.7	8.8	1.0	26.6	1.6	86

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.3	7.0	7.6	8.8	7.6	8.8	9.7	11	9.7	6.7	5.4	4.8
2	7.9	7.0	7.6	8.8	7.6	7.6	9.7	11	9.7	6.7	5.4	4.8
3	7.3	7.0	8.2	8.2	7.6	7.6	9.7	11	8.8	6.7	5.4	6.1
4	7.3	7.0	8.2	7.9	7.6	7.6	9.7	11	7.6	6.1	5.2	6.1
5	6.7	7.0	7.6	7.9	7.6	7.6	13	11	7.6	6.1	4.8	5.6
6	7.3	7.0	8.2	8.2	7.6	7.6	9.7	11	7.6	6.1	4.8	5.6
7	7.9	7.0	8.5	8.2	7.6	7.9	9.7	11	7.6	6.1	4.8	5.6
8	7.0	7.0	7.6	8.5	7.6	8.2	9.7	11	7.6	6.1	4.8	5.6
9	6.7	6.4	7.6	8.2	7.6	8.2	9.7	11	7.6	6.1	4.5	5.6
10	6.7	6.4	8.2	7.6	7.6	7.6	9.7	10	7.6	6.1	4.5	5.6
11	6.7	6.4	7.9	7.6	7.6	7.6	8.8	10	7.6	6.1	5.0	5.6
12	7.6	7.0	7.6	7.6	7.9	7.6	8.8	10	7.6	6.1	4.5	5.6
13	7.9	6.7	7.9	7.6	7.6	7.6	8.8	10	7.0	6.1	4.5	7.3
14	7.9	6.4	7.9	7.3	7.6	7.9	9.7	11	7.0	6.1	4.5	5.6
15	7.9	6.4	7.9	7.3	7.6	7.9	9.7	11	7.0	6.1	4.5	5.6
16	6.4	6.4	7.9	7.3	7.6	8.8	9.7	12	7.0	6.1	4.1	5.6
17	6.4	6.4	7.6		7.6	15	9.7	12	7.0	6.1	4.1	6.1
18	6.4	6.4	7.9		7.6	16	9.7	12	7.0	6.1	4.1	6.1
19	6.4	6.4	7.9	b7.5	7.6	16	9.7	12	7.0	6.1	4.1	5.6
20	a6.7	6.4	7.9		7.9	16	9.7	12	7.0	6.1	4.5	5.8
21	7.0	6.4	7.9		7.9	19	9.7	11	7.0	6.1	4.8	5.6
22	7.0	6.4	7.9	7.6	7.9	19	9.7	9.7	7.0	6.1	4.8	5.6
23	7.0	6.4	7.9	7.6	7.9	19	9.7	9.7	7.0	6.1	4.8	5.6
24	5.8	6.4	7.9	7.0	7.9	19	11	8.8	6.1	6.1	4.8	5.6
25	7.0	6.4	8.2	7.6	7.6	17	11	8.8	6.1	6.1	4.8	5.6
26	7.0	6.4	8.2	7.6	7.9	16	9.7	8.8	6.1	5.6	5.2	5.6
27	7.0	6.4	8.2	7.6	12	51	11	8.8	6.1	5.8	5.2	5.6
28	7.0	6.7	7.9	7.6	11	16	11	8.8	6.1	5.6	5.0	5.6
29	7.0	6.7	8.2	7.6	11	14	11	8.8	6.1	5.6	4.8	5.6
30	7.0	7.6	8.8	7.6	-	14	11	8.8	14	5.6	4.8	5.6
31	7.0	-	8.8	7.6	-	12	-	8.8	-	5.4	4.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	218.2	7.9	5.8	7.04	433
November	199.5	7.6	6.4	6.65	396
December	247.6	8.8	7.6	7.99	491
Calendar year 1939	3,446.0	79	4.1	9.44	6,840
January	239.9	8.8	-	7.74	476
February	233.7	12	7.6	8.06	464
March	405.1	51	7.6	13.1	804
April	299.4	13	8.8	9.98	594
May	321.8	12	8.8	10.4	638
June	224.2	14	6.1	7.47	445
July	187.9	6.7	5.4	6.06	373
August	147.3	5.4	4.1	4.75	292
September	170.3	7.3	4.8	5.68	338
Water year 1939-40	2,894.9	51	4.1	7.91	5,740

a No gage-height record; discharge interpolated.
b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Devil Creek near Malad, Idaho

Location.- Staff gage and wooden control, lat. 42°13', long. 112°17', in sec. 8, T. 14 S., R. 36 E., 400 feet downstream from site of proposed dam, half a mile northeast of St. John, 2½ miles northwest of Malad, and 9 miles upstream from mouth.

Records available.- October 1931 to December 1940 (discontinued).

Extremes.- Maximum discharge observed during period October 1939 to December 1940, 17 second-feet Mar. 27 (gage height, 0.99 foot); minimum observed, 1.1 second-feet Dec. 12, 1940 (gage height, 0.20 foot).

1931-40: Maximum discharge, 60 second-feet Aug. 17, 1936 (from floodmark made during cloudburst) from rating curve extended above 30 second-feet; minimum discharge observed, 0.5 second-foot Sept. 10, 1934.

Remarks.- Records fair. Gage read once daily except during winter, when observations are made three or four times a week. Flow regulated by Evans Dividers (an irrigation diversion works) 3 miles above station. Several small diversions above station. Stream receives part of flow of Birch Creek above station. Malad power plant and with a small reservoir on Birch Creek may cause slight diurnal fluctuation.

Rating table, period October 1939 to December 1940 (gage height, in feet, and discharge, in second-feet)

(Shifting-control method used Oct. 1-26, 1939)

0.2	1.1	0.5	4.9	0.8	10.6
.3	2.1	.6	6.6	.9	13.3
.4	3.4	.7	8.5	1.0	17.0

Discharge, in second-feet, 1939-40

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	4.8	1.7	1.6	1.4	2.5	9.6	8.3	4.3	1.8	2.4	2.1
2	5.1	4.8	a1.8	a1.6	1.4	a2.2	7.7	10	3.7	1.7	2.4	2.1
3	5.4	4.8	1.8	a1.6	a1.4	1.9	7.6	8.3	2.6	1.7	2.4	2.5
4	5.4	4.4	a1.8	1.6	1.4	a1.8	9.6	7.6	2.6	1.7	2.4	2.5
5	5.2	4.4	1.8	a1.6	a1.4	1.8	14	7.6	2.6	1.5	2.4	2.2
6	5.8	4.8	a1.9	1.5	1.5	a1.9	8.1	7.6	2.6	2.1	2.4	2.5
7	5.9	a4.8	1.9	1.5	1.5	a1.9	7.2	8.7	2.5	2.1	4.2	4.0
8	5.4	4.8	1.9	a1.6	a1.5	2.0	7.2	9.1	2.9	1.9	4.2	4.0
9	5.6	a3.5	a2.0	1.7	1.5	2.0	7.4	8.3	2.9	1.9	4.2	4.0
10	3.7	2.2	2.0	1.7	a1.5	1.7	8.3	5.6	2.8	1.9	3.7	4.0
11	3.7	a2.2	a2.0	a1.7	1.5	a1.7	7.9	5.4	3.7	1.5	3.7	2.4
12	3.7	2.2	1.9	a1.7	a1.5	1.7	7.9	5.2	2.8	1.5	3.7	2.5
13	3.7	2.1	a1.9	1.7	1.5	a1.7	a8.5	9.8	2.8	2.0	3.6	3.4
14	3.7	a2.1	1.9	a1.6	a1.4	1.7	9.1	8.9	2.6	2.0	2.0	a3.0
15	3.3	2.1	a1.9	1.5	1.4	a1.7	9.6	8.9	2.4	2.1	2.1	2.6
16	3.3	a2.0	1.9	a1.4	a1.4	1.7	9.6	8.5	1.6	2.4	2.4	2.6
17	2.9	a2.0	1.9	1.4	1.4	a1.8	9.3	8.9	1.6	2.4	2.5	2.6
18	2.8	1.9	a1.9	a1.4	1.4	2.0	8.5	8.1	2.0	2.4	2.5	2.6
19	3.7	1.9	1.9	a1.4	a1.4	a2.2	10	7.9	2.0	2.4	2.4	4.3
20	3.8	a1.8	a2.0	1.4	1.4	2.5	8.7	7.7	1.9	4.3	2.1	4.9
21	3.8	1.8	2.1	a1.4	a1.4	a2.3	8.9	7.6	1.9	4.0	2.0	4.8
22	4.0	a1.8	a1.8	1.3	1.4	2.1	8.7	7.2	2.0	4.0	2.0	4.8
23	4.0	1.8	1.6	a1.3	a1.4	4.9	8.5	7.0	1.9	4.0	2.0	2.9
24	4.0	a1.8	1.6	1.3	1.4	5.2	5.9	6.4	1.9	4.0	4.0	2.6
25	3.1	1.8	a1.6	1.4	a1.6	5.2	5.6	3.7	1.6	4.0	4.0	2.6
26	4.2	a1.8	1.6	a1.4	1.8	7.0	7.6	3.7	1.6	4.0	4.0	2.5
27	4.3	1.8	a1.6	1.4	a2.4	11	7.4	3.4	1.5	4.2	4.0	4.9
28	4.2	a1.8	1.6	a1.4	2.9	8.9	7.6	5.6	1.7	4.0	2.1	4.9
29	4.3	1.7	a1.6	1.4	a2.7	7.4	7.9	4.2	1.5	4.0	2.1	3.7
30	4.3	a1.7	1.6	a1.4	-	10	8.3	4.6	1.5	2.8	2.0	3.7
31	4.8	-	a1.6	1.4	-	10	-	4.4	-	2.8	2.1	-

a No gage-height record; discharge interpolated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geol[illegible]cal Survey

Discharge in second-feet, of Devil Creek near Malad, Idaho, 1939-40--Continued
1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.3	2.9	a2.4									
2	4.3	a2.9	2.2									
3	4.3	2.9	a2.4									
4	4.3	a2.9	2.6									
5	4.3	2.9	a2.6									
6	2.9	a2.8	2.6									
7	2.9	2.8	a2.6									
8	2.9	a2.8	2.5									
9	2.9	2.8	a2.5									
10	3.4	2.9	2.5									
11	3.4	a2.2	a1.8									
12	3.3	1.5	1.1									
13	3.3	a1.5	a1.2									
14	3.4	1.5	1.3									
15	3.4	a2.0	1.3									
16	3.4	2.5	a1.3									
17	5.2	2.5	a1.3									
18	5.4	a2.4	1.3									
19	3.0	a2.2	a1.3									
20	2.9	2.1	a1.3									
21	2.9	a2.1	1.3									
22	2.9	a2.1	1.3									
23	2.9	2.1	a1.4									
24	2.9	2.1	1.5									
25	2.9	a1.8	a1.5									
26	3.0	1.5	1.5									
27	3.0	a2.2	a1.4									
28	3.0	2.8	1.4									
29	3.0	a2.6	1.4									
30	3.0	2.5	a1.4									
31	2.9	-	1.4									

a No gage-height record; discharge interpolated.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	129.7	5.9	2.6	4.18	257
November	81.4	4.8	1.7	2.71	161
December	56.1	2.1	1.6	1.81	111
Calendar year 1939	1,776.0	28	1.6	4.87	3,520
January 1940	46.3	1.7	1.3	1.49	92
February	45.8	2.9	1.4	1.58	91
March	112.4	11	1.7	3.63	223
April	252.2	14	5.6	8.41	500
May	218.2	10	3.4	7.04	433
June	70.0	4.3	1.5	2.33	139
July	82.5	4.3	1.5	2.66	164
August	88.0	4.2	2.0	2.84	175
September	98.2	4.9	2.1	3.27	195
Water year 1939-40	1,280.8	14	1.3	3.50	2,540
October 1940	105.6	5.4	2.9	3.41	209
November	70.8	2.9	1.5	2.36	140
December	53.6	2.6	1.1	1.73	106
Calendar year 1940	1,243.6	14	1.1	3.40	2,470

Deep Creek below First Creek, near Malad, Idaho

Location.- Staff gage and wooden control, 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 September 1940.

Extremes.- Maximum discharge observed during year, 21 second-feet May 11, 14, June 15 (gage height, 1.10 feet); minimum observed, 1.0 second-foot Aug. 12 (gage height, 0.14 foot).

1931-40: 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 period of no gage-height record, which are poor. Small diversions above station. Flow regulated at reservoir 2½ miles above station. Gage read once daily.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	2.6	2.6	3.0	2.5	5.8	8.9	14	16	8.3	2.6	1.5
2	2.3	2.8	2.3	3.2	2.4	5.4	8.3	14	16	7.8	2.5	1.4
3	2.4	2.7	2.2	3.5	2.5	5.0	8.0	14	17	8.2	2.4	1.3
4	2.6	2.5	2.0	3.2	3.0	5.2	7.6	13	18	8.0	2.2	1.6
5	2.8	2.8	1.9	3.4	2.7	4.9	8.5	14	16	7.2	2.0	1.3
6	3.1	2.5	2.3	3.2	2.6	4.8	8.9	14	16	6.9	1.9	1.2
7	3.2	2.7	2.4	3.0	2.5	5.0	9.5	13	16	6.4	1.9	1.5
8	3.1	2.4	2.0	3.0	2.5	4.9	10	14	17	6.0	1.7	1.7
9	3.1	2.5	1.9	3.1	2.6	5.2	11	17	16	5.2	1.9	1.5
10	3.1	2.6	2.2	2.6	2.6	4.8	11	19	16	5.0	1.9	1.7
11	3.0	2.8	2.3	2.4	3.0	4.9	11	21	16	4.9	2.2	1.9
12	2.8	2.4	2.0	2.3	3.1	5.0	11	15	18	4.4	1.4	2.0
13	3.1	2.5	1.9	2.4	2.7	5.4	12	20	18	4.8	1.4	1.8
14	3.2	2.8	1.9	2.3	2.6	5.5	13	21	18	4.4	1.6	1.9
15	2.8	2.5	2.0	2.5	2.7	5.7	13	18	21	4.2	1.5	1.8
16	3.1	2.7	2.2	2.4	2.8	5.8	13	17		4.3	1.6	1.9
17	2.8	2.3	2.3	2.3	3.0	6.2	14	18	a15	4.2	1.5	2.0
18	2.6	2.2	2.4	2.5	3.0	5.9	14	17		4.0	1.4	2.6
19	2.4	2.2	2.2	2.3	3.2	6.2	13	18		3.9	1.5	2.8
20	2.5	2.3	2.3	2.0	2.8	6.5	14	17	10	4.0	1.3	2.4
21	2.4	2.4	2.4	1.8	3.1	6.9	14	16	12	3.9	1.2	2.2
22	2.3	2.5	2.3	1.9	3.0	7.0	15	16	12	4.0	1.2	2.0
23	2.4	2.4	2.5	2.0	3.2	7.6	14	16	13	4.0	1.4	1.9
24	2.3	2.6	2.6	1.9	3.4	8.0	14	18	15	3.9	1.5	2.0
25	2.5	2.7	2.7	2.2	3.4	8.5	14	14	13	4.2	1.3	2.6
26	2.4	2.4	2.5	2.5	3.5	8.3	14	16	12	4.2	1.4	2.4
27	2.6	2.3	2.7	2.4	3.6	8.3	14	15	11	4.2	1.5	2.2
28	2.8	2.2	2.8	2.5	4.3	8.5	14	15	8.9	4.2	1.3	1.8
29	2.5	2.5	2.6	2.4	5.0	8.7	14	16	10	3.9	1.4	1.9
30	2.6	2.3	2.8	2.3	-	8.3	14	18	8.7	4.0	1.5	1.7
31	2.8	-	3.0	2.6	-	9.5	-	17	-	3.7	1.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	83.5	3.2	1.9	2.69	166
November	75.1	2.8	2.2	2.50	149
December	72.2	3.0	1.9	2.33	143
Calendar year 1939	2,337.7	25	1.2	6.40	4,640
January	79.1	3.5	1.8	2.55	157
February	87.3	5.0	2.4	3.01	173
March	197.6	9.5	4.8	6.37	392
April	360.7	15	7.6	12.0	715
May	505.0	21	13	16.3	1,000
June	440.6	21	8.7	14.7	874
July	156.3	8.3	3.7	5.04	310
August	51.7	2.6	1.2	1.67	103
September	56.5	2.8	1.2	1.88	112
Water year 1939-40	2,165.6	21	1.2	5.92	4,290

a No gage-height record; discharge interpolated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Weber River near Oakley, Utah

Location.- Water-stage recorder, lat. 40°44'10", long. 111°14'45"; in NE¼ sec. 15, T. 1 S., R. 6 E., near mouth of canyon, 2 miles downstream from South Fork, 3 miles northeast of Oakley, and 6 miles upstream from Beaver Creek.

Drainage area.- 163 square miles.

Records available.- October 1904 to September 1940.

Average discharge.- 34 years (1906-40), 235 second-feet.

Extremes.- Maximum discharge during year, 1,180 second-feet May 17 (gage height, 3.39 feet); minimum discharge recorded, 31 second-feet Mar. 14.
1904-40: Maximum discharge observed, 4,010 second-feet (figure previously published in error) July 6, 1907, June 5-7, 1909; minimum discharge recorded, 26 second-feet Aug. 27, 1934, Nov. 21, 1935.

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

Rating tables, water year 1939-40, except period of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to May 16						May 17 to Sept. 30					
1.1	41	1.8	173	2.6	508	1.1	34	1.8	173	2.6	508
1.2	55	2.0	232	2.8	640	1.2	49	2.0	232	2.8	640
1.4	88	2.2	306	3.0	795	1.4	84	2.2	306	3.0	795
1.6	126	2.4	397	3.3	1,080	1.6	124	2.4	397	3.3	1,080

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	52	44			47	73	164	540	109	75	40
2	55	54	42			44	73	176	496	114	73	42
3	55	56	b41			45	68	184	450	109	70	43
4	66	51	b40			42	68	242	413	105	64	49
5	66	51	b39			42	69	242	383	103	61	52
6	66	52	b40			b41	73	279	354	99	59	46
7	65	51	41			40	68	332	315	97	59	44
8	61	51	41			b41	71	397	290	97	58	51
9	61	52	41			41	74	496	271	95	54	48
10	60	52	40			b42	76	626	236	94	51	44
11	60	48	42			42	71	779	236	97	48	43
12	60	51	b39			b41	73	858	226	99	48	44
13	58	51	b39			b42	83	904	226	95	49	48
14	54	51	b40			44	102	885	223	101	48	49
15	52	48	b41			44	118	914	204	103	48	48
16	52	b47	42	b38	b40	45	118	1,070	190	109	48	43
17	52	b47	40			47	112	1,030	179	86	48	48
18	52	b46	40			49	130	867	163	79	48	54
19	52	b47	b39			44	158	795	155	73	49	56
20	52	b49	b39			47	190	715	147	71	56	70
21	52	b50	b38			51	210	739	138	66	52	68
22	52	51	b37			54	213	662	133	63	48	59
23	52	49	b38			60	226	707	136	63	48	56
24	52	47	b39			66	246	715	133	63	48	52
25	52	b46	b38			71	260	708	124	64	54	52
26	55	45	b37			76	253	813	122	68	56	51
27	55	b45	b37			90	239	904	120	70	51	49
28	54	44	b36			81	210	731	116	80	48	58
29	55	b44	b38			69	184	619	109	80	44	63
30	52	44	b41		—	68	170	578	105	80	43	70
31	52	-	b42		—	73	-	571	-	80	42	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,733	66	51	55.9	3,440
November	1,471	55	44	49.0	2,920
December	1,231	44	36	39.7	2,440
Calendar year 1939	52,480	779	36	144	104,100
January	1,178	-	-	38	2,340
February	1,160	-	-	40	2,300
March	1,629	90	40	52.5	3,230
April	4,079	260	68	136	8,090
May	19,702	1,070	164	636	39,080
June	6,933	540	105	231	13,750
July	2,712	114	63	87.5	5,380
August	1,648	75	42	53.2	3,270
September	1,540	70	40	51.3	3,050
Water year 1939-40	45,016	1,070	36	123	89,290

b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Weber River near Coalville, Utah

Location.- Water-stage recorder, lat. 40°53'40", long. 111°24'00", in NE¼ 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 1940.

Average discharge.- 13 years, 203 second-feet.

Extremes.- Maximum discharge during year, 988 second-feet May 17 (gage height, 3.18 feet); minimum, 11 second-feet Aug. 1 (gage height, -0.04 foot).
1927-40: Maximum discharge observed, 1,960 second-feet June 17, 1929 (gage height, 4.30 feet); minimum discharge, 6 second-feet Sept. 20, 1934 (gage height, -0.23 foot).

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

Rating table, water year 1939-40, except period of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Feb. 29)

0.0	13	0.8	92	1.6	276	2.6	665
.2	24	1.0	128	1.8	339	3.0	880
.4	40	1.2	170	2.0	409	3.2	1,000
.6	63	1.4	220	2.3	525		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	77	94	120	94	231	122	199	391	31	12	31
2	52	74	89	126	b93	184	132	182	353	42	12	29
3	59	74	86	126	b95	159	134	166	317	39	13	36
4	78	73	83	111	97	157	124	161	270	44	13	36
5	88	74	80	104	94	161	117	180	273	46	13	35
6	74	73	84	97	92	132	138	192	267	39	14	30
7	69	73	89	83	95	124	132	220	192	30	15	29
8	71	73	90	b94	88	144	124	250	150	28	15	30
9	80	74	90	99	90	184	138	301	122	24	15	35
10	76	73	88	97	97	189	150	387	106	22	14	32
11	74	77	84	89	94	146	136	505	84	22	15	31
12	76	77	80	97	86	107	128	615	67	20	17	33
13	76	78	80	77	71	109	134	705	61	19	22	36
14	74	82	83	b88	94	107	155	726	55	16	23	31
15	70	82	80	b74	b92	109	172	737	51	16	23	29
16	70	78	88	b76	b80	138	177	852	55	19	21	28
17	71	80	86	b80	b78	146	166	898	53	34	22	28
18	69	78	78	b84	b88	134	170	803	41	22	21	30
19	66	78	64	b66	b84	132	180	726	40	22	22	30
20	64	84	b74	b74	b72	122	189	635	36	22	18	40
21	64	90	b70	b76	b74	120	202	615	35	21	16	33
22	64	89	b62	b68	b84	117	204	552	34	21	18	31
23	64	89	b68	b80	95	118	194	561	28	22	20	32
24	62	89	b78	b82	94	124	236	552	28	20	24	30
25	61	88	b70	b94	95	126	304	556	24	19	29	32
26	70	90	b62	b92	109	128	267	597	23	18	34	35
27	74	97	b66	b96	134	175	250	748	22	16	33	33
28	76	92	b60	b92	177	197	236	602	20	15	39	31
29	80	89	b70	b88	234	155	220	497	18	14	39	32
30	77	94	b90	b88	-	130	215	431	20	14	35	34
31	77	-	b110	b92	-	124	-	420	-	14	32	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,172	88	46	70.1	4,310
November	2,439	94	73	81.3	4,840
December	2,476	110	60	79.9	4,910
Calendar year 1939	54,806	696	14	150	108,700
January	2,810	126	68	90.6	5,570
February	2,870	234	71	99.0	5,690
March	4,429	231	107	143	8,780
April	5,246	304	117	175	10,410
May	15,571	898	161	502	30,880
June	3,236	391	18	108	6,420
July	751	46	14	24.2	1,490
August	659	39	12	21.3	1,310
September	962	40	28	32.1	1,910
Water year 1939-40	43,621	898	12	119	86,520

b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 on Weber River, 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 1940.

Extremes.- Maximum contents during year, 51,580 acre-feet June 1 (elevation, 5,543.8 feet); minimum, 1,430 acre-feet Oct. 3 (elevation, 5,472.65 feet).
1930-40: Maximum contents, 73,940 acre-feet May 31, 1937 (elevation, 5,560.35 feet); no storage, Sept. 12 to Dec. 3, 1931, and Sept. 24 to Nov. 2, 1934.

Remarks.- Reservoir is formed by earth-fill, rock-faced dam; storage began in October 1930; dam completed in 1931. Capacity, 73,400 acre-feet between elevation 5,450 feet (bottom of outlet tunnel) and 5,560 feet (top of radial gates in spillway) above mean sea level. Dead storage negligible. Elevation of spillway crest is 5,543 feet. Water is used for irrigation on the Echo project. Gage read to half tenths about 6 a.m. daily; contents are as of that time.

Contents, in acre-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,890	1,670	1,650	1,810	4,890	10,720	20,470	33,800	51,580	37,930	20,240	7,160
2	1,600	1,670	1,660	1,820	5,060	11,340	20,810	34,290	51,450	37,520	19,640	6,850
3	1,430	1,660	1,650	1,840	5,260	11,730	21,200	34,730	51,270	37,050	18,940	6,580
4	1,450	1,650	1,640	1,880	5,460	12,140	21,510	35,180	51,030	36,540	18,390	6,370
5	1,500	1,640	1,600	1,950	5,660	12,460	21,830	35,680	50,720	36,030	17,780	6,160
6	1,540	1,640	1,630	2,040	5,820	12,820	22,150	36,180	50,720	35,530	17,210	5,990
7	1,540	1,630	1,670	2,090	6,030	13,130	22,470	36,690	50,660	35,080	16,620	5,800
8	1,540	1,620	1,690	2,140	6,220	13,380	22,800	37,260	50,480	34,630	16,080	5,640
9	1,560	1,630	1,700	2,260	6,390	13,760	23,130	37,780	50,360	34,140	15,540	5,520
10	1,590	1,640	1,690	2,390	6,560	14,150	23,460	38,200	50,180	33,600	15,000	5,300
11	1,620	1,650	1,680	2,510	6,780	14,480	23,840	38,560	50,040	32,960	14,480	5,040
12	1,630	1,680	1,660	2,600	6,960	14,740	24,180	39,260	49,640	32,300	13,980	4,780
13	1,630	1,680	1,630	2,720	7,100	14,940	24,520	40,340	49,280	31,680	13,440	4,570
14	1,640	1,680	1,630	2,750	7,180	15,140	24,860	41,600	48,920	31,020	12,920	4,420
15	1,640	1,690	1,630	2,780	7,340	15,370	25,260	42,770	48,510	30,420	12,370	4,280
16	1,640	1,690	1,630	2,810	7,500	15,600	25,700	43,840	47,920	29,780	11,900	4,140
17	1,630	1,690	1,650	2,860	7,640	15,910	26,130	45,020	47,330	29,220	11,500	3,980
18	1,640	1,680	1,660	2,960	7,780	16,220	26,570	46,340	46,810	28,680	11,170	3,800
19	1,640	1,670	1,640	3,060	7,920	16,480	26,980	47,270	46,060	28,090	10,820	3,640
20	1,640	1,670	1,590	3,120	8,060	16,730	27,420	47,980	45,360	27,460	10,490	3,500
21	1,640	1,690	1,590	3,180	8,180	16,960	27,910	48,510	44,740	26,800	10,140	3,420
22	1,640	1,680	1,590	3,280	8,270	17,210	28,400	49,040	44,120	26,180	9,850	3,350
23	1,640	1,670	1,570	3,360	8,460	17,460	28,950	49,340	43,440	25,560	9,540	3,260
24	1,640	1,670	1,580	3,480	8,680	17,710	29,450	49,580	42,770	24,960	9,200	3,150
25	1,630	1,660	1,620	3,600	8,880	17,960	30,140	49,820	42,100	24,350	8,950	3,040
26	1,630	1,650	1,620	3,780	9,080	18,210	30,840	50,000	41,380	23,760	8,680	2,950
27	1,640	1,650	1,580	3,980	9,350	18,540	31,490	50,360	40,660	23,170	8,410	2,860
28	1,660	1,650	1,570	4,180	9,740	18,980	32,100	50,970	39,960	22,600	8,180	2,750
29	1,690	1,650	1,530	4,380	10,250	19,480	32,730	51,330	39,200	22,030	7,940	2,700
30	1,690	1,640	1,600	4,530	-	19,860	33,310	51,450	38,510	21,400	7,710	2,680
31	1,680	-	1,730	4,700	-	20,160	-	51,520	-	20,850	7,460	-

Monthly elevation and contents, water year October 1939 to September 1940

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	5,474.8	1,890	-220
Nov. 1	5,473.8	1,670	-20
Dec. 1	5,473.7	1,650	+160
Calendar year 1939	-	-	-16,470
Jan. 1	5,474.45	1,810	+3,080
Feb. 1	5,485.15	4,890	+5,830
Mar. 1	5,497.95	10,720	+9,750
Apr. 1	5,512.55	20,470	+13,330
May 1	5,527.7	33,800	+17,780
June 1	5,543.8	51,580	-13,650
July 1	5,531.8	37,930	-17,690
Aug. 1	5,512.25	20,240	-13,080
Sept.1	5,490.6	7,160	-4,510
Oct. 1	5,478.0	2,650	-
Water year 1939-40	-	-	+760

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., 600 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 1940.

Average discharge.- 13 years, 259 second-feet.

Extremes (regulated).- Maximum discharge during year, 548 second-feet May 24-26 (gage height, 3.15 feet); minimum daily, 2 second-feet Feb. 27 to Mar. 2, Mar. 31, Apr. 3-13.

1927-40 (regulated); Maximum discharge, 2,330 second-feet May 30, 31, 1937 (gage height, 5.83 feet); minimum daily, that of Feb. 27 to Mar. 2, Mar. 31, Apr. 3-13, 1940.

Remarks.- Records excellent. Many diversions for irrigation above and below station. One small diversion between gage and Echo Dam. Flow regulated by Echo Reservoir (see p. 42).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	207	97	114	136	34	2	3	11	474	316	336	189
2	172	97	114	145	34	2	3	11	499	297	336	189
3	97	97	114	147	34	12	2	10	490	316	332	174
4	83	97	114	124	34	22	2	11	466	313	326	163
5	90	97	99	93	35	14	2	11	370	309	319	145
6	90	97	93	93	35	14	2	11	313	290	316	135
7	88	97	97	82	32	19	2	16	309	272	313	135
8	84	90	107	70	27	24	2	68	266	278	297	135
9	83	87	114	70	27	24	2	152	242	313	290	154
10	84	87	114	72	27	16	2	306	242	332	284	172
11	88	88	114	72	27	18	2	339	254	339	287	172
12	90	97	114	72	29	27	2	275	272	339	303	165
13	90	102	107	73	37	31	2	228	269	339	303	145
14	90	102	104	73	44	29	3	278	284	339	297	114
15	90	102	104	74	39	22	3	364	332	346	260	114
16	90	102	104	64	37	22	3	389	367	339	228	123
17	83	102	104	48	37	22	3	378	370	360	214	129
18	80	102	104	48	37	22	3	419	374	316	207	129
19	80	102	96	48	35	22	3	478	378	322	204	121
20	80	102	85	48	38	22	3	462	378	336	209	107
21	81	107	85	48	40	22	3	450	381	342	217	97
22	81	114	85	50	40	22	3	474	378	336	207	102
23	81	114	81	50	35	27	3	499	374	326	191	107
24	81	114	80	50	30	30	10	526	381	326	186	107
25	81	114	80	45	30	31	16	548	381	326	191	107
26	81	114	80	32	30	30	14	535	392	322	189	107
27	80	114	80	32	11	11	13	517	389	306	172	105
28	80	114	80	33	2	3	11	512	389	303	169	91
29	91	114	71	33	2	3	11	482	392	313	174	68
30	97	114	69	33	-	3	11	466	367	326	179	68
31	97	-	99	34	-	2	-	450	-	329	186	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,870	207	80	92.6	5,690
November	3,077	114	87	103	6,100
December	3,006	114	69	97.0	5,960
Calendar year 1939	79,287	675	5	217	157,300
January	2,092	147	32	67.5	4,150
February	899	44	2	31.0	1,780
March	570	31	2	18.4	1,130
April	144	16	2	4.8	286
May	9,676	548	10	312	19,190
June	10,773	499	242	359	21,370
July	9,966	360	272	321	19,770
August	7,722	336	169	249	15,320
September	3,869	189	68	129	7,670
Water year 1939-40	54,664	548	2	149	108,400

Note.- Discharge Dec. 27 to Feb. 29 computed on basis of once-daily or more frequent gage readings and records of gate operations at Echo Dam.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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., 500 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 1940.

Average discharge.- 35 years, 462 second-feet.

Extremes.- Maximum discharge during year (regulated) 565 second-feet May 26 (gage height, 3.13 feet); minimum (regulated), 42 second-feet Feb. 17.
1905-40: Maximum discharge observed, 6,000 second-feet May 22, 1920; minimum discharge (regulated), 18 second-feet Sept. 23, 1934.

Remarks.- Records excellent except those for periods of ice effect, which are good. Many diversions above station for irrigation and domestic supply. Flow regulated by Echo Reservoir (see p. 42).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	203	106	128	142	65	62	61	90	480	334	324	a190
2	190	104	128	160	64	52	64	87	522	292	334	a190
3	124	104	128	164	65	47	61	103	512	311	327	a175
4	97	104	128	152	68	62	58	119	485	317	320	158
5	103	104	119	112	66	56	58	112	404	308	317	144
6	102	104	109	112	66	52	61	108	337	302	317	130
7	102	104	114	104	68	53	62	100	341	286	311	128
8	100	102	123	b88	58	62	62	100	295	286	302	154
9	97	97	130	b88	58	64	62	164	272	311	289	164
10	98	98	130	b91	60	60	65	314	261	324	286	181
11	102	98	130	b91	62	54	64	381	258	334	283	179
12	103	102	128	b91	58	56	64	317	280	334	298	174
13	104	108	124	b92	63	63	67	258	286	324	302	164
14	103	109	121	b94	75	61	76	283	302	327	295	121
15	102	109	121	b94	72	55	86	373	344	331	266	116
16	102	109	119	b87	64	55	87	416	381	331	230	118
17	98	109	119	b75	63	56	79	412	396	324	215	128
18	94	112	119	b75	66	57	78	428	388	305	201	128
19	94	112	111	b75	65	56	88	480	404	311	196	126
20	94	111	102	b75	63	56	97	489	408	324	199	116
21	94	114	103	b75	73	54	104	467	400	327	210	103
22	94	121	b102	b78	68	54	100	485	396	331	213	100
23	94	119	b98	b80	74	56	97	517	388	324	a195	104
24	93	121	b96	b80	67	65	98	541	396	320	a185	103
25	91	121	b96	b74	68	68	103	551	392	324	a190	104
26	91	123	b96	b63	83	70	102	546	392	324	a190	102
27	93	126	b96	b63	88	81	97	536	388	308	a170	102
28	93	126	b96	65	72	73	96	536	377	302	a170	97
29	97	126	b89	65	65	64	100	512	377	308	a175	74
30	106	128	b87	63	-	59	96	494	370	317	a180	73
31	106	-	108	65	-	58	-	480	-	320	a185	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,264	203	91	105	6,470
November	3,331	128	97	111	6,610
December	3,498	130	87	113	6,940
Calendar year 1939	91,705	670	66	251	181,900
January	2,833	164	63	91.4	5,620
February	1,947	88	58	67.1	3,860
March	1,841	81	47	59.4	3,650
April	2,303	104	58	79.8	4,750
May	10,799	551	87	348	21,420
June	11,232	522	258	374	22,280
July	9,821	334	286	317	19,480
August	7,675	334	170	248	15,220
September	3,946	190	73	132	7,830
Water year 1939-40	62,580	551	47	171	124,100

a No gage-height record; discharge computed on basis of records for station at Echo.
b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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.

Drainage area.- 1,610 square miles.

Records available.- June 1919 to September 1940. October 1889 to July 1903 at site 1 mile downstream, published as Weber River near Uinta.

Average discharge.- 20 years (1920-40), 596 second-feet.

Extremes.- Maximum discharge during year (regulated), 1,100 second-feet Mar. 27 (gage height, 2.78 feet); minimum, 93 second-feet (regulated), Feb. 13.
1889-1903, 1919-40: Maximum discharge, 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. Several diversions for irrigation above and below station. Flow affected by storage in East Canyon Creek and Echo Reservoirs (see pp. 42, 48).

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

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.4	83	0.8	165	1.8	542
.5	99	1.0	224	2.4	870
.6	118	1.4	365	2.8	1,110

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	260	171	185	202	120	260	335	373	494	476	414	302
2	277	168	185	227	122	205	327	389	537	426	414	298
3	244	171	182	244	122	173	284	499	562	418	414	305
4	190	173	182	231	133	168	260	572	523	426	409	277
5	190	171	179	193	131	173	257	523	518	418	405	264
6	187	171	165	a190	127	155	264	518	435	418	405	237
7	182	168	168	a180	136	148	264	485	480	409	409	231
8	182	168	173	a145	127	182	274	448	453	401	409	224
9	176	162	182	a145	118	205	302	448	418	405	397	250
10	171	160	182	a148	118	190	302	508	397	409	393	224
11	173	160	185	a148	122	165	291	645	377	409	385	215
12	176	162	182	a148	114	142	288	645	373	414	393	212
13	179	168	182	a148	105	148	309	567	393	405	393	218
14	176	168	176	b150	125	145	357	508	397	414	393	190
15	173	168	176	b150	127	145	418	577	422	418	397	173
16	173	168	176	b140	116	168	435	624	466	422	373	168
17	173	168	176	b127	107	205	389	618	476	431	369	171
18	168	168	173	127	118	199	393	592	476	405	346	173
19	165	168	158	b127	114	205	448	618	476	377	342	179
20	165	173	158	b127	108	215	504	656	480	377	335	179
21	162	173	152	127	105	224	537	608	485	405	342	160
22	162	185	142	129	120	231	508	592	480	405	357	158
23	160	185	155	b132	133	244	494	597	462	397	354	155
24	158	185	150	b132	138	264	504	592	466	393	342	148
25	155	185	148	b128	140	281	552	618	476	401	346	145
26	158	185	b148	116	179	305	562	618	466	414	338	145
27	155	185	b146	116	271	748	494	592	466	409	320	142
28	155	185	b146	114	335	480	439	572	466	405	305	148
29	155	185	b140	107	291	357	405	562	457	401	295	140
30	165	187	b135	112	-	320	393	542	457	409	291	127
31	168	-	155	116	-	327	-	528	-	409	291	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,533	277	155	178	10,970
November	5,194	187	160	173	10,300
December	5,142	185	135	166	10,200
Calendar year 1939	136,413	888	135	374	270,600
January	4,626	244	107	149	9,180
February	4,122	335	105	142	8,180
March	7,377	748	142	238	14,630
April	11,589	562	257	386	22,990
May	17,234	656	373	556	34,180
June	13,834	562	373	461	27,440
July	12,766	476	393	412	25,320
August	11,376	414	291	367	22,560
September	5,961	305	127	199	11,820
Water year 1939-40	104,754	748	105	286	207,800

a No gage-height record; discharge computed on basis of records for stations at Echo and at Devils Slide.
b Stage-discharge relation affected by ice.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940. Records collected in 1904 by State engineer.

Average discharge.- Not determined; figures previously published affected by changes in irrigation use.

Extremes.- Maximum discharge observed during year (regulated), 1,060 second-feet Mar. 27 (gage height, 8.45 feet); minimum observed (regulated), 8 second-feet Aug. 13.
1904-40: 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. In summer practically entire flow of Weber River is diverted above station for irrigation. Flow is regulated by storage in Echo, East Canyon Creek and Pine View Reservoirs. (See pp. 42, 48, 51.) Gage read once daily.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	72	176	352	302	637	621	329	56	21	14	12
2	49	77	181	373	311	551	678	290	42	29	11	9
3	205	83	174	496	337	512	612	154	49	18	10	29
4	144	83	165	443	364	479	549	146	64	19	10	34
5	142	80	162	420	340	487	536	134	78	16	10	40
6	139	78	165	401	327	463	545	108	109	15	13	36
7	133	77	167	373	357	455	540	98	62	15	9	36
8	139	78	162	338	314	443	558	65	66	19	12	35
9	129	83	172	373	302	521	576	52	69	19	13	34
10	115	97	176	394	302	504	589	50	64	16	14	27
11	113	90	174	401	311	467	567	32	48	18	10	25
12	113	80	181	394	298	447	551	175	49	13	10	26
13	113	90	180	373	284	413	567	217	27	16	8	30
14	113	97	182	475	286	420	616	144	27	18	10	33
15	109	120	180	420	290	428	666	112	23	19	13	32
16	103	138	185	401	290	455	690	85	25	18	9	31
17	103	138	180	385	278	467	661	84	22	15	9	32
18	101	134	175	396	286	504	635	92	24	17	15	35
19	101	136	170	330	280	459	678	62	22	16	12	38
20	92	136	173	333	274	439	710	59	19	16	14	42
21	81	145	192	340	263	463	745	77	19	16	13	36
22	81	143	208	347	291	521	715	60	23	15	12	31
23	81	154	237	357	335	529	683	58	21	16	12	29
24	80	149	273	382	479	543	621	53	19	18	11	31
25	83	149	256	407	447	560	596	34	19	14	14	34
26	83	156	248	382	463	619	600	53	16	13	14	32
27	88	143	221	407	534	1,060	540	68	18	10	14	29
28	85	186	192	400	690	902	519	56	15	10	15	41
29	69	165	248	317	651	708	525	53	18	12	10	39
30	70	172	270	314	-	612	469	50	19	10	11	40
31	66	-	300	280	-	602	-	55	-	10	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,155	205	32	102	6,260
November	3,529	186	72	118	7,000
December	6,125	300	162	198	12,150
Calendar year 1939	107,761	1,610	10	295	213,700
January	11,804	496	280	381	23,410
February	10,286	690	263	355	20,400
March	16,670	1,060	413	538	33,060
April	18,158	745	469	605	36,020
May	3,105	329	32	100	6,160
June	1,132	109	15	37.7	2,250
July	497	29	10	16.0	986
August	364	15	8	11.7	722
September	958	42	9	31.9	1,900
Water year 1939-40	75,783	1,060	8	207	150,300

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

Chalk Creek at Coalville, Utah

Location.- Water-stage recorder, lat. 40°55'10", long. 111°23'55", in SE¼ sec. 8, T. 2 N., R. 5 E., 300 feet upstream from bridge on U. S. Highway 189 in Coalville, a third of a mile upstream from mouth, and 7⅞ miles downstream from Silver Creek.

Drainage area.- 253 square miles.

Records available.- October 1904 to December 1905, April 1927 to September 1940.

Average discharge.- 13 years (1927-40), 51.2 second-feet.

Extremes.- Maximum discharge during year, 884 second-feet Aug. 21 (gage height, 3.41 feet); minimum daily, 3 second-feet Aug. 6, 15-20.
1927-40: Maximum discharge, that of Aug. 21, 1940; minimum, less than one second-foot for several days during June to November 1934.

Remarks.- Records fair. Flow affected by diversions above station for irrigation; no diversions below.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	h5	9	11	12	11	22	33	45	45	6	4	4
2	h5	10	10	12	10	16	34	46	43	6	4	4
3	h5	10	10	13	11	17	30	62	41	8	4	4
4	h5	10	9	10	11	16	28	e1	41	7	4	4
5	h7	9	8	12	10	17	28	82	40	6	4	4
6	7	10	8	10	10	15	31	63	40	6	3	4
7	8	10	13	6	10	15	30	58	36	6	4	4
8	9	9	11	10	10	18	29	78	32	6	4	16
9	10	10	10	13	9	18	30	87	29	6	4	6
10	10	13	10	12	12	18	32	107	28	6	4	4
11	10	14	10	9	10	16	30	115	26	5	4	4
12	10	14	8	11	8	10	28	144	23	5	4	4
13	9	15	6	8	6	14	27	146	22	5	4	5
14	8	16	8	9	12	13	31	148	22	5	4	5
15	6	15	8	6	13	14	38	150	20	5	3	5
16	6	15	12	6	8	16	39	146	19	6	3	5
17	6	12	10	8	6	16	33	137	19	6	3	5
18	6	12	8	9	10	15	30	112	16	6	3	4
19	6	12	3	8	10	15	32	99	15	5	3	5
20	6	13	6	8	8	16	37	90	10	4	3	6
21	6	13	6	8	8	16	47	86	8	4	59	7
22	6	13	6	8	12	17	45	86	8	5	12	6
23	6	15	6	9	13	18	46	80	8	5	8	6
24	6	15	8	10	12	21	66	74	8	5	6	6
25	6	13	6	10	12	25	87	64	8	4	10	6
26	6	13	6	10	16	29	88	62	6	4	9	6
27	7	16	8	12	20	38	81	70	5	4	8	6
28	8	13	8	11	23	38	73	66	5	5	6	6
29	8	8	10	10	26	32	68	60	4	5	6	8
30	9	12	10	10	-	29	63	54	5	5	5	7
31	9	-	11	10	-	31	-	50	-	4	5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	221	10	5	7.1	438
November	369	16	8	12.3	732
December	264	13	3	8.5	524
Calendar year 1939	12,867	243	3	35.2	25,520
January	300	13	6	9.7	595
February	337	26	6	11.6	668
March	611	38	10	19.7	1,210
April	1,294	88	27	43.1	2,570
May	2,748	150	45	88.6	5,450
June	632	45	4	21.1	1,250
July	165	8	4	5.3	327
August	207	59	3	6.7	411
September	166	16	4	5.5	329
Water year 1939-40	7,314	150	3	20.0	14,500

h Computed on basis of daily gage readings.

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geolog. al Survey

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 1940, in reports of Geological Survey. November 1931 to September 1940, in reports of Weber River water commissioner.

Extremes.- Maximum contents observed during year, 27,610 acre-feet May 31, June 6 (gage height, 138.67 feet); minimum observed, 5,360 acre-feet (interpolated) Sept. 30.
1931-40: Maximum contents, 28,730 acre-feet May 25 to June 25, 1937, and June 4-25, 1938 (gage height, 140.83 feet); no storage Nov. 1, 1931, Sept. 2 to Nov. 1, 1934, Sept. 11 to Oct. 18, 1937.

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

Capacity table (gage height, in feet, and contents, in acre-feet)
(Furnished by State Engineer; computed from project map)

0	0	30	1,250	60	4,400	90	10,250	120	19,120
10	250	40	2,000	70	5,900	100	13,000	130	23,300
20	700	50	3,000	80	7,900	110	15,880	140	28,300

Daily contents, in acre-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	17,310	-	-	-	-	-	14,630	-
2	-	-	-	-	-	-	-	26,010	-	-	-	-
3	14,190	-	15,300	-	-	-	-	-	-	-	-	6,360
4	-	-	-	16,340	-	-	22,310	-	-	20.690	-	-
5	-	14,600	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	27,610	-	-	-
7	-	-	-	-	-	18,910	-	-	-	-	-	-
8	14,240	-	-	-	17,610	-	-	-	-	-	13,140	-
9	-	-	-	-	-	-	-	26,620	-	-	12,890	-
10	-	-	15,530	-	-	-	-	-	-	-	-	-
11	-	-	-	16,640	-	-	23,230	-	-	19,100	-	-
12	-	14,750	-	-	-	-	-	-	-	-	-	5,660
13	-	-	-	-	-	-	-	-	25,540	-	-	-
14	-	-	-	-	-	19,280	-	-	-	-	-	-
15	14,310	-	-	-	17,850	-	-	-	-	-	11,490	-
16	-	-	-	-	-	-	-	27,090	-	-	-	-
17	-	-	15,780	-	-	-	-	-	-	-	-	-
18	-	-	-	16,850	-	-	24,180	-	-	17,660	-	-
19	-	14,900	-	-	-	-	-	-	-	-	-	5,540
20	-	-	-	-	-	-	-	-	24,220	-	-	-
21	-	-	-	-	-	19,840	-	-	-	-	-	-
22	14,380	-	-	-	18,070	-	-	-	-	-	9,400	-
23	-	-	-	-	-	-	-	27,320	-	-	-	-
24	-	-	15,930	-	-	-	-	-	-	-	-	-
25	-	-	-	17,070	-	-	25,180	-	-	16,310	-	-
26	-	15,070	-	-	-	-	-	-	-	-	-	5,420
27	-	-	-	-	-	-	-	-	22,420	-	-	-
28	-	-	-	-	-	21,230	-	-	-	-	7,680	-
29	14,480	-	-	-	18,530	-	-	-	-	-	-	-
30	-	†15,200	-	-	-	-	†25,780	-	†21,680	-	-	†5,360
31	†14,510	-	16,150	†17,280	-	†21,690	-	27,610	-	†14,870	†7,020	-

†No gage-height record; contents interpolated.

Monthly gage height and contents, water year October 1939 to September 1940

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	†14,220	-
Oct. 31	-	†14,510	†290
Nov. 30	-	†15,200	†690
Dec. 31	110.84	16,150	†950
Calendar year 1939	-	-	†1,350
Jan. 31	-	†17,280	†1,130
Feb. 29	118.17	18,530	†1,250
Mar. 31	-	†21,690	†3,160
Apr. 30	-	†25,780	†4,090
May 31	138.67	27,610	†1,830
June 30	-	†21,680	-5,930
July 31	-	†14,870	-6,810
Aug. 31	-	†7,020	-7,850
Sept.30	-	†5,360	-1,660
Water year 1939-40	-	-	-8,860

†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 1940, in reports of Geological Survey. October 1932 to September 1940, in reports of Weber River water commissioner.

Extremes (regulated).- Maximum daily discharge during year, 150 second-feet Aug. 16 (gage height, 1.13 feet); minimum daily, 6 second-feet Nov. 27 to Feb. 11.
1931-40: Maximum daily discharge, 412 second-feet Apr. 23, 1936; minimum daily, 5 second-feet Jan. 20 to Apr. 10, Nov. 4-19, 1935.

Remarks.- Records good. No diversion between station and East Canyon Reservoir (see p. 48), which completely regulates flow.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	10	6	6	6	7	8	9	18	114	121	107
2	18	10	6	6	6	7	8	9	18	114	119	107
3	15	10	6	6	6	7	8	9	18	112	119	93
4	12	10	6	6	6	7	8	9	18	116	119	62
5	12	10	6	6	6	7	8	9	18	117	117	61
6	12	10	6	6	6	7	8	9	83	117	114	60
7	11	10	6	6	6	7	8	9	117	116	112	58
8	11	10	6	6	6	7	9	9	117	116	116	56
9	11	10	6	6	6	7	9	9	116	114	121	31
10	11	10	6	6	6	7	9	10	114	112	119	18
11	12	10	6	6	6	7	9	10	114	116	119	17
12	12	10	6	6	7	7	9	10	112	116	117	16
13	12	10	6	6	7	7	9	10	112	114	116	16
14	12	10	6	6	7	7	9	10	110	114	116	16
15	12	10	6	6	7	7	9	10	108	112	144	16
16	12	10	6	6	7	7	9	10	108	112	150	16
17	12	10	6	6	7	7	9	10	105	110	148	16
18	12	10	6	6	7	8	9	10	108	114	146	16
19	12	10	6	6	7	8	9	10	108	105	148	16
20	12	10	6	6	7	8	9	10	114	101	146	16
21	12	10	6	6	7	8	9	10	119	101	144	16
22	12	10	6	6	7	8	9	10	117	100	146	16
23	12	10	6	6	7	8	9	10	117	100	148	16
24	12	10	6	6	7	8	9	10	116	98	146	16
25	12	10	6	6	7	8	9	10	116	110	144	16
26	11	8	6	6	7	8	9	10	114	123	142	16
27	11	6	6	6	7	8	9	10	116	123	138	16
28	11	6	6	6	7	8	9	16	117	123	129	16
29	11	6	6	6	7	8	9	18	116	121	114	16
30	11	6	6	6	-	8	9	18	116	121	112	16
31	11	-	6	6	-	8	-	18	-	121	110	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	377	18	11	12.2	748
November	282	10	6	9.4	559
December	186	6	6	6.0	369
Calendar year 1939	12,025	185	6	32.9	23,860
January	186	6	6	6.0	369
February	192	7	6	6.6	381
March	231	8	7	7.5	458
April	263	9	8	8.8	522
May	331	18	9	10.7	657
June	2,900	119	18	96.7	5,750
July	3,503	123	98	113	6,950
August	4,000	150	110	129	7,930
September	974	107	16	32.5	1,930
Water year 1939-40	13,425	150	6	36.7	26,620

Note.- Discharge for periods of low flow when recorder was not in operation, Oct. 8 to May 8, Sept. 16-30, computed on basis of weekly gage readings and time of gate changes at East Canyon Dam.

South Fork of 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 5⅛ miles east of Huntsville.

Drainage area.- 148 square miles.

Records available.- March 1921 to September 1940.

Average discharge.- 19 years, 105 second-feet.

Extremes.- Maximum discharge during year, 282 second-feet Apr. 21 (gage height, 2.40 feet); minimum, 24 second-feet Aug. 16.
1921-40: Maximum discharge, 1,780 second-feet May 4, 1936 (gage height, 5.45 feet) from rating curve extended above 900 second-feet; minimum discharge observed, 20 second-feet Nov. 25, 1931, July 28, 1934.

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

Rating table, water year 1939-40, except period of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Apr. 1 to June 30)

0.8	25	1.4	73	2.2	234
.9	28	1.6	105	2.4	288
1.0	33	1.8	143		
1.2	49	2.0	186		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	33	33	b34	b33	70	139	162	58	36	27	26
2	34	33	33	35	b33	68	133	171	57	34	27	27
3	36	33	33	36	b34	61	118	226	57	32	27	28
4	35	33	33	34	b36	58	107	271	56	32	27	29
5	35	33	33	34	b35	57	110	255	65	30	27	29
6	34	33	33	33	b34	52	118	242	59	32	27	28
7	34	32	33	32	b35	51	114	237	54	32	27	27
8	34	32	33	33	b34	57	118	234	52	30	27	27
9	34	27	33	33	b33	58	131	229	50	30	27	31
10	33	32	33	35	b33	59	135	226	47	30	27	28
11	33	32	33	34	b34	56	135	222	47	30	27	27
12	33	32	32	34	b33	51	147	209	46	30	27	28
13	34	32	32	33	b32	49	173	195	44	30	26	30
14	34	32	32	32	b34	47	202	177	43	30	27	29
15	34	32	32	b31	b34	49	226	164	42	29	26	28
16	34	32	32	b31	b33	54	209	151	40	30	26	27
17	34	32	32	b32	b33	63	182	139	38	30	26	28
18	34	32	32	b33	b34	69	200	127	37	30	26	28
19	34	32	b31	b31	b34	72	232	116	38	30	26	29
20	33	32	32	b31	b34	78	255	105	37	30	26	29
21	34	33	32	b32	b33	82	263	98	36	29	27	29
22	34	33	b30	b32	b35	91	239	91	36	28	26	30
23	34	33	b31	b31	b36	98	239	86	35	27	27	30
24	34	33	33	b32	b37	109	247	84	35	28	27	29
25	34	34	b32	b32	b38	116	255	80	34	28	28	30
26	34	34	b31	b32	b45	119	260	78	34	28	28	30
27	32	34	b31	b33	b60	214	234	73	34	28	27	31
28	32	34	b30	b33	b70	168	207	70	33	28	27	30
29	33	33	b31	b33	b80	143	198	68	33	28	27	27
30	33	33	b31	b32	-	135	177	64	34	27	27	26
31	33	-	b33	b32	-	139	-	61	-	27	27	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,046	36	33	33.7	2,070
November	975	34	27	32.5	1,930
December	995	33	30	32.1	1,970
Calendar year 1939	26,635	36.7	26	73.5	53,220
January	1,015	36	31	32.7	2,010
February	1,109	80	32	38.2	2,200
March	2,593	214	47	83.6	5,140
April	5,503	263	107	183	10,920
May	4,711	271	61	152	9,340
June	1,311	59	33	43.7	2,600
July	923	36	27	29.8	1,830
August	831	28	26	26.8	1,650
September	855	31	26	28.5	1,700
Water year 1939-40	21,867	271	26	59.7	43,360

b Stage-discharge relation affected by ice.

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

Pine View Reservoir near Ogden, Utah

Location.- Staff gage, lat. 41°15'20", long. 111°50'25", in NW¼SW¼ 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.

Drainage area.- 310 square miles.

Records available.- November 1936 to September 1940.

Extremes.- Maximum contents during year, 43,580 acre-feet May 11-15 (elevation, 4,872.00 feet); minimum, 7,050 acre-feet Sept. 27 (elevation, 4,840.86 feet).
1936-40: 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 the top of spillway gates from elevation 4,871 feet 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 the tables to obtain usable contents. Water is used for irrigation on the Ogden River project. Gage is 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 1939 to September 1940

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

Monthly elevation and contents, water year October 1939 to September 1940

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	4,853.17	17,440	+190
Nov. 1	4,853.35	17,630	+740
Dec. 1	4,854.05	18,370	+390
Calendar year 1939	-	-	+8,990
Jan. 1	4,854.42	18,760	-4,800
Feb. 1	4,849.74	13,960	-880
Mar. 1	4,848.80	13,080	+6,050
Apr. 1	4,854.77	19,130	+19,410
May 1	4,869.02	38,540	+2,000
June 1	4,870.23	40,540	-9,090
July 1	4,864.38	31,450	-10,860
Aug. 1	4,856.09	20,590	-11,630
Sept.1	4,843.67	8,960	-1,740
Oct. 1	4,841.12	7,220	-
Water year 1939-40	-	-	-10,220

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 1940, not including flow of Pine View pipe line. 1895-96, January 1904 to October 1912, October 1931 to September 1937 records at same site, including flow of pipe line, published as "Ogden River near Ogden, Utah."

Extremes (regulated).- Maximum discharge during year 482 second-feet May 11 (gage height, 3.59 feet); minimum 1 second-foot or less for several days when reservoir gates were closed.

1937-40: Maximum discharge, 1,260 second-feet Apr. 25, 26, 1938 (gage height, 5.30 feet); minimum, less than 1 second-foot at times when reservoir gates were closed.

Remarks.- Records good. Flow regulated by Pine View Reservoir (see p. 51). Records do not include flow of Pine View pipe line which diverts water above station for use in irrigation and power development. Diversions above Pine View Reservoir for irrigation and municipal supply.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	3	1	2	1	8	24	16	31	28	24	2
2	5	3	1	2	1	6	20	14	30	28	25	10
3	3	3	1	2	1	4	16	16	30	27	26	8
4	2	2	2	1	1	3	15	32	29	12	26	4
5	3	2	2	1	1	3	18	82	28	8	26	4
6	2	2	2	1	1	3	20	82	19	8	25	4
7	2	2	2	1	1	3	16	43	18	18	24	4
8	2	2	2	1	1	4	18	25	18	34	23	4
9	2	2	2	1	1	5	28	28	25	34	22	4
10	2	2	1	1	1	5	24	47	24	34	22	4
11	2	2	1	1	1	4	20	108	24	34	22	4
12	2	2	1	1	1	3	18	173	27	34	22	3
13	2	2	1	1	1	3	18	160	27	28	22	4
14	2	2	1	1	1	2	21	181	27	26	22	4
15	2	2	1	1	1	3	21	177	37	26	22	4
16	2	2	2	1	1	4	18	166	37	26	22	3
17	2	2	1	1	1	7	15	154	36	26	22	3
18	2	2	1	1	1	8	14	85	37	27	21	3
19	2	2	1	a1	1	9	14	61	37	26	22	3
20	2	2	1	a1	1	10	17	34	35	26	24	3
21	2	2	1	a1	1	13	17	49	27	25	25	3
22	2	2	1	a1	1	14	16	32	28	25	24	3
23	2	1	1	a1	1	16	16	31	28	26	24	3
24	3	1	1	a1	1	20	16	31	28	7	24	3
25	3	1	1	a1	1	24	17	30	28	11	24	3
26	3	1	1	a1	2	25	18	30	27	19	9	3
27	3	1	1	1	4	103	18	28	30	18	2	4
28	3	1	1	1	12	34	17	28	29	25	2	4
29	3	1	1	1	10	24	19	26	28	25	2	4
30	3	1	1	1	-	25	16	25	29	25	2	4
31	3	-	1	1	-	28	-	29	-	25	2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	78	5	2	2.5	155
November	55	3	1	1.8	109
December	38	2	1	1.2	75
Calendar year 1939	16,815	521	1	46.1	33,350
January	34	2	1	1.1	67
February	53	12	1	1.8	105
March	423	103	2	13.6	839
April	545	28	14	18.2	1,080
May	2,023	181	14	65.3	4,010
June	858	37	18	28.6	1,700
July	741	34	7	23.9	1,470
August	604	26	2	19.5	1,200
September	116	10	2	3.9	230
Water year 1939-40	5,568	181	1	15.2	11,040

a No gage-height record; discharge interpolated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

U. S. GOVERNMENT PRINTING OFFICE 1936—O-163065

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.- 2,610 square miles.

Records available.- October 1934 to September 1940. May to December 1904 and July 1913 to September 1934 at outlet of Utah Lake, 7½ miles upstream.

Average discharge.- 27 years (1913-40), 377 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 793 second-feet July 8; minimum, 1 second-foot Apr. 1-13, 17, 18.
1913-40: 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 excellent. 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 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	462	18	18	6	6	2	1	446	703	757	708	464
2	422	18	18	6	6	2	1	479	692	754	700	461
3	379	18	18	6	6	2	1	508	712	778	683	480
4	314	18	18	6	6	2	1	506	720	773	704	515
5	187	18	18	6	6	2	1	549	728	773	677	460
6	181	18	18	6	6	2	1	571	721	772	711	404
7	190	18	18	6	6	2	1	586	681	772	679	451
8	197	18	18	6	6	2	1	659	660	793	699	435
9	195	18	18	6	6	2	1	694	715	771	696	418
10	178	18	18	6	6	2	1	707	700	764	641	423
11	164	18	18	6	6	2	1	705	676	755	545	423
12	160	18	18	6	6	2	1	699	676	749	546	439
13	159	18	18	6	6	2	1	678	680	747	619	443
14	165	18	12	6	6	2	2	688	708	756	591	428
15	113	18	10	6	6	23	2	685	721	766	607	414
16	17	18	8	6	6	48	2	683	730	741	547	438
17	16	18	6	6	6	45	1	682	725	728	536	459
18	16	18	6	6	6	16	1	675	712	722	535	465
19	16	18	6	6	6	9	2	658	699	700	570	440
20	16	18	6	6	6	8	6	682	684	692	567	341
21	16	18	6	6	6	8	8	698	679	705	532	338
22	16	18	6	6	6	12	84	703	677	703	552	337
23	32	18	6	6	6	15	325	698	675	686	572	378
24	90	18	6	6	6	19	399	690	692	672	474	378
25	82	18	6	6	6	19	377	708	701	666	603	349
26	69	18	6	6	4	20	379	700	739	693	474	321
27	69	18	6	6	2	17	375	701	736	743	483	358
28	46	18	6	6	2	25	369	707	718	703	461	258
29	17	18	6	6	2	15	362	710	754	698	432	159
30	16	18	6	6	-	8	396	709	769	708	448	116
31	16	-	6	6	-	3	-	700	-	713	463	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,016	462	16	130	7,970
November	540	18	18	180	1,070
December	354	18	6	11.4	702
Calendar year 1939	111,900	747	6	307	221,900
January	186	6	6	6.0	369
February	160	6	2	5.5	317
March	338	48	2	10.9	670
April	3,103	399	1	103	6,150
May	20,264	710	446	654	40,190
June	21,183	769	660	706	42,020
July	22,753	793	666	734	45,130
August	18,055	711	432	582	35,810
September	11,793	515	116	393	23,390
Water year 1939-40	102,745	793	1	281	203,800

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

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 to form Spanish Fork and 2½ miles upstream from Diamond Fork.

Drainage area.- 490 square miles, (published in error in Water-Supply Papers 860 and 880).

Records available.- January 1908 to September 1925 and October 1936 to September 1940, in reports of Geological Survey. January 1933 to September 1940, in reports of Spanish Fork water commissioner.

Average discharge.- 24 years (1908-25, 1933-40), 99.4 second-feet.

Extremes.- Maximum discharge during year, 348 second-feet May 13 (gage height, 3.50 feet); minimum, 17 second-feet Aug. 6.
1908-25, 1933-40: 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, which are fair. Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	42	39	48	50	82	106	165	82	34	22	21
2	34	42	39	45	52	70	101	172	76	31	20	25
3	38	41	37	55	52	70	99	199	75	30	22	28
4	60	41	38	48	53	65	87	232	74	34	24	40
5	43	41	38	48	51	68	87	243	72	32	24	33
6	38	41	40	43	50	65	97	246	71	29	22	31
7	36	40	41	36	51	62	92	238	66	28	20	32
8	36	40	40	41	49	65	94	246	61	26	21	34
9	35	41	40	44	48	77	102	262	61	24	22	33
10	34	37	40	45	49	77	106	293	64	25	22	30
11	34	37	40	46	49	64	104	304	59	24	23	28
12	34	40	36	46	45	55	113	322	55	24	22	29
13	34	40	39	41	36	50	134	331	55	19	22	31
14	34	39	37	b33	38	52	164	313	56	22	23	30
15	34	39	37	b28	46	53	170	290	53	22	19	28
16	39	37	41	b28	45	60	143	268	53	36	20	28
17	36	37	41	b29	39	76	130	246	51	32	21	30
18	36	36	36	b36	45	88	141	222	48	29	22	33
19	38	36	32	b30	45	85	165	197	45	29	23	30
20	41	37	36	b34	37	83	185	181	44	29	22	40
21	41	37	34	b37	37	80	195	161	40	28	24	39
22	41	36	32	b39	49	80	185	149	41	28	24	33
23	41	37	34	b41	50	87	178	145	38	27	30	38
24	41	38	36	38	51	99	207	132	38	24	34	36
25	40	39	37	39	53	108	222	123	38	24	36	37
26	40	42	b30	41	64	115	217	115	38	22	31	38
27	38	40	b31	43	72	159	192	106	32	20	30	37
28	37	40	b28	44	72	128	181	104	30	22	28	55
29	38	40	b32	43	80	102	178	96	29	22	24	42
30	38	40	37	43	-	99	176	92	32	22	22	43
31	42	-	43	45	-	101	-	92	-	22	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,186	60	34	38.3	2,350
November	1,173	42	36	39.1	2,330
December	1,141	43	28	36.8	2,260
Calendar year 1939	20,959	332	17	57.4	41,580
January	1,257	55	28	40.5	2,490
February	1,458	80	36	50.3	2,890
March	2,525	159	50	81.5	5,010
April	4,351	222	87	145	8,630
May	6,285	331	92	203	12,470
June	1,577	82	29	52.6	3,130
July	620	36	19	26.5	1,630
August	741	36	19	23.9	1,470
September	1,012	55	21	33.7	2,010
Water year 1939-40	23,526	331	19	64.3	46,670

b Stage-discharge relation affected by ice.

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

Spanish Fork at Castilla, Utah

Location.- Water-stage recorder, lat. 40°02', long. 111°32', in SE¼ sec. 12, T. 9 S., R. 3 E., 600 feet upstream from outlet of Cold Springs, 1 mile northwest of Castilla railroad station, 1¾ miles upstream from diversion dam of Bureau of Reclamation, and 2 miles downstream from Diamond Fork.

Drainage area.- 670 square miles.

Records available.- May 1919 to September 1925 and October 1936 to September 1940, in reports of Geological Survey. January 1933 to September 1940, in reports of Spanish Fork water commissioner.

Average discharge.- 13 years (1919-25, 1933-40), 221 second-feet.

Extremes.- Maximum discharge during year, 541 second-feet June 20 (gage height, 3.87 feet); minimum, 25 second-feet Jan. 19.
1919-25, 1933-40: Maximum daily discharge, 1,520 second-feet May 22, 1920; minimum discharge, 25 second-feet Feb. 18, 1938, and Jan. 19, 1939.

Remarks.- Records excellent except those for period of no gage-height record, which are good. 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 of Spanish Fork for irrigation of lands in Jordan River Basin.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	106	62	62	70	75	119	157	252	302	318	240	128
2	101	60	63	68	81	106	157	258	329	275	250	125
3	101	59	60	81	82	106	140	291	371	140	263	126
4	141	58	58	71	92	101	130	332	402	86	248	128
5	82	57	59	73	82	102	134	346	399	141	245	110
6	70	58	62	68	80	98	157	346	365	208	248	98
7	62	57	63	58	81	93	147	337	337	226	252	90
8	62	58	63	64	75	98	145	343	335	283	255	84
9	62	63	62	68	73	106	163	357	357	340	228	84
10	59	57	62	71	71	109	167	402	351	368	219	80
11	59	58	62	71	73	99	165	402	365	348	192	84
12	59	59	58	74	70	87	175	410	385	289	188	82
13	59	58	62	62	54	81	199	434	405	273	230	78
14	57	58	60	49	64	86	235	393	437	217	255	78
15	54	58	60	42	73	87	252	425	452	203	238	67
16	71	57	62	42	71	92	224	479	428	208	212	58
17	84	55	62	44	62	114	201	491	443	163	186	62
18	71	52	59	50	74	125	203	507	479	171	163	109
19	59	52	49	42	70	123	230	513	500	188	161	117
20	63	53	55	48	a68	121	258	507	525	167	171	121
21	62	55	54	52	a64	123	276	516	488	163	175	109
22	60	58	48	54	a72	123	265	488	461	165	165	92
23	59	62	50	52	a80	132	263	507	413	157	171	86
24	59	63	55	60	a78	145	308	513	390	163	175	80
25	58	62	58	62	a82	151	329	485	419	163	157	81
26	59	63	44	63	96	157	318	458	461	212	123	82
27	58	63	46	67	102	217	289	428	443	233	114	90
28	57	62	42	68	106	180	278	416	419	250	117	119
29	57	62	50	64	117	145	278	396	379	219	116	90
30	57	63	60	66	-	143	278	335	351	219	112	94
31	60	-	67	71	-	145	-	289	-	226	130	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,128	141	54	68.6	4,220
November	1,762	63	52	58.7	3,490
December	1,777	67	42	57.3	3,520
Calendar year 1939	63,697	532	42	175	126,300
January	1,895	81	42	61.1	3,760
February	2,268	117	54	78.2	4,500
March	3,714	217	81	120	7,370
April	6,521	329	130	217	12,930
May	12,656	516	252	408	25,100
June	12,191	525	302	406	24,180
July	6,702	368	86	216	13,290
August	5,999	263	112	194	11,900
September	2,832	128	58	94.4	5,620
Water year 1939-40	60,445	525	42	165	119,900

a No gage-height record; discharge computed on basis of records for station on Provo River at Vivian Park and temperature records.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Spanish Fork near Lake Shore, Utah

Location.- Water-stage recorder, 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 2.5 miles north of Lake Shore.

Drainage area.- 700 square miles.

Records available.- January 1938 to September 1940. December 1903 to July 1907 and March 1909 to September 1925 at site 3 miles upstream.

Average discharge.- 19 years (1904-6, 1909-19, 1920-25, 1938-40), 99.6 second-feet.

Extremes.- Maximum discharge during year, 252 second-feet Mar. 28 (gage height, 6.45 feet); practically no flow during latter part of irrigation season.
1903-7, 1909-25, 1938-40: Maximum discharge observed, 1,100 second-feet May 7, 1922; practically no flow during latter part of irrigation season for most years.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Flow affected by many diversions for irrigation and hydroelectric power plant. During the latter part of the irrigation season only waste and return waters pass the gage. Station below all diversions.

Cooperation.- Board of Canal Presidents furnished 18 discharge measurements.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a1	64	24	68	86	139	129	90				
2	a1	58	29	74	92	120	133	38				
3	a1	50	38	100	92	117	120	34				
4	a20	32	34	82	106	113	114	16				
5	a30	36	36	78	96	109	111	14				
6	60	49	27	74	88	108	124	8				
7	49	39	14	60	103	100	117	4				
8	51	46	12	62	96	98	109	2				
9	49	63	13	72	88	107	109	1				
10	34	66	11	79	84	116	118	.5				
11	32	55	12	84	90	110	112	.3				
12	40	59	16	93	79	96	112	.3				
13	48	59	16	79	71	89	112	.3				
14	51	45	15	63	72	93	132	.3				
15	31	37	19	57	78	102	159	.3				
16	29	a35	29	60	82	104	142	.3	0.3	0.3	0.2	0.6
17	40	a30	28	53	68	114	105	.3				
18	40	26	24	55	82	124	55	.3				
19	41	26	22	a50	84	112	53	.3				
20	45	28	26	a55	70	106	46	.3				
21	46	30	30	a60	67	113	63	.3				
22	50	29	19	a60	86	125	46	.3				
23	50	41	19	a60	90	126	12	.3				
24	54	27	24	a65	94	128	10	.3				
25	62	20	35	68	97	129	37	.2				
26	62	21	33	72	102	133	47	.2				
27	63	19	40	77	118	170	60	.2				
28	59	18	32	77	119	196	92	.2				
29	60	20	47	81	123	133	145	.2				
30	60	23	53	80	-	114	143	.2				
31	68	-	67	86	-	119	-	.2	-			-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,327	68	1	42.8	2,630
November	1,151	66	18	38.4	2,280
December	844	67	11	27.2	1,670
Calendar year 1939	17,201	369	-	47.1	34,100
January	2,184	100	50	70.5	4,330
February	2,603	123	67	89.8	5,160
March	3,663	196	89	118	7,270
April	2,867	159	10	95.6	5,690
May	213.1	90	.2	6.87	423
June	9	-	-	.3	18
July	9.3	-	-	.3	18
August	6.2	-	-	.2	12
September	18	-	-	.6	36
Water year 1939-40	14,894.6	196	-	40.7	29,540

a No gage-height record; discharge computed on basis of observer's notes, one discharge measurement, and records for station at Castilla.
Note.- Discharge May 8 to Sept. 30 computed on basis of 25 field estimates.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Diamond Fork near Thistle, Utah

Location.- Water-stage recorder, lat. 40°12'15", 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 to September 1940. December 1907 to September 1917 at site 1 1/3 miles downstream.

Extremes.- Maximum discharge during period, 535 second-feet June 20 (gage height, 2.97 feet); minimum, 10 second-feet Sept. 16, 17.
1907-17, 1940: Maximum discharge observed, 735 second-feet May 9, 1909; minimum observed, 4 second-feet Jan. 21, 1916.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Some 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 of lands in Jordan River Basin.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	83	225	239	216	92
2							-	85	267	194	228	85
3							-	92	318	87	240	79
4							-	98	355	38	219	70
5							-	102	351	114	222	54
6							-	96	305	171	225	47
7							-	92	273	a135	243	38
8							-	85	261	a250	237	31
9							43	87	276	a310	194	31
10							43	112	267	a350	188	31
11							40	100	295	a325	156	38
12							43	105	305	a230	156	34
13							49	128	331	a135	208	29
14							58	98	362	177	228	29
15							62	180	393	164	202	17
16							54	273	362	158	174	10
17							49	318	397	a120	148	11
18							54	351	440	a135	126	58
19							60	372	470	a155	128	66
20							66	379	516	a135	140	54
21							73	407	474	a125	133	43
22							79	365	433	a130	123	37
23							81	390	382	a120	128	29
24							107	400	362	123	118	28
25							114	382	397	123	98	30
26							105	376	a450	131	70	30
27							102	338	a425	a215	66	40
28							98	327	404	a230	64	47
29							98	318	348	a195	68	36
30							92	243	327	a195	77	40
31							-	202	-	202	96	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April 9-30	1,670	114	40	71.4	3,110
May	6,984	407	83	225	13,850
June	10,771	516	225	359	21,360
July	5,661	350	38	183	11,230
August	4,917	243	64	159	9,750
September	1,264	92	10	42.1	2,510
The period	-	-	-	-	61,810

a No gage-height record; discharge computed on basis of difference in flow between Spanish Fork at Castilla and Spanish Fork at Thistle.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 28 years, 352 second feet (since 1932 flow includes that of Weber-Provo diversion canal).

Extremes.- Maximum discharge during year, 869 second-feet May 16 (gage height, 3.98 feet); minimum, 98 second-feet Sept. 1.
1911-40: Maximum discharge observed, 3,180 second-feet July 11, 1921; minimum discharge, 49 second-feet July 17, 1934.

Remarks.- Records excellent except those for period of ice effect, which are good. Station is below diversions for irrigation in Heber Valley and above those in vicinity of Provo. Flow slightly regulated at headwaters by small lakes that serve as reservoirs. Records include flow of Weber-Provo diversion canal.

Cooperation.- Records collected and prepared in cooperation with U. S. Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	146	191	200	228	213	335	240	211	292	232	123	102
2	152	187	202	232	223	257	245	200	282	213	120	102
3	150	187	200	268	225	263	237	209	273	200	121	110
4	174	187	200	245	252	255	228	268	273	204	121	113
5	176	184	200	230	237	247	225	356	290	197	121	112
6	176	180	200	228	228	235	235	323	284	193	120	110
7	200	180	195	204	235	225	240	332	268	189	118	108
8	200	182	197	213	223	225	240	366	268	180	118	112
9	204	182	197	232	213	232	245	411	268	172	118	113
10	193	180	197	230	213	237	235	538	268	162	115	113
11	191	180	200	228	218	228	228	584	271	164	116	113
12	202	180	200	230	209	204	220	648	263	164	113	118
13	206	180	202	211	189	202	184	706	255	164	110	121
14	204	182	202	202	204	202	180	744	260	162	113	120
15	202	182	200	191	216	204	184	749	255	168	112	118
16	202	180	197	b175	202	202	172	784	242	170	112	118
17	200	176	202	b185	189	206	164	801	218	172	112	120
18	197	172	200	216	209	206	146	732	211	164	112	123
19	197	174	189	175	202	200	137	616	211	162	112	125
20	197	178	189	b210	191	200	141	516	202	158	113	132
21	197	180	191	b220	187	200	150	462	200	152	113	128
22	195	189	182	209	209	197	154	459	193	148	110	123
23	195	187	182	209	235	200	141	428	195	144	110	120
24	191	189	193	218	232	200	187	402	197	143	113	116
25	195	187	200	216	240	202	247	398	202	144	112	120
26	197	187	178	213	301	206	271	379	197	139	110	120
27	200	202	178	220	382	260	265	385	202	135	110	118
28	197	202	193	218	379	279	242	405	197	135	110	121
29	193	200	195	211	379	255	237	379	195	132	108	121
30	191	200	197	209	-	245	230	332	202	125	105	121
31	193	-	213	209	-	235	-	309	-	128	104	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,913	206	146	191	11,730
November	5,547	202	172	185	11,000
December	6,071	213	178	196	12,040
Calendar year 1939	93,097	701	129	255	184,600
January	6,685	268	175	216	13,260
February	6,835	382	187	236	13,560
March	7,074	335	197	228	14,030
April	6,250	271	137	208	12,400
May	14,430	801	200	466	28,620
June	7,134	292	193	238	14,150
July	5,115	232	125	165	10,140
August	3,525	123	104	114	6,990
September	3,511	132	102	117	6,960
Water year 1939-40	78,092	801	102	213	154,900

b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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., 600 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, November 1938 to September 1940. January 1937 to November 1938, at site 450 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.

Extremes.- Maximum discharge during year, 396 second-feet Feb. 28; practically no flow for several days during period May 28 to Sept. 8.

1903-5, 1933-34, 1937-40: Maximum discharge observed, 1,620 second feet May 27, 1904; practically no flow during several periods.

Remarks.- Records good except those below 5 second-feet which are fair. Station is below all diversions. At times entire flow is diverted above station for irrigation. Factory race diverts water above station into Provo Bay, an arm of Utah Lake, and Provo River water commissioner furnished following record of this diverted flow for 1939-40:

Month	Diversion (acre-feet)	Month	Diversion (acre-feet)
October	80	May	0
November	220	June	0
December	60	July	0
January	1,980	August	0
February	1,910	September	0
March	930		
April	1,250	Water year 1939-40	6,430

Cooperation.- Records collected and prepared in cooperation with U. S. Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	114	105	226	187	313	248	62	0	4	1	2
2	9	112	108	230	197	280	252	52	0	3	2	1
3	13	112	108	271	197	252	219	35	0	3	2	1
4	26	101	100	240	223	238	206	24	1	4	2	1
5	78	88	95	221	211	236	211	19	2	4	2	1
6	89	79	89	211	195	250	230	11	3	3	a2	0
7	96	75	88	199	213	244	236	6	3	2	a2	0
8	116	78	82	190	199	240	223	5	3	1	a2	0
9	131	78	83	211	185	248	224	6	1	0	a2	2
10	140	73	81	217	183	254	211	20	3	0	a2	4
11	142	69	75	221	190	256	190	19	3	2	a2	3
12	152	66	67	228	183	230	170	71	5	1	a2	2
13	155	64	72	210	166	221	143	119	4	1	a2	3
14	154	59	85	197	167	226	140	156	2	2	a2	3
15	154	53	85	169	182	232	126	148	1	2	a2	1
16	155	48	89	150	169	232	116	156	0	2	2	2
17	150	44	94	162	160	234	90	185	0	2	2	2
18	149	42	93	190	175	228	64	166	0	2	0	3
19	160	39	95	152	169	219	30	126	0	3	0	3
20	167	40	102	187	158	211	15	38	2	2	a1	3
21	156	49	119	201	150	202	15	9	3	1	a1	2
22	140	63	140	185	164	204	16	12	3	1	a1	2
23	138	69	144	177	204	211	13	8	3	0	1	3
24	134	72	170	188	206	215	13	5	2	0	1	2
25	128	70	178	182	211	221	20	2	1	1	1	2
26	127	69	167	183	246	223	21	1	0	2	3	3
27	124	82	166	195	336	262	23	1	0	0	3	2
28	126	94	170	201	377	303	20	0	1	0	3	2
29	124	94	199	190	362	280	28	0	4	1	2	2
30	116	99	202	183	-	260	46	0	3	2	3	1
31	115	-	210	185	-	252	-	0	-	1	4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,669	167	5	118	7,280
November	2,195	114	39	73.2	4,350
December	3,661	210	67	118	7,260
Calendar year 1939	41,059	668	0	112	81,440
January	6,152	271	150	198	12,200
February	5,965	377	150	206	11,830
March	7,477	313	202	241	14,830
April	3,559	252	13	119	7,060
May	1,462	185	0	47.2	2,900
June	53	5	0	1.8	105
July	52	4	0	1.7	103
August	57	4	0	1.8	113
September	58	4	0	1.9	115
Water year 1939-40	34,360	377	0	93.9	68,150

a No gage-height record; discharge interpolated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolo[illegible]cal Survey

Weber-Provo diversion canal near Woodland, Utah

Location.- Water-stage recorder and Parshall rating 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.

Records available.- October 1931 to September 1940.

Extremes.- Maximum daily discharge during year, 95 second-feet May 4-6; no water diverted from Weber River for several months.
1931-40: Maximum daily discharge, 152 second-feet June 14, 15, 1933; no water diverted from Weber River for several months during each year.

Remarks.- Records good. Canal diverts water from Weber River in SW¼SW¼ sec. 21, T. 1 S., R. 6 E., 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. Not all of water diverted from Weber River reaches Provo River due to evaporation, transpiration, and seepage losses. No water was diverted from Weber River on days for which no figures are given.

Cooperation.- Records of daily discharge furnished by U. S. Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	91			
2								-	92			
3								-	93			
4								-	95			
5								-	95			
6								-	95			
7								-	92			
8								-	92			
9								-	90			
10								-	79			
11								-	78			
12								-	70			
13								-	63			
14								-	60			
15								-	48			
16								-	31			
17								-	26			
18								-	19			
19								-	15			
20								-	13			
21								-	8			
22								-	17			
23								-	14			
24								18	18			
25								42	11			
26								44	12			
27								67	6			
28								90	-			
29								94	-			
30								93	-			
31								92	-			

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-	-
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year 1939	6,135	122	0	16.8	12,170
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	540	94	-	17.4	1,070
June	1,423	95	-	47.4	2,820
July	-	-	-	-	-
August	-	-	-	-	-
September	-	-	-	-	-
Water year 1939-40	1,963	95	0	5.4	3,890

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

U. S. GOVERNMENT PRINTING OFFICE 1936—O 162062

South Fork of 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 1940.

Average discharge.- 28 years (1912-40), 30.1 second-feet.

Extremes.- Maximum discharge during year, 31 second-feet Oct. 18 (gage height, 0.93 foot); minimum daily, 18 second-feet July 13.
1911-40: Maximum discharge observed, 123 second-feet May 27, 1922; minimum discharge, 13 second-feet several times in 1934, 1935, and on Apr. 2, 1937.

Remarks.- Records excellent. Station below all diversions.

Cooperation.- Records collected and prepared in cooperation with U. S. Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

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

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	887	31	27	28.6	1,760
November	795	28	25	26.5	1,580
December	738	25	22	23.8	1,460
Calendar year 1939	9,113	31	18	25.0	18,070
January	723	25	22	23.3	1,430
February	651	24	21	22.4	1,290
March	698	25	22	22.5	1,380
April	672	24	21	22.4	1,330
May	689	25	19	22.2	1,370
June	620	22	20	20.7	1,230
July	636	22	18	20.5	1,260
August	699	24	22	22.5	1,390
September	775	28	22	25.8	1,540
Water year 1939-40	8,583	31	18	23.5	17,020

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9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

Sevier River at Hatch, Utah

Location.- Water-stage recorder, lat. 37°39', 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, June 1939 to September 1940.

Extremes.- Maximum discharge during year, 768 second-feet Sept. 17 (gage height, 3.06 feet) from rating curve extended above 200 second-feet by logarithmic plotting; minimum, 45 second-feet Aug. 31.

1911-28, 1939-40: Maximum discharge not determined, occurred May 25, 1914, owing to failure of Hatchtown Dam; maximum discharge recorded, 1,490 second-feet May 26, 1922 (gage height, 5.25 feet, datum then in use); minimum discharge, 10 second-feet on several days in 1912 when water was being stored in Hatchtown Reservoir.

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

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	87	71	64	61	a62	68	74	133	95	71	51	47
2	90	71	64	60	a61	62	73	144	93	70	51	51
3	93	71	64	60	a61	62	74	194	92	68	51	49
4	90	71	63	59	a62	61	70	255	90	66	51	48
5	89	71	62	59	a61	65	69	292	92	62	51	47
6	84	72	61	b58	a61	65	69	288	90	62	51	79
7	89	71	61	b58	a60	64	70	266	83	62	53	142
8	87	71	61	60	58	71	70	238	80	61	51	77
9	86	72	61	61	61	73	73	284	80	60	51	76
10	84	71	60	60	57	69	76	288	80	60	51	65
11	83	70	61	60	59	63	77	284	77	59	51	59
12	81	69	60	61	59	61	80	262	76	58	51	59
13	79	66	59	59	57	61	84	252	74	57	51	79
14	77	66	61	b56	56	61	98	284	73	58	51	66
15	76	68	61	b56	56	62	114	280	72	58	51	57
16	76	66	60	b57	55	63	116	262	73	60	51	56
17	76	66	60	b56	53	64	107	235	74	59	51	300
18	76	65	60	b57	56	62	97	219	72	58	51	174
19	77	63	60	b58	59	62	98	189	69	57	51	109
20	77	64	61	b58	56	61	116	180	71	57	51	97
21	76	65	60	b57	57	62	144	166	70	56	54	79
22	76	66	b60	b57	57	63	175	159	65	55	62	72
23	74	65	b59	b57	58	65	180	144	64	54	100	71
24	71	66	b59	a58	59	66	183	137	64	54	60	69
25	76	65	b58	a59	72	70	197	133	64	52	51	66
26	74	64	b57	a60	93	71	203	124	66	52	48	65
27	74	65	b58	a59	86	76	200	116	65	51	47	63
28	74	66	b59	a58	86	76	186	114	63	51	47	63
29	74	66	b60	a58	76	70	164	109	63	51	47	65
30	73	63	b61	a60	-	69	144	103	68	51	47	64
31	72	-	61	a61	-	71	-	97	-	51	46	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,471	93	71	79.7	4,900
November	2,026	72	63	67.5	4,020
December	1,876	64	57	60.5	3,720
Calendar year	-	-	-	-	-
January	1,818	61	56	58.6	3,600
February	1,814	93	53	62.5	3,600
March	2,039	76	61	65.8	4,040
April	3,481	203	69	116	6,900
May	6,231	292	97	201	12,360
June	2,258	95	63	75.3	4,480
July	1,801	71	51	58.1	3,570
August	1,631	100	46	52.6	3,240
September	2,414	300	47	80.5	4,790
Water year 1939-40	29,860	300	46	81.6	59,220

a No gage-height record; discharge computed on basis of records for station near Kirgston and temperature records.
b Stage-discharge relation affected by ice.

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

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 1940.

Average discharge.- 26 years, 147 second-feet.

Extremes.- Maximum discharge during year, 987 eecond-feet Sept. 18 (gage height, 3.01 feet); minimum daily, 5 second-feet July 30 to Aug. 15.
1914-40: Maximum discharge, about 3,000 second-feet (including eetimated flow of 360 second-feet, in overflow channel bypassing station) Mar. 4, 1938 (gage height, 5.20 feet), from rating curve extended above 600 second-feet; minimum daily, 5 second-feet June 16-20, 1931, July 30 to Aug. 15, 1940.

Remarks.- Records excellent except those for periods of ice effect or no gage-height record, which are fair. Many diverions above station; none between station and mouth of East Fork.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	149	127	133		a150	161	124	32	15	21	5	9
2	146	116	136		a148	146	130	27	14	13	5	9
3	146	99	136		a150	142	124	20	14	12	5	9
4	158	99	133		a148	136	121	17	13	11	5	9
5	161	105	130		a144	136	121	27	13	11	5	9
6	155	110	133		a144	136	105	52	13	10	5	13
7	152	107	133		146	136	87	67	13	10	5	129
8	165	102	136		136	136	80	73	13	10	5	107
9	168	113	142		127	155	65	59	11	10	5	57
10	155	119	139		133	133	55	69	11	9	5	45
11	158	130	133		133	136	50	82	11	8	5	43
12	161	130	133		124	119	45	82	11	8	5	86
13	155	127	130		119	116	32	85	11	7	5	193
14	155	127	130		119	116	48	85	11	7	5	182
15	149	124	133		133	119	65	99	11	8	5	185
16	142	121	136	a130	130	119	55	99	11	8	6	124
17	133	121	139		121	130	55	94	11	8	7	172
18	133	124	136		127	127	50	94	11	9	7	670
19	127	124	130		119	119	38	92	11	9	7	357
20	130	121	133		121	110	35	77	11	9	7	286
21	124	124	133		121	110	38	65	11	8	7	257
22	121	133	124		124	116	55	45	11	8	7	229
23	124	136	b120		130	116	80	37	11	8	7	207
24	124	139	116		136	119	105	28	11	8	7	178
25	116	149	b112		136	124	97	22	11	7	8	152
26	121	152	a110		158	124	85	22	11	7	7	142
27	121	152	a114		229	130	85	17	11	6	8	136
28	121	149	a118		203	139	87	15	11	6	9	175
29	124	149	a120		182	124	61	16	11	6	9	146
30	121	139	a124		-	119	40	15	12	5	8	136
31	124	-	a126		-	113	-	15	-	5	8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,339	168	116	140	8,610
November	3,768	152	99	126	7,470
December	4,001	139	110	129	7,940
Calendar year 1939	40,634	670	8	111	80,600
January	4,030	-	-	130	7,990
February	4,091	229	119	141	8,110
March	3,962	161	110	128	7,860
April	2,218	130	32	73.9	4,400
May	1,629	99	15	52.5	3,230
June	351	15	11	11.7	696
July	272	21	5	8.8	540
August	194	9	5	6.3	385
September	4,452	670	9	148	8,830
Water year 1939-40	55,307	670	5	91.0	66,060

a No gage-height record; discharge computed on basis of a comparison of inflow and outflow of Piute Reservoir, records for station at Hatch, and temperature records.
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. Zero of gage is 5,900.8 feet above mean sea level.

Drainage area.- 2,440 square miles.

Records available.- March 1914 to September 1940.

Extremes.- Maximum contents during year, 53,710 acre-feet Apr. 8-10 (gage height, 67.0 feet); minimum, 1,850 acre-feet Sept. 4 (gage height, 25.7 feet).
1914-40: Maximum contents, 82,300 acre-feet May 28, 1922 (gage height, 76.4 feet, original capacity table); no storage at times during several years.

Remarks.- Reservoir is formed by earth-fill dam; storage began in summer of 1910. Capacity, 84,750 acre-feet between gage heights 16 feet (approximate bottom of reservoir) and 80 feet (top of flash-boards in spillway). Spillway crest is at gage height 70.2 feet. No dead storage. Water is used for irrigation. Gage read about 4 p.m. daily; contents are as of that time.

Contents, in acre-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17,190	18,540	19,280	27,300	36,790	44,610	52,330	51,550	42,240	25,560	14,340	2,020
2	16,950	18,410	19,670	27,580	36,960	44,960	52,530	50,970	41,880	25,140	14,230	1,930
3	17,070	18,280	20,060	27,880	37,130	45,340	52,720	50,390	41,340	24,710	14,120	1,890
4	17,310	18,040	20,450	28,170	37,470	45,710	52,920	49,810	40,800	24,290	14,020	1,850
5	17,680	17,800	20,710	28,460	37,820	46,080	53,120	49,250	40,090	24,000	13,690	2,020
6	18,040	17,560	20,980	28,760	38,160	46,260	53,320	48,490	39,560	23,720	13,260	2,330
7	18,410	17,430	21,250	29,050	38,330	46,450	53,510	47,740	39,200	23,300	12,720	2,770
8	18,540	17,430	21,520	29,350	38,680	46,640	53,710	47,000	39,030	22,470	12,090	3,030
9	18,660	17,430	21,790	29,650	38,850	46,820	53,710	46,080	39,030	21,380	11,470	3,370
10	18,780	17,560	22,060	29,950	39,200	47,000	53,710	44,980	39,200	20,450	10,570	3,730
11	18,780	17,560	22,340	30,260	39,560	47,190	53,510	44,060	39,380	19,540	9,710	4,040
12	18,910	17,430	22,610	30,560	39,910	47,380	53,320	43,510	39,380	18,540	8,900	4,440
13	18,910	17,430	22,890	31,020	40,270	47,560	53,120	43,150	39,380	17,560	8,130	4,910
14	19,040	17,310	23,160	31,480	40,440	47,930	53,120	42,970	39,200	16,950	7,550	5,410
15	19,160	17,310	23,440	31,790	40,620	48,310	53,120	42,780	38,850	16,370	6,990	5,780
16	19,280	17,190	23,720	32,100	40,800	48,490	53,320	42,600	38,510	16,020	6,450	6,150
17	19,410	17,070	24,000	32,410	40,980	48,680	53,320	42,420	37,990	15,680	5,850	6,600
18	19,670	16,950	24,290	32,570	41,160	48,870	53,120	42,600	37,300	15,570	5,340	7,390
19	19,800	16,950	24,570	32,720	41,340	49,060	52,920	42,970	36,630	15,790	4,840	8,040
20	19,930	16,950	24,850	32,880	41,520	49,250	52,530	43,330	35,950	16,020	4,500	8,720
21	19,800	17,070	24,990	33,200	41,880	49,430	52,130	43,690	35,130	16,140	4,100	9,160
22	19,540	17,070	25,140	33,510	42,240	49,620	51,740	44,060	33,990	16,250	3,790	9,620
23	19,410	17,190	25,280	33,830	42,600	49,810	51,550	44,420	33,040	16,370	3,540	9,900
24	19,280	17,310	25,420	34,150	42,970	50,000	51,550	44,790	32,100	16,370	3,370	10,180
25	19,160	17,430	25,560	34,480	43,330	50,200	51,740	44,980	31,170	16,140	3,540	10,470
26	19,040	17,680	25,710	34,800	43,690	50,580	51,940	44,420	30,260	15,790	3,730	10,770
27	18,910	18,040	25,990	35,130	43,880	50,970	52,130	44,060	29,200	15,450	3,600	11,070
28	18,910	18,280	26,140	35,450	44,060	51,350	52,330	43,690	28,170	15,120	3,140	11,370
29	18,780	18,540	26,420	35,790	44,240	51,740	52,130	43,330	27,150	14,780	2,870	11,570
30	18,780	18,910	26,720	36,120	-	51,940	51,940	42,970	26,280	14,560	2,570	11,780
31	18,660	-	27,000	36,460	-	52,330	-	42,600	-	14,450	2,100	-

Monthly gage height and contents, water year October 1939 to September 1940

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	44.6	17,680	-
Oct. 31	45.4	18,660	+980
Nov. 30	45.6	18,910	+250
Dec. 31	51.5	27,000	+8,090
Calendar year 1939	-	-	-730
Jan. 31	57.6	36,460	+9,460
Feb. 29	62.0	44,240	+7,780
Mar. 31	66.3	52,330	+8,090
Apr. 30	66.1	51,940	-390
May 31	61.1	42,600	-9,340
June 30	51.0	26,280	-16,320
July 31	41.8	14,450	-11,830
Aug. 31	26.3	2,100	-12,350
Sept.30	39.3	11,780	+9,680
Water year 1939-40	-	-	-5,900

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 1940.

Average discharge.- 28 years (1912-40), 250 second-feet.

Extremes (regulated).- Maximum discharge during year, 691 second-feet June 27 (gage height, 3.06 feet); minimum daily, 2 second-feet Mar. 31.
1911-40: Maximum discharge, 2,600 second-feet May 23, 24, 1922; practically no flow at times when reservoir gates are closed.

Remarks.- Records excellent. One small diversion between gage and Piute Reservoir. Flow regulated by Piute Reservoir (see p. 64).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	264	205	26	23	3	19	6	269	322	576	242	209
2	219	226	23	23	3	19	4	298	408	429	226	207
3	181	226	23	14	3	19	4	295	417	325	246	226
4	106	226	23	9	3	19	4	328	454	322	290	186
5	116	226	23	9	18	19	4	396	441	322	303	146
6	118	226	23	8	18	18	4	405	417	322	359	143
7	157	209	22	8	18	18	4	475	308	396	394	83
8	217	195	24	8	16	18	8	475	214	550	423	70
9	217	195	33	8	18	18	56	580	174	623	426	74
10	188	195	39	8	18	18	109	638	118	628	475	74
11	163	195	42	8	18	18	105	600	137	621	485	91
12	159	195	40	8	18	16	105	540	209	614	472	81
13	154	195	40	8	18	16	105	411	229	597	450	81
14	157	195	40	8	18	16	58	342	264	540	423	83
15	159	197	40	8	19	16	24	333	330	527	364	66
16	159	197	40	8	18	16	24	277	417	262	314	56
17	159	197	39	8	18	16	99	239	457	181	300	39
18	168	197	39	8	18	16	170	139	454	122	325	14
19	181	195	39	8	18	16	190	56	533	128	317	11
20	181	195	39	8	18	16	190	93	559	103	317	23
21	181	186	40	8	18	16	190	124	642	143	330	85
22	181	122	39	8	18	16	170	217	624	184	339	63
23	181	122	39	8	18	16	124	239	586	132	269	53
24	181	101	40	3	18	16	91	300	583	161	207	85
25	181	79	40	3	18	14	80	306	583	212	118	83
26	181	79	40	3	19	3	83	328	656	339	141	81
27	181	79	40	3	18	3	51	306	680	325	236	78
28	181	79	40	3	18	3	46	254	684	356	269	89
29	179	48	40	3	19	3	68	252	677	322	300	115
30	179	31	40	3	-	3	161	308	656	308	336	111
31	179	-	32	3	-	2	-	306	-	285	328	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,406	264	105	174	10,720
November	5,013	226	31	167	9,940
December	1,087	40	22	35.1	2,160
Calendar year 1939	78,214	684	3	214	155,100
January	246	23	3	7.9	488
February	463	19	3	16.0	918
March	442	19	2	14.3	877
April	2,346	190	4	78.2	4,650
May	10,129	638	56	327	20,090
June	13,233	684	118	441	26,250
July	10,964	632	103	354	21,750
August	10,024	485	118	323	19,880
September	2,806	226	11	93.5	5,570
Water year 1939-40	62,159	684	2	170	123,300

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Sevier River above Clear Creek, near Sevier, Utah

Location.- Water-stage recorder, lat. 38°34'19", long. 112°15'24", 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 1940. 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.

Extremes (regulated).- Maximum daily discharge during year, 720 second-feet June 28, 29; minimum, 12 second-feet Feb. 14.
1911-29, 1939-40: Maximum discharge, 2,800 second-feet during last week in May 1922 (computed on basis of maximum discharge 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 or period when intake pipe was partly clogged with silt, which are fair. Many diversions above station for irrigation. Flow affected by storage in Piute and Otter Creek Reservoirs.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	335	194	58	b58	32	36	26	208	430	d660	293	289
2	278	211	54	51	31	37	27	316	469	606	271	211
3	230	240	50	51	30	39	27	335	517	418	247	233
4	171	243	48	46	30	40	27	343	526	355	286	233
5	132	250	47	41	31	38	26	405	539	359	324	171
6	134	253	47	b37	35	36	27	465	544	359	327	161
7	143	253	46	b34	41	36	26	500	517	359	401	143
8	194	230	46	b35	41	36	26	539	392	384	422	109
9	236	221	48	36	40	35	27	579	308	570	439	96
10	233	218	55	36	40	35	67	637	236	619	460	96
11	196	221	57	38	40	35	105	642	199	614	495	94
12	182	221	62	39	38	35	109	632	243	610	495	111
13	177	218	62	31	38	34	111	606	297	606	491	100
14	171	218	63	b30	43	34	113	513	316	583	482	98
15	174	218	62	b30	43	35	66	495	355	561	448	98
16	174	218	63	b31	41	35	48	495	409	487	392	84
17	174	214	63	b31	40	36	48	469	487	278	339	80
18	174	214	62	b32	36	35	123	351	d510	211	343	68
19	185	214	62	b33	37	34	177	247	d540	171	351	46
20	196	214	62	b34	40	34	196	188	d570	166	343	38
21	196	214	60	b34	40	33	208	230	d600	151	343	50
22	196	185	63	b33	39	33	218	271	d660	208	364	96
23	196	143	59	b33	40	34	202	351	d630	218	364	86
24	196	143	62	b34	38	34	161	397	d620	169	274	78
25	196	117	59	b35	38	34	146	443	d620	194	208	98
26	196	105	44	35	41	34	141	465	d620	297	143	98
27	196	103	b58	32	41	31	123	482	d700	359	185	96
28	196	103	b59	32	38	29	96	448	d720	359	253	96
29	196	101	b60	32	36	27	87	397	d720	380	286	103
30	194	71	b61	31	-	27	119	401	d700	339	320	121
31	194	-	b62	31	-	26	-	430	-	335	359	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,041	335	132	195	11,980
November	5,768	253	71	192	11,440
December	1,764	63	44	56.9	3,500
Calendar year	-	-	-	-	-
January	1,116	58	30	36.0	2,210
February	1,100	43	30	37.9	2,180
March	1,057	40	26	34.1	2,100
April	2,903	218	26	96.8	5,760
May	13,280	642	188	428	26,340
June	14,994	720	199	500	29,740
July	11,985	660	151	387	23,770
August	10,748	495	143	347	21,320
September	3,481	289	38	116	6,900
Water year 1939-40	74,237	720	26	203	147,200

b Stage-discharge relation affected by ice.
d Doubtful gage-height record, intake to well was partly clogged with silt; discharge computed on basis of records for station near Marysvale.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 26 years (1914-40), 114 second-feet.

Extremes (regulated).- Maximum discharge during year, 281 second-feet Feb. 14 (gage height, 2.53 feet); minimum daily, 1 second-foot July 7-9, 27-30, when reservoir gates were closed.

1914-40: 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 except those for periods of no gage-height record and those below 5 second-feet, which are fair. Entire flow usually diverted during low-water season; flow past station at such times represents seepage and return flow from canals. Flow also regulated by dams and reservoirs above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	130	113	120	a120	108	64	8	2	2	2	2
2	76	120	a100	124	a115	104	44	8	2	2	2	2
3	76	107	a85	122	a110	106	39	8	2	2	2	2
4	74	105	a75	116	a105	110	38	6	2	2	2	2
5	105	107	a65	116	a100	106	35	4	2	2	2	2
6	147	107	64	102	98	104	33	4	2	2	2	2
7	134	107	a80	95	100	102	40	3	2	1	2	2
8	116	109	a75	91	61	102	46	3	2	1	2	18
9	109	105	a75	93	39	100	28	3	2	1	2	34
10	109	89	a65	98	116	98	58	3	2	2	2	29
11	103	77	a60	102	110	97	42	3	2	2	2	25
12	101	89	62	106	62	97	30	2	2	2	2	25
13	100	109	a65	100	1	95	21	2	2	2	2	a30
14	100	107	a65	88	124	91	15	4	2	2	2	a30
15	101	107	a70	a85	216	88	8	11	2	2	2	a30
16	107	107	a75	a80	116	88	6	13	2	2	2	a30
17	101	103	a80	a80	91	86	6	13	2	2	2	42
18	98	107	a85	a80	91	86	6	12	2	2	2	44
19	96	128	88	a80	56	84	6	8	2	2	2	20
20	94	145	a85	a80	1	79	6	3	2	2	2	2
21	92	143	a80	a80	39	31	5	2	2	2	2	2
22	100	139	a80	a80	106	2	5	2	2	2	2	2
23	105	134	78	a80	106	2	5	2	2	2	2	2
24	111	128	76	a85	106	2	8	3	2	2	2	2
25	113	103	82	a90	164	2	12	3	2	2	2	2
26	115	89	81	a100	183	2	17	2	2	2	2	2
27	120	84	82	a105	161	2	12	2	2	1	2	2
28	124	96	93	a110	141	9	9	2	2	1	2	2
29	130	105	100	a115	114	115	9	2	2	1	2	2
30	132	105	106	a120	-	159	8	2	2	1	2	2
31	134	-	112	a120	-	93	-	2	-	2	2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,266	147	43	105	6,480
November	3,291	145	77	110	6,530
December	2,502	113	60	80.7	4,960
Calendar year 1939	27,381	230	0	75.0	54,320
January	3,043	124	80	98.2	6,040
February	2,952	216	1	105	5,860
March	2,350	159	2	75.8	4,660
April	661	64	5	22.0	1,310
May	145	13	2	4.7	288
June	60	2	2	2.0	119
July	55	2	1	1.8	109
August	62	2	2	2.0	123
September	393	44	2	13.1	780
Water year 1939-40	18,780	216	1	51.5	37,260

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

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 23 years, 219 second-feet.

Extremes (regulated).- Maximum discharge during year, 432 second-feet May 15 (gage height, 2.72 feet); minimum, 32 second-feet June 20.
1917-40: 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 except those for periods of no gage-height record, which are good. Flow regulated by reservoirs above station; many diversions above station for irrigation, most of flow being diverted during irrigation season.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 31 to June 30)

0.7	11	1.1	48	1.6	146	2.4	346
.8	18	1.2	63	1.8	197	2.6	399
.9	26	1.3	80	2.0	248	2.8	454
1.0	36	1.4	100	2.2	297	3.1	540

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a100	215	197	238	a250	250	184	94	57	62	43	54
2	a120	213	192	246	a245	230	174	92	50	56	43	54
3	a160	197	192	250	a240	223	151	129	47	50	43	57
4	a170	192	194	248	a230	228	146	197	44	50	43	62
5	179	192	184	243	a220	223	139	200	43	54	51	63
6	207	200	184	238	218	218	141	187	40	54	52	63
7	238	200	192	220	223	207	141	171	41	66	51	65
8	a260	202	205	207	236	207	129	148	41	56	46	66
9	285	207	200	210	207	207	141	197	41	46	43	77
10	250	207	197	215	171	207	129	334	42	46	44	86
11	230	189	174	228	228	213	148	311	41	46	46	90
12	218	171	168	238	228	220	168	316	40	48	46	86
13	210	181	168	256	184	215	146	297	37	47	46	90
14	207	171	168	243	113	213	120	351	37	47	44	92
15	202	164	174	213	184	210	134	372	37	51	46	96
16	a200	171	166	192	302	207	158	375	36	56	46	100
17	a205	168	171	187	250	207	132	307	38	66	44	107
18	a200	164	171	184	220	205	113	268	38	57	46	127
19	a200	164	166	181	220	200	113	248	37	54	48	136
20	a195	184	179	a180	197	194	141	228	36	63	56	127
21	a190	200	181	a180	124	192	176	215	37	62	68	104
22	a190	207	179	a180	124	161	213	200	37	50	68	98
23	a195	213	176	a180	210	122	168	174	38	47	62	96
24	202	197	179	a190	228	107	144	166	40	46	70	102
25	205	207	181	a210	230	98	168	158	42	47	80	102
26	210	207	179	a225	285	100	158	148	48	44	73	102
27	213	197	176	a235	321	98	132	148	40	43	60	102
28	213	192	181	a240	302	113	122	124	42	44	57	111
29	213	202	189	a245	275	111	109	107	40	44	60	115
30	213	200	202	a250	-	166	109	86	44	43	58	118
31	213	-	223	a250	-	218	-	72	-	43	51	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,293	285	100	203	12,480
November	5,774	215	164	192	11,450
December	5,688	223	166	183	11,280
Calendar year 1939	62,337	451	32	171	123,600
January	6,802	256	180	219	13,490
February	6,465	321	113	223	12,820
March	5,770	250	98	186	11,440
April	4,347	213	109	145	8,620
May	6,420	375	72	207	12,730
June	1,231	57	36	41.0	2,440
July	1,588	66	43	51.2	3,150
August	1,634	80	43	52.7	3,240
September	2,748	136	54	91.6	5,450
Water year 1939-40	54,780	375	36	150	108,600

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

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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, 13 miles southwest of Juab.

Drainage area.- 5,120 square miles.

Records available.- January 1914 to September 1940.

Extremes.- Maximum contents during year, 123,100 acre-feet Apr. 24-26 (gage height, 66.0 feet); minimum, 22,240 acre-feet Sept. 13-15 (gage height, 31.2 feet).
1914-40: Maximum contents, 251,000 acre-feet Apr. 19, 20, 1922 (gage height, 80.0 feet), from former capacity table; no storage at times during 1927-28, 1930-36.

Remarks.- Reservoir is formed by earth-fill dam; storage was begun about 1904 by a 30-foot dam that was 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 usable contents. Water is used for irrigation. Gage read to half-tenths about 9 a.m. daily; contents are as of that time.

Contents, in acre-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45,070	58,350	68,350	81,580	94,040	107,300	122,500	118,800	86,160	64,310	38,660	23,990
2	45,180	58,350	-	82,040	94,570	107,700	-	117,200	85,520	63,210	38,000	23,810
3	45,300	58,350	69,120	82,500	95,100	108,000	-	115,700	84,570	61,300	37,340	23,640
4	45,540	58,220	69,690	82,980	95,630	108,400	-	114,100	84,410	60,490	36,910	23,640
5	46,020	58,220	-	83,460	96,020	-	-	111,700	83,930	58,350	36,270	23,640
6	46,490	58,080	-	83,930	96,400	-	-	110,800	83,930	57,560	35,200	23,810
7	46,860	57,950	-	84,410	96,970	-	-	109,400	83,620	55,730	34,370	23,460
8	47,340	58,220	-	84,720	97,350	-	-	108,000	83,300	54,430	33,530	23,290
9	48,190	58,350	-	85,040	97,920	-	-	106,200	82,980	53,160	32,710	23,110
10	48,790	58,870	-	85,520	98,500	-	119,800	104,900	82,980	52,150	31,910	22,760
11	49,410	59,140	-	86,000	99,450	-	120,400	104,400	82,350	50,890	31,300	22,590
12	49,900	59,540	-	86,490	99,650	-	120,400	103,600	82,040	49,660	30,710	22,420
13	50,400	59,950	-	86,970	99,860	-	120,900	102,700	80,790	47,460	30,320	22,240
14	50,890	-	-	87,460	100,100	-	120,900	102,300	79,550	46,980	30,130	22,240
15	51,390	-	-	87,780	100,300	-	121,500	100,700	78,320	46,250	29,930	22,240
16	51,890	-	-	88,100	100,700	112,900	121,500	100,300	77,100	45,540	29,540	22,420
17	52,400	-	-	88,430	101,100	113,100	121,500	99,070	75,890	45,070	29,350	22,590
18	52,910	62,110	-	88,750	101,700	-	121,800	97,920	74,090	44,830	28,770	22,760
19	53,280	62,380	-	89,090	102,100	-	122,000	97,160	73,200	44,590	28,020	23,110
20	53,670	62,660	76,490	89,420	102,300	-	122,200	96,020	72,020	44,360	27,260	23,460
21	54,050	-	-	89,760	102,700	-	122,200	95,280	70,850	44,120	26,710	23,810
22	54,430	-	-	90,090	103,000	-	122,500	94,570	69,400	44,120	25,980	23,990
23	54,950	-	-	90,430	103,600	-	122,800	93,870	68,250	43,890	25,420	24,170
24	55,210	-	-	90,760	104,000	-	123,100	93,160	67,970	43,420	25,070	24,350
25	55,730	-	-	91,100	104,400	120,900	123,100	92,100	67,970	42,960	24,890	24,710
26	55,980	-	-	91,430	105,100	-	123,100	91,430	67,680	42,490	24,890	24,890
27	56,500	-	-	91,770	105,800	-	122,800	90,090	67,390	42,030	24,710	25,070
28	57,030	-	79,700	92,100	106,200	-	122,500	89,420	67,110	41,350	24,530	25,250
29	57,560	-	-	92,630	106,800	-	121,500	88,750	66,270	40,440	24,350	25,420
30	57,820	67,970	-	93,160	-	122,000	119,800	88,430	65,150	39,760	24,170	25,790
31	58,220	-	81,100	93,690	-	-	-	87,130	-	39,320	24,170	-

Monthly gage height and contents, water year October 1939 to September 1940

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	42.4	45,070	+13,280
Nov. 1	42.7	58,350	+10,000
Dec. 1	(†)	68,350	+13,230
Calendar year 1939	-	-	-18,280
Jan. 1	55.75	81,580	+12,460
Feb. 1	59.55	94,040	+13,260
Mar. 1	62.85	107,300	+15,200
Apr. 1	(†)	122,500	-3,700
May 1	65.2	118,800	-32,640
June 1	57.2	86,160	-21,850
July 1	49.9	64,310	-25,650
Aug. 1	39.6	38,660	-14,670
Sept. 1	32.2	23,990	+1,990
Oct. 1	33.3	25,980	-
Water year 1939-40	-	-	-19,090

†No gage-height record; contents interpolated.

Sevier River near Juab, Utah

Location.- Water-stage recorder, lat. 39°22', long. 112°02', in NW¼ sec. 1, T. 17 S., R. 2 W., 300 feet downstream from Sevier Bridge Dam and 11 miles southwest of Juab.

Drainage area.- 5,120 square miles.

Records available.- September 1911 to September 1940.

Average discharge.- 29 years, 255 second-feet.

Extremes (regulated).- Maximum discharge during year, 1,140 second-feet May 7, 8 (gage height, 5.15 feet, former site and datum); minimum, 1 second-foot or less for several days when reservoir gates were closed.
1911-40: Maximum discharge, 2,140 second-feet June 2, 1922 (gage height, 8.50 feet, former site and datum); practically no flow at times when reservoir gates are 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 p. 69).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	221						805	375	430	307	155
2	51	242						884	303	630	307	158
3	52	238						844	261	778	307	97
4	52	238						844	261	766	307	63
5	28	238						844	200	766	384	63
6	3	238						844	169	673	416	147
7	3	182						936	166	599	416	207
8	3	134						1,090	166	599	416	221
9	3	68						890	169	641	416	217
10	2	3			(†)			860	221	641	375	217
11	2					(†)	a1.5	822	268	641	303	194
12	2							832	362	630	228	175
13	2							832	497	512	204	175
14	2							849	568	416	197	175
15	2		a1	a1	a1	a1.5		884	599	371	194	78
16	2		(†)					938	641	311	194	3
17	2						(†)	908	641	207	231	3
18	2							750	641	166	367	3
19	3							630	614	152	362	3
20	3	a2	(†)					630	588	114	362	3
21	3							630	512	121	358	3
22	3						20	630	449	144	358	3
23	3						78	630	269	231	268	3
24	3						80	630	116	231	172	3
25	3						78	630	116	231	161	3
26	4						245	630	116	264	166	3
27	4						439	532	231	341	155	3
28	3						487	463	345	393	155	3
29	3						552	453	393	341	155	3
30	3				-		728	449	393	307	155	3
31	114	-			-		-	522	-	307	155	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	416	114	2	13.4	825
November	1,842	242	-	61.4	3,650
December	31	-	-	1.0	61
Calendar year 1939	70,336	1,110	-	193	139,500
January	31	-	-	1.0	61
February	29	-	-	1.0	58
March	46	-	-	1.5	91
April	2,739	728	-	91.3	5,430
May	23,115	1,090	449	746	45,850
June	10,650	641	116	355	21,120
July	12,954	778	114	418	25,690
August	8,551	416	155	276	16,960
September	2,387	221	3	79.6	4,730
Water year 1939-40	62,791	1,090	-	172	124,500

†Discharge measurement.
a No gage-height record, reservoir gates closed; discharge computed on basis of five discharge measurements.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

East Fork of 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 1940. May to September 1912 at site 2½ miles downstream, below all diversions.

Average discharge.- 27 years, 89.8 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 216 second-feet May 16-21 (gage height, 2.03 feet); minimum not determined, occurred during period of ice effect.

1913-40: Maximum discharge, about 2,000 second-feet Aug. 27, 1929, from rating curve extended above 400 second-feet; minimum, 6 second-feet Oct. 30, 1930.

Remarks.- Records good except those for periods of no gage-height record or ice effect, which are fair. Irrigation diversions above and below station. Station is above diversions in vicinity of Kingston. Flow regulated at Otter Creek Reservoir (capacity, 52,600 acre-feet), 8 miles upstream.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	16	19		b16	16	15	34	193	172	165	131
2	16	16	19		b16	16	16	34	193	172	163	144
3	16	16	19		b16	17	16	37	193	167	148	142
4	17	16	19		b16	17	16	37	193	86	108	140
5	16	16	19		b15	18	16	34	193	75	68	138
6	14	16	19		b15	16	15	36	196	75	59	138
7	14	16	19		b15	16	15	38	193	72	57	140
8	15	16	19		14	16	15	39	186	73	57	134
9	19	18	20		14	16	14	66	186	74	59	129
10	16	17	19		14	16	14	116	186	84	59	123
11	15	16	a19		14	16	14	133	183	157	57	122
12	14	17	a19		14	15	14	157	183	152	57	106
13	14	17	19		b14	16	15	159	181	150	53	65
14	14	17	18		b14	16	16	159	174	148	52	64
15	13	17	19		14	15	19	170	170	146	52	65
16	14	16	19	b13	14	15	17	216	170	154	50	63
17	13	16	19		b14	16	17	216	167	154	51	54
18	13	18	19		14	16	18	216	167	152	53	41
19	13	18	b18		14	16	24	216	167	163	53	31
20	13	16	b18		b14	15	36	216	167	179	53	25
21	15	16	18		b14	15	39	216	165	176	54	23
22	15	17	18		14	14	28	210	165	179	142	24
23	16	18	b17		15	14	22	208	165	179	146	27
24	16	18	b17		16	14	27	206	165	176	144	23
25	16	19	b16		16	14	31	208	167	174	144	22
26	16	19	b14		18	14	31	208	167	174	142	22
27	16	19	b14		18	15	31	208	165	172	142	19
28	16	44	b15		17	16	36	203	165	172	138	14
29	16	51	b15		16	15	36	200	167	172	134	13
30	16	22	b16		-	15	35	196	170	170	129	13
31	16	-	b16		-	15	-	193	-	170	129	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	466	19	13	15.1	928
November	574	51	16	19.1	1,140
December	554	20	14	17.9	1,100
Calendar year 1939	32,971	313	13	90.3	65,390
January	403	-	-	13	799
February	435	18	14	15.0	863
March	481	18	14	15.5	954
April	658	39	14	21.9	1,310
May	4,585	216	34	148	9,090
June	5,302	196	165	177	10,520
July	4,619	179	72	146	8,960
August	2,908	166	50	93.8	5,770
September	2,195	144	13	73.2	4,350
Water year 1939-40	23,082	216	13	63.1	45,780

a No gage-height record; discharge interpolated.
b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 4½ miles east of Beaver.

Drainage area.- 82 square miles.

Records available.- June to September 1906, March 1914 to September 1940.

Average discharge.- 26 years (1914-40), 55.1 second-feet.

Extremes.- Maximum discharge during year, 445 second-feet May 15 (gage height, 3.15 feet); minimum, 5 second-feet Nov. 30.
1914-40: Maximum discharge, 1,080 second-feet July 22, 1936 (gage height, 7.27 feet, former site and datum), from rating curve extended above 500 second-feet; minimum, 5 second-feet Aug. 29, 1931 and Nov. 30, 1939.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. No diversions above station for irrigation. Water diverted by Telluride Power Co. but returned to stream several miles above station. Flow slightly regulated by power plants and several small reservoirs.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	20	18	17	19	21	27	116	154	68	25	22
2	22	21	19	17	19	19	26	152	148	55	26	24
3	23	22	16	17	19	19	26	198	139	47	26	25
4	24	20	17	16	17	19	24	230	133	40	26	26
5	26	20	17	14	19	19	24	241	126	37	27	25
6	26	20	17	b14	19	a19	24	243	118	35	27	25
7	24	18	17	b14	19	a19	27	218	111	35	27	31
8	24	18	18	b15	19	a20	27	220	105	34	26	26
9	24	22	19	16	19	a20	34	263	97	32	26	24
10	23	16	18	17	20	20	44	294	91	34	27	24
11	25	19	18	17	19	20	49	289	87	32	24	26
12	27	19	15	16	b18	19	62	296	84	30	25	25
13	27	20	18	b14	b18	b19	78	324	84	30	24	25
14	26	19	18	b14	b18	19	89	341	77	30	25	25
15	25	19	17	b14	18	19	88	365	78	30	24	26
16	24	18	17	b14	19	20	72	355	85	36	24	23
17	24	17	17	b14	b18	20	68	307	82	32	24	32
18	23	15	16	b15	17	20	85	263	82	30	25	33
19	24	16	17	b15	b17	22	108	245	84	34	25	30
20	23	17	15	b15	b17	23	142	243	81	30	24	31
21	22	19	15	b15	b17	25	159	243	77	30	26	28
22	22	19	15	b14	b17	29	171	239	72	29	27	24
23	23	18	b15	b14	17	31	169	232	68	26	27	25
24	24	19	b15	b15	18	36	167	222	68	25	28	24
25	23	20	b15	b16	18	40	171	216	64	25	27	23
26	22	19	b13	17	22	37	156	208	61	25	25	23
27	20	18	b15	18	18	35	128	196	59	25	24	24
28	20	19	b15	17	20	32	108	188	59	24	23	34
29	20	18	b16	17	21	30	97	174	61	25	23	27
30	21	12	b16	19	-	27	95	167	68	26	22	25
31	20	-	17	19	-	27	-	163	-	26	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	723	27	20	23.3	1,430
November	557	22	12	18.6	1,100
December	511	19	13	16.5	1,010
Calendar year 1939	12,266	134	12	33.6	24,320
January	486	19	14	15.7	964
February	536	22	17	18.5	1,060
March	745	40	19	24.0	1,480
April	2,545	171	24	84.8	5,050
May	7,451	365	116	240	14,780
June	2,703	154	59	90.1	5,360
July	1,017	68	24	32.8	2,020
August	781	28	22	25.2	1,550
September	783	34	22	26.1	1,550
Water year 1939-40	18,838	365	12	51.5	37,350

a No gage-height record; discharge computed on basis of records for station at Adamsville and temperature records.
b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 24 years (1914-36, 1938-40), 36.1 second-feet.

Extremes.- Maximum discharge during year, 304 second-feet May 16 (gage height, 2.25 feet); minimum, 1 second-foot Aug. 14-21.
1913-36, 1937-40: Maximum discharge, 989 second-feet Sept. 1, 1936 (gage height, 5.79 feet, site and datum then in use) 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 diversions 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 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	17	32	35	43	40	34	7	12	20	4	4
2	10	25	32	34	42	38	24	8	7	15	3	9
3	13	29	31	34	39	43	21	12	8	14	2	22
4	14	29	31	32	43	42	19	39	11	10	2	10
5	12	30	31	34	40	37	18	55	12	8	3	8
6	12	30	32	31	37	32	18	58	17	6	2	8
7	12	31	32	37	42	32	10	48	16	6	3	10
8	14	30	32	40	40	34	8	37	12	7	3	21
9	16	34	32	42	37	35	7	57	12	6	3	18
10	14	32	32	49	39	35	6	122	10	7	2	13
11	12	29	32	63	38	36	5	140	10	5	2	12
12	12	32	31	65	36	36	5	135	10	5	2	13
13	13	34	32	39	38	35	5	174	9	4	2	13
14	12	34	32	b36	37	37	6	186	8	4	1	14
15	12	34	32	b34	37	37	5	232	7	3	1	12
16	10	35	31	b34	36	35	7	229	8	8	1	11
17	10	34	32	b35	36	38	7	180	10	14	1	17
18	10	31	31	b36	36	37	6	125	7	12	1	27
19	10	32	32	b36	36	36	8	87	7	8	1	22
20	10	34	34	37	36	35	8	78	8	8	1	18
21	9	35	34	b36	35	37	18	63	8	6	1	18
22	10	36	34	b35	37	39	11	65	11	7	2	17
23	10	35	37	b34	39	40	11	62	7	7	a4	19
24	10	35	26	b36	38	46	16	52	8	7	6	16
25	12	36	b24	37	36	52	16	54	5	7	5	15
26	16	36	b22	40	74	55	14	52	4	6	5	15
27	13	36	b26	39	52	54	10	44	4	6	4	14
28	14	36	b30	38	42	48	8	39	5	5	4	16
29	15	36	32	37	38	44	7	36	4	4	4	16
30	15	35	37	36	-	42	5	25	11	4	3	16
31	15	-	35	36	-	40	-	19	-	4	2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	377	16	9	12.2	748
November	972	36	17	32.4	1,930
December	973	37	22	31.4	1,930
Calendar year 1939	7,542	90	0	20.7	14,960
January	1,187	65	31	38.3	2,350
February	1,159	74	35	40.0	2,300
March	1,227	55	32	39.6	2,430
April	343	34	5	11.4	680
May	2,520	232	7	81.3	5,000
June	268	17	4	8.9	532
July	231	20	3	7.5	458
August	80	6	1	2.6	159
September	444	27	4	14.8	881
Water year 1939-40	9,781	232	1	26.7	19,400

a No gage-height record; discharge interpolated.
b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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, 5 miles east of Minersville.

Drainage area.- 510 square miles.

Records available.- October 1937 to September 1940.

Extremes.- Maximum contents observed during year, 10,940 acre-feet May 20 (gage height, 37.0 feet); no storage Oct. 16 and 31.
1937-40: Maximum contents observed, 20,400 acre-feet June 9, 1938 (gage height, 48.3 feet); no storage Oct. 16 and 31, 1939.

Remarks.- Reservoir is formed by earth-fill dam completed in 1914. Capacity, 23,260 acre-feet between gage heights 0 feet (bottom of outlet tunnel) and 51.0 feet (spillway crest). Prior to fall of 1937 the 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 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	7,050	-	-
3	-	-	-	-	6,940	-	-	-	-	-	-	1,100
4	655	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	10,340	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	5,290	-	-	-	9,390	9,860	-	-	-
8	-	-	-	-	-	-	-	-	-	6,390	-	-
9	-	-	3,570	-	-	8,980	-	9,450	-	-	-	-
10	-	-	-	-	7,430	-	-	-	-	-	3,510	-
11	441	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	5,710	-	9,250	-	-	-	-	-	1,250
14	357	-	-	-	-	-	10,270	10,130	-	-	3,030	-
15	-	1,760	3,880	-	-	-	-	-	-	-	-	-
16	0	-	-	-	7,700	-	-	-	-	5,670	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	9,450	10,130	-	8,860	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	4,160	6,050	-	-	10,130	10,940	-	-	-	-
21	-	-	-	-	-	9,590	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	2,130	-
23	-	-	-	-	-	-	-	-	-	-	-	1,400
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	2,490	-	-	8,250	-	-	10,670	8,090	5,250	-	-
26	-	-	-	-	-	9,860	-	-	-	-	-	-
27	-	-	4,500	6,440	-	-	9,790	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-
29	-	2,870	4,620	6,720	8,530	-	-	-	-	-	-	-
30	-	2,940	-	-	-	-	9,520	-	7,350	-	-	1,500
31	0	-	4,710	6,810	-	10,130	-	10,400	-	4,540	1,280	-

Monthly gage height and contents, water year October 1939 to September 1940

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	11.4	852	-
Oct. 31	-	0	-852
Nov. 30	-	†2,940	+2,940
Dec. 31	25.5	4,710	+1,770
Calendar year 1939	-	-	-7,790
Jan. 31	-	†6,810	+2,100
Feb. 29	33.3	8,530	+1,720
Mar. 31	35.8	10,130	+1,600
Apr. 30	34.9	9,520	-610
May 31	36.2	10,400	+880
June 30	-	†7,350	-3,050
July 31	25.1	4,540	-2,810
Aug. 31	14.0	1,280	-3,260
Sept. 30	14.9	1,500	+220
Water year 1939-40	-	-	+648

†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 1940.

Average discharge.- 25 years (1914-36, 1937-40) 38.3 second-feet.

Extremes (regulated).- Maximum discharge during year, 91 second-feet May 21 (gage height, 1.54 feet); minimum daily, 4 second-feet Nov. 5 to Jan. 5.
1913-40: 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 except those for periods when recorder was not operating, which are fair. One small diversion between dam and station gage. Flow regulated by operation of gates at Rockyford Dam and affected also by several diversions above reservoir for irrigation and municipal supply.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	5	4	4	5	6	7	38	58	82	53	46
2	41	5	4	4	5	6	8	38	57	80	51	46
3	36	5	4	4	5	6	8	37	58	80	46	23
4	36	5	4	4	5	6	8	36	56	82	69	14
5	36	4	4	4	5	6	8	37	51	63	75	13
6	36	4	4	5	5	*6	9	37	41	56	75	16
7	33	4	4	5	5	6	9	54	35	70	74	16
8	32	4	4	5	5	6	10	70	35	69	70	16
9	33	4	4	5	5	6	10	74	35	69	69	18
10	32	4	4	5	*5	6	10	74	39	69	70	17
11	31	4	4	5	5	*6	10	75	44	69	70	17
12	33	4	4	5	5	6	9	77	46	69	70	17
13	36	4	4	5	5	6	9	79	49	44	70	17
14	36	4	4	5	5	6	8	84	50	28	70	20
15	36	4	4	5	5	6	8	84	54	27	66	21
16	28	4	*4	5	5	7	8	84	51	27	64	20
17	22	4	4	5	5	7	8	84	51	27	62	21
18	21	4	4	5	5	7	8	84	66	27	60	23
19	22	4	4	5	5	7	15	86	72	27	60	23
20	21	4	4	5	5	7	22	87	70	27	60	24
21	21	4	4	5	6	7	29	89	70	29	58	24
22	21	4	4	5	6	7	36	86	68	32	54	25
23	21	4	4	5	6	7	36	84	66	36	56	18
24	19	4	4	5	6	7	36	84	70	39	54	16
25	20	4	4	5	6	7	36	75	70	42	51	35
26	25	4	4	5	6	7	36	74	77	41	49	10
27	23	4	4	5	6	7	36	62	77	44	44	5
28	24	4	4	5	6	7	37	56	82	53	42	5
29	24	4	4	5	6	7	37	53	84	53	42	5
30	24	4	4	5	-	7	39	56	84	54	41	5
31	17	-	4	5	-	7	-	57	-	53	42	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	882	42	17	28.5	1,750
November	124	5	4	4.1	246
December	124	4	4	4.0	246
Calendar year 1939	13,084	128	4	35.8	25,950
January	150	5	4	4.8	298
February	154	6	5	5.3	305
March	202	7	6	6.5	401
April	550	39	7	18.3	1,090
May	2,095	89	36	67.6	4,160
June	1,766	84	35	58.9	3,500
July	1,568	82	27	50.6	3,110
August	1,837	75	41	59.3	3,640
September	576	46	5	19.2	1,140
Water year 1939-40	10,028	89	4	27.4	19,880

*Winter discharge measurement made on this day.
Note.- Discharge for periods when recorder was not operating, Nov. 12 to Apr. 21 and Sept. 29-30, computed on basis of weekly gage readings and four discharge measurements.

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geolo[illegible]cal Survey

Coal Creek near Cedar City, Utah

Location.- Water-stage recorder, lat. 37°40'25", long. 113°02'10", in NE¼ sec. 13, T. 36 S., R. 11 W., at flood-control dam, 1½ miles southeast of Cedar City, and 3½ miles downstream from South Creek.

Drainage area.- 92 square miles.

Records available.- May 1935 to September 1940. May 1915 to November 1919 at approximately same site, but records do not include flow of power canal operated during this period (abandoned since 1919). Records equivalent if flow of power canal is added to those obtained at former site.

Extremes.- Maximum discharge during year, 1,630 second-feet Sept. 28 (gage height, 4.50 feet), from rating curve extended by broad-crested weir formula; minimum daily, 5 second-feet July 23-25.

1935-40: Maximum discharge observed, 2,910 second-feet July 9, 1936 (gage height, 6.4 feet), from rating curve extended by broad-crested weir formula; minimum observed, 4 second-feet Dec. 15, 1935.

Remarks.- Records good except those for period when recorder was not operating, which are fair. No diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	10				13	26	143	30	13	9	18
2	21	10				12	24	183	27	12	10	40
3	21	11				10	22	180	25	11	10	23
4	25	10				10	22	177	23	11	12	21
5	25	10				10	24	157	23	11	14	15
6	19	10				12	26	106	21	10	16	124
7	17	10				13	26	59	17	10	19	41
8	23	10				14	30	57	19	10	16	32
9	22	11				15	40	62	18	10	13	21
10	19	10			(*)	16	41	70	17	9	14	19
11	17	10				14	38	72	17	9	13	18
12	15	10				14	44	76	15	8	13	19
13	14	8				17	64	81	15	8	14	17
14	15	7			b7	17	76	83	17	7	16	17
15	14	7	b8	b7		16	72	79	15	6	14	14
16	14	7	(*)			17	53	68	15	10	14	14
17	14	8				17	45	64	16	8	14	112
18	13	7				18	61	59	15	8	12	37
19	12	8				19	94	55	14	8	12	20
20	12	8				24	127	52	14	8	11	17
21	12					25	148	50	14	7	11	12
22	11					26	157	45	14	6	12	8
23	10					28	159	41	14	5	17	10
24	10					34	204	41	14	5	14	14
25	11	b8				37	201	40	14	5	8	14
26	10					33	119	35	14	5	7	14
27	10				11	35	87	33	12	6	7	17
28	10				12	24	81	34	12	6	7	138
29	10				14	21	83	32	12	6	7	14
30	10				-	25	106	34	12	7	7	14
31	10	-			-	28	-	31	-	8	7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	460	25	10	14.8	912
November	262	11	7	8.7	520
December	248	-	-	8	492
Calendar year 1939	8,388	282	6	23.0	16,640
January	217	-	-	7	430
February	219	14	7	7.6	434
March	614	37	10	19.8	1,220
April	2,300	204	22	76.7	4,560
May	2,299	183	31	74.2	4,560
June	505	30	12	16.8	1,000
July	253	13	5	8.2	502
August	370	19	7	11.9	734
September	894	138	8	29.8	1,770
Water year 1939-40	8,641	204	5	23.6	17,130

Peak discharge.- Sept. 6 (5:30 p.m.) 1,060 sec.-ft.; Sept. 17 (1 p.m.) 403 sec.-ft.; Sept. 17 (7:30 p.m.) 308 sec.-ft.; Sept. 28 (12 p.m.) 1,630 sec.-ft.

b Stage-discharge relation affected by ice.

*Winter-discharge measurement made on this day.

Note.- Discharge for period when recorder was not operating, Oct. 27 to Mar. 9, computed on basis of gage readings made twice daily.

U. S. GOVERNMENT PRINTING OFFICE

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.

Records available.- November 1904 to September 1940. Records prior to September 1932 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) is 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, water year October 1939 to September 1940

Oct.	2	243.3	Mar.	1	241.8	July	1	242.3
Nov.	1	243.2	Apr.	1	241.7	Aug.	1	242.8
Dec.	1	242.9	May	1	241.7	Sept.	3	243.0
	29	242.2		24	241.8	Oct.	1	243.2
Feb.	2	242.1	June	1	242.1			

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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. Altitude, about 700 feet.

Drainage area.- 94.0 square miles.

Records available.- January 1930 to September 1940.

Average discharge.- 10 years, 6.44 second-feet.

Extremes.- Maximum discharge during year, 358 second-feet Jan. 8 (gage height, 2.40 feet), from rating curve extended above 30 second-feet on basis of velocity-area studies; no flow for several months.
1930-40: Maximum discharge, 3,850 second-feet Feb. 6, 1937 (gage height, 5.60 feet), from rating curve extended above 120 second-feet on basis of velocity-area studies; no flow for several months during most years.

Remarks.- Records good except for days of high water, Jan. 8, Feb. 3, 4, and periods of no gage-height record, which are fair.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	0.1	1.2	0.5	7	11	16	2.2				0
2	1.5	.1	1.0	.5	20	9.5	15	1.8				0
3	1.5	a.1	.8	.5	44	9	10	1.8				2.0
4	1.5	a.1	1.0	1.0	69	8.5	7.5	1.8				.1
5	1.2	a.1	.8	2.2	31	8.5	6.5	1.5				.1
6	1.2	a.1	.6	3.4	22	7	5.5	1.2				.1
7	1.0	a.1	.6	5.5	19	6.5	4.8	1.2				0
8	1.0	a.4	.6	88	15	6	4.4	1.0				0
9	1.0	a.4	.6	23	14	6	4.4	1.0				0
10	.8	a.3	.6	22	12	5.5	3.9	.8				0
11	.6	a.3	.6	15	10	a5.5	4.4	.8				0
12	.5	a.3	.6	23	9.5	a5.5	4.4	.8				0
13	.5	.2	.5	15	9	a5.5	3.9	.6				0
14	.4	.2	.5	12	9.5	5.5	3.9	.5				0
15	.4	.2	.5	9	11	4.4	3.9	.2				0
16	.4	.2	.4	7	9	3.9	5.5	.1				0
17	.3	.1	.4	6.5	8.5	3.9	3.9	.3				0
18	.3	.1	.3	6.5	7	3.4	3.0	.8				0
19	.2	.1	.3	5.5	6	3.9	2.6	1.0				0
20	.2	.1	.3	5.5	5.5	3.9	2.6	.6				0
21	.2	.1	.4	4.8	5.5	3.4	2.2	.6				0
22	.2	.1	.4	4.4	8.5	2.6	2.2	.5				0
23	.1	.1	.6	4.4	11	2.2	2.2	.3				0
24	.1	.2	a1.2	a5.5	9	2.2	2.2	.1				0
25	.2	.4	a1.0	a5	9	1.8	2.6	.1				0
26	.2	.4	a.8	a4.5	28	2.2	3.4	0				0
27	.2	.4	a.7	a4.2	16	2.6	3.9	.1				0
28	.2	5.5	.6	a4.0	12	3.0	3.4	.1				0
29	.1	3.9	.5	a3.8	11	3.0	3.0	0				0
30	.1	1.8	.5	a3.6	-	3.0	2.6	0				0
31	.1	-	.5	3.4	-	4.4	-	0				-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	17.7	1.5	0.1	0.57	35
November	16.5	5.5	.1	.55	33
December	19.4	1.2	.3	.63	38
Calendar year 1939	1,487.3	76	0	4.07	2,950
January	299.2	88	.5	9.65	593
February	448.0	69	5.5	15.4	889
March	153.3	11	1.8	4.95	304
April	143.8	16	2.2	4.79	285
May	21.8	2.2	0	.70	43
June	0	0	0	0	0
July	0	0	0	0	0
August	0	0	0	0	0
September	2.3	2.0	0	.08	4.6
Water year 1939-40	1,122.0	88	0	3.07	2,220

Peak discharge.- Jan. 8 (8:30 a.m.) 358 sec.-ft.; Feb. 3 (10 p.m.) 133 sec.-ft.; Feb. 26 (4 a.m.) 38 sec.-ft.; Apr. 1 (9 p.m.) 22 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range in stage and records for San Jacinto River near San Jacinto.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Deep Creek near Hesperia, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 34°20'30", long. 117°13'40", in SE¼ sec. 18, T. 3 N., R. 3 W., half a mile upstream from confluence with West Fork of Mojave River to form Mojave River and 8 miles southeast of Hesperia. Altitude, about 3,050 feet.

Drainage area.- 137 square miles.

Records available.- December 1929 to September 1940.

Average discharge.- 10 years, 1930-40, 65.2 second-feet.

Extremes.- Maximum discharge during year, 2,610 second-feet Jan. 8 (gage height, 4.58 feet), from rating curve extended above 1,000 second-feet on basis of broad-crested weir studies; minimum, 0.4 second-feet Aug. 15, 16.
1929-40: Maximum discharge, 46,600 second-feet Mar. 2, 1938, by slope-area method; minimum, 0.1 second-foot at times during 1932-34 and 1936.

Remarks.- Records good. Storage in Lake Arrowhead above station. Hesperia Water Co.'s canal diverts about 2 miles above station.

Correction.- Mean discharge for water year 1930-31 published in error in Water-Supply Paper 720; correct figure, 17.1 second-feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	8.5	13	11	76	140	278	50	16	3.3	2.7	2.6
2	17	11	12	10	153	121	148	47	10	2.6	2.2	1.6
3	37	8.5	11	11	153	107	148	37	13	2.6	1.0	1.6
4	18	8.5	10	12	218	104	128	35	14	2.6	1.0	1.6
5	15	5	11	27	132	88	118	33	16	2.6	1.9	1.5
6	14	7.5	11	24	100	54	110	31	16	2.5	1.9	1.5
7	18	7.5	11	22	107	50	95	28	11	2.4	1.8	1.5
8	17	9	10	1,040	90	47	85	27	9.5	2.2	1.9	1.4
9	16	6.5	10	287	75	46	73	27	6	1.7	2.1	1.4
10	12	5	8.5	171	69	44	64	24	6	1.6	.9	1.6
11	10	4.8	8.5	121	69	42	53	22	9.5	1.4	1.0	1.5
12	8	6	9	153	64	38	46	20	9.5	1.4	1.2	2.0
13	8.5	7	8.5	107	60	36	42	19	6	1.4	1.2	1.4
14	9.5	7	8	75	60	35	38	18	5	1.8	.6	1.4
15	9	7	8	56	62	34	39	17	4.3	1.8	.6	1.4
16	8	7.5	8	44	38	32	46	17	4.1	.9	.6	1.4
17	9.5	7	8	42	38	32	42	17	4.0	.9	1.1	1.4
18	9	7.5	8	37	37	32	37	17	3.8	.9	1.0	1.5
19	9.5	8	8	33	35	33	35	16	3.7	.9	1.1	1.8
20	12	7.5	8	30	33	34	33	14	3.5	.9	1.0	2.1
21	12	7.5	8.5	29	34	38	30	13	3.5	.9	.9	2.1
22	11	7.5	8	28	35	39	31	13	3.4	1.2	.9	2.2
23	11	7.5	11	28	56	30	32	12	3.4	1.4	1.0	3.0
24	11	7.5	17	38	53	27	30	12	3.4	1.7	.8	3.0
25	12	8	12	35	51	28	30	12	3.3	4.1	.6	2.0
26	10	7.5	9	67	991	29	52	12	3.1	4.1	.5	2.0
27	9.5	8.5	9	69	314	29	78	14	3.1	3.0	.6	1.9
28	9	26	10	67	196	30	80	15	3.1	1.2	.8	1.7
29	9	20	9.5	64	166	29	90	15	3.3	1.9	.8	1.6
30	9	14	10	31	-	27	85	13	3.4	1.8	.8	1.6
31	8.5	-	11	30	-	170	-	16	-	1.5	1.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	387.0	37	8	12.5	768
November	260.3	26	4.8	8.68	516
December	304.5	17	8	9.82	604
Calendar year 1939	13,986.0	508	1.3	38.3	27,740
January	279.9	1,040	10	90.3	5,550
February	3,565	991	33	123	7,070
March	1,625	170	27	52.4	3,220
April	2,196	278	30	73.2	4,360
May	663	50	12	21.4	1,320
June	203.9	16	3.1	6.80	404
July	59.2	4.1	.9	1.91	117
August	35.5	2.7	.5	1.15	70
September	53.3	3.0	1.4	1.78	106
Water year 1939-40	12,151.7	1,040	.5	33.2	24,100

Peak discharge.- Jan. 8 (8:30 a.m.) 2,610 sec.-ft.; Feb. 3 (12 p.m.) 307 sec.-ft.; Feb. 26 (4 a.m.) 1,790 sec.-ft.; Mar. 31 (8:30 p.m.) 600 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940. February 1899 to July 1906 and November 1930 to September 1936, at site 3 miles upstream.

Extremes.- Maximum discharge during year, 704 second-feet Feb. 26 (gage height, 2.97 feet); minimum, 14 second-feet on July 11 and Aug. 20.
1939-40: Maximum discharge, 70,600 second-feet Mar. 2, 1938 (gage height, 16.70 feet) by slope-area method; minimum, 11 second-feet Aug. 12, 1937.

Remarks.- Records good. Storage at Lake Arrowhead and Lake Gregory. Diversions for irrigation from Deep Creek by Hesperia Water Co. and from Mojave River at Victorville.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	43	47	51	59	51	49	40	26	20	20	20
2	34	41	47	51	51	43	51	38	27	18	20	21
3	32	41	47	49	59	40	45	36	26	20	22	22
4	32	41	47	53	57	41	36	36	26	18	21	22
5	31	43	49	51	57	41	38	38	26	18	21	24
6	34	41	49	47	55	40	38	38	24	18	20	26
7	34	41	49	51	53	40	40	34	24	18	20	26
8	36	45	49	178	53	40	41	36	22	18	21	26
9	38	47	49	90	51	40	40	38	22	20	20	26
10	38	45	51	57	53	41	36	32	22	20	18	27
11	36	41	53	49	53	41	36	32	22	18	18	27
12	36	43	47	49	55	45	36	34	20	18	21	26
13	36	43	47	49	53	41	38	29	20	17	18	26
14	36	43	47	49	53	47	40	31	21	17	20	24
15	40	43	47	49	51	49	40	31	20	17	18	22
16	40	43	49	49	55	43	38	34	21	18	17	26
17	40	45	43	49	51	41	36	31	20	20	18	26
18	40	47	43	49	49	45	38	31	20	21	20	26
19	41	47	47	51	51	43	38	32	20	20	20	26
20	40	47	47	51	51	45	38	31	18	20	18	26
21	41	49	47	49	51	45	40	29	20	20	18	24
22	43	49	47	49	55	47	38	31	18	18	20	26
23	43	49	49	53	55	45	36	27	20	18	20	26
24	45	49	51	66	55	47	38	27	18	18	20	26
25	47	49	51	57	55	49	40	26	18	20	21	22
26	47	49	49	55	258	49	40	29	18	18	20	26
27	43	49	49	55	173	47	38	27	20	20	21	26
28	43	51	49	53	74	45	38	27	18	21	22	24
29	45	47	49	53	53	43	43	26	20	22	21	29
30	41	47	51	53	-	40	40	27	21	22	20	29
31	43	-	51	53	-	41	-	26	-	20	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,209	47	31	39.0	2,400
November	1,358	51	41	45.3	2,690
December	1,497	53	43	48.3	2,970
Calendar year 1939	15,082	351	15	41.3	29,920
January	1,768	178	47	57.0	3,510
February	1,899	258	49	65.5	3,770
March	1,355	51	40	43.7	2,690
April	1,183	51	36	39.4	2,350
May	984	40	26	31.7	1,950
June	638	27	18	21.3	1,270
July	591	22	17	19.1	1,170
August	614	22	17	19.8	1,220
September	753	29	20	25.1	1,490
Water year 1939-40	13,849	258	17	37.8	27,480

Peak discharge.- Jan. 8 (4 p.m.) 573 sec.-ft.; Feb. 3 (6 p.m.) 82 sec.-ft.; Feb. 26 (2 p.m.) 704 sec.-ft.

Mojave River at Barstow, Calif.

Location.- Water-stage recorder, lat. 34°54'25", long. 117°01'20", in SW¼SE¼ sec. 31, T. 10 N., R. 1 W., on U. S. Highway 91 at Barstow. Altitude of gage, about 2,090 feet.
Records available.- November 1930 to September 1940.
Extremes.- 1930-40: 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 during year. Storage and many diversions above station.

West Fork of 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, half a mile upstream from confluence with Deep Creek to form Mojave River, 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 1940.

Average discharge.- 10 years, 30.6 second-feet.

Extremes.- Maximum discharge during year, 1,390 second-feet Jan. 8 (gage height, 4.70 feet); no flow for several months.
1930-40: Maximum discharge, 26,100 second-feet Mar. 2, 1938, by slope-area method; no flow for several months of each year.

Remarks.- Records fair. Storage at Lake Gregory above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0			101	44	135	4.0	0.1			
2		0			160	29	71	4.0	.1			
3		0			153	23	51	2.9	.1			
4		0		0.04	116	23	47	1.7	.1			
5		0			74	23	41	1.4	.1			
6		0			d50	20	35	1.5	0			
7		0		1.0	46	20	26	1.2	0			
8		0		344	44	19	24	1.0	0			
9		0		120	44	18	21	.9	0			
10		0		61	36	18	18	.8	0			
11		0	0.03	53	25	17	16	.7	0			
12		0		50	d21	15	14	.7	0			
13		0		40	18	15	9.5	.6	0			
14		0		30	20	15	6	.6	0			
15		0		17	19	14	8	.5	0			
16				13	12	14	9	.4	0			
17				12	12	14	8	.3	0			
18				11	11	14	7.5	.3	0			
19				9	11	13	5.5	.2	0			
20				8.5	11	13	4.6	.2	0			
21				e.5	9.5	11	3.2	.1	0			
22		.02		8	10	10	2.5	.1	0			
23				12	13	11	2.3	.1	0			
24				25	9	9.5	2.5	.1	0			
25				9	16	11	2.5	.1	0			
26				9	148	16	41	.1	0			
27			.04	d8	72	17	43	.1	0			
28				d7	50	15	29	.1	0			
29				d6	54	13	13	.1	0			
30				5	-	d10	4.3	.1	0			
31		-		5	-	86	-	.1	-			

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	.30	-	0	.01	.6
December	1.01	-	-	.033	2.0
Calendar year 1939	3,951.31	114	0	10.8	7,840
January	872.24	344	-	28.1	1,730
February	1,365.5	160	9.5	47.1	2,710
March	590.5	86	9.5	19.0	1,170
April	700.4	135	2.3	23.3	1,390
May	25.0	4.0	.1	.81	50
June	.5	.1	0	.02	1.0
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1939-40	3,555.45	344	0	9.71	7,050

Peak discharge.- Jan. 8 (6:30 a.m.) 1,390 sec.-ft.; Feb. 3 (7 p.m.) 272 sec.-ft.; Feb. 26 (3 a.m.) 215 sec.-ft.; Mar. 31 (5 p.m.) 223 sec.-ft.

d Doubtful or no gage-height record; discharge computed on basis of records for Deep Creek near Hesperia.

Note.- Discharge for periods of extremely low flow, Nov. 16 to Jan. 7, May 24 to June 5, computed on basis of field estimates.

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., 1⅞ 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 1940.

Average discharge.- 16 years (1923-37, 1938-40), 12.6 second-feet.

Extremes.- Maximum discharge during year, 150 second-feet Feb. 25 (gage height, 3.28 feet), from rating curve extended above 40 second-feet on basis of velocity-mean depth relation; minimum, 4.8 second-feet Sept. 24-30.
1923-40: Maximum discharge, 8,300 second-feet Mar. 2, 1938, by slope-area method; minimum, 1.2 second-feet Aug. 22, 1925.

Remarks.- Records good except those above 40 second-feet, which are fair. No diversions above station.

Cooperation.- Results of 13 discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	10	7	7	13	32	27	19	12	9	7.5	7
2	11	10	7	7	11	29	24	18	12	8.5	7.5	7
3	11	10	7	6.5	25	27	24	18	12	8	7	7
4	10	10	7	7	27	24	24	18	12	8	7.5	6.5
5	10	10	7	7.5	23	23	24	17	12	8	7.5	6.5
6	10	10	7	8	21	22	24	17	12	8	7.5	6.5
7	10	10	7	11	20	20	23	16	12	7.5	7.5	6
8	10	11	7	60	20	20	22	15	12	7.5	7.5	6
9	10	11	7	31	20	19	22	14	11	7.5	7.5	6
10	10	10	7	20	18	18	21	14	11	7.5	7.5	6
11	10	10	7	16	18	18	20	14	11	7.5	7	6
12	11	9.5	7	15	17	18	20	14	11	7.5	7	6
13	12	9.5	7	14	16	17	19	13	10	7.5	6.5	6
14	12	9	7	13	17	16	18	13	10	7.5	7	6
15	12	8	7	12	16	15	18	13	10	7.5	7	6
16	11	8	7	11	15	15	18	13	11	7.5	7	5.5
17	11	8.5	7	11	15	15	17	14	11	7.5	7	6
18	11	8	7	10	14	14	17	14	11	7.5	6.5	6
19	11	8	7	10	14	15	16	13	11	7.5	6.5	5.5
20	11	8	7	10	14	14	15	13	11	7.5	6.5	5.5
21	11	8	7	10	13	14	15	12	11	7.5	6.5	5.5
22	10	7.5	7	9.5	13	14	15	12	10	7.5	6.5	5.5
23	10	7	8	10	13	13	14	12	10	7.5	6.5	5.5
24	10	7	7	10	13	13	14	12	10	7.5	6.5	5
25	11	7.5	7	11	39	13	14	12	10	7	6.5	5
26	11	7	7	11	78	13	20	12	10	7	6.5	5
27	11	7	7	12	40	14	20	12	10	7	6.5	5
28	11	8	7	11	31	14	21	12	9.5	7.5	6.5	5
29	10	7	7	11	39	13	20	12	9.5	7.5	7	5
30	10	7	7	11	-	12	20	12	9.5	7	7	5
31	10	-	7	11	-	26	-	12	-	7.5	7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	331	12	10	10.7	657
November	261.5	11	7	8.72	519
December	218	8	7	7.03	432
Calendar year 1939	4,973.5	124	6	13.6	9,860
January	404.5	60	6.5	13.0	802
February	633	78	11	21.8	1,260
March	550	32	12	17.7	1,090
April	586	27	14	19.5	1,160
May	432	19	12	13.9	857
June	324.5	12	9.5	10.8	644
July	235.0	9	7	7.58	466
August	215.5	7.5	6.5	6.95	427
September	174.5	7	5	6.82	346
Water year 1939-40	4,365.5	78	5	11.9	8,660

Peak discharge.- Jan. 8 (4 a.m.) 115 sec.-ft.; Feb. 3 (2:30 p.m.) 82 sec.-ft.; Feb. 25 (10:30 p.m.) 150 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Little Rock Creek near Little Rock, Calif.

Location.- Water-stage recorder, lat. 34°27'40", long. 118°01'15", about a quarter of a mile upstream from Santiago Creek and 5 miles south of Little Rock, Los Angeles County.

Drainage area.- 49.0 square miles.

Records available.- October 1930 to September 1940 (1937-38 and 1938-39 incomplete).

Extremes.- Maximum discharge during year, 555 second-feet Jan. 8; no flow Aug. 6 to Sept. 30.
1930-40: Maximum discharge, 17,000 second-feet (estimated) Mar. 2, 1938; no flow part of each year.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	3.2	2.8	3.4	31	76	39	11	3.0	0.8	0.2	
2	4.2	3.0	2.6	3.4	37	64	32	9.5	2.8	.8	.1	
3	4.2	3.0	2.8	3.2	83	52	33	8.5	3.0	.8	.1	
4	4.2	3.0	2.8	3.4	63	44	30	9	2.8	.8	.1	
5	4.0	3.0	3.8	4.2	28	38	27	9.5	2.8	.7	.1	
6	3.8	2.8	3.2	4.2	23	32	27	9	2.8	.5	0	
7	4.0	2.8	2.8	5	22	32	25	8.5	2.8	.5	0	
8	4.0	3.4	2.8	174	22	28	23	8	3.0	.5	0	
9	4.0	3.2	2.8	52	22	26	22	8	2.8	.4	0	
10	3.8	3.0	2.8	36	22	24	21	8	2.8	.3	0	
11	3.8	2.8	2.8	30	22	23	19	7.5	2.4	.3	0	
12	3.8	2.8	2.8	31	21	21	17	7	2.2	.3	0	
13	3.6	2.8	2.8	25	21	19	16	7	2.2	.3	0	
14	3.6	3.0	2.8	22	21	18	15	6.5	2.0	.2	0	
15	3.4	3.0	2.6	17	19	17	14	6.5	1.9	.2	0	
16	3.4	2.8	2.6	16	17	16	14	6.5	1.8	.2	0	
17	3.2	2.8	2.4	15	15	15	13	6.5	1.4	.2	0	
18	3.2	2.8	2.4	13	16	15	12	7	1.4	.2	0	
19	3.0	2.8	2.4	12	14	15	11	6.5	1.4	.2	0	
20	2.4	2.8	2.4	11	14	15	10	5.5	1.4	.2	0	
21	2.4	2.8	2.4	11	13	14	9.5	5.5	1.3	.2	0	
22	2.6	2.8	2.4	11	13	12	9	5	1.3	.2	0	
23	2.6	2.8	3.0	12	16	12	9	4.8	1.2	.2	0	
24	2.4	2.8	4.0	14	15	13	9	4.5	1.0	.2	0	
25	2.8	3.0	3.2	12	50	13	8.5	4.3	1.0	.2	0	
26	3.2	3.0	3.0	12	183	14	13	4.1	.7	.2	0	
27	3.2	3.0	3.0	13	87	17	12	3.8	.7	.3	0	
28	3.2	3.0	2.8	12	69	17	14	3.6	.7	.3	0	
29	3.2	3.0	3.0	12	81	18	14	3.4	.7	.3	0	
30	3.2	3.0	3.0	12	-	17	12	3.1	.8	.2	0	
31	3.2	-	3.4	12	-	36	-	2.9	-	.2	0	

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	106.0	4.4	2.4	3.42	210
November	88.0	3.4	2.8	2.93	175
December	88.6	4.0	2.4	2.85	176
Calendar year	-	-	-	-	-
January	613.8	174	3.2	19.8	1,220
February	1,060	183	13	36.6	2,100
March	775	78	12	25	1,540
April	530	39	8.5	17.7	1,050
May	200.5	11	2.9	6.47	398
June	56.1	3.0	.8	1.87	111
July	10.9	.8	.2	.35	22
August	.6	.2	0	.02	1.2
September	0	0	0	0	0
Water year 1939-40	3,529.5	183	0	9.64	7,000

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Owens River near Round Valley, Calif.

Location.- Water-stage recorder, lat. 37°26'25", long. 118°33'20", in SE¼ sec. 10, T. 6 S., R. 31 E., just downstream from Sheep Bridge, 700 feet upstream from Rock Creek, and 2 miles north of Round Valley. Altitude of gage, about 4,450 feet (from topographic map).

Drainage area.- About 450 square miles.

Records available.- August 1903 to September 1923, April 1927 to September 1940.

Average discharge.- 33 years, 226 second-feet.

Extremes.- Maximum discharge during year, 570 second-feet June 18 (gage height, 5.38 feet); minimum, 70 second-feet Aug. 16.
1903-23; 1927-40: Maximum discharge recorded, 1,560 second-feet Dec. 11, 1937 (gage height, 4.87 feet); minimum discharge, 5.4 second-feet Feb. 13, 1923.

Remarks.- Flow affected by hydroelectric plant in gorge of Owens River and by diversions from tributaries for irrigation in Long Valley. Flow also diverted from Rock Creek to Owens River at lower end of Long Valley.

Cooperation.- Records of daily discharge furnished by city of Los Angeles.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	143	166	153	176	194	217	357	166	329	360	156	164
2	152	165	159	192	194	222	288	140	336	338	153	166
3	152	165	154	207	200	215	234	136	348	317	153	162
4	152	163	150	192	198	213	205	136	348	309	153	162
5	150	163	156	180	196	210	188	140	346	301	153	161
6	152	163	169	183	196	213	178	151	343	290	151	160
7	160	161	169	171	194	215	178	151	351	287	151	160
8	160	163	172	176	190	220	168	162	348	282	151	160
9	154	165	172	188	190	252	168	178	356	282	151	159
10	150	161	164	183	194	257	162	196	370	274	149	158
11	150	161	172	192	196	241	162	215	373	263	147	158
12	150	159	156	197	196	225	158	234	381	252	149	158
13	150	163	154	183	196	212	158	265	381	246	151	157
14	150	159	159	190	200	212	162	276	411	241	147	156
15	152	156	169	180	198	215	172	281	430	247	139	156
16	152	152	182	173	194	225	185	293	426	228	139	156
17	150	153	174	169	198	294	168	315	430	210	142	155
18	151	150	169	171	194	320	158	322	433	207	142	155
19	151	153	169	171	194	345	162	305	427	207	142	150
20	151	152	169	173	192	396	168	303	408	203	149	155
21	151	150	154	173	194	396	175	305	401	193	149	158
22	151	153	145	173	198	402	172	334	385	186	149	158
23	151	152	152	173	203	402	185	341	379	173	143	160
24	148	150	157	173	200	399	172	356	366	169	149	160
25	145	153	147	179	205	388	182	373	337	169	156	150
26	151	160	152	191	210	328	265	392	321	166	156	150
27	166	153	159	188	210	411	280	392	303	166	153	145
28	169	152	169	188	222	339	185	385	303	163	156	145
29	169	152	171	188	227	248	178	382	309	163	153	150
30	164	152	188	188	-	214	174	363	369	159	153	150
31	166	-	176	188	-	268	-	345	-	156	159	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,763	169	143	154	9,450
November	4,720	166	150	157	9,360
December	5,061	188	145	163	10,040
Calendar year 1939	61,955	272	121	170	122,900
January	5,649	207	169	182	11,200
February	5,773	227	190	199	11,450
March	8,714	411	210	281	17,280
April	5,747	357	158	192	11,400
May	8,333	392	136	269	16,530
June	11,048	433	303	368	21,910
July	7,207	360	156	232	14,290
August	4,659	159	139	150	9,240
September	4,694	166	145	156	9,310
Water year 1939-40	76,368	433	136	209	151,460

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Owens River at Pleasant Valley, near Bishop, Calif.

Location.- Water-stage recorder, lat. 37°25'00", long. 118°31'40", in NW¼ sec. 24, T. 6 S., R. 31 E., 1,000 feet upstream from Owens River canal intake, 2.2 miles downstream from Rock Creek, and 8 miles northwest of Bishop. Altitude of gage, about 4,350 feet (from topographic map).

Drainage area.- 596 square miles.

Records available.- March 1918 to September 1940.

Average discharge.- 22 years, 245 second-feet.

Extremes.- Maximum discharge during year, 780 second-feet June 17 (gage height, 4.69 feet); minimum, 125 second-feet (regulated), Aug. 17.
1918-40: Maximum discharge, 1,580 second-feet June 13, 1921 (gage height, 6.15 feet); maximum gage height, 8.12 feet Dec. 11, 1937; minimum discharge, 53 second-feet (regulated), Aug. 25, 1931.

Remarks.- Flow diverted from tributaries for irrigation and regulated by power plant above station.

Cooperation.- Records of daily discharge furnished by city of Los Angeles.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	190	203	209	206	234	266	414	224	486	596	197	188
2	201	205	209	221	236	366	327	212	496	546	189	189
3	201	205	210	235	245	262	264	202	511	501	190	187
4	201	203	210	235	240	257	244	205	537	486	192	187
5	196	203	205	208	236	257	231	205	519	456	192	186
6	201	203	213	219	236	257	207	214	521	437	189	187
7	212	203	214	215	235	260	211	212	529	434	189	187
8	212	203	214	230	234	269	203	221	547	424	188	187
9	208	207	214	239	234	297	203	238	559	412	187	187
10	203	203	211	224	235	299	191	262	588	389	162	186
11	201	203	216	235	235	288	191	314	605	362	182	181
12	201	203	205	239	235	264	191	333	651	347	186	186
13	199	205	203	217	235	253	191	343	656	327	185	186
14	199	203	206	224	239	255	187	369	690	319	185	187
15	199	203	213	215	235	260	207	381	707	324	183	187
16	196	204	220	210	233	278	216	399	705	305	183	188
17	196	204	217	210	236	344	209	431	713	292	182	190
18	198	204	211	210	235	366	189	406	705	284	182	190
19	198	205	211	206	230	395	193	386	669	266	181	192
20	198	205	211	207	242	457	199	381	622	253	186	194
21	198	205	199	209	242	473	209	406	613	245	183	198
22	198	206	191	214	244	489	213	483	608	235	183	194
23	198	206	199	212	248	366	219	508	586	222	183	194
24	197	206	200	214	246	342	213	531	564	215	183	193
25	196	207	194	222	260	319	226	573	577	215	186	192
26	197	207	199	246	264	373	316	578	512	215	186	190
27	203	208	203	236	253	464	326	576	496	222	186	188
28	204	208	213	229	266	414	233	568	508	220	186	187
29	203	208	220	232	280	279	223	561	528	217	187	187
30	203	209	225	232	-	244	216	531	624	210	187	190
31	202	-	219	232	-	301	-	493	-	207	187	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,209	212	190	200	12,320
November	6,147	209	203	205	12,190
December	6,484	225	191	209	12,860
Calendar year 1939	82,568	327	155	226	163,800
January	6,883	246	206	222	13,650
February	7,023	280	230	242	13,930
March	9,914	489	244	320	19,660
April	6,862	414	187	229	13,610
May	11,746	578	202	379	23,290
June	17,632	713	486	588	34,970
July	10,183	596	207	328	20,200
August	5,767	197	181	186	11,440
September	5,665	198	181	189	11,240
Water year 1939-40	100,515	713	181	275	199,400

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Owens River near Big Pine, Calif.

Location.- Water-stage recorder, lat 37°01'45", long. 118°13'30", in NE¼ sec. 2, T 11 S., R. 34 E., at Charlies Butte, 11 miles southeast of Big Pine. Altitude of gage, about 3,850 feet (from topographic map).

Drainage area.- 1,930 square miles.

Records available.- September 1906 to September 1940.

Average discharge.- 34 years, 341 second-feet.

Extremes.- Maximum discharge during year, 713 second-feet Nov. 9 (gage height, 4.60 feet); minimum, 7 second-feet Aug. 9.
1906-40: Maximum discharge, about 3,220 second-feet Jan. 26, 1914 (gage height, 11.2 feet); no flow Jan. 9-13, 21-26, 1937.

Remarks.- Diversions above station from both main stream and tributaries. Storage in Tinemaha Reservoir, which has a capacity of 16,600 acre-feet. Intake of Los Angeles aqueduct is 4 miles downstream from station.

Cooperation.- Records of daily discharge furnished by city of Los Angeles.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	600	31	633	448	373	198	580	553	319	239	12[illegible]	20
2	100	31	635	443	244	193	188	549	290	237	6[illegible]	186
3	35	27	636	442	233	182	254	544	309	324	2[illegible]	191
4	31	55	637	446	220	177	536	546	294	515	2[illegible]	193
5	29	53	637	456	183	172	528	542	274	514	1[illegible]	179
6	28	335	635	452	57	165	403	547	266	340	1[illegible]	166
7	42	633	635	443	76	159	340	520	268	333	1[illegible]	168
8	38	660	640	450	218	162	335	305	292	330	[illegible]	168
9	50	711	644	450	220	192	340	212	332	327	[illegible]	159
10	45	686	643	456	225	217	331	212	350	325	[illegible]	143
11	300	663	596	465	227	223	320	230	344	365	[illegible]	143
12	632	665	594	461	227	220	314	250	292	625	1[illegible]	146
13	558	331	616	454	225	220	298	261	239	622	1[illegible]	148
14	627	290	635	454	225	213	207	281	236	625	1[illegible]	148
15	624	260	634	435	227	207	193	344	236	625	1[illegible]	151
16	626	265	634	427	220	197	95	377	235	620	1[illegible]	146
17	627	23	634	420	176	159	62	404	235	414	1[illegible]	154
18	632	20	635	418	157	133	58	421	234	218	1[illegible]	162
19	619	20	643	416	157	143	40	445	232	199	1[illegible]	160
20	619	28	641	416	157	159	38	455	232	190	1[illegible]	162
21	606	28	634	412	153	177	36	446	233	184	1[illegible]	162
22	70	28	634	412	159	188	33	455	234	175	1[illegible]	162
23	18	28	629	412	166	193	32	463	234	158	1[illegible]	168
24	20	31	614	415	166	196	42	497	235	151	1[illegible]	174
25	21	31	587	418	170	194	42	636	235	156	1[illegible]	176
26	22	30	568	420	196	191	212	541	233	151	1[illegible]	176
27	24	29	533	426	205	236	525	521	234	149	1[illegible]	177
28	26	151	463	436	199	367	529	529	236	138	1[illegible]	256
29	28	624	440	436	194	416	544	524	237	132	1[illegible]	480
30	29	629	442	432	-	473	547	507	239	132	1[illegible]	546
31	31	-	446	437	-	432	-	425	-	137	1[illegible]	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	7,757	632	18	250	15,390
November	7,416	711	20	247	14,710
December	18,627	644	440	601	36,950
Calendar year 1939	133,100	711	15	365	264,000
January	13,508	465	412	436	26,790
February	5,655	373	57	195	11,220
March	6,754	473	133	218	13,400
April	7,602	547	32	260	15,480
May	13,444	553	212	434	26,670
June	7,859	350	232	262	15,590
July	9,650	625	132	311	19,140
August	540	125	7	17.4	1,070
September	5,572	546	20	186	11,050
Water year 1939-40	104,584	711	7	286	207,500

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. al Survey
U.S. GOVERNMENT PRINTING OFFICE 1936—O-162565

Rock Creek at Sherwin Hill, near Bishop, Calif.

Location.- Water-stage recorder, lat. 37°28'45", long. 118°36'05", in SW¼ sec. 29, T. 5 S., R. 31 E., at Sherwin Hill, 3 miles upstream from Pine Creek and 14 miles northwest of Bishop. Altitude of gage, about 4,900 feet (from topographic map).

Drainage area.- 51.7 square miles.

Records available.- August 1922 to September 1940.

Average discharge.- 18 years, 23.0 second-feet.

Extremes.- Maximum discharge during year, 98 second-feet June 18 (gage height, 2.41 feet); minimum, 2.6 second-feet Jan. 13.
1922-40: Maximum discharge recorded, 229 second-feet June 27, 1938 (gage height, 4.12 feet); minimum discharge, 1.6 second-feet Dec. 1, 1936.

Remarks.- Flow diverted at elevation of about 7,300 feet for irrigation in Little Round Valley or for discharge into Owens River at lower end of Long Valley.

Cooperation.- Records of daily discharge furnished by city of Los Angeles.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	12	14	13	16	16	20	30	58	69	23	14
2	15	12	14	15	16	17	19	31	59	80	23	14
3	15	13	14	15	16	16	18	29	58	74	22	13
4	15	15	14	15	15	16	18	27	56	71	21	13
5	15	15	14	11	17	16	17	27	56	68	21	13
6	15	15	14	13	16	16	17	26	52	65	20	13
7	15	14	14	14	14	16	17	27	52	63	20	13
8	14	15	14	16	14	16	17	30	56	63	19	13
9	14	15	14	17	15	15	17	35	62	59	19	12
10	14	15	14	17	16	15	17	41	65	50	19	12
11	13	15	14	19	15	13	18	47	68	46	20	11
12	13	15	11	18	14	11	19	54	74	41	20	11
13	13	15	13	6	14	15	21	57	80	37	20	11
14	12	14	13	10	14	15	24	58	85	35	21	11
15	12	14	14	9	13	15	25	60	86	33	21	11
16	12	14	14	8	13	15	23	60	86	25	20	11
17	12	14	14	13	16	15	21	59	69	25	20	11
18	12	14	14	13	15	15	23	54	95	25	19	11
19	12	14	13	11	11	15	25	49	63	24	19	11
20	11	14	13	11	15	15	26	47	83	22	18	11
21	11	14	10	11	16	16	27	49	74	21	18	11
22	11	14	8.5	12	16	16	30	60	73	21	17	11
23	11	14	13	13	16	16	31	68	72	20	16	11
24	11	14	10	13	15	16	33	71	68	20	16	11
25	11	14	7.5	15	16	17	32	77	67	19	16	11
26	11	14	15	18	16	17	30	75	66	20	15	11
27	11	13	11	17	16	20	29	74	71	20	15	10
28	13	13	15	16	16	18	28	71	71	20	15	10
29	12	13	15	17	16	18	28	70	77	20	14	10
30	12	13	14	16	-	18	28	63	87	20	14	10
31	12	-	14	16	-	19	-	60	-	20	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	394	15	11	12.7	781
November	420	15	12	14.0	833
December	406.0	15	7.5	13.1	805
Calendar year 1939	7,658.0	45	7.5	21.0	15,190
January	428	19	6	13.8	849
February	438	17	11	15.1	869
March	494	20	11	15.9	980
April	698	33	17	23.3	1,380
May	1,586	77	26	51.2	3,150
June	2,131	95	52	71.0	4,230
July	1,216	89	19	39.2	2,410
August	575	23	14	18.5	1,140
September	346	14	10	11.5	686
Water year 1939-40	9,132.0	95	6	25.0	18,110

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Rock Creek near Round Valley, Calif.

Location.- Water-stage recorder, lat. 37°26'25", long. 118°34'15", in SE¼ sec. 9, T. 6 S., R. 31 E., 0.1 mile upstream from Pine Creek and 2 miles northwest of Round Valley. Altitude of gage, about 4,450 feet (from topographic map).

Drainage.- About 96 square miles.

Records available.- August 1903 to September 1923, April 1930 to September 1940.

Average discharge.- 30 years, 37.9 second-feet.

Extremes.- Maximum discharge during year, 94 second-feet June 18 (gage height, 2.31 feet); minimum, 11 second-feet Sept. 27.
1903-23; 1930-40: Maximum discharge recorded, 360 second-feet Jan. 25, 1914 (gage height, 5.0 feet, at former gage); minimum discharge, 7.5 second-feet Sept. 16, 1933.

Remarks.- Water diverted above station for irrigation; flow also diverted at times from Rock Creek to Owens River at elevation of about 7,300 feet.

Cooperation.- Records of daily discharge furnished by city of Los Angeles.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	22	25	24	25	27	25	30	56	88	20	15
2	18	22	25	25	26	27	24	28	58	78	20	15
3	20	22	25	26	29	26	23	27	56	74	20	15
4	20	24	22	29	26	26	19	29	64	70	18	14
5	20	24	22	24	26	26	18	29	63	67	18	14
6	20	24	24	26	26	26	18	29	60	64	18	14
7	20	24	24	25	23	26	18	30	57	60	19	14
8	22	24	24	32	23	26	19	33	51	57	18	14
9	22	24	24	32	25	26	21	38	55	54	17	14
10	22	24	24	28	26	25	21	40	60	50	17	14
11	22	24	24	30	25	25	21	46	64	45	15	14
12	22	24	20	28	24	23	23	53	80	43	16	14
13	22	24	20	20	24	26	24	50	75	42	16	14
14	21	24	21	23	26	26	18	53	86	41	16	14
15	20	22	27	22	24	26	22	50	98	43	16	15
16	20	24	27	22	25	25	20	51	86	40	16	15
17	20	25	25	24	29	25	19	54	87	39	18	15
18	18	25	24	24	27	24	21	54	92	37	20	15
19	18	25	24	23	24	24	21	57	80	27	18	15
20	18	25	23	24	27	15	23	48	72	24	17	15
21	18	25	22	25	28	15	24	48	65	24	15	15
22	18	26	21	24	26	16	26	56	65	23	16	15
23	18	25	24	25	26	18	27	63	67	22	15	15
24	18	26	23	25	26	21	26	65	63	23	16	16
25	18	26	21	25	27	24	26	71	57	26	16	15
26	18	26	24	26	27	24	29	71	59	29	16	14
27	19	26	23	26	27	21	28	68	62	31	17	12
28	22	22	25	25	27	24	28	67	65	31	15	13
29	22	21	25	26	27	17	27	67	76	29	16	14
30	22	21	25	25	-	18	28	64	86	24	16	14
31	22	-	25	25	-	24	-	59	-	22	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	618	22	18	19.9	1,230
November	720	26	21	24.0	1,430
December	732	27	20	23.6	1,450
Calendar year 1939	8,954	41	14	24.5	17,760
January	788	32	20	25.4	1,560
February	751	29	23	25.9	1,490
March	722	27	15	23.3	1,430
April	687	29	18	22.9	1,360
May	1,528	71	27	49.3	3,030
June	2,055	92	51	68.5	4,080
July	1,327	88	22	42.8	2,630
August	527	20	15	17.0	1,050
September	432	16	12	14.4	857
Water year 1939-40	10,887	92	12	29.7	21,600

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Pine Creek at division box, near Bishop, Calif.

Location.- Water-stage recorder and Parshall flume, lat. 37°24'55", long. 118°37'10", in NW¼ sec. 19, T. 6 S., R. 31 E., a quarter of a mile upstream from division box and from forks of creek, 4 miles west of Round Valley, and 13 miles northwest of Bishop. Altitude of gage, about 5,250 feet (from topographic map).

Drainage area.- 37.9 square miles.

Records available.- October 1921 to September 1940.

Average discharge.- 19 years, 40.7 second-feet.

Extremes.- Maximum discharge during year, 268 second-feet June 17 (gage height, 4.51 feet); minimum, 16 second-feet Jan. 8.
1922-40: Maximum discharge, 350 second-feet July 21, 1936 (gage height, 3.58 feet); minimum, 10 second-feet Jan. 8, 1930, Jan. 21, 1935.

Remarks.- No diversion.

Cooperation.- Records of daily discharge furnished by city of Los Angeles.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	23	20	19	21	22	27	37	143	154	47	27
2	26	23	20	20	21	22	26	42	146	146	46	27
3	26	22	20	19	21	22	25	45	148	135	44	26
4	26	22	30	20	21	22	25	44	156	129	42	26
5	27	22	20	19	21	22	25	42	146	124	40	25
6	28	22	20	19	21	23	25	43	157	122	40	24
7	28	22	20	20	21	23	25	46	166	121	40	24
8	28	22	20	20	21	23	25	56	184	114	40	24
9	28	22	20	20	21	23	25	70	181	104	39	24
10	27	22	20	20	21	23	25	86	193	97	39	23
11	27	22	20	21	21	22	27	102	206	88	38	23
12	27	22	20	20	21	22	28	103	228	84	38	23
13	27	21	20	19	21	22	31	102	240	83	38	23
14	26	21	20	19	21	21	33	113	234	80	38	23
15	26	21	20	19	21	21	33	124	228	77	37	22
16	26	21	20	20	20	21	32	129	231	75	37	22
17	26	21	20	21	21	22	31	119	235	68	36	22
18	26	21	20	21	20	22	31	89	207	65	36	22
19	25	21	20	20	20	22	33	87	187	61	35	22
20	25	21	20	20	20	22	34	104	166	59	34	21
21	24	21	19	20	20	23	36	138	177	55	33	21
22	24	21	19	20	21	23	40	160	174	52	33	21
23	24	21	19	21	21	23	42	162	168	53	31	21
24	24	21	19	21	21	24	43	158	156	55	31	21
25	24	21	19	21	21	24	42	167	154	58	31	21
26	24	21	19	21	21	25	41	146	143	56	30	21
27	24	21	19	21	22	27	37	142	140	54	30	21
28	24	21	19	21	22	26	35	144	158	52	29	21
29	24	20	19	21	22	26	34	138	166	50	28	21
30	23	20	19	21	-	26	33	126	191	49	28	21
31	23	-	19	21	-	27	-	122	-	47	27	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	793	28	23	25.6	1,570
November	642	23	20	21.4	1,270
December	609	20	19	19.6	1,210
Calendar year 1939	13,066	140	19	35.8	25,920
January	625	21	19	20.2	1,240
February	607	22	20	20.9	1,200
March	716	27	21	23.1	1,420
April	949	43	25	31.6	1,880
May	3,186	167	37	103	6,320
June	5,399	240	140	180	10,710
July	2,567	154	47	82.8	5,090
August	1,115	47	27	36.0	2,210
September	683	27	21	22.8	1,350
Water year 1939-40	17,891	240	19	48.9	35,470

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Pine Creek near Round Valley, Calif.

Location.- Water-stage recorder, lat. 37°26'10", long. 118°34'10", in SE¼ sec. 9, T. 6 S., R. 31 E., 600 feet upstream from confluence with Rock Creek and 2 miles northwest of town of Round Valley. Altitude of gage, about 4,450 feet (from topographic map).

Drainage area.- About 58 square miles.

Records available.- August 1903 to September 1923, April 1930 to September 1940.

Average discharge.- 30 years, 22.5 second-feet.

Extremes.- Maximum discharge during year, 223 second-feet June 13 (gage height, 2.43 feet); minimum, 1.2 second-feet Apr. 18.
1903-23; 1930-40: Maximum discharge, 442 second-feet June 27, 1938 (gage height, 4.00 feet); minimum, 0.1 second-foot July 30, Aug. 13, 1920, May 23, 1930, many days in 1931, Aug. 25, 1934.

Remarks.- Water diverted above station for irrigation.

Cooperation.- Records of daily discharge furnished by city of Los Angeles.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	3.8	4.4	3.8	8	4.2	5	4.4	92	107	5.5	5.5
2	3.5	3.6	4.4	4.2	8.5	3.8	3.3	4.2	96	96	3.3	4.9
3	2.5	4.0	4.4	4.2	12	5	3.2	5	100	88	5.5	4.6
4	2.4	4.0	4.4	8.5	11	5.5	2.8	4.7	110	85	7.5	3.8
5	2.1	3.8	4.4	4.6	7.5	6.5	2.7	4.7	108	72	8	3.7
6	2.7	3.6	4.4	4.4	8	8	2.4	7.5	110	61	5.5	2.2
7	3.5	3.4	4.2	4.7	8	8	2.4	4.7	118	59	8	2.1
8	3.3	3.2	4.2	12	8	9	2.7	4.7	137	57	6.5	2.2
9	3.3	3.7	4.2	10	8	7	4.6	7	134	52	5.5	2.8
10	3.3	4.2	4.2	7	8.5	5	5.5	18	142	47	2.8	2.1
11	3.2	4.6	4.2	9	8.5	5.5	4.4	29	160	39	3.8	2.5
12	3.2	4.7	4.0	5.5	8.5	5.5	2.2	41	188	34	4.4	2.8
13	3.0	4.6	3.8	4.0	9	5.5	1.8	52	192	34	4.0	3.7
14	3.0	4.2	3.8	3.7	9	5.5	1.8	63	187	32	5.5	4.7
15	3.3	4.2	4.0	3.7	7.5	4.9	2.1	74	175	32	7	5.5
16	3.3	4.2	4.2	3.8	5.5	5	1.5	81	173	31	4.2	5.5
17	3.5	4.2	4.0	5	4.9	5	1.4	74	173	28	2.5	6
18	3.7	4.2	3.8	5.5	4.6	4.9	1.4	50	157	26	2.7	6
19	3.8	4.2	3.8	5.5	4.2	4.2	2.8	42	136	21	5.5	6
20	4.0	4.2	3.7	5.5	4.2	3.8	3.0	50	103	15	6	6
21	4.0	4.2	3.3	5.5	4.4	3.8	2.8	69	108	13	3.7	6.5
22	4.4	4.4	3.3	5.5	4.6	3.8	3.3	79	122	14	3.7	6.5
23	4.4	4.4	3.7	6	5.5	3.7	3.3	92	108	13	4.2	5.5
24	3.8	4.4	3.7	5.5	4.4	3.7	3.7	99	101	10	3.8	4.6
25	2.8	4.6	3.0	8	7	3.8	4.4	103	103	9.5	4.7	4.6
26	3.0	4.6	3.7	11	6.5	3.7	6.5	103	92	8.5	4.4	4.9
27	3.2	4.6	3.7	6.5	4.2	5.5	5	92	92	10	2.7	6
28	3.2	4.6	4.0	6.5	4.2	4.2	5.5	87	105	8.5	5	6.5
29	3.0	4.6	3.8	7	5.5	4.9	4.2	85	112	9	5.5	6
30	3.2	4.4	3.8	7	-	4.7	3.8	82	138	11	5.5	4.2
31	3.7	-	3.8	7	-	4.9	-	87	-	8.5	4.7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	103.9	4.6	2.1	3.35	206
November	125.6	4.7	3.2	4.19	249
December	122.3	4.4	3.0	3.95	243
Calendar year 1939	3,769.2	88	1.4	10.3	7,460
January	190.1	12	3.7	6.13	377
February	199.7	12	4.2	6.89	396
March	158.5	9	3.7	5.11	314
April	99.5	6.5	1.4	3.32	197
May	1,598.9	103	4.2	51.6	3,170
June	3,872	192	92	129	7,680
July	1,131.0	107	8.5	36.5	2,240
August	151.6	8	2.5	4.89	301
September	137.9	6.5	2.1	4.60	274
Water year 1939-40	7,891.0	192	1.4	21.6	15,650

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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., about a mile south of Mono Lake post office. Datum of gage is 6,390.66 feet above mean sea level (general adjustment of 1929).

Records available.- June 1912 to September 1940; those prior to September 1934 are contained in Water-Supply Paper 765.

Extremes.- 1912-40: Maximum stage, 37.4 feet July 18, 1919; minimum, 23.8 feet Nov. 18, 1935.

Gage height, in feet, water year October 1939 to September 1940

Date	U. S. Forest Service	City of Los Angeles	Date	U. S. Forest Service	City of Los Angeles
Oct. 3	-	27.0	Apr. 27	-	27.1
9	-	26.8	30	-	27.1
16	-	26.8	May 8	-	27.1
26	-	26.7	13	-	27.1
30	-	26.7	15	27.2	-
Nov. 6	-	26.7	22	-	27.1
14	-	26.7	30	-	27.2
20	-	26.7	June 3	-	27.1
29	-	26.7	10	-	27.1
Dec. 4	-	26.6	16	27.2	-
14	-	26.6	19	-	27.2
18	-	26.6	24	-	27.2
27	-	26.6	25	*27.3	-
Jan. 2	-	26.6	July 1	-	27.2
11	-	26.8	10	-	27.2
16	-	26.7	15	27.2	-
22	-	26.8	16	-	27.1
29	-	26.8	25	-	27.0
Feb. 5	-	26.8	29	-	27.0
13	-	26.9	Aug. 7	-	26.9
19	-	26.9	12	-	26.8
29	-	27.0	16	26.8	-
Mar. 4	-	27.0	22	-	26.8
12	-	27.0	26	-	26.7
19	-	27.0	Sept. 4	-	26.5
28	-	27.1	6	26.4	-
Apr. 1	-	27.1	13	-	26.4
10	-	27.1	19	-	26.2
12	27.2	-	23	-	26.2
17	-	27.1			

*U. S. Geological Survey reading.

WALKER LAKE BASIN

Walker Lake near Hawthorne, Nev.

Location.- Bench mark at United States naval ammunition depot, lat. 38°35', long. 118°42', in NE¼NE¼ sec. 2, T. 8 N., R. 29 E., 6 miles northwest of Hawthorne. Bench mark is 4,053.41 feet above mean sea level (general adjustment of 1912).

Records available.- August 1928 to September 1940. Occasional readings prior to August 1928.

Extremes.- 1928-40: Maximum elevation observed, 4,051.8 feet Mar. 13, 1928 (Indian Service); minimum observed, 4,019.2 feet Jan. 7, 1938.
Lake elevation, Sept. 27, 1908, 4,078.0 feet, observed by U. S. Coast and Geodetic Survey (general adjustment of 1912).

Remarks.- Elevations determined by spirit leveling.

Cooperation.- Records furnished by U. S. Navy Department.

Elevations, in feet, above mean sea level, water year October 1939 to September 1940

Oct. 6	4,022.5	Mar. 8	4,021.8
Nov. 7	4,022.4	May 8	4,021.1
Dec. 15	4,021.9	June 4	4,020.9
Jan. 17	4,021.9	Aug. 5	4,020.2
Feb. 15	4,021.8	Sept. 6	4,019.9

Bridgeport Reservoir near Bridgeport, Calif.

Location.- Float gage or reference point, lat. 38°19'30", long. 119°12'50", at Bridgeport Dam on East Walker River, in SE¼ sec. 34, T. 6 N., R. 25 E., 4½ miles north of Bridgeport. Datum of gage is at mean sea level.

Drainage area.- 362 square miles.

Records available.- October 1931 to September 1940, in reports of Geological Survey. March 1926 to September 1931, in files of Walker River Irrigation District.

Extremes.- Maximum contents during year, 39,980 acre-feet July 4 (elevation, 6,459.15 feet); minimum, 5,880 acre-feet Oct. 2, 3 (elevation, 6,439.55 feet).
1926-39: Maximum contents, 44,580 acre-feet June 12, 1938 (elevation, 6,460.7 feet); no storage 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) above mean sea level. No dead storage. Water is used for irrigation in Walker River irrigation district.

Cooperation.- Elevations and capacity table furnished by Walker River Irrigation District. Gage read about 8 a.m. daily; contents are as of that time.

Contents, in acre-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,920	8,080	10,910	13,720	18,090	23,620	30,610	28,930	32,330	39,400	32,840	22,580
2	5,880	8,180	11,030	13,850	18,350	23,940	30,730	29,040	32,590	39,830	32,590	22,280
3	5,880	8,280	11,080	13,990	18,520	24,340	30,730	29,040	32,840	39,830	32,080	21,990
4	5,920	8,390	11,140	14,140	18,780	24,660	30,850	29,040	32,960	39,980	31,820	21,600
5	5,920	8,490	11,260	14,290	19,060	24,990	30,850	28,930	33,220	39,830	31,700	21,500
6	5,920	8,590	11,320	14,360	19,330	25,320	30,850	28,820	33,350	39,680	31,330	21,300
7	5,960	8,690	11,440	14,660	19,610	25,540	30,850	28,700	33,730	39,680	30,970	21,110
8	6,000	8,790	11,560	14,960	19,700	25,760	30,850	28,580	33,730	39,540	30,730	21,010
9	6,040	8,900	11,700	15,170	19,980	26,090	30,850	28,580	33,980	39,400	30,360	20,820
10	6,120	9,000	11,820	15,400	20,250	26,310	30,850	28,240	34,110	39,120	30,240	20,720
11	6,160	9,100	11,940	15,550	20,530	26,530	30,850	28,010	34,510	38,840	29,880	20,620
12	6,240	9,210	12,060	15,630	20,820	26,750	30,850	28,010	34,770	38,430	29,640	20,440
13	6,330	9,320	12,200	15,710	21,010	26,980	30,850	28,010	35,040	38,150	29,400	20,340
14	6,380	9,430	12,260	15,950	21,210	27,200	30,730	28,010	35,570	37,730	29,040	20,250
15	6,500	9,540	12,320	16,110	21,300	27,440	30,610	27,780	36,100	37,590	28,700	20,070
16	6,640	9,600	12,380	16,180	21,400	27,660	30,480	27,900	36,500	37,590	28,360	19,980
17	6,720	9,650	12,440	16,260	21,600	27,780	30,480	28,010	37,180	36,900	28,010	19,880
18	6,820	9,700	12,500	16,340	21,800	28,010	30,360	28,240	37,590	36,760	27,550	19,790
19	6,900	9,820	12,560	16,420	21,990	28,120	30,240	28,580	38,150	36,630	27,090	19,700
20	6,980	9,980	12,700	16,500	22,090	28,240	30,120	28,700	38,430	36,630	26,860	19,610
21	7,030	10,040	12,770	16,580	22,190	28,360	30,000	28,930	38,980	36,230	26,310	19,520
22	7,120	10,140	12,840	16,660	22,380	28,470	29,880	29,160	38,980	35,830	25,980	19,330
23	7,220	10,260	12,900	16,740	22,480	28,700	29,760	29,400	39,120	35,700	25,540	19,150
24	7,310	10,320	12,970	16,820	22,580	28,820	29,640	29,640	39,540	35,570	25,100	19,060
25	7,410	10,380	13,040	16,900	22,680	28,930	29,400	29,880	39,400	35,300	24,770	18,960
26	7,460	10,500	13,100	17,060	22,790	29,040	29,160	30,240	39,400	35,040	24,340	18,870
27	7,500	10,550	13,170	17,230	22,900	29,160	28,930	30,610	39,120	34,770	24,040	18,780
28	7,550	10,670	13,240	17,400	23,100	29,400	28,580	30,970	39,120	34,380	23,830	18,700
29	7,700	10,730	13,310	17,580	23,300	29,880	28,700	31,330	39,120	34,110	23,520	18,610
30	7,840	10,790	13,450	17,750	-	30,120	28,700	31,700	39,260	33,860	23,200	18,520
31	7,940	-	13,580	17,920	-	30,480	-	32,080	-	33,350	22,790	-

Monthly elevation and contents, water year October 1939 to September 1940

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	6,439.6	5,920	+2,160
Nov. 1	6,442.0	8,080	+2,830
Dec. 1	6,444.6	10,910	+2,810
Calendar year 1939	-	-	-17,370
Jan. 1	6,446.8	13,720	+4,370
Feb. 1	6,449.6	18,090	+5,530
Mar. 1	6,452.5	23,620	+6,990
Apr. 1	6,455.6	30,610	-1,680
May 1	6,454.9	28,930	+3,400
June 1	6,456.3	32,330	+7,070
July 1	6,458.5	39,400	-6,560
Aug. 1	6,456.5	32,840	-10,260
Sept. 1	6,452.0	22,580	-4,140
Oct. 1	6,449.8	18,440	-4,140
Water year 1939-40	-	-	+12,520

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 1940. July 1911 to September 1914, at site 1½ miles upstream.

Average discharge.- 17 years (1922-24, 1925-40), 118 second-feet.

Extremes (regulated).- Maximum discharge observed during year, 289 second-feet June 27-30 (gage height, 1.73 feet); minimum daily, 5 second-feet Oct. 27 to Mar. 21, except Jan. 4, 6, and 7.

1921-40: Maximum discharge observed, 1,220 second-feet June 12, 1938 (gage height, 6.74 feet, datum then in use); minimum observed, 2 second-feet many days when reservoir gates were closed.

Remarks.- Records good. Flow affected by irrigation of meadow and pasture lands near Bridgeport; flow regulated by Bridgeport Reservoir (see p. 92).

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.1	5	0.4	29	1.0	121
.2	11	.6	55	1.3	183
.3	19	.8	86	1.6	255

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	5	5	5	5	5	55	100	252	278	240	188
2	36	5	5	5	5	5	55	96	252	252	230	188
3	37	5	5	5	5	5	55	100	252	248	225	188
4	37	5	5	6	5	5	55	116	252	250	225	170
5	37	5	5	5	5	5	55	125	252	250	225	157
6	37	5	5	6	5	5	55	134	252	242	218	140
7	37	5	5	6	5	5	58	148	252	240	216	130
8	37	5	5	5	5	5	64	157	252	240	216	129
9	34	5	5	5	5	5	80	179	252	240	208	129
10	25	5	5	5	5	5	91	208	242	248	206	116
11	13	5	5	5	5	5	108	228	238	263	206	100
12	13	5	5	5	5	5	110	225	255	271	206	96
13	13	5	5	5	5	5	134	225	263	271	206	105
14	13	5	5	5	5	5	153	248	263	271	206	110
15	13	5	5	5	5	5	153	260	263	268	206	110
16	13	5	5	5	5	5	153	260	263	265	206	110
17	10	5	5	5	5	5	148	260	263	248	206	110
18	9	5	5	5	5	5	146	260	263	235	216	110
19	9	5	5	5	5	5	144	260	263	220	220	110
20	9	5	5	5	5	5	153	260	255	211	238	110
21	8	5	5	5	5	5	165	260	252	211	245	110
22	7	5	5	5	5	8	159	260	271	211	245	110
23	6	5	5	5	5	36	161	273	278	194	245	110
24	6	5	5	5	5	54	159	278	278	188	242	105
25	6	5	5	5	5	55	157	278	278	188	240	103
26	6	5	5	5	5	55	148	265	286	188	240	94
27	5	5	5	5	5	55	134	252	289	192	223	89
28	5	5	5	5	5	55	129	255	289	197	216	89
29	5	5	5	5	5	55	116	252	289	197	216	89
30	5	5	5	5	-	55	107	252	289	206	216	89
31	5	-	5	5	-	55	-	252	-	225	197	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	548	52	5	17.7	1,090
November	150	5	5	5.0	298
December	155	5	5	5.0	307
Calendar year 1939	36,715	297	5	101	72,820
January	158	6	5	5.1	313
February	145	5	5	5.0	288
March	583	55	5	19.0	1,170
April	3,460	55	165	115	6,860
May	6,726	278	96	217	13,340
June	7,898	289	238	263	15,670
July	7,208	278	188	233	14,300
August	6,850	245	197	221	13,590
September	3,594	188	89	120	7,130
Water year 1939-40	37,480	289	5	102	74,360

Note.- Discharge for periods when recorder was not operating, May 29 to July 16, Aug. 3 to Sept. 30, computed from daily gage readings and record of gate changes at Bridgeport Reservoir.

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9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

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., 200 feet upstream from bridge on U. S. Highway 395, 75 feet downstream from East Fork, and 13 miles southeast of Coleville. Prior to Oct. 1, 1939, water-stage recorder at site 125 feet downstream with gage datum 1 foot higher.

Drainage area.- 182 square miles.

Records available.- April 1938 to September 1940. October 1902 to July 1908 at site 9½ miles downstream; March 1909 to August 1910, June 1915 to March 1938 at site 10 miles downstream, published as West Walker River near Coleville, Calif.

Extremes.- Maximum discharge during year, 1,690 second-feet May 25 (gage height, 4.66 feet); minimum, 10 second-feet Dec. 21.
1938-40: 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, that of Dec. 21, 1939.
Maximum discharge known, 5,800 second-feet Dec. 11, 1937, by slope-area method.

Remarks.- Records good except those for period of ice effect, which are fair. Station is above all diversions except a few small ranch ditches. Flow very slightly regulated by Poor Lake Reservoir (capacity unknown), 7 miles upstream.

Cooperation.- Two discharge measurements furnished by Walker River Irrigation District.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	64	32	33	b46	68	216	451	1,100	592	126	53
2	83	61	33	60	b48	66	187	633	1,050	568	119	52
3	98	58	28	52	51	61	171	682	1,010	568	111	53
4	94	55	28	58	46	61	162	613	1,080	534	108	53
5	101	52	32	41	52	61	152	520	1,090	463	111	56
6	99	48	37	b38	48	61	156	525	1,110	439	110	58
7	98	50	33	b36	50	65	165	582	1,170	423	101	53
8	88	51	34	b40	52	86	169	693	1,140	392	96	50
9	86	48	33	b44	48	93	182	824	1,050	367	91	50
10	85	45	35	b40	46	80	208	988	1,060	335	86	48
11	88	45	39	b52	46	78	249	1,130	1,210	318	80	46
12	91	45	32	b47	44	70	305	1,250	1,300	298	88	46
13	93	42	35	b40	47	70	385	1,320	1,360	270	88	46
14	91	41	34	b34	51	72	468	1,210	1,400	267	82	46
15	88	39	37	b30	50	76	480	1,120	1,290	258	78	47
16	82	38	34	b28	57	88	377	1,130	1,210	267	76	48
17	74	38	33	b32	52	96	331	1,210	1,350	243	72	50
18	70	38	34	b34	b48	99	370	1,130	1,190	224	72	48
19	66	38	32	b38	b46	104	447	1,050	1,020	221	72	50
20	62	37	32	b42	b48	115	489	1,120	960	204	70	50
21	61	37	22	b40	57	122	530	1,250	1,050	187	70	48
22	60	36	25	b42	50	136	568	1,320	918	175	70	46
23	57	33	33	b36	51	156	618	1,350	774	167	70	48
24	56	32	29	b34	51	178	602	1,520	756	162	71	45
25	53	37	25	61	50	238	530	1,420	733	169	74	44
26	56	39	34	80	51	308	439	1,130	649	160	71	41
27	70	33	31	64	61	392	377	1,140	666	154	64	39
28	72	34	34	64	82	279	345	1,290	698	156	61	41
29	74	26	36	b58	71	246	338	1,190	682	152	58	44
30	71	35	35	b50	-	261	356	1,030	666	140	57	44
31	66	-	33	b48	-	252	-	946	-	130	51	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,390	101	53	77.1	4,740
November	1,275	64	26	42.5	2,530
December	1,004	39	22	32.4	1,990
Calendar year 1939	57,213	785	22	157	113,500
January	1,396	80	28	45.0	2,770
February	1,500	82	44	51.7	2,980
March	4,138	392	61	133	8,210
April	10,372	618	152	346	20,570
May	31,767	1,520	451	1,025	63,010
June	30,742	1,400	649	1,025	60,980
July	9,003	592	130	290	17,860
August	2,554	126	51	82.4	5,070
September	1,445	58	39	48.2	2,870
Water year 1939-40	97,586	1,520	22	267	193,600

b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Extremes.- Maximum contents observed during year, 59,440 acre-feet June 30 to July 5 (elevation, 5,005.0 feet); minimum observed, 8,750 acre-feet Oct. 2, 3, 6 (elevation, 4,977.9 feet).

1931-40: Maximum contents observed, that of June 30 to July 5, 1940; minimum observed, 505 acre-feet, from revised capacity rating, 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 elevation 5,005 feet (3 feet below top of levee) above mean sea level. 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 and base data for capacity table furnished by Walker River Irrigation District.

Contents, in acre-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	-	-	33,330	52,140	59,440	41,980	-
2	8,750	-	-	-	-	-	32,690	33,690	53,130	59,440	40,970	21,700
3	8,750	-	-	-	-	-	-	-	53,910	59,440	40,160	-
4	-	-	-	-	-	-	31,980	-	54,570	59,440	-	21,150
5	-	-	13,350	-	-	27,750	-	34,050	55,690	59,440	38,780	20,650
6	8,750	-	-	-	22,680	-	-	34,320	56,480	59,330	38,100	20,220
7	-	11,000	-	-	-	-	-	34,320	57,160	59,330	37,420	19,800
8	-	-	-	-	-	-	-	34,320	57,610	56,930	36,750	19,130
9	-	-	-	17,630	-	-	32,690	34,510	-	-	36,080	-
10	9,310	-	-	-	-	-	32,600	34,780	57,390	57,160	35,430	18,800
11	-	-	-	-	-	-	-	35,340	57,610	56,430	34,690	18,470
12	-	-	13,840	-	-	28,800	-	37,320	57,840	-	33,960	-
13	9,390	-	-	-	23,960	-	-	-	57,840	54,910	33,240	18,130
14	-	11,560	-	-	-	-	33,600	37,710	57,950	54,240	32,510	17,720
15	-	-	-	-	-	-	-	37,420	58,070	53,350	31,800	17,380
16	-	-	-	18,880	-	-	-	37,510	-	52,630	31,170	-
17	9,550	-	-	-	-	-	-	37,900	58,180	51,810	30,640	-
18	-	-	-	-	-	-	33,870	38,780	58,180	-	30,110	17,050
19	-	-	14,660	-	-	29,670	-	41,370	58,180	50,720	29,500	16,550
20	9,630	-	-	-	25,240	-	34,140	-	58,300	50,180	28,880	16,220
21	-	-	-	-	-	-	-	-	-	49,640	28,360	15,980
22	-	-	-	-	-	-	34,140	42,900	58,520	49,270	27,660	-
23	-	-	-	19,720	-	-	-	44,030	58,870	-	27,060	15,560
24	-	-	-	-	-	-	34,420	45,180	59,100	-	26,450	15,400
26	-	-	-	-	-	-	34,510	-	59,210	47,810	-	15,150
26	10,270	-	15,320	-	-	30,290	-	48,030	59,210	47,160	25,330	14,990
27	-	-	-	-	26,360	-	34,320	49,100	59,210	46,830	24,900	-
28	-	12,860	-	-	-	31,440	34,060	50,180	59,210	46,070	24,380	14,500
29	-	-	-	-	26,760	-	-	50,610	59,320	44,240	23,960	-
30	-	13,000	-	21,240	-	-	33,510	51,150	59,440	-	23,440	14,250
31	10,520	-	16,140	21,440	-	32,190	-	51,700	-	42,530	22,930	-

Monthly elevation and contents, water year October 1939 to September 1940

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,977.88	8,750	-
Oct. 31	4,979.00	10,520	+1,770
Nov. 30	-	†13,000	+2,480
Dec. 31	-	†16,140	+3,140
Calendar year 1939	-	-	-30,370
Jan. 31	-	†21,440	+5,300
Feb. 28	-	†26,760	+5,320
Mar. 31	-	†32,190	+5,430
Apr. 30	4,992.53	33,510	+1,320
May 31	5,001.54	51,700	+18,190
June 30	5,005.00	59,440	†7,740
July 31	4,997.26	42,590	-16,850
Aug. 31	4,986.49	22,930	-19,660
Sept.30	4,981.30	14,250	-8,680
Water year 1939-40	-	-	+5,500

†No gage-height record; contents interpolated.

HUMBOLDT-CARSON SINK BASIN

CARSON RIVER BASIN

East Fork of 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.- 360 square miles.

Records available.- May 1939 to September 1940. 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.

Extremes.- Maximum discharge during year, 2,580 second-feet Mar. 27 (gage height, 4.63 feet); minimum, 36 second-feet Dec. 25.
1890-93, 1900-06, 1908-10, 1917, 1924-29, 1935-37, 1939-40: 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 discharge observed, 8 second-feet Dec. 4-10, 19-23, 1904.

Remarks.- Records good. Station is above all diversions in Carson Valley. Flow affected by diversions for irrigation and by storage in several small reservoirs (total capacity about 5,000 acre-feet) above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	79	65	70	166	305	596	938	1,340	422	125	82
2	112	75	65	160	163	280	510	1,370	1,240	386	125	79
3	123	74	56	255	211	246	455	1,450	1,090	365	125	84
4	108	74	54	226	211	223	422	1,290	1,140	344	123	95
5	117	70	55	145	182	223	386	960	1,110	309	125	95
6	114	68	63	121	199	217	378	982	1,130	287	112	99
7	114	66	65	110	182	226	395	1,080	1,140	276	103	99
8	108	66	60	138	156	286	404	1,260	1,110	259	90	90
9	106	70	58	148	153	297	418	1,460	1,020	249	79	88
10	101	66	58	128	161	255	465	1,690	998	232	90	84
11	99	65	77	208	161	232	558	1,930	1,070	220	103	82
12	101	63	63	223	140	196	658	2,020	1,090	210	103	81
13	103	63	60	123	150	199	844	2,000	1,100	210	105	79
14	101	61	66	117	148	202	1,050	1,850	1,100	201	94	79
15	97	58	68	99	145	208	1,050	1,710	1,040	207	86	77
16	93	55	66	103	128	214	746	1,670	952	204	95	72
17	89	55	63	108	148	229	658	1,870	1,000	195	103	79
18	85	58	61	119	135	226	752	1,640	922	172	103	74
19	81	55	61	133	117	232	960	1,530	824	170	103	70
20	77	55	60	143	126	272	1,040	1,560	726	154	103	69
21	74	54	50	140	138	301	1,090	1,670	732	147	101	67
22	74	56	60	140	138	351	1,200	1,700	700	139	110	66
23	72	56	60	119	166	422	1,350	1,720	590	130	110	66
24	70	54	58	103	182	477	1,290	1,770	568	123	110	64
25	74	58	46	119	168	648	1,110	1,670	536	118	112	63
26	68	63	65	490	171	720	886	1,530	494	130	105	60
27	83	61	61	347	510	1,460	739	1,530	465	127	97	60
28	91	56	68	232	650	732	694	1,480	469	127	90	61
29	91	54	70	199	414	640	682	1,350	504	127	86	64
30	87	45	74	179	-	765	688	1,240	504	121	84	64
31	83	-	70	168	-	784	-	1,220	-	121	84	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,859	123	63	92.2	5,670
November	1,856	79	45	61.9	3,680
December	1,926	77	46	62.1	3,820
Calendar year	-	-	-	-	-
January	5,113	490	70	165	10,140
February	5,719	650	117	197	11,340
March	12,068	1,460	196	389	23,940
April	22,474	1,350	378	749	44,580
May	47,130	2,020	938	1,520	93,480
June	26,704	1,340	465	890	52,970
July	6,482	422	118	209	12,860
August	3,184	125	79	103	6,320
September	2,292	99	60	76.4	4,550
Water year 1939-40	137,807	2,020	45	377	273,350

Peak discharge.- Jan. 2 (11:30 p.m.) 432 sec.-ft.; Jan. 26 (7:30 p.m.) 687 sec.-ft.; Feb. 27 (8 p.m.) 860 sec.-ft.; Mar. 27 (3 a.m.) 2,580 sec.-ft.; May 3 (1 a.m.) 1,860 sec.-ft.; May 13 (2 a.m.) 2,450 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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, 2¼ miles upstream from bridge on road to Mexican Dam, and 5 miles southeast of Carson City.

Records available.- May 1939 to September 1940.

Extremes.- Maximum discharge during year, 2,300 second-feet May 14 (gage height, 4.36 feet); minimum, 5 second-feet Sept. 1, 2.
1939-40: Maximum discharge, that of May 14, 1940; minimum daily, [a] second-feet (estimated) Aug. 17, 1939.

Remarks.- Records good except those for period of ice effect, or no gage-height record and those below 75 second-feet, all of which are fair. Several diversions above station for irrigation. Flow slightly regulated by several small reservoirs on tributaries above.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

-0.3	5	0.8	64	2.6	717
-.2	8	1.0	89	3.0	980
0	15	1.3	151	3.5	1,390
.2	23	1.6	241	4.0	1,890
.4	34	1.9	355		
.6	47	2.2	490		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	75	79	112	339	775	924	787	1,150	273	23	6
2	38	65	81	139	323	568	775	1,010	1,170	263	21	6
3	47	60	85	296	327	466	655	1,400	1,040	245	20	8
4	74	57	96	397	466	402	590	1,520	924	193	19	9
5	72	60	92	424	393	376	541	1,340	924	164	18	13
6	71	62	91	273	363	363	485	1,090	987	139	19	16
7	74	64	89	238	384	359	466	1,020	952	106	23	17
8	79	61	99	263	335	372	485	1,120	952	78	23	13
9	79	62	103	490	300	402	480	1,230	917	63	20	13
10	79	62	89	596	285	380	505	1,470	890	53	18	17
11	79	66	86	505	281	359	536	1,690	864	44	15	17
12	75	64	101	832	266	327	614	1,910	832	41	14	15
13	72	62	99	b400	252	296	743	2,080	819	38	13	19
14	65	61	94	b260	266	292	980	2,170	852	34	12	19
15	63	61	99	b240	270	288	1,190	2,030	813	35	11	21
16	62	63	98	b220	259	288	1,110	1,870	781	33	9	22
17	60	62	94	b230	255	296	845	1,880	768	38	13	23
18	60	61	88	b240	266	307	800	a2,000	711	49	15	24
19	57	61	86	b240	245	304	910	a1,760	608	45	15	24
20	56	62	86	b250	228	327	1,050	a1,620	521	44	12	24
21	53	63	85	b260	234	363	1,150	a1,640	466	39	10	24
22	49	63	81	b260	248	406	1,290	a1,760	433	40	10	22
23	51	63	81	b250	300	447	1,440	a1,800	397	44	10	23
24	53	64	92	b240	355	500	1,600	a1,820	393	35	11	27
25	59	67	88	b260	319	574	1,510	a1,900	363	28	11	28
26	68	71	88	637	304	717	1,290	1,770	323	29	10	29
27	71	71	91	1,170	331	1,300	1,100	1,550	255	29	8	26
28	72	79	104	631	910	1,440	897	1,360	193	25	7	29
29	79	82	112	447	1,030	945	819	1,320	193	24	10	31
30	82	81	112	389	-	878	723	1,230	221	23	6	32
31	83	-	112	351	-	1,100	-	1,130	-	26	6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,016	83	34	65.0	4,000
November	1,955	82	57	65.2	3,880
December	2,881	112	79	92.9	5,710
Calendar year	-	-	-	-	-
January	11,540	1,170	112	372	22,890
February	10,134	1,030	228	349	20,100
March	16,217	1,440	288	523	32,170
April	26,503	1,600	466	883	52,570
May	48,327	2,170	787	1,559	95,860
June	20,712	1,170	193	690	41,080
July	2,320	273	23	74.8	4,600
August	432	23	6	13.9	857
September	597	32	6	19.9	1,180
Water year 1939-40	143,634	2,170	6	392	284,900

a No gage-height record; discharge computed on basis of records for East Fork of Carson River near Gardnerville.
b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940. April 1911 to December 1933 at site 8 miles upstream.

Average discharge.- 29 years (1911-40), 358 second-feet.

Extremes.- Maximum daily discharge during year, 2,000 second-feet May 15; no flow Oct. 1-4, Aug. 1 to Sept. 30.
1911-40: Maximum discharge observed, 6,150 second-feet Jan. 26, 1914 (gage height, 11.5 feet, site and datum then in use); no flow during some periods in nearly every year since 1923.

Remarks.- Records good. Several diversions above station for irrigation, including diversions for irrigation of 720 acres between present site and the one 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 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	93	98	134	390	986	1,170	671	1,110	209		
2	0	91	100	157	380	720	959	741	1,100	212		
3	0	88	100	178	370	559	776	1,040	1,130	209		
4	0	88	100	292	416	479	685	1,360	995	189		
5	11	88	103	406	484	432	629	1,400	932	157		
6	40	88	120	448	432	422	566	1,180	932	143		
7	57	86	120	396	432	406	538	995	968	125		
8	57	86	120	354	422	401	505	977	932	102		
9	61	88	120	333	422	406	510	1,080	923	85		
10	71	85	120	545	338	422	500	1,240	887	68		
11	74	85	120	629	328	416	531	1,440	839	54		
12	74	85	120	755	318	390	566	1,640	811	42		
13	73	86	120	797	297	370	636	1,860	776	32		
14	71	86	122	510	286	333	748	1,990	769	20		
15	69	86	122	364	292	320	995	2,000	790	19		
16	69	85	120	292	297	318	1,160	1,840	755	17		
17	69	85	120	236	286	312	950	1,720	720	16		
18	69	85	117	221	276	307	776	1,790	706	14		
19	71	85	114	221	271	307	790	1,750	629	15		
20	71	83	111	221	266	318	905	1,550	552	15		
21	68	83	111	236	260	338	1,040	1,480	468	15		
22	68	83	114	244	255	354	1,160	1,510	422	15		
23	68	85	114	250	250	380	1,270	1,610	385	15		
24	68	85	114	250	250	448	1,420	1,620	370	14		
25	66	85	122	250	250	494	1,510	1,700	344	13		
26	69	86	131	312	250	566	1,360	1,800	312	13		
27	76	88	120	905	250	755	1,220	1,640	247	13		
28	83	90	117	1,050	380	1,360	995	1,420	221	13		
29	85	90	114	650	905	1,220	846	1,290	175	13		
30	85	98	114	510	-	986	790	1,260	163	10		
31	86	-	120	453	-	950	-	1,180	-	8		

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,829	86	0	59.0	3,630
November	2,605	98	83	86.8	5,170
December	3,578	131	98	115	7,100
Calendar year 1939	59,612	790	0	163	118,200
January	12,599	1,050	134	406	24,990
February	10,053	905	250	347	19,940
March	16,475	1,360	307	531	32,680
April	26,506	1,510	500	884	52,570
May	44,774	2,000	671	1,444	88,810
June	20,363	1,130	163	679	40,390
July	1,885	212	8	60.8	3,740
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1939-40	140,667	2,000	0	384	279,000

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West Fork of Carson River at Woodfords, Calif.

Location.- Water-stage recorder, lat. 38°46', long. 119°50', 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), and October 1938 to September 1940. April 1890 to March 1892, June 1907 to September 1920, at site 0.7 mile downstream and below three diversions for irrigation.

Average discharge.- 17 years (1901-3, 1905-15, 1916-20, 1939-40), 139 second-feet.

Extremes.- 1938-39: Maximum discharge during period, 354 second-feet Apr. 7 (gage height, 3.72 feet); minimum daily, 12 second-feet Aug. 14.

1939-40: Maximum discharge during year, 895 second-feet May 2 (gage height, 5.21 feet); minimum, 10 second-feet Dec. 21.

1900-20, 1938-40: Maximum discharge, 1,570 second-feet May 9 and 10, 1906 (gage height, 6.8 feet, datum then in use); minimum, (1900-1907, 1938-40) that of Dec. 21, 1939.

Maximum discharge known, 3,500 second-feet Dec. 11, 1937, by slope-area method (gage height, 9.00 feet, present datum, from floodmarks).

Remarks.- Records good except those for periods of no gage-height record and those below 75 second-feet, which are fair. Flow slightly affected by small diversions above station for irrigation, also slightly regulated by several small reservoirs of unknown capacities.

Rating table, October 1938 to September 1940 (gage height, in feet, and discharge, in second-feet)

0.6	10	1.4	43	2.2	118	3.6	327
.8	15	1.6	59	2.5	153	4.0	426
1.0	21	1.8	77	2.8	193	4.5	591
1.2	30	2.0	97	3.2	253	5.0	800

Discharge, in second-feet, 1938-40

1938-39

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	35				22	131	190	96	24	17	18
2	-	34				22	166	180	89	23	18	16
3	-	35				22	166	174	86	22	16	15
4	-	38				22	183	169	79	62	16	15
5	-	38				22	193	168	70	70	23	15
6	-	30				24	220	140	64	71	20	15
7	-	31				24	253	134	63	62	15	15
8	-	34				24	277	140	89	53	15	15
9	-	32				24	270	146	100	35	14	14
10	-	39				24	256	169	103	22	14	14
11	-	36				24	268	151	79	20	14	14
12	-	33				24	258	130	67	19	14	14
13	-	28				24	200	125	59	18	13	15
14	-	30				24	172	128	59	17	12	15
15	-	33	22	20	22	26	167	125	68	16	21	15
16	-	34				28	162	124	51	16	23	16
17	-	31				32	201	121	47	16	23	16
18	-	33				36	220	118	43	19	23	16
19	-	30				41	239	115	43	32	22	16
20	-	31				46	248	112	40	35	21	16
21	28	28				61	262	109	69	33	14	17
22	28	26				78	242	106	73	28	13	18
23	28	23				96	197	103	70	20	13	18
24	28	26				107	166	100	73	17	13	19
25	28	25				117	174	98	47	17	13	33
26	28	24				110	175	99	30	17	14	40
27	28	23				89	193	103	30	17	14	28
28	28	22				80	210	112	28	17	16	23
29	28	22				77	219	122	25	20	20	20
30	36	22			-	86	204	124	25	19	19	20
31	40	-			-	103	-	114	-	18	19	-

Note.- No gage-height record Nov. 12 to Mar. 10, May 16-24, June 13-20, 25-30, Sept. 16, 17; discharge computed on basis of records for West Walker River near Coleville, fragmentary gage-height record, and weather records.

UNITED STATES DEPARTMENT OF THE INTERIOR
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Discharge, in second-feet, of West Fork of Carson River at Woodfords, Calif., 1938-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	23	21	27	42	40	154	399	305	96	80	26
2	32	23	20	98	41	45	136	618	272	90	76	21
3	31	22	20	73	41	45	133	599	250	86	72	19
4	29	21	19	43	38	46	128	486	240	82	51	20
5	28	20	20	45	38	49	116	347	239	76	28	
6	28	20	21	38	41	52	112	347	245	71	25	
7	32	20	20	31	40	57	127	381	245	68	23	
8	27	20	21	28	38	62	131	426	242	65	22	
9	28	20	20	22	38	64	141	483	218	63	22	
10	27	20	21	24	37	64	169	550	200	62	21	a20
11	24	20	26	31	38	59	213	630	197	61	21	
12	24	20	20	30	34	59	265	658	201	60	26	
13	23	20	23	30	37	57	334	634	197	57	30	
14	23	20	21	30	34	56	412	569	190	56	40	
15	22	19	23	31	33	57	347	519	183	55	47	
16	22	19	23	34	35	62	240	493	172	96	70	18
17	21	19	22	34	34	65	245	512	175	102	73	18
18	21	19	21	34	33	64	311	446	167	96	45	19
19	21	19	24	34	37	61	399	415	153	59	24	19
20	21	19	23	35	36	68	426	410	141	42	21	18
21	21	19	17	35	37	79	455	432	136	40	20	18
22	21	19	18	34	38	90	506	421	128	37	20	18
23	20	19	20	32	36	105	544	399	115	35	20	18
24	21	19	20	32	37	120	509	432	119	34	23	17
25	23	20	14	33	39	153	402	404	118	32	22	17
26	22	21	21	42	38	194	317	342	109	31	21	17
27	28	19	20	45	37	284	268	315	107	31	20	18
28	28	20	21	49	43	210	274	313	106	30	28	19
29	26	25	25	47	40	178	268	277	110	61	35	19
30	24	20	26	45	-	207	296	270	104	89	33	20
31	24	-	25	43	-	178	-	268	-	90	30	-

a No gage-height record; discharge computed on basis of records for West Walker River near Coleville, fragmentary gage-height record, and weather records.

Monthly discharge, in second-feet, 1938-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 21-31, 1938	328	40	28	29.9	651
November	905	39	22	30.2	1,800
December	682	-	-	22	1,350
Calendar year	-	-	-	-	-
January 1939	620	-	-	20	1,230
February	616	-	-	22	1,220
March	1,539	117	22	49.6	3,050
April	6,331	277	131	211	12,560
May	4,039	190	98	130	8,010
June	1,865	103	25	62.2	3,700
July	875	71	16	28.2	1,740
August	522	23	12	16.8	1,040
September	541	40	14	18.0	1,070
The period	-	-	-	-	37,420
October 1939	763	32	20	24.6	1,510
November	604	25	19	20.1	1,200
December	656	26	14	21.2	1,300
Calendar year 1939	18,971	277	-	52.0	37,630
January 1940	1,189	98	22	38.4	2,360
February	1,090	43	33	37.6	2,160
March	2,930	284	40	94.5	5,810
April	8,378	544	112	279	16,620
May	13,795	658	268	445	27,360
June	5,384	305	104	179	10,680
July	1,953	102	30	63.0	3,870
August	1,089	80	20	35.1	2,160
September	579	-	17	19.3	1,150
Water year 1939-40	38,410	658	14	105	76,180

Humboldt River at Palisade, Nev.

Location.- Water-stage recorder, lat. 40°37', long. 116°12', in sec. 36, T. 32 N., R. 51 E., at Palisade, a quarter of a mile downstream from Southern Pacific Railroad bridge 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 1940.

Average discharge.- 32 years (1903-6, 1911-40), 322 second-feet.

Extremes.- Maximum discharge during year, 1,210 second-feet May 30 (gage height, 4.90 feet); minimum daily, 11 second-feet Aug. 18.
1902-6, 1911-40: Maximum discharge observed, 4,300 second-feet Mar. 5, 1921 (gage height, 8.6 feet, site and datum then in use); minimum observed, 2 second-feet Aug. 25-28, 1931.

Remarks.- Records good except those for periods of ice effect, which are fair. Water is diverted for irrigation of about 150,000 acres of hay and pasture lands above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	37	48	56	120	313	464	464	1,160	124	18	14
2	38	31	46	63	134	310	464	488	1,150	129	18	15
3	58	26	48	71	148	306	472	521	1,150	124	18	17
4	66	24	49	75	166	306	472	546	1,110	115	17	18
5	56	24	48	86	174	292	504	538	1,080	102	16	18
6	49	25	49	82	183	275	496	521	994	96	15	17
7	45	25	48	75	205	262	496	504	916	88	14	16
8	43	24	55	79	196	285	529	480	862	82	14	16
9	41	24	61	88	191	324	513	464	1,170	79	14	16
10	40	28	59	92	183	296	504	441	826	73	14	16
11	38	31	58	96	188	268	480	457	772	70	14	16
12	37	34	53	115	177	249	472	496	676	68	14	16
13	37	37	50	105	169	234	464	564	578	61	13	16
14	37	36	52	b75	169	237	464	627	510	58	13	16
15	38	35	52	b50	166	234	457	755	452	52	12	16
16	35	36	52	b50	156	237	480	775	421	48	12	17
17	34	36	52	b50	151	246	457	890	391	43	12	18
18	37	36	52	b50	158	243	480	962	355	40	11	18
19	36	36	52	b55	154	237	472	974	324	36	12	20
20	37	35	52	b55	151	243	426	986	292	34	12	19
21	36	37	49	b55	148	252	383	1,010	262	32	12	19
22	36	38	48	b60	146	252	383	1,050	240	30	12	20
23	36	38	45	b65	154	252	372	1,010	222	28	12	18
24	36	40	b40	b70	174	256	343	1,020	216	25	12	19
25	38	41	b35	75	208	265	363	1,020	196	23	13	21
26	38	43	b40	82	208	285	376	1,040	180	22	14	19
27	40	50	b45	92	259	332	441	1,090	164	22	15	19
28	38	49	43	94	351	387	464	1,170	148	21	14	17
29	40	49	50	105	347	391	472	1,190	134	19	14	15
30	40	50	52	107	-	395	472	1,200	124	18	15	15
31	40	-	53	107	-	404	-	1,180	-	18	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,251	66	31	40.4	2,480
November	1,055	50	24	35.2	2,090
December	1,536	61	35	49.5	3,050
Calendar year 1939	83,848	1,900	15	230	166,300
January	2,380	115	50	76.8	4,720
February	5,334	351	120	184	10,580
March	8,868	404	234	286	17,590
April	13,635	529	343	454	27,040
May	24,433	1,200	441	788	48,460
June	17,075	1,170	124	569	33,870
July	1,780	129	18	57.4	3,530
August	430	18	11	13.9	853
September	517	21	14	17.2	1,030
Water year 1939-40	78,294	1,200	11	214	155,300

b Stage-discharge relation affected by ice.
Note.- Discharge Apr. 1 to May 23 computed from once-daily chain-gage readings.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

U. S. GOVERNMENT PRINTING OFFICE 1941—O 226154

Humboldt River near Imlay, Nev.

Location.- Water-stage recorder, lat. 40°41'20", long. 118°12'55", in SW¼ sec. 25, T. 33 N., R. 33 E., 600 feet upstream from old Calahan Dam and 4 miles northwest of Imlay.

Drainage area.- 13,500 square miles.

Records available.- June 1935 to September 1940.

Extremes.- Maximum daily discharge during year, 363 second-feet June 18; no flow for many days.
1935-40: Maximum daily discharge, 564 second-feet June 4, 1936; no flow during some periods in 1935, 1937-40.

Remarks.- Records good except those for period of no gage-height record, which are fair. Station is just above flow line of Rye Patch Reservoir and about 9 miles below Humboldt-Lovelock Irrigation, Light & Power Co.'s feeder canal. Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal releases water into Rye Patch Reservoir. Flow also affected by many diversions above station for irrigation.

Cooperation.- Record of daily discharge furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							195	94	197	163	35	12
2							195	102	192	140	39	12
3							198	104	194	124	35	14
4							206	98	217	122	42	13
5							210	116	239	125	38	13
6							198	124	242	124	38	13
7						a10	202	119	262	117	35	14
8							223	108	291	111	33	14
9							237	116	303	107	30	13
10							247	113	289	102	29	13
11							249	116	274	104	27	12
12							239	118	287	117	25	11
13							235	122	284	108	24	11
14						239	230	156	213	98	23	10
15						246	228	232	217	89	21	9
16					a10	232	192	215	262	81	20	9
17						235	165	210	297	77	19	
18						225	139	223	363	74	18	
19						200	121	242	329	69	18	
20						186	111	205	305	65	18	
21						195	96	186	289	68	16	
22						197	72	168	271	65	16	
23						190	65	176	247	61	15	
24						189	60	192	222	57	15	a5
25						189	61	211	202	52	15	
26						189	72	234	182	43	15	
27						187	89	256	171	38	14	
28						189	97	264	156	38	14	
29						189	102	237	145	38	14	
30						190	111	197	160	40	13	
31						195	-	186	-	38	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1939	31,877	497	0	87.3	63,220
January	0	0	0	0	0
February	290	-	-	10	575
March	3,792	246	-	122	7,520
April	4,845	249	60	162	9,610
May	5,240	264	94	169	10,390
June	7,302	363	145	243	14,480
July	2,655	163	38	85.6	5,270
August	728	42	13	23.5	1,440
September	263	14	-	8.8	522
Water year 1939-40	25,115	363	0	68.6	49,810

a No gage-height record; discharge estimated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 Ry. datum).

Drainage area.- 13,700 square miles.

Records available.- February 1936 to September 1940.

Extremes.- Maximum contents during year, 18,950 acre-feet Apr. 15, 17, 18 (elevation, 4,107.55 feet); minimum, 6,820 acre-feet Sept. 16 (elevation, 4,097.85 feet).
1936-40: Maximum contents, 31,160 acre-feet Apr. 25, 26, 1937 (elevation, 4,112.37 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, 178,100 acre-feet between elevations 4,072.5 (sill of trash rack structure) and 4,133.0 feet (top of spillway gates) above mean sea level. Dead storage negligible. Elevation of spillway (gate sill) is 4,116 feet. Water is used for irrigation on Humboldt project.

Cooperation.- Records furnished by U. S. Bureau of Reclamation.

Contents, in acre-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,030	8,140	8,180	8,420	9,460	10,070	16,020	16,190	9,910	15,010	8,360	7,140
2	8,120	8,120	8,210	8,460	9,510	10,120	16,100	15,930	9,810	14,830	8,180	7,140
3	8,210	8,120	8,210	8,670	9,510	10,120	16,380	15,680	9,810	14,640	8,230	7,140
4	8,210	8,120	8,210	8,720	9,530	10,120	16,740	15,360	9,810	14,330	8,170	7,150
5	8,230	8,120	8,220	8,760	9,560	10,120	16,830	15,250	10,170	14,130	8,100	7,190
6	8,290	8,120	8,230	8,770	9,590	10,120	17,110	15,250	10,470	14,110	8,050	7,190
7	8,670	8,120	8,230	8,780	9,590	10,120	17,200	15,040	10,860	13,930	8,010	7,190
8	8,660	8,120	8,230	8,810	9,660	10,120	17,380	14,800	11,200	13,750	7,940	7,140
9	8,650	8,120	8,240	8,860	9,660	10,170	17,560	14,560	11,700	13,610	7,870	7,140
10	8,640	8,120	8,250	8,970	9,660	10,170	17,940	14,250	12,140	13,430	7,790	7,090
11	8,690	8,120	8,260	8,950	9,710	10,190	18,040	13,970	12,610	13,250	7,750	7,090
12	8,690	8,120	8,260	9,040	9,760	10,190	18,240	13,680	13,070	12,970	7,750	7,010
13	8,670	8,120	8,260	9,020	9,760	10,190	18,390	13,280	13,490	12,840	7,710	6,970
14	8,670	8,120	8,260	9,000	9,760	10,190	18,540	12,940	13,940	12,610	7,710	6,930
15	8,670	8,120	8,260	8,980	9,760	10,390	18,950	12,780	14,180	12,450	7,710	6,860
16	8,640	8,120	8,270	9,000	9,810	10,860	18,850	12,680	14,550	12,270	7,670	6,820
17	8,620	8,130	8,280	9,000	9,810	11,390	18,950	12,330	14,560	11,930	7,620	6,860
18	8,600	8,130	8,290	9,000	9,840	11,680	18,950	12,140	14,830	11,700	7,540	6,860
19	8,600	8,130	8,290	9,000	9,860	12,080	18,850	11,590	15,070	11,480	7,500	6,860
20	8,590	8,140	8,290	9,020	9,870	12,380	18,750	11,530	15,460	11,200	7,460	6,870
21	8,580	8,140	8,290	9,040	9,890	12,710	18,650	11,480	15,770	10,910	7,420	6,880
22	8,570	8,140	8,300	9,040	9,910	13,040	18,380	11,310	15,930	10,580	7,340	6,880
23	8,550	8,140	8,330	9,090	9,910	13,350	18,100	11,140	16,290	10,370	7,300	6,890
24	8,470	8,140	8,330	9,090	9,910	13,680	17,840	10,910	16,230	10,010	7,260	6,890
25	8,430	8,150	8,330	9,120	9,980	13,970	17,460	10,690	16,190	9,690	7,220	6,890
26	8,390	8,170	8,330	9,280	9,960	14,180	17,200	10,520	16,100	9,450	7,180	6,890
27	8,360	8,170	8,330	9,370	9,980	14,480	16,980	10,370	16,010	9,430	7,140	6,890
28	8,340	8,180	8,350	9,390	10,020	14,720	16,740	10,270	15,610	9,140	7,140	6,890
29	8,320	8,180	8,340	9,420	10,020	15,040	16,560	10,220	15,450	8,930	7,140	6,890
30	8,270	8,180	8,400	9,430	-	15,360	16,280	10,170	15,250	8,710	7,140	6,890
31	8,250	-	8,410	9,440	-	15,060	-	10,020	-	8,540	7,140	-

Monthly elevation and contents, water year October 1939 to September 1940

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	4,099.32	8,030	+110
Nov. 1	4,099.45	8,140	+40
Dec. 1	4,099.50	8,180	+240
Calendar year 1939	-	-	-5,190
Jan. 1	4,099.77	8,420	+1,040
Feb. 1	4,100.90	9,460	+610
Mar. 1	4,101.50	10,070	+5,950
Apr. 1	4,106.00	16,020	+170
May 1	4,106.10	16,190	-6,280
June 1	4,101.35	9,910	+5,190
July 1	4,105.40	15,040	-6,680
Aug. 1	4,099.70	8,360	-1,220
Sept. 1	4,098.25	7,140	-250
Oct. 1	4,097.95	6,890	-
Water year 1939-40	-	-	-1,140

Humboldt River near Rye Patch, Nev.

Location.- Water-stage recorder, lat. 40°27'25", long. 118°18'20", in NE¼NE¼ sec. 19, T. 30 N., R. 33 E., 5,000 feet downstream from Rye Patch Dam and 1 mile northwest of Rye Patch.

Drainage area.- 13,700 square miles.

Records available.- October 1935 to September 1940. 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, Nev.

Average discharge.- 28 years (1899-1909, 1910-16, 1917-22, 1930-32, 1935-40), 199 second-feet (unadjusted).

Extremes.- Maximum daily discharge during year (regulated), 414 second-feet May 21; practically no flow for several days when reservoir gates were closed.
1896-1922, 1924-32, 1935-40: 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, 1935-40.

Remarks.- Records good. Because of unstable conditions caused by backwater from aquatic growth at gaging station, flow was computed from gate openings at dam, 5,000 feet above station, by applying a coefficient determined from current-meter measurements to the theoretical discharge. Flow completely regulated by Rye Patch Reservoir (see p. 103), and affected also by many diversions for irrigation and by Taylor-Pitt Reservoirs.

Cooperation.- Records of daily discharge furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	24				0	91	238	250	293	141	0
2	4	12				0	91	244	216	277	98	10
3	0	0				0	103	244	197	266	50	28
4	0	0				0	117	244	168	265	46	40
5	0	0				0	120	248	62	255	60	40
6	0	0				0	130	285	36	225	70	40
7	0	0				0	130	388	42	224	75	40
8	0	0				0	132	345	40	224	74	40
9	0	0				0	145	345	22	231	44	40
10	0	0				0	155	351	11	254	30	40
11	0	0				0	190	370	11	272	30	58
12	6	0				0	196	370	24	300	30	56
13	10	0				0	193	368	32	310	30	40
14	10	0				0	193	384	56	310	30	40
15	15	0				0	193	386	70	310	30	34
16	23	0				0	193	411	99	296	30	0
17	19	0				0	193	409	111	289	40	0
18	19	0				0	193	407	118	288	44	0
19	19	0				0	193	404	127	254	52	0
20	12	0				0	193	404	113	208	59	0
21	9	0				0	193	414	121	207	44	0
22	9	0				0	207	390	136	206	50	0
23	18	0				0	212	374	192	205	47	0
24	25	0				54	228	373	215	204	31	0
25	24	0				75	258	372	218	183	31	0
26	24	0				75	248	370	251	152	31	0
27	24	0				78	226	369	251	152	28	0
28	24	0				68	219	369	258	158	15	0
29	24	0				55	219	364	292	164	7	0
30	24	0				55	219	336	293	147	0	0
31	24	-				72	-	298	-	133	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	276	25	0	12.1	746
November	36	24	0	1.2	71
December	0	0	0	0	0
Calendar year 1939	37,505	491	0	103	74,390
January	0	0	0	0	0
February	0	0	0	0	0
March	532	78	0	17.2	1,060
April	5,373	258	91	179	10,660
May	10,874	414	238	351	21,570
June	4,042	293	11	135	8,020
July	7,262	310	133	234	14,400
August	1,347	141	0	43.5	2,670
September	546	58	0	18.2	1,080
Water year 1939-40	30,388	414	0	83.0	60,280

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

South Fork of 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 1940.

Average discharge.- 32 years (1896-1903, 1904-9, 1910-18, 1923-26, 1927-32, 1936-40) 125 second-feet.

Extremes.- Maximum discharge during year, 750 second-feet May 16 (gage height, 3.80 feet); no flow Aug. 1 to Sept. 30.
1896-1922; 1923-32, 1936-39: Maximum discharge, 2,400 second-feet Jan. 26, 1914, from rating curve extended above 1,200 second-feet; 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. Flow affected by many diversions above station for irrigation. Station is below all diversions except those to Hunter & Banks ranch, 3 miles downstream.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9	16	18	25	48		200	303	468	82		
2	58	16	18	30	52		210	261	444	67		
3	36	16	18	42	48		215	258	432	54		
4	20	16	18	32	55		219	277	428	50		
5	15	15	16	29	52	a75	234	287	432	42		
6	14	15	16	24	51		225	293	374	36		
7	14	15	17	26	55		214	310	324	34		
8	14	15	17	31	50		222	317	296	32		
9	14	16	17	30	42		202	334	283	26		
10	15	15	17	32	45		188	349	274	23		
11	14	14	16	33	45		183	401	261	21		
12	14	15	15	31	34		180	480	246	15		
13	14	15	14	25	47	a70	186	570	246	10		
14	14	15	17	b22	45		194	606	252	8		
15	14	15	16	b16	41	67	219	691	246	8		
16	12	14	17	b16	31	68	264	730	237	7		
17	14	14	16	b18	34	67	303	710	216	6		
18	14	18	16	b20	35	66	296	668	208	5		
19	14	22	b16	b22	34	67	267	619	202	4		
20	14	21	b16	b24	30	68	240	583	199	3		
21	12	23	b16	b28	28	72	249	574	183	2		
22	13	24	b16	b32	33	75	271	560	165	4		
23	13	23	b16	36	34	82	300	547	152	4		
24	14	24	b15	39	40	93	334	556	136	a3		
25	14	25	b14	40	46	110	356	578	121	a3		
26	14	18	b16	43	48	123	367	610	110	a3		
27	16	21	b19	47	55	158	390	642	93	a2		
28	17	21	24	43	a80	172	378	628	75	a2		
29	16	21	26	35	a85	175	367	637	60	a2		
30	16	19	30	40	-	183	345	578	66	a1		
31	16	-	28	43	-	178	-	516	-	a1		

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	508	58	9	16.4	1,010
November	537	25	14	17.9	1,070
December	551	30	14	17.8	1,090
Calendar year 1939	32,647	448	2	89.4	64,760
January	954	47	16	30.8	1,890
February	1,323	85	28	45.6	2,620
March	2,854	183	-	92.1	5,660
April	7,818	390	180	261	15,510
May	15,473	730	258	499	30,690
June	7,229	468	60	241	14,340
July	560	82	1	18.1	1,110
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1939-40	37,807	730	0	103	74,990

a No gage-height record; discharge computed on basis of records for station on Humboldt River at Palisade and temperature records.
b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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.

Records available.- October 1921 to September 1940.

Average discharge.- 18 years (1921-26, 1927-40), 24.6 second-feet.

Extremes.- Maximum discharge during year, 602 second-feet Feb. 27 (gage height, 4.09 feet), from rating curve extended above 100 second-feet; minimum daily, 4 second-feet for several days.
1921-40: Maximum discharge, 1,000 second-feet Feb. 21 to 22, 1927, from rating curve extended above 200 second-feet; minimum, 2 second-feet Sept. 1-9, 1928.

Remarks.- Records good except those for period of no gage-height record and those above 100 second-feet, which are fair. No diversion above gage.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6	6	a8	11	13	67	224	70	35	6	4	4
2	8	6	a8	12	13	56	147	87	34	6	4	4
3	7	6	a8	13	16	39	123	105	32	6	4	4
4	6	6	a8	12	15	33	105	107	31	6	4	6
5	6	6	a8	10	13	30	93	93	32	6	4	5
6	7	6	a8	8	16	24	80	85	30	6	4	5
7	6	6	a8	9	15	25	79	80	27	6	4	5
8	6	6	a8	10	13	61	82	83	25	6	4	5
9	6	6	a8	11	13	55	74	91	23	6	4	5
10	6	6	a8	10	13	44	73	107	21	6	4	5
11	6	6	8	10	11	31	71	123	20	6	4	5
12	6	6	7	8	11	27	77	136	18	6	4	4
13	6	6	8	6	12	25	91	136	16	5	4	5
14	6	6	8	7	13	24	112	123	15	5	4	5
15	6	6	8	7	12	26	119	115	14	5	4	5
16	6	6	8	7	10	32	95	105	13	5	4	5
17	6	6	8	8	11	48	83	96	12	5	4	6
18	6	6	8	8	10	43	87	88	12	5	4	6
19	6	6	8	9	9	41	98	82	11	4	4	7
20	6	6	8	9	9	46	105	70	10	4	4	6
21	6	6	8	9	10	55	98	71	10	4	4	6
22	6	6	6	10	12	61	96	67	10	4	4	6
23	6	6	7	9	12	69	96	63	9	4	4	5
24	6	6	9	10	16	76	95	61	9	4	4	5
25	6	7	6	10	17	103	91	59	8	4	4	6
26	6	8	7	14	30	121	95	56	8	4	5	6
27	7	a8	8	13	245	226	87	52	e	4	4	5
28	7	a8	8	11	374	132	77	47	7	4	4	6
29	6	a8	9	11	134	130	77	46	7	4	4	6
30	6	a8	10	12	-	132	71	42	6	4	4	6
31	6	-	11	13	-	308	-	38	-	4	4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	192	8	6	6.2	381
November	191	8	6	6.4	379
December	248	11	6	8.0	492
Calendar year 1939	7,714	208	3	21.1	15,290
January	307	14	6	9.9	609
February	1,098	374	9	37.9	2,180
March	2,190	308	24	70.6	4,340
April	2,901	224	71	96.7	5,750
May	2,584	136	38	83.3	5,130
June	513	35	6	17.1	1,020
July	154	6	4	5.0	305
August	125	5	4	4.0	248
September	159	7	4	5.3	315
Water year 1939-40	10,662	374	4	29.1	21,150

a No gage-height record; discharge interpolated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal near Humboldt, Nev.

Location.- Water-stage recorder and Cippoletti weir, lat. 40°36'25", long. 118°18'20", in SE¼ sec. 30, T. 32 N., R. 33 E., at outlet of lower Taylor-Pitt Reservoir, 2½ miles west of Humboldt.

Records available.- February 1914 to September 1920, October 1921 to September 1940.

Average discharge.- 25 years, 14.1 second-feet.

Extremes.- Maximum daily discharge during year, 143 second-feet May 15; no flow for many days.
1914-20, 1921-40: Maximum daily discharge, 477 second-feet July 17, 1917; practically no flow at times during each year.

Remarks.- Records good. Flow regulated by reservoir outlet gates a few hundred feet upstream. Canal conducts stored water released from Taylor-Pitt Reservoirs to Rye Patch Reservoir, from which it is later released and carried in natural river channel to Lovelock district for use in irrigation.

Cooperation.- Records of daily discharge furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10					0	51	46	45	50	31	0
2	4					0	51	55	45	50	31	12
3	0					0	51	55	45	50	19	24
4	0					0	51	55	33	50	14	30
5	0					0	51	96	15	54	14	29
6	0					0	51	121	15	66	14	29
7	0					0	51	121	21	66	13	29
8	0					0	51	121	31	66	14	29
9	0					0	51	121	14	72	16	28
10	0					0	60	120	0	84	8	28
11	0					0	65	120	0	100	0	28
12	7					0	58	120	0	120	0	16
13	10					0	55	120	2	126	0	16
14	10					0	55	135	14	126	0	6
15	10					0	48	143	15	126	0	0
16	10					0	39	133	10	116	0	0
17	10					0	39	128	0	96	10	0
18	10					0	39	131	12	90	15	0
19	10					0	29	132	15	64	24	0
20	3					0	24	131	15	16	30	0
21	0					0	24	141	15	15	18	0
22	0					0	37	116	15	15	10	0
23	0					0	45	96	22	15	15	0
24	0					34	45	87	25	15	15	0
25	0					51	64	88	30	15	15	0
26	0					51	58	88	28	15	15	0
27	0					53	38	88	22	15	15	0
28	0					46	30	97	27	22	0	0
29	0					31	30	94	44	31	0	0
30	0					31	30	47	50	31	0	0
31	0					44	-	45	-	31	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	94	10	0	3.0	186
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1939	8,949	295	0	24.5	17,750
January	0	0	0	0	0
February	0	0	0	0	0
March	341	53	0	11.0	676
April	1,371	65	24	45.7	2,720
May	3,191	143	45	103	6,330
June	625	50	0	20.8	1,240
July	1,808	126	15	58.3	3,590
August	356	31	0	11.5	706
September	304	30	0	10.1	603
Water year 1939-40	8,090	143	0	22.1	16,050

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 (general adjustment of 1929).
Records available.- 1867 to 1925 (occasional elevations in some years) June 1926 to September 1940. Elevations prior to January 1934 referred to general adjustment of 1912, datum of which is 0.57 foot above that of general adjustment of 1929.
Extremes.- 1926-40: Maximum elevation observed, 3,847.35 feet June 1926; minimum, 3,816.4 feet Jan. 29, 1937; both elevations referred to general adjustment of 1929.
Remarks.- Elevations determined by spirit leveling.
Cooperation.- Records furnished by U. S. Indian Service.

Elevation, in feet, above mean sea level, water year 1939-40

Oct. 20	3,817.50	Feb. 19	3,816.92	June 17	3,818.85
Nov. 20	3,817.25	Mar. 9	3,816.69	July 24	3,818.19
Dec. 7	3,817.16	Apr. 12	3,817.34	Sept.20	3,817.08
Jan. 14	3,816.99	May 19	3,818.68		

Lake Tahoe at Tahoe, Calif.

Location.- Staff gage, lat. 39°09'55", long. 120°08'25", in NW¼ sec. 7, T. 15 N., R. 17 E., near outlet of Lake at Tahoe. Datum of gage is 6,219.01 feet above mean sea level (general adjustment of 1929) or 6,220.0 feet above mean sea level (datum of Bureau of Reclamation). Elevations given herein are referred to general adjustment of 1929.
Drainage area.- 519 square miles (including water surface of lake, which is 193 square miles).
Records available.- 1900 to September 1940.
Extremes.- Maximum stage during year, 8.31 feet June 27-29; minimum, 4.41 feet Dec. 31.
1900-1940: Maximum stage, 11.26 feet July 14, 15, 17, 18, 1907; minimum, 1.74 feet Dec. 26, 1934.
Remarks.- Lake levels maintained by concrete regulator dam with 17 gates; storage began about 1874. Capacity, 1,028,000 acre-feet between elevations 6,222.01 feet (natural rim of lake at outlet) and 6,230.27 feet (highest stage recorded, July 14, 15, 17, 18, 1907) above mean sea level. Sill of outlet gates is 6,218.01 feet above mean sea level. Water is used for irrigation in State of Nevada and for power development. Gage read once daily. Increase in capacity in the range indicated, about 125,000 acre-feet per foot of rise.
Cooperation.- Records furnished by H. C. Dukes, Federal Court Watermaster, in cooperation with Truckee-Carson Irrigation District.

Gage height, in feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.40	5.02	4.68	4.43	5.40	6.20	6.72	7.17	8.01	8.30	7.80	7.37
2	5.43	5.01	4.67	4.54	5.41	6.19	6.74	7.19	8.02	8.30	7.78	7.35
3	5.43	5.00	4.66	4.62	5.43	6.17	6.75	7.20	8.04	8.29	7.77	7.32
4	5.40	5.00	4.65	4.73	5.52	6.16	6.75	7.24	8.05	8.28	7.76	7.29
5	5.37	4.98	4.64	4.75	5.56	6.15	6.75	7.28	8.07	8.28	7.75	7.26
6	5.43	4.96	4.64	4.75	5.57	6.15	6.76	7.31	8.09	8.27	7.74	7.23
7	5.40	4.95	4.64	4.76	5.60	6.15	6.76	7.33	8.11	8.26	7.73	7.20
8	5.37	4.94	4.63	4.90	5.61	6.14	6.77	7.35	8.12	8.24	7.72	7.17
9	5.34	4.93	4.61	4.99	5.60	6.14	6.79	7.37	8.13	8.22	7.71	7.15
10	5.32	4.92	4.59	5.02	5.59	6.13	6.80	7.39	8.15	8.20	7.69	7.12
11	5.30	4.90	4.61	5.10	5.59	6.15	6.82	7.43	8.17	8.18	7.68	7.09
12	5.28	4.89	4.59	5.20	5.59	6.15	6.83	7.47	8.18	7.17	7.67	7.07
13	5.27	4.88	4.58	5.21	5.58	6.15	6.84	7.51	8.20	8.15	7.66	7.05
14	5.26	4.86	4.57	5.21	5.65	6.14	6.86	7.55	8.22	8.13	7.65	7.02
15	5.25	4.84	4.56	5.20	5.66	6.14	6.89	7.58	8.23	8.12	7.63	7.00
16	5.24	4.82	4.54	5.19	5.67	6.15	6.89	7.61	8.24	8.12	7.62	6.98
17	5.22	4.80	4.53	5.19	5.69	6.14	6.91	7.64	8.26	8.11	7.61	6.99
18	5.21	4.79	4.52	5.18	5.71	6.14	6.93	7.67	8.27	8.09	7.60	6.98
19	5.20	4.78	4.50	5.18	5.71	6.15	6.95	7.70	8.28	8.07	7.59	6.96
20	5.18	4.77	4.49	5.18	5.70	6.15	6.96	7.73	8.29	8.05	7.57	6.93
21	5.16	4.76	4.48	5.18	5.70	6.15	6.98	7.76	8.29	8.03	7.56	6.91
22	5.14	4.75	4.46	5.18	5.70	6.16	7.00	7.79	8.29	8.02	7.54	6.90
23	5.13	4.74	4.44	5.18	5.76	6.16	7.02	7.82	8.30	8.00	7.52	6.89
24	5.11	4.74	4.45	5.19	5.80	6.17	7.04	7.85	8.30	7.98	7.51	6.88
25	5.12	4.74	4.44	5.20	5.81	6.20	7.05	7.87	8.30	7.95	7.49	6.87
26	5.09	4.76	4.43	5.41	5.83	6.23	7.08	7.90	8.30	7.93	7.48	6.86
27	5.08	4.75	4.42	5.41	5.97	6.40	7.11	7.92	8.31	7.90	7.46	6.84
28	5.07	4.71	4.42	5.40	6.14	6.43	7.13	7.94	8.31	7.88	7.44	6.83
29	5.06	4.70	4.42	5.40	6.21	6.49	7.14	7.96	8.31	7.86	7.42	6.80
30	5.04	4.69	4.42	5.40	-	6.56	7.15	7.98	8.30	7.84	7.41	6.78
31	5.03	-	4.41	5.40	-	6.71	-	8.00	-	7.82	7.39	-

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Truckee River at Tahoe, Calif.

Location.- Water-stage recorder, lat. 39°09'55", long. 120°08'45", in NW¼ sec. 7, T. 15 N., R. 17 E., at Tahoe, just below dam at outlet of Lake Tahoe. Datum of gage is 6,219.01 feet above mean sea level (general adjustment of 1929).

Drainage area.- 519 square miles.

Records available.- July 1895 to February 1896, June 1900 to September 1940.

Average discharge.- 40 years (1900-1940), 241 second-feet.

Extremes.- Maximum daily discharge during year, 428 second-feet (regulated), July 30; no flow for several months.
1895-96; 1900-1940: Maximum daily discharge, 1,340 second-feet July 13-20, 1907; no flow during parts of 1900, 1901, 1914, 1918-40.

Remarks.- Flow regulated by operation of gates in dam at Lake Tahoe and occasionally by pumping from lake.

Cooperation.- Record of daily discharge furnished by H. C. Dukes, Federal Court Watermaster, in cooperation with Truckee-Carson Irrigation District.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	374	268	226	154					0	240	332	413
2	374	268	224	86					0	240	326	413
3	374	268	221	0					0	256	318	413
4	374	301	218	0					0	268	315	413
5	374	320	216	0					0	280	294	413
6	374	315	214	0					0	301	216	413
7	374	312	214	0					0	320	216	413
8	374	310	210	0					0	339	216	413
9	374	305	202	0					0	348	216	413
10	374	300	198	0					0	348	216	413
11	374	293	206	0					0	348	216	413
12	374	288	198	0					0	354	216	406
13	374	284	190	0					0	358	216	402
14	374	277	189	0					0	364	216	402
15	374	270	187	0					0	368	216	402
16	374	268	185	0					0	368	216	402
17	374	263	183	0					0	375	216	402
18	374	261	181	0					0	381	216	402
19	374	256	177	0					0	381	216	402
20	374	252	176	0					0	381	216	402
21	374	247	172	0					0	381	216	396
22	374	245	165	0					0	391	216	376
23	374	243	159	0					30	397	216	376
24	374	239	161	0					68	397	216	376
25	369	239	156	0					95	402	216	242
26	277	243	150	0					128	407	216	150
27	235	239	149	0					171	414	216	184
28	268	233	149	0					204	418	216	227
29	268	230	150	0					230	422	216	238
30	268	228	150	0					240	428	332	197
31	268	-	150	0					-	358	406	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	10,929	374	235	353	21,680
November	8,065	320	228	269	16,000
December	5,726	226	149	185	11,360
Calendar year 1939	109,634	490	0	300	217,500
January	240	154	0	7.7	476
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	1,166	240	0	38.9	2,310
July	11,033	428	240	356	21,880
August	7,507	406	216	242	14,890
September	10,927	413	150	364	21,670
Water year 1939-40	55,593	428	0	152	110,300

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Truckee River at Farad, Calif.

Location.- Water-stage recorder, lat. 39°26', long. 120°02', in SW¼ sec. 18, T. 18 N., R. 18 E., 0.5 mile downstream from Farad hydroelectric plant, 2 miles downstream from Bronco Creek, and 3 miles north of Iceland. Altitude of gage, about 5,200 feet (from topographic map).

Records available.- January 1938 to September 1940. September 1899 to August 1912 at Nevada-California State line, 5 miles downstream. August 1912 to December 1937 at Iceland, 3 miles upstream.

Average discharge.- 28 years (1912-40), 648 second-feet.

Extremes.- Maximum discharge during year, 7,120 second-feet Mar. 30 (gage height, 7.70 feet); minimum, 272 second-feet Dec. 25.
1938-40: Maximum daily discharge, 6,770 second-feet May 15, 1938; minimum daily, 290 second-feet Nov. 16, 1939.

Remarks.- Storage upstream from station in Lakes Tahoe, Donner, Independence, and Weber.

Cooperation.- Record of daily discharge furnished by H. C. Dukes, Federal Court Watermaster, in cooperation with Truckee-Carson Irrigation District.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	430	393	294	314	474	769	2,940	1,512	1,505	584	520	498
2	457	395	293	845	472	684	2,273	2,167	1,282	556	520	490
3	423	376	294	486	532	658	1,923	2,518	1,140	545	504	494
4	404	376	299	472	561	633	1,928	2,552	1,080	554	500	500
5	400	344	307	348	495	547	1,440	1,943	1,188	536	500	503
6	432	340	311	297	495	500	1,209	1,661	1,226	538	503	507
7	417	340	311	304	447	459	1,198	1,661	1,202	547	512	503
8	404	335	303	352	380	504	1,242	1,908	1,160	552	512	503
9	404	332	294	336	365	472	1,259	2,146	1,010	556	510	500
10	404	325	318	332	372	406	1,386	2,416	937	552	510	498
11	402	324	356	580	372	428	1,563	2,705	937	540	512	498
12	397	320	309	580	356	419	1,771	2,887	1,010	581	514	494
13	401	310	304	450	372	463	2,094	3,228	1,098	527	512	486
14	400	304	297	389	352	441	2,295	2,874	1,074	525	512	490
15	400	297	297	364	370	468	2,383	2,495	1,035	531	512	490
16	400	290	293	356	382	486	2,167	2,327	1,013	529	512	494
17	397	291	295	356	378	491	2,273	2,349	1,010	522	512	507
18	404	304	299	356	368	470	2,012	2,219	949	520	512	512
19	395	309	300	382	352	479	2,146	2,114	842	510	509	512
20	391	309	294	379	356	495	2,316	2,053	747	502	507	503
21	389	311	291	385	360	495	2,338	2,125	694	498	507	493
22	392	313	297	376	354	528	2,383	2,146	552	494	505	486
23	393	309	304	340	380	604	2,371	2,167	512	503	505	488
24	394	306	304	334	402	663	2,219	2,140	547	498	512	486
25	406	311	293	342	366	958	1,933	1,992	575	492	513	507
26	393	307	306	628	389	1,652	1,733	1,724	529	500	507	534
27	352	304	299	764	804	3,163	1,531	1,724	550	500	503	486
28	412	311	304	486	1,394	1,865	1,752	1,670	566	507	503	490
29	406	297	313	404	1,039	3,555	1,463	1,478	591	505	500	494
30	397	322	318	389	-	5,440	1,362	1,281	594	514	500	488
31	395	-	307	459	-	4,240	-	1,554	-	516	494	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	12,491	457	352	403	24,780
November	9,695	393	290	323	19,230
December	9,404	356	291	303	18,650
Calendar year 1939	168,632	857	290	462	334,500
January	13,185	845	297	425	26,150
February	13,740	1,394	352	471	27,250
March	33,435	5,440	406	1,073	66,320
April	56,903	2,940	1,198	1,897	112,900
May	65,636	3,228	1,281	2,117	130,200
June	27,155	1,505	512	905	53,860
July	16,284	584	492	525	32,300
August	15,754	520	494	508	31,250
September	14,934	534	486	498	29,620
Water year 1939-40	288,616	5,440	290	789	572,500

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Donner Creek near Truckee, Calif.

Location.- Water-stage recorder, lat. 39°19'15", long. 120°12'10", in SE¼ sec. 16, T. 17 N., R. 16 E., 1 mile downstream from Cold Creek and 1½ miles southwest of Truckee. Altitude of gage, about 5,800 feet (from topographic map).

Drainage area.- 30 square miles.

Records available.- October 1902 to September 1915, April 1928 to September 1940.

Average discharge.- 11 years (1923-35, 1936-40), 59.8 second-feet.

Extremes.- Maximum discharge during year, 1,137 second-feet Mar. 30 (gage height, 4.82 feet); minimum, 3 second-feet on many days in October, August, and September.
1902-15; 1928-40: Maximum discharge, 1,800 second-feet Dec. 11, 1937 (gage height, 6.2 feet on outside gage); minimum, less than 1 second-foot during many summers.

Remarks.- Flow regulated at Donner Lake.

Cooperation.- Record of daily discharge furnished by H. C. Dukes, Federal Court watermaster, in cooperation with Truckee-Carson Irrigation District.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3	83	10	10	168	254	913	256	130	25	5	3
2	3	82	10	10	164	236	741	304	106	23	5	3
3	3	84	10	10	160	224	620	335	97	21	4	3
4	3	62	10	10	156	212	596	320	91	19	4	3
5	3	6	10	21	150	195	224	267	90	18	4	3
6	3	5	10	21	75	125	94	245	94	16	4	3
7	3	5	10	18	8	43	85	245	74	14	4	3
8	3	5	10	15	7	48	76	270	87	13	4	3
9	3	5	10	21	6	51	69	304	75	13	4	3
10	3	5	10	22	6	49	88	310	75	11	4	3
11	4	5	10	23	5	46	114	377	81	10	4	3
12	4	5	10	149	5	44	142	384	122	9	4	3
13	4	5	10	174	5	114	281	377	178	8	4	3
14	4	5	10	152	5	182	335	374	174	8	4	3
15	4	5	10	143	5	180	401	361	166	7	3	3
16	4	5	10	137	4	176	374	361	166	6	3	3
17	4	5	10	125	4	174	357	367	162	7	3	3
18	4	5	10	117	4	110	351	351	152	6	3	3
19	4	5	10	19	4	46	348	316	143	6	3	3
20	4	5	10	13	20	49	345	313	133	6	3	3
21	5	5	10	14	22	54	345	345	99	6	3	3
22	5	5	10	15	26	62	304	354	57	5	3	3
23	5	5	10	5	32	70	225	367	39	5	3	3
24	5	5	10	8	36	82	210	351	36	5	3	3
25	5	5	10	7	36	130	191	320	35	5	3	91
26	8	5	10	27	41	570	178	281	33	5	3	212
27	106	10	10	72	95	920	164	256	30	5	3	185
28	104	10	10	37	216	704	154	245	29	5	3	160
29	92	10	10	34	276	768	176	203	27	5	3	135
30	91	10	10	101	-	1,018	232	124	26	5	3	111
31	91	-	10	172	-	1,007	-	140	-	5	3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	587	106	3	18.9	1,160
November	462	84	5	15.4	916
December	310	10	10	10.0	615
Calendar year 1939	11,624	276	3	31.8	23,060
January	1,702	174	5	54.9	3,380
February	1,741	276	4	60.0	3,450
March	7,941	1,018	43	256	15,750
April	8,733	913	69	291	17,320
May	9,423	384	124	304	18,690
June	2,807	178	26	93.6	5,570
July	302	25	5	9.7	599
August	109	5	3	3.5	216
September	966	212	3	32.2	1,920
Water year 1939-40	35,083	1,018	3	95.9	69,590

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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. Altitude of gage, 4,965 feet (from river-profile map).

Drainage area.- 249 square miles.

Records available.- September 1922 to September 1923 and October 1932 to September 1940, in reports of Geological Survey. September 1922 to September 1923 and October 1929 to September 1936, in reports of State engineer.

Average discharge.- 12 years (1922-23, 1929-40), 85.9 second-feet.

Extremes.- Maximum discharge during year, 1,700 second-feet Feb. 27 (gage height, 5.33 feet); minimum, 4.1 second-feet Aug. 20, 21 (gage height, 0.21 foot).

1922-23, 1932-40: Maximum discharge, 5,030 second-feet Dec. 11, 1938 (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 fair. Diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 11 to Sept. 30)

0.2	4.5	1.2	62	2.3	253	4.2	1,000
.4	9.4	1.4	85	2.6	328	4.6	1,240
.6	17	1.6	113	3.0	447		
.8	28	1.8	148	3.4	595		
1.0	43	2.0	187	3.8	790		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	11	12	158	52	310	555	265	108	17	5.2	5.2
2	8.4	10	14	195	48	270	400	251	100	15	5.9	5.2
3	8.4	11	12	104	53	230	362	310	92	14	6.1	5.4
4	8.6	11	11	108	48	191	345	302	161	13	5.6	6.1
5	8.9	10	11	70	54	156	302	325	73	11	5.6	6.1
6	10	10	12	51	159	150	255	302	62	10	5.9	6.3
7	10	11	12	45	116	152	272	255	56	9.7	5.6	6.3
8	9.4	11	13	41	80	270	323	251	51	8.9	5.6	5.6
9	8.9	11	26	45	75	215	302	263	48	8.9	5.4	7.3
10	8.9	10	47	43	93	152	292	292	42	8.6	5.4	7.3
11	9.7	10	42	38	59	113	290	315	41	8.4	5.4	7.1
12	8.6	10	24	30	61	108	290	323	35	8.4	5.4	6.8
13	8.6	10	21	40	48	115	312	323	31	8.4	5.4	6.6
14	8.6	10	20	23	36	123	356	312	29	8.4	5.0	6.6
15	8.9	9.1	26	20	37	115	397	294	27	8.1	5.2	6.8
16	8.6	8.9	26	19	34	125	323	267	24	8.1	5.2	6.8
17	8.1	9.1	42	18	32	132	305	239	23	8.1	5.2	6.8
18	8.4	9.4	29	20	27	127	315	226	22	8.4	5.0	9.7
19	8.6	9.4	24	23	31	135	334	212	20	7.8	5.0	11
20	8.6	9.4	26	22	33	161	350	208	18	7.3	4.5	9.1
21	8.9	9.4	16	19	36	191	334	200	19	7.3	4.5	8.9
22	8.9	10	13	22	32	221	334	191	18	6.8	5.0	8.4
23	10	12	13	20	27	246	339	181	18	6.3	5.4	8.1
24	10	11	11	20	37	302	307	177	18	5.6	6.1	8.1
25	12	11	11	20	183	498	315	169	17	5.2	5.6	9.7
26	11	12	14	64	480	480	280	161	16	5.4	6.1	9.1
27	13	11	14	100	1,160	865	251	148	15	5.6	5.6	8.4
28	15	11	14	63	1,180	555	246	128	14	5.9	5.4	11
29	14	9.4	26	59	575	498	248	132	14	5.9	5.4	12
30	12	10	64	59	-	865	258	115	15	5.4	5.4	12
31	12	-	73	59	-	790	-	116	-	5.2	5.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	302.6	15	7.6	9.76	600
November	308.1	12	8.9	10.3	611
December	719	73	11	23.2	1,430
Calendar year 1939	21,444.6	665	5.4	58.8	42,540
January	1,618	195	18	52.2	3,210
February	4,886	1,180	27	168	9,690
March	8,861	865	108	286	17,580
April	9,592	555	246	320	19,030
May	7,253	325	115	234	14,390
June	1,227	161	14	40.9	2,430
July	262.1	17	5.2	8.45	520
August	167.3	6.1	4.5	5.40	332
September	233.8	12	5.2	7.79	464
Water year 1939-40	35,429.9	1,180	4.5	96.8	70,290

Peak discharge.- Feb. 27 (10:30 p.m.) 1,700 sec.-ft.; Mar. 27 (8 a.m.) 1,000 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 power plant of R. R. Severin, 700 feet upstream from diversion dam of Conn ditch, a quarter of a mile downstream from Mill Creek, and 2⅛ miles west of Paisley. Datum of gage is 4.504.9 feet above mear sea level (river-profile survey).

Drainage area.- 275 square miles.

Records available.- April to September 1912, May 1924 to September 1940. January 1905 to December 1907, 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 run-off at these sites practically equivalent.

Average discharge.- 30 years (1905-7, 1909-21, 1924-40), 130 second-feet.

Extremes.- Maximum discharge during year, 1,360 second-feet Mar. 30 (gage height, 4.58 feet); minimum, 2.9 second-feet (regulated) Nov. 30 (gage height, 0.90 foot); minimum daily, 10 second-feet Dec. 24, 25.

1905-7, 1909-21, 1924-40: Maximum discharge, 4,000 second-feet (estimated) Nov. 23, 1909 (gage height, 9.40 feet, site and datum then in use); no flow part of Dec. 7, 1927, Dec. 12, 1932 (frozen); minimum daily discharge not determined.

Remarks.- Records good except those for periods of shifting control, which are fair, and those for periods of ice effect or no gage-height record, which are poor. Low flow partly regulated by power plant above station. About 160 acres are irrigated above station.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Feb. 27 to Mar. 29, Apr. 20 to May 13)

1.3	9.5	1.9	55	2.7	218	4.0	920
1.5	18	2.1	82	3.0	335	4.5	1,280
1.7	34	2.4	136	3.5	600		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	28	32	148	53	282	766	436	215	52	23	a18
2	29	28	34	249	53	282	600	474	215	47	23	a18
3	29	29	30	153	72	200	524	546	188	44	22	a18
4	27	24	27	*112	69	185	463	540	174	43	22	a19
5	28	23	25	68	79	168	395	490	158	40	22	a20
6	38	24	34	69	174	155	353	446	143	38	22	a21
7	30	24	31	46	116	160	371	430	136	36	22	a21
8	26	24	32	76	88	226	395	430	126	35	20	a21
9	24	21	68	82	87	185	390	458	120	33	21	a20
10	24	19	88	74	111	166	390	512	114	32	21	a22
11	23	26	82	65	79	132	390	576	105	31	21	a22
12	22	27	35	46	56	130	415	594	98	30	21	a21
13	23	28	55	23	79	130	490	588	93	30	20	a21
14	23	24	44	b21	69	134	570	576	88	30	19	a21
15	23	21	48	b18	68	126	558	552	82	29	20	a21
16	23	23	50	b18	68	134	468	507	78	30	20	a22
17	22	22	67	b17	64	132	502	468	72	30	20	25
18	23	30	39	b18	51	126	540	441	68	30	20	31
19	23	25	43	b21	*50	134	576	415	68	29	19	42
20	23	27	46	b20	46	143	606	405	67	28	18	32
21	23	27	18	b19	52	160	576	390	62	28	18	28
22	23	34	12	b20	62	185	588	366	58	26	18	27
23	23	28	b12	b19	53	209	588	344	53	24	18	26
24	27	25	b10	b19	58	249	540	340	51	24	19	25
25	26	29	b10	82	143	362	518	330	51	24	19	27
26	25	31	b12	102	279	529	474	299	59	24	21	26
27	34	31	b13	82	702	752	463	271	51	25	22	28
28	37	24	b20	59	740	564	458	249	48	25	20	33
29	30	20	64	58	463	696	430	245	47	24	19	35
30	29	32	67	55	-	1,160	420	228	53	23	a19	31
31	28	-	92	59	-	990	-	242	-	23	a18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	812	38	22	26.2	1,610
November	778	34	19	25.9	1,540
December	1,240	92	10	40.0	2,460
Calendar year 1939	26,369	395	10	72.2	52,310
January	1,918	249	17	61.9	3,800
February	4,084	740	46	141	8,100
March	9,185	1,160	126	296	18,220
April	14,817	766	353	494	29,390
May	13,188	594	228	425	26,160
June	2,941	215	47	98.0	5,830
July	967	52	23	31.2	1,920
August	627	23	18	20.2	1,240
September	742	42	18	24.7	1,470
Water year 1939-40	51,299	1,160	10	140	101,700

*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.
Note.- Discharge for periods of shifting control, Feb. 27 to Mar. 29, Apr. 20 to May 13, computed on basis of three discharge measurements.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 (general adjustment of 1929).

Drainage area.- 221 square miles.

Records available.- December 1904 to March 1907, January 1909 to September 1940.

Average discharge.- 30 years (1905-6, 1909-27, 1929-40), including Silver Lake Irrigation District canal, 25.5 second-feet.

Extremes.- Maximum discharge during year, 222 second-feet Feb. 28 (gage height, 3.96 feet); minimum, 0.8 second-foot Nov. 17 (gage height, 1.56 feet).
1904-7, 1909-40: 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 ice effect or backwater from moss, which are fair. Flow regulated by reservoir (capacity, 800 acre-feet), above diversion dam 1½ miles upstream and by Thompson Valley Reservoir (capacity, 17,400 acre-feet), 11 miles upstream, both of which are owned by the Silver Lake Irrigation District.

Rating tables, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Mar. 27 to May 7, Aug. 1-22, Aug. 27 to Sept. 26)

Oct. 1 to Feb. 27				Feb. 28 to Sept. 30					
1.5	0.4	1.8	5.5	1.6	1.5	2.2	27	3.2	123
1.6	1.1	2.0	14.5	1.8	5.9	2.5	51		
				2.0	15	2.8	80		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	1.1	1.4	2.0	2.4	70	71	26	33	50	4.2	3.9
2	1.1	1.1	1.4	2.2	2.4	56	46	28	33	49	4.2	3.9
3	1.1	1.1	1.4	2.3	2.4	45	38	29	30	48	4.2	3.9
4	1.1	1.1	1.4	2.3	2.4	32	37	31	27	48	4.2	3.9
5	1.1	1.2	1.4	2.4	2.4	18	33	31	28	47	3.9	3.9
6	1.1	1.2	1.4	b2.3	2.6	15	31	30	28	47	3.9	3.7
7	1.1	1.1	1.2	b2.6	2.8	17	28	31	30	45	3.9	3.7
8	1.1	1.1	1.6	2.6	3.0	20	23	34	33	40	3.9	3.7
9	1.1	1.1	1.8	2.4	3.0	22	23	34	36	40	3.9	3.7
10	1.1	1.2	1.7	2.4	3.3	21	22	33	40	40	4.2	3.9
11	1.1	1.1	1.6	b2.3	3.6	16	22	34	39	39	4.2	3.9
12	1.1	1.1	1.6	b2.6	b3.3	9.2	22	36	40	38	4.2	3.9
13	1.0	1.1	1.6	3.9	3.6	10	22	36	46	36	4.2	3.9
14	1.0	1.1	1.6	5.8	3.6	9.6	22	37	40	36	4.2	3.9
15	1.0	1.1	1.6	7.0	b3.3	8.8	22	38	54	28	4.2	4.2
16	1.1	1.2	1.6	7.4	3.0	8.8	22	36	50	19	4.5	3.1
17	1.0	1.2	1.6	7.8	3.0	8.8	23	36	48	20	4.5	2.8
18	1.0	1.6	1.6	6.6	b3.0	8.8	22	36	46	22	4.5	2.8
19	1.0	1.6	1.6	5.2	b3.0	8.0	23	36	45	19	4.5	2.8
20	1.0	1.6	1.4	3.6	b2.8	8.0	23	36	45	13	4.5	2.8
21	1.0	1.6	2.2	6.2	b2.8	8.0	23	36	45	11	4.5	2.8
22	1.0	1.4	2.0	7.0	2.8	8.0	22	36	45	10	4.5	2.8
23	1.0	1.4	2.4	4.8	2.8	8.4	22	36	44	8.8	4.5	2.6
24	1.1	1.6	3.0	3.6	2.8	9.6	22	36	45	5.6	4.5	2.5
25	1.1	1.4	5.8	3.6	2.6	12	22	36	48	5.3	4.5	2.3
26	1.1	1.4	3.3	3.3	3.6	16	22	36	49	5.3	4.5	2.3
27	1.1	1.2	5.2	2.6	10	54	21	36	48	5.1	4.2	2.3
28	1.1	1.2	5.2	2.3	92	40	22	36	49	4.8	4.2	2.3
29	1.1	1.6	2.6	2.4	88	46	25	36	49	4.5	4.2	2.3
30	1.1	1.4	2.2	2.4	-	91	25	35	49	4.5	4.2	2.3
31	1.1	-	1.8	2.4	-	110	-	33	-	4.2	4.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	33.1	1.1	1.0	1.07	66
November	38.2	1.6	1.1	1.27	76
December	66.2	5.8	1.2	2.14	131
Calendar year 1939	2,373.2	33	1.0	6.50	4,710
January	116.3	7.8	2.0	3.75	231
February	266.3	92	2.4	9.18	528
March	815.0	110	8.0	26.3	1,620
April	801	71	21	26.7	1,590
May	1,060	38	26	34.2	2,100
June	1,242	54	27	41.4	2,460
July	793.1	50	4.2	25.6	1,570
August	132.0	4.5	3.9	4.26	262
September	96.8	4.2	2.3	3.23	192
Water year 1939-40	5,460.0	110	1.0	14.9	10,830

b Stage-discharge relation affected by ice.
Note.- Backwater from moss Mar. 27 to May 7, Aug. 1-22, Aug. 27 to Sept. 26; discharge computed on basis of five discharge measurements.

Silver Lake Irrigation District canal near Silver Lake, Oreg.

Location.- Staff gage, lat. 43°05', long. 121°05', in NE¼ sec. 5, T. 29 S., R. 14 E., at diversion dam of Silver Lake Irrigation District, 2½ miles southwest of Silver Lake post office.

Records available.- October 1922 to September 1928, October 1929 to September 1940.

Average discharge.- 17 years, 4.43 second-feet.

Extremes.- Maximum discharge observed during year, 13 second-feet June 9, 17-24 (gage height, 0.96 foot); no flow at times.
1922-28, 1929-40: Maximum discharge observed, 60 second-feet June 26-29, 1923; no flow at times.

Remarks.- Records good to July 20 except those for days of no gage-height record, which are fair; poor thereafter. Canal diverts from Silver Creek water that is released from Thompson Valley Reservoir.

Cooperation.- Gage readings furnished by Silver Lake Irrigation District.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	4.8	a6.8	5.4	3.5	
2							0	a4.8	a6.8	a5.4		
3							0	5.4	8.8	a5.4		
4							0	a6.5	a10	a5.4		
5							0	a6.5	11	a5.4		
6							0	a6.5	a11	5.4		
7							0	a6.5	a11	a5.4		
8							0	6.5	**a11**	a5.4		a3.8
9							0	a6.5	12	a5.4		
10							0	a6.5	a12	5.4		
11							0	a6.5	12	a5.4		
12							0	3.0	**a12**	a5.4	a4.0	
13							0	0	5.0	a5.4		
14							0	2.4	3.8	a5.4		
15							0	6.0	a9.2	4.7		2.0
16							0	7.2	a9.2	a3.7		0
17							0	6.1	11	a3.6		0
18							0	5.8	a13	a3.5		0
19							0		a13	a3.4		0
20							0		13	3.4		0
21							0		a13			0
22							0		a13			0
23							0		a13		4.6	0
24							0		9.1			0
25							1.3	a5.6	6.5			0
26							3.3		**a6.4**	a3.4		0
27							4.8		a6.2		a4.4	0
28							a4.8		a6.0			0
29							a4.8		5.8			0
30							a4.8		a5.6			0
31							-	6.2	-			-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1939	2,112.5	35	0	5.79	4,190
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	23.8	4.8	0	.79	47
May	170.9	7.2	0	5.51	339
June	286.2	13	3.8	9.54	568
July	135.3	5.4	3.4	4.36	268
August	127.3	4.6	3.5	4.11	252
September	55.2	-	0	1.84	109
Water year 1939-40	798.7	13	0	2.18	1,580

a No gage-height record; discharge interpolated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Silvies River near Burns, Oreg.

Location.- Water-stage recorder, lat. 43°43', long. 119°10', 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 1940.

Average discharge.- 27 years (1903-5, 1909-12, 1917-21, 1922-40), 132 second-feet.

Extremes.- Maximum discharge during year, 1,500 second-feet Feb. 29 (gage height, 12.49 feet); minimum, 2 second-feet Aug. 15.
1903-6, 1908-40: 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 or no gage-height record, and those below 10 second-feet, all of which are poor. Small areas on Silvies River above station are irrigated with flood water.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Dec. 10, July 15 to Aug. 19, Sept. 19-30)

0.7	2.1	1.5	33	3.0	153	7.0	545
.8	3.1	1.8	53	4.0	243	8.0	660
1.0	8.0	2.2	83	5.0	342	10.0	960
1.2	17	2.6	117	6.0	442	12.0	1,380

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	6	8	42	35	600	1,290	342	37	5	5	3
2	4	6	10	47	35	442	1,180	322	36	6	4	3
3	5	6	10	58	36	382	1,080	272	35	6	3	4
4	4	6	9	59	49	322	960	262	34	7	3	5
5	5	6	10	50	47	302	843	252	32	6	3	6
6	7	5	9	38	71	262	751	216	30	6	3	6
7	8	6	9	38	194	262	697	202	27	5	3	5
8	7	6	10	37	162	322	811	198	26	5	3	5
9	7	6	14	38	122	302	859	176	24	4	3	5
10	6	6	16	40	115	282	891	162	24	4	3	5
11	6	6	b16	33	126	243	875	140	22	3	3	5
12	5	6	*b13	29	90	212	827	126	20	3	3	5
13	6	6	b10	27	86	198	751	108	18	3	3	6
14	7	6	b13	b23	81	198	723	101	14	3	3	6
15	7	6	20	b21	71	225	697	83	12	5	3	6
16	6	5	22	b17	61	252	648	76	12	6	3	6
17	6	5	23	b13	66	282	600	70	10	5	3	6
18	6	6	26	b16	55	292	567	81	10	5	3	7
19	6	7	20	b19	56	312	523	78	10	6	3	8
20	6	7	b20	b18	55	342	502	75	9	6	3	8
21	7	7	b19	b18	54	362	482	69	8	6	3	8
22	7	8	b17	*b17	56	402	462	65	8	6	3	8
23	6	8	b13	b20	54	442	442	52	7	6	3	7
24	6	8	b15	b22	55	a475	422	52	7	5	3	7
25	6	7	b13	b25	62	a600	412	51	6	5	3	6
26	6	8	b11	29	207	a900	392	51	6	5	3	6
27	6	9	b7	32	660	a1,300	382	47	6	6	3	6
28	6	10	b10	34	1,250	a1,050	362	43	5	6	3	6
29	7	6	16	34	1,270	a900	352	41	5	6	3	7
30	8	7	21	34	-	1,330	342	38	5	6	3	7
31	7	-	35	32	-	1,360	-	38	-	7	3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	190	8	4	6.1	377
November	197	10	5	6.6	391
December	465	35	7	15.0	922
Calendar year 1939	37,031	1,180	2	101	73,440
January	960	59	13	31.0	1,900
February	5,281	1,270	35	182	10,470
March	15,155	1,360	198	489	30,060
April	20,125	1,290	342	671	39,920
May	3,889	342	38	125	7,710
June	505	37	5	16.8	1,000
July	163	7	3	5.3	323
August	96	5	3	3.1	190
September	178	8	3	5.9	353
Water year 1939-40	47,204	1,360	3	129	93,620

Peak discharge.- Feb. 29 (1 to 4 a.m.) 1,500 sec.-ft.
*Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Malheur River near Drewsey.
b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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., 1⅛ miles upstream from upper diversions for Malheur Migratory Waterfowl Refuge, 2 miles downstream from Fish Creek, and 3⅛ miles southeast of Frenchglen.

Drainage area.- 180 square miles.

Records available.- December 1937 to September 1940. 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.

Extremes.- Maximum discharge during year, 1,570 second-feet Mar. 30 (gage height, 5.27 feet), from rating curve extended above 650 second-feet; minimum discharge, 8 second-feet Jan. 14 (gage height, 1.62 feet), caused by ice jams upstream.

1909-21, 1937-40: Maximum discharge, about 2,200 second-feet Mar. 3. 1921 (gage height, 6.6 feet, from floodmark, site and datum then in use), from rating curve extended above 500 second-feet; minimum, that of Jan. 14, 1940.

Remarks.- Records good except those for periods of ice effect, plugged inlet, and no gage-height record, all of which are poor. No diversions or regulation above station.

Cooperation.- Records collected in cooperation with U. S. Fish and Wildlife Service October to June; recorder inspected by employee of U. S. Fish and Wildlife Service July to September.

Rating tables, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 25				Feb. 26 to Sept. 30					
0.8	16	2.7	120	0.8	16	2.4	66	3.3	340
2.0	27	3.0	210	2.0	27	2.7	120	3.6	495
2.2	42	3.3	325	2.2	43	3.0	210	4.0	720
2.4	65								

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	35	33	66	38	120	534	192	290	78	33	27
2	36	34	32	51	37	100	310	254	254	65	32	27
3	35	34	32	46	39	90	270	330	222	65	32	27
4	33	33	32	45	40	85	250	300	206	61	31	41
5	33	32	31	40	38	81	218	254	189	56	31	41
6	36	33	31	36	48	94	200	254	186	53	30	38
7	36	34	30	35	49	83	206	270	182	50	30	38
8	34	33	30	43	40	*105	203	290	154	48	30	35
9	33	33	33	40	40	81	200	395	157	46	30	32
10	33	30	36	39	45	66	182	506	172	44	30	32
11	33	33	*34	33	40	62	178	550	192	43	29	32
12	33	33	27	b33	36	59	192	572	206	42	29	31
13	33	33	33	18	42	56	230	561	214	40	30	39
14	32	32	32	22	40	54	282	528	189	39	30	37
15	32	30	33	28	38	52	290	490	172	39	30	34
16	32	32	33	32	35	50	254	435	160	38	30	33
17	32	31	33	33	40	60	238	420	145	38	30	34
18	32	31	29	35	b33	65	250	410	145	39	29	40
19	32	30	34	36	b32	70	282	410	140	39	29	53
20	32	31	33	36	b30	80	305	415	125	38	29	51
21	32	32	30	33	b33	100	290	370	97	38	28	48
22	32	33	19	34	40	120	310	385	92	37	28	40
23	32	32	25	*36	36	140	305	425	80	37	28	37
24	33	32	29	38	37	180	282	440	75	37	28	36
25	33	32	22	40	296	250	278	425	72	36	30	39
26	33	33	31	68	258	400	258	345	72	36	30	36
27	36	33	37	62	200	360	234	315	66	36	29	35
28	40	30	39	48	250	320	222	290	62	33	29	36
29	40	28	43	41	170	340	214	274	60	27	30	39
30	36	34	47	40	-	573	196	282	65	33	28	42
31	36	-	43	37	-	622	-	274	-	33	28	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,045	40	30	33.7	2,070
November	966	35	28	32.2	1,920
December	1,006	47	19	32.5	2,000
Calendar year 1939	33,773	761	19	92.5	67,000
January	1,224	68	18	39.5	2,430
February	2,100	296	30	72.4	4,170
March	4,918	622	50	159	9,750
April	7,663	534	178	255	15,200
May	11,661	572	192	376	23,130
June	4,441	290	60	148	8,810
July	1,345	78	27	43.4	2,670
August	920	33	28	29.7	1,820
September	1,110	53	27	37.0	2,200
Water year 1939-40	38,399	622	18	105	76,170

Peak discharge.- Feb. 25 (9 p.m.) 820 sec.-ft.; Mar. 26 (date estimated, recorder stopped but range of stage defined) 810 sec.-ft.; Mar. 30 (10 p.m.) 1,570 sec.-ft.

*Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.- No gage-height record or inlet action faulty Feb. 21 to Mar. 4, Mar. 12-28; discharge computed on basis of recorded range of stage, weather records, and records for Silvies River near Burns and Trout Creek near Denio.

Donner und Blitzen River near Voltage, Oreg.

Location.- Water-stage recorder, lat. 43°16', long. 118°51', in SW¼ sec. 2, T. 27 S., R. 31 E., just downstream from Sodhouse diversion dam of U. S. Fish and Wildlife Service, 1½ miles south of Sodhouse lane and headquarters of Malheur Migratory Waterfowl Refuge, and 2 miles southwest of former post office at Voltage. Datum of gage is 4,097.58 feet above mean sea level (surveys of U. S. Biological Survey). Auxiliary staff gage at bridge at Sodhouse lane; datum of gage is 4,091.17 feet above mean sea level (general adjustment of 1929).

Records available.- February 1938 to September 1940 (discontinued). April 1916 to June 1919, March 1921 to June 1922, fragmentary records at site 1½ miles downstream, including diversions and overflow through 16 culverts crossing Sodhouse lane.

Extremes.- Maximum discharge observed during year, 274 second-feet in the latter part of September, while clock was stopped (gage height, 3.67 feet, caused by break in temporary dam); minimum discharge not determined.

1916-19, 1921-22, 1937-40: Maximum discharge observed, 800 second-feet May 21, 1917 (gage height, 3.3 feet, site and datum then in use); little or no flow at times, June to August 1918.

Remarks.- Records good October to April except those below 50 second-feet, which are fair; records poor May to September. Most of river flow diverted above station for irrigation and for flooding waterfowl refuge; Kado and Springer canals divert water below station.

Cooperation.- Records collected in cooperation with U. S. Fish and Wildlife Service (formerly U. S. Biological Survey) October to June; recorder inspected by employee of U. S. Fish and Wildlife Service, July to September.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 11 to July 23)

0.4	9	1.3	54	2.5	147
.6	16	1.6	75	3.0	199
.8	25	1.9	96	3.5	254
1.0	36	2.2	120		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	26	25	77	72	198	119	15	14	14		
2	12	34	26	88	71	118	159	16	16	12		
3	11	36	26	91	72	100	147	15	16	10		
4	11	34	26	90	72	98	120	15	17	14		
5	11	33	25	81	74	68	83	14	18	22		
6	10	32	24	78	74	56	90	14	15	16		
7	10	32	25	76	77	76	93	14	14	13		
8	11	31	44	63	85	41	93	12	14	18		
9	11	31	47	70	77	12	94	11	16	8		
10	10	31	*43	76	74	10	81	11	18	14		
11	11	30	50	72	76	14	86	10	18	32		
12	13	28	52	64	74	16	43	12	22	27		
13	12	29	52	b38	50	11	35	12	23	30		
14	21	29	61	b42	53	10	22	13	24	27		
15	40	28	53	b45	56	10	16	13	20	17	a3	a6
16	41	28	53	b46	43	10	12	14	a17	8		
17	38	28	52	b49	38	10	10	14	a15	6		
18	33	28	52	b52	37	10	10	12	a13	23		
19	27	28	56	b52	37	10	10	12	10	24		
20	14	28	53	b52	35	13	11	12	10	22		
21	10	28	52	b52	32	14	13	12	12	19		
22	9	29	47	*b50	32	14	15	12	12	11		
23	10	30	b33	b52	35	14	15	14	12	7		
24	16	29	b38	53	36	12	14	13	12			
25	15	29	b45	b56	35	11	14	17	12			
26	14	28	b33	62	80	52	14	66	14			
27	13	40	b46	87	182	61	14	92	14	a2		
28	13	35	54	b104	220	102	14	88	14			
29	12	26	62	93	246	100	15	86	13			
30	12	25	71	83	-	55	14	79	12			
31	14	-	78	76	-	60	-	47	-			-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	497	41	9	16.0	986
November	903	40	25	30.1	1,790
December	1,404	78	24	45.3	2,780
Calendar year 1939	19,71e	416	5	54.0	39,100
January	2,070	104	38	66.8	4,110
February	2,145	246	32	76.0	4,250
March	1,388	198	10	44.8	2,750
April	1,476	159	10	49.2	2,930
May	787	92	10	25.4	1,560
June	457	24	10	15.2	906
July	410	32	-	13.2	813
August	93	-	-	3	184
September	180	-	-	6	357
Water year 1939-40	11,810	246	-	32.3	23,420

*Winter discharge measurement made on this day.
a No gage-height record; discharge interpolated or computed on basis of discharge measurements made on Aug. 19 and Oct. 2, and recorded peak discharge.
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. 32⅛ E., at mouth of canyon, 1,000 feet upstream from road crossing and 3⅛ miles northeast of Frenchglen.

Records available.- March 1911 to September 1916, December 1937 to September 1940.

Extremes.- Maximum discharge during year, 34 second-feet Mar. 26 (gage height, 1.37 feet); minimum recorded, 8 second-feet Dec. 29 to Jan. 25, Mar. 10-15.
1911-16, 1937-40: Maximum discharge observed, 230 second-feet (estimated) sometime during Mar. 16-18, 1939 (gage height, 3.30 feet, from floodmark); minimum observed, 7 second-feet Feb. 24, 25, 1912, Dec. 30, 1937, to Jan. 4, 1938.

Remarks.- Records good except those for October, February, March, July to September, which are fair. No diversion or regulation above station. Base flow is maintained by large springs.

Cooperation.- Records collected in cooperation with U. S. Fish and Wildlife Service to June 30. Water-stage recorder inspected by employee of U. S. Fish and Wildlife Service, July to September.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Feb. 25 to Mar. 10, June 26 to Sept. 19)

0.9	6.4	1.2	21
1.0	10.0	1.3	28
1.1	14.8		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		10	10	8	10	12	20	16	10	10	9	9
2		10	10	8	10	12	19	17	10	10	9	9
3		10	10	8	10	11	20	19	10	10	9	10
4		10	10	8	10	11	19	19	10	10	9	10
5		10	10	8	10	11	19	17	10	10	9	10
6		10	10	8	10	10	19	16	10	10	9	9
7		10	9	8	10	10	19	15	10	10	9	9
8		10	9	8	10	19	19	14	10	10	9	9
9		10	9	9	10	13	19	14	10	10	9	9
10		10	9	9	10	10	18	13	10	10	9	9
11		10	9	8	10	9	17	13	10	10	9	9
12		10	9	8	10	8	17	13	10	10	9	9
13		10	9	8	10	8	16	12	10	10	9	10
14		10	9	8	10	9	16	12	11	10	9	10
15		10	9	8	10	9	17	12	11	10	9	10
16	10.5	11	9	8	9	10	18	11	11	10	9	10
17		11	9	8	9	10	20	11	10	10	9	10
18		11	9	8	9	10	19	10	10	10	10	10
19		11	9	8	9	10	19	10	10	10	10	18
20		11	9	8	9	11	19	10	10	10	10	12
21		11	9	8	9	11	19	10	10	10	10	11
22		11	9	8	9	11	20	10	10	10	10	11
23		11	9	8	9	11	20	10	10	10	10	11
24		11	9	8	9	12	19	10	10	10	10	11
25		11	9	9	17	18	19	10	10	10	10	11
26		11	9	9	18	19	18	10	10	10	10	11
27		11	9	9	14	22	17	10	10	10	10	11
28		10	9	9	14	19	17	10	10	10	10	11
29		10	8	9	13	19	17	10	10	10	10	11
30		10	8	9	-	19	17	10	10	9	10	11
31		-	8	9	-	22	-	10	-	9	9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	326	-	-	10.5	647
November	312	11	10	10.4	619
December	282	10	8	9.1	559
Calendar year 1939	4,830	120	-	13.2	9,580
January	257	9	8	8.3	510
February	307	18	9	10.6	609
March	396	22	8	12.8	785
April	552	20	16	18.4	1,090
May	384	19	10	12.4	762
June	303	11	10	10.1	601
July	308	10	9	9.9	611
August	292	10	9	9.4	579
September	311	18	9	10.4	617
Water year 1939-40	4,030	22	8	11.0	7,990

Note.- Flow diverted around station Oct. 1-30, during construction of control. No gage-height record Oct. 1-31, Mar. 2-7; discharge computed on basis of discharge measurement made on Oct. 3, weather records, and records for Silvies River near Burns.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 4,351.52 feet above mean sea level (general adjustment of 1929).

Records available.- March 1911 to March 1912, April 1922 to November 1923, April 1925 (revised) to September 1940 (incomplete prior to 1932).

Average discharge.- Maximum discharge during year, 107 second-feet May 11 (gage height, 3.21 feet); minimum, 0.5 second-foot Sept. 1-3.
1911-12, 1922-23, 1925-40: 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 good except those for periods of uncertain gage-height record or shifting control, which are fair, and those for periods of no gage-height record, which are poor. Some diversions above station for irrigation of small fields; large diversions below station for irrigation.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Apr. 26 to May 10)

1.2	0.6	1.8	6.6	2.6	46
1.4	1.3	2.0	12	2.9	75
1.6	2.9	2.3	25	3.2	106

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	3.4	3.9	6.8	4.5	16	29	49	22	8.4	1.5	0.5
2	3.5	2.9	3.9	5.8	4.5	15	27	63	20	7.1	1.5	.5
3	4.2	2.8	3.4	6.0	5.1	13	26	77	18	6.2	1.4	.5
4	3.1	2.7	3.2	6.0	5.1	12	20	74	18	6.0	1.3	1.3
5	3.2	2.5	3.2	5.1	4.9	12	16	71	16	4.9	1.2	1.5
6	5.1	2.4	3.2	3.9	5.3	11	18	63	14	4.3	1.2	1.5
7	4.9	2.3	3.4	3.5	5.6	11	19	61	13	3.4	1.1	1.5
8	4.0	2.3	3.4	6.2	4.9	11	20	64	11	2.7	1.1	1.5
9	3.7	2.4	4.0	5.8	5.3	11	22	73	11	2.0	1.0	2.0
10	3.5	2.3	4.0	5.1	5.1	12	22	85	11	1.8	1.0	2.1
11	3.5	2.3	4.0	4.3	4.3	11	17	84	9.7	1.8	1.0	2.0
12	3.7	2.2	3.2	4.3	3.9	10	11	84	9.4	1.7	1.0	1.8
13	3.5	2.2	4.0	3.4	5.3	10	18	86	9.1	2.0	.9	2.0
14	3.5	2.2	4.2	2.1	5.1	10	30	76	8.1	2.1	.8	2.3
15	3.2	2.2	4.2	3.7	5.8	9.4	45	75	7.8	1.7	.9	2.3
16	2.2	3.7	4.0	a4	4.7	9.4	37	66	8.6	1.4	.9	2.5
17	1.6	4.2	4.0	a5	5.8	8.8	36	58	9.4	1.3	.9	2.6
18	1.4	4.2	3.2	a6	4.3	8.6	37	54	8.1	2.1	.9	4.5
19	1.4	4.2	3.4	a6	4.9	8.8	45	46	7.8	1.9	.8	9.1
20	1.5	3.9	4.2	a4	4.0	9.4	59	46	8.1	1.9	.7	10
21	1.6	3.7	3.2	a4	4.0	10	60	41	7.8	1.7	.7	6.2
22	1.7	4.2	2.4	b3.7	6.0	11	61	38	7.8	1.3	.7	4.9
23	1.9	4.2	1.9	4.3	5.3	13	65	35	8.4	1.2	.7	4.2
24	2.1	3.7	2.3	4.9	5.1	15	60	34	8.1	1.1	.7	4.0
25	2.3	4.2	a2	5.1	5.8	20	59	35	7.1	1.0	.8	4.9
26	2.4	4.2	a2	6.2	6.8	30	70	32	7.1	1.1	.9	4.0
27	2.6	4.2	a2	5.8	16	29	60	28	7.4	1.3	.8	3.5
28	3.2	4.2	a3	4.9	18	27	54	27	7.1	1.2	.9	3.9
29	3.7	3.9	a4	4.5	18	27	53	26	6.4	1.3	.7	4.2
30	3.9	4.0	4.7	4.5	-	26	48	25	7.1	1.6	.7	4.2
31	3.9	-	6.2	4.5	-	29	-	24	-	1.6	.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	91.9	5.1	1.4	2.96	182
November	97.8	4.2	2.2	3.26	194
December	107.7	6.2	1.9	3.47	214
Calendar year 1939	2,907.1	46	.5	7.96	5,770
January	149.4	6.8	2.1	4.82	296
February	183.4	18	3.9	6.32	364
March	456.4	30	8.6	14.7	905
April	1,144	70	11	38.1	2,270
May	1,700	86	24	54.8	3,370
June	314.4	22	6.4	10.5	624
July	79.6	8.4	1.0	2.57	158
August	29.3	1.5	.6	.95	58
September	96.0	10	.5	3.20	190
Water year 1939-40	4,449.9	86	.5	12.2	8,820

a No gage-height record; discharge computed on basis of records for Donner und Blitzen River near Frenchglen.
b Stage-discharge relation affected by ice.
Note.- Gage-height record uncertain Oct. 1 to Nov. 16 because of sluggish inlet. Discharge for period of shifting control, Apr. 26 to May 10, computed on basis of one discharge measurement.

In addition to the records of stream flow obtained at gaging stations in the Great Basin and reported in the preceding pages, measurements of flow were made at other points, as shown in the following table:

Miscellaneous discharge measurements in the Great Basin during the water year October 1939 to September 1940

Great Salt Lake Basin

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
Oct. 9	Devil Creek (below Evans dividers).	Malad River.....	Sec. 35, T. 13 S., R. 36 E., 3 miles northeast of Malad, Idaho.	2.41
Nov. 13	....do.....	....do.....	....do.....	3.19
Jan. 9	....do.....	....do.....	....do.....	*.50
Mar. 8	....do.....	....do.....	....do.....	*.10
26	....do.....	....do.....	....do.....	6.70
Apr. 27	....do.....	....do.....	....do.....	8.27
May 24	....do.....	....do.....	....do.....	4.61
June 21	....do.....	....do.....	....do.....	4.55
28	....do.....	....do.....	....do.....	0
July 27	....do.....	....do.....	....do.....	1.87
Aug. 29	....do.....	....do.....	....do.....	3.86
Sept.20	....do.....	....do.....	....do.....	1.24
Oct. 9	Spring Creek (below Evans dividers).	Devil Creek.....	....do.....	2.26
Nov. 13	....do.....	....do.....	....do.....	3.35
Jan. 9	....do.....	....do.....	....do.....	8.62
Mar. 8	....do.....	....do.....	....do.....	9.54
26	....do.....	....do.....	....do.....	7.70
Apr. 27	....do.....	....do.....	....do.....	3.88
May 24	....do.....	....do.....	....do.....	6.77
June 21	....do.....	....do.....	....do.....	.51
28	....do.....	....do.....	....do.....	5.99
July 27	....do.....	....do.....	....do.....	1.29
Aug. 29	....do.....	....do.....	....do.....	1.14
Sept.20	....do.....	....do.....	....do.....	4.11
Mar. 19	Farmington Creek	Great Salt Lake..	NW¼ sec. 17, T. 3 N., R. 1 E., at Intermountain Forest & Range experiment station gage, at mouth of canyon 1½ miles northeast of Farmington, Utah.	4.2
29	....do.....	....do.....	....do.....	15.6
July 2	Strawberry tunnel.	Sixthwater Creek.	Sec. 34, T. 7 S., R. 6 E., at west portal (outlet) at water commissioner's gage, 18 miles northeast of Thistle, Utah.	167

*Estimated.

Sevier Lake Basin

Oct. 6	Mammoth Creek...	Sevier River.....	NE¼ sec. 6, T. 37 S., R. 5 W., at bridge on U. S. Highway 89, 2 miles southwest of Hatch, Utah.	37.3
Nov. 6	....do.....	....do.....	....do.....	24.4
Dec. 14	....do.....	....do.....	....do.....	23.5
Feb. 8	....do.....	....do.....	....do.....	14.6
Mar. 13	....do.....	....do.....	....do.....	17.3
Apr. 24	....do.....	....do.....	....do.....	93.7
June 12	....do.....	....do.....	....do.....	21.6
July 10	....do.....	....do.....	....do.....	13.4

Salton Sea Basin

Oct. 17	Andreas Canyon..	Palm Canyon Creek	Mouth, near Palm Springs, Calif.....	*0.3
Nov. 15	....do.....	....do.....	....do.....	*.2

*Estimated.

Antelope Valley Basin

Jan. 16	Punch Bowl Creek	Rock Creek.....	Mouth, near Valyermo, Calif.....	*0.3
Feb. 29	....do.....	....do.....	....do.....	2.5
July 6	....do.....	....do.....	....do.....	0

*Estimated.

Abert Lake Basin

June 12	Small Creek.....	Chewaucan River..	Mouth, at Paisley, Oreg.....	39.8

Summer Lake Basin

June 14	Ana River.....	Summer Lake.....	NE¼ sec. 8, T. 30 S., R. 17 E., above Carlon Ranch, near Summer Lake, Oreg.	37.7

Silver Lake Basin

June 11	Guyer Creek.....	Silver Creek.....	NW¼ sec. 19, T. 30 S., R. 14 E., near Silver Lake, Oreg.	3.8

Guano Lake Basin

Apr. 30	Guano Creek.....	Guano Lake.....	NW¼ sec. 28, T. 37 S., R. 26 E., Oregon..	9.0

Malheur and Harney Lakes Basin

Apr. 24	Silvies River...	Malheur Lake.....	Sec. 2, T. 17 S., R. 31 E., 1 mile south of Seneca, Oreg.	138
Mar. 4	East Fork of Silvies River (distributary)	....do.....	Sec. 35, T. 24 S., R. 32 E., near Lawen, Oreg.	32.7
Apr. 24	Bear Creek.....	Silvies River....	Sec. 35, T. 16 S., R. 31 E., near Seneca, Oreg.	54.5

Miscellaneous discharge measurements in the Great Basin during the water year October 1939 to September 1940--Continued

Malheur and Harney Lakes Basin--Continued

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
Mar. 24	Silver Creek....	Harney Lake.....	Sec. 30, T. 22 S., R. 26 E., at Cecil Ranch, near Suntex, Oreg.	204
May 18	....do.....	....do.....	....do.....	15.1
7	East Fork of Silver Creek.	Braided channel of Silver Creek	Sec. 30, T. 22 S., R. 26 E., near Suntex, Oreg.	20.2
13	....do.....	....do.....	....do.....	14.0
21	....do.....	....do.....	....do.....	8.1
25	....do.....	....do.....	....do.....	8.1
7	West Fork of Silver Creek.	....do.....	....do.....	14.1
13	....do.....	....do.....	....do.....	10.6
21	....do.....	....do.....	....do.....	4.2
25	....do.....	....do.....	....do.....	3.0
6	Rattlesnake Creek.	Malheur Lake.....	Sec. 7, T. 22 S., R. 32½ E., above James Ranch, near Harney, Oreg.	5.4
6	....do.....	....do.....	Sec. 18. T. 22 S., R. 32½E., at Thompson Ranch, near Harney, Oreg.	6.8
Mar. 25	....do.....	....do.....	Sec. 19, T. 22 S., R. 32½E., near Harney, Oreg.	40.2
28	....do.....	....do.....	....do.....	83.0
28	Cow Creek.....	....do.....	Sec. 25, T. 22 S., R. 32½ E., near Harney, Oreg.	76.4
Apr. 5	....do.....	....do.....	....do.....	46.6
May 6	....do.....	....do.....	....do.....	6.0
Apr. 28	Donner und Blitzen River.	....do.....	Sec. 8, T. 32 S., R. 32½ E., below P Ranch diversion, Oreg.	81.2
May 28	....do.....	....do.....	....do.....	131
June 15	....do.....	....do.....	....do.....	73.6
May 28	....do.....	....do.....	Sec. 26, T. 29 S., R. 31 E., below Grain Camp, above Kiger Creek, Oreg.	99.3
Aug. 19	....do.....	....do.....	Sec. 35, T. 26 S., R. 31 E., below Sodhouse Lane, Oreg.	2.6
May 16	Kiger Creek.....	Donner und Blitzen River.	Sec. 10, T. 30 S., R. 33 E., above Haines Ranch, near Diamond, Oreg.	118
June 15	....do.....	....do.....	....do.....	37.0
May 16	McCoy Creek.....	Kiger Creek.....	Sec. 1, T. 30 S., R. 32 E., near Diamond, Oreg.	138
June 15	....do.....	....do.....	....do.....	29.8
Jan. 23	Sodhouse Spring.	Donner und Blitzen River.	Below Sodhouse Lane, near Voltage, Oreg..	8.6

Catlow Valley Basin

Apr. 14	Rock Creek.....	Catlow Valley....	Sec. 16, T. 35 S., R. 26 E., just below Willow Creek and above Lyons Ranch, Oreg.	14.9
29	....do.....	....do.....	....do.....	11.6
May 29	....do.....	....do.....	....do.....	6.7
Apr. 29	....do.....	....do.....	NE¼ sec. 3, T. 35 S., R. 26 E., below Lyons Ranch, Oreg.	10.9
May 29	....do.....	....do.....	....do.....	3.2
Apr. 14	....do.....	....do.....	Sec. 28 or 29, T. 34 S., R. 27 E., above Fluke Ranch, Oreg.	12.2
14	....do.....	....do.....	....do.....	13.8
29	....do.....	....do.....	....do.....	10.9
May 28	....do.....	....do.....	....do.....	2.4
Apr. 14	....do.....	....do.....	Sec. 15 or 22, T. 34 S., R. 27 E., below Fluke Ranch, Oreg.	11.8
29	....do.....	....do.....	....do.....	10.6
May 28	....do.....	....do.....	....do.....	1.8
Apr. 29	....do.....	....do.....	Sec. 19, T. 33 S., R. 29 E., above Belgian Ranch, Oreg.	8.3
14	....do.....	....do.....	Sec. 13, T. 33 S., R. 29 E., 4 miles above Rock Creek Ranch, near Blitzen, Oreg.	9.6
15	....do.....	....do.....	....do.....	16.3
19	....do.....	....do.....	....do.....	12.7
19	....do.....	....do.....	Sec. 28, T. 33 S., R. 30 E., near Blitzen, Oreg.	3.9

Alvord Lake Basin

Apr. 18	Trout Creek.....	Alvord Lake.....	Sec. 16, T. 39 S., R. 37 E., below Little Trout Creek, above Defenbach Ranch, near Fields, Oreg.	40.7
18	....do.....	....do.....	Sec. 17, T. 39 S., R. 37 E., below Wallace Ranch, near Fields, Oreg.	35.9
Mar. 12	....do.....	....do.....	Sec. 28, T. 39 S., R. 36 E., above South Branch distributary, near Fields, Oreg.	12.2

Some of the pages of this report carry at the bottom a form number and other matter that should have been masked out before the pages were photographed for printing by the offset method. Although this mars the appearance, it does not impair the integrity of the tables. As withholding for change would involve considerable delay and added expense to the Government, the Geological Survey is releasing the report with regret for its appearance.

DECEMBER 1941.