Surface Water Supply of the United States 1947

Part 13. Snake River Basin

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

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PREFACE

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

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SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of stage and flow made on streams, lakes, and reservoirs in the United States during the water year ending September 30, 1947. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of the flow of streams and of the stage and contents of lakes and reservoirs have been made at about 11,100 gaging stations in the 48 States and also at many in the Territories of Alaska and Hawaii. In July 1947, 5,810 gaging stations, including those in Hawaii, were being maintained by the Geological Survey and cooperating organizations. Miscellaneous discharge measurements were made during the water year at many other points.

In the execution of the work many State and private organizations have cooperated, either by furnishing data or by assisting in collecting data. Cooperation of the first kind is acknowledged in connection with the description of each station affected; cooperation of the second kind is acknowledged, under the heading "Cooperation," in the introductory matter that precedes the gaging-station records in each volume. In the present volume, the section on cooperation of the second kind appears on page 12.

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

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

EXPLANATION OF DATA

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

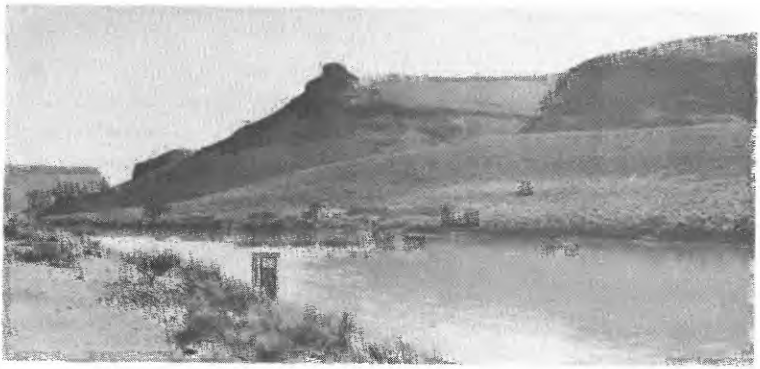
Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily mean gage height to those rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject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

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

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

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

A. SNAKE RIVER AT KING HILL, IDAHO.



B. SNAKE RIVER NEAR MURPHY, IDAHO.

C. SNAKE RIVER NEAR CLARKSTON, WASH.

FIGURE 1.—GAGING-STATION STRUCTURES

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

The description of the station gives the type of gage, its latitude and longitude as 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. Selected peak discharges with the times of their occurrence are given, below the table of monthly discharge, for some stations. This supplementary information is generally omitted for a station at which the drainage area of the stream is less than 10 or more than 10,000 square miles or at which, on most days, the peak discharge exceeds the mean discharge by less than 10 percent

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

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

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

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

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

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

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

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

PUBLICATIONS

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

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

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

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

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

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

East of the Mississippi River:
Albany, N. Y., 526 Federal Building.
Asheville, N. C., 220 Post Office Building.
Atlanta, Ga., 411 Grand Theater Building.
Augusta, Maine, 420 Statehouse.
Baton Rouge, La., 538 Florida Street.
Boston, Mass., 939 Post Office Building.
Champaign, Ill., 605 South Neil Street.
Charleston, W. Va., 408 Union Building.
Charlottesville, Va., Cabell Hall, University of Virginia.
Chattanooga, Tenn., 442 Post Office Building.
College Park, Md., 105 Engineering Building, University of Maryland.
Columbia, S. C., 207 Creason Building.
Columbus, Ohio, 404 Engineering Experiment Station, Ohio State University.
Harrisburg, Pa., 490 Education Building.
Hartford, Conn., 203 Federal Building.
Indianapolis, Ind., 205 Underwriters Building.
Jackson, Miss., 208 Millsaps Building.
Knoxville, Tenn., 337 Post Office Building.
Louisville, Ky., 531 Federal Building.
Madison, Wis., 666 State Office Building.
Montgomery, Ala., 507 Post Office Building.
Morgantown, W. Va., 407 Mineral Industries Building.
New Philadelphia, Ohio, Muskingum Watershed Conservancy District Building.
Ocala, Fla., 302 Post Office Building.
Pittsburgh, Pa., 515 Plaza Building.
Raleigh, N. C., 244 Educational Building.
St. Paul, Minn., 1427 New Post Office Building.
Trenton, N. J., 228 Federal Building.
Washington, D. C., General Services Building.
Williamsburg, Ky., State Highway Building.

West of the Mississippi River:
Albuquerque, N. Mex., 723 North Second Street.
Austin, Tex., 302 West Fifteenth Street.
Bismarck, N. Dak., 7 Eltinge Building.
Boise, Idaho, 429 Federal Building.
Denver, Colo., 126 New Customhouse.
Fort Smith, Ark., 6 Post Office Building.
Helena, Mont., 408 Federal Building.
Honolulu, Hawaii, 225 Federal Building.
Idaho Falls, Idaho, 204 Federal Building.
Iowa City, Iowa, 508 Hydraulic Laboratory, University of Iowa.
Lincoln, Nebr., 510 Rudge-Guenzel Building.
Los Angeles, Calif., 429-F United States Post Office and Courthouse.
Oklahoma City, Okla., 203 Council Building.
Pierre, S. Dak., 301 Federal Building.
Portland, Oreg., 606 Post Office Building.
Rolla, Mo., 211 Ramsey Building.
St. Louis, Mo., 1004 New Federal Building.
Salt Lake City, Utah, 303 Federal Building.
San Francisco, Calif., 702 Appraisers Building.
Santa Fe, N. Mex., 204 United States Courthouse.
Tacoma, Wash., 207 Federal Building.
Topeka, Kans., 305 Federal Building.
Tucson, Ariz., 210 Post Office Building.

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

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

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

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

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

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

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

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

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

Numbers of water-supply papers containing results of stream measurements, 1899-1947 (for basins included see p. 5).

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	806	809	810	811	812	813	814
1937.....	821	822	823	824	825	826	827	828	829	830	831	832	833	834
1938.....	851	852	853	854	855	856	857	858	859	860	861	862	863	864
1939.....	871	872	873	874	875	876	877	878	879	880	881	882	883	884
1940.....	891	892	893	894	895	896	897	898	899	900	901	902	903	904
1941.....	921	922	923	924	925	926	927	928	929	930	931	932	933	934
1942.....	951	952	953	954	955	956	957	958	959	960	961	962	963	964
1943.....	971	972	973	974	975	976	977	978	979	980	981	982	983	984
1944.....	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014
1945.....	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044
1946.....	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064
1947.....	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094

a Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Monthly discharge for 1899 in 21st Annual Report, part 4.
b James River only.
c Gallatin River.
d Green and Gunnison Rivers and Colorado River above Gunnison River.
e Mojave River only.
f Kings and Kern Rivers and south Pacific slope basins.
g Rating tables and index to Water-Supply Papers 47-52 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.
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.

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

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

Report	Period	Water-Supply Paper
STATE		
Alabama, Water powers of, with an appendix on stream measurements in Mississippi.	1895-1903	107
California, Water resources of, part 1, Stream measurements in Sacramento River Basin.	1887-1912	298
California, Water resources of, part 2, Stream measurements in San Joaquin River Basin.	1878-1912	299
California, Water resources of, part 3, Stream measurements in the Great Basin and Pacific Coast river basins.	1891-1912	300
California, southern, Surface water supply of Pacific slope of.....	1890-1918	447
California, Surface water supply of Sacramento River Basin.....	1895-1927	597-E
California, Surface water supply of San Joaquin River Basin.....	1895-1927	636-D
California, southern, Surface water supply of Pacific slope basins in....	1894-1927	636-E
California, Surface water supply of minor San Francisco Bay, northern Pacific, and Great basins in.	1895-1927	637-A
Colorado, Water resources of.....	1884-1900	74
Georgia, Water resources of.....	1895-1905	197
Massachusetts, Surface waters of.....	1845-1915	415
Nebraska, Surface water supply of.....	1894-1906	230
Oregon, Surface water supply of.....	1878-1910	370
Texas, Summary of records of surface waters of.....	1898-1937	850
Vermont, Surface waters of.....	1875-1916	424
Washington, Summary of hydrometric data in.....	1878-1919	492
Washington, Summary of records of surface waters of.....	1919-35	870
Wisconsin, northern, Water power of.....	1895-1905	156
Wyoming, Surface waters of, and their utilization.....	1894-1921	469
DRAINAGE BASIN		
Colorado River (Ariz., Colo., N. Mex., Utah, Wyo.) and its utilization...	1888-1914	395
Colorado River, upper (Colo., Utah), and its utilization.....	1897-1927	617
Colorado River Basin (Ariz., Calif., Colo., Utah, Wyo.), Surface waters at base stations in.	1891-1938	918
Colorado River Basin (Ariz., Calif., Nev., N. Mex., Utah), Surface waters at stations on tributaries in lower.	1888-1938	1049
Columbia River Basin, upper (Mont., Idaho), Surface waters of.....	1898-1938	916
Great Salt Lake Basin, Water powers of.....	1889-1920	517
Green River (Colo., Utah, Wyo.) and its utilization.....	1894-1926	618
Kennebec River Basin (Maine), Water resources of.....	1890-1906	198
Milk River. See St. Mary and Milk Rivers.....		
Missouri and St. Mary River Basins (Mont.), Surface waters of.....	1881-1938	917
New-Kanawha River Basin (N. C., Va., W. Va.), Surface water supply of....	1895-1920	536
Penobscot River Basin (Maine), Water resources of.....	1904-9	279
Potomac River Basin (D. C., Md., W. Va.).....	1895-1906	192
Rio Grande Basin (Colo., N. Mex., Tex.), Water resources of.....	1888-1913	358
St. Mary and Milk Rivers (Mont., Canada), Water supply of.....	1898-1917	491
St. Mary River. See St. Mary and Milk Rivers; Missouri and St. Mary River Basin.		
Sevier Lake Basin (Utah), Utilization of surface water resources of.....	1889-1937	920
Susquehanna River Basin (Pa., Md.) Hydrography of.....	1890-1904	109

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

State reports containing compilations of records of discharge

State	Period	Report	Issued by
Alabama.....	1895-1915	Bull. 17, Water powers of Alabama.....	Geological Survey of Alabama.
Arkansas.....	1857-1928	Stream-gaging Rept. 1.....	Arkansas Geological Survey.
Colorado.....	1881-1935	Water resources of Colorado, Appendix 2, Data on stream-gaging stations of Colorado.[1]	State Planning Commission, Water Conservation Board, State engineer.
Do.....	1881-1938	Water resources of Colorado, Appendix 3, vols. 1 and 2, Stream-flow data of Colorado.	Do.
Connecticut...	1900-1927	Bull. 44, Water resources of Connecticut...	State Geological and Natural History Survey.
Do.....	1912-33	5th biennial report.....	State Water Commission.
Florida.....	1898-1946	Bull. 31, Springs of Florida.....	Florida Geological Survey.
Georgia.....	1895-1906	Bull. 16, Water powers of Georgia.....	Geological Survey of Georgia.
Do.....	1907-19	Bull. 38, Water powers of Georgia.....	Do.
Illinois.....	1908-11	Water resources of Illinois.....	Rivers and Lakes Commission.
Do.....	1900-1934	Stream-flow data of Illinois.....	Division of Waterways.
Indiana.....	1923-27	Pub. 72, Surface water supply of Indiana...	Department of Conservation.
Do.....	1927-30	Pub. 112, Surface water supply of Indiana..	Do.
Iowa.....	1873-1932	Stream-flow records of Iowa.....	State Planning Board.
Do.....	1873-1940	Water-Supply Bull. 1, Summaries of yearly and flood flow relating to Iowa streams..	Iowa Geological Survey.
Do.....	1941-42	Water-Supply Bull. 2, Surface water resources of Iowa.	Do.

[1] Contains records of yearly discharge only.

State reports containing compilations of records of discharge--Continued

State	Period	Report	Issued by
Kansas	1895-1919	Surface waters of Kansas	Kansas Water Commission.
Do	1919-24	....do	Do.
Do	1924-28	Report of Division of Water Resources	State Board of Agriculture.
Do	1928-35	Stream-flow data of Kansas	Do.
Do	1935-39	....do	Do.
Kentucky	1910-20	Surface waters of Kentucky	Kentucky Geological Survey.
Louisiana	1903-38	Geol. Bull. 16, Surface water supply of Louisiana.	Department of Conservation.
Maine	1887-1920	1st annual report	Maine Water Power Commission.
Maryland	1929-37	Flow data and draft storage curves for major streams in Maryland.	State Planning Commission and Water Resources Commission.
Do	1892-1943	Bull. 1, Summary of records of surface waters of Maryland and the Potomac River Basin.	Department of Geology, Mines, and Water Resources.
Minnesota	1909-12	Water-resources investigation of Minnesota.	State Drainage Commission.
Missouri	1857-1926	Vol. 20, 2d series, Water resources of Missouri.	Missouri Bureau of Geology and Mines.
Do	1927-39	Vol. 26, 2d series, Surface waters of Missouri.	Missouri Geological Survey and Water Resources.
Montana	1889-1911	5th biennial report	Office of the State Engineer.
Do	1881-1938	Special Rept. 10, vols. 1-4, Water resources of Montana.	Montana Agricultural Experiment Station.
Nebraska	1894-1914	1st hydrographic report	Bureau of Water Power, Irrigation, and Drainage.
Do	1914-28	2d hydrographic report	Do.
New Hampshire	1889-1922	Annual and statistical report, vol. 12	Public Service Commission.
New Jersey	1892-1928	Bull. 33, Surface water supply of New Jersey.	Department of Conservation and Development.
Do	1928-34	Special Rept. 5, Surface water supply of New Jersey.	State Water Policy Commission.
Do	1934-40	Special Rept. 9, Surface water supply of New Jersey.	Do.
New Mexico	1888-1925	Surface water supply of New Mexico	Office of the State Engineer.
North Carolina	1889-1923	Bull. 34, Discharge records of North Carolina streams.	Department of Conservation and Development.
Do	1889-1936	Bull. 39, Discharge records of North Carolina streams.[2]	Do.
Do	1866-1945	Hydrologic Data on the Neuse River Basin.	Do.
Do	1820-1945	Hydrologic Data on the Cape Fear River Basin.	Do.
Do	1866-1945	Hydrologic Data on the Yadkin-Pee Dee River Basin.	Do.
North Dakota	1919-21	Report to Governor of North Dakota on flood control.	State chief engineer.
Do	1882-1938	Surface water in North Dakota	State Planning Board.
Do	1882-1944	Supplement B, 4th biennial report	State Water Conservation Commission.
Ohio	1898-1921	Bull. 73, Ohio stream flow, Part 1	Engineering Experiment Station, Ohio State University.
Do	1898-1944	Bull. 127, Ohio stream flow, Part 2	Do.
Do	1902-39	Bull. 200, Compilation of stream-flow records of Ohio.	Department of Agriculture, Division of Conservation and Natural Resources.
Do	1898-1939	Bull. 111, Ohio stream-drainage areas and flow-duration tables.	Engineering Experiment Station, Ohio State University.
Oregon	1878-1914	Bull. 4, Water resources of the State of Oregon.	Office of the State Engineer.
Do	1914-24	Bull. 7, Water resources of the State of Oregon.	Do.
Do	1924-30	Bull. 8, Water resources of the State of Oregon.	Do.
Do	1930-36	Bull. 9, Water resources of the State of Oregon.	Do.
Pennsylvania	1890-1911	Report of the Water Supply Commission of Pennsylvania.	Water Supply Commission of Pennsylvania.
Do	1928-32	Stream-flow records of Pennsylvania	Department of Forests and Waters.
Rhode Island	1929-41	7th annual report	Department of Public Works.
South Carolina	1884-1946	Bull. 17, Summary of records of surface water supply of South Carolina.	South Carolina Research, Planning and Development Board.
Tennessee	1874-1924	Bull. 34, Water resources of Tennessee[3]	Department of Education.
Do	1920-30	Bull. 40, Surface waters of Tennessee	Do.
Utah	1889-1905	5th biennial report	Office of the State Engineer.
Do	1906-10	7th biennial report	Do.
Do	1911-16	10th biennial report	Do.
Virginia	1895-1927	Bull. 31, Water resources of Virginia	Virginia Geological Survey.
Do	1927-42	Bull. 4, Surface water supply of Virginia (Potomac, Rappahannock, and York River Basins).	Virginia Conservation Commission.
Do	1927-42	Bull. 5, Surface water supply of Virginia (James River Basin).	Do.
Do	1927-42	Bull. 6, Surface water supply of Virginia (Roanoke and Chowan River Basins).	Do.
Do	1927-42	Bull. 7, Surface water supply of Virginia (New, Tennessee, and Big Sandy River Basins).	Do.
Washington	1878-1933	Bull. 5, Monthly and yearly summaries of hydrometric data.	Department of Conservation and Development.
Wisconsin	1888-1914	1st report of Railroad Commission of Wisconsin to Legislature on water powers.	Railroad Commission of Wisconsin.
Do	1914-23	2d report of Railroad Commission of Wisconsin to Legislature on water powers.	Do.

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

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

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

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

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

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The following table contains a list of gaging stations for the area covered by this report at which records of daily discharge were collected during the water year October 1946 to September 1947 by agencies other than the Geological Survey. The records for these stations are not contained in the publications of the Geological Survey except as noted.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
American Falls Reservoir, inflow to.	Near American Falls, Idaho.....	1927-28, 1932-47	Idaho Water District 36.
Malheur River.....	SW¼ sec. 32, T. 20 S., R. 41 E., near Namorf, Oreg.	1931-47†.....	Oregon State engineer.
Do.....	Below Nevada Dam, near Vale, Oreg..	1934, 1936-42, 1944-47†.	Do.
Snake River tributaries.	Near Irwin, Idaho.....	1940-47‡.....	Idaho Water District 36.
Teton River tributaries and diversions.	Near Driggs, Idaho.....	1934-47‡.....	Do.
Thief Valley Reservoir.	NE¼SW¼ sec. 26, T. 6 S., R. 40 E., at Thief Valley Dam, 7 miles east of North Powder, Oreg.	1944-47†.....	Oregon State engineer.

† Records for some earlier years published in water-supply papers of the Geological Survey.
‡ Fragmentary.

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

Stream	Location	Period	Collected by
Wallowa Lake Reservoir	At outlet, near Joseph, Oreg.....	1925-47†	Oregon State engineer.
Wallowa River.....	Below Wallowa Lake, Oreg.....	1926-47†	Do.

† Records for some earlier years published in water-supply papers of the Geological Survey.

Note.- Of the records for the stations operated by the Oregon State engineer, those for 1925-30 are published in Bulletin 8 of the State engineer, and those for 1931-36 (including some to December 1936) in Bulletin 9; those for 1937-47 have not been published.

Records for the stations operated by Idaho Water District 36 are published in the annual reports of that organization.

COOPERATION

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

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

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

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

Washington: State Department of Conservation and Development, Art Garton, director, and C. J. Bartholet, consulting engineer for the department.

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

Financial assistance was furnished by the Corps of Engineers in the operation of 18 gaging stations, of which 14 were in Idaho and 4 in Wyoming.

Financial assistance was furnished also by the Office of Indian Affairs and the Bureau of Reclamation of the United States Department of the Interior. Assistance was furnished by the Weather Bureau of the United States Department of Commerce.

Assistance in collecting records was rendered by the following organizations and watermasters.

Idaho: City of Pocatello, Idaho Power Co., Board of Control for Boise Project, Idaho Water District 36, North Side Canal Co., Twin Falls Canal Co., Utah Power & Light Co., Washington Water Power Co., and watermasters for Big Lost, Little Lost, Big Wood, Little Wood, Boise, and Weiser Rivers, Lake Fork of Payette River, and Mud Lake.

Oregon: Malheur, Baker, Union, and Wallowa Counties, Pacific Power & Light Co., and Warmsprings Irrigation District.

Washington: Bonneville Power Administration, Washington Water Power Co.

DIVISION OF WORK

The stream-gaging work was conducted by the water resources division of the Geological Survey--Carl G. Paulsen, chief hydraulic engineer, and Joseph V. B. Wells, chief of the surface water branch. The data for the stations in the several States were collected and prepared for publication under supervision of district engineers as listed below.

Idaho: Stations on Snake River between Heise and Milner, stations on tributaries of Snake River above American Falls Reservoir (except Teton River near Victor, Teton Creek and Horseshoe Creek near Driggs, and Packsaddle Creek and Spring Creek near Tetonia) and diversions from Snake River at and above Milner, Lynn Crandall; all other stations in Idaho, T. R. Newell.

Nevada: M. T. Wilson (except for Salmon Falls Creek near San Jacinto, T. R. Newell).

Oregon: G. H. Canfield (except for Snake River at Oxbow, T. R. Newell), the work being done in collaboration with C. E. Stricklin, State engineer.

Utah: M. T. Wilson (Clear Creek near Naf, Idaho).

Washington: F. M Veatch.

Wyoming: Grassy Lake, Jackson Lake, and Snake River at Moran, Lynn Crandall; Salt River near Smoot and at Wyoming-Idaho State line, Cottonwood Creek near Smoot, and Swift Creek near Afton, Robert Follansbee; all other stations in Wyoming, T. R. Newell.

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

SNAKE RIVER MAIN STEM

Jackson Lake at Moran, Wyo.

Location.- Electric tape gage, lat. 43°51', long. 110°35', in sec. 18, T. 45 N., R. 114 W., at dam on Snake River, at Moran. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Drainage area.- 816 square miles.

Records available.- July 1908 to September 1947 (1908-10 fragmentary).

Extremes.- Maximum contents during year 854,660 acre-feet June 27 (elevation, 6,769.30 feet); minimum, 403,410 acre-feet Oct. 1 (elevation, 6,750.47 feet).
1908-47: Maximum contents, 857,220 acre-feet June 23, 1937 (elevation, 6,769.40 feet); no usable contents on several days during period August to October 1919 (elevation, 6,730.00 feet).

Remarks.- Reservoir was formed by log crib dam in 1906 with a usable capacity of 300,000 acre-feet. The dam washed out in July 1910 and was replaced by an earth dam, forming a reservoir with a usable capacity of 380,000 acre-feet. The earth dam was raised in 1916 increasing the usable capacity to 790,000 acre-feet. In 1917, by dredging the outlet, the capacity was further increased to 847,000 acre-feet between elevations 6,730 feet (top of baffles to sluices) and 6,769 feet (top of spillway gates). Water is used for irrigation in Snake River Valley, Idaho. Gage read once daily at 8 a.m. Contents as given herein are computed from elevation at that time; all available for release.

Cooperation.- Reservoir elevations and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	403,410	438,040	466,280	499,630	529,790	550,620	579,120	613,610	854,150	850,560	742,580	585,760
2	404,750	439,180	467,430	500,320	531,430	551,080	580,540	617,430	853,640	852,100	735,160	580,310
3	406,090	440,090	468,580	500,780	532,360	552,250	581,730	620,290	853,120	853,380	729,720	572,740
4	406,990	440,540	469,260	501,470	533,070	553,900	582,680	631,570	851,580	853,120	719,350	564,500
5	407,880	441,450	470,180	502,630	533,530	555,310	-	642,390	850,560	851,580	712,720	555,070
6	408,330	441,910	471,780	503,780	534,000	556,020	584,810	652,760	850,560	851,840	708,790	545,000
7	409,220	442,590	472,930	504,470	534,700	556,960	586,000	664,140	850,820	853,120	705,350	534,000
8	410,560	443,270	474,990	505,630	535,410	557,900	586,710	675,550	851,580	850,820	701,670	523,280
9	411,680	444,640	476,370	506,550	536,110	558,840	587,420	687,740	854,150	848,000	699,210	512,820
10	412,580	445,090	477,510	507,710	536,580	560,020	587,900	701,670	853,640	845,440	695,300	501,930
11	413,020	445,550	478,660	509,340	537,280	561,670	588,610	716,650	850,820	844,420	693,590	494,320
12	413,690	446,230	479,800	510,500	537,980	562,610	589,320	727,740	849,790	843,920	691,150	486,700
13	414,810	447,140	482,100	511,430	539,150	563,320	589,800	738,870	849,790	843,410	688,710	478,890
14	415,260	448,500	484,390	512,130	540,320	563,790	590,510	750,020	850,300	841,630	685,790	471,780
15	416,610	449,410	486,470	512,820	541,020	564,500	591,460	759,730	851,580	838,830	681,890	465,370
16	419,090	449,870	486,930	513,990	541,960	565,200	591,930	767,700	852,610	836,280	677,500	458,740
17	419,770	450,550	487,390	514,920	542,660	565,910	592,880	778,210	852,870	833,480	672,620	453,500
18	420,670	451,000	487,620	515,610	543,130	566,850	593,830	791,750	852,610	829,920	666,810	451,460
19	421,580	451,460	487,860	516,780	544,060	567,800	594,780	801,820	852,100	826,100	660,510	451,000
20	422,250	453,280	488,320	517,700	544,770	568,270	595,960	812,180	852,350	821,780	653,000	451,910
21	423,150	454,870	488,780	518,400	545,470	568,740	596,910	822,800	852,870	816,720	645,280	452,600
22	424,280	455,320	489,700	518,870	545,940	569,450	598,100	834,250	850,820	812,940	636,780	453,730
23	425,640	457,600	490,390	519,330	546,870	570,620	599,760	839,340	850,050	806,620	632,050	454,870
24	427,440	458,960	491,090	520,030	547,570	571,570	600,470	844,420	850,560	801,320	625,800	455,550
25	429,020	459,420	492,010	520,960	548,280	572,980	601,660	848,250	851,330	795,260	618,340	456,460
26	430,370	460,330	493,390	523,750	548,740	573,690	602,620	849,530	852,100	788,740	613,370	457,370
27	431,950	461,240	495,010	524,910	549,450	574,390	604,050	850,820	854,660	782,220	607,400	459,420
28	433,980	463,530	496,390	525,840	549,910	575,100	605,960	852,100	853,640	774,440	601,660	460,550
29	435,110	464,680	497,090	526,540	-	576,040	608,350	850,820	850,820	767,450	596,200	462,390
30	435,780	465,820	497,550	527,700	-	576,990	611,220	850,050	849,530	759,980	591,690	463,990
31	436,910	-	498,470	528,630	-	577,940	-	850,300	-	750,770	589,080	-

Monthly elevation and contents, water year October 1946 to September 1947

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	6,750.44	402,740	-
Oct. 31	6,751.96	436,910	+34,170
Nov. 30	6,753.23	465,820	+28,910
Dec. 31	6,754.65	498,470	+32,650
Calendar year 1946	-	-	-153,330
Jan. 31	6,755.95	528,630	+30,160
Feb. 28	6,756.86	549,910	+21,280
Mar. 31	6,758.05	577,940	+28,030
Apr. 30	6,759.45	611,220	+33,280
May 31	6,769.13	850,300	+239,080
June 30	6,769.10	849,530	-770
July 31	6,765.18	750,770	-98,760
Aug. 31	6,758.52	589,080	-161,690
Sept.30	6,753.15	463,990	-125,090
Water year 1946-47	-	-	+61,250

Snake River at Moran, Wyo.

Location.- Water-stage recorder, lat.43°51', long. 110°35', in Sec. 18, T. 45 N., R. 114 W., at Moran, 1,000 feet downstream from Jackson Lake Dam. Datum of gage is 6,725.61 feet above mean sea level (Bureau of Reclamation bench mark).

Drainage area.- 816 square miles.

Records available.- September 1903 to September 1947.

Average discharge.- 44 years, 1,408 second-feet.

Extremes.- Maximum discharge during year, 8,660 second-feet June 9 (gage height, 9.38 feet); minimum daily, 3 second-feet Apr. 15-28.
1903-47: Maximum discharge, 15,100 second-feet June 12, 1918 (gage height, 10.41 feet, site and datum then in use); practically no flow for a few days in 1907 and 1909.

Remarks.- Records excellent except those for Oct. 1 to May 20, which are good. Flow regulated by Jackson Lake (see preceding page).

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	5	4				5	18	7,220	1,870	5,740	3,100
2	16	4	4				5	19	8,090	2,220	5,620	4,660
3	6	4	4				5	19	8,010	3,150	5,570	5,160
4	5	4	4				5	15	7,040	4,140	5,140	5,520
5	5	4	4				5	12	5,220	3,810	3,850	6,300
6	5	4	5				5	11	5,240	2,240	3,340	3,540
7	5	4	5				5	32	5,240	3,910	2,990	3,470
8	5	4	5				5	32	5,540	4,900	2,860	6,300
9	5	4	5				5	36	7,600	4,560	2,810	5,790
10	5	4	5				5	40	8,010	8,010	2,810	5,510
11	5	4	5				5	43	5,380	2,630	2,680	4,960
12	5	4	5				5	43	4,120	2,610	2,300	4,540
13	5	4	5				5	40	3,980	2,860	2,290	4,320
14	5	4	5				5	40	3,950	3,430	2,560	4,080
15	5	4	5	5	5	5	3	40	4,190	3,590	3,100	3,850
16	5	5	5				3	35	5,300	3,580	3,340	3,350
17	5	5	5				3	70	5,930	3,650	3,610	2,800
18	5	5	5				3	60	5,930	3,910	4,100	1,100
19	5	5	5				3	60	5,740	4,120	4,730	236
20	5	4	5				3	57	6,640	4,480	4,920	41
21	5	4	5				3	564	7,870	4,430	4,960	41
22	5	4	5				3	2,170	3,410	4,400	4,620	41
23	5	4	5				3	2,880	3,260	4,400	4,060	41
24	5	4	b5				3	3,290	3,260	4,660	4,020	41
25	4	4	b5				3	4,950	3,290	4,670	3,950	41
26	4	4	b5				3	6,010	4,370	4,790	3,780	39
27	5	4	b5				3	6,610	6,720	5,060	3,770	7
28	5	4	b5				3	8,000	7,190	5,460	3,770	7
29	5	4	b5		-		18	5,890	3,890	5,540	3,360	10
30	5	4	b5		-		16	4,500	1,810	5,880	1,900	10
31	5	-	b5		-		-	4,160	-	5,810	2,290	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	190	30	4	6.1	377
November	125	5	4	4.2	248
December	150	5	4	4.8	298
Calendar year 1946	611,724	8,830	4	1,676	1,213,000
January	155	-	-	5	307
February	140	-	-	5	278
March	155	-	-	5	307
April	146	18	3	4.9	290
May	49,746	8,000	.11	1,605	98,670
June	163,640	8,090	1,810	5,455	324,600
July	124,220	5,880	1,870	4,007	246,400
August	114,840	5,740	1,900	3,750	227,800
September	84,905	6,540	7	2,830	168,400
Water year 1946-47	538,412	8,090	3	1,475	1,068,000

b Stage-discharge relation affected by ice.
Note.- No gage-height record Jan. 1 to Mar. 31; discharge computed on basis of estimate of leakage through gates in dam above station.

Snake River below Greys River, at Alpine, Idaho

Location.- Wire-weight gage, 1st. 43°10'30", long. 111°02'30", in SW¼ sec. 19, T. 37 N., R. 118 W. sixth principal meridian, Wyo., at State line bridge on U. S. highway 89, a quarter of a mile south of Alpine, Idaho, post office, and 1¾ miles upstream from Salt River, and 2 miles downstream from Greys River.

Drainage area.- 3,940 square miles.

Records available.- October 1944 to September 1947.

Extremes.- Maximum discharge observed during year, 21,400 second-feet June 10 (gage height, 8.94 feet); minimum daily, 1,400 second-feet Jan. 4-20; minimum gage height observed, 2.69 feet Feb. 8.
1944-47: Maximum discharge observed, 22,400 second-feet June 7, 1946 (gage height, 9.15 feet); minimum observed, 1,190 second-feet Mar. 6, Apr. 3, 1945 (gage height, 2.29 feet).

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Gage read once or twice daily. Diversions from tributaries above gage. Some regulation by Jackson Lake (see p. 14).

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,370	2,230	2,070	1,510	1,550	1,450	2,250	5,200	14,600	10,200	9,730	5,410
2	2,520	2,230	2,100	1,480	1,550	1,450	2,280	6,390	18,200	9,140	9,840	6,160
3	2,420	2,030	1,950	1,450	1,600	1,540	2,320	8,080	18,700	9,700	10,000	7,060
4	2,370	2,030	1,950	1,400	1,640	1,540	2,270	10,500	18,700	10,300	10,200	7,310
5	2,420	2,080	2,030	1,400	1,600	1,530	2,220	12,000	16,700	11,100	8,760	8,050
6	2,400	2,110	2,050	1,400	1,540	1,520	2,180	12,600	15,500	12,100	7,490	8,420
7	2,370	2,150	2,130	1,400	1,560	1,500	2,150	13,200	15,400	11,000	7,340	8,450
8	2,350	2,150	2,050	1,400	1,460	1,530	2,110	14,300	15,500	13,700	7,090	a8,450
9	2,320	2,130	2,020	1,400	1,470	1,530	2,130	15,500	17,400	13,600	6,840	7,950
10	2,350	2,080	1,950	1,400	*1,600	1,580	2,110	15,700	21,300	12,100	7,780	7,600
11	2,250	2,070	2,000	1,400	1,580	1,500	2,130	16,200	19,200	11,200	7,400	7,490
12	2,270	2,030	2,020	1,400	1,560	1,530	2,070	14,400	15,700	10,700	6,420	7,030
13	2,300	2,050	2,020	1,400	1,620	1,520	2,160	12,900	14,000	10,700	6,050	6,570
14	2,280	2,030	2,160	1,400	1,590	1,530	2,450	11,900	13,300	10,700	5,570	5,890
15	2,270	2,070	*2,050	1,400	1,600	1,580	2,900	10,900	13,500	10,400	6,420	5,150
16	2,300	2,030	1,970	1,400	1,620	1,640	2,990	11,100	13,700	10,400	6,570	4,660
17	2,320	2,050	1,750	1,400	1,600	*1,730	3,050	11,700	16,000	10,300	6,810	3,920
18	2,320	2,030	1,520	1,400	1,590	1,810	3,180	12,000	16,900	10,500	7,490	3,730
19	2,320	2,070	1,650	1,400	1,590	1,840	3,220	11,600	17,300	10,300	7,820	3,650
20	2,300	2,030	1,700	1,400	1,560	1,890	3,550	10,800	17,400	10,400	8,150	2,870
21	2,320	1,950	1,730	1,450	1,580	1,910	3,730	10,700	19,300	10,400	8,320	2,610
22	2,270	2,020	1,810	1,450	1,590	1,970	3,670	11,800	18,200	10,600	7,180	2,560
23	2,280	2,030	1,780	1,450	1,590	2,100	3,350	13,300	13,500	10,300	6,900	2,450
24	2,270	2,070	1,860	1,450	1,560	2,030	3,310	13,200	11,700	9,940	6,750	2,420
25	2,300	2,070	1,750	1,600	1,540	2,000	3,350	13,900	12,100	9,840	6,600	2,380
26	2,320	2,050	1,790	1,650	1,520	1,970	3,490	16,200	12,300	9,620	6,480	2,350
27	2,400	2,070	1,760	1,600	1,490	1,970	3,850	17,300	13,800	9,840	6,360	2,370
28	2,370	2,110	1,710	1,540	1,460	1,970	4,500	18,800	13,900	9,900	6,190	2,330
29	2,280	2,110	1,660	1,540	-	2,030	5,180	18,000	14,400	9,980	4,920	a2,350
30	2,270	2,070	1,600	1,540	-	2,200	5,230	15,500	13,900	9,940	4,680	2,380
31	2,270	-	1,540	1,540	-	2,220	-	13,900	-	9,730	4,850	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	72,170	2,520	2,250	2,328	143,100
November	62,230	2,230	1,950	2,074	123,400
December	58,130	2,160	1,520	1,875	115,300
Calendar year 1946	2,053,470	22,000	1,400	5,626	4,073,000
January	45,050	1,650	1,400	1,453	89,360
February	43,810	1,640	1,460	1,565	86,900
March	54,110	2,220	1,450	1,745	107,300
April	89,380	5,230	2,070	2,979	177,300
May	399,570	18,800	5,200	12,890	792,500
June	472,100	21,300	11,700	15,740	936,400
July	328,630	13,700	9,140	10,600	651,800
August	223,000	10,200	4,680	7,194	442,300
September	150,100	8,450	2,330	5,004	297,700
Water year 1946-47	1,998,290	21,300	1,400	5,475	3,963,000

*Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for stations near Heise and at Moran.
Note.- Stage-discharge relation affected by ice Dec. 19, 20, Dec. 28 to Feb. 2, Feb. 10, Feb. 27 to Mar. 2.

Snake River near Heise, Idaho

Location.- Water-stage recorder, lat. 43°37', long. 111°40', in sec. 5, T. 3 N., R. 41 E., 3 miles upstream from Heise and 23 miles upstream from Henrys Fork. Altitude of gage, 5,015 feet (from river-profile map).

Drainage area.- 5,740 square miles.

Records available.- September 1910 to September 1947, except winters of 1914-24.

Average discharge.- 37 years, 6,735 second-feet.

Extremes.- Maximum discharge during year, 25,900 second-feet June 10; maximum gage height, 8.73 Jan. 3 (ice jam); minimum discharge not determined, occurred during period of ice effect; minimum gage height, 1.70 feet Mar. 1.

1910-47: Maximum discharge, about 60,000 second-feet May 19, 1927, result of washing out of landslide on Gros Ventre River (gage height, about 16.0 feet, present datum); minimum, 1,210 second-feet Jan. 22, 1935 (gage height, 1.15 feet).

Remarks.- Records excellent except those for periods of ice effect, which are good. Station is above all irrigation diversions from main river except Riley ditch (4,690 acre-feet diverted during year), which diverts 1 mile upstream from station. About 11[illegible],000 acres in Wyoming and Idaho irrigated by diversions from tributaries above station. Some regulation by Jackson Lake (see p. 14).

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,530	3,420	3,070			2,280	3,730	8,800	17,000	12,700	11,600	6,420
2	3,720	3,320	3,010			2,280	3,730	9,720	19,800	11,700	11,700	6,680
3	3,780	3,200	2,930	2,300	2,400	2,350	3,860	12,200	21,600	11,900	11,900	7,960
4	3,700	3,080	2,880			2,350	3,880	14,800	21,800	13,200	11,700	8,700
5	3,610	3,100	2,910			2,320	3,660	16,600	20,600	15,000	11,700	8,960
6	3,650	3,120	3,080			2,290	3,480	17,500	18,600	15,000	10,400	9,420
7	3,700	3,180	3,240			2,290	3,360	17,700	18,200	13,300	9,620	9,800
8	3,670	3,220	3,220	2,100	2,400	2,310	3,270	18,500	18,400	14,400	9,220	9,900
9	3,610	3,220	3,120			2,340	3,250	19,400	20,600	16,000	9,120	9,860
10	3,610	3,140	3,030			2,470	3,210	19,800	25,100	15,900	9,150	9,490
11	3,530	3,090	2,970		2,400	2,470	3,190	20,100	24,500	14,600	9,450	9,150
12	3,460	3,030	3,030		2,450	2,380	3,150	20,000	20,800	13,000	9,050	8,860
13	3,530	2,930	3,100	2,200	2,500	2,350	3,170	18,200	17,800	12,400	8,270	8,140
14	3,460	2,970	3,220		2,550	2,360	3,520	16,700	16,900	12,000	7,900	7,870
15	3,460	3,070	3,440		2,550	2,460	4,410	15,500	16,800	12,300	7,720	7,520
16	3,550	3,030	3,300		2,600	2,630	5,110	14,800	17,200	12,400	8,110	7,460
17	3,610	2,930	2,950		*2,560	2,810	5,360	15,000	18,900	12,300	8,240	7,050
18	3,550	2,930	2,590	2,100	2,520	2,940	5,480	15,500	20,200	12,100	8,360	7,380
19	3,480	3,010	2,690		2,470	3,030	5,510	15,100	20,200	12,000	8,540	6,320
20	3,420	3,100	2,820		2,440	3,120	5,980	14,100	20,900	12,100	9,120	5,020
21	3,400	3,120	2,730		2,400	3,210	6,320	13,600	22,400	12,500	9,420	4,270
22	3,360	2,970	2,690		2,400	3,300	6,420	14,100	23,200	12,200	9,900	4,030
23	3,480	2,990	2,800	2,300	2,400	3,460	6,110	15,500	17,700	12,300	9,800	3,920
24	3,530	3,070	2,760		2,420	3,540	5,840	16,000	15,600	11,900	8,860	3,830
25	3,480	3,030	2,710		2,400	3,300	5,760	16,000	15,000	11,800	8,700	3,750
26	3,460	3,030	*2,730	2,600	2,380	3,140	6,040	17,900	15,000	11,500	8,580	3,730
27	3,530	3,050	2,860	2,500	2,340	3,030	6,680	19,900	16,200	11,400	8,330	3,640
28	3,800	3,050	2,860	*2,400	2,350	2,990	7,550	21,100	20,200	11,200	8,240	3,620
29	3,720	3,050	2,670	2,350	-	3,010	8,580	22,100	20,400	11,600	8,110	3,600
30	3,610	3,030	2,620	2,350	-	3,270	9,020	18,700	16,100	11,500	7,990	3,600
31	3,510	-	2,480	2,350	-	3,680	-	16,600	-	11,900	6,760	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	110,510	3,800	3,360	3,565	219,200
November	92,490	3,420	2,930	3,083	183,500
December	90,510	3,440	2,480	2,920	179,500
Calendar year 1946	2,748,890	25,800	2,100	7,531	5,452,000
January	69,550	-	-	2,244	138,000
February	68,130	2,600	-	2,433	135,100
March	85,790	3,680	2,280	2,767	170,200
April	148,630	9,020	3,150	4,954	294,800
May	511,520	22,100	8,800	16,500	1,015,000
June	577,700	25,100	15,000	19,260	1,146,000
July	394,100	16,000	11,200	12,710	781,700
August	285,560	11,900	6,760	9,212	566,400
September	199,950	9,900	3,600	6,665	396,600
Water year 1946-47	2,634,440	25,100	-	7,218	5,226,000

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Jan. 1 to Feb. 16.

Diversions from Snake River between Heise and Shelley gaging stations, Idaho

Between Heise and Shelley gaging stations, 47 canals divert water from Snake River for irrigation; of these 36 divert above mouth of Henrys Fork. Records available during each irrigation season from 1919 to 1947. One of the canals is equipped with a water-stage recorder, the others with staff gages which are read once daily. Discharge combined to show total diverted flow. Records include Riley ditch which diverts 1 mile above Heise gaging station. Records good.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								2,776	7,012	7,203	8,652	6,930
2								3,308	6,919	7,884	8,552	7,138
3								3,994	6,380	8,285	8,284	7,487
4								4,360	6,145	8,105	7,880	7,703
5								5,069	6,082	8,765	7,692	7,790
6								6,246	6,081	8,694	7,408	7,658
7								6,757	6,444	8,844	7,410	7,664
8								7,063	6,460	8,991	7,399	7,666
9								7,481	5,783	9,312	7,509	7,405
10								7,342	5,039	9,161	7,356	6,710
11								6,293	4,618	9,232	7,037	6,478
12								5,286	4,302	9,088	6,953	6,439
13								4,852	4,537	9,154	6,864	6,151
14								4,615	4,885	9,045	6,705	5,919
15								4,578	5,157	9,121	6,669	5,944
16								4,594	6,170	9,268	6,935	6,056
17								4,753	7,157	9,285	7,111	5,952
18								4,943	7,676	9,248	6,962	4,533
19								5,278	7,979	9,248	7,198	3,354
20								5,462	8,451	9,200	7,225	3,127
21								5,748	8,493	9,025	7,372	2,864
22								6,193	8,146	9,147	7,042	2,649
23								6,594	7,885	9,114	6,960	2,611
24								6,566	8,008	9,003	6,568	2,565
25								7,142	8,080	9,009	6,760	2,533
26								7,601	8,056	8,974	6,716	2,460
27								8,403	7,756	8,968	6,714	2,361
28								8,516	7,433	8,971	6,736	2,324
29								8,390	7,022	9,023	6,661	2,412
30								8,271	6,868	8,987	6,909	2,411
31								7,692	-	8,844	6,696	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	186,166	8,516	2,776	6,005	369,300
June	201,024	8,493	4,302	6,701	398,700
July	276,196	9,285	7,203	8,910	547,800
August	222,925	8,652	6,568	7,191	442,200
September	153,294	7,790	2,324	5,110	304,100
The period	-	-	-	-	2,062,000

Snake River near Shelley, Idaho

Location.- Water-stage recorder, lat. 43°25', long. 112°08', in sec. 17, T. 1 N., R. 37 E., a quarter of a mile east of Woodville and 3 miles north of Shelley Altitude of gage, 4,596 feet (from river-profile map).

Records available.- March 1915 to September 1947 (summer months only during some years).

Extremes.- Maximum discharge during year, 26,800 second-feet June 12 (gage height, 12.20 feet); minimum, 1,220 second-feet Sept. 3 (gage height, 4.39 feet).
1915-47: Maximum discharge, 47,200 second-feet June 17, 1918 (gage height, 16.97 feet); minimum, 288 second-feet Nov. 5, 1934 (gage height, 2.22 feet).
Maximum discharge known, 70,000 second-feet (estimated) June 6, 1894, at former station at Eagle Rock (now Idaho Falls), 7 miles upstream from present site.

Remarks.- Records excellent except those for periods of ice effect, which are fair. Some regulation by Jackson Lake (see p. 14), Henrys Lake (see p. 56), Island Park Reservoir (see p. 48), and Grassy Lake (see p. 56). Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,390	4,640	3,710	2,600	2,550	2,880	4,380	9,570	12,000	10,700	4,300	2,460
2	2,650	4,520	3,750	2,400	2,500	3,010	4,640	9,430	14,200	7,390	4,580	1,680
3	3,190	4,410	3,680	2,000	2,400	3,050	4,810	10,200	18,000	6,020	5,150	1,620
4	3,620	4,330	3,660	1,700	2,500	3,070	4,940	12,800	20,200	5,890	5,830	2,310
5	3,710	4,220	3,870	1,600	2,700	3,000	4,870	15,200	21,000	6,930	6,150	2,940
6	3,620	4,250	3,970	1,700	2,800	*2,980	4,640	16,300	19,700	7,800	6,340	3,230
7	3,710	4,360	4,120	1,800	2,750	2,920	4,490	16,400	17,800	7,260	5,380	3,680
8	3,830	4,460	4,220	2,000	2,700	2,830	4,300	16,000	17,000	5,790	4,580	4,140
9	3,920	4,460	4,040	2,200	2,600	2,830	4,170	15,800	17,700	6,600	4,250	4,270
10	3,920	4,410	3,730	2,300	2,600	2,900	4,100	16,400	21,000	7,770	4,120	5,030
11	3,920	4,410	3,780	2,370	2,460	3,070	4,100	17,800	25,000	7,430	4,300	5,120
12	3,950	4,300	3,830	2,300	2,650	3,090	4,000	19,100	26,600	6,440	4,550	5,060
13	3,950	4,220	3,900	2,300	2,850	2,980	3,920	19,100	24,200	5,060	4,410	4,840
14	3,970	4,140	4,000	2,300	*3,100	2,880	3,920	17,900	20,300	4,640	3,870	4,490
15	4,000	4,100	4,040	2,200	3,300	2,880	4,170	17,000	18,400	4,120	3,370	4,330
16	3,970	4,250	4,220	1,900	3,500	3,070	5,120	16,400	16,600	4,330	3,010	3,970
17	4,020	4,070	3,780	1,800	3,600	3,480	5,860	15,600	15,300	4,330	3,030	4,020
18	4,100	3,750	2,830	1,800	3,800	3,780	6,150	15,400	15,800	4,140	3,210	4,840
19	4,120	3,590	*2,950	1,900	3,800	3,950	5,990	15,300	16,000	3,970	3,250	6,400
20	4,100	3,710	3,200	2,200	3,750	3,870	6,110	14,300	15,400	4,000	3,270	6,310
21	4,020	3,830	3,350	*2,400	3,700	3,850	6,600	12,800	15,800	4,250	3,590	5,470
22	4,000	3,970	3,550	2,600	3,620	3,920	7,130	11,500	18,000	4,440	4,220	4,810
23	4,200	3,800	*3,800	2,700	3,500	4,040	7,200	11,500	18,400	4,200	5,030	4,520
24	4,330	3,900	4,170	2,800	3,500	4,140	6,860	11,800	13,100	4,410	5,190	4,200
25	4,520	3,920	3,900	2,900	3,270	4,200	6,700	11,500	10,600	4,270	4,750	4,040
26	4,520	3,900	3,730	3,100	3,190	3,970	6,600	11,100	8,500	4,220	4,360	3,970
27	4,460	3,850	3,900	3,000	3,000	3,640	6,770	12,000	9,720	4,020	4,070	3,920
28	4,780	3,830	3,900	3,050	2,900	3,520	7,360	13,100	11,500	3,800	3,750	3,830
29	4,940	3,800	3,800	2,900	-	3,400	8,210	14,300	15,900	3,570	3,570	3,780
30	4,810	3,800	2,940	2,700	-	3,330	9,120	14,800	15,500	3,730	3,350	3,710
31	4,720	-	2,900	2,500	-	3,730	-	12,300	-	3,870	3,110	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	123,960	4,940	2,390	3,999	245,900
November	123,200	4,640	3,590	4,107	244,400
December	115,220	4,220	2,830	3,717	228,500
Calendar year 1946	2,362,080	24,600	1,350	6,471	4,685,000
January	72,120	3,100	1,600	2,326	143,000
February	85,560	3,800	2,400	3,057	169,800
March	104,260	4,200	2,830	3,362	206,800
April	167,230	9,120	3,920	5,574	331,700
May	442,700	19,100	9,430	14,280	878,100
June	510,220	26,600	9,500	17,010	1,012,000
July	165,390	10,700	3,570	5,335	328,000
August	131,940	6,340	3,010	4,256	261,700
September	122,990	6,400	1,620	4,100	243,900
Water year 1946-47	2,164,820	26,600	1,600	5,931	4,294,000

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 19-22, 28, 29, Dec. 31 to Feb. 21.

Diversions from Snake River between Shelley and Blackfoot gaging stations, Idaho

Between Shelley and Blackfoot gaging stations, 13 canals divert water from Snake River for irrigation. Records available during each irrigation season from 1919 to 1947. The two largest canals are equipped with recorders, the others with staff gages which are read once daily. Discharge combined to show total diverted flow. Records good.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								2,355	3,528	3,372	3,482	1,472
2								2,614	3,540	3,612	3,147	1,164
3								3,025	3,204	3,576	3,018	1,295
4								3,344	3,175	3,651	2,956	2,309
5								3,582	3,269	3,691	2,920	2,542
6								3,769	3,192	3,868	2,920	2,597
7								3,800	3,183	3,788	3,147	2,853
8								3,802	2,988	3,667	3,222	2,860
9								3,775	2,698	3,851	2,726	2,779
10								3,286	2,200	3,909	2,594	2,747
11								2,504	1,721	3,841	2,338	2,645
12								2,416	1,314	3,799	2,624	2,655
13								2,674	1,339	3,574	2,657	2,949
14								2,680	1,401	3,605	2,854	3,041
15								2,726	1,564	3,477	2,876	2,673
16								2,814	2,035	3,582	2,827	2,700
17								2,810	2,328	3,692	2,784	2,752
18								2,976	2,481	3,696	2,925	1,930
19								2,974	2,504	3,675	2,997	1,425
20								3,017	2,941	3,700	2,990	1,353
21								3,178	3,119	3,728	3,161	1,272
22								3,443	3,255	3,755	3,295	1,303
23								3,637	3,272	3,690	2,987	1,305
24								3,781	3,313	3,758	3,149	1,390
25								3,817	3,446	3,710	3,130	1,423
26								3,897	3,319	3,674	3,070	1,382
27								3,987	3,314	3,651	3,226	1,370
28								4,037	3,480	3,601	3,262	1,402
29								3,993	3,131	3,449	3,292	1,425
30								3,947	2,954	3,523	3,210	1,420
31								3,655	-	3,616	2,801	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	102,315	4,037	2,355	3,300	202,900
June	83,206	3,540	1,314	2,774	165,000
July	113,781	3,909	3,372	3,670	225,700
August	92,587	3,482	2,338	2,987	183,600
September	60,433	3,041	1,164	2,014	119,900
The period	-	-	-	-	897,100

Snake River near Blackfoot, Idaho

Location.- Water-stage recorder, lat. 43°07', long. 113°31', in SE¼ sec. 30, T. 3 S., R. 34 E., a quarter of a mile downstream from Blackfoot River and 14 miles southwest of Blackfoot. Altitude of gage, 4,401 feet (from river-profile map).

Records available.- June 1910 to September 1947.

Extremes.- Maximum discharge during year, 25,000 second-feet June 12 (gage height, 10.80 feet); minimum, 215 second-feet Sept. 6 (gage height, 0.57 foot).

1910-47: Maximum discharge, 46,200 second-feet June 18, 1918 (gage height, 14.80 feet); minimum, 111 second-feet Nov. 10, 1934 (gage height, 0.80 foot).

Late in summer of 1905 there was no flow in Snake River for a distance of 10 miles in vicinity of Blackfoot. On Aug. 9, 1905, discharge of Snake River just below mouth of Blackfoot River was 39 second-feet, supplied by ground-water inflow a short distance upstream.

Remarks.- Records excellent. Some regulation by Jackson Lake (see p. 14), Henrys Lake (see p. 56), Island Park Reservoir (see p. 48), Grassy Lake (see p. 56), and Blackfoot-Marsh Reservoir, having a combined capacity of 1,483,000 acre-feet. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	969	4,570	3,850	2,520	2,340	2,540	3,960	7,130	8,370	9,480	534	716
2	1,280	4,480	3,880	2,100	2,280	2,640	4,350	6,680	9,590	5,030	1,460	667
3	1,910	4,350	3,850	1,640	2,140	2,800	4,420	6,560	12,700	3,160	1,930	480
4	2,500	4,330	3,780	1,420	2,210	a2,900	4,610	7,790	15,800	2,390	2,800	326
5	3,080	4,260	3,900	1,180	2,500	a3,000	4,710	9,750	17,000	2,880	3,190	262
6	3,160	4,320	4,050	1,380	2,640	a3,050	4,540	11,300	17,200	3,790	3,490	218
7	3,140	4,410	4,100	1,570	2,560	3,030	4,390	11,600	14,900	4,010	2,880	395
8	3,220	4,460	4,210	1,750	2,420	2,870	4,210	11,400	14,100	2,700	1,810	987
9	3,410	4,260	4,280	1,990	2,410	2,820	4,080	11,200	14,700	2,180	1,790	1,420
10	3,530	4,230	3,970	2,300	2,460	2,860	3,920	11,800	16,900	3,560	1,760	1,820
11	3,530	4,210	3,880	2,370	2,240	2,930	3,920	13,900	21,200	3,990	2,100	2,500
12	3,510	4,190	3,970	2,020	2,250	3,240	3,900	15,700	24,300	3,250	2,450	2,570
13	3,830	4,170	3,970	2,090	2,540	3,110	3,780	16,400	24,300	2,310	2,350	2,520
14	3,790	4,120	4,060	2,160	2,690	3,010	3,700	15,300	20,600	1,530	1,560	1,860
15	3,830	3,880	4,150	1,880	3,030	2,880	3,780	14,200	17,500	1,090	987	1,800
16	3,790	4,170	4,240	1,620	3,300	2,980	4,260	13,700	15,500	800	630	1,920
17	3,810	4,080	4,010	1,670	3,420	3,290	4,120	13,000	13,300	772	400	1,610
18	3,880	4,030	3,290	1,620	3,580	3,650	5,510	12,400	13,300	709	350	2,520
19	3,920	3,990	2,500	1,580	3,790	3,850	5,630	12,400	13,500	564	415	4,440
20	3,970	3,940	3,030	1,750	3,700	3,940	5,730	11,600	12,700	460	380	5,330
21	3,900	3,990	3,370	1,820	3,560	3,870	5,870	9,950	11,800	546	385	4,780
22	3,850	4,060	3,780	1,970	3,540	3,960	6,490	8,440	13,400	824	800	4,170
23	3,920	4,030	3,830	2,080	3,440	4,010	6,680	7,610	15,200	793	1,620	3,760
24	4,030	4,010	3,610	2,390	3,340	4,150	6,350	7,790	11,300	779	2,080	3,460
25	4,230	4,050	3,970	2,570	3,320	4,260	5,930	7,850	7,920	832	1,860	3,080
26	4,210	4,120	3,940	2,820	3,140	4,030	5,870	7,200	6,400	709	1,540	3,010
27	4,170	4,100	3,900	2,640	2,960	3,760	5,690	7,360	6,290	695	1,190	2,960
28	4,410	4,060	3,870	2,800	2,760	3,540	5,870	8,420	7,230	588	816	2,810
29	4,650	4,030	3,650	2,760	-	3,440	6,070	9,480	10,300	440	510	2,740
30	4,650	3,900	2,920	2,410	-	3,300	6,660	10,600	13,000	340	460	2,690
31	4,590	-	2,570	2,280	-	3,410	-	9,590	-	350	318	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	110,669	4,650	969	3,570	219,500
November	124,800	4,570	3,880	4,160	247,500
December	116,380	4,280	2,500	3,754	230,800
Calendar year 1946	1,939,749	23,500	226	5,314	3,847,000
January	63,150	2,820	1,180	2,037	125,300
February	80,560	3,790	2,140	2,877	159,800
March	103,120	4,260	2,540	3,326	204,500
April	150,000	6,680	3,700	5,000	297,500
May	328,100	16,400	6,580	10,580	650,800
June	420,300	24,300	6,290	14,010	833,700
July	61,551	9,480	340	1,986	122,100
August	44,845	3,490	318	1,447	88,950
September	67,821	5,330	218	2,261	134,500
Water year 1946-47	1,671,296	24,300	218	4,579	3,315,000

a No gage-height record, discharge computed on basis of records for station near Shelley.

American Falls Reservoir at American Falls, Idaho

Location.- Water-stage recorder, lat. 42°46', long. 112°53', in sec. 30, T. 7 S., R. 31 E., at outlet gates of reservoir on Snake River at American Falls. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Records available.- March 1926 to September 1947.

Extremes.- Maximum contents during year, 1,720,880 acre-feet June 11 (elevation, 4,354.87 feet); minimum, 649,450 acre-feet Sept. 18 (elevation, 4,331.03 feet).
1926-47: Maximum contents, 1,726,580 acre-feet June 10, 1938 (elevation, 4,354.97 feet); minimum since full capacity was attained on July 13, 1927, 17,200 acre-feet Oct. 22, 1931 (elevation, 4,299.72 feet).

Remarks.- Reservoir is formed by concrete gravity dam with earth dikes at each end; partial storage began in 1926, full storage in 1927. Capacity, 1,700,000 acre-feet between elevations 4,295.66 feet (bottom of outlet gate) and 4,354.50 feet (top of spillway radial gates). Small amount of dead storage. Water is used for irrigation by canals diverting from Snake River at Minidoka and Milner Dams. Contents given herein are computed from mean daily elevations; all available for release.

Cooperation.- Reservoir elevations and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1	721,430	933,310	1,137,690	1,285,930	1,290,800	1,369,030
2	724,240	945,970	1,147,370	1,285,930	1,289,340	1,373,570
3	732,310	955,990	1,151,520	1,285,440	1,290,310	1,377,600
4	734,420	968,920	1,154,280	1,283,980	1,290,800	1,382,140
5	743,900	976,440	1,157,970	1,281,550	1,289,830	1,388,700
6	754,520	985,250	1,162,600	1,279,600	1,290,310	1,396,770
7	760,650	992,970	1,165,900	1,278,620	1,291,770	1,404,840
8	765,330	1,001,130	1,172,020	1,279,600	1,291,770	1,413,050
9	770,020	1,005,420	1,181,440	1,280,570	1,292,260	1,422,310
10	777,960	1,014,430	1,187,090	1,282,520	1,293,230	1,432,590
11	780,120	1,026,020	1,185,200	1,283,490	1,294,210	1,439,790
12	786,610	1,032,170	1,189,910	1,285,440	1,294,700	1,448,530
13	795,120	1,035,690	1,196,510	1,285,930	1,296,160	1,457,280
14	805,870	1,040,100	1,203,100	1,287,390	1,298,590	1,464,090
15	812,170	1,041,860	1,208,280	1,289,340	1,301,030	1,471,940
16	816,990	1,049,340	1,221,220	1,289,830	1,306,400	1,481,370
17	823,660	1,056,820	1,226,500	1,289,830	1,314,810	1,491,320
18	828,600	1,066,510	1,228,890	1,289,830	1,318,770	1,500,220
19	835,080	1,069,590	1,227,450	1,288,360	1,323,720	1,510,180
20	843,850	1,071,370	1,231,770	1,287,880	1,328,180	1,518,170
21	853,760	1,079,490	1,233,690	1,286,900	1,331,640	1,524,560
22	860,230	1,085,350	1,237,530	1,285,930	1,335,600	1,534,140
23	861,380	1,087,600	1,248,560	1,284,960	1,343,030	1,540,000
24	868,810	1,093,920	1,252,390	1,283,980	1,352,430	1,551,710
25	874,690	1,104,290	1,255,750	1,284,470	1,357,430	1,563,710
26	882,140	1,109,700	1,258,660	1,284,960	1,360,960	1,573,230
27	895,480	1,116,020	1,258,660	1,287,390	1,363,480	1,587,360
28	906,210	1,119,710	1,266,450	1,288,850	1,365,500	1,594,420
29	913,490	1,123,860	1,276,190	1,288,850	-	1,602,030
30	921,980	1,129,390	1,283,010	1,290,310	-	1,610,180
31	929,260	-	1,285,440	1,289,830	-	1,617,250

Contents, in acre-feet, of American Falls Reservoir at American Falls, Idaho, water year October 1946 to September 1947--Continued

Day	Apr.	May	June	July	Aug.	Sept.
1	1,628,300	1,688,230	1,694,400	1,700,000	1,252,870	818,100
2	1,632,730	1,687,110	1,698,320	1,697,760	1,238,960	803,650
3	1,642,120	1,684,870	1,705,600	1,687,670	1,225,540	787,340
4	1,640,470	1,680,380	1,715,750	1,677,020	1,213,550	776,150
5	1,652,630	1,678,140	1,719,740	1,664,790	1,202,630	760,650
6	1,655,940	1,679,260	1,716,890	1,651,520	1,193,680	747,410
7	1,663,680	1,684,870	1,713,470	1,642,120	1,183,790	731,960
8	1,669,210	1,688,230	1,706,160	1,630,520	1,172,960	721,430
9	1,670,870	1,688,790	1,704,480	1,618,350	1,158,890	708,980
10	1,669,760	1,695,520	1,716,320	1,603,660	1,143,220	699,410
11	1,672,540	1,703,920	1,720,880	1,588,990	1,116,940	692,920
12	1,675,340	1,711,760	1,717,460	1,582,470	1,037,520	685,410
13	1,675,900	1,711,760	1,715,180	1,568,880	1,087,600	674,350
14	1,677,020	1,711,760	1,711,200	1,554,370	1,074,980	673,680
15	1,680,940	1,708,400	1,707,840	1,536,800	1,059,910	664,050
16	1,678,700	1,703,920	1,705,600	1,521,900	1,045,380	658,080
17	1,681,500	1,708,400	1,709,520	1,504,930	1,028,210	652,430
18	1,675,900	1,709,520	1,714,040	1,489,220	1,014,000	649,450
19	1,678,700	1,712,330	1,716,320	1,471,420	998,980	650,110
20	1,679,260	1,712,900	1,712,330	1,454,190	983,530	655,090
21	1,680,380	1,702,800	1,719,170	1,436,190	966,840	661,730
22	1,687,110	1,704,480	1,706,160	1,419,740	948,890	667,370
23	1,689,350	1,703,360	1,706,720	1,402,310	938,160	672,350
24	1,694,400	1,700,560	1,710,080	1,385,170	925,620	676,340
25	1,697,760	1,699,440	1,705,600	1,369,030	913,090	678,990
26	1,699,440	1,696,640	1,701,680	1,354,410	900,180	679,990
27	1,700,000	1,697,760	1,694,960	1,336,590	886,850	681,990
28	1,693,440	1,699,350	1,690,470	1,318,770	874,300	684,380
29	1,692,710	1,687,110	1,698,230	1,302,490	859,470	684,040
30	1,683,750	1,688,790	1,693,270	1,285,930	844,230	686,770
31	-	1,689,350	-	1,269,880	832,030	-

Monthly elevation and contents, water year October 1946 to September 1947

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30.....	4,333.09	718,970	-
Oct. 31.....	4,338.69	929,260	+210,290
Nov. 30.....	4,343.30	1,129,390	+200,130
Dec. 31.....	4,346.59	1,285,440	+156,050
Calendar year 1946...	-	-	+68,060
Jan. 31.....	4,346.68	1,289,830	+4,390
Feb. 28.....	4,348.21	1,365,500	+75,670
Mar. 31.....	4,353.01	1,617,250	+251,750
Apr. 30.....	4,354.21	1,683,750	+66,500
May 31.....	4,354.31	1,689,350	+5,600
June 30.....	4,354.38	1,693,270	+3,920
July 31.....	4,346.25	1,269,890	-424,390
Aug. 31.....	4,336.21	832,030	-436,850
Sept.30.....	4,332.15	688,770	-145,260
Water year 1946-47...	-	-	-32,200

Snake River at Neeley, Idaho

Location.- Water-stage recorder, lat. 42°45', long. 112°54', in SW¼ sec. 31, T. 7 S., R. 31 E., 0.9 mile downstream from American Falls Dam. Datum of gage is 4,241.4 feet above mean sea level (river-profile survey). Records computed to show flow at former site in sec. 11, T. 8 S., R. 30 E., half a mile north of Neeley and 2½ miles downstream from present site, by adding inflow between sites.

Records available.- March 1906 to September 1947.

Extremes.- Maximum discharge during year, 27,600 second-feet June 11 (gage height, 9.44 feet); minimum, 70 second-feet on several days (gage height, 0.94 foot).
1906-47: Maximum daily discharge, 48,400 second-feet June 20, 1918 (gage height, 13.5 feet, site and datum then in use); minimum, 50 second-feet Oct. 22, 23, Nov. 14-16, 1941.

Remarks.- Records excellent. Flow regulated by American Falls Reservoir (see p. 22) and other reservoirs, having a combined usable capacity of 3,200,000 acre-feet. About 700,000 acres of land irrigated by water diverted from river and tributaries above station.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,680	3,610	71	5,090	5,250	3,630	3,450	9,840	10,000	11,500	11,400	10,700
2	2,870	3,600	4,940	5,090	4,390	2,260	3,480	10,200	9,650	11,500	11,300	10,700
3	2,890	75	4,080	4,090	4,210	4,180	3,760	10,900	9,560	11,400	11,300	10,600
4	2,820	3,360	4,110	5,480	5,210	3,390	4,600	11,900	13,900	11,600	11,200	10,600
5	2,480	3,390	5,110	4,190	5,210	1,800	4,570	12,500	19,700	11,600	10,900	10,500
6	70	3,130	5,140	6,140	5,210	1,800	4,570	11,900	20,100	11,600	10,600	10,300
7	3,100	3,100	5,130	4,190	5,210	1,790	4,660	11,400	21,800	11,500	10,700	10,100
8	3,780	4,990	79	3,960	5,210	1,790	4,940	11,500	19,400	11,400	11,000	9,650
9	3,840	5,070	5,090	3,950	4,370	87	4,940	11,500	12,700	11,600	11,200	9,230
10	3,840	70	5,060	4,280	5,210	1,800	5,390	11,500	17,200	11,500	11,600	9,180
11	3,840	4,980	5,050	4,390	5,210	1,800	5,780	12,600	23,500	11,300	11,700	9,000
12	3,860	4,990	5,080	4,450	4,350	1,800	5,780	16,700	27,400	11,400	11,700	8,590
13	78	5,040	5,080	4,430	4,230	1,810	5,780	18,900	27,300	11,700	11,600	8,460
14	3,830	5,040	5,070	4,450	4,240	1,790	5,780	18,800	25,900	11,900	11,500	8,360
15	3,860	5,040	104	4,430	4,240	1,810	6,280	18,800	22,900	12,000	11,400	8,100
16	3,780	5,040	5,060	4,390	1,460	89	7,130	15,600	17,600	11,900	11,300	7,830
17	3,860	71	5,080	4,390	4,270	1,810	7,610	13,900	13,900	11,900	11,300	7,560
18	3,880	5,110	5,090	5,240	4,290	1,810	7,560	13,900	13,900	11,800	11,100	6,400
19	3,900	5,120	5,110	4,390	4,300	1,810	7,560	14,000	15,600	11,800	11,000	5,510
20	75	5,040	5,080	5,240	4,300	3,280	7,560	16,500	16,500	11,800	11,100	5,050
21	3,660	4,980	5,080	5,230	4,310	1,820	7,560	15,500	17,000	11,900	11,200	4,740
22	3,960	5,040	77	5,240	4,200	1,830	6,960	12,300	16,400	11,800	10,900	4,770
23	3,980	5,040	5,090	5,240	90	93	6,440	10,400	15,700	11,800	11,100	4,770
24	3,980	70	5,080	5,270	4,200	1,860	6,440	11,000	15,200	11,700	11,100	4,880
25	3,980	5,070	5,060	5,250	4,230	1,870	7,300	11,400	13,100	11,800	11,100	5,160
26	3,930	5,180	5,060	4,420	4,230	1,860	7,740	11,400	10,500	11,900	11,100	5,390
27	75	5,090	5,120	5,250	4,350	1,860	8,280	11,600	11,500	11,900	11,100	5,390
28	3,700	5,060	5,120	5,250	3,760	1,840	9,980	11,500	12,000	12,000	11,000	5,390
29	3,610	4,560	82	5,280	-	1,830	10,900	11,400	12,000	11,800	10,900	4,770
30	3,590	4,430	5,150	5,270	-	86	10,600	11,100	11,700	11,500	10,800	4,410
31	3,590	-	5,320	5,250	-	2,260	-	10,500	-	11,400	10,700	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	97,398	3,980	70	3,142	193,200
November	120,386	5,180	70	4,013	238,800
December	152,853	5,320	71	4,286	263,500
Calendar year 1946	2,976,585	26,900	70	8,155	5,904,000
January	150,210	6,140	3,950	4,845	297,900
February	120,740	5,250	90	4,312	239,500
March	57,545	4,180	86	1,856	114,100
April	193,380	10,900	3,450	6,446	383,600
May	400,900	18,900	9,840	12,930	795,300
June	493,610	27,400	9,560	16,450	979,100
July	362,200	12,000	11,300	11,680	718,400
August	345,900	11,700	10,600	11,160	686,100
September	226,090	10,700	4,410	7,536	448,400
Water year 1946-47	2,701,202	27,400	70	7,401	5,358,000

Lake Walcott near Minidoka, Idaho

Location.- Staff gage, lat. 42°40', long. 113°99', in sec. 1, T. 9 S., R. 25 E., in powerhouse at Minidoka Dam on Snake River, 6 miles southeast of Minidoka. Datum of gage is 4,200.00 feet above datum of Bureau of Reclamation, which is 49.52 feet below mean sea level.

Records available.- April 1909 to September 1947.

Extremes.- Maximum contents during year, 100,010 acre-feet June 5 (gage height, 45.40 feet); minimum, 63,890 acre-feet Dec. 2, 30 (gage height, 42.21 feet).
1909-47: Maximum contents, 110,740 acre-feet Aug. 8, 1922 (gage height, 46.28 feet); minimum, -101,410 acre-feet Nov. 17, 1941 (gage height, 15.19 feet).

Remarks.- Reservoir is formed by rock-fill dam with concrete core; storage began in 1909. Capacity, 107,240 acre-feet between gage height 36.00 feet (sill of powerhouse penstock) and 46.00 feet (top of flashboards). Dead storage, about 115,000 acre-feet. Gage read at 8 a.m. and 4 p.m. Contents given herein are computed from mean gage heights. Water used for power development and irrigation on Minidoka project of Bureau of Reclamation.

Cooperation.- Gage-height record and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80,610	69,630	70,400	67,870	74,410	68,310	68,420	92,860	96,870	99,760	98,320	95,430
2	80,830	71,280	63,590	69,300	74,070	68,090	68,420	91,460	97,960	99,520	98,560	95,910
3	81,850	71,610	64,800	70,620	73,390	68,750	68,860	91,230	98,560	99,160	97,960	95,430
4	81,060	66,990	66,550	71,830	73,840	69,410	68,530	90,990	98,680	99,040	97,590	95,910
5	81,280	68,090	67,870	74,290	74,070	69,850	69,410	92,390	100,010	99,640	97,840	95,910
6	80,160	69,190	69,850	74,290	74,520	70,290	68,640	94,950	98,320	99,520	98,080	96,150
7	76,320	69,740	70,730	73,960	74,520	71,390	68,750	94,950	97,590	99,040	97,840	95,550
8	78,130	70,290	70,950	72,490	73,840	72,050	68,750	94,950	98,320	98,800	98,080	95,790
9	76,890	71,830	63,920	71,500	73,280	71,830	67,430	94,020	96,390	98,320	96,510	94,950
10	79,140	72,260	65,560	70,730	72,260	70,730	66,990	94,720	99,520	97,350	94,950	94,250
11	78,690	65,890	66,330	70,730	74,290	69,410	71,060	94,950	99,040	96,150	95,910	95,310
12	78,580	67,210	67,650	70,730	74,520	72,260	72,490	97,590	99,640	96,870	94,600	95,670
13	78,130	68,530	69,850	70,730	73,840	73,050	73,840	98,800	99,880	96,630	96,030	93,320
14	72,260	69,630	71,170	71,060	73,620	73,390	74,520	99,040	99,640	96,750	96,510	95,790
15	72,490	70,620	70,290	70,950	73,170	73,620	75,870	98,680	99,880	95,430	97,350	96,270
16	72,260	72,830	63,810	70,950	73,280	72,490	77,110	97,350	97,110	96,150	97,350	97,590
17	72,940	72,720	65,890	70,950	68,750	70,730	79,480	97,840	96,390	97,110	97,110	98,080
18	72,720	65,330	66,990	71,170	69,630	70,950	82,190	97,720	96,630	97,840	97,590	99,760
19	73,390	68,090	57,870	72,260	69,850	71,390	85,980	97,840	96,270	97,110	97,350	98,560
20	72,940	69,410	70,070	72,260	70,510	71,610	88,780	98,080	95,550	97,350	96,990	97,350
21	67,650	71,610	72,050	73,500	70,950	74,290	90,880	96,870	97,110	97,840	96,270	95,670
22	68,530	72,940	70,400	74,070	71,280	73,840	93,320	97,840	96,390	96,990	95,180	94,490
23	67,430	73,620	63,920	74,290	69,740	70,840	93,320	97,350	96,150	96,390	95,910	93,550
24	70,290	72,260	65,450	74,410	64,360	69,190	93,200	96,390	95,670	97,110	95,790	93,090
25	71,170	66,550	66,330	74,410	65,230	70,730	92,510	96,750	95,180	96,870	95,910	93,090
26	72,490	67,980	68,090	74,070	65,670	69,630	92,270	96,630	94,950	97,350	95,670	92,390
27	72,600	69,740	68,530	73,500	66,770	70,950	91,570	96,750	93,090	97,590	95,670	93,090
28	67,870	70,950	70,400	74,070	67,210	71,610	91,460	95,070	95,430	97,590	95,670	93,900
29	68,530	71,940	70,510	73,840	-	71,940	91,690	94,720	97,350	98,320	96,270	94,720
30	69,520	72,260	63,590	74,410	-	71,170	90,290	95,910	99,280	98,680	95,310	94,950
31	70,290	-	65,670	74,290	-	67,870	-	95,430	-	98,320	95,430	-

Monthly gage height and contents, water year October 1946 to September 1947

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	44.02	83,770	-
Oct. 31	42.82	70,290	-13,480
Nov. 30	43.00	72,260	+1,970
Dec. 31	42.40	65,670	-6,590
Calendar year 1946	-	-	-6,380
Jan. 31	43.18	74,290	+8,620
Feb. 28	42.54	67,210	-7,080
Mar. 31	42.60	67,870	+660
Apr. 30	44.58	90,290	+22,420
May 31	45.02	95,430	+5,140
June 30	45.34	99,280	+3,850
July 31	45.26	98,320	-960
Aug. 31	45.02	95,430	-2,890
Sept. 30	44.98	94,950	-480
Water year 1946-47	-	-	+11,180

Snake River near Minidoka, Idaho

Location.- Water-stage recorder, lat. 42°40', long. 113°30', in sec. 2, T. 9 S., R. 25 E., 1 mile downstream from Minidoka Dam and 6 miles southeast of Minidoka. Datum of gage is 4,132.2 feet above mean sea level (river-profile survey).

Records available.- April 1910 to September 1947. August 1895 to December 1899 and May 1901 to December 1910 at site at Montgomery Ferry, 6 miles downstream.

Extremes.- Maximum discharge during year, 27,000 second-feet June 12 (gage height, 12.76 feet); minimum, 1,160 second-feet Mar. 5 (gage height, 3.78 feet).
1910-47: Maximum discharge, 45,900 second-feet June 21, 1918 (gage height, 16.02 feet); minimum, 59 second-feet Nov. 18, 1936 (gage height, 1.56 feet).

Remarks.- Records good. Flow regulated by American Falls Reservoir (see p. 22), Lake Walcott (see preceding page), and other reservoirs, having a combined capacity of about 3,300,000 acre-feet; and greatly reduced by diversions above station for irrigation.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,170	3,450	4,630	b4,480	5,440	3,330	3,270	7,530	7,240	8,210	8,600	8,240
2	2,340	3,450	4,500	b4,500	5,370	3,350	3,310	7,590	7,020	8,090	8,720	8,030
3	2,100	3,410	4,520	b4,610	5,240	3,350	3,290	7,910	7,100	8,150	8,720	8,090
4	2,120	3,070	4,520	b4,700	5,260	3,350	4,500	8,360	9,980	8,360	8,540	8,030
5	2,060	2,840	4,520	b4,850	5,370	2,160	4,980	8,390	17,600	8,480	8,150	8,000
6	1,970	2,840	4,520	b4,920	5,400	1,660	5,080	8,330	18,700	8,480	7,970	7,760
7	1,960	2,840	4,520	b5,190	5,590	1,660	4,940	8,210	19,900	8,300	8,150	7,680
8	2,100	3,660	4,520	b4,940	5,680	1,670	4,940	8,270	19,100	8,480	8,510	7,530
9	3,680	4,560	4,520	*b4,720	5,400	1,700	5,080	8,420	11,800	9,110	8,750	7,180
10	3,430	4,520	4,520	b4,700	4,810	1,610	4,920	8,390	15,300	8,750	8,990	7,020
11	3,470	4,500	*4,540	b4,810	4,850	1,660	4,210	8,930	21,400	8,570	8,990	6,680
12	3,490	4,540	4,560	b4,650	5,050	1,670	4,980	12,700	26,400	8,660	8,750	6,410
13	3,450	4,520	4,560	b4,650	4,920	1,730	5,010	16,000	26,800	8,840	8,600	6,440
14	3,510	4,500	4,560	b4,520	4,760	1,920	4,980	16,600	25,700	9,080	8,360	6,100
15	3,560	4,590	4,560	b4,520	4,670	2,020	4,940	17,100	24,300	9,020	8,300	5,850
16	3,580	4,560	4,560	b4,610	4,260	1,980	4,940	14,700	19,100	8,840	8,330	5,640
17	3,530	4,340	4,540	b4,740	4,190	1,810	5,010	11,600	13,500	8,540	8,390	5,490
18	3,580	4,520	4,520	b4,760	4,190	1,800	5,140	11,700	13,300	8,600	8,330	5,350
19	3,530	4,520	4,540	b5,010	*4,230	1,830	5,080	11,800	14,100	8,900	8,300	5,190
20	3,510	4,590	4,560	b4,960	4,280	1,920	5,120	13,600	15,500	8,900	8,390	4,830
21	3,490	4,560	4,560	b5,080	4,340	2,170	5,140	14,400	15,900	8,870	8,450	4,410
22	3,490	4,600	4,540	*b5,330	4,340	2,100	5,140	10,200	15,500	8,780	8,480	4,300
23	3,530	4,640	4,500	b5,440	4,390	1,980	5,170	7,850	14,700	8,660	8,480	4,150
24	3,560	4,640	4,500	b5,420	4,170	1,850	5,170	7,910	13,800	8,810	8,450	4,020
25	3,580	4,560	4,520	5,520	4,120	1,840	5,350	8,360	12,100	8,930	8,450	4,000
26	3,580	4,540	4,520	5,490	4,080	1,840	5,830	8,330	8,390	8,840	8,420	4,210
27	3,470	4,540	4,560	5,140	4,170	1,900	6,230	8,930	8,570	8,840	8,360	4,060
28	3,450	4,540	b4,500	b5,140	3,740	1,930	6,850	8,660	8,000	8,840	8,120	3,950
29	3,450	4,540	b4,410	b5,100	-	1,880	7,020	8,180	8,420	8,870	8,060	3,010
30	3,450	4,630	b4,390	b5,100	-	1,880	8,000	7,910	8,330	8,540	8,330	2,840
31	3,430	-	b4,300	b5,300	-	2,610	-	7,700	-	8,510	8,390	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	97,620	3,680	1,960	3,149	193,600
November	125,610	4,640	2,840	4,187	249,100
December	140,090	4,630	4,300	4,519	277,900
Calendar year 1946	2,649,540	25,100	1,060	7,259	5,255,000
January	152,900	5,520	4,480	4,932	303,300
February	132,310	5,680	3,740	4,725	262,400
March	64,160	3,350	1,610	2,070	127,300
April	153,620	8,000	3,270	5,121	304,700
May	314,560	17,100	7,530	10,140	623,900
June	447,550	26,800	7,020	14,920	887,700
July	268,850	9,110	8,090	8,673	533,300
August	261,830	8,990	7,970	8,446	519,300
September	174,490	8,240	2,840	5,816	346,100
Water year 1946-47	2,333,590	26,800	1,610	6,393	4,629,000

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

Snake River at Milner, Idaho

Location.- Water-stage recorder, lat. 42°32', long. 114°01', in sec. 29, T. 10 S., R. 21 E., at Milner, a quarter of a mile downstream from Milner Dam. Altitude of gage, 4,062 feet (from river-profile map).

Records available.- May 1909 to September 1947.

Extremes.- Maximum discharge during year, 21,300 second-feet June 13 (gage height, 19.62 feet); minimum, 10 second-feet Aug. 1, 2 (gage height, 1.64 feet).
1909-47: Maximum discharge, 44,400 second-feet June 12, 1909 (gage height, 20.10 feet, site and datum then in use); minimum, 2 second-feet Mar. 17-28, 1936 (gage height, 1.18 feet).

Remarks.- Records good. Flow regulated by American Falls Reservoir (see p. 22), Lake Walcott (see p. 25), and other reservoirs, having a combined usable capacity of about 3,300,000 acre-feet, and greatly reduced by diversions above Milner Dam for irrigation. About 1,300,000 acres of land irrigated by diversion from river and its tributaries above station. Flow includes some stored water released for use downstream by Idaho Power Co.

Cooperation.- Gage-height record furnished by Twin Falls Canal Co. and North Side Canal Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99	1,590	3,910	3,350	4,610	2,740	2,090	69	303	449	10	410
2	326	2,210	3,880	3,630	4,910	2,640	2,100	70	54	76	23	316
3	587	2,470	3,670	3,710	4,520	2,590	2,260	70	89	76	19	250
4	688	2,530	3,530	3,840	4,590	2,560	2,420	71	1,600	75	18	250
5	688	2,160	3,570	4,000	4,630	2,200	4,470	93	9,500	74	17	250
6	688	2,160	3,700	4,030	4,640	973	4,450	158	12,100	57	14	255
7	638	2,340	3,600	4,440	4,700	456	3,530	108	12,500	27	14	242
8	698	2,500	3,690	4,690	4,800	374	2,710	107	15,300	22	97	476
9	762	3,460	3,700	4,240	4,950	553	2,280	76	7,690	22	162	490
10	2,260	3,830	3,600	3,950	4,630	564	1,210	62	5,950	178	209	228
11	2,920	3,650	3,510	3,970	4,220	663	3,170	528	14,800	21	297	242
12	3,000	3,640	3,280	3,850	4,120	663	4,430	3,520	20,000	16	281	248
13	2,990	3,670	2,220	3,670	4,070	692	3,650	7,670	21,200	16	273	248
14	2,880	3,730	3,030	3,680	4,000	816	3,250	8,600	20,600	16	273	252
15	2,780	3,810	3,530	3,500	4,010	1,160	2,500	8,770	19,100	15	273	252
16	2,740	3,830	3,310	3,560	3,920	1,350	1,670	7,790	14,800	16	252	252
17	2,890	3,690	3,910	3,740	3,580	992	937	3,590	8,180	14	252	248
18	2,930	2,980	3,300	3,890	3,350	825	850	3,380	7,700	12	248	330
19	2,890	3,220	2,380	4,120	3,330	830	1,570	3,380	7,280	12	250	718
20	2,870	3,850	3,590	3,900	3,530	835	1,100	4,520	8,460	12	250	835
21	2,930	4,230	4,830	3,900	3,520	1,030	865	6,160	8,860	13	252	487
22	2,970	3,950	4,430	4,220	3,530	1,560	550	2,850	9,030	12	252	305
23	2,580	3,840	3,760	4,530	3,430	850	141	300	7,970	12	329	250
24	2,800	3,840	4,290	4,630	3,600	1,480	71	64	6,360	12	550	248
25	3,220	3,860	4,250	4,810	3,550	1,740	71	38	5,430	12	550	245
26	3,090	3,720	4,180	4,850	3,500	731	71	38	808	12	333	245
27	3,240	3,730	3,970	4,660	3,290	420	70	235	602	11	447	248
28	3,220	3,640	3,690	4,360	3,020	727	67	585	162	11	429	248
29	3,160	3,760	3,640	4,210	-	587	68	383	127	11	252	248
30	2,810	3,810	3,600	4,130	-	501	65	205	626	11	252	650
31	1,820	-	3,380	4,370	-	835	-	205	-	11	252	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	68,206	3,240	99	2,200	135,300
November	99,700	4,230	1,590	3,323	197,800
December	112,930	4,830	2,220	3,643	224,000
Calendar year 1946	1,252,981	19,600	10	3,433	2,485,000
January	126,430	4,850	3,350	4,078	250,800
February	112,550	4,950	3,020	4,020	223,200
March	34,937	2,740	374	1,127	69,300
April	52,684	4,470	65	1,758	104,500
May	63,695	8,770	38	2,055	126,300
June	247,151	21,200	54	8,238	490,200
July	1,334	449	11	43.0	2,650
August	7,130	550	10	230	14,140
September	9,368	835	228	332	19,770
Water year 1946-47	936,713	21,200	10	2,566	1,858,000

Snake River near Kimberly, Idaho

Location.- Water-stage recorder lat. 42°36', long. 114°22', in NW¼ sec. 4, T. 10 S., R. 18 E., 1,200 feet downstream from Twin Falls power plant, 2½ miles upstream from Shoshone Falls, and 4 miles north of Kimberly.

Records available.- July 1923 to September 1947.

Extremes.- Maximum discharge during year, 21,400 second-feet June 13 (gage height, 19.50 feet); minimum, 18 second-feet (regulated) July 30, 30 (gage height, 1.36 feet); minimum daily, 247 second-feet July 13.

1923-47: Maximum discharge, 27,200 second-feet July 4, 1927 (gage height, 14.76 feet, site and datum then in use), from rating curve extended above 20,000 second-feet; minimum daily recorded, 139 second-feet July 4, 1941.

Remarks.- Records excellent except those above 10,000 second-feet, which are good, and those for periods of no gage-height record, which are fair. Flow regulated by Twin Falls power plant and several reservoirs above station. Practically entire flow is diverted at Milner during irrigation season; no diversion between Milner and Kimberly.

Rating table, water year 1946-47 (gage height, in feet, and discharge, in second-feet)

3.5	238	6.0	910	12.0	5,750
4.0	332	7.0	1,320	14.0	8,750
4.5	445	8.0	1,800	16.0	12,600
5.0	580	9.0	2,480	18.0	17,300
5.5	735	10.0	3,400	19.5	21,400

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	526	1,930	4,270	3,500	4,860	a3,100	1,850	400	570	1,060	442	716
2	a600	2,360	4,280	3,790	5,300	a3,000	2,420	410	784	903	436	848
3	a750	2,750	4,140	3,930	4,980	a2,850	2,380	420	574	488	434	849
4	a950	2,880	3,890	3,980	4,860	a2,800	2,500	395	676	439	472	734
5	a1,200	2,670	3,930	4,230	4,960	2,640	4,050	430	7,690	486	472	720
6	a1,200	2,340	3,980	4,310	4,930	1,810	5,140	496	12,200	416	479	740
7	a1,200	2,680	4,070	4,620	4,980	1,130	4,680	460	12,200	382	481	750
8	1,220	2,650	4,030	4,980	5,080	954	3,540	418	15,300	422	509	712
9	1,210	3,530	4,110	4,680	5,270	688	3,280	412	8,550	412	532	938
10	1,980	4,280	4,000	4,220	4,930	836	2,910	432	6,030	440	510	1,010
11	3,050	4,060	4,000	4,230	4,560	958	1,790	413	13,800	466	603	792
12	3,300	4,070	3,890	4,190	4,400	1,020	4,980	1,860	19,700	504	777	732
13	3,300	4,080	2,720	4,000	4,420	1,040	4,060	7,540	21,200	247	746	748
14	3,200	4,110	2,870	3,890	4,340	1,130	3,730	9,110	20,800	462	713	710
15	3,160	4,230	3,910	3,890	a4,300	1,330	3,050	9,350	18,900	404	742	746
16	3,080	4,230	3,550	3,830	a4,300	1,740	2,140	8,900	16,000	349	724	757
17	3,190	4,200	4,200	4,070	a4,000	1,590	1,640	4,320	8,800	396	728	755
18	3,310	3,500	4,050	4,110	a3,600	1,280	1,160	3,800	9,020	526	702	760
19	3,250	3,520	2,730	4,400	h3,580	1,240	1,600	3,730	7,300	484	696	859
20	3,210	3,760	3,300	4,160	a3,800	1,230	1,710	4,140	8,310	340	702	1,410
21	3,230	4,570	4,920	4,220	a3,800	1,270	1,330	6,810	8,840	350	694	1,230
22	3,410	4,440	5,130	4,420	a3,800	2,050	1,210	4,330	9,180	402	700	1,010
23	2,990	4,230	4,060	4,900	a3,800	1,590	892	1,660	8,290	405	698	874
24	2,950	4,220	4,560	4,960	a3,800	1,620	567	750	6,760	382	710	766
25	3,500	4,240	4,640	5,090	a3,800	2,100	408	454	6,060	420	1,050	720
26	3,420	4,080	4,500	5,160	a3,800	1,700	384	416	2,900	456	1,040	749
27	3,590	4,170	4,380	5,130	a3,800	990	426	452	942	411	903	735
28	3,520	4,010	3,970	4,690	3,480	827	400	921	1,050	400	868	717
29	3,520	4,120	3,930	4,620	-	1,060	428	1,050	684	424	982	742
30	3,320	4,220	3,830	4,500	-	970	418	822	618	460	740	741
31	2,350	-	3,710	4,740	-	847	-	636	-	432	703	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	78,686	3,590	526	2,538	156,100
November	110,110	4,570	1,930	3,670	218,400
December	123,550	5,130	2,720	3,985	245,100
Calendar year 1946	1,374.374	17,900	241	3,765	2,726,000
January	135,440	5,160	3,500	4,369	268,600
February	121,530	5,300	3,480	4,340	241,100
March	47,390	3,100	388	1,529	94,000
April	65,073	5,140	384	2,169	129,100
May	75,737	9,350	395	2,443	150,200
June	252,728	21,200	570	8,424	501,300
July	14,148	1,060	247	456	28,060
August	20,988	1,050	434	677	41,630
September	24,570	1,410	710	819	48,730
Water year 1946-47	1,069,950	21,200	247	2,931	2,122,000

a No gage-height record; discharge computed on basis of records for stations at Milner and near Twin Falls.
h Computed from staff-gage reading.

Snake River near Twin Falls, Idaho

Location.- Water-stage recorder, lat. 42°36', long. 114°29', in NW¼NW¼ sec. 33, T. 9 S., R. 17 E., at Perrine Bridge, 200 feet upstream from outlet of Blue Lakes, 4 miles north of city of Twin Falls, and 4 miles downstream from Shoshone Falls.
Records available.- September 1911 to June 1917, May 1919 to December 1947 (discontinued).
Extremes.- Maximum discharge during period October 1946 to December 1947, 21,500 second-feet June 13 (gage height, 12.30 feet); minimum, 328 second-feet (regulated) Apr. 27 (gage height, 1.94 feet); minimum daily, 449 second-feet Apr. 27.
1911-17, 1919-47: Maximum discharge observed, 32,200 second-feet June 10, 1914 (gage height, 13.3 feet); minimum, 280 second-feet (estimated) Apr. 16, 1936; minimum daily, 311 second-feet Apr. 17, 1936.
Remarks.- Records good. Flow regulated by Twin Falls and Shoshone Falls power plants and several reservoirs above station. No diversion except by small ranch ditches between this station and station at Milner, where practically entire flow is diverted during irrigation season.

Discharge, in second-feet, 1946-47

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	841	2,220	4,680	3,770	5,060	3,270	1,670	705	825	1,010	569	896
2	880	2,670	4,690	4,040	5,530	3,250	2,640	521	896	1,170	575	972
3	1,020	3,050	4,550	4,230	5,300	3,110	2,640	486	905	848	582	1,020
4	1,210	3,300	4,280	4,250	5,060	3,090	2,810	486	817	588	608	938
5	1,490	3,110	4,320	4,390	5,190	3,010	4,110	504	7,160	459	635	922
6	1,500	2,670	4,390	4,460	5,170	2,170	5,380	526	13,000	575	614	913
7	1,520	3,010	4,480	4,750	5,210	1,390	4,910	588	13,000	601	594	930
8	1,500	2,980	4,420	5,280	5,320	1,100	3,860	569	16,000	509	614	896
9	1,490	3,800	4,510	5,060	5,490	913	3,480	551	10,800	575	635	1,020
10	2,110	4,640	4,410	4,600	5,230	905	3,320	532	6,320	582	628	1,170
11	3,500	4,480	4,300	4,500	4,820	1,020	1,610	521	14,000	575	691	1,020
12	3,800	4,420	4,250	4,460	4,660	1,100	5,150	1,260	19,500	621	817	913
13	3,770	4,440	3,190	4,260	4,690	1,120	4,300	7,420	21,500	575	913	930
14	3,670	4,480	3,110	4,180	4,590	1,190	3,920	9,430	21,200	498	833	938
15	3,620	4,640	4,210	4,130	4,570	1,340	3,330	9,690	19,400	601	888	930
16	3,550	4,660	3,940	4,130	4,570	1,840	2,430	10,300	17,100	569	880	981
17	3,600	4,640	4,460	a4,200	4,250	1,810	1,940	4,820	9,570	504	864	964
18	3,770	4,010	4,420	a4,400	3,940	1,490	1,350	3,920	8,440	563	817	964
19	3,680	3,840	3,110	a4,600	3,890	1,340	1,550	3,920	7,750	582	825	1,020
20	3,630	4,160	3,480	a4,400	3,970	1,340	1,980	4,200	8,780	515	833	1,430
21	3,620	5,080	5,130	a4,400	4,080	1,360	1,450	6,890	9,290	544	856	1,530
22	3,860	4,890	5,460	4,570	4,080	2,000	1,350	4,820	9,740	515	848	1,230
23	3,410	4,660	4,390	5,100	4,040	1,990	1,100	2,030	9,020	544	848	1,080
24	3,330	4,640	4,800	5,210	4,080	1,640	872	1,080	7,310	526	848	972
25	3,910	4,680	4,960	5,320	4,140	2,290	608	662	6,420	532	1,080	913
26	3,870	4,460	4,840	5,440	4,010	1,980	569	582	3,330	575	1,180	905
27	3,970	4,590	4,780	5,380	3,970	1,250	449	521	1,290	608	1,080	913
28	3,960	4,390	4,300	4,930	3,680	972	504	802	1,130	614	981	905
29	3,940	4,500	4,230	4,910	-	1,060	544	1,260	1,050	588	1,120	905
30	3,750	4,590	4,230	4,750	-	1,110	544	1,070	698	575	955	981
31	2,810	-	4,020	4,930	-	990	-	930	-	601	913	-

a No gage-height record; discharge computed on basis of records for stations at Milner and near Kimberly.

1947

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	1,470	2,200	4,420	9	2,000	2,980	4,480	17	2,480	2,280	-	25	2,080	3,550	-
2	2,550	1,950	4,680	10	2,430	2,920	4,460	18	2,140	2,640	-	26	2,020	4,780	-
3	2,520	2,060	4,570	11	2,410	2,730	4,410	19	2,020	2,680	-	27	1,990	4,860	-
4	2,490	2,560	4,330	12	2,450	2,760	4,410	20	2,520	2,870	-	28	1,640	4,820	-
5	2,220	3,090	3,960	13	2,760	2,810	4,420	21	2,380	2,930	-	29	2,310	4,660	-
6	2,170	2,970	4,110	14	2,730	2,600	4,410	22	2,270	2,820	-	30	2,340	4,250	-
7	2,140	3,520	4,300	15	2,620	2,520	-	23	1,570	2,360	-	31	2,240	-	-
8	1,970	3,250	4,460	16	2,540	2,100	-	24	1,990	2,680	-				

Monthly discharge, in second-feet, 1947-48

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October 1946	90,581	3,970	841	2,922	179,700
November	121,700	5,080	2,220	4,057	241,400
December	134,340	5,460	3,110	4,334	266,500
Calendar year 1946	1,491,621	19,000	498	4,087	2,959,000
January 1947	143,030	5,440	3,770	4,614	283,700
February	128,550	5,530	3,680	4,591	255,000
March	52,440	3,270	905	1,692	104,000
April	70,370	5,380	449	2,346	139,600
May	81,596	10,300	486	2,632	161,800
June	266,641	21,500	698	8,888	528,900
July	18,742	1,170	459	605	37,170
August	25,134	1,180	569	811	49,850
September	30,081	1,530	896	1,003	59,660
Water year 1946-47	1,163,205	21,500	449	3,187	2,307,000
October 1947	69,340	2,760	1,470	2,237	137,500
November	51,200	4,860	1,950	3,040	180,900
December 1-14	61,420	4,680	3,960	4,387	121,800

Snake River near Buhl, Idaho

Location.- Water-stage recorder, lat. 42°40', long. 114°43', in NW¼ sec. 9, T. 9 S., R. 15 E., 2 miles downstream from Niagara Springs, 3 3/4 miles upstream from outlet of Clear Lakes, and 6 miles northeast of Buhl. Datum of gage is 2,952.9 feet above mean sea level, by stadia levels.

Records available.- December 1946 to September 1947.

Extremes.- Maximum discharge during period, 23,100 second-feet June 13 (gage height, 10.34 feet); minimum observed, 1,900 second-feet (regulated) May 5 (gage height, 0.38 foot).

Remarks.- Records good except those for period of no gage-height record, which are fair. Flow regulated by Twin Falls and Shoshone Falls power plants and several reservoirs above station. No diversion except by small ranch ditches between this station and station at Milner, where practically entire flow is diverted during irrigation season.

Rating table, December 1946 to September 1947
(gage height, in feet, and discharge, in second-feet)

0.3	1,840	3.0	4,750	6.0	10,900
1.0	2,400	4.0	6,450	8.0	16,100
2.0	3,450	5.0	8,550	10.4	23,200

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-	a5,200	6,390	4,680	3,110	2,100	2,620	2,630	2,380	2,680
2			-	a5,300	6,890	4,600	3,910	2,040	2,670	2,770	2,370	2,710
3			-	a5,400	6,810	4,490	3,840	2,020	2,880	2,400	2,340	2,790
4			-	a5,650	6,410	4,420	4,200	1,960	2,730	2,240	2,400	2,760
5			-	a5,800	6,580	4,380	4,940	1,900	7,440	1,990	2,490	2,730
6			-	5,940	6,560	3,790	6,680	1,910	14,300	2,130	2,440	2,740
7			-	5,940	6,560	3,000	6,260	2,050	14,500	2,240	2,460	2,770
8			-	6,640	6,600	a2,750	5,310	2,020	17,200	2,020	2,350	2,780
9			-	6,450	6,870	a2,500	4,910	2,040	13,000	2,100	2,400	2,840
10			-	5,850	6,680	a2,400	f4,560	2,140	7,760	2,130	2,420	3,020
11			-	5,720	6,220	a2,450	f3,370	2,090	14,900	2,150	2,440	3,000
12			5,640	a5,700	6,010	2,500	5,600	2,170	21,100	2,220	2,440	2,820
13			4,530	5,640	6,080	2,560	5,720	f7,530	22,900	2,200	2,640	2,800
14			a5,000	5,550	5,950	2,580	5,230	10,600	22,600	2,010	f2,500	2,810
15			a5,500	5,550	5,900	2,690	4,720	10,900	21,000	2,240	2,560	2,810
16			5,640	5,520	5,920	3,240	3,800	10,800	19,000	2,150	2,540	2,850
17			5,720	5,760	5,670	2,630	3,280	6,990	12,200	2,040	2,540	2,850
18			5,640	5,740	5,340	2,880	2,770	5,290	10,100	2,120	2,510	2,860
19			4,460	6,120	5,230	2,750	2,770	5,340	9,190	2,130	2,510	2,860
20			4,600	5,940	5,280	2,730	3,450	5,440	10,000	2,090	2,530	3,110
21			a6,500	5,900	5,440	2,730	3,110	7,910	10,600	2,120	2,540	3,460
22			a6,750	6,010	5,390	2,860	2,880	6,750	11,200	2,170	2,550	3,190
23			a6,000	6,490	5,390	2,730	2,580	3,910	10,600	2,130	2,560	3,000
24			a6,300	6,640	5,340	2,980	2,420	2,730	8,870	2,150	2,590	2,890
25			a6,500	6,740	5,470	3,200	2,050	2,370	7,980	2,090	2,740	2,790
26			a6,400	6,910	5,340	3,240	2,050	2,140	f5,230	2,180	2,920	2,750
27			a6,100	6,830	5,340	2,670	2,010	2,130	3,150	2,240	2,870	2,770
28			a5,700	6,410	5,040	2,490	1,940	2,140	2,750	2,270	2,760	2,770
29			a5,400	6,360	-	2,320	1,930	2,880	2,710	2,260	2,860	2,720
30			a5,300	6,130	-	2,580	1,960	2,860	2,350	2,290	2,770	2,820
31			a5,250	6,260	-	2,450	-	2,810	-	2,330	2,690	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	-	-	-	-	-
November	-	-	-	-	-
December 12-31	112,930	6,750	4,460	5,646	224,000
Calendar year	-	-	-	-	-
January	186,090	6,910	5,200	6,003	369,100
February	166,700	6,890	5,040	5,954	330,600
March	94,270	4,680	2,320	3,041	187,000
April	111,360	6,680	1,930	3,712	220,900
May	125,960	10,900	1,900	4,063	249,800
June	313,530	22,900	2,350	10,450	621,900
July	68,230	2,770	1,990	2,201	135,300
August	79,110	2,920	2,340	2,552	156,900
September	85,750	3,460	2,680	2,858	170,100
The period	-	-	-	-	2,666,000

a No gage-height record; discharge computed on basis of records for stations near Twin Falls and below Lower Salmon Falls, near Hagerman.
f Computed from partly estimated gage-height record.
Note.- Computed from staff-gage reading Dec. 12, 13, 16-20, Jan. 6-11, 13-16, Mar. 5-7, Mar. 12 to Apr. 4, Apr. 16 to May 12, May 24 to June 4, June 27 to Aug. 13.

Snake River below Lower Salmon Falls, near Hagerman, Idaho

Location.- Water-stage recorder, lat. 42°51'36", long. 114°54'42", in lot 3, sec. 2, T. 7 S., R. 13 E., half a mile downstream from lower Salmon Falls power plant, 1 mile upstream from Big Wood (Malad) River, and 3½ miles north of Hagerman.

Records available.- November 1937 to September 1947.

Extremes.- Maximum discharge during year, 27,900 second-feet June 14 (gage height, 15.37 feet); minimum recorded, 4,880 second-feet (regulated) Apr. 24 (gage height, 6.08 feet); minimum daily, 5,400 second-feet May 4, 5.

1937-47: Maximum discharge, 28,800 second-feet June 7, 1943 (gage height, 15.66 feet), from rating curve extended above 22,000 second-feet; minimum, 3,720 second-feet (regulated) July 8, 1946 (gage height, 5.36 feet); minimum daily, 5,110 second-feet May 17, 1940.

Remarks.- Records excellent except those for period of no gage-height record, which are good. Flow regulated by Lower Salmon Falls power plant and many reservoirs above station. Practically entire flow at Milner diverted during irrigation season; only minor diversions below Milner.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,690	8,320	10,500	9,520	10,700	9,190	6,530	5,600	7,190	6,870	6,820	7,310
2	8,090	8,340	10,800	9,540	11,100	8,950	7,730	5,650	7,210	7,130	6,830	7,410
3	7,960	9,190	10,600	9,880	11,400	8,860	8,000	5,500	7,350	6,930	6,930	7,330
4	8,050	9,210	10,300	9,900	10,900	8,740	8,210	5,400	7,430	6,800	6,930	7,670
5	8,380	9,450	10,100	10,100	11,000	8,700	8,530	5,400	9,500	6,510	6,990	7,290
6	8,510	9,120	10,300	10,300	11,000	8,300	10,700	5,600	18,200	6,440	7,030	7,530
7	8,510	8,970	10,500	10,400	11,000	7,570	10,600	5,900	19,000	6,530	6,910	7,470
8	8,530	9,080	10,300	10,900	11,000	7,010	9,830	5,900	21,000	6,450	6,890	7,630
9	8,380	9,190	10,400	10,900	11,200	6,910	9,100	5,850	20,100	6,440	6,930	7,550
10	8,360	10,400	10,300	10,300	11,100	6,680	8,800	6,000	13,100	6,550	6,780	7,790
11	9,650	10,700	10,300	10,200	10,800	6,700	8,090	6,250	17,200	6,380	6,870	7,840
12	10,300	10,500	10,200	10,200	10,500	6,950	8,970	6,600	24,600	6,590	6,990	7,770
13	10,200	10,500	9,850	10,100	10,600	6,830	10,000	8,750	27,400	6,640	6,970	7,730
14	10,200	10,600	8,930	9,850	10,500	6,850	9,390	14,200	27,400	6,490	7,170	7,770
15	10,100	10,600	9,610	9,810	10,400	6,890	8,760	15,200	26,000	6,510	7,070	7,730
16	10,000	10,600	10,100	9,650	10,400	7,230	8,210	15,100	24,700	6,610	7,170	7,820
17	9,950	10,700	9,810	9,850	10,400	7,490	7,410	13,200	18,900	6,490	7,010	7,920
18	10,100	10,500	10,200	10,000	10,300	7,370	7,010	9,250	14,500	6,450	7,070	8,000
19	10,100	9,850	9,720	10,200	9,590	7,010	6,640	9,150	13,900	6,510	7,050	7,920
20	10,100	10,100	8,970	10,300	9,670	6,910	7,110	9,000	14,100	6,570	7,070	8,050
21	9,980	11,000	10,200	10,200	10,000	6,890	7,230	10,200	15,000	6,440	7,050	8,470
22	10,100	11,100	11,800	10,300	9,830	6,970	7,070	11,600	15,500	6,070	7,170	8,360
23	10,000	10,800	10,800	10,700	9,780	7,790	6,610	8,700	15,500	6,420	7,130	8,150
24	9,500	10,700	10,300	11,000	9,720	7,190	6,280	7,200	13,900	6,550	7,270	8,050
25	9,850	10,700	10,900	11,100	9,880	7,110	6,070	6,500	12,400	6,510	7,210	7,840
26	10,200	10,800	10,900	11,200	9,760	7,290	5,960	5,830	11,200	6,610	7,510	7,920
27	10,200	10,600	10,800	11,400	9,670	6,740	5,750	6,230	7,840	6,640	7,510	7,670
28	10,300	10,500	10,300	10,900	9,450	6,340	5,750	6,640	7,290	6,780	7,530	7,880
29	10,100	10,400	9,830	10,700	-	6,300	5,550	6,820	7,350	6,720	7,370	7,860
30	9,850	10,500	9,700	10,600	-	6,510	5,550	7,050	7,050	6,780	7,570	7,820
31	9,390	-	9,740	10,500	-	6,680	-	7,150	-	6,850	7,250	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	292,630	10,300	7,690	9,440	580,400
November	303,020	11,100	8,320	10,100	601,000
December	317,060	11,800	8,930	10,230	628,900
Calendar year 1946	3,664,730	24,400	6,230	10,040	7,269,000
January	320,500	11,400	9,520	10,340	635,700
February	291,650	11,400	9,450	10,420	578,500
March	226,950	9,190	6,300	7,321	450,100
April	231,440	10,700	5,550	7,715	459,100
May	247,420	15,200	5,400	7,981	490,800
June	451,790	27,400	7,030	15,060	896,100
July	204,260	7,130	6,070	6,589	405,100
August	220,050	7,570	6,780	7,098	436,500
September	233,550	8,470	7,290	7,785	463,200
Water year 1946-47	3,340,320	27,400	5,400	9,152	6,625,000

Note.- No gage-height record Apr. 27 to May 25; discharge computed on basis of records for stations near Buhl and at King Hill.

Snake River at King Hill, Idaho

Location.- Water-stage recorder, lat. 43°00', long. 115°11', in SW¼ sec. 7, T. 5 S., R. 11 E., 300 feet east of railroad station at King Hill and 20 miles downstream from Big Wood River. Datum of gage is 2,492.3 feet above mean sea level, by stadia levels.

Records available.- May 1909 to September 1947.

Extremes.- Maximum discharge during year 29,600 second-feet June 14 (gage height, 12.69 feet); minimum, 6,230 second-feet (regulated) May 4 (gage height, 5.46 feet); minimum daily, 6,710 second-feet May 5.
1909-47: Maximum discharge observed, 47,200 second-feet June 22, 1918 (gage height, 16.3 feet), from rating curve extended above 30,000 second-feet; minimum observed, 4,760 second-feet July 7-9, Aug. 15, 16, 1910 (gage height, 4.5 feet).

Remarks.- Records excellent. Flow regulated by many reservoirs above station. Practically entire flow at Milner diverted during irrigation season; flow at King Hill is then derived largely from springs and seepage entering below Milner.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,130	10,300	12,400	11,400	12,300	10,900	8,300	6,830	8,560	7,760	7,980	8,380
2	9,690	10,100	12,500	11,200	12,600	10,700	9,370	7,010	8,690	8,030	7,980	8,580
3	9,610	10,800	12,400	11,500	13,100	10,700	9,880	6,850	8,840	7,960	8,030	8,580
4	9,690	11,200	12,200	11,600	12,600	10,600	10,200	6,730	9,080	7,730	8,200	8,790
5	9,910	11,300	11,800	11,600	12,600	10,500	10,700	6,710	9,690	7,350	8,180	8,530
6	10,100	11,100	12,100	11,900	12,700	10,200	12,800	7,010	18,700	7,250	8,300	8,790
7	10,100	10,800	12,300	12,000	12,800	9,450	12,900	7,320	20,100	7,270	8,180	8,790
8	10,200	10,900	12,200	12,400	12,700	8,790	12,300	7,350	21,500	7,390	8,060	8,920
9	10,200	10,800	12,200	12,600	12,800	8,690	11,300	7,230	22,600	7,300	8,230	8,920
10	10,200	11,900	12,200	12,200	12,900	8,560	10,900	7,370	15,200	7,390	8,000	9,130
11	11,100	12,500	12,200	12,000	12,500	9,100	10,400	7,590	16,500	7,540	8,030	9,210
12	12,100	12,300	12,000	12,000	12,400	8,900	10,100	7,800	24,900	7,370	8,100	9,160
13	12,000	12,300	11,800	11,800	13,000	8,610	12,100	9,660	28,900	7,510	8,200	9,080
14	12,100	12,400	10,800	11,600	13,000	8,740	11,300	15,700	29,400	7,370	8,280	9,100
15	11,900	12,400	11,200	11,500	12,700	8,560	10,700	16,600	27,900	7,420	8,430	9,160
16	11,800	12,400	11,900	11,300	12,500	9,100	10,200	16,500	26,300	7,490	8,580	9,230
17	11,700	12,500	11,600	11,400	12,500	9,370	9,530	14,700	21,100	7,420	8,580	9,340
18	11,900	12,400	12,000	11,600	12,100	9,640	9,260	10,800	16,000	7,320	8,460	9,480
19	11,900	11,700	11,700	11,800	11,600	9,500	8,920	10,500	15,200	7,510	8,480	9,420
20	11,800	11,800	10,800	12,000	11,300	9,310	9,230	10,400	14,800	7,590	8,530	9,450
21	11,800	12,500	11,700	11,800	11,600	9,290	9,580	11,600	15,700	7,630	8,480	9,940
22	11,800	12,900	13,400	11,900	11,600	8,970	9,160	13,100	16,400	7,300	8,610	9,940
23	11,900	12,900	12,900	12,200	11,600	9,990	8,530	10,000	16,600	7,390	8,610	9,640
24	11,300	12,700	12,200	12,500	11,400	9,580	8,230	8,560	15,000	7,610	8,560	9,530
25	11,500	12,600	12,700	12,800	11,600	9,130	7,630	7,900	13,500	7,710	8,640	9,420
26	12,100	12,600	12,800	13,000	11,500	9,230	7,230	7,490	12,700	7,780	8,740	9,310
27	11,900	12,400	12,700	13,100	11,400	8,660	7,060	7,420	9,210	7,800	8,840	9,210
28	12,100	12,400	12,300	12,700	11,200	8,130	7,060	7,830	8,660	8,200	8,690	9,230
29	11,900	12,200	11,600	12,500	-	8,000	6,780	8,080	8,330	8,160	8,530	9,480
30	11,700	12,300	11,600	12,300	-	8,260	6,850	8,460	7,930	8,060	8,740	9,230
31	11,300	-	11,500	12,200	-	8,510	-	8,560	-	7,980	8,610	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	346,430	12,100	9,130	11,180	687,100
November	357,400	12,900	10,100	11,910	708,900
December	373,700	13,400	10,800	12,050	741,200
Calendar year 1946	4,284,250	27,800	7,300	11,740	8,498,000
January	372,400	13,100	11,200	12,010	738,600
February	342,600	13,100	11,200	12,240	679,500
March	287,670	10,900	8,000	9,280	570,600
April	288,500	12,900	6,780	9,617	572,200
May	289,660	16,600	6,710	9,344	574,500
June	487,990	29,400	7,930	16,270	967,900
July	235,590	8,200	7,250	7,600	467,300
August	259,860	8,840	7,980	8,383	515,400
September	274,970	9,940	8,340	9,166	545,400
Water year 1946-47	3,916,770	29,400	6,710	10,730	7,769,000

Snake River near Murphy, Idaho

Location.- Water-stage recorder, lat. 43°18', long. 116°26', in NE¼ sec. 35, T. 1 S., R. 1 W., 4¼ miles downstream from Swan Falls power plant and 7½ miles northeast of Murphy. Datum of gage is 2,271.3 feet above mean sea level, by stadia levels.

Drainage area.- 41,900 square miles.

Records available.- August to October 1912, August 1913 to September 1947.

Extremes.- Maximum discharge during year, 32,400 second-feet June 15 (gage height, 11.12 feet); minimum, 5,780 second-feet (regulated) July 24 (gage height, 3.27 feet); minimum daily, 7,370 second-feet May 1, 2.
1912-47: Maximum discharge 47,300 second-feet June 22, 1918 (gage height, 13.95 feet, site and datum then in use); minimum observed, 3,950 second-feet (discharge measurement) July 20, 1934, when stage was below intake pipe.

Remarks.- Records excellent. Flow regulated by many reservoirs above station. Diurnal fluctuation caused by Swan Falls power plant. Several diversions by pumping between this station and station at King Hill.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,310	11,800	12,700	11,600	12,400	11,400	8,860	7,370	8,830	8,180	8,160	8,800
2	9,550	10,800	12,600	11,600	12,600	11,200	8,950	7,370	9,010	8,210	8,160	8,420
3	9,850	10,500	12,900	11,400	12,800	10,900	9,640	7,590	9,190	8,040	8,100	8,740
4	9,880	11,100	12,700	11,800	13,400	10,900	10,300	7,700	9,130	8,240	8,180	8,560
5	9,880	11,500	12,500	11,800	13,000	10,700	10,500	7,760	9,340	7,840	8,180	8,800
6	10,200	11,800	12,300	11,800	13,000	10,500	11,000	7,760	10,200	7,670	8,160	8,620
7	10,400	11,400	12,500	12,200	13,100	10,000	12,900	8,010	19,400	7,560	8,330	8,710
8	10,400	11,100	12,700	12,200	13,000	9,490	13,100	8,180	21,400	7,590	8,210	8,740
9	10,300	11,400	12,500	12,700	13,100	8,800	12,500	8,330	23,200	7,700	8,300	8,980
10	10,400	11,200	12,600	12,800	13,100	8,740	11,400	8,270	23,400	7,590	7,950	8,800
11	10,500	12,300	12,500	12,500	13,200	8,770	11,200	8,390	15,900	7,760	8,210	9,100
12	11,200	12,800	12,500	12,200	12,900	9,070	10,700	8,620	18,600	7,700	7,950	9,130
13	12,300	12,500	12,300	12,200	12,700	8,950	10,400	8,710	27,100	7,650	8,160	9,130
14	12,200	12,700	12,200	12,100	13,600	9,040	12,200	10,500	30,900	7,650	8,300	9,040
15	12,200	12,700	11,200	11,800	13,600	8,830	11,500	15,900	31,100	7,810	8,360	9,130
16	12,200	12,700	11,500	11,700	13,400	8,920	11,000	16,600	29,700	7,510	8,440	9,220
17	12,000	12,700	12,200	11,700	13,100	9,190	10,400	16,600	27,800	7,650	8,560	9,280
18	12,000	12,700	11,800	11,700	13,000	9,490	9,820	14,800	21,900	7,670	8,530	9,340
19	12,100	12,800	12,100	11,700	12,600	9,790	9,550	12,700	16,400	7,650	8,530	9,580
20	12,100	12,300	12,000	11,700	12,100	9,730	9,370	11,000	15,600	7,810	8,560	9,460
21	12,100	12,200	11,100	11,800	11,800	9,640	9,400	10,900	15,500	7,730	8,530	9,580
22	12,100	12,800	12,000	11,900	11,900	9,490	9,820	12,200	16,800	7,840	8,470	9,910
23	12,100	13,200	13,700	11,900	12,000	9,190	9,400	13,500	16,800	7,700	8,680	10,000
24	12,200	13,200	13,100	12,400	11,800	10,100	8,950	10,700	16,600	7,510	8,620	9,700
25	11,600	13,000	12,400	12,800	11,800	9,730	8,590	9,100	15,200	7,670	8,560	9,610
26	11,800	13,000	13,100	13,000	12,000	9,310	8,070	8,300	13,700	7,870	8,560	9,400
27	12,400	13,100	13,000	13,300	11,800	9,310	7,760	8,180	12,800	7,810	8,890	9,430
28	12,200	12,700	12,900	13,400	11,700	9,010	7,510	7,840	9,490	7,930	9,010	9,310
29	12,400	12,800	12,600	13,000	-	8,300	7,620	8,180	8,800	8,180	8,680	9,430
30	12,300	12,700	11,700	12,600	-	8,240	7,390	8,590	8,620	8,210	8,560	9,520
31	12,000	-	11,800	12,600	-	8,470	-	8,920	-	8,240	8,800	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	352,170	12,400	9,310	11,360	698,500
November	367,500	13,200	10,500	12,250	728,900
December	383,700	13,700	11,100	12,380	761,100
Calendar year 1946	4,469,690	30,300	7,450	12,250	8,865,000
January	377,900	13,400	11,400	12,190	749,600
February	354,500	13,600	11,700	12,660	703,100
March	295,200	11,400	8,240	9,523	585,500
April	299,800	13,100	7,390	9,993	594,600
May	308,570	16,600	7,370	9,954	612,000
June	512,410	31,100	8,620	17,080	1,016,000
July	242,170	8,240	7,510	7,812	480,300
August	260,690	9,010	7,950	8,409	517,100
September	275,470	10,000	8,420	9,182	546,400
Water year 1946-47	4,030,080	31,100	7,370	11,040	7,993,000

Snake River at Weiser, Idaho

Location.- Water-stage recorder, lat. 44°15', long. 116°59', in sec. 31, T. 11 N., R. 5 W., a third of a mile upstream from highway bridge at Weiser. Datum of gage is 2,087.09 feet above mean sea level, datum of 1929.

Records available.- October 1910 to September 1947. Fragmentary gage-height record obtained by U. S. Weather Bureau since 1895.

Extremes.- Maximum discharge during year, 44,600 second-feet June 11 (gage height, 9.46 feet); minimum, 8,700 second-feet July 17 (gage height, 2.68 feet).
1910-47: Maximum discharge observed, 83,100 second-feet May 23, 1921 (gage height, 13.60 feet); minimum observed, 5,100 second-feet Aug. 5, 1924 (gage height, 1.35 feet).
Flood of Mar. 3, 1910, reached a stage of 15.7 feet on old U. S. Weather Bureau gage (discharge, about 100,000 second-feet). Flood of June 1894 was considerably higher.

Remarks.- Records excellent. Flow regulated by many reservoirs above station. Some diurnal fluctuation caused by Swan Falls power plant. Some diversions below Murphy for irrigation.

Cooperation.- Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,600	15,900	20,400	15,600	16,000	15,900	19,600	18,100	26,200	13,500	10,000	10,700
2	12,900	15,400	19,300	15,200	15,900	16,100	20,900	18,300	27,400	13,000	9,860	10,800
3	13,200	14,400	18,800	15,200	16,200	15,700	21,100	20,100	27,500	12,300	9,860	10,600
4	14,400	13,700	18,500	14,600	16,600	15,600	21,200	23,500	27,400	11,600	9,640	10,700
5	14,100	14,200	18,400	14,900	17,000	15,400	21,800	25,600	26,400	12,000	9,530	10,800
6	14,200	15,000	19,200	15,200	16,700	15,000	21,400	26,100	25,900	11,200	9,680	10,800
7	14,600	15,200	19,300	15,400	16,600	14,800	20,900	27,000	25,500	11,000	9,680	11,000
8	15,200	15,000	18,900	16,000	16,700	14,900	21,800	29,000	33,500	10,700	9,720	11,100
9	15,100	14,600	19,100	16,000	16,600	14,000	22,000	32,200	38,900	10,100	9,720	11,700
10	14,900	14,500	18,600	16,400	16,600	15,600	21,100	36,600	43,400	9,980	9,570	11,900
11	14,900	14,700	18,300	17,000	16,700	16,400	19,800	35,200	43,300	9,720	9,460	11,700
12	15,100	15,600	19,800	16,700	18,200	15,400	19,300	33,700	36,100	9,680	9,750	12,200
13	15,500	16,200	23,700	16,000	27,300	15,100	18,600	33,800	35,800	9,750	9,530	12,200
14	16,800	15,800	28,700	15,600	28,000	14,600	18,000	32,700	41,800	9,640	9,830	11,900
15	16,800	15,900	29,000	15,200	23,700	14,600	20,300	31,400	44,100	9,530	10,100	11,900
16	16,900	16,000	26,100	15,100	23,000	15,200	20,400	34,400	43,200	9,600	10,000	12,000
17	16,800	16,200	22,400	14,800	22,200	15,900	20,100	32,800	41,000	9,210	10,000	12,000
18	16,300	16,200	20,400	15,100	21,900	16,800	19,900	31,900	39,300	9,420	10,100	12,000
19	16,000	16,700	19,000	15,100	20,600	17,500	19,000	30,400	33,700	9,460	10,100	12,800
20	16,100	22,000	18,900	15,200	19,500	18,200	18,400	26,400	27,800	9,350	10,200	13,200
21	16,100	20,900	18,600	15,400	18,600	18,800	18,500	25,900	26,600	9,390	10,400	13,400
22	16,200	18,700	17,400	15,800	17,200	19,200	18,000	26,700	25,400	9,530	10,100	13,100
23	16,700	18,600	17,700	15,700	17,000	20,100	17,900	27,700	25,400	9,640	10,300	13,300
24	17,000	21,000	19,000	15,800	17,200	20,200	17,200	29,300	24,600	9,530	10,500	13,500
25	17,200	20,100	18,900	16,100	18,900	20,100	16,000	27,300	23,600	9,280	10,800	12,800
26	16,100	19,800	17,700	16,700	16,400	20,400	15,400	25,600	21,600	9,570	10,700	12,800
27	16,000	22,500	18,300	17,000	16,300	20,200	15,000	25,100	19,800	9,860	10,800	12,500
28	16,600	23,700	18,800	17,200	16,200	20,400	15,400	25,500	19,100	9,720	10,900	12,300
29	16,600	23,200	17,900	17,000	-	20,000	16,500	24,500	15,900	9,790	11,000	12,400
30	16,500	21,800	17,000	16,700	-	19,600	17,900	23,800	14,600	9,900	10,700	12,200
31	13,300	-	15,800	15,900	-	20,400	-	24,400	-	10,200	10,700	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	484,000	17,200	12,600	15,610	960,000
November	523,800	23,700	13,700	17,460	1,039,000
December	612,200	29,000	15,800	19,750	1,214,000
Calendar year 1946	7,834,030	57,000	9,280	21,460	15,540,000
January	489,600	17,200	14,600	15,790	971,100
February	519,700	27,300	15,900	18,580	1,031,000
March	532,000	20,400	14,000	17,160	1,055,000
April	573,400	22,000	15,000	19,110	1,137,000
May	865,000	36,600	18,100	27,900	1,716,000
June	904,800	44,100	14,600	30,160	1,795,000
July	317,150	13,500	9,210	10,230	629,100
August	313,230	11,000	9,460	10,100	621,300
September	360,300	13,500	10,600	12,010	714,600
Water year 1946-47	6,495,180	44,100	9,210	17,800	12,880,000

Snake River at Oxbow, Oreg.

Location.- Water-stage recorder, lat. 44°57', long. 116°51', in NW¼ sec. 16, T. 7 S., R. 48 E., at Oxbow, five-eighths of a mile upstream from intake of diversion tunnel for Oxbow power plant.

Records available.- May 1923 to September 1947.

Extremes.- Maximum discharge during year, 44,600 second-feet June 11 (gage height, 15.61 feet); minimum, 9,170 second-feet July 18 (gage height, 7.86 feet).
1923-47: Maximum discharge, 74,600 second-feet Apr. 21, 1943 (gage height, 20.71 feet); minimum, 4,890 second-feet Aug. 6, 1924 (gage height, 6.30 feet).

Remarks.- Records excellent. Flow regulated by many reservoirs above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,600	16,300	21,500	16,000	16,300	16,700	21,000	18,900	26,000	14,500	10,300	10,600
2	12,900	15,800	20,400	15,600	16,100	16,700	20,900	19,100	27,800	13,800	10,200	10,800
3	13,100	15,300	19,300	15,500	16,100	16,600	21,900	20,400	28,200	12,900	10,200	10,800
4	14,100	14,400	18,900	15,000	16,600	16,300	21,700	22,800	28,400	12,400	9,980	10,600
5	14,300	14,000	18,900	14,700	16,900	16,100	22,200	26,100	27,400	12,100	9,770	10,800
6	14,200	14,900	19,100	15,400	17,300	16,000	22,400	27,600	26,800	12,100	9,740	10,800
7	14,500	15,100	20,000	15,400	16,800	15,800	21,800	28,400	26,400	11,500	9,830	11,100
8	14,900	15,300	19,400	15,900	16,900	15,600	21,800	29,600	30,000	11,100	9,800	11,100
9	15,300	15,000	19,400	16,200	16,900	15,400	23,000	31,800	37,700	10,700	9,740	11,600
10	15,200	14,800	19,300	16,200	16,700	15,000	22,100	35,700	41,600	10,300	9,690	12,000
11	14,900	15,000	18,700	16,900	16,700	17,400	21,100	37,400	44,100	10,200	9,720	12,100
12	15,000	15,000	19,400	17,000	17,900	16,500	20,200	35,300	39,900	10,000	9,600	12,100
13	15,100	16,000	22,300	16,500	24,600	15,700	19,400	34,200	34,800	10,000	9,720	12,300
14	15,900	16,300	26,100	15,900	31,000	15,500	18,700	34,200	39,200	10,000	9,600	12,100
15	16,400	16,100	29,100	15,300	25,800	15,200	19,500	32,700	43,000	9,830	9,770	12,000
16	16,500	16,300	29,000	15,300	24,700	15,600	21,200	33,500	43,300	9,690	10,000	12,100
17	16,700	16,600	25,000	15,400	23,700	16,400	21,000	34,000	41,700	9,860	9,950	12,100
18	16,400	16,700	22,100	14,600	23,400	17,200	20,900	32,800	39,800	9,600	10,100	12,000
19	16,000	17,000	20,400	14,800	22,200	18,500	20,400	32,000	36,700	9,690	10,000	12,400
20	15,900	18,700	19,200	15,300	21,000	19,000	19,600	29,600	30,200	9,740	10,100	13,000
21	16,100	22,600	19,400	15,700	20,000	19,800	19,500	26,800	27,400	9,630	10,300	13,300
22	16,000	19,800	18,800	15,900	18,900	20,200	19,400	27,100	26,000	9,800	10,400	13,200
23	16,500	18,700	17,800	16,000	18,100	20,900	18,900	27,800	25,800	9,860	10,400	13,200
24	16,500	19,800	18,600	16,000	18,100	21,700	18,600	29,700	25,200	9,950	10,500	13,500
25	17,200	20,800	19,600	16,100	17,900	21,000	17,400	29,500	24,400	9,740	10,800	13,200
26	17,000	20,000	18,800	16,600	17,500	21,500	16,500	27,200	23,200	9,690	10,700	12,900
27	15,900	21,000	18,400	16,900	17,200	21,200	16,100	26,700	21,200	9,950	10,800	12,700
28	16,400	24,300	19,100	17,400	17,000	21,200	15,900	26,300	19,600	10,100	10,800	12,400
29	16,700	24,200	18,700	17,300	-	21,200	16,500	26,200	18,600	10,000	11,000	12,400
30	16,500	23,000	17,900	17,000	-	20,600	17,800	24,900	15,500	10,000	10,900	12,300
31	16,600	-	16,800	16,500	-	20,900	-	24,700	-	10,300	10,600	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	481,300	17,200	12,600	15,530	954,600
November	528,800	24,300	14,000	17,630	1,049,000
December	631,400	29,100	16,800	20,370	1,252,000
Calendar year 1946	8,102,440	59,800	9,540	22,200	16,070,000
January	494,300	17,400	14,600	15,950	980,400
February	542,300	31,000	16,100	19,370	1,076,000
March	557,400	21,700	15,000	17,990	1,106,000
April	597,400	23,000	15,900	19,910	1,185,000
May	893,000	37,400	18,900	28,810	1,771,000
June	919,900	44,100	15,500	30,660	1,825,000
July	329,030	14,500	9,600	10,610	652,600
August	315,010	11,000	9,600	10,160	624,800
September	361,500	13,500	10,600	12,030	717,000
Water year 1946-47	6,651,340	44,100	9,600	18,220	13,190,000

Snake River near Clarkston, Wash.

Location.- Water-stage recorder, lat. 46°25'30", long. 117°10'30", in lot 1, sec. 16, T. 11 N., R. 45 E., 2 miles upstream from Alpowa Creek, 7 miles downstream from Clarkston, and 134 miles upstream from mouth. Datum of gage is 670 feet above mean sea level (Corps of Engineers bench mark).

Drainage area.- 103,200 square miles.

Records available.- October 1935 to September 1947 in reports of Geological Survey. October 1915 to September 1922 and August 1928 to September 1935 at site 66 miles downstream, published as Snake River at Riparia, in reports of Geological Survey. October 1909 to September 1933 (at site at Riparia) in State Water-Supply Bulletin 5.

Extremes.- Maximum discharge during year, 239,000 second-feet (regulated) May 10 (gage height, 33.92 feet); minimum, 16,400 second-feet (regulated) Aug. 21, Sept. 2, 5 (gage height, 3.94 feet); minimum daily, 19,000 second-feet (regulated) Aug. 21, Sept. 2-7, 1909-47: Maximum discharge observed, 970,000 second-feet May 20, 1921 (gage height, 19.0 feet, site and datum then in use); minimum observed, 10,600 second-feet Aug. 14, 18, 20, 24-28, 30, 31, Sept. 1, 2, 5, 1931, but may have been less during period of ice effect in January 1937.

Maximum stage known, 24.7 feet, Riparia site and datum, June 5, 1894, determined from floodmarks by U. S. Weather Bureau (discharge, 409,000 second-feet).

Remarks.- Records excellent. Small diversions by pumping between this station and station at Oxbow, Oreg. Large diurnal fluctuation caused by power plant on Clearwater River above Lewiston, Idaho.

Rating table, water year 1946-47 (gage height, in feet, and discharge, in second-feet)

10.5	18,600	15.0	41,000	24.0	120,000
11.0	20,500	16.0	47,700	26.0	142,000
12.0	24,800	18.0	62,700	28.0	166,000
13.0	29,600	20.0	79,700	30.0	193,000
14.0	35,000	22.0	98,700	32.6	230,000

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21,800	34,400	50,500	34,400	33,300	40,400	69,100	118,000	126,000	57,100	23,000	19,800
2	22,200	33,300	46,300	33,800	34,400	39,200	67,500	121,000	125,000	53,300	23,000	19,000
3	24,400	31,600	43,600	30,600	39,200	39,200	66,700	147,000	122,000	51,900	22,600	19,000
4	28,000	30,000	41,000	28,600	37,400	39,200	65,900	176,000	120,000	50,500	22,200	19,000
5	28,000	28,600	40,400	28,600	36,800	38,600	64,300	193,000	115,000	49,100	22,200	19,000
6	27,600	28,600	41,000	29,000	36,800	36,800	62,700	198,000	111,000	47,700	21,400	19,000
7	25,700	30,000	41,000	32,200	36,200	35,600	60,300	200,000	113,000	45,600	21,400	19,000
8	26,200	30,000	41,000	32,800	34,400	35,000	57,900	219,000	107,000	43,600	21,000	19,800
9	26,200	30,000	40,400	32,200	33,800	34,400	57,100	230,000	123,000	43,000	20,500	20,200
10	26,200	29,000	39,800	32,200	32,800	35,600	59,500	228,000	141,000	41,000	20,500	21,400
11	25,700	29,000	43,000	32,800	32,800	39,800	58,700	195,000	134,000	39,800	19,800	22,600
12	25,700	28,600	90,700	32,800	36,200	44,300	54,700	170,000	126,000	39,200	20,200	22,200
13	25,200	28,000	105,000	32,200	52,600	42,400	53,300	154,000	115,000	37,400	19,800	21,800
14	25,700	28,600	125,000	31,100	68,300	41,000	54,700	148,000	111,000	35,600	20,200	21,400
15	26,600	28,600	152,000	29,000	69,100	41,700	61,900	142,000	112,000	33,800	19,800	20,500
16	26,600	28,600	144,000	27,800	61,900	43,000	72,500	137,000	112,000	32,800	19,800	20,500
17	26,200	28,600	107,000	27,600	58,700	47,000	79,700	138,000	117,000	31,600	19,800	21,800
18	26,600	28,600	82,400	28,000	61,100	52,600	88,700	137,000	122,000	30,600	19,400	23,900
19	26,200	34,400	70,700	27,600	59,500	57,900	94,700	134,000	114,000	29,600	19,400	23,500
20	26,200	43,000	62,700	28,600	54,700	61,900	95,700	136,000	106,000	28,600	19,400	23,500
21	25,700	43,000	57,100	29,000	51,200	63,500	92,700	134,000	93,700	28,000	19,000	23,900
22	26,200	43,000	54,000	29,600	49,100	66,700	87,800	135,000	86,000	27,000	19,800	23,500
23	33,300	39,800	50,500	31,100	47,700	72,500	84,200	133,000	81,500	26,600	19,800	23,000
24	36,800	45,000	47,000	29,600	48,400	69,900	79,700	130,000	77,900	26,200	22,200	22,600
25	35,000	46,300	45,600	47,700	48,400	66,700	78,800	134,000	75,200	25,700	21,800	23,000
26	57,900	45,600	45,000	51,900	47,000	62,700	77,900	137,000	73,400	25,200	21,000	23,000
27	51,900	46,300	44,300	49,100	45,600	60,300	82,400	141,000	73,400	24,800	20,500	22,200
28	42,400	51,200	43,000	42,400	41,700	57,100	92,700	144,000	77,900	24,800	20,200	22,200
29	39,200	57,100	41,000	38,600	-	56,300	106,000	135,000	69,900	24,400	19,800	22,200
30	36,800	54,700	38,600	36,800	-	57,900	121,000	125,000	63,500	23,500	19,800	21,800
31	35,000	-	36,200	35,000	-	65,100	-	120,000	-	23,500	19,400	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	937,200	57,900	21,800	30,230	1,859,000
November	1,083,500	57,100	28,000	36,120	2,149,000
December	1,909,800	152,000	36,200	61,610	3,788,000
Calendar year 1946	20,375,100	166,000	17,800	55,820	40,410,000
January	1,042,500	51,900	27,600	33,630	2,068,000
February	1,287,100	69,100	32,800	45,970	2,553,000
March	1,544,300	72,500	34,400	49,820	3,063,000
April	2,248,800	121,000	53,300	74,960	4,460,000
May	4,789,000	230,000	118,000	154,500	9,499,000
June	3,144,400	141,000	63,500	104,800	6,237,000
July	1,101,500	57,100	23,500	35,530	2,185,000
August	638,700	23,000	19,000	20,600	1,267,000
September	644,300	23,900	19,000	21,480	1,278,000
Water year 1946-47	20,371,100	230,000	19,000	55,810	40,410,000

Pacific Creek near Moran, Wyo.

Location.- Water-stage recorder, lat. 43°51', long. 110°31', in sec. 23 T. 45 N., R. 114 W., 50 feet downstream from bridge on U. S. Highway 287, half a mile above mouth, and 3 miles southeast of Moran.

Drainage area.- 160 square miles.

Records available.- July to November 1906 (gage heights only), July 1917 to September 1918 (no winter record), September 1944 to September 1947.

Extremes.- Maximum discharge during year, 1,600 second-feet May 28; maximum gage height, 3.22 feet May 10; minimum discharge recorded, 32 second-feet Dec. 17 (gage height, 0.53 foot), but may have been less during period of ice effect.
1917-18, 1944-47: Maximum discharge observed, 3,030 second-feet June 15, 1918 (gage height, 3.98 feet, former site and datum); minimum recorded, that of Dec. 17, 1946.

Remarks.- Records good except those for Dec. 17 to Mar. 28, which are poor. No diversion or regulation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	68	62				62	348	1,330	618	149	77
2	75	68	62				60	455	1,320	650	146	76
3	75	62	62				59	642	1,390	682	141	80
4	70	60	62				59	820	1,260	690	146	78
5	71	60	64				57	960	1,120	650	157	75
6	69	62	66				56	1,020	1,100	618	135	72
7	69	64	66				55	1,070	1,110	594	155	72
8	72	64	66				53	1,160	1,210	562	149	70
9	72	64	64				55	1,330	1,400	602	133	71
10	66	64	61			50	54	1,360	1,260	485	152	76
11	59	62	63				55	1,260	1,110	436	173	77
12	66	60	63				53	1,200	970	403	133	74
13	63	60	61				58	1,120	920	378	124	70
14	68	60	60				72	1,110	950	342	117	69
15	75	61	61		(*)		88	1,140	980	325	108	a68
16	78	61	59	50	50		86	1,180	1,060	354	108	a68
17	74	60	40				89	1,270	1,140	300	105	a68
18	69	60	35			*h55	94	1,270	1,070	280	101	a95
19	69	61	*40			a56	95	1,110	1,100	271	99	a100
20	66	63				a57	108	1,090	1,330	248	97	a80
21	70	62				h58	112	1,220	1,120	240	112	77
22	71	58				a59	114	1,230	940	235	121	74
23	82	64				a60	106	1,210	830	215	108	71
24	75	64				a62	114	1,200	800	203	101	71
25	82	64	55			a60	121	1,260	800	189	99	72
26	89	64				a58	133	1,340	840	176	94	72
27	84	63				a55	169	1,440	1,070	157	92	82
28	86	63				a60	223	1,420	890	157	89	78
29	84	64			-	63	266	1,180	744	155	86	112
30	76	63			-	63	305	1,100	658	155	84	110
31	75	-			-	62	-	1,210	-	152	80	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	2,265	89	59	73.1	0.457	0.53	4,490
November	1,873	68	58	62.4	.390	.44	3,720
December	1,777	66	35	57.3	.358	.41	3,520
Calendar year 1946	95,451	1,480	35	262	1.64	22.19	189,300
January	1,550	-	-	50.0	.312	.36	3,070
February	1,400	-	-	50.0	.312	.33	2,780
March	1,678	63	-	54.1	.338	.39	3,330
April	3,031	305	53	101	.631	.70	6,010
May	34,725	1,440	348	1,120	7.00	8.07	68,880
June	31,822	1,400	658	1,061	6.63	7.40	63,120
July	11,522	690	152	372	2.32	2.68	22,850
August	3,694	173	80	119	.744	.86	7,330
September	2,335	112	68	77.8	.486	.54	4,630
Water year 1946-47	97,672	1,440	35	268	1.68	22.71	193,700

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for stations on nearby streams.
h Computed from staff-gage reading.
Note.- Stage-discharge relation affected by ice Nov. 4-6, 11-13, 16, 17, 24, 25, Dec. 1-4, Dec. 17 17 to Mar. 17 (no gage-height record during most of period; discharge computed on basis of weather records and records for stations on nearby streams.

Buffalo Fork near Moran, Wyo.

Location.- Water-stage recorder, lat. 43°50', long. 110°31', in sec. 26, T. 45 N., R. 114 W., 30 feet below bridge on county road, half a mile above mouth, 2¾ miles downstream from Lava Creek, and 4 miles southeast of Moran.

Drainage area.- 378 square miles.

Records available.- July to November 1906 (gage heights only), July 1917 to September 1918 (no winter records), September 1944 to September 1947.

Extremes.- Maximum discharge during year, 3,440 second-feet June 20 (gage height, 5.14 feet); minimum recorded, 86 second-feet Dec. 17, (gage height, 0.95 foot), but may have been less during period of ice effect.

1917-18, 1944-47: Maximum discharge observed, 5,840 second-feet June 13, 1918 (gage height, 6.78 feet, datum then in use), from discharge measurement; minimum recorded, that of Dec. 17, 1946.

Remarks.- Records good except those for periods of ice effect, which are fair. No diversion or regulation.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

1.0	95	2.4	680
1.2	139	2.9	1,050
1.4	192	3.5	1,600
1.7	296	4.0	2,120
2.0	43[illegible]	5.0	3,270

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	220	189	180					452	1,780	a1,900	1,030	343
2	251	184	180					526	1,800	a1,950	1,190	338
3	244	154	175					876	1,930	a2,000	1,110	347
4	226	170	170					1,310	1,830	a2,500	994	347
5	240	204	170				160	1,590	1,650	a2,600	1,010	325
6	223	208	180					1,740	1,580	2,420	869	313
7	220	223	184					1,960	1,580	2,480	908	309
8	230	211	181					2,040	1,830	2,570	862	300
9	226	201	175					2,380	2,260	2,600	834	296
10	214	186	170				154	2,360	1,990	2,530	890	309
11	201	201	170			135	147	2,080	1,740	2,280	898	325
12	217	178	172				140	1,880	1,500	2,160	722	300
13	211	167	159				150	1,660	1,420	2,100	667	292
14	220	204	a165				181	1,530	1,580	1,940	622	281
15	234	192	172	140	*135		230	1,450	1,700	1,830	589	277
16	237	190	149				230	1,640	1,960	1,790	589	273
17	237	195	97				234	1,810	2,330	1,800	563	277
18	230	198	110			(*)	237	1,800	2,320	1,650	526	389
19	223	189	(*)				237	1,600	2,600	1,680	502	415
20	208	181					269	1,440	3,150	1,790	484	317
21	220	162					273	1,540	2,830	1,620	490	292
22	223	164					269	1,670	2,150	1,770	550	285
23	230	180					230	1,550	1,860	a1,700	502	277
24	220	180					237	1,520	1,740	a1,500	457	273
25	220	175					234	1,660	1,860	a1,300	452	273
26	240	178	160			160	266	1,920	2,220	a1,300	430	269
27	223	178					317	2,160	2,720	f1,180	415	292
28	230	184					399	2,100	f2,280	1,130	394	285
29	230	186			-		430	1,670	a2,100	1,110	389	313
30	204	181			-		440	1,480	a1,900	1,050	375	321
31	208	-			-		-	1,600	-	1,000	347	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	6,960	251	201	225	0.595	0.68	13,800
November	5,593	223	154	186	.492	.55	11,090
December	5,039	184	97	163	.431	.50	9,990
Calendar year 1946	203,356	2,800	97	557	1.47	20.00	403,400
January	4,340	-	-	140	.370	.43	8,610
February	3,780	-	-	135	.357	.37	7,500
March	4,460	-	-	144	.381	.44	8,850
April	6,744	440	140	225	.595	.66	13,380
May	50,974	2,360	452	1,644	4.35	5.02	101,100
June	60,190	3,150	1,420	2,006	5.31	5.92	119,400
July	57,430	2,600	1,000	1,853	4.90	5.65	113,900
August	20,658	1,190	347	666	1.76	2.03	40,970
September	9,253	415	269	308	.815	.91	18,350
Water year 1946-47	235,421	3,150	97	645	1.71	23.16	466,900

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for stations on other Snake River tributaries.

f Computed from partly-estimated gage-height record.

Note.- Stage-discharge relation affected by ice Nov. 16, 23-25, Dec. 1-6, 10, 11, Dec. 18 to Apr. 9 (no gage-height record Jan. 5, 6, Jan. 9 to Feb. 13; discharge computed on basis of weather records and records for stations on Gros Ventre River at Kelly and Hoback River near Jackson).

Gros Ventre River at Kelly, Wyo.

Location.- Wire-weight gage, lat. 43°37', long. 110°38', in NW¼ sec. 11, T. 42 N., R. 115 W., at bridge on private road, 0.3 mile south of Kelly post office and 3 miles downstream from Turpin Creek.

Drainage area.- 622 square miles.

Records available.- October 1944 to September 1947. June to September 1918 at site 1 mile upstream.

Extremes.- Maximum discharge observed during year, 3,100 second-feet May 10 (gage height, 6.34 feet); minimum observed, 122 second-feet Jan. 3 (gage height, 1.51 feet).

1918, 1944-47: Maximum discharge observed, 6,220 second-feet June 16, 1918 (gage height, 9.95 feet, site and datum then in use); minimum observed, 102 second-feet Dec. 16, 1944 (gage height, 1.54 feet).

Flood of May 18, 1927, when landslide about 2 miles upstream washed out, releasing about 60,000 acre-feet of impounded water, was considerably higher; discharge not determined.

Remarks.- Records good. Diversions above and below station for irrigation.

Rating table, water year 1946-47 (gage height, in feet, and discharge, in second-feet)

1.5	120	3.0	590
1.7	154	3.5	884
2.0	216	4.0	1,240
2.3	297	5.0	2,020
2.6	405	6.3	3,150

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sept
1	203	207	184	136	143	130	171	483	1,560	964	422	262
2	207	196	177	130	149	140	173	540	1,570	897	439	251
3	214	188	177	122	143	143	175	770	1,640	910	465	256
4	221	181	173	133	143	140	179	1,220	1,800	1,120	478	248
5	276	179	173	136	140	136	175	1,610	1,680	1,330	550	245
6	228	181	181	145	140	141	169	2,010	1,520	1,250	555	240
7	228	186	186	147	140	140	167	2,180	1,480	1,180	527	238
8	221	192	186	140	133	141	164	2,550	1,440	1,260	521	228
9	223	192	184	141	130	143	160	2,740	1,720	1,320	521	226
10	221	188	177	165	143	143	158	3,100	1,880	1,340	540	223
11	216	186	175	150	145	143	162	2,740	1,720	1,290	580	226
12	209	169	a177	147	145	140	152	2,520	1,520	1,190	540	230
13	209	169	a179	150	147	133	156	2,180	1,320	1,080	516	230
14	207	169	181	150	136	141	167	1,940	1,210	990	456	226
15	212	175	177	150	147	143	192	1,650	1,320	846	413	221
16	223	177	175	141	147	143	221	1,520	1,520	884	382	205
17	226	175	145	136	147	143	243	1,760	1,520	897	366	214
18	226	173	169	136	150	150	256	1,760	1,880	833	352	243
19	223	177	128	147	149	150	270	1,680	1,960	783	330	267
20	221	181	131	147	136	154	282	1,520	1,810	758	310	273
21	212	184	141	145	143	158	307	1,480	1,600	746	304	279
22	212	179	154	143	140	169	320	1,490	1,840	699	304	267
23	216	179	162	147	145	177	307	1,540	1,580	688	317	245
24	212	181	158	150	147	177	282	1,530	1,210	654	330	243
25	214	181	164	147	136	177	273	1,520	1,150	622	317	238
26	216	181	165	158	140	169	270	1,560	1,180	590	304	235
27	221	181	171	143	130	160	285	1,970	1,430	545	304	235
28	223	181	173	150	136	150	334	2,170	1,760	483	291	226
29	221	184	150	143	-	154	401	1,840	1,440	465	285	228
30	221	186	143	143	-	164	460	1,520	1,180	447	276	230
31	221	-	134	143	-	169	-	1,420	-	426	267	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	6,803	276	203	219	.352	.41	13,490
November	5,458	207	169	182	.293	.33	10,830
December	5,150	186	128	166	.267	.31	10,210
Calendar year 1946	167,674	2,780	128	459	.738	10.03	332,600
January	4,461	165	122	144	.232	.27	8,850
February	3,970	150	130	142	.228	.24	7,870
March	4,661	177	130	150	.241	.28	9,240
April	7,031	460	152	234	.376	.42	13,950
May	54,513	3,100	483	1,758	2.83	3.26	108,100
June	46,440	1,960	1,150	1,548	2.49	2.78	92,110
July	27,487	1,340	426	887	1.43	1.64	54,520
August	12,562	580	267	405	.651	.75	24,920
September	7,178	279	205	239	.384	.43	14,240
Water year 1946-47	185,714	3,100	122	509	.818	11.12	368,300

a No gage-height record; discharge computed on basis of weather records and records for Hoback River near Jackson and other nearby streams.

Hoback River near Jackson, Wyo.

Location.- Staff gage, lat. 43°17'55", long. 110°40'10", in sec. 32, T. 39 N., R. 115 W., at Camp Creek Camp, a quarter of a mile downstream from Willow Creek, 4 miles upstream from mouth, and 13½ miles southeast of Jackson.

Drainage area.- 564 square miles; 572 square miles at site near Cheney.

Records available.- November 1944 to September 1947. July 1917 to September 1918 at site a quarter of a mile above mouth, published as Hoback River near Cheney.

Extremes.- Maximum discharge observed during year, 3,050 second-feet May 8, 11 (gage height, 5.42 feet); minimum observed, 90 second-feet Dec. 18 (gage height, 1.70 feet).

1917-18, 1944-47: Maximum discharge observed 6,160 second-feet June 16, 1918 (gage height, 13.46 feet, former site and datum); minimum observed, that of Dec. 18, 1946.

Remarks.- Records fair. No regulation. Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	304	248	223	167	187	154	261	1,500	1,830	1,040	617	341
2	314	176	216	165	194	194	275	1,900	1,930	1,070	652	346
3	304	257	223	b155	181	205	280	2,400	2,020	1,200	638	336
4	294	275	231	b165	201	201	261	2,650	1,900	1,430	725	309
5	294	257	223	170	198	194	261	2,800	1,840	1,440	667	314
6	285	231	240	187	194	187	236	2,810	1,960	1,210	576	299
7	265	257	231	181	201	187	244	2,830	1,860	1,240	667	275
8	294	265	223	176	176	198	236	2,960	2,030	1,550	652	265
9	285	257	223	170	165	194	244	2,960	2,430	1,580	718	270
10	275	240	216	181	187	201	236	2,870	2,090	1,450	710	270
11	294	231	209	187	181	198	231	3,010	1,890	1,520	667	280
12	275	240	231	170	176	201	248	2,740	1,700	1,080	590	280
13	257	257	240	176	198	209	363	2,420	1,600	1,180	548	275
14	285	252	240	176	194	201	445	2,240	1,690	1,160	515	270
15	285	219	216	170	181	205	569	2,180	1,760	1,080	515	265
16	275	205	187	165	187	216	596	2,150	1,940	1,140	515	275
17	285	184	154	b160	194	231	631	2,250	2,150	1,040	483	284
18	275	191	90	b160	205	231	681	2,180	2,100	975	458	357
19	257	198	*187	176	201	248	770	2,130	2,310	966	451	314
20	248	227	187	187	194	244	834	1,960	2,390	890	470	285
21	248	219	179	191	187	257	874	2,040	2,020	818	515	270
22	265	212	181	181	*181	265	834	2,050	1,730	882	515	270
23	257	219	223	187	198	285	748	1,940	1,560	810	496	270
24	257	198	209	194	194	257	762	1,920	1,500	810	426	280
25	265	212	223	191	209	252	762	1,980	1,520	710	445	270
26	257	227	223	194	187	240	906	2,180	1,510	732	439	265
27	248	244	216	181	176	231	1,060	2,330	1,830	667	97	265
28	275	219	201	170	194	257	1,310	2,370	1,570	660	391	252
29	285	227	181	170	-	248	1,500	1,970	1,350	645	380	261
30	275	231	165	176	-	275	1,470	1,880	1,240	638	380	280
31	257	-	154	181	-	261	-	1,740	-	610	357	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	8,479	314	248	274	0.486	0.56	16,820
November	6,875	275	176	229	.406	.45	13,640
December	6,345	240	90	205	.363	.42	12,590
Calendar year 1946	257,141	2,960	90	704	1.25	16.97	510,000
January	5,460	194	155	176	.312	.36	10,830
February	5,321	209	165	190	.337	.35	10,550
March	6,927	285	154	223	.395	.46	13,740
April	18,128	1,500	231	604	1.07	1.20	35,960
May	71,340	3,010	1,500	2,301	4.08	4.70	141,500
June	55,250	2,430	1,240	1,842	3.27	3.64	109,600
July	32,203	1,580	610	1,039	1.84	2.12	63,870
August	16,575	725	357	535	.949	1.09	32,880
September	8,593	357	252	286	.507	.57	17,040
Water year 1946-47	241,496	3,010	90	662	1.17	15.92	479,000

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

Salt River near Smoot, Wyo.

Location.- Water-stage recorder, lat. 42°36', long. 110°55', in sec. 7, T. 30 N., R. 118 W., 1¼ miles south of Smoot and 1½ miles upstream from Willow Creek.

Drainage area.- 59.4 square miles.

Records available.- June 1932 to September 1947 (no winter records 1933-35, 1936-37).

Average discharge.- 11 years (1935-36, 1937-47), 35.5 second-feet.

Extremes.- Maximum discharge during year, 308 second-feet May 3 (gage height, 3.50 feet), from rating curve extended above 210 second-feet; minimum daily, 6.0 second-feet Jan. 20-26.

1932-47: Maximum discharge, 430 second-feet May 15, 1936, from rating curve extended above 200 second-feet; maximum gage height, that of May 3, 1947; minimum daily discharge recorded, 1.8 second-feet Sept. 1, 1937.

Remarks.- Records excellent between 12 and 210 second-feet, fair below and above. A few diversions above station for irrigation.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 26				Apr. 27 to Sept. 30			
1.2	6.0	1.6	26	1.5	15	2.3	104
1.3	9.2	1.8	43	1.6	23	2.9	200
1.4	14	2.0	64	1.8	41	3.4	290
1.5	19			2.0	64		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	10	8.0	6.5	6.2	7.0	9.5	147	149	97	28	19
2	12	11	8.0	6.5	6.2	7.8	10	195	147	97	28	18
3	10	b10	8.0	6.6	6.2	8.2	10	243	160	100	28	17
4	10	b10	8.0	7.0	6.2	8.0	10	247	155	94	29	17
5	12	b11	8.0	7.2	6.2	7.9	10	243	149	90	28	16
6	12	b12	8.0	7.0	6.4	7.8	10	247	155	89	26	15
7	12	b13	8.0	6.4	6.8	7.8	10	259	150	86	27	14
8	12	b13	8.0	6.6	7.4	8.0	9.5	281	171	83	27	14
9	12	8.9	8.0	7.0	7.6	8.0	9.0	272	216	80	28	16
10	12	8.9	8.0	6.4	7.0	8.0	9.0	250	204	76	29	17
11	11	10	7.8	6.4	7.0	8.0	9.5	259	202	70	28	17
12	11	11	7.8	*6.4	7.0	7.6	*10	231	192	64	26	17
13	11	*11	7.8	6.4	7.0	8.0	12	205	184	62	24	16
14	12	11	7.8	6.5	7.0	*8.4	16	197	181	57	24	16
15	12	11	7.8	6.4	7.0	8.2	22	197	179	54	23	16
16	12	11	7.0	6.6	6.8	8.6	27	197	184	54	23	16
17	11	10	6.2	7.0	6.8	8.6	29	200	192	53	22	20
18	11	9.5	7.4	7.0	6.8	8.6	32	197	186	51	21	21
19	11	9.0	9.0	6.2	6.8	8.6	38	195	179	50	22	18
20	10	9.0	6.5	6.0	7.0	8.8	50	184	187	46	21	17
21	10	9.0	6.5	6.0	7.0	9.0	60	184	168	45	25	16
22	9.7	9.0	6.5	6.0	7.0	9.0	50	192	152	44	26	15
23	11	9.0	6.5	6.0	7.0	9.5	43	181	136	42	23	14
24	10	8.5	6.5	6.0	7.0	10	40	176	130	40	23	14
25	11	8.0	6.5	6.0	7.0	9.5	43	176	118	39	22	14
26	11	8.0	6.5	6.0	7.0	9.0	53	184	122	36	21	14
27	13	8.0	6.5	6.2	6.8	9.0	70	181	122	36	21	14
28	15	8.0	6.5	6.2	6.8	9.0	94	187	112	35	21	14
29	13	8.0	6.8	6.6	-	9.0	118	163	106	34	21	14
30	11	8.0	7.0	6.8	-	9.0	125	149	98	30	21	14
31	10	-	6.5	6.2	-	9.2	- -	150	-	28	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	350.7	15	9.7	11.3	696
November	293.8	13	8.0	9.79	583
December	227.4	9.0	6.2	7.34	451
Calendar year 1946	13,370.7	174	-	36.6	26,520
January	200.1	7.2	6.0	6.45	397
February	191.0	7.6	6.2	6.82	379
March	262.8	10	7.0	8.48	521
April	1,038.5	125	9.0	34.6	2,060
May	6,369	281	147	205	12,630
June	4,786	216	98	160	9,490
July	1,862	100	28	60.1	3,690
August	756	29	20	24.4	1,500
September	480	21	14	16.0	952
Water year 1946-47	16,817.3	281	6.0	46.1	33,350

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.- No gage-height record Nov. 12 to Apr. 11 (stage-discharge relation affected by ice most of period); discharge computed on basis of 3 discharge measurements and weather records.

Salt River at Wyoming-Idaho State line

Location.- Water-stage recorder, lat. 43°10', long. 111°04', in sec. 16, T. 3 S., R. 46 E., just downstream from Trout Creek, half a mile upstream from mouth, and three-quarters of a mile west of Wyoming-Idaho State line.

Drainage area.- 830 square miles.

Records available.- April 1934 to September 1947. July 1917 to September 1918 at site 4 miles upstream; records not equivalent.

Average discharge.- 13 years, 685 second-feet.

Extremes.- Maximum discharge during year, 1,720 second-feet May 5; maximum gage height, 4.15 feet Jan. 10 (ice jam); minimum daily discharge, 375 second-feet Mar. 6.
1934-47: Maximum discharge, 3,520 second-feet May 6, 1936 (gage height, 4.64 feet), from rating curve extended above 2,600 second-feet; minimum, 216 second-feet May 17, 1934 (gage height, 1.30 feet).

Remarks.- Records excellent except those for periods of ice effect or no gage-height record, and those after July 20, which are good. Diversions above station for irrigation.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Jan. 12-15, Apr. 30 to Sept. 20)

1.6	375	2.6	1,010
1.9	495	3.1	1,490
2.1	615	3.3	1,710

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	668	a690	615	b410	406	392	856	1,230	956	992	758	772
2	682	a710	602	b420	400	392	904	1,290	938	956	750	765
3	696	a680	589	b410	406	392	929	1,480	920	912	750	765
4	690	a660	582	b400	406	392	856	1,630	912	904	772	758
5	690	a640	589	b400	403	378	750	1,700	920	904	832	750
6	705	a650	630	b410	396	375	698	1,660	1,030	888	825	720
7	712	a670	660	b420	392	382	675	1,620	1,040	880	832	720
8	720	a680	638	b410	b385	382	668	1,590	1,040	880	825	720
9	720	a620	622	b410	b380	386	660	1,560	1,190	880	832	720
10	705	a600	602	b400	b390	389	652	1,520	1,490	880	856	712
11	705	a630	602	b410	396	389	622	1,590	1,500	864	904	712
12	720	a630	608	410	389	389	630	1,600	1,460	848	880	705
13	712	a630	638	*414	389	392	668	1,510	1,410	832	856	705
14	705	*630	720	410	389	396	742	1,470	1,360	825	840	698
15	705	630	720	414	*389	400	856	1,440	1,320	832	832	698
16	698	630	652	b410	392	406	896	1,370	1,260	832	825	690
17	698	608	570	b415	392	422	896	1,340	1,260	848	802	698
18	712	608	556	b425	396	438	896	1,300	1,300	856	802	772
19	705	615	556	b420	396	477	912	1,290	1,270	856	795	765
20	690	630	550	b400	389	522	938	1,240	1,240	864	802	712
21	682	622	544	392	392	563	1,030	1,220	1,240	864	832	698
22	675	615	534	403	396	622	1,060	1,140	1,230	856	856	690
23	698	638	539	396	396	682	1,000	1,080	1,190	872	848	682
24	712	652	539	406	396	666	947	992	1,130	864	832	675
25	712	630	528	418	389	596	920	896	1,060	856	825	668
26	705	622	539	426	392	589	938	856	1,030	832	810	660
27	728	638	544	406	392	570	1,020	818	1,070	802	795	652
28	765	638	539	410	392	589	1,110	848	1,140	788	795	645
29	772	622	500	410	-	652	1,210	938	1,080	788	795	645
30	750	622	b470	406	-	802	1,250	864	1,040	788	780	652
31	a700	-	b430	406	-	929	-	896	-	765	772	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	21,939	772	668	703	43,520
November	19,140	710	600	633	37,960
December	18,007	720	430	581	35,720
Calendar year 1946	312,240	2,800	430	855	619,300
January	12,697	426	392	410	25,180
February	11,026	406	380	394	21,870
March	15,353	929	375	495	30,450
April	26,189	1,250	622	873	51,950
May	39,958	1,700	818	1,289	79,260
June	35,026	1,500	912	1,163	69,470
July	26,608	992	765	859	52,780
August	25,310	904	750	816	50,200
September	21,224	772	645	707	42,100
Water year 1946-47	272,477	1,700	375	747	540,500

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

Cottonwood Creek near Smoot, Wyo.

Location.- Water-stage recorder, lat. 42°37', long. 110°53', in sec. 4, T. 30 N., R. 118 W., 1¼ miles downstream from Porcupine Creek and 1½ miles southeast of Smoot.

Drainage area.- 26.3 square miles.

Records available.- May 1933 to September 1947.

Average discharge.- 14 years, 41.9 second-feet.

Extremes.- Maximum discharge during year, 250 second-feet June 20 (gage height, 2.79 feet); minimum, 9.0 second-feet Feb. 4 (gage height, 1.09 feet).
1933-47: Maximum discharge observed, 424 second-feet June 17, 18, 1933 (gage height, 3.76 feet, datum then in use), from rating curve extended above 200 second-feet; minimum daily, 8.5 second-feet Feb. 28 to Mar. 2, 1935.

Remarks.- Records excellent below 150 second-feet and good above. No diversion above station. Flow regulated by Cottonwood Lake.

Rating table, water year 1946-47 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 4-29)

1.1	9.3	1.5	39
1.2	14	1.7	65
1.3	20	2.0	110
1.4	28	2.8	250

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	19	15	14	13	13	15	47	157	155	74	44
2	26	19	15	14	13	12	15	62	160	151	74	43
3	25	19	15	13	13	12	15	83	171	155	76	43
4	25	19	15	16	13	12	15	96	171	155	82	42
5	26	19	15	15	13	12	15	106	167	155	77	42
6	25	19	15	14	13	12	15	113	169	151	74	40
7	25	19	15	13	13	12	14	121	176	148	71	40
8	25	19	15	14	13	12	14	148	191	146	70	39
9	24	19	15	14	14	12	14	164	225	142	70	39
10	25	19	15	14	13	12	14	164	227	139	70	39
11	25	19	15	14	13	12	14	158	220	133	66	38
12	24	19	15	14	13	12	14	151	205	128	64	37
13	24	19	15	15	13	11	14	137	194	123	62	37
14	24	19	15	15	13	12	16	130	184	118	60	36
15	24	18	15	14	13	12	19	130	189	115	60	36
16	24	17	15	15	12	12	21	133	205	112	58	35
17	23	17	12	15	12	13	22	144	216	106	57	37
18	24	16	17	16	12	13	22	153	220	102	56	38
19	23	16	15	14	12	13	24	158	230	100	55	37
20	22	16	14	13	12	13	26	157	239	98	56	35
21	22	16	14	13	12	14	28	167	230	94	61	35
22	22	16	14	13	12	14	28	176	193	92	58	34
23	22	17	14	13	12	13	26	173	180	90	57	34
24	21	16	14	13	12	13	26	171	176	89	55	32
25	22	16	14	13	12	14	26	175	171	86	52	32
26	22	16	14	13	12	14	27	182	173	84	49	31
27	22	16	14	13	12	14	29	189	176	84	49	31
28	23	15	14	13	12	14	31	189	175	84	48	31
29	23	16	15	13	-	14	37	178	166	82	47	30
30	21	16	14	13	-	14	40	166	160	78	46	31
31	20	-	15	14	-	14	-	160	-	77	44	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	729	26	20	23.5	1,450
November	526	19	15	17.5	1,040
December	454	17	12	14.6	900
Calendar year 1946	18,107	238	12	49.6	35,920
January	430	16	13	13.9	853
February	352	14	12	12.6	698
March	400	15	11	12.9	793
April	636	40	14	21.2	1,260
May	4,481	189	47	145	8,890
June	5,716	239	157	191	11,340
July	3,570	155	77	115	7,080
August	1,895	82	44	61.1	3,760
September	1,099	44	30	36.6	2,180
Water year 1946-47	20,288	239	11	55.6	40,240

Swift Creek near Afton, Wyo.

Location.- Water-stage recorder, lat. 42°43'30", long. 110°54'00", in SE¼ sec. 29, T. 32 N., R. 118 W., 1 mile upstream from mouth of canyon and 1½ miles east of Afton.

Drainage area.- 27.4 square miles.

Records available.- May 1943 to September 1947.

Extremes.- Maximum discharge observed during year, 385 second-feet June 22 (gage height, 3.15 feet); minimum daily, 30 second-feet Apr. 11.
1943-47: Maximum discharge, 491 second-feet June 21, 1943 (gage height, 3.38 feet); minimum, 24 second-feet Mar. 24, 1944 (gage height, 1.96 feet).

Remarks.- Records fair. Pipe line (capacity, about 5 second-feet) diverts water above station for town of Afton.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	50	41	37	39	36	34	79	242	251	119	71
2	64	50	42	37	39	37	34	97	255	284	119	71
3	62	51	42	35	40	37	35	119	263	314	122	70
4	62	48	42	35	37	36	35	145	272	309	119	68
5	60	47	42	36	35	35	35	191	267	305	116	70
6	59	50	42	35	35	36	33	206	272	293	113	68
7	57	48	42	35	36	37	32	218	280	309	116	66
8	57	47	42	36	35	36	31	280	301	314	116	66
9	57	48	42	35	36	36	31	318	334	301	113	66
10	57	48	42	36	36	36	31	301	343	284	111	66
11	56	48	42	36	35	36	30	297	347	259	113	62
12	56	46	42	36	35	36	31	288	343	246	111	60
13	55	41	42	37	36	36	31	226	339	234	108	60
14	56	42	42	37	36	36	33	198	339	218	102	60
15	54	50	42	38	36	36	36	191	339	214	102	60
16	51	48	43	39	36	36	37	206	322	218	100	59
17	50	47	41	37	37	36	42	230	335	188	100	59
18	47	45	40	37	37	36	42	242	343	184	95	57
19	47	46	43	38	36	36	42	242	356	180	89	59
20	47	47	41	36	36	35	46	230	364	170	87	57
21	48	45	42	36	36	35	48	259	372	163	89	55
22	47	43	42	35	37	36	50	272	385	157	89	55
23	47	42	42	36	38	36	48	263	372	154	87	55
24	46	42	42	36	39	35	48	263	364	145	82	55
25	46	42	42	37	38	35	48	272	347	139	84	54
26	47	42	41	37	37	36	48	326	343	133	82	52
27	48	41	41	38	36	34	54	347	318	133	82	54
28	47	41	39	37	36	35	49	343	288	127	79	52
29	50	41	36	38	-	35	68	301	259	125	79	52
30	50	41	37	38	-	35	73	246	255	125	73	51
31	50	-	37	39	-	35	-	230	-	125	73	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,645	66	46	53.1	3,260
November	1,367	51	41	45.6	2,710
December	1,278	43	36	41.2	2,530
Calendar year 1946	34,077	369	36	93.4	67,580
January	1,135	39	35	36.6	2,250
February	1,025	40	35	36.6	2,030
March	1,108	37	34	35.7	2,200
April	1,245	73	30	41.5	2,470
May	7,426	347	79	240	14,730
June	9,559	385	242	319	18,960
July	6,601	314	125	213	13,090
August	3,070	122	73	99.0	6,090
September	1,810	71	51	60.3	3,590
Water year 1946-47	37,269	385	30	102	73,910

Note.- Discharge for June 18 to July 26 computed from chain-gage readings.

Crow Creek near Fairview, Wyo.

Location.- Water-stage recorder, lat. 42°40'10", long. 111°01'20", in sec. 17, T 31 N., R. 119 W., 1¼ miles upstream from Spring Creek, 1½ miles downstream from Idaho-Wyoming State line, and 2½ miles southwest of Fairview.

Drainage area.- 114 square miles.

Records available.- March 1946 to September 1947.

Extremes.- Maximum discharge during year, 158 second-feet May 11; maximum gage height observed, 3.52 feet Feb. 8 (ice jam); minimum discharge not determined, probably occurred during period of ice effect; minimum gage height, 1.31 feet Nov. 12.
1946-47: Maximum discharge observed, 236 second-feet Apr. 19, 1946; maximum gage height observed, that of Feb. 8, 1947; minimum discharge not determined, probably occurred during period of ice effect; minimum gage height, that of Nov. 12, 1946.

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	47	41			40	71	74	85	57	39	40
2	53	48	41			40	76	82	79	55	44	39
3	47	57	41			40	70	f120	78	51	49	40
4	46	62	41			40	63	134	75	50	51	41
5	48	53	43			39	58	133	77	50	54	40
6	51	45	46			39	57	126	88	49	48	40
7	51	45	46			39	55	123	78	50	50	40
8	49	45	44		37	40	54	122	73	50	49	41
9	48	45	43			40	54	113	112	52	54	42
10	49	45	42	35	(*)	41	54	113	96	50	55	41
11	a49	46	42			41	53	147	95	49	57	41
12	a49	47	42			41	53	138	98	48	49	41
13	a49	53	44			40	61	123	83	47	46	39
14	49	44	46			40	76	126	76	47	45	39
15	49	43	46			44	81	114	74	46	44	39
16	49	43	*42			53	76	106	73	48	45	39
17	49	46				*57	73	101	74	53	44	42
18	49	42				66	72	94	77	50	43	59
19	49	42			40	72	73	93	73	48	44	49
20	48	45				75	80	89	74	46	41	44
21	46	52				81	98	76	73	46	48	42
22	46	45			h42	86	95	77	78	51	46	41
23	52	44				81	76	79	74	66	42	41
24	49	44	40			62	68	77	71	49	42	41
25	49	42		37	40	57	65	73	66	46	41	40
26	49	44				56	63	73	64	44	41	39
27	51	44				54	66	71	76	44	41	39
28	55	44				61	68	98	68	43	43	39
29	55	42			-	72	75	83	64	43	42	40
30	50	42			-	82	78	75	63	43	41	41
31	48	-			-	76	-	81	-	42	41	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,528	55	46	49.3	3,030
November	1,386	62	42	46.2	2,750
December	1,290	46	-	41.6	2,560
Calendar year	-	-	-	-	-
January	1,107	-	-	35.7	2,200
February	1,077	-	-	38.5	2,140
March	1,695	86	39	54.7	3,360
April	2,062	98	53	68.7	4,090
May	3,134	147	71	101	6,220
June	2,335	112	63	77.8	4,630
July	1,513	66	42	48.8	3,000
August	1,419	57	39	45.8	2,810
September	1,239	59	39	41.3	2,460
Water year 1946-47	19,785	147	-	54.2	39,250

* Winter discharge measurement made on this day.
a No gage-height record; discharge interpolated.
f Computed from partly estimated gage-height record.
h Computed from staff-gage reading.

Note.- Stage-discharge relation affected by ice Dec. 17 to about Feb. 21, Mar. 1, 2 (no gage-height record Dec. 18-21, Dec. 29 to Jan. 7, Jan. 9-19, 21-29, Jan. 31 to Feb. 7, Feb. 9, 19-21, 23-28; discharge computed on basis of winter discharge measurements, weather records, and records for Stump Creek near Auburn).

Stump Creek near Auburn, Wyo.

Location.- Water-stage recorder, lat. 42°47', long. 111°03', in sec. 26, T. 7 S., R. 46 E., 0.6 mile upstream from Wyoming-Idaho State line, 0.8 mile downstream from Tygee Creek, and 2½ miles west of Auburn.

Drainage area.- 103 square miles.

Records available.- March 1946 to September 1947.

Extremes.- Maximum discharge during year, 396 second-feet May 5 (gage height, 3.30 feet); minimum, 3.0 second-feet Feb. 5 (gage height, 0.66 foot), ice jam upstream.
1946-47: Maximum discharge observed, 469 second-feet Apr. 26, 1946 (gage height, 3.74 feet); minimum, that of Feb. 5, 1947.

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	31	26		23	23	85	170	100	56	35	28
2	32	30	26		23	23	91	304	91	54	36	26
3	30	30	26		21	23	86	300	93	52	35	26
4	28	32	26		23	23	70	323	80	51	46	26
5	30	31	27		25	22	60	328	86	51	44	25
6	33	29	30		24	23	57	304	101	49	36	23
7	34	28	30		23	23	55	283	84	47	44	22
8	32	29	28		21	23	55	274	84	48	42	23
9	30	28	28		20	23	57	258	135	51	44	22
10	32	27	27		21	25	56	244	161	48	48	24
11	32	26	27	21	*21	26	56	274	158	44	45	24
12	32	29	28		21	24	65	230	140	43	38	24
13	32	30	29		21	24	86	211	122	41	35	24
14	31	27	33		21	25	103	205	112	40	34	23
15	31	27	33		21	29	114	181	103	40	32	25
16	30	26	*28		21	34	106	167	97	39	33	25
17	30	28	23		22	*38	104	159	96	41	32	29
18	32	26	23		23	50	110	149	93	38	31	42
19	31	27	24		22	65	103	142	81	35	30	32
20	30	27	25		23	72	117	134	85	35	31	29
21	29	30	25	22	24	81	132	127	81	35	36	28
22	29	27	24		24	86	122	118	78	36	34	25
23	36	29	25		23	84	103	110	74	33	32	25
24	33	28	24		23	59	98	103	67	31	32	25
25	33	26	24	22	23	50	94	98	65	30	30	25
26	33	28	25	22	21	50	98	96	69	28	27	24
27	37	28	26	22	23	48	114	94	76	28	26	24
28	39	28	23	23	23	59	132	123	69	29	28	24
29	37	27		22	-	76	158	101	63	29	26	24
30	34	27	21	23	-	110	156	90	60	28	25	24
31	32	-		23	-	103	-	97	-	30	27	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	994	39	28	32.1	1,970
November	846	32	26	28.2	1,680
December	808	33	-	26.0	1,600
Calendar year	-	-	-	-	-
January	666	-	-	21.5	1,320
February	624	25	20	22.3	1,240
March	1,424	110	22	45.9	2,820
April	2,849	158	55	95.0	5,650
May	5,797	328	90	187	11,500
June	2,804	161	60	93.5	5,560
July	1,240	56	28	40.0	2,460
August	1,075	48	25	34.7	2,130
September	770	42	22	25.7	1,530
Water year 1946-47	19,895	328	-	54.5	39,460

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 17-21, Dec. 29 to Jan. 24, Jan. 27, 30, Feb. 1, 5-10, Mar. 1 (no gage-height record Dec. 29 to Jan. 8, Jan. 14, 15, Feb. 7-9; discharge computed on basis of weather records).

Henrys Fork near Lake, Idaho

Location.- Water-stage recorder, lat. 44°36', long. 111°21', in SW¼ sec. 26, T. 15 N., R. 43 E., a quarter of a mile downstream from Henrys Lake Dam and 4 miles south of former Lake post office. Datum of gage is 6,450.62 feet above mean sea level, levels by Bureau of Reclamation (Corps of Engineers bench mark).

Drainage area.- 104 square miles, including that of Dry Creek Basin.

Records available.- September 1922 to September 1947. May 1920 to September 1922 at site 3 miles downstream and below mouth of Dry Creek, floodwaters of which have been diverted into Henrys Lake at times since 1923.

Average discharge.- 27 years, 47.3 second-feet.

Extremes.- Maximum discharge during year, about 390 second-feet June 12-23; minimum daily, 3 second-feet on many days (leakage through reservoir gates).
1920-47: Maximum discharge, 907 second-feet June 13, 1926 (gage height, 5.40 feet); minimum, 0.1 second-foot Oct. 3-31, 1937. Outflow from Henrys Lake entirely ceased late in summer of 1889.

Remarks.- Records good except those for periods of no gage-height record October to July, which are fair. Flow regulated by Henrys Lake (see p. 56), gates of which remained closed Oct. 5 to June 11. No diversion from Dry Creek into Henrys Lake during year.

Cooperation.- Gage-height record furnished by North Fork Reservoir Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39								80	280	339	178
2	39								80	280	339	112
3	39								80	280	338	35
4	39								80	280	336	37
5	3								80	280	336	37
6	3								80	280	334	38
7	3								80	280	330	38
8	3								80	69	330	38
9	3								80	69	328	38
10	3								80	70	328	38
11	3								80	70	326	37
12	3								390	70	326	37
13	3								390	70	324	37
14	3								390	70	324	36
15	3								390	70	324	36
16	3								390	70	324	35
17	3								390	70	324	35
18	3								390	70	326	35
19	3								390	70	324	35
20	3								390	70	324	35
21	3								390	70	321	24
22	3								390	70	232	4
23	3								389	70	180	3
24	3								350	70	180	3
25	3								350	70	183	3
26	3								350	70	183	3
27	3								350	70	184	3
28	3								350	70	184	3
29	3								350	70	183	3
30	3								350	70	182	3
31	3								-	204	180	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	237	39	3	7.6	470
November	90	-	-	3	179
December	124	-	-	4	246
Calendar year 1946	18,487	224	3	50.6	36,680
January	155	-	-	5	307
February	168	-	-	6	333
March	279	-	-	9	553
April	1,200	-	-	40	2,380
May	3,100	-	-	100	6,150
June	8,009	-	-	267	15,890
July	3,772	-	-	122	7,480
August	8,776	339	180	283	17,410
September	999	178	3	33.3	1,980
Water year 1946-47	26,909	-	3	73.7	53,380

Note.- No gage-height record Oct. 1 to July 30; discharge computed on basis of 10 discharge measurements and occasional gage readings. Monthly mean discharges only November to May.

Island Park Reservoir near Island Park, Idaho

Location.- Electric tape gage, lat. 44° 25', long. 111°24', in gatehouse shaft at dam on Henrys Fork, a quarter of a mile south of quarter corner between secs. 28 and 29, T. 13 N., R. 43 E., a quarter of a mile upstream from Buffalo River, and 2 miles west of Island Park post office. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Drainage area.- 478 square miles.

Records available.- November 1938 to September 1947.

Extremes.- Maximum contents during year, 137,230 acre-feet June 10-12 (elevation, 6,303.25 feet); minimum 51,465 acre-feet Oct. 1 (elevation, 6,289.17 feet).
1938-47: Maximum contents, 137,805 acre-feet June 8, 1945 (elevation, 6,303.32 feet); minimum after first filling of reservoir in May 1939, 16,855 acre-feet Sept. 27, 1940 (elevation, 6,274.22 feet).

Remarks.- Reservoir is formed by earth fill, rock-faced dam. Storage began Nov. 15, 1938. Capacity, 127,265 acre-feet between elevations 6,239 feet (normal low-water level with outlet gates open) and 6,302 feet (crest of spillway). Natural flow passing through reservoir when outlet gates are open prevents withdrawal of storage to elevation 6,230 feet (sill of lower outlet). Dead storage negligible. Water is used for irrigation of lands in Fremont-Madison irrigation district between Ashton and Rexburg. Gage read daily at 8 a.m. Contents given herein are computed from elevations at that time; all available for release.

Cooperation.- Reservoir elevations and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51,465	52,685	68,665	73,860	99,615	119,835	132,470	136,095	136,420	136,095	116,410	94,975
2	52,205	52,685	69,650	74,855	100,285	120,515	132,550	136,095	136,580	136,095	114,935	94,130
3	52,325	52,605	69,335	75,855	100,960	121,195	132,790	136,260	136,990	136,015	113,695	93,095
4	52,365	52,605	69,075	76,470	101,780	122,110	132,870	135,855	136,990	135,690	113,405	92,130
5	52,365	52,405	68,820	77,315	102,525	123,095	132,790	135,285	136,990	135,690	111,520	91,365
6	52,130	52,405	69,025	78,170	103,280	123,860	132,710	134,800	136,825	135,690	110,300	90,475
7	52,165	52,285	69,180	79,035	104,040	124,550	132,710	135,205	136,420	135,690	108,945	88,655
8	52,165	52,285	69,960	79,905	104,735	125,320	132,630	135,450	136,420	135,610	107,950	87,100
9	52,205	52,285	70,270	80,780	106,195	126,175	132,630	135,690	136,905	135,690	106,895	85,565
10	52,165	52,130	70,375	81,665	106,265	127,030	132,550	135,690	137,230	135,205	105,565	84,235
11	52,090	52,130	70,270	82,495	106,825	127,735	132,550	135,530	137,230	134,800	106,265	82,615
12	52,050	52,050	70,375	83,270	107,455	128,675	132,470	135,610	137,230	134,315	105,845	81,075
13	52,050	51,970	70,325	84,050	108,090	128,985	132,470	135,530	136,745	133,830	105,705	80,080
14	51,970	51,735	70,325	85,120	108,945	129,615	132,630	135,530	136,665	132,790	105,845	78,975
15	51,970	51,660	71,380	85,930	110,015	130,170	132,790	135,450	136,580	132,070	105,705	78,115
16	52,090	52,805	72,395	86,730	110,800	130,325	132,870	135,365	136,420	131,590	105,495	76,865
17	52,010	53,650	72,340	87,535	111,520	130,720	132,950	134,720	136,420	130,880	105,150	75,910
18	52,050	54,635	72,235	88,340	112,385	130,960	133,030	134,720	136,420	130,090	104,665	75,740
19	51,930	55,720	72,070	89,090	113,110	131,195	133,190	134,720	136,175	128,985	104,525	75,350
20	51,930	56,905	72,070	89,910	113,695	131,435	133,270	134,395	136,500	128,125	104,110	75,130
21	52,010	58,605	72,125	90,665	114,280	131,590	133,670	134,475	136,500	126,875	103,420	75,295
22	51,930	59,630	72,180	91,430	115,080	131,670	133,750	134,395	136,175	126,175	102,940	75,295
23	52,130	60,535	72,285	92,195	115,815	131,990	133,830	134,555	136,015	125,320	102,255	75,295
24	52,365	61,640	72,340	93,030	116,480	131,990	133,910	134,555	135,855	124,475	101,300	75,185
25	52,365	62,665	72,340	93,870	117,220	131,990	134,075	134,555	135,690	123,630	100,625	75,130
26	52,565	63,760	72,340	94,780	117,890	131,990	134,315	134,475	135,365	122,790	99,815	75,185
27	52,485	64,820	72,500	95,630	118,485	132,070	134,475	134,395	135,690	121,650	99,010	75,465
28	52,765	65,700	72,720	96,420	119,160	132,070	134,720	134,800	135,770	120,440	98,275	75,520
29	52,685	66,640	72,770	97,215	-	132,070	135,530	135,205	135,855	119,760	97,545	75,520
30	52,685	67,645	72,825	97,940	-	132,230	136,095	135,285	136,015	118,860	96,555	75,520
31	52,685	-	72,880	98,675	-	132,390	-	135,450	-	117,740	95,760	-

Monthly elevation and contents, water year October 1946 to September 1947

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	6,289.17	51,465	-
Oct. 31	6,289.48	52,685	+1,220
Nov. 30	6,292.80	67,645	+14,960
Dec. 31	6,293.80	72,880	+5,235
Calendar year 1946	-	-	-24,135
Jan. 31	6,298.05	98,675	+25,795
Feb. 28	6,300.94	119,160	+20,485
Mar. 31	6,302.65	132,390	+13,230
Apr. 30	6,303.11	136,095	+3,705
May 31	6,303.03	135,450	-645
June 30	6,303.10	136,015	+565
July 31	6,300.75	117,740	-18,275
Aug. 31	6,297.61	95,760	-21,980
Sept. 30	6,294.28	75,520	-20,240
Water year 1946-47	-	-	+24,055

Henrys Fork near Island Park, Idaho

Location.- Water-stage recorder, lat. 44°25', long. 111°24', in SW¼ sec. 28, T. 13 N., R. 43 E., an eighth of a mile upstream from Buffalo River, an eighth of a mile downstream from Island Park Dam, and 2 miles west of Island Park post office. Altitude of gage, 6,225 feet (from river-profile map).

Drainage area.- 478 square miles.

Records available.- January 1933 to September 1947.

Average discharge.- 14 years, 504 second-feet.

Extremes.- Maximum discharge during year, 2,130 second-feet May 3 (gage height, 5.38 feet); minimum daily, 7 second-feet on many days.
1933-47: Maximum discharge, 2,770 second-feet Apr. 26, 1946 (gage height, 6.15 feet); minimum daily, 1 second-foot Nov. 16 to Dec. 7, 1938.

Remarks.- Records good. Flow regulated by Henrys Lake (see p. 56) and Island Park Reservoir (see preceding page).

Cooperation.- Gage-height record and two discharge measurements furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	548	538	7	7	10	13	409	1,470	930	870	1,270	1,020
2	548	538	342	7	10	13	422	1,500	1,080	875	1,310	1,020
3	548	538	538	7	10	13	436	1,850	1,260	870	1,310	1,020
4	548	538	576	7	10	13	440	2,000	1,290	841	1,300	1,020
5	548	538	543	7	10	13	432	1,640	1,260	836	1,310	1,020
6	548	538	509	7	10	13	427	1,330	1,240	836	1,310	1,080
7	552	538	164	7	10	13	432	1,280	1,190	831	1,300	1,320
8	552	538	216	7	10	14	422	1,300	1,190	826	1,260	1,280
9	548	538	509	7	10	14	422	1,340	1,280	802	1,050	1,280
10	543	538	509	7	10	14	414	1,340	1,320	738	971	1,280
11	543	538	509	7	10	28	418	1,320	1,410	699	971	1,280
12	543	538	509	8	10	54	414	1,320	1,430	762	856	1,200
13	543	538	509	8	11	116	414	1,320	1,260	935	767	1,020
14	543	538	184	8	11	181	427	1,320	1,180	890	767	1,020
15	548	173	7	8	11	214	440	1,300	1,150	777	836	1,020
16	548	7	342	8	11	240	450	1,270	1,140	841	890	1,020
17	543	7	509	8	11	261	463	1,150	1,140	961	890	1,010
18	543	7	509	8	11	282	472	1,100	1,150	961	890	935
19	548	7	454	8	11	299	486	1,100	1,050	971	895	797
20	548	7	454	8	11	312	509	1,060	1,180	976	1,020	635
21	548	7	454	9	11	321	543	950	1,360	971	1,020	586
22	548	7	454	9	11	329	562	945	1,140	966	1,020	586
23	552	7	454	9	11	355	572	956	1,110	966	1,020	586
24	548	7	454	9	11	364	586	961	1,070	961	1,020	543
25	548	7	454	9	11	364	610	945	1,050	961	1,020	524
26	548	7	454	9	13	368	645	865	890	961	1,020	495
27	552	7	454	9	13	368	699	674	826	956	1,020	476
28	548	7	454	9	13	373	767	753	836	961	1,020	476
29	543	7	454	9	-	378	860	792	856	956	1,020	476
30	543	7	454	9	-	396	1,280	797	870	945	1,020	476
31	543	-	175	9	-	409	-	846	-	1,100	1,020	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	16,954	552	543	547	33,630
November	7,810	538	7	260	15,490
December	12,614	576	7	407	25,020
Calendar year 1946	236,324	2,400	7	648	468,700
January	248	9	7	8.0	492
February	302	13	10	10.8	599
March	6,145	409	13	198	12,190
April	15,873	1,280	409	529	31,480
May	36,794	2,000	674	1,187	72,980
June	34,138	1,430	826	1,138	67,710
July	27,802	1,100	699	897	55,140
August	32,393	1,310	767	1,045	64,250
September	26,501	1,320	476	883	52,560
Water year 1946-47	217,574	2,000	7	596	431,500

Note.- Discharge Nov. 16 to Dec. 1, Dec. 15 to Mar. 12 (computed from staff-gage readings).

Henrys Fork at Warm River, Idaho

Location.- Water-stage recorder, lat. 44°07', long. 111°20', in sec. 12, T. 9 N., R. 43 E., 1,000 feet upstream from Warm River and half a mile northwest of Warm River railroad station. Altitude of gage, 5,255 feet (from river-profile map).

Drainage area.- 660 square miles.

Records available.- September 1910 to March 1915, April 1918 to September 1947.

Average discharge.- 33 years, 985 second-feet.

Extremes.- Maximum discharge during year, 2,710 second-feet May 4 (gage height, 6.97 feet); minimum, 249 second-feet Jan. 2 (gage height, 3.25 feet).
1910-15, 1918-47: Maximum discharge, 3,540 second-feet May 18, 1927; maximum gage height, 7.80 feet Apr. 27, 1946; minimum discharge, 218 second-feet Jan. 19, 1940 (gage height, 3.17 feet).

Remarks.- Records good. Flow regulated by Henrys Lake (see p. 56) and Island Park Reservoir (see p. 48). Some water diverted above station for irrigation of meadows on headwaters.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	956	930	422	286	426	409	855	2,140	1,440	1,300	1,680	1,420
2	1,030	917	435	318	448	422	873	2,100	1,510	1,290	1,750	1,420
3	982	917	924	362	444	430	885	2,340	1,720	1,290	1,760	1,430
4	962	904	943	404	439	434	879	2,660	1,800	1,290	1,750	1,420
5	943	904	995	408	434	430	873	2,470	1,770	1,260	1,740	1,420
6	930	910	943	430	430	404	861	2,120	1,750	1,260	1,740	1,420
7	936	910	891	444	413	422	855	1,970	1,720	1,250	1,740	1,640
8	936	924	462	382	372	434	837	1,960	1,710	1,250	1,720	1,680
9	930	910	769	394	388	434	837	1,990	1,860	1,260	1,560	1,680
10	930	904	917	417	443	439	837	1,970	1,890	1,210	1,390	1,690
11	917	904	910	458	443	456	813	1,930	1,910	1,160	1,380	1,660
12	924	917	924	448	443	434	807	1,920	1,940	1,140	1,350	1,650
13	930	917	917	412	452	474	813	1,950	1,830	1,280	1,150	1,410
14	924	917	917	390	452	520	837	1,910	1,680	1,430	1,140	1,380
15	924	910	471	366	443	568	879	1,870	1,640	1,260	1,150	1,380
16	924	440	346	378	448	597	909	1,810	1,610	1,200	1,260	1,380
17	917	404	852	426	448	622	939	1,730	1,630	1,410	1,260	1,420
18	910	404	930	430	409	653	987	1,620	1,640	1,410	1,260	1,420
19	910	448	910	453	434	674	1,020	1,600	1,580	1,420	1,260	1,270
20	910	486	930	453	413	695	1,090	1,570	1,650	1,430	1,350	1,090
21	917	358	891	444	426	712	1,130	1,490	1,870	1,420	1,430	975
22	924	448	859	440	409	733	1,120	1,440	1,720	1,420	1,420	987
23	982	440	853	440	430	813	1,150	1,440	1,590	1,430	1,420	987
24	943	435	853	440	426	795	1,190	1,420	1,550	1,430	1,420	969
25	930	417	853	430	413	784	1,260	1,420	1,500	1,410	1,420	927
26	936	394	865	430	317	778	1,380	1,380	1,450	1,410	1,420	957
27	943	485	872	404	413	778	1,480	1,250	1,290	1,400	1,420	909
28	956	453	829	386	448	784	1,590	1,180	1,290	1,390	1,420	897
29	924	430	a800	430	-	795	1,670	1,220	1,290	1,390	1,420	897
30	917	430	a810	426	-	831	1,830	1,250	1,310	1,390	1,420	897
31	904	-	a820	366	-	861	-	1,320	-	1,410	1,420	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	29,001	1,030	904	936	57,520
November	20,147	930	358	672	39,960
December	25,113	995	346	810	49,810
Calendar year 1946	397,760	3,060	346	1,090	788,900
January	12,695	458	286	410	25,180
February	11,904	452	317	425	23,610
March	18,615	861	404	600	36,920
April	31,486	1,830	807	1,050	62,450
May	54,440	2,660	1,180	1,756	108,000
June	49,140	1,940	1,290	1,638	97,470
July	41,300	1,430	1,140	1,332	81,920
August	45,020	1,760	1,140	1,452	89,300
September	38,682	1,690	897	1,289	76,720
Water year 1946-47	377,543	2,660	286	1,034	748,900

a No gage-height record; discharge computed on basis of records for stations near Island Park and near Ashton.

Henrys Fork near Ashton, Idaho

Location.- Water-stage recorder, lat. 44°05', long. 111°30', in sec. 28, T. 9 N., R. 42 E., a quarter of a mile downstream from power plant and 3 miles west of Ashton. Altitude of gage, 5,095 feet (from river-profile map).

Drainage area.- 1,030 square miles.

Records available.- August 1902 to June 1909, April 1920 to September 1947.

Average discharge.- 28 years (1903-8, 1924-47), 1,281 second-feet.

Extremes.- Maximum discharge during year, 4,140 second-feet May 4 (gage height, 7.64 feet); minimum, 368 second-feet (regulated) Jan. 3; minimum daily, 519 second-feet Jan. 3.

1902-9, 1920-47: Maximum discharge, 6,220 second-feet May 7, 1925; minimum, 65 second-feet (regulated) Oct. 16, 1935 (gage height, 4.59 feet); minimum daily, 440 second-feet Dec. 5, 1931.

Remarks.- Records excellent. Flow regulated by power plant above station and by Henrys Lake (see p. 56) and Island Park Reservoir (see p. 48). Some water diverted above station for irrigation of meadows on headwaters.

Cooperation.- Gage-height record during nonirrigation season furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,330	1,330	723	792	656	676	1,240	2,970	2,200	1,660	1,980	1,790
2	1,470	1,300	760	656	728	707	1,320	2,990	2,160	1,660	2,080	1,790
3	1,340	1,270	1,100	519	718	760	1,270	3,330	2,380	1,650	2,140	1,830
4	1,320	1,270	1,270	738	718	686	1,270	3,720	2,470	1,630	2,120	1,790
5	1,300	1,280	1,340	656	728	728	1,260	3,510	2,400	1,600	2,140	1,770
6	1,260	1,300	1,300	781	728	707	1,240	3,100	2,380	1,580	2,140	1,770
7	1,280	1,280	1,260	718	728	707	1,240	2,860	2,320	1,580	2,160	2,000
8	1,300	1,300	825	696	627	718	1,210	2,860	2,320	1,580	2,160	2,080
9	1,300	1,300	1,010	636	618	707	1,200	2,910	2,680	1,610	2,040	2,060
10	1,280	1,280	1,260	707	707	803	1,210	2,800	2,760	1,550	1,810	2,060
11	1,260	1,270	1,200	748	738	836	1,170	2,740	2,630	1,470	1,810	1,980
12	1,270	1,270	1,270	718	728	728	1,170	2,720	2,610	1,420	1,770	1,980
13	1,280	1,280	1,230	749	728	803	1,200	2,760	2,470	1,360	1,530	1,680
14	1,300	1,280	1,260	627	738	858	1,260	2,780	2,220	1,880	1,500	1,610
15	1,300	1,320	866	656	707	916	1,340	2,610	2,180	1,700	1,500	1,610
16	1,300	803	760	636	728	952	1,360	2,490	2,140	1,500	1,610	1,610
17	1,300	722	770	676	760	988	1,470	2,420	2,200	1,720	1,600	1,630
18	1,280	788	1,100	686	728	1,040	1,520	2,280	2,220	1,770	1,630	1,770
19	1,280	796	1,280	707	728	1,080	1,530	2,260	2,120	1,790	1,630	1,580
20	1,270	832	1,260	718	707	1,100	1,700	2,220	2,200	1,790	1,720	1,420
21	1,280	710	1,200	686	728	1,130	1,720	2,120	2,440	1,770	1,860	1,300
22	1,330	770	1,130	728	718	1,140	1,700	2,020	2,300	1,790	1,830	1,300
23	1,450	749	1,160	718	696	1,240	1,680	2,000	2,040	1,790	1,830	1,320
24	1,340	787	1,120	718	718	1,160	1,750	1,960	2,020	1,790	1,810	1,280
25	1,340	781	1,140	707	738	1,130	1,810	1,980	1,960	1,770	1,790	1,230
26	1,360	737	1,140	738	636	1,120	2,020	1,920	1,940	1,770	1,790	1,320
27	1,340	788	1,140	696	618	1,120	2,200	1,810	1,730	1,770	1,830	1,240
28	1,390	737	1,130	646	686	1,120	2,300	1,700	1,730	1,790	1,810	1,210
29	1,340	741	1,080	676	-	1,170	2,510	1,790	1,700	1,770	1,790	1,210
30	1,300	729	1,090	718	-	1,260	2,630	1,790	1,700	1,770	1,810	1,210
31	1,300	-	1,120	646	-	1,270	-	1,960	-	1,770	1,810	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	40,790	1,470	1,260	1,316	80,910
November	30,799	1,330	710	1,027	61,090
December	34,294	1,340	723	1,106	68,020
Calendar year 1946	555,604	4,660	646	1,522	1,102,000
January	21,498	792	519	693	42 640
February	19,784	760	618	707	39,240
March	29,360	1,270	676	947	58,240
April	46,500	2,630	1,170	1,550	92,230
May	77,380	3,720	1,700	2,496	153,500
June	66,820	2,760	1,700	2,221	132,100
July	52,250	1,880	1,420	1,685	103,600
August	57,030	2,160	1,500	1,840	113,100
September	48,430	2,080	1,210	1,614	96,060
Water year 1946-47	524,735	3,720	519	1,438	1,041,000

Diversions from Henrys Fork between Ashton and St. Anthony gaging stations, Idaho

Between Ashton and St. Anthony gaging stations seven canals divert water from Henrys Fork for irrigation. Records available each irrigation season from 1919 to 1947. Discharge of canals computed from daily or biweekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								712	1,193	789	1,155	723
2								743	1,009	991	1,046	697
3								793	752	995	1,032	718
4								803	774	1,000	1,021	731
5								799	875	1,011	893	769
6								826	830	1,017	808	767
7								848	829	1,024	866	773
8								1,184	887	1,067	939	762
9								1,212	856	1,046	969	790
10								1,216	864	990	951	761
11								1,228	794	991	930	676
12								1,225	816	973	904	668
13								1,199	844	941	831	637
14								940	878	1,057	812	512
15								999	884	1,132	837	475
16								1,000	929	1,064	831	443
17								1,004	968	1,071	860	447
18								1,079	1,119	1,077	868	307
19								1,164	1,170	1,163	836	278
20								1,201	1,189	1,135	843	275
21								1,215	1,167	1,122	767	270
22								1,207	1,082	1,115	756	270
23								1,219	975	1,097	769	269
24								1,272	1,040	1,084	761	297
25								1,283	1,053	1,056	744	297
26								1,335	1,054	1,071	796	294
27								1,339	1,041	1,083	799	294
28								1,342	995	1,100	781	293
29								1,306	939	1,088	780	292
30								1,258	979	1,153	736	292
31								1,199	-	1,160	734	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	34,150	1,342	712	1,102	67,710
June	28,785	1,193	752	960	57,090
July	32,663	1,163	789	1,054	64,790
August	26,653	1,155	734	860	52,870
September	15,077	790	269	503	29,900
The period	-	-	-	-	272,400

Henrys Fork at St. Anthony, Idaho

Location.- Water-stage recorder, lat. 43°58', long. 111°41', in sec. 1, T. 7 N., R. 40 E., half a mile upstream from bridge on main street of St. Anthony. Altitude of gage, 4,950 feet (from river-profile map).

Drainage area.- 1,730 square miles.

Records available.- March 1919 to September 1947 (irrigation seasons only).

Extremes.- Maximum discharge recorded during year, 6,850 second-feet May 4 (gage height, 6.06 feet); minimum daily recorded, 617 second-feet July 12.
1919-47: Maximum discharge recorded, 9,030 second-feet May 8, 1925 (gage height, 6.70 feet); minimum daily recorded, 413 second-feet July 22, 1931.

Remarks.- Records excellent. Diversions above station for irrigation. Flow regulated by power plant 17 miles above station and by Henrys Lake (see p. 56), Island Park Reservoir (see p. 48), and Grassy Lake (see p. 56).

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								3,960	3,530	1,400	972	1,300
2								4,090	3,530	1,210	1,190	1,330
3								5,130	3,830	1,140	1,280	1,330
4								6,010	3,700	1,120	1,310	1,330
5								5,960	3,300	1,020	1,430	1,290
6								5,300	3,180	919	1,490	1,260
7								4,750	3,110	866	1,430	1,340
8								4,320	2,960	806	1,400	1,490
9								4,370	4,110	816	1,310	1,480
10								3,930	5,210	796	1,110	1,560
11								3,680	4,270	702	1,180	1,680
12								3,660	3,830	617	1,110	1,710
13								3,830	3,260	642	940	1,630
14								4,160	2,770	919	887	1,590
15								3,830	2,770	826	876	1,490
16								3,500	2,680	634	962	1,510
17								3,400	2,610	758	940	1,580
18								3,130	2,560	767	951	2,100
19								2,770	2,320	758	940	1,980
20								2,520	2,700	739	983	1,750
21								2,430	3,530	730	1,200	1,540
22								2,380	2,870	739	1,250	1,510
23								2,340	2,170	796	1,200	1,510
24								2,170	1,960	866	1,210	1,490
25								2,060	1,790	887	1,250	1,420
26								2,040	1,640	767	1,210	1,460
27								2,020	1,580	758	1,200	1,540
28								1,940	1,880	730	1,210	1,460
29								1,660	1,610	676	1,240	1,460
30								1,510	1,460	676	1,250	1,480
31								1,880	-	721	1,300	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	104,730	6,010	1,510	3,378	207,700
June	86,720	5,210	1,460	2,891	172,000
July	25,801	1,400	617	832	51,180
August	36,211	1,490	876	1,168	71,820
September	45,600	2,100	1,260	1,520	90,450
The period	-	-	-	-	593,200

Diversions from Henrys Fork between St. Anthony and Rexburg gaging stations, Idaho

Between St. Anthony and Rexburg gaging stations four canals divert water from Henrys Fork for irrigation. Records available for part of each irrigation season from 1919 to 1947. Discharge of canals computed from daily or biweekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								749	917	784	861	617
2								771	837	774	770	636
3								791	703	862	772	635
4								801	673	836	777	665
5								852	637	801	595	650
6								954	648	742	635	655
7								1,026	683	756	585	661
8								1,077	659	767	594	665
9								1,101	645	772	657	673
10								1,107	593	725	700	625
11								1,059	589	716	684	576
12								994	615	646	652	540
13								938	682	739	568	529
14								837	732	847	585	527
15								850	750	810	617	367
16								850	765	669	676	329
17								850	816	816	669	241
18								861	842	762	634	216
19								865	837	833	683	139
20								923	872	805	678	115
21								927	799	788	771	111
22								922	805	736	673	137
23								934	785	829	616	150
24								953	818	829	581	150
25								1,012	840	797	521	150
26								1,034	832	740	617	150
27								1,055	845	791	632	150
28								1,046	799	785	608	150
29								1,026	771	787	621	150
30								1,056	754	795	636	150
31								1,000	-	825	628	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	29,221	1,107	749	943	57,960
June	22,543	917	589	751	44,710
July	24,164	862	646	779	47,930
August	20,306	861	521	655	40,280
September	11,509	673	111	384	22,830
The period	-	-	-	-	213,700

Henrys Fork near Rexburg, Idaho

Location.- Water-stage recorder, lat. 43°50', long. 111°54', in sec. 30, T. 6 N., R. 39 E., just downstream from highway bridge, downstream from all tributaries, and 7 miles west of Rexburg. Altitude of gage, 4,807 feet (from river-profile map).

Drainage area.- 3,010 square miles.

Records available.- April 1909 to September 1947.

Average discharge.- 39 years (1908-47), 1,911 second-feet.

Extremes.- Maximum discharge during year, 6,370 second-feet June 11 (gage height, 8.99 feet); minimum, 650 second-feet Aug. 1 (gage height, 3.04 feet).
1909-47: Maximum discharge, 9,490 second-feet June 29, 1927 (gage height, 9.90 feet); minimum, 183 second-feet Mar. 24-28, 1934 (gage height, 1.45 feet).

Remarks.- Records good except those for period of ice effect, which are fair. Flow regulated by operation of power plant near Ashton and by Henrys Lake (see following page), Island Park Reservoir (see p. 48), and Grassy Lake (see following page). Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,810	2,230	1,640	1,470	1,250	1,160	1,570	3,130	2,400	1,860	650	1,240
2	1,980	2,230	1,620	1,300	1,300	1,130	1,530	3,540	3,620	1,590	725	1,190
3	2,140	2,120	1,650	1,220	1,330	1,220	1,630	3,800	4,040	1,380	1,020	1,160
4	2,090	2,080	1,900	1,120	1,350	1,210	1,590	4,710	4,500	1,270	1,280	1,180
5	2,080	2,160	1,960	1,340	1,350	1,220	1,570	5,720	4,640	1,250	1,440	1,170
6	2,040	2,200	2,030	1,350	1,350	1,240	1,530	6,010	4,370	1,130	1,500	1,130
7	2,020	2,220	2,050	1,400	1,350	1,180	1,530	5,570	4,140	1,020	1,510	1,130
8	2,090	2,250	1,980	1,370	1,300	1,210	1,480	5,170	3,920	904	1,410	1,320
9	2,100	2,230	1,610	1,310	1,250	1,230	1,420	4,770	4,020	843	1,350	1,360
10	2,080	2,220	1,800	1,260	1,200	1,290	1,380	4,510	5,140	820	1,240	1,400
11	2,050	2,170	1,880	1,310	1,250	1,430	1,360	4,380	6,320	798	1,160	1,520
12	2,000	2,160	1,880	1,380	1,300	1,430	1,310	4,250	6,160	730	1,310	1,590
13	2,020	2,080	1,910	1,390	1,350	1,320	1,310	4,250	5,690	680	1,290	1,660
14	2,020	2,040	1,920	1,350	1,450	1,320	1,280	4,550	4,790	660	1,110	1,620
15	2,020	2,120	1,940	1,270	1,500	1,380	1,390	4,860	4,020	776	970	1,610
16	2,030	2,070	1,670	1,150	1,650	1,540	1,560	4,440	3,750	814	918	1,660
17	2,040	1,700	1,520	1,200	1,750	1,650	1,560	4,070	3,320	776	937	1,770
18	2,080	1,610	1,460	1,250	1,920	1,710	1,560	3,850	2,990	755	911	2,140
19	2,070	1,660	1,680	1,270	1,740	1,680	1,610	3,560	2,750	755	950	2,570
20	2,040	1,740	1,910	1,300	1,650	1,690	1,620	3,190	2,570	735	911	2,540
21	2,020	1,770	2,020	1,320	1,560	1,660	1,830	2,880	3,060	720	1,050	2,360
22	2,080	1,690	1,980	1,350	1,550	1,670	1,910	2,620	3,590	715	1,240	2,200
23	2,200	1,780	2,010	1,350	1,440	1,630	1,820	2,430	3,100	700	1,230	2,160
24	2,450	1,800	2,000	1,340	1,400	1,740	1,780	2,270	2,410	700	1,310	2,140
25	2,340	1,760	1,920	1,340	1,350	1,580	1,810	2,040	2,060	735	1,340	2,070
26	2,250	1,710	1,930	1,350	1,240	1,410	1,850	1,960	1,840	776	1,290	1,960
27	2,350	1,660	*1,970	1,380	*1,160	1,360	1,990	1,850	1,740	755	1,220	1,980
28	2,390	1,660	1,990	1,300	1,180	1,320	2,220	1,800	1,980	710	1,190	2,010
29	2,390	1,650	1,800	*1,270	-	1,250	2,420	1,710	2,260	680	1,220	1,930
30	2,350	1,650	1,700	1,270	-	1,360	2,790	1,440	2,110	670	1,200	1,950
31	2,270	-	1,650	1,250	-	1,520	-	1,420	-	660	1,240	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	65,890	2,450	1,810	2,125	130,700
November	58,420	2,250	1,610	1,947	115,900
December	56,980	2,050	1,460	1,838	113,000
Calendar year 1946	747,942	7,080	630	2,049	1,484,000
January	40,530	1,470	1,120	1,307	80,390
February	39,470	1,920	1,160	1,410	78,290
March	43,740	1,740	1,130	1,411	86,760
April	50,210	2,790	1,280	1,674	99,590
May	110,750	6,010	1,420	3,573	219,700
June	107,300	6,320	1,740	3,577	212,800
July	27,367	1,860	660	883	54,280
August	36,122	1,510	650	1,165	71,650
September	51,720	2,570	1,130	1,724	102,600
Water year 1946-47	688,499	6,320	650	1,886	1,366,000

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 29 to Feb. 17.

Smaller Reservoirs in Henrys Fork Basin

Henrys Lake.- Staff gage, lat. 44°36', long. 111°21', at dam on Henrys Fork in SW¼ sec. 26, T. 15 N., R. 43 E., 4 miles south of former lake, Idaho, post office. Datum of gage is 6,457.16 feet above mean sea level (levels by Bureau of Reclamation). Drainage area, 104 square miles, including that of Dry Creek. Records available, June 1923 to September 1947 (fragmentary). Maximum contents observed during year, 83,184 acre-feet June 12 (gage height, 15.60 feet); minimum, 54,237 acre-feet Sept. 3 (gage height, 10.90 feet). Maximum contents observed during period 1923-47, that of June 12, 1947; minimum observed, 140 acre-feet Nov. 8, 1934,(gage height, 0.03 foot).

Reservoir is formed on natural lake by concrete dam; storage began Sept. 21, 1922; dam completed July 1923. Capacity, 79,351 acre-feet between gage heights 0.0 foot (normal low-water level of Henrys Lake prior to construction of dam) and 15.0 feet (top of 5-foot flashboards on spillway). Floodwaters of Dry Creek are diverted into Henrys Lake at times (none diverted during water year 1946-47). Water used for irrigation near St. Anthony. Gage read once or twice a week during period of storage withdrawal and occasionally during remainder of year. Records given herein represent usable contents. Gage-height record and capacity table furnished by North Fork Reservoir Co.

Grassy Lake.- Mercury pressure gage, lat. 44°08', long. 110°49', in gatehouse at dam on Grassy Creek, approximately in sec. 7, T. 48 N., R. 116 W. (unsurveyed), half a mile upstream from mouth and 94 miles northwest of Moran, Wyo. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Drainage area, 12 square miles, including basin of Cascade Creek, from which water is diverted into Grassy Lake. Records available, October 1939 to September 1947. Maximum contents observed during year, 15,384 acre-feet May 31 to June 2 (elevation, 7,210.65 feet); minimum observed, 12,056 acre-feet Oct. 13-25 (elevation, 7,199.55 feet). Maximum contents observed during period 1939-47, 15,446 acre-feet July 2, 1943 (elevation, 7,210.85 feet); no contents Oct. 2-5, 1940.

Reservoir is formed by earth-fill, rock-faced dam; storage began Oct. 18, 1939. Capacity, 15,182 acre-feet between elevations 7,195.0 feet (sill of trash rack) and 7,210.0 feet (crest of spillway) above mean sea level. Water is used for irrigation of lands in Fremont-Madison Irrigation district, Idaho. Gage read once daily about 7 a.m. Records given herein represent usable contents. Gage-height record and capacity table furnished by Bureau of Reclamation.

Monthly elevations or gage heights and contents, water year October 1946 to September 1947

Date	Henrys Lake			Grassy Lake		
	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet
Sept.30	-	a62,700	-	7,199.75	12,114	-
Oct. 31	-	a66,310	+3,610	-	a12,100	-14
Nov. 30	-	a70,290	+3,980	-	a12,250	+150
Dec. 31	14.22	74,436	+4,146	7,200.95	12,462	+212
Calendar year 1946	-	-	+4,236	-	-	-1,403
Jan. 31	-	a74,870	+434	7,201.25	12,549	+87
Feb. 28	-	a75,500	+630	7,201.60	12,651	+102
Mar. 31	-	a78,500	+3,000	-	a12,800	+149
Apr. 30	-	a81,100	+2,600	-	a12,985	+185
May 31	-	a82,600	+1,500	7,210.65	15,384	+2,399
June 30	-	a72,800	-9,800	7,210.25	15,260	-124
July 31	13.46	69,708	-3,092	7,210.05	15,198	-62
Aug. 31	-	a55,000	-14,708	7,209.85	15,136	-62
Sept.30	-	a55,600	+600	7,203.55	13,220	-1,916
Water year 1946-47	-	-	-7,100	-	-	+1,106

a No gage-height record; contents interpolated.

Diversions from Fall River above gaging station, near Squirrel, Idaho

Above Squirrel gaging station two canals divert water from Fall River for irrigation. Records available for part of each irrigation season from 1919 to 1947. Discharge of canals computed from daily or beweekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	70	160	250	97
2								0	70	180	252	97
3								0	60	190	233	97
4								0	50	190	209	97
5								0	50	190	181	96
6								0	50	195	179	96
7								0	50	195	177	96
8								0	50	199	180	96
9								0	50	203	182	96
10								0	50	238	185	97
11								0	50	236	183	73
12								0	50	236	156	71
13								0	50	225	156	71
14								0	50	233	152	71
15								0	50	222	137	71
16								0	80	237	129	70
17								0	90	245	134	69
18								0	100	243	133	69
19								0	110	245	129	69
20								0	120	251	129	0
21								50	120	246	127	0
22								50	120	257	128	0
23								55	121	290	108	0
24								60	121	319	108	0
25								60	125	258	107	0
26								60	130	257	103	0
27								65	135	259	103	0
28								70	140	222	101	0
29								72	140	262	103	0
30								72	150	253	101	0
31								72	-	251	97	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	686	72	0	22.1	1,360
June	2,602	150	50	86.7	5,160
July	7,227	319	160	233	14,330
August	4,652	252	97	150	9,230
September	1,599	97	0	53.3	3,170
The period	-	-	-	-	33,250

Fall River near Squirrel, Idaho

Location.- Staff gage, lat. 44°04', long. 111°15', in sec. 34, T. 9 N., R. 44 E., 4 miles northeast of Squirrel and 10 miles upstream from Conant Creek.

Drainage area.- 380 square miles.

Records available.- January 1904 to June 1909, May 1918 to September 1947. August 1902 to December 1903 at Wilson's sawmill, 3 miles upstream.

Average discharge.- 34 years (1904-8, 1917-47), 742 second-feet.

Extremes.- Maximum daily discharge during year, 3,500 second-feet June 10; minimum daily, 384 second-feet Feb. 26.
1904-9, 1917-47: Maximum discharge observed, 6,440 second-feet June 27, 1927; minimum observed, 72 second-feet Feb. 9, 1930.

Remarks.- Records good July to September and fair for other periods. Flow since October 1939 partly regulated by Grassy Lake (see p. 56). Two diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	500	530	505	425	445	403	465	1,330	2,750	1,000	588	588
2	664	515	500	435	445	403	455	1,560	2,580	950	579	570
3	585	546	495	445	450	403	455	2,350	2,450	942	622	588
4	560	546	*485	455	*450	403	455	2,900	2,320	942	657	570
5	546	546	515	470	442	403	455	2,830	2,100	942	657	570
6	538	538	508	478	440	403	460	2,780	2,000	940	639	554
7	530	530	505	*484	440	405	460	2,750	1,980	930	622	554
8	546	525	503	490	440	406	465	2,780	2,100	920	675	554
9	540	520	500	495	435	408	470	2,800	3,320	840	693	554
10	530	515	500	498	435	410	475	2,500	3,500	760	730	588
11	520	495	500	500	435	412	480	2,180	3,000	760	693	588
12	515	470	500	495	442	414	490	2,180	2,250	760	639	570
13	510	470	520	482	445	415	500	2,370	1,900	702	622	570
14	508	485	594	460	450	416	530	2,600	1,780	684	604	570
15	510	492	575	400	455	420	550	2,120	1,830	630	613	562
16	520	497	555	440	465	424	550	2,000	1,890	666	622	562
17	522	500	442	455	470	430	554	2,050	1,830	648	604	604
18	517	505	450	460	460	435	560	2,030	1,780	630	588	870
19	508	530	460	465	450	440	570	1,920	2,100	648	604	790
20	500	515	470	470	435	442	600	1,820	2,680	613	588	770
21	500	500	475	570	430	436	655	1,940	2,400	613	604	750
22	500	500	480	468	420	435	660	1,900	2,000	630	622	730
23	540	510	485	465	415	434	655	1,900	1,610	613	622	720
24	740	530	488	463	410	432	637	1,920	1,540	562	604	711
25	740	510	490	462	400	430	635	1,960	1,480	596	604	650
26	738	530	515	460	384	430	640	2,000	1,550	579	604	579
27	680	550	500	460	403	430	750	2,050	1,870	579	604	620
28	628	530	490	460	403	429	1,010	1,900	1,600	562	604	620
29	595	515	450	455	-	440	1,100	1,650	1,250	554	622	579
30	554	515	400	450	-	450	1,200	1,630	1,150	554	604	580
31	543	-	415	445	-	470	-	1,910	-	579	588	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	17,427	740	500	562	34,570
November	15,460	550	470	515	30,660
December	15,270	594	400	493	30,290
Calendar year 1946	277,637	2,700	400	761	550,700
January	14,360	500	400	463	28,480
February	12,194	470	384	436	24,190
March	13,111	470	403	423	26,000
April	17,941	1,200	455	598	35,590
May	66,610	2,900	1,330	2,149	132,100
June	62,590	3,500	1,150	2,086	124,100
July	22,328	1,000	554	720	44,290
August	19,321	730	579	623	38,320
September	18,685	870	554	623	37,060
Water year 1946-47	295,297	3,500	384	809	585,600

* Winter discharge measurement made on this day.

Note.- Gage read once daily July 8 to Sept. 19; discharge for other periods computed on basis of once-to thrice-weekly gage readings, 10 discharge measurements, and records for Fall River near Chester and Teton River near St. Anthony (stage-discharge relation affected by ice at times December to February).

Diversions from Fall River between Squirrel and Chester gaging stations, Idaho

Between Squirrel and Chester gaging stations eight canals divert water from Fall River for irrigation. Records available for part of each irrigation season from 1919 to 1947. Discharge of canals computed from daily or biweekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								57	651	598	492	391
2								56	616	599	476	389
3								55	570	587	478	396
4								53	560	612	469	244
5								51	544	625	463	392
6								50	530	642	465	377
7								48	515	658	468	432
8								392	510	665	448	441
9								470	505	631	450	437
10								493	502	606	425	461
11								518	491	592	420	385
12								517	485	578	422	359
13								524	473	552	457	328
14								503	458	531	443	419
15								396	497	528	458	418
16								392	542	543	456	420
17								387	572	531	451	409
18								442	579	520	446	367
19								482	591	514	444	361
20								435	565	517	446	305
21								484	605	511	451	224
22								594	622	429	445	224
23								604	649	450	445	224
24								615	680	445	446	224
25								624	707	440	443	224
26								640	739	497	435	223
27								662	782	491	429	220
28								664	752	487	410	218
29								669	720	443	411	216
30								678	689	456	408	216
31								693	-	465	409	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	13,248	693	48	427	26,280
June	17,681	782	458	589	35,070
July	16,743	685	429	540	33,210
August	13,809	492	408	445	27,390
September	9,944	461	216	331	19,720
The period	-	-	-	-	141,700

Fall River near Chester, Idaho

Location.- Water-stage recorder, lat. 44°01', long. 111°34', in sec. 13, T. 8 N., R. 41 E., half a mile upstream from mouth and 2 miles north of Chester. Altitude of gage, 5,060 feet (from river-profile map).

Drainage area.- 560 square miles.

Records available.- April 1920 to September 1947 (irrigation seasons only).

Extremes.- Maximum discharge during period May to September, 3,460 second-feet May 5 (gage height, 4.82 feet); minimum daily, 34 second-feet July 29.
1920-47: Maximum discharge, 6,380 second-feet June 27, 1927 (gage height, 6.60 feet); minimum, 9 second-feet Aug. 7, 1923.

Remarks.- Records excellent. Flow since October 1939 partly regulated by Grassy Lake (see p. 56). Station is below all diversions for irrigation from Fall River.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								1,760	2,550	529	123	238
2								2,040	2,370	460	146	234
3								2,780	2,300	412	172	230
4								3,170	2,060	390	204	278
5								3,200	1,810	298	226	238
6								2,970	1,730	226	219	211
7								2,760	1,710	204	201	193
8								2,530	1,740	183	242	203
9								2,600	2,610	159	278	208
10								2,300	3,150	134	290	223
11								2,110	2,280	117	370	257
12								2,110	1,810	132	261	274
13								2,130	1,590	137	211	290
14								2,420	1,530	120	201	249
15								2,130	1,580	101	201	204
16								1,970	1,540	88	215	204
17								1,990	1,510	71	208	238
18								1,950	1,460	60	208	440
19								1,760	1,340	59	208	508
20								1,700	1,670	54	208	508
21								1,730	1,950	47	219	508
22								1,680	1,380	78	230	529
23								1,650	1,080	110	230	543
24								1,560	950	123	230	543
25								1,560	855	117	230	454
26								1,640	770	43	242	454
27								1,810	910	36	234	543
28								1,780	1,120	35	230	494
29								1,320	802	34	261	481
30								1,170	643	a62	253	494
31								1,410	-	90	245	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	63,690	3,200	1,170	2,055	126,300
June	48,800	3,150	643	1,627	96,790
July	4,709	529	34	152	9,340
August	6,998	370	123	226	13,880
September	10,476	543	193	349	20,780
The period	-	-	-	-	267,100

a No gage-height record; discharge interpolated.

Teton River near Victor, Idaho

Location.- Water-stage recorder, lat. 43°33'50", long. 111°04'00", on line between secs. 19 and 30, T. 3 N., R. 46 E., 100 feet downstream from Moose Creek, 200 feet upstream from String Canal, and 3½ miles southeast of Victor.

Drainage area.- 47.6 square miles.

Records available.- May 1946 to September 1947.

Extremes.- Maximum discharge during year, 305 second-feet May 27; maximum gage height recorded, 1.94 feet Jan. 4 (ice jam); minimum discharge recorded, 22 second-feet Feb. 20 (gage height, -0.15 foot), but may have been less during periods of ice effect or no gage-height record.

1946-47: Maximum discharge observed, 310 second-feet June 6, 1946; maximum gage height recorded, that of Jan. 4, 1947; minimum discharge recorded, that of Feb. 20, 1947.

Remarks.- Records good except those for periods of ice effect or no gage-height record and those for June 20 to July 20, which are fair. No regulation or diversion above station.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-20)

-0.1	24	0.2	49	1.0	178
0	31	.4	75	1.3	241
.1	39	.7	123	1.6	315

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	51	44	39			30	36	86	246	168	90	59
2	56	43	39			31	36	108	255	172	90	57
3	51	44	39			31	36	155	258	176	87	60
4	50	44	39			31	36	188	241	170	86	57
5	50	44	40			30	35	198	226	163	84	57
6	49	43	41		35	30	34	215	226	159	80	57
7	49	43	41	38		31	34	223	230	159	84	57
8	50	42	40			31	34	253	248	155	82	57
9	49	41	39			32	34	288	272	150	82	57
10	48	42	39			32	34	265	246	145	86	59
11	47	41	39			32	34	258	232	141	80	57
12	49	40	39		*34	32	35	248	219	134	76	56
13	49	40	39		33	32	37	234	215	128	75	56
14	49	40	41		33	32	42	215	221	125	74	56
15	54	40	41		32	33	43	206	230	127	74	55
16	51	40	*40	34	32	33	44	206	239	127	72	55
17	50	39	35		31	*34	46	217	248	118	71	59
18	49	39	40		31	34	46	219	243	116	69	61
19	48	40	*45		31	33	47	213	251	114	68	56
20	48	40	40		32	34	48	204	275	111	68	55
21	50	40	37		32	34	48	213	239	108	71	54
22	51	40	39		32	35	47	221	228	106	71	54
23	53	41	41		32	35	46	217	215	106	68	53
24	49	40	40		32	35	46	221	206	101	65	53
25	50	39	40	36	31	34	48	234	217	98	64	53
26	50	40	42		30	34	51	258	215	93	62	53
27	50	40	41		30	34	60	295	221	92	62	54
28	49	39	37		30	34	71	280	198	90	62	53
29	48	39	35		-	35	62	246	184	88	62	54
30	46	39	33		-	36	80	232	174	90	61	53
31	46	-	35		-	36	-	241	-	90	60	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	1,539	56	46	49.6	1.04	1.20	3,050
November	1,226	44	39	40.9	.859	.96	2,430
December	1,215	45	33	39.2	.824	.95	2,410
Calendar year	-	-	-	-	-	-	-
January	1,134	-	-	36.6	.769	.89	2,250
February	923	-	30	33.0	.693	.72	1,830
March	1,020	36	30	32.9	.691	.80	2,020
April	1,330	80	34	44.3	.931	1.04	2,640
May	6,857	295	86	221	4.64	5.36	13,600
June	6,918	275	174	231	4.85	5.41	13,720
July	3,920	176	88	126	2.65	3.06	7,780
August	2,286	90	60	73.7	1.79	1.79	4,530
September	1,677	60	53	55.9	1.17	1.31	3,330
Water year 1946-47	30,045	295		82.3	1.73	23.49	59,590

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 3, Dec. 17-19, Dec. 29 to Jan. 5, Feb. 27 to Mar. 3. No gage-height record Dec. 20-22, Jan. 6 to Feb. 11; discharge computed on basis of weather records and records for Fall River near Squirrel and Teton River near Tetonia.

Teton River near Tetonia, Idaho

Location.- Water-stage recorder, lat. 43°51', long. 111°15', in sec. 15, T. 6 N., R. 44 E., 1¾ miles downstream from highway bridge, 4 miles downstream from Packsaddle Creek, and 6 miles northwest of Tetonia.

Drainage area.- 460 square miles.

Records available.- October 1929, March 1930 to September 1932, May to September 1934, July to September 1935, May to September 1940, July 1941 to September 1947. Additional records collected by Water District 36, State of Idaho, October and November 1932, July to September 1936, July to September 1937.

Extremes.- Maximum discharge during year, 1,330 second-feet June 10 (gage height, 2.43 feet); minimum daily, 150 second-feet Jan. 15.
1929-47: Maximum discharge observed, 1,900 second-feet June 28, 1945 (gage height, 2.97 feet); minimum observed, 62 second-feet Jan. 16, 17, 1943.

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	324	344	420	215	h175	h220	349	279	686	700	497	370
2	380	339	360	220	175	210	370	292	708	650	535	386
3	397	414	340	225	175	210	375	329	847	643	516	392
4	370	392	360	h230	175	205	359	386	800	686	510	386
5	354	375	400	240	175	205	319	437	693	708	497	364
6	354	360	460	240	180	200	301	588	664	678	484	354
7	359	345	h414	240	h180	200	296	671	629	664	478	349
8	375	330	380	240	180	h197	279	730	671	686	478	344
9	375	h319	350	240	180	210	274	808	1,090	708	466	344
10	364	300	330	235	180	240	266	872	1,300	730	503	359
11	354	285	350	h220	185	225	266	823	1,200	708	588	370
12	349	270	375	200	195	215	279	823	972	671	510	364
13	349	300	410	185	220	220	270	776	815	643	472	359
14	339	305	h443	165	245	230	266	708	730	615	448	349
15	344	300	350	150	h270	h246	266	568	671	615	437	349
16	375	h296	230	155	360	450	246	510	678	615	443	344
17	375	295	245	158	300	650	246	478	746	622	419	397
18	370	295	275	h160	270	610	238	472	888	595	408	484
19	364	430	310	165	255	550	234	497	888	588	402	425
20	344	440	285	170	245	525	234	460	1,020	574	414	386
21	339	430	h260	170	240	530	238	425	1,180	561	425	380
22	349	*419	270	175	h235	h516	246	413	963	561	431	370
23	392	h344	285	175	230	490	238	419	839	574	425	364
24	414	400	295	175	235	400	234	402	776	568	408	359
25	402	380	315	h175	*238	340	230	380	708	541	402	359
26	370	365	340	174	245	315	230	402	716	516	392	375
27	359	350	*314	*173	250	290	234	460	872	497	375	397
28	478	440	h283	174	250	300	250	561	1,040	484	375	380
29	466	460	210	175	-	314	270	516	847	478	375	380
30	392	h472	205	175	-	437	279	472	769	478	364	380
31	359	-	210	175	-	454	-	554	-	491	359	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	11,535	478	324	372	22,880
November	10,794	472	270	360	21,410
December	10,074	460	205	325	19,980
Calendar year 1946	149,574	872	200	410	296,700
January	5,969	240	150	193	11,840
February	6,243	360	175	223	12,380
March	10,404	650	197	336	20,640
April	8,182	375	230	273	16,230
May	16,511	872	279	533	32,750
June	25,406	1,300	629	847	50,390
July	18,848	730	478	608	37,380
August	13,836	588	359	446	27,440
September	11,219	484	344	374	22,250
Water year 1946-47	149,021	1,300	150	408	295,600

* Winter discharge measurement made on this day
h Computed from reading of auxiliary staff gage 1¼ miles above station.
Note.- No gage-height record Nov. 5 to Mar. 28 except weekly readings of auxiliary staff gage (stage-discharge relation affected by ice Dec. 21, Jan. 4 to Feb. 22); discharge computed on basis of available gage readings, 4 discharge measurements, weather records, and records for station near St. Anthony.

Teton River near St. Anthony, Idaho

Location.- Water-stage recorder, lat. 43°56', long. 111°37', in sec. 15, T. 7 N., R. 41 E., half a mile upstream from railroad bridge and 4 miles southeast of St. Anthony.

Drainage area.- 920 square miles.

Records available.- April 1903 to June 1909, April 1920 to September 1947.

Average discharge.- 20 years (1903-8, 1921-22, 1933-47), 751 second-feet.

Extremes.- Maximum discharge during year, 2,680 second-feet May 9 (gage height, 5.21 feet); minimum, 266 second-feet Dec. 30 (gage height, 1.75 feet).
1903-9, 1920-47: Maximum discharge, 7,820 second-feet June 5, 1909 (gage height, 6.90 feet, site and datum then in use); minimum, 88 second-feet Mar. 12, 1906 (gage height, 1.00 foot, site and datum then in use).

Remarks.- Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow affected by diversions from streams in Teton Basin, 20 miles upstream, and by flow diverted from Henrys Fork through Cross Cut Canal into Teton River (none diverted into river during 1947).

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	539	563	650	330	390	408	597	852	1,600	1,190	816	597
2	587	539	578	335	395	404	582	946	1,680	1,150	810	608
3	639	498	554	a345	400	391	597	1,400	1,760	1,190	810	613
4	613	526	516	a360	400	382	582	1,900	1,750	1,270	789	613
5	587	558	535	a375	405	378	539	2,110	1,530	1,280	789	592
6	578	554	582	a390	410	374	507	2,200	1,440	1,230	769	582
7	578	549	672	a390	410	369	498	2,330	1,420	1,200	756	563
8	582	539	597	390	410	369	480	2,360	1,470	1,220	769	563
9	587	539	544	390	400	386	466	2,570	2,080	1,230	756	563
10	582	530	512	390	400	435	462	2,410	2,600	1,210	762	573
11	563	521	494	390	410	498	462	2,130	2,490	1,170	873	587
12	558	489	507	365	420	458	476	2,060	2,040	1,120	873	592
13	558	471	526	345	440	444	480	1,980	1,690	1,070	750	587
14	554	526	549	325	480	476	489	1,930	1,600	1,030	725	573
15	549	516	694	310	503	558	512	1,680	1,540	998	706	563
16	573	521	535	320	521	782	512	1,560	1,530	1,010	706	568
17	597	507	417	330	573	909	512	1,570	1,570	1,010	689	578
18	582	503	444	350	535	852	516	1,550	1,680	983	666	661
19	563	516	444	360	480	880	516	1,530	1,680	969	666	719
20	544	602	471	375	435	803	526	1,410	1,880	954	672	650
21	539	613	448	390	426	769	558	1,330	2,080	917	666	613
22	549	597	417	405	404	789	558	1,340	1,700	909	683	602
23	582	573	426	405	399	762	535	1,320	1,470	902	678	592
24	623	661	430	405	408	712	516	1,260	1,360	895	666	587
25	592	628	440	405	*422	554	516	1,220	1,320	866	666	578
26	587	558	453	405	422	521	521	1,230	1,340	816	666	582
27	558	544	*489	390	430	503	568	1,350	1,550	796	655	608
28	623	592	444	390	391	489	666	1,490	1,730	769	639	608
29	683	634	374	*390	-	526	782	1,340	1,460	756	634	582
30	634	639	304	390	-	639	816	1,180	1,280	750	628	597
31	582	-	324	390	-	725	-	1,260	-	776	608	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	18,065	683	539	583	35,830
November	16,606	661	471	554	32,940
December	15,370	694	304	496	30,490
Calendar year 1946	294,732	2,270	304	807	584,600
January	11,530	405	310	372	22,870
February	12,119	573	390	433	24,040
March	17,545	909	369	566	34,800
April	16,347	816	462	545	32,420
May	50,778	2,570	852	1,638	100,700
June	50,320	2,600	1,280	1,677	99,810
July	31,636	1,280	750	1,021	62,750
August	22,341	873	608	721	44,310
September	17,894	719	563	596	35,490
Water year 1946-47	280,551	2,600	304	769	556,400

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records.
Note.- Stage-discharge relation affected by ice Dec. 31 to Jan. 2, Jan. 8 to Feb. 14.

Diversions from Teton River between St. Anthony gaging station and mouth, Idaho

Between St. Anthony gaging station and mouth 17 canals divert water from Teton River for irrigation. Records available for part of each irrigation season from 1919 to 1947. Discharge of canals computed from daily or biweekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

Discharge, in second-feet, water year October 1946 **to September** 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								336	740	1,040	863	551
2								342	719	1,043	851	560
3								369	766	1,037	846	586
4								400	827	1,030	848	605
5								440	745	1,037	839	597
6								474	754	1,101	749	613
7								534	727	1,100	747	567
8								612	612	1,151	737	567
9								679	589	1,179	751	568
10								687	564	1,193	783	585
11								687	544	1,164	807	595
12								693	557	1,115	792	579
13								693	577	1,126	709	575
14								710	635	1,084	700	517
15								726	715	1,065	699	520
16								752	790	1,007	685	515
17								782	927	1,046	667	513
18								813	997	997	658	531
19								834	1,066	1,017	608	485
20								839	1,100	1,032	631	326
21								857	1,130	1,035	620	262
22								882	1,093	1,009	625	259
23								914	1,118	976	631	259
24								941	1,191	968	622	259
25								1,012	1,284	969	630	259
26								1,096	1,233	930	637	253
27								1,143	1,275	901	624	253
28								1,041	1,152	795	608	248
29								881	1,097	806	588	248
30								860	1,049	787	512	248
31								812	-	831	583	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	22,841	1,143	336	737	45,300
June	26,573	1,284	544	886	52,710
July	31,571	1,193	787	1,018	62,620
August	21,750	863	583	702	43,140
September	13,503	613	248	450	26,780
The period	-	-	-	-	230,600

Teton Creek near Driggs, Idaho

Location.- Water-stage recorder, lat. 43°45'30", long. 110°58', 1½ miles upstream from Mill Creek, 1.6 miles west of Boy Scout camp, 4.2 miles east of Wyoming-Idaho State line, and 7½ miles northeast of Driggs.

Drainage area.- 33.8 square miles.

Records available.- June 1946 to September 1947.

Extremes.- Maximum discharge during year, 788 second-feet June 19, 20 (gage height, 3.47 feet); minimum not determined, occurred during period of no gage-height record.
1946-47: Maximum discharge, that of June 19, 20, 1947; minimum not determined, probably occurred during period of no gage-height record in winter.

Remarks.- Records good except those for Nov. 16 to Mar. 20, which are fair, and those for Mar. 21 to Apr. 12, which are poor. No diversion or regulation above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	23						101	453	252	142	30
2	37	22						178	416	371	142	29
3	32	20						353	410	509	130	32
4	31	22						484	365	526	118	30
5	30	22						523	317	502	100	29
6	28	22						530	314	498	95	28
7	28	22		11			18	554	356	568	114	27
8	28	22	17		10	9.0		586	470	540	109	26
9	27	21						624	544	576	95	25
10	25	20						530	416	484	109	27
11	24	20						488	326	460	101	25
12	25	19			(*)			422	252	419	79	25
13	24	19					23	347	248	383	71	23
14	24	19					23	284	314	353	64	22
15	25	19					28	245	395	329	61	22
16	25						30	265	478	353	58	20
17	25		(*)				31	338	558	323	57	22
18	24						31	365	554	299	51	28
19	23	19				*10	30	314	648	314	49	24
20	23						31	270	728	290	48	22
21	24		13				31	317	512	284	51	21
22	25			10	9.0		30	350	436	258	51	20
23	28	18					30	371	410	212	44	20
24	26						30	368	422	205	41	20
25	27					12	32	419	498	192	38	20
26	27						36	498	565	168	36	20
27	27						49	558	600	161	35	28
28	26	17					74	516	422	161	34	27
29	25				-		94	401	335	150	34	25
30	24		11		-	18	92	347	255	132	34	25
31	24	-			-		-	416	-	140	32	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	814	37	23	26.3	0.778	0.90	1,610
November	583	23	-	19.4	.574	.64	1,160
December	457	-	-	14.7	.435	.50	906
Calendar year	-	-	-	-	-	-	-
January	323	-	-	10.4	.308	.36	641
February	267	-	-	9.54	.282	.29	530
March	333	-	-	10.7	.317	.37	660
April	941	94	-	31.4	.929	1.04	1,870
May	12,362	624	101	399	11.8	13 60	25,520
June	13,017	728	248	434	12.8	14.32	26,820
July	10,412	576	132	336	9.94	11.46	20,650
August	2,223	142	32	71.7	2.12	2.45	4,410
September	742	32	20	24.7	.731	.82	1,470
Water year 1946-47	42,474	728	-	116	3.43	46 75	84,250

* Winter discharge measurement made on this day.

Note.- Fragmentary or no gage-height record Nov. 16 to Apr. 12 (stage-discharge relation affected by ice on scattered days); discharge computed on basis of fragmentary gage-height record, 3 discharge measurements, weather records, and records for nearby streams. No gage-height record Sept. 29, 30; discharge computed on basis of records for Teton River near Victor.

Horseshoe Creek near Driggs, Idaho

Location.- Water-stage recorder, lat. 43°44', long. 111°15'30", in sec. 27, T. 5 N., R. 44 E., at mouth of canyon, 90 feet upstream from bridge on old railroad grade, 4 miles upstream from mouth, and 7½ miles west of Driggs.

Drainage area.- 11.7 square miles.

Records available.- May 1946 to September 1947.

Extremes.- Maximum discharge during year, 60 second-feet June 9; maximum gage height, 3.23 feet May 3; minimum discharge, 0.7 second-foot Nov. 12, but may have been less during winter period; minimum gage height observed, 0.96 foot Feb. 11.
1946-47: Maximum discharge, that of June 9, 1947; maximum gage height, that of May 3, 1947; minimum discharge, that of Nov 12, 1946; minimum gage height observed, that of Feb. 11, 1947.

Remarks.- Records fair May to August, others poor. No diversion or regulation above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.5	b3.4	b3.4	b2.4			b5.0	32	30	19	6.9	4.0
2	6.8	b3.4	3.1	2.4			4.9	40	30	18	7.4	4.0
3	5.7	b3.6	b3.0	2.4			5.7	50	31	17	6.8	4.3
4	5.7	b3.6	3.2	2 4			5.7	52	29	17	6.6	4.0
5	5.5	b3.5	3.9		2.3		5.7	52	27	16	6.0	4.3
6	5.4	b3.5	5.8				5.5	52	27	16	5.8	4.0
7	5.5	b3.5	4.8				5.2	52	25	16	5.8	4.4
8	5.7	b3.4	4.0			2.2	b5.4	52	27	15	5.7	4.0
9	5.2	3.0	b3.8				5.5	51	46	15	5.2	4.0
10	5.0	3.1	b3.6				5.5	48	48	15	6.5	3.7
11	4.8	2.8	3.4		h2.3		5.5	47	42	14	6.0	3.9
12	4.9	2.7	3.2				5.8	45	38	13	5.2	3.9
13	4.6	b3.2	3.2		2.3		6.6	45	35	13	5.0	3.7
14	4.6	b3.0	b5.0				10	44	33	12	5.0	3.9
15	5.0	b2.9	b5.0				16	41	31	12	4.8	3.6
16	4.8	2.8	b3.6			3.5	16	40	30	12	4.4	3.5
17	4.3	2.8	b3.8	2.4		*h4.6	16	39	30	11	4.3	3.9
18	4.0	2.8	*b4.0			5.0	16	38	29	11	4.3	4.4
19	3.9	3.9	b4.2			5.0	17	36	27	10	4.3	3.7
20	3.9	4.2	b4.0			5.0	21	35	27	9.9	4.3	3.7
21	3.9	3.9	b3.0			5.5	20	34	26	9.5	4.4	3.6
22	4.2	3.6	b3.2		2.2	6.0	18	33	25	9.3	4.4	3.5
23	5.7	b3.8	3.5			5.0	16	31	24	8.6	4.3	3.4
24	4.6	b3.7	3.1			4.5	17	30	23	8.3	4.3	3.1
25	4.4	b3.6	3.4			4.0	16	30	22	7.8	4.2	3.2
26	4.2	3.6	b3.6			3.5	18	29	22	7.4	4.3	3.1
27	4.3	3.4	b3.4			3.5	22	30	24	6.9	4.2	3.6
28	4.4	3.5	2.6			3.4	26	29	21	6.8	4.0	3.2
29	3.9	3.6	b2.4		-	b3.3	31	27	21	6.6	4.2	3.6
30	3.6	3.7	b2.4		-	4.9	32	27	20	6.6	4.2	3.4
31	3.5	-	b2.4		-	5.7	-	31	-	6.9	4.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	147.5	6.8	3.5	4.76	0.407	0.47	293
November	101.5	4.2	2.7	3.38	.289	.32	201
December	111.0	5.8	2.4	3.58	.306	.35	220
Calendar year	-	-	-	-	-	-	-
January	74.4	-	-	2.40	.205	.24	148
February	63.1	-	-	2.25	.192	.20	125
March	105.4	6.0	-	3.40	.291	.34	209
April	400	32	4.9	13.3	1.14	1.27	793
May	1,222	52	27	39.4	3.37	3.88	2,420
June	870	48	20	29.0	2.48	2.77	1,730
July	366.6	19	6.6	11.8	1.01	1.17	727
August	157.4	7.4	4.0	5.08	.434	.50	312
September	112.6	4.4	3.1	3.75	.321	.36	223
Water year 1946-47	3,731.5	52	-	10.2	.872	11.87	7,400

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
h Computed from staff-gage reading.
Note.- No gage-height record Jan. 9 to Feb. 10, Feb. 12 to Mar. 16, Mar. 18-27 (stage-discharge relation affected by ice during most of periods); discharge computed on basis of weather records and records for other stations in Teton River Basin.

Packsaddle Creek near Tetonia, Idaho

Location.- Water-stage recorder, lat. 43°45'30", long. 111°18'30", in sec. 18, T. 5. N., R. 44 E., 0.9 mile upstream from North Fork and 8½ miles southwest of Tetonia.

Drainage area.- 5.7 square miles.

Records available.- June 1946 to September 1947.

Extremes.- Maximum discharge during year, 27 second-feet May 3, 4; maximum gage height, 1.78 feet Jan. 27 (ice jam); minimum discharge, 0.1 second-foot Jan. 22 (gage height, 0.36 foot), ice jam upstream.
1946-47: Maximum discharge, that of May 3, 4, 1947; maximum gage height, that of Jan. 27, 1947; minimum discharge, that of Jan. 22, 1947.

Remarks.- Records fair except those for periods of ice effect or no gage-height record, and those below 1.0 second-foot, which are poor. No diversion or regulation above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	b0.7	0.5	0.6		0.3	1.4	12	16	5.4	2.0	0.5
2	1.6	b.6	.5	.5		.2	1.4	15	16	5.0	1.9	.6
3	1.6	b.5	.5	.5		.2	1.3	21	16	4.8	1.6	.5
4	1.4	b.6	.5	.4		.3	1.2	23	14	4.6	1.6	.5
5	1.3	.8	.7	.4		.4	b1.2	23	14	4.4	1.8	.5
6	1.2	.8	.9	.4		.4	1.0	23	13	4.2	1.6	.5
7	1.2	.7	.7	.3	b0.3	.4	1.0	23	12	4.1	1.6	.5
8	1.2	.7		.3		.4	1.0	24	13	4.1	1.8	.5
9	1.2	.6		.2		.3	b1.0	23	20	3.9	1.6	.5
10	1.2	.7		.2		.3	b1.0	22	21	3.7	2.0	.6
11	1.0	.6	b.8	.4		.4	1.2	22	20	3.5	1.4	.6
12	1.0	.7		.2		.4	1.2	22	18	3.3	1.2	.5
13		.8				.4	1.4	23	17	3.2	1.2	.5
14		.5			.4	.4	2.2	22	15	3.0	1.2	.4
15	a1.0	.5	.9		*.4	.5	2.6	21	14	3.0	1.0	.4
16		.5			.4	.5	b3.0	21	13	3.0	1.0	.4
17		.5		b.3	.4	.7	3.3	21	13	2.8	1.0	.6
18		.5	(*)		.4	.9	3.5	20	12	2.8	.9	.8
19		.6			.4	.9	4.1	20	11	2.6	.9	.5
20	a.8	b.6	b.9		.4	*.9	5.2	20	10	2.8	.9	.5
21		b.6			.4	1.2	5.0	20	9.5	2.4	.9	.5
22		.7		.2	.3	1.4	4.4	20	8.8	2.6	1.0	.5
23		.8	.9	.2	.3	b1.4	4.2	19	8.1	2.2	.9	.5
24	a1.1	.5	.8	.3	.2	b1.3	4.4	19	7.4	2.4	.8	.5
25		.5	.8		.3	1.2	4.6	19	6.9	2.2	.7	.4
26	.9	.5	.8		.3	.9	5.0	19	6.7	2.0	.7	.6
27	1.0	.5	.7	b.3	.4	1.2	6.9	20	7.4	2.0	.7	.8
28	.9	.5	.7		.3	1.2	9.2	19	6.3	2.0	.7	.5
29	.8	.5	.7		-	1.2	10	18	5.9	1.9	.7	.5
30	.7	.5	.7		-	1.4	10	17	5.6	2.0	.6	.5
31	.7	-	.7		-	1.4	-	17	-	2.0	.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	32.0	1.6		1.03	0.181	0.21	63
November	17.9	.8	0.5	.60	.105	.12	36
December	23.9	-	.5	.77	.135	.16	47
Calendar year	-	-	-	-	-	-	-
January	9.9	.6	-	.32	.056	.06	20
February	9.2	-	-	.33	.058	.06	18
March	23.0	1.4	.2	.74	.130	.15	46
April	102.9	10	1.0	3.43	.602	.67	204
May	628	24	12	20.3	3.56	4.10	1,250
June	370.6	21	5.6	12.4	2.18	2.42	735
July	97.9	5.4	1.9	3.16	.554	.64	194
August	36.5	2.0	.6	1.18	.207	.24	72
September	15.7	.8	.4	.52	.091	.10	31
Water year 1946-47	1,367.5	24	.2	3.75	.658	8.93	2,720

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for other stations in Teton River Basin.
b Stage-discharge relation affected by ice.

Spring Creek near Tetonia, Idaho

Location.- Water-stage recorder, lat. 43°50'30", long. 111°07', in sec. 14, T. 6 N., R. 45 E., 10 feet downstream from source of creek at spring and 3 miles northeast of Tetonia.

Records available.- June 1946 to September 1947.

Extremes.- Maximum discharge recorded during year, 9.5 second-feet Mar. 19 (gage height, 0.77 foot), but may have been more during period of no gage-height record Mar. 16-18; minimum observed, 2.4 second-feet Feb. 23 (gage height, 0.45 foot), but may have been less during period of no gage-height record.
1946-47: Maximum discharge recorded, that of Mar. 19, 1947; minimum observed, that of Feb. 23, 1947.

Remarks.- Records fair except those for periods of no gage-height record, which are poor. One diversion above gage for irrigation. Approximately 150 acre-feet were diverted during year (3 in May, 15 in June, 15 in July, 65 in August, and 52 in September).

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	3.5	3.3	3.5	3.2	2.5	3.2	4.2	7.8	7.5	5.7	3.2
2	3.6	3.5	3.2	3.6	3.2	2.5	3.2	4.2	7.8	7.5	5.7	3.2
3	3.6	3.3	3.2	3.6	3.2	2.5	3.2	4.2	7.8	7.5	5.2	3.2
4	3.6	3.3	3.3	3.6	3.2	2.6	3.2	4.2	7.5	7.8	4.7	3.2
5	3.6	3.3	3.5	3.6	3.1	2.6	3.3	4.4	7.2	7.8	4.7	3.2
6	3.6	3.3	3.5	3.6	3.1	2.6	3.5	4.7	7.5	8.1	4.7	3.2
7	3.6	3.2	3.5	3.6	3.0	2.6	3.5	4.7	7.5	7.8	4.4	3.2
8	3.6	3.2	3.5	3.6	3.0	2.6	3.5	4.9	7.8	7.8	4.2	3.0
9	3.6	3.2	3.3	3.5	2.9	2.6	3.5	5.2	7.8	7.5	4.2	3.0
10	3.6	3.0	3.3	3.5	2.8	2.6	3.5	5.9	7.8	7.5	4.2	3.0
11	3.5	3.0	3.3	3.5	2.8	2.6	3.3	6.5	7.8	7.2	4.2	3.0
12	3.5	2.8	3.5	3.4	2.8	2.6	3.3	6.5	7.5	7.0	4.0	3.0
13	3.5	2.8	3.5	3.4	2.8	2.6	3.3	6.7	7.5	7.0	4.0	3.2
14	3.3	2.8	3.5	3.3	2.8	2.6	3.6	6.7	7.8	7.0	3.6	3.2
15	3.5	2.8	3.6	3.3	2.8	2.6	3.6	7.0	7.8	7.0	3.5	3.2
16	3.5	3.0	3.6	3.2	2.8	7.0	3.8	7.2	7.8	7.0	3.5	3.2
17	3.5	2.8	3.6	3.2	2.8	9.0	3.8	7.5	7.8	6.7	3.5	3.2
18	3.3	2.8	3.5	3.2	2.7	8.5	3.8	7.5	7.8	6.7	3.5	3.2
19	3.3	2.8	3.3	3.2	2.6	7.8	4.0	7.8	7.8	6.7	3.5	3.2
20	3.3	3.0	3.3	3.2	2.6	6.5	4.2	7.8	7.8	6.7	3.5	3.2
21	3.5	3.0	3.2	3.3	2.5	5.9	4.2	7.8	7.5	6.5	3.5	3.2
22	3.5	2.8	3.2	3.3	2.4	5.2	4.2	7.8	7.5	6.7	3.5	3.2
23	3.6	2.8	3.2	3.4	2.4	4.9	4.2	7.2	7.8	6.7	3.3	3.2
24	3.6	2.8	3.3	3.4	2.4	4.7	4.0	7.2	7.8	6.5	3.3	3.2
25	3.6	2.8	3.3	3.5	2.4	4.2	4.0	7.5	8.1	6.5	3.3	3.3
26	3.8	2.8	3.4	3.5	2.4	3.8	4.0	7.8	8.1	6.5	3.3	3.5
27	3.8	3.0	3.5	3.5	2.4	3.6	3.8	7.8	8.1	6.5	3.3	3.3
28	3.8	3.0	3.5	3.5	2.5	3.5	3.8	7.8	8.1	6.5	3.2	3.3
29	3.6	3.0	3.5	3.4	-	3.2	3.8	7.8	8.1	6.2	3.3	3.3
30	3.5	3.2	3.5	3.3	-	3.2	4.0	8.1	7.8	6.2	3.3	3.3
31	3.5	-	3.5	3.2	-	3.2	-	8.1	-	5.9	3.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	110.0	3.8	3.3	3.55	218
November	90.6	3.5	2.8	3.02	180
December	105.4	3.6	3.2	3.40	209
Calendar year	-	-	-	-	-
January	105.9	3.6	3.2	3.42	210
February	77.6	3.2	2.4	2.77	154
March	122.9	9.0	2.5	3.96	244
April	110.3	4.2	3.2	3.68	219
May	202.7	8.1	4.2	6.54	402
June	232.8	8.1	7.2	7.76	462
July	216.5	8.1	5.9	6.98	429
August	121.0	5.7	3.2	3.90	240
September	95.8	3.5	3.0	3.19	190
Water year 1946-47	1,591.5	9.0	2.4	4.36	3,160

Note.- No gage-height record for most of period Dec. 22 to Mar. 18; discharge interpolated, or computed on basis of staff-gage readings on Dec. 28, Jan. 5, 18, 26, Feb. 2, 11, 16, 23, Mar. 9, 15 and records for Teton River near Tetonia.

Blackfoot River near Blackfoot, Idaho

Location.- Water-stage recorder, lat. 43°08', long. 112°28', at east quarter corner of sec. 28, T. 3 S., R. 34 E., 2 miles upstream from mouth and 9 miles southwest of Blackfoot. Altitude of gage, 4,420 feet (river-profile survey).

Drainage area.- 1,100 square miles.

Records available.- July 1913 to September 1947.

Extremes.- Maximum discharge during year, 562 second-feet Apr. 22 (gage height, 5.55 feet); minimum, 1 second-foot July 4; minimum gage height, 1.02 feet May 26.
1913-47: Maximum discharge, 868 second-feet May 21, 1921; no flow on many days.

Remarks.- Records good except those for Jan. 1 to Feb. 24, which are poor. Flow regulated by Blackfoot Marsh Reservoir (capacity, 413,000 acre-feet). Many diversions above station for irrigation. Most of flow during nonirrigation season and part of that during irrigation season is supplied by waste from Snake River canals.

Cooperation.- Gage-height record furnished by Office of Indian Affairs.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53		352	190	110	130	208	273	30	21	12	9
2	106		349	185	110	136	227	137	57	5	66	5
3	176	a200	345	185	*108	118	231	50	77	2	74	3
4	236		339	180	115	123	224	31	54	2	104	3
5	278		339	180	125	140	220	30	64	5	207	4
6	261		350	*180	130	140	166	32	129	26	159	19
7	252		363	180	125	129	156	7	159	16	72	12
8	271	a250	371	180	125	123	136	3	84	11	34	12
9	332		380	h180	120	129	127	6	114	7	34	14
10	380		364	h180	120	136	120	58	211	27	72	19
11	374	260	332		115	208	131	194	414	42	221	32
12	342	280	308		115	261	163	138	363	43	418	33
13	291	300	298	160	120	244	150	88	253	44	299	29
14	234	299	282		130	232	144	38	134	33	57	24
15	205	190	289		135	251	153	43	53	16	46	40
16	205	442	235		145	278	176	35	39	8	43	40
17	201	367	213		155	318	149	39	29	15	25	52
18	198	356	250	140	*168	332	262	53	217	24	11	165
19	211	373	245		h175	304	274	57	267	25	7	249
20	225	378	244		h175	324	247	55	158	24	8	236
21	213	385	245		175	256	261	35	66	40	7	194
22	201	413	278		175	311	538	29	88	53	12	127
23	187	414	350	120	170	300	501	20	90	56	25	86
24	172	411	234		168	316	476	12	94	50	26	82
25	142	414	304		166	286	454	7	49	60	26	73
26	102	400	277		148	181	418	4	31	57	18	92
27	96	416	283		102	191	395	5	17	48	12	153
28	133	413	224		140	170	342	43	26	41	9	137
29	a140	366	197	110	-	159	261	23	40	21	6	131
30	a150	352	195		-	162	172	24	36	18	4	111
31	a160	-	190		-	183	-	28	-	10	4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	6,527	380	53	211	12,950
November	9,479	442	-	316	18,800
December	9,025	380	190	291	17,900
Calendar year 1946	85,144	590	9	233	168,900
January	4,580	190	-	148	9,080
February	3,865	175	102	138	7,670
March	6,571	332	118	212	13,030
April	7,482	538	120	249	14,840
May	1,597	273	3	51.5	3,170
June	3,443	414	17	115	6,830
July	850	60	2	27.4	1,690
August	2,118	418	4	68.3	4,200
September	2,186	249	3	72.9	4,340
Water year 1946-47	57,723	538	2	158	114,500

* Winter discharge measurement made on this day.
a No gage-height record; discharge estimated.
h Computed from reading of auxiliary staff gage 9 miles upstream.
Note.- Discharge for Jan. 1 to Feb. 24 computed on basis of 3 discharge measurements and occasional readings of auxiliary gage (stage-discharge relation affected by ice during much of period).

Portneuf River at Topaz, Idaho

Location.- Staff gage, lat. 42°38', long. 112°06', in sec. 23, T. 9 S., R. 37 E., at Oregon Short Line Railroad bridge, a quarter of a mile west of Topaz, 1¼ miles upstream from diversion dam of Portneuf-Marsh Valley Canal Co., and 6 miles southeast of McCammon.

Records available.- January 1913 to September 1915, July 1919 to September 1947

Average discharge.- 28 years (1913-14, 1919-22, 1923-47), 191 second-feet.

Extremes.- Maximum discharge observed during year, 307 second-feet May 12 (gage height, 1.98 feet); minimum observed, 130 second-feet Oct. 3; minimum gage height observed, 1.10 feet Jan. 3-6, 15.

1913-15, 1919-47: Maximum discharge observed, 902 second-feet Apr. 3, 1913 (gage height, 6.1 feet, site and datum then in use); minimum observed, 65 second-feet Oct. 9, 1934 (gage height, 0.81 foot).

Remarks.- Records good except those for periods of rapidly changing stage, which are fair. Gage read once daily. Flow regulated by Portneuf-Marsh Valley Canal Co.'s reservoir near Chesterfield. Many ranch diversions above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	140	196	188	151	151	168	188	253	174	225	198	182
2	140	196	188	151	149	170	192	253	178	231	198	178
3	130	196	184	140	149	170	192	257	178	233	198	178
4	149	188	184	140	149	170	196	267	206	237	198	147
5	155	184	182	140	149	170	200	275	198	239	206	142
6	155	180	200	140	155	172	200	271	204	239	194	143
7	160	180	200	143	155	172	196	271	204	229	190	159
8	164	180	204	147	155	172	192	279	208	212	182	166
9	162	176	200	149	151	176	188	290	212	214	200	166
10	162	176	196	153	151	200	186	294	220	214	204	166
11	a163	176	192	153	153	220	184	298	220	212	212	166
12	164	172	188	153	153	220	182	307	216	212	216	166
13	166	176	192	149	155	204	178	288	216	202	216	162
14	166	186	204	145	245	196	176	284	216	198	212	155
15	168	174	200	138	237	200	176	280	212	204	208	155
16	168	174	178	142	220	204	176	273	192	208	204	147
17	174	174	170	145	216	204	176	269	182	206	200	147
18	174	174	174	147	190	196	178	245	182	202	200	159
19	174	174	174	147	186	192	186	214	170	202	196	166
20	174	174	174	147	174	192	210	223	170	200	192	155
21	174	174	174	147	170	182	223	216	174	200	192	155
22	178	178	174	147	166	182	223	214	174	200	190	147
23	182	194	172	147	174	190	223	198	174	200	194	143
24	182	198	172	145	176	190	210	186	174	198	190	143
25	182	202	172	147	176	190	206	184	174	198	188	143
26	178	206	172	149	172	194	216	182	178	198	194	138
27	180	210	172	149	168	194	225	180	180	190	194	140
28	198	200	172	147	164	194	229	180	198	192	198	142
29	206	196	164	149	-	190	233	178	204	202	198	142
30	198	192	164	149	-	190	245	170	220	206	198	143
31	194	-	157	147	-	190	-	166	-	202	194	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,260	206	130	170	10,430
November	5,556	210	172	185	11,020
December	5,637	204	157	182	11,180
Calendar year 1946	89,714	861	130	246	177,900
January	4,543	153	138	147	9,010
February	4,809	245	149	172	9,540
March	5,854	220	168	189	11,610
April	5,985	245	176	200	11,870
May	7,445	307	166	240	14,770
June	5,808	220	170	194	11,520
July	6,505	239	190	210	12,900
August	6,154	216	182	199	12,210
September	4,641	182	138	155	9,210
Water year 1946-47	68,197	307	130	187	135,800

a No gage-height record; discharge interpolated.

Portneuf River at Pocatello, Idaho

Location.- Water-stage recorder, lat. 42°52', long. 112°28', in sec. 27, T. 6 S., R. 34 E., at highway bridge at foot of Carson Street, in west end of Pocatello.

Records available.- August 1911 to September 1947. May 1897 to October 1899 at site 1 mile upstream.

Average discharge.- 34 years (1912-16, 1917-47), 253 second-feet.

Extremes.- Maximum discharge during year, 554 second-feet Feb. 14 (gage height, 5.27 feet); minimum, 7 second-feet (regulated) June 3 (gage height, 1.60 feet).
1897-99, 1911-47: Maximum discharge, more than 2,000 second-feet sometime during period May 13 to June 14, 1917; minimum, 5 second-feet July 31, 1942, from rating curve extended below 40 second-feet.

Remarks.- Records good except those for period of ice effect, which are poor. Many diversions above station for irrigation. Flow regulated by storage reservoir near Chesterfield.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	373	373	306	293	344	380	380	44	55	50	100
2	142	354	367	304	335	348	369	352	44	62	53	101
3	151	337	365	300	327	356	369	354	37	51	47	101
4	166	333	361	300	322	360	400	363	34	44	42	80
5	172	333	365	300	335	365	416	363	39	42	50	75
6	188	333	382	300	356	356	416	358	44	26	57	74
7	204	337	*406	300	360	352	408	337	71	20	58	72
8	220	340	420	310	346	352	398	304	75	15	69	71
9	226	339	418	320	333	358	386	277	86	27	71	72
10	224	333	402	325	329	375	375	263	111	31	67	68
11	262	326	388	330	333	491	365	268	140	29	84	68
12	291	326	386	325	346	489	360	309	170	28	88	66
13	295	326	398	320	384	440	354	335	172	33	87	65
14	304	331	412	315	539	436	350	315	162	38	80	65
15	309	342	418	290	544	450	354	313	146	40	78	60
16	309	342	406	260	520	470	363	288	120	36	77	59
17	315	329	375	300	506	468	373	248	115	31	84	72
18	327	327	340	310	483	462	380	223	116	31	84	91
19	333	335	339	310	444	454	386	183	106	38	83	129
20	326	340	342	305	414	442	390	158	98	41	86	139
21	317	356	346	300	392	426	394	134	88	46	86	142
22	318	354	348	300	384	418	412	119	84	49	79	122
23	320	360	352	300	382	416	416	109	74	50	82	123
24	331	414	354	305	398	422	404	97	67	53	83	139
25	327	412	350	320	390	418	394	71	56	53	88	139
26	326	380	352	350	375	402	390	72	41	50	86	142
27	329	380	363	380	360	392	384	60	35	49	83	145
28	377	388	369	340	354	384	384	54	45	46	82	144
29	416	380	342	324	-	378	394	44	53	48	87	151
30	408	377	320	315	-	375	404	47	51	49	89	158
31	396	-	282	*291	-	378	-	41	-	47	93	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	8,754	416	125	282	17,360
November	10,537	414	326	351	20,900
December	11,441	420	282	369	22,690
Calendar year 1946	126,507	1,020	73	347	250,900
January	9,655	380	260	311	19,150
February	10,884	544	293	389	21,590
March	12,577	491	344	406	24,950
April	11,568	416	350	386	22,940
May	6,839	380	41	221	13,560
June	2,524	172	34	84.1	5,010
July	1,258	62	15	40.6	2,500
August	2,333	93	42	75.3	4,630
September	3,033	158	59	101	6,020
Water year 1946-47	91,403	544	15	250	181,300

* Winter discharge measurement made on this day
Note.- Stage-discharge relation affected by ice Jan. 3-28.

Birch Creek near Downey, Idaho

Location.- Staff gage and wooden control, lat. 42°21', long. 112°15', in SE¼ sec. 28, T. 12 S., R. 36 E., just downstream from point where flow that is diverted through Malad power plant re-enters stream, 8.6 miles southwest of Downey and 10 miles upstream from confluence with Marsh Creek.

Records available.- September 1937 to September 1947. October 1911 to August 1914 at site 1¼ miles upstream.

Average discharge.- 11 years (1911-12, 1937-47), 9.27 second-feet.

Extremes.- Maximum discharge observed during year, 20 second-feet May 6, 13 (gage height, 1.32 feet); minimum observed, 6.2 second-feet Mar. 7-14.

1911-14, 1937-47: Maximum discharge observed, 95 second-feet July 15, 1938, by velocity-area method on basis of floodmark at measuring section; minimum observed, 3.4 second-feet Dec. 24-27, 1913.

Remarks.- Records fair. Gage read twice daily. Malad power plant, which has a small reservoir above station, may cause slight diurnal fluctuations. Water is diverted from Birch Creek half a mile below station and carried by transmountain canal to Devil Creek in Bear River Basin.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.7	8.5	8.5	7.7	7.1	6.6	7.5	13	12	9.9	7.3	7.7
2	8.5	8.5	8.5	7.7	7.1	6.6	7.7	14	12	9.3	7.5	7.7
3	8.5	8.5	8.5	7.7	7.1	6.6	7.9	14	12	9.3	7.3	7.7
4	8.5	8.5	8.5	7.7	7.1	6.6	7.9	14	12	9.0	7.3	7.7
5	8.5	8.5	8.5	7.7	7.1	6.6	7.5	17	12	9.0	7.3	7.3
6	8.5	8.7	9.0	7.7	7.1	6.6	7.7	18	12	9.0	7.3	7.7
7	8.5	8.7	8.5	7.7	7.1	6.2	8.2	17	12	9.0	7.3	7.7
8	8.5	8.7	8.5	7.7	7.1	6.2	8.5	17	12	9.0	7.7	7.7
9	8.5	8.7	8.2	7.7	7.1	6.2	8.5	17	12	9.0	7.5	7.7
10	8.5	8.7	8.5	7.7	7.1	6.2	8.5	17	12	9.0	7.7	7.7
11	8.5	8.7	8.5	7.7	7.1	6.6	8.5	17	14	9.0	7.5	7.7
12	8.5	8.7	8.7	7.7	7.1	6.2	8.5	19	12	8.7	7.5	7.7
13	8.5	8.7	8.5	7.7	7.1	6.2	8.5	19	12	8.7	7.5	7.7
14	8.5	8.7	8.7	7.5	6.8	6.4	9.3	19	12	8.7	7.5	7.7
15	8.5	8.7	8.5	7.5	6.8	6.6	9.6	19	12	8.7	7.5	7.7
16	8.5	8.7	8.5	7.5	6.8	7.7	10	18	12	8.7	7.7	7.9
17	8.5	8.5	7.9	7.5	6.8	7.9	10	17	11	8.5	7.7	7.9
18	8.5	8.2	7.9	7.5	6.8	7.9	10	17	11	8.2	7.7	8.5
19	9.0	8.2	7.9	7.5	6.8	7.9	10	16	11	8.2	7.3	7.9
20	8.2	7.9	7.9	7.5	6.8	7.9	10	16	11	7.9	7.3	7.9
21	8.5	7.9	8.2	7.5	6.8	7.9	10	16	11	7.9	7.3	7.9
22	8.5	8.2	8.5	7.5	6.8	7.9	10	15	10	7.9	7.3	7.9
23	8.5	9.0	8.5	7.5	6.8	7.5	11	14	10	7.7	7.5	7.9
24	8.5	8.5	8.5	7.5	6.8	7.5	10	13	9.9	7.5	7.5	7.9
25	8.5	8.5	8.5	7.3	6.8	7.5	10	13	9.9	7.5	7.5	7.9
26	8.5	8.5	8.5	7.1	6.8	7.3	11	12	9.9	7.5	7.5	7.9
27	8.7	8.5	8.2	7.1	6.6	7.7	12	12	9.9	7.5	7.5	8.2
28	8.5	8.5	7.9	7.1	6.6	7.5	12	12	9.9	7.3	7.5	8.2
29	8.5	8.5	7.7	7.1	-	7.7	12	12	9.9	7.3	7.5	8.2
30	8.5	8.5	7.7	7.1	-	7.7	12	12	9.9	7.3	7.7	8.2
31	8.5	-	7.7	7.1	-	7.7	-	12	-	7.3	7.7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	264.1	9.0	8.2	8.52	524
November	255.6	9.0	7.9	8.52	507
December	258.1	9.0	7.7	8.33	512
Calendar year 1946	3,656.7	26	7.3	10.0	7,250
January	232.5	7.7	7.1	7.50	461
February	193.9	7.1	6.6	6.92	385
March	219.6	7.9	6.2	7.08	436
April	284.3	12	7.5	9.48	564
May	478	19	12	15.4	948
June	338.3	14	9.9	11.3	671
July	259.5	9.9	7.3	8.37	515
August	231.9	7.7	7.3	7.48	460
September	235.4	8.5	7.3	7.85	467
Water year 1946-47	3,251.2	19	6.2	8.91	6,450

Raft River at Peterson Ranch, near Bridge, Idaho

Location.- Water-stage recorder, lat. 113°27', long. 42°04', in sec. 5, T. 16 S., R. 26 E., 100 feet upstream from One Mile Creek, 400 feet downstream from road bridge, 7½ miles southwest of Bridge, and 16 miles south of Malta.

Records available.- September 1946 to September 1947.

Extremes.- Maximum discharge during period September 1946 to September 1947, 72 second-feet Feb. 14 (gage height, 2.01 feet); minimum, 2.4 second-feet Jan. 12 (gage height, 1.04 feet), caused by ice jam upstream.

Remarks.- Records good. Diversions above station for irrigation.

Discharge, in second-feet, 1946-47

1946

Day	Discharge	Day	Discharge	Day	Discharge
Sept.19	9.1	Sept.23	9.1	Sept.27	9.1
20	9.1	24	9.1	28	9.1
21	9.1	25	9.5	29	9.1
22	9.1	26	9.5	30	9.1

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	19	22	13	15	15	21	14	9.9	8.0	5.5	6.4
2	23	17	22	13	17	18	21	14	13	6.4	6.4	6.6
3	14	16	22	13	19	19	24	14	26	6.6	6.6	6.6
4	12	14	22	13	19	17	28	13	16	6.6	7.0	6.6
5	11	17	22	13	20	19	25	12	14	6.6	8.0	6.6
6	12	20	22	14	20	19	23	11	16	6.6	7.3	6.4
7	12	21	23	13	20	19	23	11	14	6.4	7.0	6.4
8	12	20	23	13	18	19	20	11	17	6.4	7.0	6.6
9	13	20	22	14	17	19	20	12	21	6.4	7.0	7.3
10	12	17	20	14	19	19	20	12	16	6.4	7.0	7.0
11	12	17	21	16	19	19	21	14	19	6.4	6.6	7.3
12	12	17	22	14	19	18	21	16	16	6.4	6.4	7.3
13	12	17	21	15	23	16	20	15	14	5.8	6.4	7.3
14	13	23	21	16	39	17	20	18	12	5.8	6.4	7.0
15	12	23	20	13	32	17	20	19	11	6.1	6.6	7.3
16	13	20	20	13	26	20	19	16	11	6.4	6.6	7.6
17	16	20	15	15	24	22	17	14	13	6.6	5.8	8.4
18	17	20	12	14	23	20	17	13	13	6.6	6.1	12
19	16	20	13	16	23	19	16	12	11	6.6	6.1	9.5
20	15	21	16	16	22	19	16	12	10	7.0	6.4	8.7
21	14	19	17	14	21	20	19	11	10	7.0	6.4	8.7
22	14	20	17	15	22	20	19	11	11	7.3	6.4	8.7
23	15	23	18	15	22	17	18	11	10	7.3	6.4	8.7
24	16	23	17	16	22	19	17	11	9.5	7.3	6.4	8.7
25	16	20	19	17	23	18	17	10	9.5	7.0	6.4	8.7
26	15	21	20	18	20	16	16	10	9.5	7.0	6.4	8.7
27	16	20	22	17	19	15	16	10	9.1	6.6	6.4	8.7
28	18	23	17	17	16	14	16	10	9.5	6.6	6.4	8.7
29	19	23	15	17	-	14	16	9.9	9.1	6.6	6.1	8.3
30	19	22	13	16	-	16	16	9.9	8.4	6.6	6.1	8.3
31	18	-	14	16	-	16	-	9.5	-	6.4	6.4	-

Monthly discharge, in second-feet, 1946-47

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
September 19-30, 1946	110.0	9.5	9.1	9.17	218
October 1946	455	23	11	14.7	902
November	593	23	14	19.8	1,180
December	590	23	12	19.0	1,170
Calendar year	-	-	-	-	-
January 1947	459	18	13	14.8	910
February	599	39	15	21.4	1,190
March	555	22	14	17.9	1,100
April	582	28	16	19.4	1,150
May	386.3	19	9.5	12.5	766
June	388.5	26	8.4	13.0	771
July	205.8	8.0	5.8	6.64	408
August	202 0	8.0	5.5	6.52	401
September	235.1	12	6.4	7.84	466
Water year 1946-47	5,250.7	39	5.5	14.4	10,410

Clear Creek near Naf, Idaho

Location.- Water-stage recorder, lat. 41°58'15", long. 113°17'15", in SW¼SW¼ sec. 1, T. 14 N., R. 13 W. Salt Lake meridian, 2 miles south of Utah-Idaho State line, 3 miles south of Naf post office, and 20 miles upstream from Raft River.

Drainage area.- 19 square miles.

Records available.- January 1910 to June 1911 (fragmentary), June to December 1912 (gage heights only), November 1944 to September 1947.

Extremes.- Maximum discharge during year, 80 second-feet May 7 (gage height, 2.14 feet); minimum, 0.4 second-foot Sept. 14, caused by irrigation diversion.
1910-11, 1944-47: Maximum discharge observed, 180 second-feet May 13, 1910; minimum observed, 0.3 second-foot July 21, 1910, Aug. 5, Sept. 14, 1946.

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	*1.8	1.8			b2.0	3.4	15	40	18	3.4	1.1
2	3.2	b1.7	1.8			3.7	3.4	22	41	18	3.7	.9
3	2.2	b1.7	1.6			3.4	4.0	36	41	18	3.7	.9
4	1.8	b1.8	1.8			3.2	3.4	52	38	17	4.3	1.0
5	1.6	2.0	2.0			3.0	3.2	61	37	16	4.3	1.1
6	1.6	1.8	*2.6			*2.9	3.4	55	35	15	3.2	1.1
7	1.4	1.8	2.2			2.4	3.4	70	34	14	2.9	1.0
8	1.4	1.8	2.0		*b1.7	1.8	3.2	70	41	13	2.4	1.3
9	1.3	1.6	1.8			1.6	3.2	67	40	12	3.2	1.3
10	1.3	b1.4	1.6	(*)		2.0	3.2	52	37	9.8	4.6	1.3
11	1.0	b1.5	1.8			1.8	3.4	43	37	6.9	3.2	1.3
12	1.1	b1.5	1.6			1.8	3.4	34	36	6.5	2.6	1.1
13	1.1	1.6	1.6			1.8	3.7	33	35	6.1	2.4	.9
14	1.1	2.2	1.6			1.8	4.0	33	37	5.7	2.2	.6
15	1.3	1.8	1.6	b1.4	2.2	2.0	5.4	32	40	7.3	2.0	1.0
16	1.6	b1.7	b1.5		2.2	2.2	6.5	34	38	9.2	1.1	.9
17	2.4	1.6	b1.3		2.2	2.6	7.3	36	41	8.2	1.8	1.6
18	2.2	1.6	b1.2		2.2	2.9	7.3	38	37	7.3	1.6	4.6
19	1.8	1.8	b1.3		2.0	3.2	6.9	41	36	6.5	1.4	3.2
20	1.8	b2.0	b1.4		b1.9	3.2	7.3	45	35	6.1	1.6	2.9
21	2.0	b1.8	1.4		b1.9	3.4	8.8	46	34	6.1	2.0	2.6
22	2.2	2.0	1.4		2.0	3.7	8.8	48	33	6.5	2.0	2.4
23	2.6	2.9	1.3		2.0	4.3	7.8	45	29	4.3	2.2	2.2
24	2.0	2.6	1.3		2.0	3.7	7.3	41	27	5.7	1.1	2.2
25	2.0	2.6	1.3		1.8	3.4	6.9	41	25	5.7	1.6	2.0
26	1.8	2.2	1.4		b1.6	2.9	6.9	46	25	5.0	1.4	2.0
27	2.4	2.4	1.4		b1.6	2.9	6.9	53	26	4.6	1.4	2.6
28	2.6	2.2	b1.3		b1.7	3.2	8.2	50	24	4.3	1.4	2.4
29	2.6	2.2	b1.1		-	3.2	10	42	22	4.3	1.4	2.6
30	2.0	2.2	b1.1		-	3.7	12	40	20	3.7	1.3	2.6
31	2.0	-	b1.1		-	3.7	-	38	-	2.4	1.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	57.6	3.2	1.0	1.86	114
November	57.8	2.9	1.4	1.93	115
December	48.2	2.6	1.1	1.55	96
Calendar year 1946	3,129.9	60	.6	8.58	6,200
January	43.4	-	-	1.4	86
February	51.1	2.2	-	1.82	101
March	87.4	4.3	1.6	2.82	173
April	172.6	12	3.2	5.75	342
May	1,359	70	15	43.8	2,700
June	1,021	41	20	34.0	2,030
July	273.2	18	2.4	8.81	542
August	72.7	4.6	1.1	2.35	144
September	52.7	4.6	.6	1.76	105
Water year 1946-47	3,296.7	70	.6	9.03	6,550

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice (no gage-height record Jan. 1-9, Jan. 11 to Feb. 7; discharge computed on basis of weather records).

North Side Minidoka Canal near Minidoka, Idaho

Location.- Water-stage recorder, lat. 42°40', long. 113°29', in sec. 1, T. 9 S., R. 25 E., 600 feet downstream from head gates at Minidoka Dam and 6 miles south of Minidoka.

Records available.- May 1909 to September 1947.

Extremes.- Maximum discharge during year, 1,740 second-feet July 3-5; maximum gage height, 9.93 feet July 3; no flow during winter.
1909-47: Maximum discharge, 1,780 second-feet July 11, 1943; maximum gage height, 10.00 feet May 7, 1943: no flow during winters.

Remarks.- Records excellent. Flow controlled by head gates. Canal diverts water from Snake River for irrigation of 64,000 acres of land under North Side Minidoka project.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	807						0	1,570	1,130	1,580	1,420	1,230
2	656						0	1,590	1,050	1,630	1,430	1,180
3	513						0	1,590	995	1,690	1,440	1,180
4	461						0	1,660	949	1,730	1,440	1,190
5	434						0	1,700	953	1,740	1,410	1,190
6	417						0	1,700	949	1,730	1,400	1,190
7	380						60	1,700	942	1,720	1,400	1,180
8	347						171	1,690	944	1,730	1,390	1,110
9	347						204	1,690	826	1,730	1,380	1,050
10	348						204	1,700	730	1,720	1,380	990
11	348						207	1,640	662	1,710	1,420	974
12	350						208	1,490	632	1,700	1,490	917
13	348						209	1,420	632	1,700	1,530	866
14	339						263	1,370	630	1,690	1,530	875
15	337						306	1,310	632	1,680	1,540	831
16	337						374	1,300	626	1,690	1,560	807
17	337						471	1,300	624	1,690	1,570	809
18	337						550	1,300	680	1,700	1,580	744
19	322						598	1,390	724	1,690	1,570	648
20	185						630	1,460	720	1,690	1,580	644
21	187						758	1,540	778	1,690	1,520	640
22	187						928	1,610	818	1,690	1,450	638
23	187						1,060	1,590	816	1,690	1,370	600
24	189						1,130	1,590	907	1,630	1,330	582
25	159						1,220	1,590	1,050	1,590	1,330	580
26	76						1,280	1,590	1,310	1,580	1,330	578
27	0						1,280	1,590	1,440	1,580	1,330	602
28	0						1,360	1,590	1,450	1,580	1,300	626
29	0						1,490	1,580	1,470	1,550	1,280	664
30	0						1,530	1,490	1,480	1,530	1,280	682
31	0						-	1,310	-	1,460	1,280	

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	8,935	807	0	288	17,720
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1946	220,888	1,690	0	605	438,100
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	16,491	1,530	0	550	32,710
May	47,640	1,700	1,300	1,537	94,490
June	27,549	1,480	624	918	54,640
July	51,510	1,740	1,460	1,662	102,170
August	44,260	1,580	1,280	1,428	87,790
September	25,797	1,230	578	860	51,170
Water year 1946-47	222,182	1,740	0	609	440,700

South Side Minidoka Canal near Minidoka, Idaho

Location.- Water-stage recorder, lat. 42°40', long. 113°29', in sec. 12, T. 9 S., R. 25 E., 300 yards downstream from head gates at Minidoka Dam and 6 miles south of Minidoka.

Records available.- April 1909 to September 1947.

Extremes.- Maximum discharge during year, 1,340 second-feet May 27 (gage height, 5.89 feet); maximum gage height, 6.05 feet Aug. 24; no flow during winter.
1909-47: Maximum discharge, 1,360 second-feet July 11, 1945; no flow during winters.

Remarks.- Records excellent. Flow controlled by head gates. Canal diverts water from Snake River for irrigation of 54,000 acres of land under South Side Minidoka project.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	547						0	1,290	1,100	1,300	1,270	1,210
2	306						0	1,310	1,030	1,320	1,270	1,220
3	253						0	1,310	889	1,320	1,270	1,230
4	229						0	1,310	712	1,320	1,240	1,250
5	218						0	1,320	728	1,190	1,110	1,260
6	216						0	1,330	736	1,320	1,070	1,260
7	212						0	1,320	736	1,310	1,160	1,260
8	200						0	1,320	605	1,310	1,180	1,240
9	199						0	1,320	426	1,300	1,190	1,190
10	196						0	1,320	353	1,300	1,260	1,190
11	196						0	1,200	352	1,310	1,290	1,110
12	198						0	878	248	1,310	1,280	1,090
13	196						66	801	0	1,310	1,300	1,040
14	192						204	733	0	1,310	1,290	989
15	190						267	612	0	1,310	1,270	916
16	190						308	704	157	1,310	1,270	869
17	190						315	757	472	1,300	1,270	798
18	190						322	760	469	1,300	1,270	524
19	67						301	807	469	1,300	1,260	461
20	0						288	886	469	1,290	1,250	458
21	0						295	964	465	1,290	1,220	437
22	0						313	1,160	463	1,290	1,070	412
23	0						381	1,280	555	1,280	1,180	412
24	0						447	1,320	686	1,280	1,260	424
25	0						574	1,330	992	1,280	1,240	450
26	0						697	1,330	1,130	1,280	1,250	480
27	0						776	1,330	1,190	1,280	1,270	503
28	0						925	1,300	1,220	1,290	1,250	538
29	0						1,080	1,300	1,220	1,280	1,240	557
30	0						1,170	1,290	1,260	1,250	1,220	557
31	0						-	1,200	-	1,250	1,210	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	4,185	547	0	135	8,300
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1946	166,714	1,300	0	457	330,700
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	8,729	1,170	0	291	17,310
May	35,092	1,330	612	1,132	69,600
June	19,132	1,260	0	638	37,950
July	40,090	1,320	1,190	1,293	79,520
August	38,180	1,300	1,070	1,232	76,730
September	25,335	1,260	412	844	50,250
Water year 1946-47	170,743	1,330	0	463	338,700

Goose Creek above Trapper Creek, near Oakley, Idaho

Location.- Water-stage recorder, lat. 42°07', long. 113°56', in sec. 13, T. 15 S., R. 21 E., 5 miles upstream from Trapper Creek and 10 miles south of Oakley.

Records available.- April 1911 to September 1916, March 1919 to September 1947.

Average discharge.- 24 years (1911-14, 1926-47), 40.9 second-feet.

Extremes.- Maximum discharge during year, 146 second-feet Feb. 15 (gage height, 3.01 feet); no flow Sept. 14.
1911-16, 1919-47: Maximum discharge, 1,670 second-feet Jan. 23 or Feb. 24, 1943 (gage height, 7.6 feet, from high-water mark), from rating curve extended above 600 second-feet by logarithmic plotting; no flow July 22 to Aug. 10, Aug. 22-30, 1934, Aug. 15 to Oct. 3, 1935, July 22 to Sept. 25, 1940, Sept. 14, 1947.

Remarks.- Records good except those for periods of ice effect, which are poor. Diversions above station for irrigation. Flow of artesian well, completed in 1935, enters below. Practically entire flow passing station is stored in Oakley Reservoir.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	26	33	20	20	39	61	72	31	16	3.0	1.5
2	29	24	32	20	22	43	61	76	32	14	2.8	1.2
3	27	21	31	20	22	44	65	74	31	11	3.4	1.0
4	22	20	31	18	22	43	70	74	31	9.6	5.8	.8
5	20	22	31	18	22	43	69	76	30	8.7	6.8	.6
6	18	25	*33	18	26	41	65	77	28	8.1	11	.9
7	18	27	34	18	26	39	68	73	25	6.2	7.2	.5
8	19	27	35	18	25	*40	66	68	27	5.8	5.5	.4
9	19	27	34	18	25	42	64	57	31	5.5	5.2	.4
10	18	22	33	18	25	44	63	61	31	5.2	4.8	.4
11	18	20	32	18	25	49	59	67	38	5.0	4.8	.4
12	17	19	32	17	70	50	56	73	39	5.0	4.4	.2
13	17	22	32	17	116	46	54	80	34	5.2	4.0	.2
14	17	27	33	17	114	45	53	81	31	4.6	3.4	.1
15	18	30	32	16	108	49	53	76	28	4.2	3.4	.2
16	18	27	31	15	87	57	55	67	26	4.2	3.6	.2
17	18	27	20	16	78	63	62	64	24	4.0	4.0	1.4
18	22	29	20	17	61	66	64	57	23	3.8	3.8	3.8
19	23	29	22	18	52	69	73	52	22	3.4	3.6	6.8
20	23	33	25	19	47	68	77	43	20	3.2	3.6	5.8
21	22	28	25	19	45	67	81	37	20	3.6	3.0	6.5
22	22	31	25	19	44	67	86	36	20	6.2	2.8	6.5
23	23	31	25	19	45	67	86	35	19	6.8	3.0	6.5
24	24	33	25	20	49	69	84	34	18	6.8	2.8	6.5
25	24	31	25	20	51	67	81	32	17	6.2	3.2	6.8
26	24	31	25	21	48	63	76	32	15	5.2	2.8	7.0
27	24	33	25	21	46	60	72	32	15	4.6	2.6	6.5
28	25	35	23	21	44	58	69	32	17	4.2	2.2	6.5
29	27	34	22	19	-	57	65	31	18	3.8	1.8	6.8
30	28	34	20	*18	-	58	67	30	18	3.4	1.6	7.0
31	27	-	20	18	-	60	-	31	-	3.0	1.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	665	29	14	21.5	1,320
November	825	35	19	27.5	1,640
December	866	35	20	27.9	1,720
Calendar year 1946	20,364.4	326	6.2	55.8	40,400
January	571	21	15	18.4	1,130
February	1,365	116	20	48.8	2,710
March	1,673	69	39	54.0	3,320
April	2,025	86	53	67.5	4,020
May	1,730	81	30	55.8	3,430
June	759	39	15	25.3	1,510
July	186.5	16	3.0	6.02	370
August	121.7	11	1.6	3.93	241
September	93.4	7.0	.1	3.11	185
Water year 1946-47	10,880.6	116	.1	29.8	21,600

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 4-6, 11-14, Dec. 17, 18, Dec. 20 to Feb. 12.

Oakley Reservoir near Oakley, Idaho

Location.- Staff gage, lat. 42°12', long. 113°55', in sec. 19, T. 14 S., R. 22 E., just upstream from right abutment of dam on Goose Creek, 4 miles southwest of Oakley.

Records available.- October 1912 to September 1947.

Extremes.- Maximum contents observed during year, 27,800 acre-feet May 4 (gage height, 84.0 feet); minimum observed, 1,740 acre-feet Sept. 28 (gage height, 21.9 feet).
1912-47: Maximum contents observed, 74,600 acre-feet June 15, 1921 (gage height, 136.2 feet); reservoir drained at close of seasons in 1915, 1919, 1920, 1926, 1933.

Remarks.- Reservoir is formed by earth dam constructed in 1911-13; storage began in 1911. Capacity, 74,350 acre-feet between gage heights 0.0 foot (bottom of diversion tunnel) and 136.0 feet (crest of spillway). Dead storage negligible. Water is used for irrigation of lands along Goose Creek in Oakley Canal Co. project. Figures given herein represent usable contents. Gage read occasionally and contents shown on days observations were made.

Cooperation.- Gage readings and capacity table furnished by Oakley Canal Co.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	14,200	16,500	18,000	21,200	-	-	22,000	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	12,300	-	-	-	-	-	-	-	-	10,900	-
4	-	-	-	-	-	-	-	27,800	-	-	-	5,480
5	10,300	-	-	16,700	-	-	-	-	-	-	-	-
6	-	-	14,600	-	-	-	25,200	-	-	19,700	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	21,700	-	-	21,400	-	-	-
9	-	-	-	-	18,600	-	-	-	-	-	-	-
10	10,700	12,700	-	16,900	-	-	-	-	-	-	10,200	-
11	-	-	-	-	-	-	26,000	25,100	-	17,600	9,980	-
12	-	-	-	-	-	22,000	-	-	-	-	-	3,960
13	-	-	-	-	-	-	-	-	-	16,900	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	11,000	13,000	15,400	17,100	19,600	-	26,400	24,800	22,000	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	11,200	-	-	-	-	-	-	24,600	-	-	-	-
19	-	-	-	-	-	-	-	-	-	14,600	8,590	-
20	-	-	-	17,300	-	-	27,000	-	-	14,100	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	15,800	-	-	-	-	-	22,100	-	-	-
23	-	-	-	-	20,600	23,400	-	-	-	-	-	2,900
24	-	13,700		-	-	-	27,400	-	21,600	-	-	-
25	11,500	-	-	-	-	-	-	24,600	-	-	-	-
26	-	-	-	17,600	-	-	-	23,700	-	-	7,150	-
27	-	-	-	-	-	-	27,600	-	-	12,500	-	-
28	-	-	-	-	-	-	-	-	-	-	-	1,740
29	-	-	-	17,900	-	-	27,700	-	21,300	-	7,220	-
30	-	-	-	17,900	-	-	-	-	-	-	-	1,810
31	11,900	-	-	-	-	24,300	-	-	-	-	-	-

Trapper Creek near Oakley, Idaho

Location.- Water-stage recorder and concrete control, lat. 42°10', long. 113°59', in sec. 34, T. 14 S., R. 21 E., 4 miles upstream from Oakley Dam and 7 miles southwest of Oakley.

Records available.- May 1911 to September 1916, March 1919 to September 1947.

Average discharge.- 23 years (1911-12, 1913-14, 1926-47), 13.6 second-feet.

Extremes.- Maximum discharge during year, 25 second-feet May 11 (gage height, 5.09 feet); minimum, 7.0 second-feet Sept. 3, 5 (gage height, 4.75 feet).
1911-16, 1919-47: Maximum discharge recorded, 270 second-feet Aug. 17, 1941 (gage height, 6.99 feet), during cloudburst, from rating curve extended above 100 second-feet on basis of velocity-area studies and flow over weir (a higher flow may have occurred during cloudburst about 12 p.m. Aug. 15, 1931); minimum not determined, probably occurred during winter.

Remarks.- Records good except those for periods of no gage-height record, which are fair. A few small diversions above station. Flow of artesian well, completed in 1936, enters above. Practically entire flow passing station is stored in Oakley Reservoir.

Cooperation.- Gage-height record furnished by Oakley Canal Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	11	12	10	12	12	16	19	16	10	8.0	8.0
2	12	10	12	10	12	12	16	19	17	10	8.5	7.6
3	11	10	12	10	12	12	17	20	17	9.5	8.5	8.0
4	11	10	12	10	12	12	16	20	17	10	10	8.0
5	11	11	12	10	12	12	15	20	15	10	10	7.6
6	11	11	h12	10	12	12	16	20	15	10	8.0	8.0
7	11	12	12	10	12	12	15	21	15	10	7.6	8.5
8	12	12	12	10	12	12	16	21	15	9.5	7.6	9.0
9	11	12	12	10	12	12	16	22	15	10	8.0	8.5
10	10	11	12	10	12	14	15	23	14	9.5	8.0	9.0
11	10	10	12	9.5	13	14	15	24	17	9.5	8.0	8.5
12	10	10	12	9.5	14	12	14	24	15	9.5	8.0	8.5
13	10	11	12	9.5	15	12	15	23	14	9.0	8.0	8.0
14	10	12	12	9.5	14	12	15	22	13	9.0	8.0	8.5
15	10	12	12	9.0	14	14	16	20	12	10	8.5	9.0
16	11	12	12	9.0	14	14	17	19	12	10	8.5	8.5
17	11	12	11	9.0	14	15	18	17	12	10	8.0	10
18	11	12	11	9.5	13	14	18	17	12	9.0	8.0	11
19	11	12	11	9.5	12	15	18	17	12	9.0	8.0	11
20	10	12	11	9.5	12	15	18	16	12	8.5	9.0	10
21	10	12	11	10	12	15	19	15	12	8.5	9.0	10
22	10	12	11	10	12	15	19	15	12	8.5	8.5	10
23	11	12	11	10	12	15	18	16	12	8.5	9.0	9.5
24	11	12	11	10	12	15	18	16	12	8.5	8.5	10
25	11	12	11	10	12	14	18	16	12	8.0	8.0	9.5
26	11	12	11	11	12	14	17	16	12	8.0	8.0	9.5
27	11	12	11	11	12	14	17	15	12	8.0	8.0	9.5
28	12	12	11	11	12	14	17	15	12	7.6	8.0	8.5
29	12	12	10	11	-	14	18	15	12	7.6	7.6	8.5
30	11	12	10	11	-	15	18	15	12	7.6	8.0	8.5
31	11	-	10	11	-	17	-	16	-	7.6	8.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	337	12	10	10.9	668
November	345	12	10	11.5	684
December	354	12	10	11.4	702
Calendar year 1946	6,353.0	57	9.5	17.4	12,590
January	309.5	11	9.0	9.98	614
February	351	15	12	12.5	696
March	421	17	12	13.6	835
April	501	19	14	16.7	994
May	574	24	15	18.5	1,140
June	407	17	12	13.6	807
July	280.4	10	7.6	9.05	556
August	256.8	10	7.6	8.28	509
September	268.7	11	7.6	8.96	533
Water year 1946-47	4,405.4	24	7.6	12.1	8,740

h Computed from staff-gage reading.

Note.- No gage-height record Oct. 4, 5, Nov. 2 to Dec. 5, Dec. 7 to Jan. 28, June 16-23; discharge computed on basis of records for Goose Creek above Trapper Creek, near Oakley, and Rock Creek near Rock Creek.

P. A. lateral near Milner, Idaho

Location.- Staff gage, lat. 42°32', long. 114°01', in sec. 22, T. 10 S., R. 21 E., 600 feet downstream from pumping station and 2½ miles northeast of Milner

Records available.- April 1919 to September 1947. Records collected by North Side Canal Co. 1916 to 1918.

Extremes.- Maximum discharge during year, 62 second-feet on many days; no flow at times. 1919-47: Maximum discharge, 64 second-feet May 11-13, 1920, July 11, 12, 19-29, 1932; no flow at times.

Remarks.- Records excellent. Gage read twice daily. Flow regulated by pumping plant which lifts water from Snake River for irrigation on North Side Twin Falls tract.

Cooperation.- Gage-height record and one discharge measurement furnished by North Side Canal Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0					0	60	0	62	61	60
2		0					0	60	58	62	60	60
3		0					0	60	58	62	61	60
4		0					0	60	60	62	60	60
5		0					0	60	60	62	60	60
6		0					0	60	60	62	60	60
7		0					0	60	60	62	60	60
8		0					0	60	60	62	60	60
9		0					0	60	60	62	60	60
10		0					0	60	60	62	60	60
11		0					0	60	55	62	60	60
12		0					0	60	55	60	60	60
13		0					0	60	53	62	60	60
14		0					0	60	54	62	60	60
15		0					0	60	54	61	60	60
16		0					0	61	54	61	60	60
17		0					0	61	54	61	60	60
18		0					0	61	54	61	60	60
19		5					0	61	55	60	60	60
20		20					0	61	51	61	60	43
21		5					0	61	53	60	60	43
22		0					0	61	53	60	60	52
23		0					0	61	57	60	60	52
24		0					0	61	59	60	60	50
25		0					0	61	62	60	60	23
26		0					16	61	62	59	60	0
27		0					16	61	62	60	60	0
28		0					30	61	62	60	60	0
29		0					42	61	62	62	60	0
30		0					58	61	62	62	60	0
31		-					-	61	-	61	60	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	30	20	0	1.0	60
December	0	0	0	0	0
Calendar year 1946	8,973	62	0	24.6	17,800
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	162	58	0	5.4	321
May	1,876	61	60	60.5	3,720
June	1,669	62	0	55.6	3,310
July	1,895	62	59	61.1	3,760
August	1,862	61	60	60.1	3,690
September	1,403	60	0	46.8	2,780
Water year 1946-47	8,897	62	0	24.4	17,640

Milner low-lift canal near Milner, Idaho

Location.- Pumping plant, lat. 42°31', long. 114°01', in sec. 32, T. 10 S., R. 21 E., at head of canal and 1½ miles south of Milner.

Records available.- June 1921 to September 1947.

Extremes.- Maximum discharge during year, 200 second-feet July 4, 5; no flow on many days. 1921-47: Maximum discharge, 203 second-feet Aug. 26, 27, 1945; no flow on many days.

Remarks.- Records excellent. Flow controlled by pumping plant which lifts water from Snake River above Milner Dam for irrigation of 9,000 acres of land in Milner low-lift irrigation district.

Cooperation.- Record of pump discharges furnished by Milner low-lift irrigation district.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	182	0	175	197	199
2							0	182	0	178	197	199
3							0	182	0	192	197	199
4							0	180	0	200	198	185
5							0	179	0	200	198	175
6							0	178	0	199	198	175
7							0	177	0	199	199	175
8							0	176	0	198	199	175
9							0	175	0	198	199	175
10							0	174	48	197	199	175
11							0	173	25	197	199	175
12							0	173	50	197	199	175
13							0	173	50	197	199	175
14							0	173	50	197	199	175
15							0	173	76	197	199	175
16							0	173	100	197	199	172
17							0	173	100	198	199	163
18							0	173	116	198	199	148
19							0	173	131	199	199	148
20							0	173	131	199	199	148
21							0	173	131	199	199	123
22							46	173	131	199	199	116
23							82	173	131	199	199	93
24							94	173	144	199	199	83
25							97	173	163	199	199	83
26							121	173	174	198	199	83
27							140	171	174	198	199	83
28							153	148	174	198	199	83
29							177	136	174	197	199	83
30							182	113	176	197	199	83
31							-	159	-	197	199	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1946	27,036	200	0	74.1	53,620
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	1,092	182	0	36.4	2,170
May	5,280	182	113	170	10,470
June	2,449	176	0	81.6	4,860
July	6,092	200	175	197	12,080
August	6,160	199	197	199	12,220
September	4,399	199	83	147	8,720
Water year 1946-47	25,472	200	0	69.8	50,520

Gooding Canal at Milner, Idaho

Location.- Water-stage recorder on Milner-Gooding Canal in NW¼ sec. 18, staff gage in diversion canal in sec. 19, T. 10 S., R. 21 E., and differential recorder on control gates of North Side Canal Co. diversion in NE¼ sec. 13, T. 10 S., R. 20 E., about 3 miles downstream from head gates that are in sec. 28, T. 10 S., R. 21 E., lat. 42°31', long. 114°01'

Records available.- May 1930 to September 1947.

Extremes.- Maximum daily discharge during year, 2,520 second-feet July 21; no flow on many days.
1930-47: Maximum daily discharge, 2,580 second-feet July 31, Aug. 1, 2, 1942, July 31, Aug. 1, 3, 4, 1943; no flow on many days.

Remarks.- Records good. Gooding Canal diverts water from Snake River for Milner-Gooding project of Bureau of Reclamation and in part for project of North Side Canal Co. The latter project also receives water through North Side Twin Falls Canal and P. A. lateral. Discharge of canal is computed by combining the discharge of Milner-Gooding diversion and that of North Side Canal Co. diversions below their division point, and adding from 20 to 60 second-feet to that sum for loss between head gates and division point.

Cooperation.- Gage-height record furnished by North Side Canal Co. and American Fall Reservoir District No. 2.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	600				0	650	1,960	2,170	2,270	2,480	2,140
2	0	610				0	650	2,070	2,160	2,250	2,500	2,130
3	0	620				0	650	2,140	2,160	2,250	2,510	2,110
4	0	590				0	630	2,160	2,150	2,310	2,500	2,110
5	0	380				0	310	2,180	2,160	2,370	2,510	2,100
6	0	120				0	70	2,210	2,150	2,370	2,470	2,120
7	0	70				0	69	2,210	2,150	2,370	2,410	2,120
8	0	0				0	9	2,180	2,150	2,350	2,390	2,130
9	0	0				0	8	2,170	2,080	2,380	2,390	2,110
10	0	0				0	3	2,190	2,130	2,410	2,390	2,070
11	0	0				0	1	2,200	2,040	2,350	2,410	2,090
12	350	0				0	0	2,190	1,960	2,340	2,330	2,090
13	580	0				0	0	2,210	1,970	2,400	2,220	2,070
14	630	0				0	0	2,240	1,950	2,410	2,210	2,060
15	690	0				0	380	2,320	1,950	2,420	2,190	2,020
16	610	0				0	1,000	2,330	1,960	2,440	2,170	2,020
17	560	0				0	1,160	2,320	1,980	2,490	2,180	1,990
18	580	0				0	1,210	2,330	1,980	2,480	2,180	1,960
19	620	0				0	1,340	2,310	2,070	2,470	2,190	1,950
20	610	0				100	1,370	2,330	2,160	2,480	2,180	1,880
21	590	0				150	1,410	2,310	2,190	2,520	2,150	1,840
22	560	0				130	1,470	2,310	2,180	2,500	2,150	1,830
23	560	0				80	1,590	2,310	2,160	2,480	2,180	1,820
24	590	0				120	1,690	2,280	2,200	2,470	2,160	1,790
25	590	0				140	1,660	2,270	2,260	2,470	2,170	1,760
26	590	0				230	1,670	2,220	2,260	2,480	2,150	1,750
27	610	0				470	1,720	2,250	2,290	2,500	2,140	1,760
28	600	0				630	1,780	2,220	2,260	2,480	2,120	1,770
29	590	0				650	1,870	2,180	2,290	2,480	2,120	840
30	590	0				650	1,910	2,180	2,300	2,490	2,120	0
31	600	-				650	-	2,170	-	2,490	2,120	-

Month	Second-foot-days	Discharge in second-feet			Total runoff in acre-feet	Distribution (acre-feet)	
		Maximum	Minimum	Mean		To Milner-Gooding project	To North Side Canal Co. project
October	11,700	690	0	377	23,210	0	23,210
November	2,990	620	0	99.7	5,930	0	5,930
December	0	0	0	0	0	0	0
Calendar year 1946	374,169	2,480	0	1,025	742,150	409,750	332,400
January	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0
March	4,000	650	0	129	7,930	2,080	5,850
April	26,280	1,910	0	876	52,130	27,510	24,610
May	68,950	2,330	1,960	2,224	136,760	78,780	57,980
June	63,870	2,300	1,950	2,129	126,690	71,070	55,620
July	74,970	2,520	2,250	2,418	148,700	87,950	60,750
August	70,390	2,510	2,120	2,271	139,620	77,890	61,730
September	56,430	2,140	0	1,881	111,930	59,270	52,660
Water year 1946-47	379,580	2,520	0	1,040	752,900	404,550	348,340

North Side Twin Falls Canal at Milner, Idaho

Location.- Water-stage recorder, lat. 42°32', long. 114°01', in sec. 20, T. 10 S., R. 21 E., half a mile north of Milner and three-quarters of a mile downstream from head gates at Milner Dam.

Records available.- May 1909 to September 1947.

Extremes.- Maximum discharge during year, 2,850 second-feet July 10; no flow on many days. 1909-47: Maximum daily discharge, 3,200 second-feet July 5-7, 29-31, 1921, May 15, 1928, June 2, July 23, 1929; no flow at times when head gates were closed.

Remarks.- Records excellent April to September and good October to March. Flow controlled by head gates. Water diverted by this canal and by P. A. lateral and part of that diverted by Gooding Canal, all at Milner, is used for irrigation of 163,000 acres of land under North Side Canal Co. system. Diversions began in spring of 1909.

Cooperation.- Gage-height record furnished by North Side Canal Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	923	0	509	480	404	436	0	2,220	2,370	2,320	2,660	2,500
2	886	0	503	480	404	433	0	2,240	2,290	2,390	2,660	2,480
3	832	0	497	480	401	433	0	2,260	2,270	2,440	2,680	2,450
4	767	0	500	480	404	469	0	2,360	2,180	2,480	2,680	2,440
5	752	0	503	480	404	488	366	2,450	2,040	2,540	2,650	2,380
6	734	0	509	470	404	469	585	2,470	1,970	2,580	2,600	2,340
7	696	224	512	470	404	507	626	2,470	1,880	2,620	2,600	2,280
8	651	534	515	460	404	605	626	2,440	1,390	2,620	2,580	2,240
9	614	559	506	460	404	608	602	2,400	1,360	2,760	2,580	2,170
10	618	559	503	460	401	608	646	2,460	1,750	2,800	2,560	2,120
11	624	556	497	427	401	585	629	2,460	1,220	2,700	2,600	2,070
12	230	559	503	454	407	605	643	2,440	1,300	2,740	2,580	1,870
13	0	559	522	454	401	572	678	2,460	1,510	2,720	2,600	1,700
14	0	559	528	450	407	491	810	2,420	1,450	2,750	2,570	1,700
15	0	556	522	450	398	457	928	2.440	1,540	2,740	2,530	1,690
16	0	559	518	450	387	445	944	2,460	1,690	2,760	2,540	1,660
17	0	553	525	450	379	439	956	2,460	1,830	2,720	2,540	1,620
18	0	550	522	450	393	445	988	2,440	1,790	2,690	2,550	1,550
19	0	550	518	450	395	454	1,090	2,440	1,960	2,710	2,540	1,460
20	0	537	515	450	395	454	1,040	2,470	2,060	2,720	2,540	1,340
21	0	522	518	450	398	454	1,020	2,460	2,040	2,730	2,530	1,280
22	0	518	497	451	401	395	1,120	2,440	1,980	2,720	2,530	1,280
23	0	509	497	416	401	312	1,340	2,430	2,070	2,700	2,540	1,300
24	0	503	487	401	416	96	1,490	2,380	2,190	2,700	2,520	1,290
25	0	503	478	395	416	0	1,620	2,410	2,350	2,720	2,510	1.280
26	0	500	478	390	418	0	1,750	2,460	2,430	2,720	2,510	1,140
27	0	497	466	393	418	0	1,820	2,500	2,420	2,700	2,500	1,090
28	0	500	478	401	436	0	1,870	2,460	2,300	2,680	2,480	1,090
29	0	503	478	401	-	0	2,020	2,460	2,380	2,670	2,480	1,410
30	0	506	481	401	-	0	2,120	2,440	2,400	2,650	2,480	1,120
31	0	-	481	401	-	0	-	2,380	-	2,650	2,510	-

Month	Second-feet-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	8,327	923	0	269	16,520
November	12,475	559	0	416	24,740
December	15,566	528	466	502	30,880
Calendar year 1946	448,674	2,750	0	1,229	889,800
January	13,705	480	390	442	27,180
February	11,301	436	379	404	22,420
March	11,260	608	0	363	22,330
April	28,327	2,120	0	944	56,190
May	75,080	2,500	2,220	2,422	148,900
June	58,410	2,430	1,220	1,947	115,900
July	82,440	2,800	2,320	2,659	163,500
August	79,430	2,680	2,480	2,562	157,500
September	52,340	2,500	1,090	1,745	103,800
Water year 1946-47	448,661	2,800	0	1,229	889,900

South Side Twin Falls Canal at Milner, Idaho

Location.- Water-stage recorder, lat. 42°31', long. 114°01', in sec. 29, T. 10 S., R. 21 E., 700 feet downstream from head gates at Milner Dam.

Records available.- May 1909 to September 1947.

Extremes.- Maximum discharge during year, 3,730 second-feet July 10 (gage height, 10.50 feet); minimum, 42 second-feet Mar. 23 (gage height, 1.45 feet).
1909-47: Maximum daily discharge, 4,600 second-feet Aug. 12, 1918, computed on basis of stage-discharge relation for canal plus estimates by hydrographer of water wasted through spillway below station and returned to river; no flow Sept. 20, 1920.

Remarks.- Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow controlled by head gates. Canal has diverted water since March 1905 from Snake River at Milner Dam for irrigation of 202,000 acres of land in Twin Falls County.

Cooperation.- Gage-height record furnished by Twin Falls Canal Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,600	1,220	541	544	559	547	691	3,300	3,300	3,330	3,620	3,560
2	1,570	739	538	520	559	541	762	3,360	3,170	3,370	3,590	3,520
3	1,480	661	538	538	544	541	813	3,380	3,070	3,430	3,590	3,460
4	1,410	664	544	526	541	544	765	3,400	2,940	3,490	3,610	3,430
5	1,370	661	547	502	538	547	765	3,420	2,860	3,560	3,580	3,370
6	1,300	604	562	483	529	538	749	3,420	2,840	3,540	3,520	3,220
7	1,240	532	571	477	535	541	742	3,420	2,800	3,580	3,540	3,110
8	1,140	366	571	477	535	547	771	3,460	2,730	3,570	3,550	3,060
9	1,070	493	568	483	526	544	797	3,500	2,600	3,650	3,660	2,930
10	992	535	568	*483	535	544	813	3,540	2,600	3,680	3,600	2,860
11	913	526	571	497	526	529	797	3,520	2,520	3,550	3,630	2,840
12	889	505	*571	604	535	505	765	3,470	2,470	3,600	3,610	2,770
13	865	388	568	583	535	511	862	3,440	2,370	3,630	3,600	2,640
14	810	374	565	601	535	514	926	3,360	2,330	3,650	3,560	2,630
15	778	362	568	601	541	511	1,080	3,380	2,320	3,630	3,560	2,550
16	781	359	568	604	541	511	1,250	3,460	2,340	3,620	3,580	2,390
17	739	463	568	613	541	511	1,440	3,480	2,350	3,580	3,600	2,230
18	698	526	565	613	544	511	1,670	3,450	2,360	3,580	3,600	2,080
19	655	520	562	613	550	511	1,730	3,450	2,550	3,580	3,600	1,870
20	634	511	562	616	*550	514	1,890	3,480	2,670	3,580	3,600	1,780
21	491	514	562	622	547	289	1,980	3,480	2,950	3,580	3,600	1,750
22	408	520	559	625	532	44	2,090	3,440	3,110	3,600	3,600	1,700
23	637	520	562	*622	532	42	2,220	3,440	3,210	3,610	3,600	1,590
24	475	526	559	619	520	46	2,300	3,400	3,290	3,620	3,580	1,490
25	a60	520	559	610	511	366	2,490	3,440	3,320	3,650	3,560	1,460
26	a60	517	556	607	532	678	2,730	3,500	3,340	3,640	3,560	1,430
27	a60	517	559	604	550	1,100	2,890	3,560	3,360	3,630	3,560	1,380
28	a60	517	559	595	556	661	2,950	3,450	3,340	3,640	3,550	1,350
29	a60	520	556	589	-	577	3,090	3,440	3,400	3,630	3,540	1,300
30	287	535	556	577	-	619	3,160	3,460	3,380	3,630	3,540	1,270
31	1,120	-	553	574	-	664	-	3,420	-	3,630	3,580	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	24,652	1,600	60	795	48,900
November	16,215	1,220	359	540	32,160
December	17,356	571	538	560	34,420
Calendar year 1946	628,004	3,580	60	1,721	1,246,000
January	17,622	625	477	568	34,950
February	15,079	559	511	539	29,910
March	15,648	1,100	42	505	31,040
April	45,978	3,160	691	1,533	91,200
May	106,700	3,560	3,300	3,442	211,600
June	85,890	3,400	2,320	2,863	170,400
July	111,060	3,680	3,330	3,583	220,300
August	111,010	3,630	3,520	3,581	220,200
September	71,020	3,560	1,270	2,367	140,900
Water year 1946-47	638,230	3,680	42	1,749	1,266,000

* Winter discharge measurement made on this day.
a No gage-height record, gates closed; leakage estimated by watermaster, Milner Dam.
Note.- Stage-discharge relation affected by ice Dec. 30 to Feb. 8.

Rock Creek near Rock Creek, Idaho

Location.- Water-stage recorder, lat. 42°22', long. 114°18', in sec. 25, T. 12 S., R. 18 E., 0.1 mile downstream from road bridge, three-quarters of a mile downstream from West Fork Rock Creek, 5 miles south of Rock Creek settlement, and 12 miles south of Hansen.

Records available.- November 1938 to July 1939, November 1943 to September 1947. November 1909 to August 1913 at site 2 miles downstream; records equivalent except for ranch diversions and small inflow from artesian wells developed in recent years.

Extremes.- Maximum discharge during year, 130 second-feet May 4, 5; maximum gage height, 2.24 feet May 4; minimum discharge, 6.4 second-feet Aug. 20, 21 (gage height, 1.03 feet).

1909-13, 1938-39, 1943-47: Maximum discharge observed, 429 second-feet May 21, 1912 (gage height, 10.4 feet, site and datum then in use); minimum observed, 3.6 second-feet Aug. 7-12, 1910 (gage height, 0.3 foot, site and datum then in use).

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	14	17	15	15	17	53	110	36	14	7.5	7.2
2	17	14	17	14	14	18	54	116	36	13	7.9	6.8
3	14	13	17	b10	14	17	58	124	39	12	8.3	6.8
4	14	14	16	b11	14	17	60	126	34	12	8.6	6.8
5	13	14	16	b13	14	16	58	125	32	12	8.6	7.2
6	13	14	19	15	14	16	54	116	30	12	7.9	6.8
7	12	14	18	14	14	16	53	109	30	12	7.9	7.2
8	13	14	18	14	14	16	54	102	35	12	7.9	7.5
9	13	14	17	14	14	16	57	97	35	12	7.9	7.5
10	12	13	17	14	15	17	54	91	32	12	7.9	7.5
11	12	13	17	14	14	18	53	92	38	11	7.9	7.5
12	12	13	17	13	15	17	51	87	41	11	7.9	7.5
13	12	13	17	12	17	17	52	82	36	11	7.9	7.2
14	12	14	*20	14	17	18	58	76	34	11	7.9	7.2
15	12	14	20	b12	18	19	71	71	31	10	7.5	7.5
16	13	13	18	b12	19	21	84	66	29	12	7.5	7.2
17	13	13	13	b13	20	23	91	62	30	11	7.2	7.9
18	13	13	14	b13	20	26	104	61	29	10	6.8	9.5
19	13	13	19	14	20	31	103	58	26	9.5	6.8	9.0
20	12	14	17	14	20	34	103	56	25	9.5	6.8	9.5
21	12	13	17	14	19	38	104	53	26	9.0	6.4	9.0
22	13	14	17	13	19	41	104	51	25	8.6	6.8	9.0
23	16	14	16	13	18	46	97	50	24	8.6	7.2	8.3
24	14	15	16	14	18	44	90	46	23	8.6	7.5	8.3
25	14	14	16	14	18	43	88	44	20	8.6	7.2	8.6
26	13	16	16	16	17	42	86	42	19	8.3	6.8	9.0
27	13	20	16	15	17	40	90	41	19	8.3	6.8	9.0
28	14	18	14	13	17	40	97	42	19	7.9	6.8	9.0
29	14	18	13	*14	-	43	107	37	17	7.5	6.8	8.6
30	14	17	14	12	-	50	110	36	15	7.5	6.8	9.5
31	13	-	b11	12	-	52	-	37	-	7.5	7.2	-

Month	Second-feet-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	408	17	12	13.2	809
November	430	20	13	14.3	853
December	510	20	11	16.5	1,010
Calendar year 1946	15,028.9	278	8.3	41.2	29,800
January	415	16	10	13.4	823
February	465	20	14	16.6	922
March	869	52	16	23.0	1,720
April	2,298	110	51	76.6	4,560
May	2,306	126	36	74.4	4,570
June	865	41	15	23.8	1,720
July	319.4	14	7.5	10.3	634
August	230.9	8.6	6.4	7.45	458
September	239.6	9.5	6.8	7.99	475
Water year 1946-47	9,355.9	126	6.4	25.6	18,550

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

Rock Creek near Twin Falls, Idaho

Location.- Water-stage recorder, lat. 42°36', long. 114°32', in SW¼ sec. 36, T. 9 S., R. 16 E., at highway bridge, 3 miles upstream from mouth and 4 miles northwest of town of Twin Falls.
Records available.- March 1922 to November 1947 (discontinued).
Average discharge.- 24 years (1922-46), 211 second-feet.
Extremes.- Maximum discharge recorded during period October 1946 to November 1947, 484 second-feet June 9 (gage height, 3.12 feet), but may have been greater during periods of no gage-height record; minimum recorded, 96 second-feet Jan. 11 (gage height, 1.69 feet), but may have been less during periods of no gage-height record.
1922-47: Maximum discharge, 984 second-feet Sept. 21, 1927 (gage height, 4.5 feet, datum then in use, from floodmarks); minimum, 90 second-feet Mar. 28, 1941 (gage height, 1.66 feet).
Remarks.- Records good except those for periods of no gage-height record, which are poor. Practically all normal summer flow diverted several miles above station for irrigation. Waste water from South Side Twin Falls low-line canal, which crosses Rock Creek 12 miles above station, causes abrupt fluctuations in stage at times. Irrigation waste water and return flow from project lands enter above station.

Discharge, in second-feet, 1946-47

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	339	204	a260	155	149	132			-	219	245	253
2	349	256		152	152	134			-	214	245	259
3	326	248		a151	127	134			-	204	237	262
4	319	242		150	121	130			-	202	248	264
5	313	245	267	139	121	124			282	209	248	267
6	306	242	264	134	121	120			270	214	250	273
7	306	242	282	132	120	120			273	214	239	a280
8	306	237	264	118	118	121			342	207	234	291
9	294	219	262	107	120	123			436	207	232	294
10	282	209	262	100	121	124			377	211	229	288
11	279	204	248	97	121	113			402	214	229	291
12	270	195	214		123	109			380	214	234	294
13	267	193	209	a110	120	116			363	211	232	297
14	267	189	198		118	120	h124		349	214	237	285
15	262	187	193	181	120	121			342	214	237	294
16	264	179	187	198	123	123			332	214	237	291
17	250	200	173	209	121	123			329	214	234	285
18	245	259	168	211	118	110			322	211	229	288
19	250	256	171	219	118	114			262	214	229	282
20	253	262	175	219	123	118			256	216	229	273
21	253	245	173	200	128	117			256	216	232	267
22	262	242		187	127	126			288	216	229	267
23	294	242			127	160			322	216	234	270
24	256	239			127	-			319	219	239	264
25	253	237	a180	a170	132	-			316	221	248	262
26	253				132	-			270	224	245	262
27	250	a250			132	-		h209	229	232	242	259
28	239			142	128	-			234	234	242	259
29	207			142	-	-			232	237	245	259
30	191	h259	189	145	-	-			226	248	239	262
31	187	-	187	141	-	-	-		-	250	248	-

a No gage-height record; discharge interpolated, or computed on basis of records for station near Rock Creek.
h Computed from staff-gage reading.

1947

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	259	209	7	a264	-	13	262	-	19	229	-	25	214	-
2	256	209	8	a264	-	14	259	-	20	214	-	26	214	-
3	259	-	9	a263	h219	15	256	-	21	181	-	27	219	-
4	262	-	10	a262	-	16	256	h191	22	175	-	28	219	-
5	267	-	11	a262	-	17	250	-	23	175	-	29	216	-
6	264	-	12	262		18	239	h183	24	200	-	30	214	-
												31	211	-

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

Monthly discharge, in second-feet, 1946-47

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October 1946	8,392	349	187	271	16,650
November	6,932	262	179	231	13,750
December	6,566	282	168	212	13,020
Calendar year 1946	80,568	349	124	221	159,800
January 1947	4,809	219	97	155	9,540
February	3,508	152	118	125	6,960
March 1-23	2,832	160	109	123	5,620
April	-	-	-	-	-
May	-	-	-	-	-
June 5-30	8,009	436	226	308	15,890
July	6,750	250	202	218	13,390
August	7,377	250	229	238	14,630
September	8,242	297	253	275	16,350
October 1947	7,347	267	175	237	14,570

Salmon Falls Creek near San Jacinto, Nev.

Location.- Water-stage recorder, lat. 41°57', long. 114°42', in sec. 23, T. 47 N., R. 64 E., in canyon, 200 yards downstream from highway bridge, 250 yards downstream from Shoshone Creek, and 5 miles north of San Jacinto.

Records available.- September 1909 to September 1916, October 1918 to September 1947.

Average discharge.- 33 years (1910-16, 1919-20, 1921-47), 128 second-feet.

Extremes.- Maximum discharge during year, 342 second-feet May 12 (gage height, 4.32 feet); minimum, 6.8 second-feet Sept. 16 (gage height, 2.29 feet).
1909-16, 1918-47: Maximum discharge, between 2,060 and 2,420 second-feet Feb. 24, 1943 (gage height exceeded range of recorder, 10.20 feet, but was not more than 1.2 feet higher), from rating curve extended above 1,400 second-feet; minimum, 5.3 second-feet Aug. 17, 1940 (gage height, 2.16 feet).

Remarks.- Records good. Many diversions above station for irrigation. Salmon Dam of Salmon River Canal Co., 15 miles below station, forms a reservoir having a capacity of about 180,000 acre-feet.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	58	79	58	66	109	191	180	182	57	11	8.4
2	35	58	79	61	70	107	201	184	188	52	11	8.4
3	37	54	76	58	70	106	214	186	206	46	12	9.2
4	44	55	73	51	70	106	226	206	199	40	12	8.8
5	42	58	73	54	73	102	217	230	201	38	12	7.7
6	42	57	82	53	80	98	221	258	170	34	14	7.4
7	42	59	93	52	82	94	217	262	148	33	16	7.4
8	44	63	93	52	78	91	210	265	152	30	16	7.4
9	50	60	91	54	76	91	210	281	160	29	15	7.4
10	53	58	85	55	79	93	206	293	164	28	14	7.4
11	50	57	84	54	76	101	195	320	156	26	12	7.7
12	52	54	84	51	112	101	186	328	154	26	11	8.0
13	50	59	85	51	184	98	180	328	160	24	11	9.0
14	48	60	86	50	184	101	172	303	156	23	11	7.7
15	48	64	88	48	188	109	162	267	150	24	12	7.7
16	59	59	85	44	156	121	172	239	134	24	12	7.7
17	57	63	59	46	150	139	191	214	125	24	12	8.8
18	58	63	60	48	141	160	217	201	125	23	11	9.6
19	57	66	79	50	137	178	237	188	125	22	11	10
20	55	72	72	53	123	195	246	188	121	21	10	11
21	55	72	73	54	112	199	249	182	111	21	10	10
22	58	70	74	55	107	201	249	176	106	22	10	10
23	59	69	72	55	107	210	232	176	98	22	11	10
24	59	69	72	59	118	219	217	174	91	22	11	11
25	58	68	72	60	132	212	208	170	88	21	10	11
26	55	72	73	64	123	197	195	166	82	21	10	12
27	54	74	76	65	119	182	186	160	78	21	10	14
28	57	78	68	64	112	172	178	160	72	19	10	17
29	58	80	55	66	-	168	174	160	66	18	10	16
30	58	80	63	60	-	170	172	170	64	14	10	17
31	57	-	58	59	-	180	-	178	-	12	9.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,577	59	26	50.9	3,130
November	1,929	80	54	64.3	3,830
December	2,362	93	55	76.2	4,680
Calendar year 1946	52,284	881	16	143	103,700
January	1,704	66	44	55.0	3,380
February	3,125	188	66	112	6,200
March	4,410	219	91	142	8,750
April	6,131	249	162	204	12,160
May	6,793	328	160	219	13,470
June	4,032	206	64	134	8,000
July	837	57	12	27.0	1,660
August	357.6	16	9.6	11.5	709
September	293.7	17	7.4	9.77	583
Water year 1946-47	33,551.3	328	7.4	91.9	66,550

Salmon River Canal Co. reservoir near Rogerson, Idaho

Location.- Staff gage at dam on Salmon Falls Creek, lat. 42°13', long. 114°44', in sec. 17, T. 14 S., R. 15 E., 10 miles west of Rogerson. Datum of gage is 4,990.0 feet above mean sea level (surveys of Salmon River Canal Co.).

Records available.- January 1922 to September 1947.

Extremes.- Maximum contents observed during year, 48,800 acre-feet May 9-12 (gage height, 30.0 feet); minimum observed, 5,335 acre-feet Sept. 30 (gage height, 4.1 feet).
1922-47: Maximum contents observed, 123,700 acre-feet May 30, 31, 1922 (gage height, 61.1 feet); minimum observed, 125 acre-feet Sept. 21 to Oct. 5, 1934 (gage height, 0.1 foot).

Remarks.- Reservoir is formed by gravity-section concrete-arch dam completed in 1911; storage began in 1910. Capacity, 182,650 acre-feet between gage heights 0.0 foot (bottom of outlet tunnel) and 80.0 feet (maximum operating level). Dead storage unknown. Water is used for irrigation of lands in Salmon River Canal Co. project. Figures given herein represent usable contents. Gage read once daily.

Cooperation.- Gage readings and capacity table furnished by Salmon River Canal Co.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,550	16,800	18,460	22,520	23,710	28,980	36,700	45,800	43,200	41,320	18,940	6,145
2	14,550	16,800	18,620	22,520	24,050	29,320	36,880	46,600	43,600	40,760	18,300	6,145
3	14,700	16,800	18,940	22,690	24,390	29,660	37,250	46,800	44,000	40,210	17,700	6,145
4	14,700	16,800	19,100	22,690	24,560	30,000	37,440	47,200	44,400	39,470	16,950	6,145
5	14,700	16,800	19,100	22,690	24,730	30,340	37,620	47,400	44,800	39,100	16,350	6,145
6	14,700	16,800	19,260	22,690	24,900	30,510	38,180	47,800	45,200	38,540	15,750	6,145
7	14,700	16,800	19,420	22,860	24,900	30,850	38,730	48,200	45,400	38,180	15,000	6,145
8	14,700	16,800	19,580	22,860	25,070	31,020	39,100	48,600	45,600	37,440	14,250	6,280
9	14,700	16,950	19,740	22,860	25,240	31,190	39,470	48,800	45,600	36,700	13,510	6,280
10	14,700	16,950	19,900	22,860	25,410	31,360	39,840	48,800	45,800	35,770	12,780	6,280
11	14,700	16,950	20,060	22,860	25,580	31,530	40,400	48,800	46,000	34,840	12,070	6,280
12	14,700	17,100	20,060	22,860	25,750	31,700	40,580	48,800	46,400	33,920	11,640	6,280
13	14,700	17,100	20,220	22,860	25,920	31,880	40,760	48,600	46,600	33,000	10,910	6,280
14	14,700	17,250	20,220	22,860	26,090	32,070	40,950	48,400	46,800	32,070	10,180	6,145
15	14,700	17,400	20,380	23,030	26,260	32,070	41,140	48,200	47,000	31,190	9,605	6,145
16	14,850	17,400	20,380	23,030	26,430	32,260	41,320	48,000	47,200	30,340	9,025	6,145
17	14,850	17,400	20,540	23,030	26,600	32,440	41,690	47,600	47,400	29,490	8,300	6,010
18	15,000	17,400	20,540	23,200	26,770	32,810	41,880	47,200	47,200	28,640	7,720	6,010
19	15,000	17,400	20,700	23,200	26,940	33,180	42,240	46,800	47,000	27,790	6,995	6,010
20	15,150	17,550	20,860	23,200	27,110	33,550	42,620	46,400	46,800	26,940	6,145	6,010
21	15,150	17,550	21,020	23,200	27,280	33,740	43,000	46,000	46,400	26,260	6,145	5,875
22	15,300	17,700	21,180	23,200	27,450	33,740	43,400	45,800	46,000	25,410	6,145	5,875
23	15,450	17,700	21,340	23,370	27,620	33,920	43,800	45,600	45,600	24,730	6,145	5,740
24	15,600	17,850	21,500	23,370	27,790	33,920	44,200	45,400	45,200	24,050	6,145	5,740
25	15,750	17,850	21,670	23.370	27,960	34,290	44,600	45,000	44,800	23,370	6,145	5,740
26	15,900	17,850	21,840	23,370	28,130	34,660	45,000	44,600	44,200	22,860	6,145	5,605
27	16,050	18,000	22,010	23,370	28,470	35,030	45,400	44,000	43,600	22,180	6,145	5,605
28	16,200	18,000	22,180	23,540	28,640	35,400	45,600	43,600	43,000	21,500	6,145	5,470
29	16,350	18,150	22,180	23,540	-	35,770	45,800	43,200	42,430	20,860	6,145	5,470
30	16,500	18,300	22,350	23,540	-	36,140	45,800	42,800	41,880	20,220	6,145	5,335
31	16,650	-	22,350	23,710	-	36,320	-	43,000	-	19,580	6,145	-

Monthly gage height and contents, water year October 1946 to September 1947

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	10.5	14,550	-
Oct. 31	11.9	16,650	+2,100
Nov. 30	13.0	18,300	+1,650
Dec. 31	15.5	22,350	+4,050
Calendar year 1946	-	-	-12,130
Jan. 31	16.3	23,710	+1,360
Feb. 28	19.2	28,640	+4,930
Mar. 31	23.5	36,320	+7,680
Apr. 30	28.5	45,800	+9,480
May 31	27.1	43,000	-2,800
June 30	26.5	41,880	-1,120
July 31	13.8	19,580	-22,300
Aug. 31	4.7	6,145	-13,435
Sept.30	4.1	5,335	-810
Water year 1946-47	-	-	-9,215

Salmon River Canal Co. canal near Rogerson, Idaho

Location.- Water-stage recorder, lat. 42°15', long. 114°45', in sec. 7, T. 14 S., R 15 E., half a mile downstream from Salmon River Canal Co. reservoir and 7 miles west of Rogerson.

Records available.- April 1937 to September 1947.

Extremes.- Maximum discharge during year, 441 second-feet July 11 (gage height, 6.16 feet); no flow during long periods.
1937-47: Maximum discharge, 660 second-feet July 20-24, 1944; no flow during long periods in each year.

Remarks.- Records good. Canal diverts from Salmon River Canal Co. reservoir for irrigation of lands in Salmon River Canal Co. project.

Cooperation.- Gage-height record furnished by Salmon River Canal Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0						0	0	286	308	
2	0	0						0	0	276	312	
3	0	0						0	0	275	308	
4	0	0						0	0	270	312	
5	0	0						0	0	274	316	
6	h16	0						0	0	276	315	
7	h18	0						0	0	322	317	
8	0	0						0	70	379	318	
9	0	0						225	0	396	319	
10	0	0						335	0	397	317	
11	0	0						353	0	419	317	
12	0	0						354	0	438	317	
13	0	h122						352	0	436	316	
14	0	h190						352	0	433	314	
15	0	h27						355	0	417	308	
16	0	0						355	0	403	307	
17	0	0						341	131	403	308	
18	0	0						323	197	398	288	
19	0	0						310	198	380	h265	
20	0	0						310	196	360	h233	
21	0	0						307	227	358	0	
22	0	0						304	265	353	0	
23	0	0						312	263	333	0	
24	0	0						303	275	322	0	
25	0	0						315	304	322	0	
26	0	0						327	320	322	0	
27	0	0						330	325	323	0	
28	0	0						330	328	322	0	
29	0	0						303	341	322	0	
30	0	0						194	287	316	0	
31	0	-						0	-	314	0	

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	34	18	0	1.1	67
November	339	190	0	11.3	672
December	0	0	0	0	0
Calendar year 1946	44,742	577	0	123	88,750
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	6,995	355	0	226	13,870
June	3,727	341	0	124	7,390
July	10,845	438	270	350	21,510
August	6,115	319	0	197	12,130
September	0	0	0	0	0
Water year 1946-47	28,055	438	0	76.9	55,640

h Computed from staff-gage readings and time of gate changes.

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Mud Lake near Terreton, Idaho

Location.- Water-stage recorder, lat. 43°53', long. 112°24', in SW¼ sec. 1, T. 6 N., R. 34 E., 2 miles north of First Owsley pump house, 2½ miles northeast of Terreton, and 14 miles southwest of Hamer; supplemental staff gage at pump house. Datum of each gage is 4,775.33 feet above mean sea level.

Records available.- April 1921 to September 1947.

Extremes.- Maximum contents during year, 45,300 acre-feet May 2 (gage height, 8.58 feet); minimum, 7,990 acre-feet Oct. 7 (gage height, 1.94 feet).

1921-47: Maximum contents observed, 61,660 acre-feet May 5, 1923 (gage height, 9.2(feet); practically no contents Oct. 1 to Nov. 15, 1937 (at 4 p.m. Nov. 15 water was released from Camas Creek into lake).

Remarks.- Mud Lake is a perched body of water confined by earth dikes and fed by ground water and surface tributaries augmented by well flows. For complete description of Mud Lake region see Water-Supply Paper No. 818. Water for irrigation is diverted from lake by pumping. During low lake stages inflow from Camas Creek may be bypassed through Camas Creek diversion canal directly to lake outlet channel leading to First Owsley pumping plant. Bypass was not used during 1947. Other irrigation diversions are made by various means from adjacent lakes and wells and Camas Creek above lake. Area of Mud Lake is varied from time to time by changes in dikes. Figures given herein represent contents above gage height -4.0 feet. Capacity table prepared from surveys made by Geological Survey and adjusted for changes in dikes. High winds occasionally disturb the recording of lake stages.

Cooperation.- Water-stage recorder inspected by Water District No. 66 and supplemental staff-gage readings furnished by Owsley Canal Co.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,410	10,600	-	-	h32,000	-	40,000	45,200	40,400	32,400	16,100	-
2	8,150	10,900	h18,400	-	-	-	40,300	45,200	40,200	32,000	15,600	-
3	8,370	11,100	-	-	-	-	40,500	45,100	40,000	31,500	15,200	-
4	8,310	11,300	-	-	-	-	40,700	45,000	39,600	31,000	14,700	-
5	8,470	11,500	-	-	-	-	40,800	44,800	39,300	30,500	14,400	-
6	8,440	11,700	-	-	h32,000	-	40,800	44,700	38,800	29,900	14,200	10,600
7	8,180	11,900	-	-	-	h36,900	40,900	44,400	38,500	29,300	14,000	10,300
8	8,120	12,200	-	-	-	-	41,000	43,900	38,000	28,700	13,700	10,400
9	8,210	12,500	-	h27,200	h32,900	-	41,000	43,500	37,900	28,200	13,300	10,200
10	8,310	12,900	-	-	h33,200	-	41,200	43,400	37,700	27,700	13,200	10,300
11	8,210	13,100	-	-	-	-	41,300	43,500	38,000	27,000	12,900	10,300
12	8,280	13,400	-	-	-	37,500	41,300	43,500	37,600	26,500	12,600	10,300
13	8,310	13,600	h21,300	-	h33,900	37,500	41,400	43,400	37,500	25,800	12,600	10,300
14	8,410	13,900	21,500	-	h34,100	37,700	41,600	43,500	37,600	25,100	12,400	10,300
15	8,740	14,100	21,500	-	-	37,800	41,900	43,600	37,700	24,600	12,200	10,200
16	8,870	14,400	21,900	-	-	37,900	41,700	43,500	37,700	24,000	12,000	9,950
17	9,040	14,600	21,900	h29,100	-	38,000	41,800	43,500	37,700	23,600	11,900	10,200
18	9,070	14,700	22,200	-	-	38,300	41,900	43,500	37,500	23,100	11,900	10,200
19	9,140	14,900	22,600	-	-	38,500	42,000	43,600	37,200	22,600	11,700	10,100
20	9,210	15,000	22,800	h29,500	h35,000	38,700	42,200	43,500	36,900	22,100	11,600	10,100
21	9,070	15,400	23,000	-	-	38,800	42,500	43,700	36,700	21,600	11,600	9,950
22	9,180	15,700	23,200	-	h35,200	38,900	43,000	43,600	35,900	21,100	11,300	9,950
23	9,450	16,000	23,400	-	-	39,100	43,100	43,400	35,600	20,500	11,300	9,880
24	9,560	16,300	23,600	-	-	39,300	43,400	43,200	35,300	19,800	11,300	9,810
25	9,280	16,500	23,800	-	-	39,400	43,500	43,000	35,000	19,200	11,300	9,770
26	9,840	16,800	24,000	-	-	39,800	43,800	42,700	34,300	18,900	11,300	9,740
27	9,950	16,900	24,200	-	-	39,700	44,200	42,500	33,800	18,500	11,200	9,700
28	10,100	-	24,400	-	h36,500	39,800	44,700	42,100	33,600	18,100	11,100	9,670
29	10,200	-	24,600	-	-	39,900	44,700	41,400	33,200	17,600	11,100	9,630
30	10,200	h18,200	24,700	-	-	39,900	44,900	41,000	32,800	17,100	11,100	9,560
31	10,400	-	24,800	h31,700	-	39,900	-	40,800	-	16,600	h11,100	-

h Computed staff-gage reading at recorder site or from supplemental staff-gage reading when not affected by pump operation.

Monthly gage height and contents, water year October 1946 to September 1947

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	2.08	8,440	-
Oct. 31	2.67	10,500	+2,060
Nov. 30	4.38	18,200	+7,700
Dec. 31	5.60	24,800	+6,600
Calendar year 1946	-	-	-7,300
Jan. 31	6.70	31,700	+6,900
Feb. 28	7.40	36,500	+4,800
Mar. 31	7.87	39,900	+3,400
Apr. 30	8.55	45,100	+5,200
May 31	7.96	40,600	-4,500
June 30	6.84	32,600	-8,000
July 31	4.00	16,300	-16,300
Aug. 31	2.82	11,100	-5,200
Sept. 30	2.39	9,490	-1,610
Water year 1946-47	-	-	+1,050

† Gage height at 12 p.m.

Camas Creek at Eighteenmile shearing corral, near Kilgore, Idaho

Location.- Water-stage recorder, lat. 44°18', long. 111°52', in sec. 7, T. 11 N., R. 39 E., at bridge on county road at Eighteenmile shearing corral, just downstream from West Camas Creek, 7 miles south of Kilgore, and 18½ miles northeast of Dubois.

Drainage area.- 210 square miles.

Records available.- May 1937 to September 1947 (no winter records prior to 1947).

Extremes.- Maximum discharge during year, 619 second-feet May 10; maximum gage height, 4.85 feet Apr. 26 (ice jam); minimum discharge recorded, 17 second-feet Oct. 11, but may have been less during period of no gage-height record in winter.
1937-47: Maximum discharge 1,340 second-feet Apr. 21, 1946 (gage height, 6.08 feet), from rating curve extended above 500 second-feet; minimum recorded, 0.7 second-foot Aug. 19, 1940.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above and below station for irrigation and stock water.

Cooperation.- Water-stage recorder inspected by Water District No. 66.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	35						328	241	71	26	22
2	48	35						295	320	62	26	22
3	57	35						300	273	54	26	22
4	44	35						409	270	48	28	20
5	38	35						468	276	42	30	20
6	34	35						483	254	42	30	20
7	33	34						489	218	38	28	20
8	32	34				20	35	513	202	37	28	20
9	32	34	35					562	262	37	28	20
10	31	34						594	420	38	24	22
11	30	34	(*)					528	432	38	26	22
12	32	34						538	385	37	28	22
13	34	36				(*)		507	270	a37	28	22
14	34	37					45	519	220	a37	24	22
15	34	38		20	20		65	483	188	a37	22	22
16	38	38					85	368	166	a37	20	22
17	38	37					100	309	152	a37	20	26
18	36	37					120	281	161	a36	19	36
19	36						150	265	152	a36	20	41
20	34						200	252	143	a36	22	34
21	*33						300	236	218	a36	24	31
22	34						330	220	210	a36	26	30
23	38						330	210	140	a36	28	28
24	40		25			25	370	192	116	36	28	28
25	37	35					470	180	99	36	26	28
26	38						500	168	89	34	24	28
27	38						471	161	85	31	24	36
28	36						471	166	81	30	24	34
29	36				-		*450	175	79	28	24	31
30	36				-		397	156	77	26	24	30
31	36	-			-		-	152	-	26	24	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,127	57	30	36.4	2,240
November	1,057	38	-	35.2	2,100
December	935	-	-	30.2	1,850
Calendar year	-	-	-	-	-
January	620	-	-	20.0	1,230
February	560	-	-	20.0	1,110
March	705	-	-	22.7	1,400
April	5,309	500	-	177	10,530
May	10,507	594	152	339	20,840
June	6,179	432	77	206	12,260
July	1,192	71	26	38.5	2,360
August	771	30	19	24.9	1,530
September	781	41	20	26.0	1,550
Water year 1946-47	29,743	594	-	81.5	59,000

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for station at Camas and nearby streams.

Note.- Stage-discharge relation affected by ice Oct. 30 to Nov. 6, Nov. 8-14, Nov. 19 to Apr. 26 (no gage-height record Dec. 17 to Apr. 20 except staff-gage readings Feb. 6 and Mar. 13; discharge computed on basis of 2 discharge measurements, weather records, and records for stations on nearby streams).

Camas Creek at Camas, Idaho

Location.- Water-stage recorder, lat. 44°00', long. 112°13', in E½SE¼ sec. 21, T. 8 N., R. 36 E., 350 feet upstream from Oregon Short Line Railroad bridge at Camas and half a mile upstream from Beaver Creek.

Records available.- April 1925 to September 1947.

Average discharge.- 21 years (1926-47), 23.4 second-feet.

Extremes.- Maximum discharge during year, 524 second-feet Apr. 27 (gage height, 4.83 feet); no flow at times.
1925-47: Maximum discharge, 900 second-feet probably on May 3, 1938 (gage height, 3.98 feet, datum then in use, from floodmark), from rating curve extended above 400 second-feet; no flow June 1-7, 1926, and many periods during 1930-47.

Remarks.- Records good except those below 10 second-feet, which are fair, and those for periods of ice effect or no gage-height record, which are poor. Diversiors above and below station for irrigation and stock water.

Cooperation.- Gage-height record collected in cooperation with Water District No. 66 and seven winter field estimates furnished by that district.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 26

1.8	1.0	2.2	15	3.0	111
1.9	2.8	2.3	22	3.5	205
2.0	5.6	2.5	41	4.0	313
2.1	9.7	2.7	66	4.5	436

Apr. 27 to Sept. 30

1.5	0.2	1.9	5.2
1.6	.8	2.0	s.2
1.7	1.7	2.2	17
1.8	3.1	2.4	31

Note.- Same as preceding table above 2.4 feet.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	12	17				42	287	111	37	0.7	0
2	2.4	12	17				56	243	159	30	.7	0
3	5.3	6.4	21				45	218	189	27	.9	0
4	15	11	17		(*)		48	230	169	23	1.2	0
5	15	16	16			12	37	291	169	20	1.3	0
6	11	14					34	311	171	15	1.3	0
7	8.9						28	313	156	12	1.6	0
8	7.6					13	27	315	141	11	2.1	0
9	7.2					13	25	331	139	8.2	1.5	0
10	4.8		*17			14	23	368	187	8.2	2.0	0
11	4.5	15				15	24	388	271	7.0	2.0	0
12	5					*16	23	355	262	5.5	0	0
13	5					18	24	365	211	6.1	0	0
14	5					20	29	338	169	4.8	1.6	0
15	5				(*)	*25	51	343	142	4.2	2.1	0
				11	11							
16	5.6	f17				28	70	295	126	3.7	.2	0
17	6.4	f15		(*)		30	86	241	113	3.5	0	0
18	8.1					35	106	213	106	1.3	0	.7
19	6.8					37	123	203	105	1.4	0	4.2
20	6.0					36	152	191	103	4.6	0	16
21	5.6				(*)	35	239	183	103	5.0	0	14
22	4.2					33	271	169	137	5.2	0	10
23	4.8					31	249	152	123	3.3	0	9.0
24	11	17	13			28	295	142	92	2.5	0	7.6
25	12					24	365	132	73	3.7	0	7.3
26	11					22	413	123	65	4.4	0	6.7
27	11					20	413	116	54	3.9	0	6.1
28	14				(*)	21	390	114	45	3.5	0	7.0
29	12				-	23	348	113	39	3.5	0	9.3
30	10				-	30	324	120	38	3.5	0	7.3
31	9.7	-	(*)	(*)	-	42	-	111	-	2.5	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	241.8	15	1.9	7.80	480
November	459.4	-	6.4	15.3	911
December	466	-	-	15.0	924
Calendar year 1946	18,796.4	741	0	51.5	37,280
January	341	-	-	11.0	676
February	308	-	-	11.0	611
March	693	42	-	22.4	1,370
April	4,360	413	23	145	8,650
May	7,314	388	111	236	14,510
June	3,968	271	38	132	7,870
July	274.5	37	1.3	8.85	544
August	19.2	2.1	0	.62	38
September	105.2	16	0	3.51	209
Water year 1946-47	18,550.1	413	0	50.8	36,790

* Winter discharge measurement or field estimate made on this day.
f Computed on basis of partly estimated gage height.
Note.- Stage-discharge relation affected by ice about Nov. 29 to Dec. 1, Dec. 10 to about Mar. 25. No gage-height record Oct. 12-15, Nov. 7-15, 18-29, Dec. 6-9, Dec. 13 to Feb. 3, Feb. 5 to Mar. 11, Mar. 13-18, 20-26, Aug. 11; discharge computed on basis of weather records, 7 field estimates, and records for nearby streams.

Beaver Creek at Spencer, Idaho

Location.- Staff gage, lat. 44°21', long. 112°11', in NE¼ sec. 23, T. 12 N., R. 36 E., at highway bridge, 0.4 mile southeast of Spencer post office and 2½ miles upstream from Rattlesnake Creek.

Drainage area.- 120 square miles.

Records available.- October 1940 to September 1947 (no winter records 1942-47).

Extremes.- Maximum discharge observed during year, 192 second-feet May 14; maximum gage height observed, 5.13 feet, Mar. 14 (ice jam); minimum discharge observed, 5.0 second-feet Oct. 1.

1940-47: Maximum discharge observed, 408 second-feet Apr. 13, 1942, from rating curve extended above 140 second-feet; maximum gage height observed, 5.95 feet Mar. 30, 1943 (ice jam); minimum discharge observed, 0.5 second-foot Jan. 26, 1942, Feb. 22, 1944.

Remarks.- Records fair except those for periods of doubtful or no gage-height record, which are poor. Gage read once daily Oct. 1-27, twice daily Mar. 13 to Sept. 30. Several ranch diversions above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.0					-	95	110	112	72	14	10
2	110					-	79	112	112	58	14	12
3	111					-	84	116	136	46	14	12
4	66					-	d70	120	124	34	14	12
5	24					-	d50	126	120	30	13	12
6	21					-	d50	127	d105	30	13	12
7	18					-	d50	124	d120	30	12	12
8	17					-	d50	127	d130	32	11	12
9	16					-	d50	128	d140	58	11	12
10	d25					-	37	d140	141	52	18	12
11	26					-	48	d145	138	41	15	13
12	28					-	44	d160	117	30	14	13
13	26					-	148	d190	101	25	11	13
14	22					*b11	161	186	97	25	11	13
15	22					a15	168	148	88	27	11	13
16	29					a25	142	124	93	38	10	14
17	26					a37	148	112	93	38	9.0	20
18	24					a54	142	112	94	27	9.0	27
19	22					*b65	136	108	85	24	9.0	24
20	22					a100	112	102	120	28	10	22
21	21					a115	106	91	141	31	20	21
22	21					a110	101	d6	118	31	17	20
23	22					106	112	86	93	25	15	18
24	22					84	112	d1	86	26	15	17
25	21					84	106	82	83	26	15	16
26	23					74	112	77	75	22	15	21
27	24					69	112	82	75	21	12	24
28	a24					52	112	88	75	20	12	22
29	a24					d100	112	86	76	19	11	20
30	a24					112	112	78	76	17	11	19
31	a24					90	-	91	-	15	10	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	910.0	111	5.0	29.4	1,800
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 14-31	1,303	115	-	72.4	2,580
April	2,961	168	37	98.7	5,870
May	3,545	190	77	114	7,030
June	3,164	141	75	105	6,280
July	998	72	15	32.2	1,980
August	396.0	20	9.0	12.8	785
September	488	27	10	16.3	968
Water year	-	-	-	-	-

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for stations at Dubois and at Camas.

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed on basis of weather records and records for nearby stream.

Beaver Creek at Dubois, Idaho

Location.- Water-stage recorder, lat. 44°11', long. 112°14', in NW¼ sec. 21, T. 10 N., R. 36 E., half a mile north of Dubois.

Drainage area.- 220 square miles.

Records available.- April 1921 to September 1947.

Average discharge.- 20 years (1921-24, 1928-29, 1931-47), 16.1 second-feet.

Extremes.- Maximum discharge during year, 175 second-feet sometime between May 11-13, computed from recorded range in stage; maximum gage height, 4.83 feet Mar. 18 (ice jam); minimum recorded, 4.4 second-feet sometime between Oct. 23 and Nov. 1 (gage height, 0.67 foot).

1921-47: Maximum discharge, 858 second-feet Apr. 7, 1930; maximum gage height, about 6.5 feet Mar. 16, 1926; no flow during long periods.

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

Cooperation.- Six field estimates furnished and water-stage recorder inspected by Water District No. 66.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.2	8.5					77	77	108	40	8.8	6.0
2	90						79	77	90	33	7.9	6.0
3	90						63	86	88	29	7.3	6.4
4	50				(*)		52	101	90	28	7.0	6.6
5	17					15	37	106	85	25	7.9	6.8
6	15						46	106	80	24	7.6	6.6
7	12						39	108	75	20	6.6	6.0
8	11	20	24			16	40	116	80	18	6.2	6.2
9	11					17	39	124	130	24	5.5	7.0
10	14		(*)			20	42	130	128	30	5.3	7.6
11	17					23	39	130	126	26	5.5	9.1
12	18					*28	38	140	101	21	10	9.1
13	16					30	43	150	79	18	8.5	8.8
14	15	26			(*)	35	101	142	69	16	7.6	8.5
15	15			12	12	*40	138	124	63	15	6.8	8.5
16	18		14			50	134	106	60	14	6.4	10
17	18			(*)		60	124	99	60	18	6.0	10
18	17					80	122	93	71	18	5.5	16
19	15					*93	106	90	60	15	5.3	21
20	15					100	105	84	66	15	4.9	16
21	15	25			(*)	105	114	79	105	17	6.2	14
22	14					103	97	76	90	18	13	12
23	15					86	77	73	66	18	10	11
24	15		15			60	74	69	59	18	8.8	11
25	14					44	73	65	52	17	7.9	11
26						47	73	60	48	14	7.0	11
27						39	76	59	47	12	6.8	16
28					(*)	40	81	83	47	10	7.0	14
29	16	24			-	50	84	74	48	9.1	6.6	13
30		24			-	84	83	62	46	8.8	6.4	13
31		-	(*)	(*)	-	105	-	65	-	9.1	6.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	649.2	90	6.2	20.9	1,290
November	672.5	-	-	22.4	1,330
December	599	-	-	19.3	1,190
Calendar year 1946	10,625.1	196	-	29.1	21,070
January	372	-	-	12.0	738
February	336	-	-	12.0	666
March	1,460	105	-	47.1	2,900
April	2,296	138	37	76.5	4,550
May	2,954	150	80	95.3	5,860
June	2,317	130	46	77.2	4,600
July	596.0	40	8.8	19.2	1,180
August	222.5	13	4.9	7.18	442
September	308.2	21	6.0	10.3	611
Water year 1946-47	12,782.4	150	-	35.0	25,360

* Winter discharge measurement or field estimate made on this day.

Note.- Stage-discharge relation affected by ice about Dec. 8-11, Dec. 17 to Mar. 21. No gage-height record Oct. 2-20, Oct. 23 to Mar. 12, May 11-13, June 3-9, July 18-21, except for staff-gage readings Oct. 15, 20, Nov. 1, 14, 29, Dec. 10, 16, Feb. 4, Mar. 12; discharge computed on basis of weather records, 6 field estimates, and records for Beaver Creek at Spencer and Camas Creek at Camas.

Beaver Creek at Camas, Idaho

Location.- Staff gage, lat. 44°01', long. 112°14', in NE¼ sec. 21, T. 8 N., R. 36 E., a quarter of a mile northwest of Oregon Short Line Railroad station at Camas and three-eighths of a mile upstream from mouth.

Records available.- April 1921 to September 1947.

Extremes.- Maximum discharge observed during year, 104 second-feet Mar. 20 (gage height, 2.64 feet); no flow most of year.
1921-47: Maximum discharge observed, 163 second-feet Apr. 7, 1930; usually no flow past station except for short period in spring of each year; none passed station during years 1931-36, 1940.

Remarks.- Records good except those below 10 second-feet and those for periods of no gage-height record, which are fair. Flow affected by irrigation diversions above Dubois, about 14 miles above station, and by heavy channel losses below Dubois.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	56	32	26	0.5		
2						0	51	27	44	0		
3						0	51	19	a38	0		
4						0	34	22	a37	0		
5						0	19	27	a38	0		
6						0	29	28	a35	0		
7						0	19	28	a30	0		
8						0	22	37	a33	0		
9						0	18	42	a40	0		
10						0	19	49	a55	0		
11						0	22	54	56	0		
12						0	15	66	49	0		
13						0	14	71	40	0		
14						0	18	76	31	0		
15						a10	57	61	27	0		
16						18	81	52	25	0		
17						33	73	44	31	0		
18						50	68	40	34	0		
19						79	65	38	47	0		
20						91	56	32	55	0		
21						93	62	32	48	0		
22						89	69	29	37	0		
23						70	50	25	23	0		
24						54	43	23	13	0		
25						37	41	20	8.8	0		
26						38	37	8.1	3.3	0		
27						24	33	2.4	2.1	0		
28						24	35	5.1	1.1	0		
29						28	36	13	0	0		
30						42	35	11	3.3	0		
31						66	-	9.4	-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1946	1,820	82	0	4.99	3,610
January	0	0	0	0	0
February	0	0	0	0	0
March	846	93	0	27.3	1,680
April	1,227	81	14	40.9	2,430
May	1,023	76	2.4	33.0	2,030
June	910.6	56	0	30.4	1,810
July	.5	.5	0	.02	1.0
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1946-47	4,007.1	93	0	11.0	7,950

a No gage-height record; discharge computed on basis of weather records and records for station at Dubois and Camas Creek at Camas.

Medicine Lodge Creek at Ellis Ranch, near Argora, Idaho

Location.- Water-stage recorder, lat. 44°17', long. 112°30', in sec. 7, T. 11 N., R. 34 E., 4 miles upstream from Middle Creek, 6½ miles southeast of Argora, and 17 miles northwest of Dubois.

Records available.- October 1940 to September 1947.

Extremes.- Maximum discharge during year, 201 second-feet Mar. 15 (gage height, 3.98 feet), from rating curve extended above 120 second-feet by logarithmic plotting; minimum, 10 second-feet Dec. 17 (gage height, 1.08 feet).

1940-47: Maximum discharge, 229 second-feet June 9, 1944 (gage height, 4.23 feet), from rating curve extended above 120 second-feet by logarithmic plotting; minimum, 9 second-feet Dec. 12, 1940.

Remarks.- Records good. Several diversions above and below station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	34	48	21	29	25	45	36	64	68	63	54
2	54	34	48	18	40	33	45	36	68	68	62	53
3	48	33	46	14	52	44	44	35	72	65	61	52
4	48	36	46	14	50	48	42	36	71	65	61	52
5	48	36	46	14	50	46	41	36	72	65	62	52
6	48	37	a47	15	48	45	41	38	71	63	60	50
7	49	39	a46	16	40	46	41	36	67	58	58	50
8	49	45	a46	18	24	45	44	34	79	59	61	50
9	49	50	a45	20	23	45	42	32	85	67	60	50
10	48	49	45	23	26	46	42	35	80	65	62	50
11	46	50	45	26	32	46	40	68	88	64	54	50
12	a45	48	45	32	48	46	41	68	80	65	32	50
13	a45	48	45	35	49	52	41	65	80	63	59	50
14	a45	49	44	33	47	62	41	60	77	60	59	49
15	a45	50	44	26	48	105	44	58	76	68	58	50
16	a43	49	38	22	48	107	41	58	79	66	57	48
17	a42	48	15	23	47	98	40	56	80	65	56	50
18	a42	48	13	24	46	94	39	56	80	64	55	57
19	a42	50	15	25	46	85	39	57	76	64	54	50
20	42	57	18	26	45	74	36	56	79	63	56	50
21	40	47	23	28	46	68	38	54	76	64	59	49
22	40	49	32	33	45	62	37	55	71	64	66	47
23	40	50	35	40	46	57	36	60	69	63	59	47
24	40	50	46	50	46	54	36	64	67	61	58	47
25	40	48	46	52	45	53	36	65	67	58	57	47
26	40	50	47	56	28	54	37	66	67	58	56	48
27	38	48	47	46	30	52	37	66	68	58	56	46
28	38	48	27	32	29	53	37	69	69	58	56	46
29	36	48	28	35	-	54	37	64	69	62	55	46
30	35	48	22	29	-	54	36	63	68	62	54	46
31	35	-	20	28	-	48	-	64	-	61	54	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,345	54	35	43.4	2,670
November	1,376	57	33	45.9	2,730
December	1,156	48	13	37.3	2,290
Calendar year 1946	16,831	72	13	46.1	33,380
January	874	56	14	28.2	1,730
February	1,153	52	23	41.2	2,290
March	1,801	107	25	58.1	3,570
April	1,196	45	36	39.9	2,370
May	1,646	69	32	53.1	3,260
June	2,215	88	64	73.8	4,390
July	1,954	68	58	63.0	3,880
August	1,820	66	54	58.7	3,610
September	1,486	57	46	49.5	2,950
Water year 1946-47	18,022	107	13	49.4	35,740

a No gage-height record; discharge computed on basis of weather records, recorded range in stage, and records for station near Small.

Medicine Lodge Creek near Small, Idaho

Location.- Water-stage recorder, lat. 44°16', long. 112°25', in NW¼ sec. 25, T. 11 N., R. 34 E., 400 feet west of H. W. Small's ranch house, 1 mile downstream from Indian Creek, 4 miles northwest of Small, and 11 miles northwest of Dubois.

Drainage area.- 270 square miles.

Records available.- April 1921 to December 1923, October 1940 to September 1947.

Extremes.- Maximum discharge during year, 211 second-feet Mar. 16; maximum gage height recorded, 6.49 feet Feb. 13 (ice jam); minimum discharge not determined, occurred during period of ice effect.
1921-23, 1940-47: Maximum discharge recorded, 265 second-feet June 9, 1944, from rating curve extended above 150 second-feet; maximum gage height recorded, that of Feb. 13, 1947; minimum observed, 8 second-feet Dec. 14, 1940 (discharge measurement).

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	44	51			30	55	61	84	84	72	54
2	60	43	52			30	57	63	85	84	71	53
3	54	42	51			54	56	66	90	80	70	52
4	53	45	51			60	55	68	90	80	70	52
5	54	46	53	20	*40	56	50	69	90	80	70	52
6	56	47	56			56	52	71	88	76	68	52
7	56	48	52			56	51	70	85	72	66	52
8	56	52	55			56	54	67	100	75	69	52
9	56	56	54			56	55	65	105	85	67	52
10	56	55	*54		25	56	55	66	100	82	68	52
11	55	56	53			57	52	90	h109	80	73	52
12	54	52	53	35	62	*f59	52	106	100	80	69	51
13	54	53	52		64	69	55	100	100	80	66	50
14	54	56	52		62	77	59	93	96	77	66	50
15	55	55	53		62	106	60	88	96	84	64	50
16	52	54	49		62	123	58	88	100	82	63	50
17	50	53			62	112	57	85	100	81	61	51
18	50	52			60	100	58	85	100	80	60	61
19	50	57		25	60	97	57	85	95	81	59	53
20	50	64	20		58	84	56	85	100	80	59	51
21	48	54			59	78	57	82	95	80	65	50
22	47	52			59	71	59	82	90	80	73	48
23	47	55			65	66	56	80	86	79	66	48
24	48	54			60	61	56	92	84	77	64	48
25	48	51		45	56	58	56	92	84	73	63	47
26	50	53	40		30	60	58	92	84	72	60	50
27	48	53			30	57	60	92	84	72	57	51
28	48	53			30	59	61	94	85	71	56	50
29	46	53			-	60	63	90	85	73	56	50
30	44	51	30	30	-	64	63	84	82	73	55	50
31	43	-			-	60	-	84	-	72	55	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,590	60	43	51.3	3,150
November	1,559	64	42	52.0	3,090
December	1,311	56	-	42.3	2,600
Calendar year 1946	21,070	118	-	57.7	41,790
January	900	-	-	30.0	1,790
February	1,336	65	-	47.7	2,650
March	2,088	123	30	67.4	4,140
April	1,693	63	50	56.4	3,360
May	2,545	106	61	82.1	5,050
June	2,772	109	82	92.4	5,500
July	2,425	85	71	78.2	4,810
August	2,001	73	55	64.5	3,970
September	1,534	61	47	51.1	3,040
Water year 1946-47	21,754	123	-	59.6	43,150

* Winter discharge measurement made on this day.
f Computed from partly estimated gage-height record.
h Computed from staff-gage reading.
Note.- Stage-discharge relation affected by ice Nov. 2-4, 10, 21, Dec. 17 to Feb. 14, Feb. 26 to about Mar. 10; no gage-height record Jan. 26, Jan. 31 to Feb. 4, Feb. 7-11, 15-20, Feb. 28 to Mar. 11, May 13 to June 10, June 12 to July 22; discharge computed on basis of records for station near Argora and nearby streams.

Little Lost River near Howe, Idaho

Location.- Water-stage recorder, lat. 43°53', long. 113°06', in sec. 3, T. 6 N., R. 28 E., a quarter of a mile upstream from diversion dam of Blaine County Investment Co , 6 miles northwest of Berenice, and 7 miles northwest of Howe.

Records available.- April 1921 to September 1947 (no winter records).

Extremes.- Maximum discharge during year, 174 second-feet June 12, 17, 18, 21-23; maximum gage height observed, 6.00 feet Feb. 3 (ice jam); minimum discharge recorded, 33 second-feet Dec. 28, but may have been less during periods of ice effect or no record in winter.

1921-47: Maximum discharge, about 450 second-feet Aug. 11, 1936, during cloudburst (gage height, 3.1 feet, datum then in use, from floodmark), from rating curve extended above 100 second-feet; minimum observed, 4.1 second-feet Dec. 12, 1940.

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

Cooperation.- Water-stage recorder inspected by Water District No. 9.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	h81	81	a65			-	101	124	167	136	86	88
2	100	78	a65			-	101	127	167	131	83	85
3	106	68	a65			-	101	141	168	128	82	84
4	100	69	a75			-	98	150	168	127	88	85
5	98	84	a75			-	92	155	168	127	89	83
6	96	86	a75			-	94	155	168	124	85	82
7	96	89	a65			-	95	157	170	121	82	82
8	96	89	a65			-	92	158	170	120	80	84
9	95	78	*80			-	91	162	171	133	78	86
10	98	73	64			-	91	163	171	132	81	88
11	h95	81	69			-	91	164	171	127	86	89
12	h96	76	75			-	89	163	172	126	84	88
13	94	62	76			*71	91	161	171	122	81	85
14	94	80	76			82	97	162	171	120	80	82
15	94	86	76			110	103	159	171	121	77	84
16	94	76	69			138	110	159	171	119	77	84
17	94	66	b50			137	112	158	172	116	80	89
18	94	82	b40			128	115	161	172	110	78	92
19	94	89	b43			132	115	162	171	110	76	95
20	92	92	b45			132	113	161	171	107	76	92
21	92	74	b45			132	116	161	172	107	91	89
22	92	64	45			124	112	162	174	108	146	86
23	92	78	b45			113	109	162	172	106	116	83
24	92	84	b43			101	97	161	171	109	103	82
25	92	73	43			98	94	161	163	106	100	81
26	92	75	44			101	96	161	159	100	94	82
27	92	78	46			96	103	163	158	95	91	83
28	94	81	b42		h54	94	118	167	154	88	90	82
29	92	82	b42		-	98	124	167	153	88	89	82
30	85	82	b42		-	104	124	167	145	88	86	81
31	84	-	b42		-	107	-	167	-	88	88	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,906	106	81	93.7	5,760
November	2,356	92	62	78.5	4,670
December	1,772	76	40	57.2	3,510
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 13-31	2,098	138	71	110	4,160
April	3,085	124	89	103	6,120
May	4,901	167	124	158	9,720
June	5,022	174	145	167	9,960
July	3,540	136	88	114	7,020
August	2,723	146	76	87.8	5,400
September	2,558	95	81	85.3	5,070
Water year	-	-	-	-	-

* 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 Big Lost River at Wildhorse, near Chilly.
b Stage-discharge relation affected by ice.
h Computed from staff-gage reading.

Blaine County Investment Co.'s canal near Howe, Idaho

Location.- Staff gage and Cippoletti weir, lat. 43°53', long. 113°05', in NW¼NW¼ sec. 11, T. 6 N., R. 28 E., 300 yards downstream from head gates and 7 miles northwest of Howe.

Records available.- April 1924 to September 1947 (prior to 1939, irrigation seasons only).

Extremes.- Maximum discharge observed during year, 65 second-feet June 8-24 (gage height, 2.16 feet); no flow during long periods.
1924-47: Maximum discharge observed, 87 second-feet May 24, 25, 1928; no flow during long periods each year.

Remarks.- Records good except those for Nov. 1 to Mar. 20, which are poor. Gage read once daily. Canal diverts water from Little Lost River in sec. 2, T. 6 N., R. 28 E. for irrigation of lands in project of Blaine County Inventment Co.

Cooperation.- Gage readings furnished by Water District No. 9.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34						44	20	61	35	8.7	a20
2	41						44	28	61	30	8.7	a20
3	51						47	35	61	26	8.7	19
4	51						49	42	61	26	8.7	20
5	51		0.1				50	48	61	27	8.7	20
6	51						55	55	63	24	8.7	14
7	51					0.5	52	55	63	20	8.7	14
8	51						50	55	65	20	8.3	14
9	38		.1				41	55	65	20	8.3	14
10	37						38	57	65	20	8.7	14
11	32						35	57	65	20	8.7	14
12	32						30	57	65	20	8.7	20
13	31					.8	30	52	65	20	8.7	20
14	36						30	55	65	19	8.7	20
15	35						30	55	65	19	8.7	20
16	36	1.0			0.5	1.0	34	53	65	19	7.2	16
17	35						37	54	65	18	7.2	13
18	35						41	56	65	a16	7.2	18
19	35						45	57	65	15	7.2	18
20	35		.1			7.9	43	57	65	15	7.2	18
21	35					15	43	57	65	12	7.2	18
22	35					15	43	57	65	12	16	17
23	35					18	37	58	65	12	16	16
24	35					18	30	58	65	12	17	16
25	39					28	23	58	64	12	18	16
26	48					28	20	58	59	12	18	16
27	48					40	12	61	57	11	20	16
28	42					42	12	61	53	11	20	18
29	42				-	41	20	61	53	11	20	16
30	42				-	46	20	61	45	9.1	20	16
31	20	-			-	42	-	61	-	8.7	a20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,219	51	20	39.3	2,420
November	30.0	-	-	1.0	60
December	3.1	-	-	.1	6.1
Calendar year 1946	5,739.1	55	0	15.7	11,390
January	0	0	0	0	0
February	14.0	-	-	.5	28
March	353.7	46	-	11.4	702
April	1,085	55	12	36.2	2,150
May	1,654	61	20	53.4	3,280
June	1,867	65	45	62.2	3,700
July	551.8	35	8.7	17.8	1,090
August	357.9	20	7.2	11.5	710
September	509	20	13	17.0	1,010
Water year 1946-47	7,644.5	65	0	20.9	15,160

a No gage-height record; discharge interpolated.
Note.- Leakage only passing station Nov. 1 to Mar. 19; discharge computed on basis of 3 discharge measurements or field estimates and observer's notes.

Big Lost River at Wild Horse, near Chilly, Idaho

Location.- Water-stage recorder, lat. 43°56', long. 114°07', in sec. 17, T. 7 N., R. 20 E., a quarter of a mile upstream from East Fork Big Lost River, 2 miles downstream from Wild Horse dam site, and 16 miles southwest of Chilly.

Drainage area.- 114 square miles.

Records available.- March 1944 to September 1947.

Extremes.- Maximum discharge during year, 616 second-feet May 8 (gage height, 4.35 feet); minimum, 9 second-feet sometime during period Feb. 4 to Mar. 14 (gage height, 1.15 feet, from recorded range in stage).
1944-47: Maximum discharge, 622 second-feet June 27, 1944 (gage height, 4.37 feet); minimum, that which occurred sometime during period Feb. 4 to Mar. 14, 1947.

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

Cooperation.- Water-stage recorder inspected by employee of Water District No. 27.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	34	26	24	b21		36	195	374	190	88	38
2	94	31	28	23	21		35	280	368	220	85	36
3	73	30	26	23	21		34	438	341	240	85	38
4	64	32	31	25			34	473	300	240	82	37
5	60	31	31	25			32	473	280	230	77	36
6	56	31	31	25			32	483	260	230	72	34
7	53	31	26	23		19	32	532	260	240	67	35
8	52	31	26	23			32	592	321	260	64	37
9	49	29	28	23			32	565	335	240	62	36
10	48	29	26	23			32	457	298	213	62	36
11	44	31	28	23			31	380	286	205	60	36
12	45	25	29	22			32	324	266	186	56	35
13	44	27	29	22			38	304	266	180	54	34
14	43	32	29	b21			50	270	276	175	53	33
15	42	29	29	b19	20	*20	67	258	286	175	52	32
16	41	25	21	b19		20	82	266	310	171	49	32
17	41	31	17	b19		22	110	283	347	159	48	34
18	41	31	23	b19		24	117	293	359	152	46	34
19	39	31	25	19		26	108	299	398	154	46	34
20	39	26	25	20		28	120	327	413	150	51	34
21	41	25	24	20		30	123	353	356	145	54	33
22	43	28	25	20		33	118	368	280	140	53	32
23	44	31	24	20		33	116	332	260	135	53	31
24	40	26	24	22		31	111	330	260	123	49	31
25	41	28	26	22		30	107	356	270	114	46	31
26	41	32	26	22		31	117	380	290	107	44	32
27	38	32	26	20		30	143	413	280	100	42	32
28	38	32	24	20		32	175	392	230	96	41	32
29	35	32	22	b20	-	35	190	344	210	94	39	31
30	35	28	23	b21	-	38	182	332	190	91	39	32
31	32	-	23	b21	-	36	-	368	-	88	39	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	1,442	94	32	46.5	0.408	0.47	2,860
November	891	34	25	29.7	.261	.29	1,770
December	801	31	17	25.8	.226	.26	1,590
Calendar year 1946	34,882	480	-	95.6	.839	11.37	69,180
January	668	25	19	21.5	.189	.22	1,320
February	563	21	-	20.1	.176	.18	1,120
March	765	38	-	24.7	.217	.25	1,520
April	2,468	190	31	82.3	.722	.81	4,900
May	11,460	592	195	370	3.25	3.74	22,730
June	8,948	413	190	298	2.61	2.92	17,750
July	5,243	260	88	169	1.48	1.71	10,400
August	1,758	88	39	56.7	.497	.57	3,490
September	1,018	38	31	33.9	.297	.33	2,020
Water year 1946-47	36,025	592	-	98.7	.866	11.75	71,470

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.- No gage-height record Feb. 4 to Mar. 14, June 4-7, June 22 to July 9; discharge computed on basis of weather records, records for Warm Springs Creek near Ketchum, and station at Howell Ranch.

Big Lost River at Howell Ranch, near Chilly, Idaho

Location.- Water-stage recorder, lat. 44°01', long. 114°00', in sec. 30, T. 8 N., R. 21 E., at Howell Ranch, 9 miles southwest of Chilly and 21 miles northwest of Mackay.

Records available.- April 1904 to August 1906, July 1907 to November 1914, May 1920 to September 1947 (no winter records).

Extremes.- Maximum discharge during year, 1,890 second-feet May 8 (gage height, 3.85 feet); minimum not determined, probably occurred during period of no record.
1904-14, 1920-47: Maximum discharge, 3,500 second-feet June 12, 1921 (gage height, 5.94 feet); minimum observed, 19 second-feet (discharge measurement) Dec. 12, 1939.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Several small diversions above station. Hammerly ditch (capacity, about 20 second-feet) diverts a quarter of a mile below station.

Cooperation.- Water-stage recorder inspected by Water District No. 27.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Sept. 23-30)

0.9	100	2.3	641
1.2	169	2.8	975
1.5	264	3.3	1,370
1.9	430	3.8	1,840

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	164	132					a115	529	1,020	534	246	126
2	408	121					a110	788	982	600	236	123
3	298	113					110	1,230	905	672	236	128
4	254	132					b110	1,420	815	666	250	128
5	236	126					b100	1,410	742	629	223	123
6	223	123					b100	1,430	716	641	203	117
7	213	126					b100	1,580	722	672	194	117
8	207	121					b100	1,780	912	710	186	121
9	194	b115					b100	1,720	961	678	177	119
10	186	b115					b100	1,380	835	624	172	119
11	172	b120					b100	1,120	795	595	172	117
12	175						b100	996	729	514	162	115
13	166						b130	912	729	488	159	110
14	164						177	822	781	488	159	106
15	162						216	762	815	488	154	106
16	159						229	788	919	478	149	104
17	156						264	849	1,040	440	144	108
18	154						283	870	1,030	416	139	119
19	149						257	870	1,100	421	137	115
20	149						287	954	1,140	412	149	113
21	154	a110					302	1,020	933	394	180	110
22	156						298	1,080	775	376	210	110
23	169						294	968	703	364	180	108
24	152						287	954	703	330	162	107
25	154						283	1,020	748	306	149	106
26	154						330	1,050	788	287	142	113
27	144						398	1,140	722	268	137	113
28	146						493	1,140	629	264	135	110
29	135						519	975	561	254	137	110
30	135						509	919	519	250	132	110
31	119	-					-	1,020	-	243	130	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,607	408	119	181	11,120
November	3,434	132	-	114	6,810
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	6,801	519	100	227	13,490
May	33,496	1,780	529	1,081	66,440
June	24,769	1,140	519	826	49,130
July	14,502	710	243	468	28,760
August	5,341	250	130	172	10,590
September	3,431	128	104	114	6,810
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of weather records and records for station at Wild Horse, near Chilly.
b Stage-discharge relation affected by ice.

Big Lost River (east channel) above Mackay Reservoir, near Mackay, Idaho

Location.- Water-stage recorder and concrete control, lat. 43°59', long. 113°45', in sec. 32, T. 8 N., R. 23 E., above flow line of reservoir, 3 miles upstream from Mackay Dam and 7½ miles northwest of Mackay.

Records available.- May 1919 to September 1947.

Average discharge.- 28 years, 64.8 second-feet.

Extremes.- Maximum discharge during year, 860 second-feet May 9 (gage height, 4.60 feet); minimum, 8 second-feet Jan. 31, Apr. 11-30; minimum gage height, 1.25 feet Jan. 31, Apr. 25-28, 30.
1919-47: Maximum discharge, 1,320 second-feet June 7, 1938; maximum gage height, 5.02 feet July 1, 1944; no flow during long periods in 1920, 1923-38, 1940.

Remarks.- Records good except those for periods of backwater and those for Jan. 1 to Apr. 30, which are fair. Diversions above station for irrigation. The sum of the combined discharge of east and west channels of Big Lost River and of the combined discharge of east and west channels of Warm Spring Creek, near Mackay, represents practically entire surface flow of Big Lost River which enters Mackay Reservoir.

Cooperation.- Water-stage recorder graph furnished by Water District No. 27.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	30	18	15	10	10	10	16	561	235	54	21
2	14	28	18	14	10	10	9	46	556	233	51	20
3	16	27	20	14	10	10	9	205	537	245	48	20
4	23	26	19	14	10	10	9	412	492	250	46	18
5	29	27	18	13	10	10	9	524	440	245	44	15
6	29	26	18	13	10	10	9	580	400	240	43	15
7	30	27	18	13	10	10	9	660	377	235	40	15
8	30	27	18	14	10	10	9	776	448	250	38	16
9	30	25	18	14	10	10	9	836	520	258	35	15
10	30	24	17	14	9	10	9	c770	500	255	36	15
11	30	24	17	14	9	10	9	c675	c470	250	35	15
12	30	23	16	13	9	10	8	605	c420	255	34	14
13	30	24	16	13	9	10	9	524	c380	237	33	14
14	30	23	16	13	10	12	8	476	c380	223	31	14
15	30	21	16	12	10	12	9	408	c390	216	30	14
16	30	20	16	12	10	12	9	385	c430	212	30	14
17	30	20	16	12	10	12	8	396	c500	205	29	14
18	31	20	16	12	10	12	8	416	c530	187	27	14
19	31	20	16	12	11	11	8	420	c535	181	27	14
20	31	21	16	12	10	10	8	448	c590	177	28	13
21	31	20	16	12	10	10	8	488	c560	174	30	13
22	31	20	16	12	10	10	8	532	c450	168	30	13
23	31	20	16	12	11	10	8	516	c400	158	30	13
24	31	20	16	12	12	10	8	480	c370	148	30	13
25	31	19	16	12	11	9	8	500	385	128	27	14
26	32	18	16	12	11	9	8	528	385	107	26	12
27	32	18	16	12	11	10	8	580	366	97	26	12
28	32	18	16	12	10	10	8	620	337	75	25	12
29	32	18	16	12	-	10	8	556	311	69	25	13
30	32	18	16	12	-	10	8	512	271	63	23	12
31	30	-	15	11	-	10	-	546	-	57	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	892	32	13	28.8	1,770
November	672	30	18	22.4	1,330
December	518	20	15	16.7	1,030
Calendar year 1946	33,364	698	4	91.4	66,190
January	394	15	11	12.7	781
February	283	12	9	10.1	561
March	319	12	9	10.3	633
April	255	10	8	8.5	506
May	15,436	836	16	498	30,620
June	13,291	590	271	443	26,360
July	5,833	258	57	188	11,570
August	1,033	54	22	33.3	2,050
September	437	21	12	14.6	867
Water year 1946-47	39,363	836	8	108	78,080

c Backwater from Mackay Reservoir; discharge computed on basis of percentage submergence of control and a standard submerged weir formula corrected on basis of discharge measurements.

Big Lost River (west channel) above Mackay Reservoir, near Mackay, Idaho

Location.- Water-stage recorder, lat. 43°58', long. 113°45', in sec. 5, T. 7 N., R. 23 E., above flow line of reservoir, 3 miles upstream from Mackay Dam and 7½ miles northwest of Mackay.

Records available.- May 1919 to September 1947.

Average discharge.- 28 years, 58.6 second-feet.

Extremes.- Maximum discharge during year, 222 second-feet May 9 (gage height, 3.15 feet); minimum, 30 second-feet Apr. 19-22 (gage height, 2.00 feet).

1919-47: Maximum discharge, 1,200 second-feet (estimated) sometime during period June 5-16, 1921 (gage height, 4.45 feet, site and datum then in use); minimum, 9 second-feet May 22, 26, 1935.

Remarks.- Records good except those for periods of backwater from Mackay Reservoir, which are fair. Diversions above station for irrigation. The sum of the combined discharge of east and west channels of Big Lost River and the combined discharge of east and west channels of Warm Spring Creek, near Mackay, represents practically the entire surface flow of Big Lost River which enters Mackay Reservoir (see following page).

Cooperation.- Water-stage recorder graph furnished by Water District No. 27.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	47	46	41	38	35	34	32	112	69	50	43
2	59	46	46	40	38	34	34	35	114	66	50	45
3	56	46	45	40	38	34	34	59	110	66	50	45
4	55	46	43	40	38	34	34	103	103	68	50	45
5	52	46	43	40	38	34	34	117	94	69	50	45
6	52	46	43	40	36	34	33	130	84	69	48	45
7	52	46	43	40	36	34	32	148	80	68	48	43
8	52	46	43	40	36	34	32	182	87	69	48	43
9	52	46	43	40	36	34	33	212	102	72	47	43
10	52	46	43	40	36	34	33	c190	108	75	47	43
11	52	46	42	40	36	33	34	c150	c100	74	47	43
12	52	46	42	39	36	33	34	c130	c90	68	46	43
13	51	46	42	39	36	34	34	117	c85	63	46	43
14	51	45	42	39	36	34	34	107	c80	62	46	43
15	51	45	43	39	36	35	33	90	c80	62	46	43
16	51	45	43	39	36	38	32	84	c90	63	46	43
17	51	43	43	39	36	38	31	82	c105	62	45	45
18	51	43	43	39	36	38	31	82	c110	62	45	43
19	51	46	43	39	36	36	30	81	c115	62	45	45
20	51	47	43	39	35	35	30	82	c130	61	47	45
21	51	47	43	39	35	34	30	89	c135	62	50	43
22	51	46	43	39	35	33	30	95	c110	63	50	43
23	51	46	42	39	35	33	31	100	c95	62	48	43
24	51	46	43	39	36	33	31	95	c90	62	48	43
25	51	46	43	39	36	33	32	97	89	61	47	43
26	51	46	43	39	36	33	32	102	89	56	47	43
27	51	46	42	39	35	34	32	110	89	54	46	43
28	51	47	42	39	35	34	32	122	84	52	47	43
29	50	46	42	38	-	34	32	115	78	50	46	43
30	50	47	42	38	-	34	32	105	72	50	45	43
31	48	-	41	38	-	34	-	110	-	51	45	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,604	59	48	51.7	3,180
November	1,376	47	43	45.9	2,730
December	1,330	46	41	42.9	2,640
Calendar year 1946	23,103	260	39	63.3	45,810
January	1,218	41	38	39.3	2,420
February	1,012	38	35	36.1	2,010
March	1,064	38	33	34.3	2,110
April	970	34	30	32.3	1,920
May	3,353	212	32	108	6,650
June	2,910	135	72	97.0	5,770
July	1,953	75	50	63.0	3,870
August	1,466	50	45	47.3	2,910
September	1,306	45	43	43.5	2,590
Water year 1946-47	19,562	212	30	53.6	38,800

c Backwater from Mackay Reservoir; discharge computed by using slope as a factor.

Combined discharge, in second-feet, of Big Lost River (east and west channels) and Warm Spring Creek (east and west channels) above Mackay Reservoir, near Mackay, Idaho, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	205	204	194	182	170	166	154	126	837	434	203	173
2	216	201	193	181	169	165	153	161	836	426	201	170
3	208	200	193	162	166	165	153	367	812	442	199	170
4	212	199	190	179	166	163	153	654	753	452	197	166
5	217	200	189	178	166	163	152	791	682	450	195	166
6	211	199	193	178	164	163	150	873	622	444	191	166
7	211	202	191	179	165	164	146	985	593	435	187	166
8	213	203	191	179	165	164	143	1,160	683	451	186	168
9	212	201	189	180	164	163	145	1,280	781	470	183	169
10	213	198	189	180	163	163	145	1,190	773	475	186	170
11	213	198	187	180	162	162	145	1,020	739	465	186	175
12	213	197	187	178	163	160	144	909	670	455	182	173
13	213	198	186	178	163	164	146	803	615	425	181	172
14	214	197	186	178	166	179	145	734	603	408	182	168
15	213	195	187	177	166	188	145	632	611	402	183	168
16	213	193	184	180	166	183	144	596	667	399	181	167
17	213	190	184	177	166	178	141	604	763	390	180	173
18	215	191	186	177	166	175	141	625	808	370	178	173
19	214	198	184	177	166	170	140	628	824	365	176	176
20	214	208	186	177	165	163	139	658	906	360	182	175
21	214	203	186	176	165	161	136	711	886	360	194	174
22	214	202	186	176	163	158	135	770	733	354	193	182
23	215	200	183	176	166	156	134	764	649	339	190	182
24	215	199	184	176	168	155	132	720	606	331	189	190
25	213	196	184	175	170	153	128	743	615	303	187	190
26	214	195	186	175	168	153	125	782	617	272	187	191
27	214	195	185	175	169	154	119	852	598	258	188	190
28	214	198	183	175	168	154	119	915	561	232	188	190
29	212	197	183	174	-	155	119	839	526	221	188	190
30	210	197	183	173	-	158	119	776	476	214	183	188
31	205	-	181	171	-	156	-	822	-	207	179	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	6,589	216	205	213	13,070
November	5,954	208	190	198	11,810
December	5,793	194	181	187	11,490
Calendar year 1946	103,472	1,240	147	283	205,200
January	5,499	182	171	177	10,910
February	4,644	170	162	166	9,210
March	5,074	188	153	164	10,060
April	4,190	154	119	140	8,310
May	23,490	1,280	126	758	46,590
June	20,845	906	476	695	41,350
July	11,609	475	207	374	23,030
August	5,805	203	176	187	11,510
September	5,271	191	166	176	10,450
Water year 1946-47	104,763	1,280	119	237	207,800

Mackay Reservoir near Mackay, Idaho

Location.- Staff gage on head-gate tower of dam on Big Lost River, lat. 43°57', long. 113°40', in sec. 12, T. 7 N., R. 23 E., 4 miles northwest of Mackay. Datum of gage is 6,000 feet above mean sea level.

Records available.- January 1919 to September 1947.

Extremes.- Maximum contents observed during year, 40,480 acre-feet June 20-22 (gage height, 63.60 feet); minimum observed, 5,420 acre-feet Sept. 22 (gage height, 23.80 feet).

1919-47: Maximum contents observed, 41,270 acre-feet May 30, 1938 (gage height, 64.20 feet); no available contents during periods in 1919, 1920, 1924, 1926, 1929, 1931-35; minimum gage height observed, 6.3 feet Aug. 5, 1934.

Remarks.- Reservoir is formed by earth- and rock-fill dam, which was reconstructed 1917-18; storage impounded by original dam not recorded. Capacity, 38,400 acre-feet between gage heights 7.0 feet (bottom of outlet tunnel) and 62.0 feet (crest of spillway). Dead storage reported to be about 125 acre-feet. Water is used for irrigation of lands in Big Lost River irrigation district. Considerable seepage around dam because of its porous foundation, but the greater part of this water returns to Big Lost River between reservoir and station below reservoir, near Mackay. Figures given herein represent usable contents computed for 12 p.m. on basis of once-daily readings of staff gage.

Cooperation.- Gage-height record and capacity table furnished by Water District No. 27.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15,220	24,740	32,300	37,180	37,750	37,750	37,360	35,420	39,110	36,090	18,890	9,640
2	15,520	25,000	32,480	37,240	37,760	37,750	37,290	35,350	39,150	35,490	18,390	9,480
3	15,910	25,200	32,680	37,300	37,770	37,750	37,230	35,560	39,150	35,130	17,640	9,280
4	16,280	25,420	32,880	37,380	37,770	37,730	37,150	36,230	39,020	34,660	17,020	9,180
5	16,590	25,700	33,110	37,440	37,780	37,720	37,140	37,190	38,850	34,100	16,650	8,730
6	16,910	25,930	33,310	37,490	37,780	37,720	37,130	38,140	38,750	33,650	16,320	8,370
7	17,260	26,100	33,470	37,480	37,780	37,720	37,090	38,930	38,810	33,340	15,900	8,090
8	17,570	26,270	33,650	37,440	37,770	37,710	37,030	39,510	38,950	33,170	15,540	7,840
9	17 810	26,700	33,850	37,420	37,770	37,700	36,930	39,940	39,320	33,050	15,190	7,540
10	18,130	27,000	34,080	37,430	37,780	37,680	36,870	40,080	39,670	32,500	14,790	7,270
11	18,450	27,320	34,260	37,440	37,770	37,680	36,790	39,800	40,040	31,970	14,500	7,070
12	18,840	27,550	34,420	37,540	37,750	37,670	36,690	39,470	40,150	31,650	14,130	6,810
13	19,210	27,750	34,600	37,620	37,750	37,670	36,630	39,240	40,020	31,270	13,830	6,540
14	19,490	27,950	34,790	37,630	37,750	37,680	36,580	39,010	39,910	30,930	13,560	6,380
15	19,790	28,160	34,970	37,630	37,760	37,730	36,520	38,670	39,840	30,540	13,260	6,200
16	20,060	28,380	35,120	37,630	37,760	37,820	36,460	38,400	39,770	29,990	12,970	5,940
17	20,370	28,600	35,290	37,640	37,760	37,870	36,430	38,330	39,950	29,330	12,600	5,770
18	20,680	28,870	35,460	37,660	37,750	37,870	36,380	38,160	40,250	28,520	12,240	5,590
19	21,060	29,220	35,630	37,660	37,750	37,860	36,330	38,270	40,440	27,960	11,870	5,480
20	21,330	29,640	35,820	37,660	37,730	37,820	36,300	38,550	40,480	27,380	11,540	5,480
21	21,520	30,000	36,000	37,670	37,720	37,780	36,250	38,810	40,480	26,730	11,280	5,440
22	21,830	30,330	36,150	37,670	37,710	37,730	36,200	38,930	40,290	26,020	11,010	5,510
23	22,140	30,600	36,280	37,680	37,700	37,680	36,150	38,970	39,940	25,510	10,830	5,720
24	22,360	30,860	36,410	37,680	37,710	37,660	36,050	39,000	39,560	24,710	10,560	5,870
25	22,660	31,120	36,540	37,700	37,720	37,620	35,990	39,030	39,270	23,940	10,440	5,960
26	23,000	31,400	36,690	37,700	37,730	37,540	35,900	39,120	38,840	23,220	10,400	6,020
27	23,310	31,600	36,790	37,700	37,750	37,470	35,750	39,210	38,380	22,410	10,290	6,070
28	23,530	31,760	36,870	37,710	37,750	37,420	35,660	39,210	37,960	21,560	10,160	6,120
29	23,880	31,940	36,930	37,710	-	37,390	35,600	39,180	37,360	20,790	9,940	6,180
30	24,220	32,100	36,990	37,720	-	37,390	35,490	39,150	36,820	20,130	9,820	6,260
31	24,490	-	37,080	37,730	-	37,380	-	39,120	-	19,480	9,750	-

Monthly gage height and contents, water year October 1946 to September 1947

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	38.83	14,850	-
Oct. 31	49.81	24,490	+9,640
Nov. 30	56.82	32,100	+7,610
Dec. 31	60.95	37,080	+4,980
Calendar year 1946	-	-	+6,280
Jan. 31	61.47	37,730	+650
Feb. 28	61.48	37,750	+20
Mar. 31	61.19	37,380	-370
Apr. 30	59.66	35,490	-1,890
May 31	62.56	39,120	+3,630
June 30	60.58	36,620	-2,500
July 31	44.48	19,480	-17,140
Aug. 31	31.64	9,750	-9,730
Sept.30	25.55	6,260	-3,490
Water year 1946-47	-	-	-8,590

Big Lost River below Mackay Reservoir, near Mackay, Idaho

Location.- Water-stage recorder, lat. 43°56', long. 113°38', in sec. 18, T. 7 N., R. 24 E., 450 feet downstream from Oleson Suspension Bridge, 1 mile downstream from head of Sharp ditch, 1½ miles donwstream from Mackay Reservoir, and 2½ miles northwest of Mackay.

Records available.- December 1903 to August 1906, May 1912 to March 1915 (April 1913 to March 1915 at site 1 mile downstream), January 1919 to September 1947.

Average discharge.- 31 years (1904-5, 1912-14, 1919-47), 271 second-feet.

Extremes.- Maximum discharge during year, 1,120 second-feet (regulated) May 10 (gage height, 3.77 feet); minimum, 56 second-feet (regulated) Oct. 1; minimum gage height, 1.62 feet Oct. 4.

1903-6, 1912-15, 1919-47: Maximum discharge, 2,990 second-feet June 10, 1921 (gage height, 5.79 feet); minimum, 18 second-feet (regulated) Nov. 1, 1934; mirimum gage height, 1.23 feet Nov. 5-8, 1926.

Remarks.- Records good except those for May 5-10, which are fair. Sharp ditch is only diversion between station and reservoir; many diversions above reservoir. Flow regulated by Mackay Reservoir (see preceding page).

Cooperation.- Water-stage recorder inspected by Water District No. 27.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	82	104	146	179	183	201	183	805	757	500	268
2	60	82	104	146	179	183	201	216	811	733	491	276
3	58	82	104	146	179	183	201	302	811	721	500	285
4	58	85	104	146	179	183	197	311	793	721	491	293
5	58	85	106	146	179	183	197	347	757	721	456	320
6	58	85	109	146	179	183	197	432	691	685	408	329
7	58	87	109	165	179	183	197	535	602	674	384	324
8	58	87	109	183	179	183	197	775	565	668	365	324
9	60	87	109	179	179	183	197	1,040	560	668	365	329
10	60	87	109	169	179	183	197	1,110	545	680	361	324
11	60	87	109	169	179	183	194	1,080	602	691	351	320
12	60	87	109	169	179	183	194	990	636	674	338	315
13	63	87	109	165	183	186	194	907	641	652	338	315
14	69	87	109	169	179	186	194	841	668	658	333	311
15	69	87	109	169	183	186	190	775	658	668	333	307
16	69	87	106	172	183	186	190	715	652	663	338	302
17	69	90	106	172	183	186	190	685	658	680	342	302
18	69	93	109	172	183	190	190	630	668	709	351	281
19	69	96	109	172	183	197	186	597	739	715	351	231
20	69	98	109	172	183	197	186	602	823	739	370	212
21	72	98	109	172	186	197	183	624	865	757	361	201
22	75	98	109	176	183	197	183	658	829	697	338	172
23	75	98	109	176	183	197	183	697	775	685	307	136
24	75	96	112	176	183	197	183	709	715	685	293	130
25	75	96	112	176	183	197	183	709	745	709	293	142
26	77	98	121	176	183	197	183	721	805	715	281	190
27	80	98	142	179	183	197	183	787	811	703	264	190
28	80	101	146	176	183	197	183	847	835	685	260	190
29	80	98	146	179	-	197	183	847	823	636	264	190
30	82	101	146	179	-	201	183	817	805	608	272	194
31	82	-	146	179	-	201	-	805	-	565	272	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,107	82	58	68.0	4,180
November	2,730	101	82	91.0	5,410
December	3,549	146	104	114	7,040
Calendar year 1946	108,414	1,190	52	297	215,000
January	5,217	183	146	168	10,350
February	5,075	186	179	181	10,070
March	5,885	201	183	190	11,670
April	5,720	201	183	191	11,350
May	21,294	1,110	183	687	42,240
June	21,693	865	545	723	43,030
July	21,322	757	565	688	42,290
August	10,971	500	260	354	21,760
September	7,703	329	130	257	15,280
Water year 1946-47	113,266	1,110	58	310	224,700

Big Lost River near Arco, Idaho

Location.- Water-stage recorder, lat. 43°35', long. 113°17', in SW¼ sec. 17, T. 3 N., R. 27 E., 600 feet downstream from head of box canyon, 2,000 feet southeast of Mower ranch house, and 3 miles southeast of Arco.
Records available.- August 1946 to September 1947.
Extremes.- Maximum discharge during period August 1946 to September 1947, 285 second-feet June 6; maximum gage height, 3.83 feet Feb. 3, 4 (ice jam); minimum discharge recorded, 28 second-feet Aug. 12, 13, 19, 20, 1947 (gage height, 1.47 feet), but may have been less during period of no gage-height record in July.
Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Station is below all large diversions for irrigation in Big Lost River Valley. Flow regulated by Mackay Reservoir (see p. 105).

Discharge, in second-feet, 1946-47

1946

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	89	7	-	76	13	-	53	19	-	51	25	-	46
2	-	85	8	-	78	14	-	51	20	-	46	26	-	46
3	-	76	9	-	69	15	-	45	21	-	44	27	-	45
4	-	71	10	-	74	16	-	44	22	-	43	28	134	43
5	-	78	11	-	64	17	-	47	23	-	45	29	143	43
6	-	74	12	-	57	18	-	54	24	-	44	30	116	43
												31	100	-

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	64	78			160	122	44	76		33	38
2	80	62	78			160	131	34	137		33	39
3	69	65	78		(*)	158	140	32	199		33	39
4	65	65	76			152	143	37	237		34	40
5	67	65	82			152	137	50	272		34	39
6	82	67	89			152	140	50	279		32	37
7	89	69			55	149	140	46	269		33	38
8	87	67				152	131	39	266		33	36
9	85	65				152	131	56	250		30	
10	85	65				143	119	149	237		30	
			90							34		
11	85	65				143	113	227	250		31	
12	85	64				143	111	269	262		30	
13	87	64				*152	102	272	262		31	
14	80	65			70	162	89	275	250		33	
15	78	65			90	177	87	272	246		33	
				55								
16	76	65			122	186	97	243	243		32	
17	74	67			122	183	111	221	183		31	
18	69	69	(*)		128	165	131	186	100		31	
19	67	85	60		131	158	137	155	51		30	40
20	67	100			134	158	131	113	40		31	
21	65	89			137	149	122	78	36	34	34	
22	62	89	62		137	143	131	67	35	34	35	
23	62	94	61		146	152	134	64	35	34	39	
24	65	89	61		171	152	131	59	34	34	47	
25	67	87	61		177	140	97	49	32	33	49	
26	67	87	64		171	134	80	47	30	33	45	
27	69	85	65		162	131	80	45		34	46	
28	69	82			150	128	62	44	30	31	45	
29	69	85			-	125	59	44		30	43	
30	65	82	60		-	125	50	46		31	39	
31	64	-			-	125	-	49	-	33	39	-

* Winter discharge measurement made on this day.
Note.- No gage-height record Dec. 7-17, Jan. 7 to Feb. 2, June 27 to July 20, Sept. 9-30; discharge computed on basis of weather records, recorded range in stage, and records for station below Mackay Reservoir and Camas Creek near Blaine. Stage-discharge relation affected by ice Dec. 18-21, Dec. 28 to Feb. 15, Feb. 28 to Mar. 2.

Monthly discharge, in second-feet, 1946-47

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
September 1946	1,724	89	43	57.5	3,420
October 1946	2,254	89	53	72.7	4,470
November	2,232	100	62	74.4	4,430
December	2,265	-	-	73.1	4,490
Calendar year	-	-	-	-	-
January 1947	1,705	-	-	55.0	3,380
February	2,763	177	-	98.7	5,480
March	4,661	186	125	150	9,240
April	3,389	143	50	113	6,720
May	3,362	275	32	108	6,670
June	4,431	279	-	148	8,790
July	1,041	-	-	33.6	2,060
August	1,095	49	30	35.5	2,180
September	1,186	-	36	39.5	2,350
Water year 1946-47	30,388	279	-	83.3	60,260

Warm Spring Creek (east channel) near Mackay, Idaho

Location.- Water-stage recorder, lat. 43°58', long. 113°45', in NE¼ sec. 5, T. 7 N., R. 23 E., 700 feet upstream from confluence with west channel and 7½ miles northwest of Mackay.

Records available.- May 1919 to September 1947.

Average discharge.- 28 years, 28.2 second-feet.

Extremes.- Maximum discharge during year, 89 second-feet May 9 (gage height, 2.59 feet); minimum, 15 second-feet Apr. 30, May 1 (gage height, 1.57 feet).
1919-47: Maximum discharge observed, 225 second-feet June 15, 1922 (gage height, 3.24 feet, site and datum then in use); minimum, 9 second-feet May 8, 9, 13, 14, 1919, May 18-21, 1920.

Remarks.- Records good. Practically all natural flow above station diverted during irrigation season. Discharge during summer represents return water from irrigation. The sum of the combined discharge of east and west channels of Warm Spring Creek and the combined discharge of east and west channels of Big Lost River, near Mackay, represents practically the entire surface flow of Big Lost River which enters Mackay Reservoir.

Cooperation.- Water-stage recorder graph furnished by Water District No. 27.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	22	23	24	23	25	22	16	54	38	24	27
2	31	22	22	23	23	25	22	17	54	37	24	25
3	28	22	22	24	22	25	22	28	54	38	25	25
4	27	22	22	23	22	24	22	46	51	39	25	25
5	26	22	21	23	22	24	22	50	46	40	25	26
6	25	22	24	23	22	24	21	57	42	39	24	26
7	25	23	23	24	23	24	21	63	40	38	24	27
8	25	24	23	23	23	24	20	73	44	38	24	27
9	25	24	22	24	22	24	21	86	49	42	25	28
10	25	23	23	24	23	24	21	83	52	45	25	28
11	25	23	22	24	23	24	21	68	53	43	26	29
12	25	23	23	24	23	24	21	60	49	39	25	28
13	25	23	23	24	23	25	21	55	45	35	25	28
14	25	23	23	24	24	28	21	50	43	34	27	27
15	25	23	23	24	24	30	21	42	43	35	27	27
16	25	22	23	25	24	29	21	39	46	35	27	27
17	25	22	23	24	24	27	21	38	50	35	27	28
18	25	22	23	24	24	26	21	38	52	34	26	29
19	25	24	23	24	24	25	21	38	54	35	26	29
20	25	26	23	24	24	24	21	38	58	34	27	29
21	25	24	23	24	24	24	20	41	60	35	30	29
22	25	24	23	24	23	23	20	43	54	35	30	31
23	25	23	23	24	24	23	20	46	46	33	30	31
24	25	23	23	24	24	23	19	45	44	34	28	33
25	24	23	23	24	25	22	18	45	42	31	29	33
26	24	23	23	24	25	22	17	47	44	28	28	35
27	24	23	23	24	25	22	16	51	44	27	29	35
28	24	23	23	23	25	21	16	57	44	27	29	35
29	24	23	23	23	-	22	16	55	42	25	29	35
30	23	23	23	23	-	24	16	52	40	25	28	35
31	23	-	23	23	-	23	-	54	-	24	28	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	781	31	23	25.2	1,550
November	689	26	22	23.0	1,370
December	707	24	21	22.8	1,400
Calendar year 1946	9,982	97	14	27.3	19,790
January	736	25	23	23.7	1,460
February	657	25	22	23.5	1,300
March	754	30	21	24.3	1,500
April	602	22	16	20.1	1,190
May	1,521	86	16	49.1	3,020
June	1,439	60	40	48.0	2,850
July	1,077	45	24	34.7	2,140
August	825	30	24	26.6	1,640
September	877	35	25	29.2	1,740
Water year 1946-47	10,665	86	16	29.2	21,160

Note.- No gage-height record Dec. 16-28, June 16; discharge interpolated.

Warm Spring Creek (west channel) near Mackay, Idaho

Location.- Water-stage recorder, lat. 43°58', long. 113°45', in NE¼ sec. 5, T. 7 N., R. 23 E., 500 feet upstream from confluence with east channel and 7½ miles northwest of Mackay.

Records available.- May 1919 to September 1947.

Average discharge.- 28 years, 92.5 second-feet.

Extremes.- Maximum discharge during year, 158 second-feet May 9 (gage height, 2.03 feet); minimum, 62 second-feet Apr. 30, May 1, 2 (gage height, 1.19 feet).
1919-47: Maximum discharge, 600 second-feet (estimated) Aug. 11, 1936 (gage height, 4.42 feet, datum then in use, from high-water mark); minimum, 49 second-feet Apr. 27, 1935 (gage height, 0.62 foot, datum then in use).

Remarks.- Records good. Flow during summer represents return flow from irrigation. The sum of the conbined discharge of east and west channels of Warm Spring Creek and the combined discharge of east and west channels of Big Lost River, near Mackay, represents practically the entire surface flow of Big Lost River which enters Mackay Reservoir.

Cooperation.- Water-stage recorder graph furnished by Water District No. 27.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	105	107	102	99	96	88	62	110	92	75	82
2	112	105	107	104	98	96	88	63	112	90	76	80
3	108	105	106	104	96	96	88	75	111	93	76	80
4	107	105	106	102	96	95	88	93	107	95	76	78
5	106	105	107	102	96	95	87	100	102	96	76	80
6	105	105	108	102	96	95	87	106	96	96	76	80
7	104	106	107	102	96	96	84	114	96	94	75	81
8	106	106	107	102	96	96	82	132	104	94	76	82
9	105	106	106	102	96	95	82	150	110	98	76	83
10	106	105	106	102	95	95	82	147	113	100	78	84
11	106	105	106	102	94	95	81	128	116	98	78	88
12	106	105	106	102	95	93	81	114	111	93	77	88
13	107	105	105	102	95	95	82	107	105	90	77	87
14	108	106	105	102	96	105	82	101	100	89	78	84
15	107	106	105	102	96	111	82	92	98	89	80	84
16	107	106	102	104	96	104	82	88	101	89	78	83
17	107	105	102	102	96	101	81	88	108	88	80	86
18	108	106	104	102	96	99	81	89	116	87	80	87
19	107	108	102	102	95	98	81	89	120	87	78	88
20	107	114	104	102	96	94	80	90	128	88	80	88
21	107	112	104	101	96	93	78	93	131	89	84	89
22	107	112	104	101	95	92	77	100	119	88	83	95
23	108	111	102	101	96	90	75	102	108	86	82	95
24	108	110	102	101	96	89	74	100	102	87	83	101
25	107	108	102	100	98	89	70	101	99	83	84	100
26	107	108	104	100	96	89	68	105	99	81	86	101
27	107	108	104	100	98	88	63	111	99	80	87	100
28	107	110	102	101	98	89	63	116	96	78	87	100
29	106	110	102	101	-	89	63	113	95	77	88	99
30	105	a109	102	100	-	90	63	107	93	76	87	98
31	104	-	102	99	-	89	-	112	-	75	84	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	3,312	112	104	107	6,570
November	3,217	114	105	107	6,380
December	3,238	108	102	104	6,420
Calendar year 1946	37,030	182	75	101	73,450
January	3,151	104	99	102	6,250
February	2,692	99	94	96.1	5,340
March	2,937	111	88	94.7	5,830
April	2,363	88	63	78.8	4,690
May	3,188	150	62	103	6,320
June	3,205	131	93	107	6,360
July	2,746	100	75	88.6	5,450
August	2,481	88	75	80.0	4,920
September	2,651	101	78	88.4	5,260
Water year 1946-47	35,181	150	62	96.4	69,790

a No gage-height record; discharge interpolated.

Sharp ditch near Mackay, Idaho

Location.- Water-stage recorder and sharp-crested weir, lat. 43°57', long. 113°39', in sec. 7, T. 7 N., R. 24 E., 1,600 feet downstream from head of ditch, three-quarters of a mile downstream from Mackay Reservoir, and 3½ miles northwest of Mackay.

Records available.- April 1939 to September 1947. June 1912 to October 1914 and March 1919 to April 1939 at site 1,400 feet upstream, above Hintze ditch.

Extremes.- Maximum discharge during year, 50 second-feet July 10 (gage height, 1.63 feet); no flow May 1, 2.
1912-14, 1919-47: Maximum discharge, that of July 10, 1947; no flow at times.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Sharp ditch diverts from east side of Big Lost River in SE¼ sec. 12, T. 7 N., R. 23 E., half a mile below Mackay Reservoir and 1 mile above station on Big Lost River below Mackay Reservoir, near Mackay. Water used for irrigation northwest of Mackay and above Streeter ditch. Hintze ditch, which diverts from Sharp ditch above station, was reported by watermaster to have carried 151 acre-feet during year (54 in May, 71 in June, and 26 in July).

Cooperation.- Water-stage recorder graph furnished by Water District No. 27.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	1.6	2.8					h0.2	31	34	17	18
2	1.9	1.6	2.8					0	31	30	21	18
3	2.2	1.6	2.8					.6	31	29	23	18
4	4.3	1.6	3.0					.6	32	29	21	18
5	7.2	1.9	3.0					.6	31	29	18	18
6	8.0	1.9	3.0					.6	27	27	20	18
7	8.0	1.9	3.2			0.7		19	23	27	19	18
8	8.2	1.9	3.2					35	14	26	18	18
9	8.7	1.9	3.2					39	14	26	17	18
10	9.5	1.9	3.4					38	14	27	16	18
11	9.8	1.9	3.4					38	15	23	16	18
12	11	1.9	3.2					37	17	25	15	18
13	11	1.9	3.2					36	19	25	16	18
14	9.2	1.9	3.2	0.7		1.0		34	21	24	16	18
15	9.2	1.9	3.2		0.7	.8	0.6	32	20	24	16	18
16	8.7	1.9	3.2			.6		31	20	24	15	18
17	8.0	1.9	3.4			.5		31	20	23	16	18
18	8.0	1.9	3.5			.5		31	20	24	17	17
19	8.0	2.2	3.5			.5		29	20	25	20	16
20	8.0	2.8	3.5			.5		30	20	26	21	16
21	7.5	2.8	3.5			.6		33	20	22	19	15
22	3.2	2.8	3.5			.6		34	20	25	18	14
23	3.2	2.8	3.5			.6		34	24	26	17	12
24	3.2	2.8	2.3			.6		35	31	25	17	12
25	3.0	2.8				.6		35	34	26	17	13
26	3.0	2.8				.6		36	35	26	17	14
27	2.2	2.8	.7	h.7		.6		38	36	21	17	14
28	1.9	2.8				.6		39	36	20	17	14
29	1.8	2.8		.7	-	.6		38	37	19	18	14
30	1.8	2.8			-	.6		34	36	18	19	11
31	1.6	-			-	.6	-	31	-	18	19	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	182.7	11	1.4	5.89	362
November	66.0	2.8	1.6	2.20	131
December	81.4	3.5	-	2.63	161
Calendar year 1946	3,286.4	34	0	9.00	6,510
January	21.7	-	-	0.70	43
February	19.6	-	-	0.70	39
March	20.1	1.0	.5	0.65	40
April	18.0	-	-	0.60	36
May	849.6	39	0	27.4	1,690
June	749	37	14	25.0	1,490
July	773	34	18	24.9	1,530
August	553	23	15	17.8	1,100
September	488	18	11	16.3	968
Water year 1946-47	3,822.1	39	0	10.5	7,590

h Computed from staff-gage reading.

Note.- No gage-height record Dec. 25 to Jan. 26, Jan. 28 to Mar. 13, Apr. 1-30; discharge interpolated, or computed on basis of field notes and information furnished by watermaster.

Big Wood River at Hailey, Idaho

Location.- Water-stage recorder, lat. 43°31', long. 114°20', in SW¼ sec. 9, T. 2 N., R. 18 E., at steel highway bridge a quarter of a mile southwest of Hailey.
Drainage area.- 640 square miles (total area above River and Slough stations).
Records available.- July to December 1889, June 1915 to September 1947.
Average discharge.- 32 years, 294 second-feet. Average combined discharge of Big Wood River and Big Wood Slough, 32 years, 409 second-feet.
Extremes.- Maximum discharge during year, 2,270 second-feet May 9 (gage height, 5.60 feet); minimum not determined, probably occurred during period of no gage-height record.

1889, 1915-47 (river only): Maximum discharge, 4,480 second-feet June 7, 1938; maximum gage height, 8.66 feet June 12, 1921; practically no flow Sept. 15-23, Nov. 20, 22, 23, 1931, Oct. 25, 1937.

1889, 1915-47 (combined): Maximum daily discharge, 4,500 second-feet June 6, 7, 1938; minimum daily, 15 second-feet Dec. 27, 1921.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Water diverted around station through Big Wood Slough (see p. 119). Total flow of river at Hailey (combined flow of Big Wood River and Big Wood Slough) is given on following page. Diversions above station for irrigation.
Cooperation.- Water-stage recorder inspected by Water District No. 7 AB.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Aug. 1 to Sept. 30)

1.5	50	3.1	537
1.7	82	3.5	762
2.0	142	4.0	1,060
2.3	220	4.8	1,590
2.7	353	5.5	2,180

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	189	122	95	60	80	77	378	1,020	1,240	602	235	80
2	369	106	98	60	82	91	365	1,230	1,220	630	226	80
3	299	100	91	b60	80	93	349	1,640	1,160	681	229	84
4	260	112	102	60	77	89	331	1,840	1,080	681	226	82
5	244	118	*110	65	80	89	309	1,840	1,020	658	212	77
6	232	116	114	70	79	80	306	1,840	988	658	200	75
7	223	116	102	75	77	86	292	1,950	982	658	187	77
8	214	114	96	75	b75	87	299	2,150	1,070	681	182	86
9	212	108	98	75	b76	86	289	2,170	1,130	664	179	84
10	209	114	89	80	82	91	296	1,850	1,010	613	184	82
11	203	114	95	80	82	86	302	1,530	952	591	179	80
12	203	98	100	75	87	79	320	1,400	874	532	174	75
13	200	102	100	75	87	84	378	1,320	839	506	171	72
14	198	114	100	75	84	*87	532	1,200	856	491	171	70
15	195	106	96	65	86	95	693	1,100	868	476	169	74
16	195	95	89	65	87	108	762	1,080	946	457	166	75
17	192	106	b68	70	86	131	821	1,110	1,020	429	166	91
18	189	112	b65	75	82	169	850	1,130	1,050	407	142	96
19	189	129	62	87	79	209	821	1,160	1,100	403	98	93
20	187	142	75	84	75	241	821	1,230	1,080	386	106	95
21	195	114	75	79	80	269	856	1,300	946	346	110	93
22	206	118	74	79	89	292	845	1,320	833	316	104	86
23	229	129	70	77	87	299	821	1,230	792	313	108	82
24	212	110	67	82	87	292	803	1,200	750	299	100	82
25	209	98	68	82	91	316	774	1,250	780	285	96	79
26	209	114	80	86	91	316	792	1,290	821	279	91	80
27	206	116	86	b75	84	306	862	1,390	762	269	89	80
28	182	112	79	*b75	77	323	982	1,350	698	260	89	77
29	122	108	67	b75	-	342	1,030	1,220	647	256	86	79
30	122	104	b60	b79	-	403	1,000	1,180	591	247	84	82
31	114	-	b58	b77	-	390	-	1,220	-	244	84	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	6,408	369	114	207	12,710
November	3,367	142	95	112	6,680
December	2,629	114	58	84.8	5,210
Calendar year 1946	144,480	1,960	32	396	286,600
January	2,297	87	60	74.1	4,560
February	2,309	91	75	82.5	4,580
March	5,706	403	77	184	11,320
April	18,279	1,030	289	609	36,260
May	43,740	2,170	1,020	1,411	86,760
June	28,105	1,240	591	937	55,750
July	14,318	681	244	462	28,400
August	4,643	235	84	150	9,210
September	2,448	96	70	81.6	4,860
Water year 1946-47	134,249	2,170	58	368	266,300

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.- No gage-height record Jan. 1, 2, 4-18; discharge computed on basis of weather records and records for Big Wood Slough at Hailey and Warm Springs Creek near Ketchum.

Combined discharge, in second-feet, of Big Wood River and Big Wood Slough at Hailey, Idaho, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	238	227	184	115	164	154	444	1,050	1,280	660	289	158
2	421	204	188	110	166	181	430	1,250	1,260	691	277	158
3	349	196	184	115	164	184	413	1,650	1,200	749	280	163
4	310	213	197	125	161	178	394	1,850	1,120	750	275	162
5	293	219	210	135	164	176	371	1,850	1,060	722	257	157
6	281	217	214	147	163	161	367	1,880	1,020	722	242	154
7	272	218	197	150	158	173	352	2,040	1,010	723	225	160
8	261	215	186	150	157	176	359	2,240	1,100	747	217	173
9	258	206	190	150	160	172	351	2,240	1,160	727	211	171
10	254	215	174	155	169	181	356	1,900	1,080	671	213	169
11	247	216	185	160	169	172	362	1,580	1,050	645	211	166
12	246	193	193	150	174	160	380	1,450	961	579	205	159
13	242	198	193	155	174	168	439	1,370	923	550	202	155
14	237	216	195	155	171	174	595	1,240	940	533	203	154
15	233	204	189	130	172	186	756	1,140	953	517	201	159
16	232	187	175	130	172	205	824	1,120	1,040	496	196	160
17	230	206	130	140	169	237	882	1,150	1,120	465	195	186
18	227	216	131	150	163	285	911	1,170	1,150	438	187	194
19	226	240	142	157	158	332	880	1,200	1,200	436	190	191
20	223	260	160	159	152	369	881	1,270	1,180	418	199	195
21	230	229	160	159	161	405	907	1,340	1,040	394	205	193
22	242	236	159	159	176	432	885	1,360	914	389	196	182
23	265	240	150	157	174	443	862	1,270	870	384	203	177
24	248	211	133	162	173	411	829	1,240	824	363	191	175
25	246	214	137	162	178	382	787	1,290	855	347	183	172
26	248	230	154	166	180	381	806	1,330	901	338	176	177
27	243	225	164	159	169	371	877	1,430	837	324	173	178
28	240	210	151	156	157	389	997	1,390	768	315	172	175
29	226	206	126	153	-	408	1,050	1,260	711	309	167	176
30	226	197	110	154	-	471	1,020	1,220	647	300	163	174
31	215	-	103	157	-	458	-	1,260	-	298	163	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	7,909	421	215	255	15,690
November	6,464	260	187	215	12,820
December	5,164	214	103	167	10,240
Calendar year 1946	174,578	2,040	103	478	346,300
January	4,582	166	110	148	9,090
February	4,668	180	152	167	9,260
March	8,575	471	154	277	17,010
April	19,767	1,050	351	659	39,210
May	45,030	2,240	1,050	1,453	89,320
June	30,174	1,280	647	1,006	59,850
July	16,000	750	298	516	31,740
August	6,467	289	163	209	12,830
September	5,123	195	154	171	10,160
Water year 1946-47	159,923	2,240	103	438	317,200

Big Wood River near Bellevue, Idaho

Location.- Water-stage recorder, lat. 43°19', long. 114°21', in sec. 20, T. 1 S., R. 18 E., 1¼ miles upstream from flow line of Magic Reservoir, 3 miles upstream from Camas Creek, and 10 miles southwest of Bellevue.

Drainage area.- 823 square miles.

Records available.- July 1911 to September 1947 (except winters of 1942 and prior to 1940).

Extremes.- Maximum discharge during year, 1,570 second-feet May 9 (gage height, 4.18 feet); minimum, 57 second-feet Sept. 1, 2 (gage height, 1.91 feet).
1911-47: Maximum discharge recorded, 3,660 second-feet June 16, 1921 (gage height, 6.07 feet), from rating curve extended above 2,800 second-feet; minimum recorded, 7 second-feet Apr. 14, 1932 (gage height, 1.10 feet).

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

Cooperation.- Water-stage recorder inspected and four discharge measurements furnished by Water District No. 7 AB.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 3 to Feb. 19,
June 1 to July 4)

Oct. 1 to Apr. 13				Apr. 14 to Sept. 30			
2.0	60	2.4	168	1.9	55	2.8	380
2.1	81	2.5	208	2.0	75	3.1	560
2.2	106	2.7	310	2.1	100	3.5	870
2.3	135	2.9	445	2.3	165	3.9	1,260
				2.5	240	4.2	1,590

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73	192	168	70	66	98	387	630	602	276	92	59
2	109	196	165	65	75	106	387	705	638	276	88	61
3	145	188	161	62	79	109	373	915	609	280	85	61
4	161	184	161	66	84	115	342	1,160	560	276	95	67
5	172	168	*172	72	88	118	329	1,220	502	276	98	71
6	161	192	200	72	94	109	323	1,210	495	280	103	71
7	155	192	188	72	96	109	299	1,240	508	272	103	73
8	158	196	172	72	b86	115	304	1,420	560	276	95	78
9	152	188	168	72	b70	112	304	1,500	616	285	88	82
10	155	168	161	72	73	135	294	1,390	554	290	85	82
11	152	168	158	72	73	138	299	1,070	547	272	82	82
12	148	165	161	72	86	126	310	897	495	228	80	79
13	148	158	165	71	142	120	329	769	441	179	78	76
14	148	165	172	69	129	*120	413	682	418	172	73	74
15	148	168	165	62	126	126	521	567	413	162	67	71
16	148	161	158	62	126	129	602	508	413	154	67	69
17	152	158	118	64	123	138	645	465	453	134	67	66
18	155	168	101	67	120	158	675	424	502	118	67	63
19	158	213	112	70	118	188	675	435	540	106	69	63
20	161	250	123	72	112	232	675	483	547	109	73	67
21	165	222	123	71	109	272	698	588	483	109	82	69
22	176	200	112	70	115	310	698	630	402	118	80	67
23	208	222	101	70	120	348	668	595	365	124	78	65
24	213	227	81	72	118	329	638	540	345	121	71	65
25	200	192	68	74	109	304	595	588	350	103	69	63
26	200	184	68	76	112	304	588	602	391	98	69	65
27	217	188	75	72	112	299	609	602	396	98	65	65
28	208	184	76	*68	106	316	652	645	365	90	63	65
29	184	180	76	b67	-	329	690	595	330	88	63	65
30	196	176	72	66	-	387	682	554	290	90	63	63
31	192	-	68	b65	-	402	-	574	-	95	63	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,118	217	73	165	10,150
November	5,633	250	158	188	11,170
December	4,069	200	68	131	8,070
Calendar year 1946	109,591	1,640	52	300	217,400
January	2,147	76	62	69.3	4,260
February	2,867	142	66	102	5,690
March	6,201	402	98	200	12,300
April	15,004	698	294	500	29,760
May	24,203	1,500	424	781	48,010
June	14,130	638	290	471	28,030
July	5,555	290	88	179	11,020
August	2,421	103	63	78.1	4,800
September	2,067	82	59	68.9	4,100
Water year 1946-47	89,415	1,500	59	245	177,400

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.- No gage-height record Dec. 27 to Jan. 27, Sept. 12-17; discharge computed on basis of weather records, recorded range in stage, combined flow of Big Wood River and Slough at Hailey, records for Warm Springs Creek near Ketchum, and change in storage in Magic Reservoir.

Magic Reservoir near Richfield, Idaho

Location.- Staff gage at dam on Big Wood River, lat. 43°15', long. 114°22', in NE¼SE¼ sec. 18, T. 2 S., R. 18 E., 18 miles northwest of Richfield. Datum of gage is 4,800 feet above datum of Idaho Irrigation Co., which is reported to be about 137 feet below mean sea level.

Drainage area.- 1,500 square miles.

Records available.- February to April 1909 (gage heights only), April 1909 to September 1947.

Extremes.- Maximum observed contents during year, 193,100 acre-feet May 4-6, 9-11 (gage height, 135.4 feet); minimum observed, 83,100 acre-feet Sept. 30 (gage height, 97.9 feet).

1909-47: Maximum observed contents, 193,500 acre-feet June 26-28, 1944 (gage height, 135.5 feet); no storage for several days in 1909, 1919, 1920, 1924, 1928, 1935.

Remarks.- Reservoir is formed by earth and rock-fill dam, completed in 1909, and raised 5 feet in 1917. Capacity, 191,500 acre-feet, between gage heights 21.4 feet (2.9 feet above bottom of outlet pipe) and 135.0 feet (top of 5-foot flashboards). Dead storage unknown. Water is used for irrigation of lands in Carey Act project of Big Wood Canal Co. Figures given herein represent usable contents inlcuding bank storage. Gage read in morning except during irrigation season when it was read morning and evening; contents computed from morning reading.

Cooperation.- Gage readings and yield table furnished by Water District No. 7 AB.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	104,000	115,300	124,400	136,500	142,200	162,000	190,300	191,900	186,800	182,200	142,200	109,300
2	104,300	115,500	124,700	136,500	142,200	163,000	191,500	192,300	186,800	181,500	140,700	108,300
3	104,800	115,800	125,200	136,800	142,500	163,700	191,500	192,700	186,800	180,400	139,500	107,300
4	105,000	116,300	125,500	136,800	142,800	164,400	191,500	193,100	187,200	179,600	138,000	106,300
5	105,300	116,800	126,000	137,100	143,100	164,800	190,700	193,100	187,200	179,600	136,500	105,000
6	105,800	117,400	126,600	137,400	143,500	165,500	190,700	193,100	186,800	177,700	135,700	104,000
7	106,300	117,900	126,900	137,400	143,800	165,800	190,700	192,700	186,800	176,600	134,500	102,800
8	106,500	118,400	127,400	137,700	143,800	166,500	190,700	192,700	187,200	175,500	133,300	101,800
9	106,800	118,700	128,000	137,700	144,100	166,900	191,100	193,100	187,200	174,100	132,200	100,800
10	107,000	119,000	128,500	138,000	144,100	167,600	191,500	193,100	187,200	173,000	131,100	99,900
11	107,500	119,500	128,800	138,000	144,100	169,000	191,500	193,100	187,600	171,900	129,900	98,700
12	107,800	119,800	129,400	138,000	144,700	170,100	191,500	192,700	188,000	170,800	128,100	97,500
13	108,000	120,000	129,700	138,300	145,300	171,200	191,900	192,300	188,400	169,400	128,000	96,300
14	108,500	120,300	130,200	138,600	147,200	171,900	192,300	191,900	188,400	168,000	126,900	95,600
15	108,800	120,900	130,800	138,900	148,500	172,600	192,300	191,900	188,800	166,500	126,000	94,600
16	109,000	121,100	131,400	139,200	149,400	173,000	192,300	191,900	188,800	165,100	124,900	93,700
17	109,600	121,400	131,900	139,200	150,400	173,700	192,300	191,500	188,800	164,100	123,800	92,800
18	109,800	121,700	132,200	139,500	151,000	174,100	192,300	190,700	188,800	162,700	122,700	91,800
19	110,100	121,700	132,800	139,500	152,000	174,800	192,300	190,300	188,800	161,000	121,700	91,100
20	110,300	121,700	133,100	139,800	152,600	175,900	192,300	189,900	188,800	160,000	120,600	90,700
21	110,800	121,100	133,300	139,800	153,300	177,000	192,300	189,500	188,800	158,300	120,000	90,000
22	111,100	120,600	133,600	140,100	154,000	177,700	192,300	189,200	188,800	156,900	119,000	89,300
23	111,600	120,300	133,900	140,100	154,600	178,500	192,300	189,200	188,400	155,300	117,900	88,400
24	112,100	120,600	134,200	140,400	155,300	179,200	191,900	188,800	187,600	154,000	117,100	87,500
25	112,600	121,400	134,500	140,700	156,600	180,700	191,900	188,400	186,800	152,300	116,000	86,800
26	112,900	121,900	134,800	140,700	158,300	182,200	191,900	188,000	186,100	151,000	115,000	86,200
27	113,400	122,500	135,400	141,000	160,000	183,800	191,900	187,600	185,300	149,400	114,200	85,300
28	113,700	123,000	135,700	141,300	161,000	184,900	191,900	187,600	184,900	148,100	113,200	84,600
29	114,200	123,600	136,000	141,600	-	186,100	191,900	187,600	184,100	146,600	112,100	84,000
30	114,700	123,800	136,200	141,900	-	187,200	191,900	187,200	183,400	145,000	111,100	83,100
31	115,000	-	136,200	141,900	-	188,800	-	187,200	-	143,500	110,300	-

Monthly gage height and contents, water year October 1946 to September 1947

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	106.9	104,000	-
Oct. 31	111.2	115,000	+11,000
Nov. 30	114.5	123,800	+8,800
Dec. 31	118.9	136,200	+12,400
Calendar year 1946	-	-	+18,300
Jan. 31	120.8	141,900	+5,700
Feb. 28	126.7	161,000	+19,100
Mar. 31	134.3	188,800	+27,800
Apr. 30	135.1	191,900	+3,100
May 31	133.9	187,200	-4,700
June 30	132.9	183,400	-3,800
July 31	121.3	143,500	-39,900
Aug. 31	109.4	110,300	-33,200
Sept. 30	97.9	83,100	-27,200
Water year 1946-47	-	-	-20,900

Big Wood River below Magic Dam, near Richfield, Idaho

Location.- Water-stage recorder, lat. 43°14', long. 114°22', in sec. 18, T. 2 S., R. 18 E., half a mile downstream from Magic Dam and 18 miles northwest of Richfield.

Records available.- April 1911 to September 1947.

Average discharge.- 35 years (1912-47), 404 second-feet.

Extremes.- Maximum discharge during year, 1,790 second-feet (regulated) May 5 (gage height, 5.78 feet); minimum discharge, 10 second-feet (regulated) Nov. 27 to Dec. 1. 1911-47: Maximum discharge, 7,160 second-feet Apr. 13, 1943 (gage height, 13.31 feet); no flow Feb. 3, 1915.

Remarks.- Records good. Many ranch diversions in upper drainage area. Flow regulated by Magic Reservoir (see preceding page).

Cooperation.- Water-stage recorder inspected and five discharge measurements furnished by Water District No. 7 AB.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	12	10	11	12	13	114	774	730	730	785	593
2	13	12	11	11	12	13	730	807	698	725	774	598
3	13	12	11	11	12	13	790	918	666	758	763	598
4	13	12	11	11	12	13	936	1,240	660	768	736	598
5	13	12	11	11	12	13	698	1,610	634	780	687	598
6	13	12	11	11	12	14	629	1,630	604	785	660	598
7	13	12	11	11	12	14	529	1,520	593	785	634	598
8	14	12	11	11	12	14	403	1,500	598	818	619	604
9	14	12	11	11	12	15	394	1,560	598	834	619	578
10	14	12	11	11	12	16	435	1,620	563	834	614	568
11	14	12	11	11	12	17	408	1,530	510	829	614	568
12	14	12	11	11	12	17	390	1,360	481	846	604	548
13	14	12	11	11	12	17	408	1,030	471	858	583	544
14	14	12	11	11	12	17	553	870	471	858	568	558
15	14	12	11	11	12	446	703	852	471	829	568	563
16	14	12	11	11	12	758	882	802	476	812	573	553
17	14	12	11	11	12	975	970	774	481	816	573	544
18	14	187	11	11	12	1,060	948	763	510	834	573	524
19	13	266	11	12	12	985	936	758	563	834	558	514
20	13	450	11	12	12	714	954	758	629	834	553	514
21	13	573	11	12	12	655	965	780	640	829	553	514
22	13	444	11	12	12	655	1,030	812	655	824	548	514
23	13	178	11	12	12	655	1,050	824	687	824	548	514
24	13	12	11	12	12	191	924	824	741	824	553	500
25	13	11	11	12	13	18	870	829	763	818	553	495
26	13	11	11	12	13	19	858	829	758	818	553	495
27	13	11	11	12	13	19	858	829	752	818	548	490
28	13	10	11	12	13	20	858	807	752	812	553	490
29	12	10	11	12	-	21	812	790	741	807	548	490
30	12	10	11	12	-	24	812	796	736	796	558	208
31	12	-	11	12	-	28	-	774	-	790	573	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	412	14	12	13.3	817
November	2,377	573	10	79.2	4,710
December	340	11	10	11.0	674
Calendar year 1946	198,944	3,840	10	545	394,600
January	354	12	11	11.4	702
February	340	13	12	12.1	674
March	7,449	1,060	13	240	14,770
April	21,847	1,050	114	728	43,330
May	31,570	1,630	758	1,018	62,620
June	18,632	763	471	621	36,960
July	25,129	858	725	811	49,840
August	18,746	785	548	605	37,180
September	16,071	604	208	536	31,880
Water year 1946-47	143,267	1,630	10	393	284,200

Big Wood River at Gooding, Idaho

Location.- Water-stage recorder, lat. 42°57', long. 114°43', in NE¼NE¼ sec. 31, T. 5 S., R. 15 E., 30 feet downstream from highway bridge and half a mile north of Gooding.

Records available.- June 1896 to October 1899 (published as Malade River at Tcponis), April 1921 to September 1947, except for winters.

Extremes.- Maximum discharge during year, 792 second-feet Apr. 18 (gage height, 4.02 feet); no flow for long periods.
1921-47: Maximum discharge recorded, 5,120 second-feet Apr. 13, 1943 (gage height, 10.21 feet); no flow for long periods in each year.

Remarks.- Records good except those computed from staff-gage readings, which are fair, and those for periods of no gage-height record, which are poor. Many diversions above and below station for irrigation. Flow regulated by Magic Reservoir (see p. 114) and affected by deliveries from Milner-Gooding canal which diverts from Snake River.

Cooperation.- Water-stage recorder graph and four discharge measurements furnished by Water District No. 7 AB.

Rating tables, water year 1946-47 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-5, Apr. 18-20)

Oct. 1 to Apr. 17						Apr. 18 to Sept. 30					
0.7	0	1.2	15	2.0	114	1.2	26	1.9	116	3.0	391
.8	1	1.4	29	2.4	202	1.4	46	2.2	171	3.5	585
.9	3	1.6	49	2.8	308	1.6	71	2.6	267	4.0	805
1.0	6	1.8	78	3.2	440						

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39					-	0	123	75	66	61	42
2	20					-	0	78	85	57	57	44
3	a10					-	59	52	94	51	59	42
4	a1		†0			-	460	59	94	50	68	44
5	h1					-	544	209	90	54	62	47
6	-					-	354	549	90	58	62	47
7	-					-	338	553	91	61	54	46
8	-					-	232	423	111	67	52	51
9	-					-	142	442	138	62	51	56
10	-					-	138	537	142	61	50	59
11	-					f29	166	605	159	62	62	54
12	-					34	144	545	159	57	66	56
13	-					f20	106	391	110	56	67	57
14	-				h178	f20	110	209	94	54	48	54
15	-					f22	222	70	84	53	35	59
16	-					a14	338	102	85	54	31	59
17	-					f146	426	110	68	52	30	64
18	-					508	684	82	57	56	33	72
19	-					576	674	82	56	58	38	66
20	-					524	692	77	57	62	39	70
21	-					320	670	81	79	63	39	75
22	-					305	473	67	81	58	38	62
23	-					317	509	67	74	59	40	61
24	-					329	413	58	75	54	44	61
25	-					107	316	57	78	58	50	58
26	-					f16	275	56	78	61	47	56
27	-					h10	251	42	74	71	44	58
28	-					a3	207	63	72	74	44	63
29	-				-	a1	178	56	68	66	40	74
30	-				-	0	159	42	71	68	39	74
31	-				-	0	-	61	-	66	40	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October 1-5	71	39	1	14.2	141
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 11-31	3,301	576	0	157	6,550
April	9,280	692	0	309	18,410
May	5,948	605	42	192	11,800
June	2,689	159	56	89.6	5,330
July	1,849	74	50	59.6	3,670
August	1,490	68	30	48.1	2,960
September	1,731	75	42	57.7	3,430
Water year	-	-	-	-	-

† Field observation made on this day.
a No gage-height record; discharge interpolated, or computed on basis of information furnished by Water District No. 7 AB.
f Computed on basis of partly-estimated gage-height record.
h Computed from staff-gage reading.

Big Wood River near Gooding, Idaho

Location.- Water-stage recorder, lat. 42°54', long. 114°48', in sec. 21, T. 6 S., R. 14 E., at Hudson Ranch, 2 miles downstream from bridge on Bliss-Gooding highway, 3½ miles downstream from Little Wood River, 5 miles upstream from diversion dam for King Hill project, and 6 miles southwest of Gooding.

Records available.- March 1916 to September 1947 (fragmentary 1922-37, 1941, 1942).

Extremes (regulated).- Maximum discharge during year, 1,050 second-feet Apr. 18; maximum gage height, 6.28 feet Feb. 13 (ice jam); minimum discharge, 12 second-feet July 16 (gage height, 0.96 foot); minimum daily, 16 second-feet May 3.
1916-47: Maximum discharge, 5,220 second-feet Apr. 14, 1943 (gage height, 9.80 feet); no flow at times in many years.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above and below station for irrigation. Flow regulated by Magic Reservoir (see p. 114) and affected by deliveries from canals diverting from Snake River at Milner.

Cooperation.- One discharge measurement furnished by Water District No. 7 AB.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used June 8 to July 27, Aug. 4 to Sept. 26)

1.0	14	2.0	107	4.5	620
1.1	19	2.5	185	5.0	780
1.3	32	3.0	271	5.5	970
1.5	48	3.5	365		
1.7	68	4.0	480		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	75	142	134	b65	107	150	202	56	153	101	52	36
2	119	134	131	b65	110	167	226	46	188	79	48	38
3	110	130	131	b60	112	169	221	16	217	49	52	36
4	107	131	*131	b65	108	169	625	22	244	30	83	35
5	110	132	136	h70	134	169	808	92	248	28	100	44
6	116	132	137	h78	183	167	641	498	243	39	113	64
7	116	114	137	b75	187	147	558	581	234	45	106	60
8	118	84	150	*89	b145	124	483	436	266	34	83	74
9	113	78	139	110	b125	124	384	393	291	26	66	86
10	110	136	142	h150	119	156	337	458	275	18	62	92
11	126	137	140	h110	125	386	359	567	341	32	78	90
12	124	139	140	b80	147	234	330	584	397	29	97	83
13	122	134	136	b75	b550	177	296	470	322	24	116	93
14	124	134	137	b70	555	190	280	298	291	22	101	100
15	124	134	136	a50	475	194	316	140	253	20	75	108
16	124	131	131	b55	382	169	443	122	239	18	49	108
17	124	136	108	b60	318	*202	553	126	204	17	32	114
18	124	106	94	b65	210	665	862	101	187	25	30	140
19	131	76	b96	b70	179	794	938	86	134	28	31	131
20	131	92	99	b75	171	745	906	68	84	34	35	132
21	132	174	100	b80	159	544	840	55	131	40	35	150
22	136	253	126	b90	161	511	626	54	163	35	30	130
23	140	339	137	h131	153	528	561	56	148	39	29	113
24	140	302	139	a130	147	511	493	50	142	36	36	113
25	140	226	148	h128	169	330	369	46	100	38	57	96
26	140	128	145	h122	167	177	294	48	103	39	56	81
27	143	158	124	d120	158	145	231	52	108	41	51	79
28	145	161	b85	h122	151	126	174	90	113	52	47	88
29	132	148	b80	h118	-	190	125	110	107	44	45	99
30	140	140	b75	*112	-	195	81	99	107	48	33	108
31	139	-	a65	108	-	199	-	112	-	52	32	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	3,875	145	75	125	7,690
November	4,461	339	76	149	8,850
December	3,809	150	65	123	7,560
Calendar year 1946	106,535	3,270	21	292	211,300
January	2,798	150	50	90.3	5,550
February	5,707	555	107	204	11,320
March	8,754	794	124	282	17,360
April	13,562	938	81	452	26,900
May	5,930	584	16	191	11,760
June	6,033	397	84	201	11,970
July	1,162	101	17	37.5	2,300
August	1,860	116	29	60.0	3,690
September	2,721	150	35	90.7	5,400
Water year 1946-47	60,672	938	16	166	120,400

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge computed on basis of weather records.
h Computed from staff-gage reading.

Warm Springs Creek at Guyer Hot Springs, near Ketchum, Idaho

Location.- Water-stage recorder, lat. 43°41', long. 114°25', in NE¼ sec. 15, T. 4 N., R. 17 E., at Guyer Hot Springs, 2 1/8 miles upstream from mouth and 2.2 miles west of Ketchum.

Drainage area.- 96 square miles.

Records available.- November 1940 to September 1947. May 1920 to September 1921 at site a quarter of a mile downstream, published as Warm Springs Creek near Ketchum; records not equivalent.

Extremes.- Maximum discharge during year, 452 second-feet May 8 (gage height, 2.80 feet); minimum, 13 second-feet Dec. 17 (gage height, 0.77 foot).
1940-47: Maximum discharge, 696 second-feet May 30, 1943 (gage height, 3.36 feet); minimum, 6 second-feet Feb. 29, 1944 (gage height, 0.55 foot), ice jam upstream; minimum daily, 17 second-feet Dec. 17, 1946.

Remarks.- Records excellent except those for periods of no gage-height record, which are fair. Diversions above and below station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	41	35	35	35	34	75	195	190	82	45	34
2	64	32	38	29	34	39	73	253	197	79	45	34
3	51	32	37	30	31	37	71	331	185	78	46	35
4	47	38	40	34	32	36	66	366	171	78	46	35
5	45	38	39	35	34	35	64	363	160	75	44	34
6	44	38	39	36	32	33	62	370	151	73	42	33
7	44	39	37	36	31	36	61	399	149	72	41	34
8	44	38	35	36	30	35	62	429	164	71	41	36
9	41	34	37	37	30	34	62	414	166	72	40	36
10	41	38	36	37	35	35	65	342	155	71	40	35
11	40	38	37	37	34	34	66	287	147	68	40	35
12	41	33	37	34	35	31	73	272	135	66	39	35
13	40	35	37	35	35	34	98	256	129	64	39	34
14	39	39	37	35	34	34	135	236	125	64	39	33
15	39	33	37	29	34	36	158	224	122	61	38	34
16	39	32	30	29	34	41	155	221	125	60	37	35
17	39	37	17	32	34	50	166	224	127	60	37	35
18	38	38	24	34	31	61	164	227	127	57	36	36
19	39	39	32	36	33	69	164	230	127	56	36	36
20	38	41	37	37	31	72	169	233	129	53	39	36
21	41	37	38	36	34	76	171	236	123	52	40	35
22	44	39	37	35	37	78	164	236	112	51	39	35
23	50	41	37	35	36	72	160	230	107	51	40	34
24	44	38	35	a36	36	65	151	224	104	52	39	34
25	42	38	36	a37	38	61	141	224	100	50	38	34
26	42	41	37	a34	38	61	145	227	100	50	37	36
27	41	41	37	a33	37	62	162	230	100	47	36	35
28	40	39	30	a32	33	69	178	224	95	47	36	34
29	39	39	34	31	-	72	183	205	90	47	35	35
30	39	39	28	34	-	81	180	195	87	46	35	35
31	36	-	30	34	-	78	-	195	-	46	35	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,319	64	36	42.5	2,620
November	1,125	41	32	37.5	2,230
December	1,077	40	17	34.7	2,140
Calendar year 1946	32,771	444	17	89.8	65,000
January	1,060	37	29	34.2	2,100
February	948	38	30	33.9	1,880
March	1,591	81	31	51.3	3,160
April	3,644	183	61	121	7,230
May	8,298	429	195	268	16,460
June	3,999	197	87	133	7,930
July	1,899	82	46	61.3	3,770
August	1,220	46	35	39.4	2,420
September	1,042	36	33	34.7	2,070
Water year 1946-47	27,222	429	17	74.6	54,010

a No gage-height record; discharge computed on basis of weather records and records for combination of Big Wood River and Big Wood Slough at Hailey.

Big Wood Slough at Hailey, Idaho

Location.- Water-stage recorder, lat. 43°31'00", long. 114°19'30", in sec. 9, T. 2 N., R. 18 E., at highway bridge, an eighth of a mile northeast of steel highway bridge over Big Wood River and an eighth of a mile southwest of Hailey.

Records available.- June 1915 to September 1947.

Average discharge.- 32 years, 116 second-feet.

Extremes (regulated).- Maximum discharge during year, 157 second-feet Mar. 21 (gage height, 2.75 feet); minimum, 6.3 second-feet May 5 (gage height, 1.32 feet).
1915-47: Maximum discharge observed, 419 second-feet June 6, 1921, from rating curve extended above 280 second-feet; maximum gage height, 5.55 feet (top of ice in well) Jan. 20-23, 1937; no flow May 8, 1931, Oct. 20 to Nov. 3, 1938.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Flow controlled at inoperative power plant half a mile upstream to meet the requirements of irrigation diversion from slough and sewage dilution. Big Wood Slough is a natural channel of Big Wood River and its discharge plus the discharge of Big Wood River at Hailey (see p. 111) is total discharge of river at this point.

Cooperation.- Water-stage recorder inspected by Water District No. 7 AB.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	105	89	b55	84	77	66	26	42	58	54	78
2	52	98	90	b50	84	90	65	21	42	61	51	78
3	50	96	93	b55	84	91	64	10	44	68	51	79
4	50	101	95	b65	84	89	63	14	42	69	49	80
5	49	101	*100	b70	84	87	62	7.6	43	64	45	80
6	49	101	100	77	84	81	61	43	30	64	42	79
7	49	102	95	75	81	87	60	86	30	65	38	83
8	47	101	90	b75	a82	89	60	86	32	66	35	87
9	46	98	92	a75	a84	86	62	68	32	63	32	87
10	45	101	85	a75	h87	90	60	51	68	58	29	87
11	44	102	90	b80	a87	86	60	47	96	54	32	86
12	43	95	93	a75	a87	81	60	51	87	47	31	84
13	42	96	93	a80	a87	84	61	48	84	44	31	83
14	39	102	95	a80	a87	*87	63	43	84	42	32	84
15	38	98	93	a65	h86	91	63	40	85	41	32	85
16	37	92	86	a65	a85	97	62	39	91	39	30	85
17	38	100	b62	b70	a83	106	61	41	97	36	29	95
18	38	104	b66	a75	81	116	61	43	100	31	45	98
19	37	111	a80	b70	79	123	59	43	104	33	92	98
20	36	118	a85	b75	77	128	60	43	104	32	93	100
21	35	115	a85	b80	81	136	51	43	92	48	95	100
22	36	118	a85	b80	87	140	40	44	81	73	92	96
23	36	111	a80	b80	87	144	41	43	78	71	95	95
24	36	101	66	b80	86	119	26	43	74	64	91	93
25	37	116	69	b80	87	66	13	43	75	62	87	93
26	39	116	74	b80	89	65	14	42	80	59	85	97
27	37	109	78	84	85	65	15	44	75	55	84	98
28	58	98	72	*81	80	66	15	44	70	55	83	98
29	104	98	59	78	-	66	18	42	64	53	81	97
30	104	93	b50	b75	-	68	24	40	56	53	79	92
31	101	-	b45	b80	-	68	-	41	-	54	79	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,501	104	35	48.4	2,980
November	3,097	118	92	103	6,140
December	2,535	100	45	81.8	5,030
Calendar year 1946	30,104	150	28	82.5	59,710
January	2,285	84	50	73.7	4,530
February	2,359	89	77	84.2	4,680
March	2,869	144	65	92.5	5,690
April	1,490	66	13	49.7	2,960
May	1,319.6	86	7.6	42.6	2,620
June	2,082	104	30	69.4	4,130
July	1,682	73	31	54.3	3,340
August	1,824	95	29	58.8	3,620
September	2,675	100	78	89.2	5,310
Water year 1946-47	25,718.6	144	7.6	70.5	51,030

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for Big Wood River at Hailey and near Bellevue and Warm Springs Creek at Guyer Hot Springs, near Ketchum.
b Stage-discharge relation affected by ice.
h Computed from staff-gage reading.

Camas Creek near Blaine, Idaho

Location.- Water-stage recorder, lat. 43°20', long. 114°33', in sec. 15, T. 1 S., R. 16 E., a quarter of a mile north of Macon siding on Hill City branch of Oregon Short Line Railroad, three-eighths of a mile downstream from Willow Creek, 2¼ miles upstream from backwater of Magic Reservoir, and 4 miles southeast of Blaine.

Drainage area.- 618 square miles.

Records available.- May 1912 to September 1947 (no winter records prior to 1945). Discharge measurements only for 1922.

Extremes.- Maximum discharge during year, 1,340 second-feet Feb. 25 (gage height, 6.17 feet); minimum recorded, 2.8 second-feet Sept. 6, 7 (gage height, 0.92 foot).
1912-47: Maximum discharge recorded, 9,780 second-feet Apr. 8, 1943; maximum gage height, 15.48 feet about Apr. 18, 1938, from floodmark; minimum discharge recorded, 1.5 second-feet Aug. 29, 1940.

Remarks.- Records good except those below 10 second-feet, which are fair, and those for periods of no gage-height record, which are poor. Many small diversions above station; no appreciable regulation.

Cooperation.- Four discharge measurements furnished by Water District No. 7 AB.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.7	15	38			333	389	183	73	22	3.7	3.0
2	24	14	37			269	381	177	79	18	3.7	3.0
3	17	13	35			218	341	191	84	15	3.7	3.0
4	14	14	35			176	336	207	85	13	3.7	3.0
5	13	15	37			162	295	216	82	11	3.5	3.0
6	12	14	53			146	262	213	76	11	3.3	2.8
7	12	15	66		30	136	233	216	72	9.4	3.3	3.0
8	13	15	72			141	226	216	78	8.4	3.2	3.0
9	13	15	58			145	207	213	87	7.2	3.2	3.0
10	12	15	65			193	189	213	96	6.9	3.2	3.2
11	12	15	62			392	191	207	115	8.7	3.2	3.3
12	12	14	64			271	185	211	102	10	3.2	3.3
13	12	14	76		227	281	181	205	92	7.5	3.2	3.3
14	12	15	110		247	336	193	197	80	6.3	3.2	3.3
15	13	15	146		230	511	211	181	68	5.6	3.2	3.3
				20								
15	12	14			209	806	228	161	62	5.8	3.0	3.3
17	13	14			220	1,070	244	140	60	6.0	3.0	3.3
18	13	16			228	*1,190	253	126	54	5.8	3.0	3.3
19	13	23			207	1,160	253	115	51	5.8	3.0	3.5
20	13	31			179	1,000	253	108	47	5.2	3.2	3.7
21	13	31			191	817	248	97	43	5.2	3.2	3.7
22	15	34			220	716	239	92	38	4.4	3.2	3.7
23	20	41	50		280	632	230	87	35	4.2	3.2	3.5
24	17	38			346	538	222	82	31	4.0	3.3	3.5
25	16	38			638	505	211	78	25	4.0	3.3	3.5
26	15	44			768	414	201	71	20	3.8	3.2	3.7
27	15	40			619	365	193	65	19	3.8	3.2	3.7
28	15	39			445	357	187	76	20	3.8	3.2	3.7
29	15	41			-	308	187	78	19	4.2	3.2	3.7
30	14	40			-	336	189	75	20	4.0	3.0	3.8
31	14	-			-	365	-	73	-	3.8	3.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	432.7	24	8.7	14.0	858
November	702	44	13	23.4	1,390
December	1,754	146	-	56.6	3,480
Calendar year 1946	88,054	5,170	3.5	241	174,600
January	620	-	-	20.0	1,230
February	5,614	768	-	200	11,140
March	14,289	1,190	136	461	28,340
April	7,158	389	181	239	14,200
May	4,570	216	65	147	9,060
June	1,813	115	19	60.4	3,600
July	233.8	22	3.8	7.54	464
August	100.7	3.7	3.0	3.25	200
September	100.1	3.8	2.8	3.34	199
Water year 1946-47	37,387.3	1,190	2.8	102	74,160

Note.- No gage-height record Dec. 17 to Feb. 12, Feb. 23; discharge computed on basis of weather records and inflow-outflow studies for Magic Reservoir.

Lincoln Canal near Richfield, Idaho

Location.- Staff gage, lat. 43°10', long. 114°19', in sec. 9, T. 3 S., R. 18 E., at head of canal, 100 yards east of Shoshone-Hailey highway, 5½ miles downstream from Magic Dam, and 12 miles northwest of Richfield. Recording gage at same location not operated during year.

Records available.- April 1925 to September 1947 (irrigation seasons only except 1937-46).

Extremes.- Maximum daily discharge during year, 270 second-feet May 6, 10, 11; maximum gage height observed, 3.40 feet Aug. 19; no flow for long periods.
1925-47: Maximum discharge, 706 second-feet May 28, 1927 (gage height, 4.00 feet), from rating curve extended above 600 second-feet; no flow during long periods in each year.

Remarks.- Records fair except those for periods of no gage-height record, which are poor. Canal diverts water from right bank of Big Wood River in sec. 9, T. 3 S., R. 18 E., from which point it approximately parallels river for 10 miles to head of North Gooding Canal in sec. 15, T. 4 S., R. 18 E., where water is either diverted into North Gooding Canal or returned to Big Wood River. Canal is used to avoid large channel losses in natural bed of river. No diversions above station.

Cooperation.- Gage readings and seven discharge measurements furnished by Water District No. 7 AB.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	184	a160	179	176	167
2							-	192	144	184	a175	156
3	†o						-	a225	a144	184	a175	164
4							-	a250	144	191	170	162
5							-	266	a143	a200	a168	167
6							-	a270	142	a210	167	a167
7							-	267	a143	219	a160	a167
8							-	a265	a143	215	150	167
9							-	267	144	208	a150	a168
10							-	a270	a144	212	a150	170
11							-	a270	133	205	151	172
12							-	267	128	214	150	153
13							-	a255	114	a210	148	a158
14							-	243	a118	206	151	a158
15						†o	-	239	a116	a205	151	161
16							130	246	114	192	a148	a161
17							136	a235	a114	191	a149	161
18							136	a235	114	187	151	161
19							a135	233	128	a190	151	153
20							a135	a225	161	a190	146	a151
21							133	196	157	201	150	a151
22							128	196	a165	a200	153	151
23							126	187	176	198	a152	a150
24							127	a180	182	196	a152	145
25							162	a180	189	191	156	a148
26							a175	177	184	a190	a160	151
27							a170	a180	186	a190	162	a150
28							181	182	a186	189	157	a150
29							a187	172	a187	189	159	150
30							186	176	187	165	a160	a100
31							-	a175	-	a175	a162	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April 16-30	2,247	187	126	150	4,460
May	6,905	270	172	223	13,700
June	4,490	189	114	150	8,910
July	6,076	219	165	196	12,050
August	4,860	176	146	157	9,640
September	4,690	172	100	156	9,300
Water year	-	-	-	-	-

† Field observation made on this day.
a No gage-height record; discharge computed on basis of records for station near Shoshone and reported diversions between stations.

Lincoln Canal near Shoshone, Idaho

Location.- Staff gage and concrete control, lat. 43°05', long. 114°19', in sec. 15, T. 4 S., R. 18 E., a quarter of a mile upstream from outlet of canal, 7 miles west of Richfield, 11 miles northeast of Shoshone, and 12½ miles downstream from Magic Dam. Prior to May 21, water-stage recorder at same site and datum.

Records available.- May 1925 to September 1947 (1929-36, 1947, irrigation seasons only).

Extremes.- Maximum discharge during year, 240 second-feet May 6 (gage height, 1.40 feet); no flow for long periods.
1925-47: Maximum discharge, 667 second-feet May 29, 1927 (gage height, 2.48 feet), from rating curve extended above 550 second-feet; no flow for long periods each year.

Remarks.- Records good. No record of domestic flow in November or of leakage during nonirrigation season. Canal diverts water from right bank of Big Wood River in sec. 9, T. 3 S., R. 18 E., from which point it approximately parallels river for 10 miles to head of North Gooding Canal in sec. 15, T. 4 S., R. 18 E., where water is either diverted into North Gooding Canal or returned to Big Wood River. Canal is used to avoid large channel losses in natural bed of river. Five ditches have rights to divert 12.5 second-feet above this station for irrigation.

Cooperation.- Water-stage recorder graph, staff-gage readings, and five discharge measurements furnished by Water District No. 7 AB.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18						-	152	138	162	157	143
2	0						-	157	131	162	162	143
3	0						-	204	125	162	160	145
4	0						-	216	123	167	157	147
5	0						-	231	123	172	143	154
6	0						-	237	123	182	138	154
7	0						-	234	123	190	136	154
8	0						-	228	123	190	129	154
9	0						-	231	123	188	129	154
10	0						-	234	121	185	129	157
11	0						-	234	114	188	129	160
12	0						-	231	102	188	129	152
13	0						-	222	93	188	129	145
14	0						-	210	98	188	129	145
15	0					†0	-	207	97	190	121	147
16	0						112	207	95	174	125	147
17	0						131	207	93	172	131	147
18	0						134	210	93	170	131	147
19	0						129	210	112	170	131	143
20	0						129	207	131	170	131	138
21	0						129	177	129	172	131	138
22	0						h108	172	140	180	131	138
23	0						106	167	150	177	131	138
24	0						102	162	143	177	131	136
25	0						114	162	167	177	134	131
26	0						140	162	167	177	140	131
27	0						136	164	167	177	140	131
28	0						143	162	167	177	143	131
29	0						150	152	167	174	143	131
30	0						150	152	167	162	143	131
31	0						-	152	-	157	143	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	18	18	0	0.6	36
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April 16-30	1,913	150	102	128	3,790
May	6,053	237	152	195	12,010
June	3,845	167	93	128	7,630
July	5,465	190	157	176	10,840
August	4,236	162	121	137	8,400
September	4,312	160	131	144	8,550
Water year	-	-	-	-	-

† Field observation made on this day.
h Computed from staff-gage reading.

Thorn Creek spillway near Gooding, Idaho

Location.- Water-stage recorder, lat. 43°01', long. 114°37', in sec. 6, T. 5 S., R. 16 E., 600 feet downstream from point of diversion from North Gooding Canal, 900 feet upstream from Thorn Creek, and 7½ miles northeast of Gooding.

Records available.- April 1928 to September 1947 (prior to 1937, irrigation seasons only).

Extremes (regulated).- Maximum discharge during year, 328 second-feet Apr. 18 (gage height, 2.50 feet); no flow for long periods.
1928-47: Maximum discharge, 447 second-feet Apr. 24, 1938 (gage height, 2.90 feet); usually no flow during nonirrigation seasons.

Remarks.- Records good except those for Oct. 2, which are poor. Spillway diverts from North Gooding Canal and discharges into Thorn Creek in sec. 6, T. 5 S., R. 16 E. Irrigation diversions from Big Wood River below Thorn Creek are served in part by this water carried successively through Lincoln and North Gooding Canals to minimize channel losses in natural bed of river.

Cooperation.- Water-stage recorder graph and six discharge measurements furnished by Water District No. 7 AB.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	0					0	148	129	132	140	99
2	f20	0					0	125	132	129	132	99
3	0	0					0	125	138	120	136	98
4	0	0					0	132	142	120	136	101
5	0	0					0	138	140	127	132	106
6	0	0					0	140	142	134	132	108
7	0	0					0	130	138	134	123	108
8	0	0					0	96	142	142	125	113
9	0	0					0	90	162	140	123	116
10	0	0					0	101	182	140	123	114
11	0	0					0	106	204	142	134	104
12	0	0					0	108	184	138	140	109
13	0	0					0	109	156	138	130	106
14	0	0					0	108	144	134	101	113
15	0	0					0	114	134	132	90	113
16	0	0					0	177	129	130	86	108
17	0	0					19	177	118	129	87	113
18	0	12					273	152	108	136	99	108
19	0	32					278	152	108	140	99	101
20	0	129					278	152	123	146	99	106
21	0	118					237	156	140	138	98	108
22	0	184					173	144	134	138	96	96
23	0	144					154	142	130	136	96	102
24	0	111					129	134	144	136	104	102
25	0	f12					140	134	148	138	104	94
26	0	0					132	132	144	142	102	98
27	0	0					127	108	144	152	104	99
28	0	0					134	125	148	169	102	104
29	0	0					152	116	142	144	99	114
30	0	0					158	108	142	146	98	127
31	0	-					-	127	-	142	96	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	51	31	0	1.6	101
November	742	184	0	24.7	1,470
December	0	0	0	0	0
Calendar year 1946	21,199	331	0	58.1	42,040
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	2,384	278	0	79.5	4,730
May	4,006	177	90	129	7,950
June	4,271	204	108	142	8,470
July	4,264	169	120	138	8,460
August	3,466	140	86	112	6,870
September	3,187	127	94	106	6,320
Water year 1946-47	22,371	278	0	61.3	44,370

f Computed from partly-estimated gage-height record.

Little Wood River at Campbell Ranch, near Carey, Idaho

Location.- Water-stage recorder, lat. 43°28', long. 114°03', in SW¼NW¼ sec. 35, T. 2 N., R. 20 E., at Campbell Ranch, above flow line of Little Wood Reservoir, 1½ miles downstream from High Five Creek, 2½ miles downstream from Muldoon Creek, 11 miles east of Bellevue, and 19 miles northwest of Carey.

Drainage area.- 967 square miles.

Records available.- February 1930 to September 1936 (published as Little Wood River near Carey); March 1941 to December 1942, April 1944 to September 1947 (no winter records except 1921-24, 1926).

Extremes.- Maximum discharge during year, 918 second-feet May 4 (gage height, 3.33 feet), from rating curve extended above 480 second-feet; minimum recorded, 32 second-feet Sept. 6, 7 (gage height, 1.04 feet).

1930-36, 1941-42, 1944-47: Maximum discharge recorded, 1,420 second-feet Apr. 10, 1942 (gage height, 4.31 feet, former site and datum); minimum, 14 second-feet Aug. 29, 30, 1926.

Remarks.- Records good. Flow may be slightly regulated by Campbell Reservoir (capacity, 2,700 acre-feet) on unnamed tributary. Diversions for irrigation from Muldoon Creek.

Cooperation.- Water-stage recorder inspected by Little Wood Reservoir Co. and Water District No. 110.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-14)

1.0	28	1.4	84	2.3	354
1.1	38	1.6	128	2.6	498
1.2	51	1.8	180	2.9	662
1.3	66	2.0	242	3.2	840

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	75	66			-	413	413	338	136	51	36
2	143	66	b68			-	399	514	321	140	48	36
3	114	60	71			-	342	685	302	146	51	35
4	105	68	71			-	294	846	283	143	56	35
5	103	71	79			-	259	834	266	133	52	34
6	92	70	88			-	245	810	252	138	48	33
7	90	71	82			-	229	804	252	138	46	34
8	88	71	70			-	223	822	302	140	44	37
9	82	70	73			-	223	786	309	138	44	37
10	79	68	71			-	229	656	276	128	43	37
11	79	68	75			-	229	551	273	126	44	39
12	79	60	77			*73	242	503	249	112	43	38
13	77	64	79			73	287	447	236	107	42	37
14	75	70	80			79	363	418	232	103	41	35
15	73	68	b78			94	437	372	242	101	41	37
16	71	60	58			128	472	358	259	97	41	36
17	73	66	-			175	498	363	273	94	39	38
18	71	70	-			229	514	358	269	88	37	43
19	71	88	-			266	462	350	266	86	37	43
20	70	110	-			291	462	363	266	86	43	44
21	71	75	-			329	472	372	220	86	82	44
22	77	88	-			372	442	381	198	84	71	44
23	90	99	-			418	399	346	189	82	56	42
24	80	75	-			346	386	338	186	77	50	39
25	79	66	-			309	358	342	189	75	46	39
26	80	b82	-			329	368	342	192	71	42	39
27	80	82	-			329	394	346	177	68	41	39
28	79	80	-			350	437	338	156	64	41	38
29	75	77	-			418	428	313	140	60	39	38
30	73	73	-			645	413	306	133	52	37	38
31	68	-	-			503	-	358	-	52	36	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,551	143	64	82.3	5,060
November	2,211	110	60	73.7	4,390
December 1-16	1,186	88	58	74.1	2,350
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 12-31	5,756	645	73	288	11,420
April	10,919	514	223	364	21,660
May	15,035	846	303	485	29,820
June	7,246	338	133	242	14,370
July	3,151	146	52	102	6,250
August	1,432	82	36	46.2	2,840
September	1,144	44	33	38.1	2,270
Water year	-	-	-	-	-

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

Little Wood River near Carey, Idaho

Location.- Water-stage recorder, lat. 43°23', long. 114°00', in E½ sec. 30, T. 1 N., R. 21 E., a third of a mile upstream from West Canal, 1 1/3 miles upstream from East Canal, 2 miles downstream from Little Fish Creek, 3 miles downstream from Little Wood Reservoir, and 6 miles northwest of Carey.

Drainage area.- 312 square miles.

Records available.- April 1904 to May 1905, September 1926 to September 1947.

Average discharge.- 18 years (1926-27, 1929-42, 1943-47), 127 second-feet.

Extremes (regulated).- Maximum discharge during year, 766 second-feet May 5 (gage height, 5.02 feet); minimum daily, 5 second-feet Feb. 4.
1904-5, 1926-47: Maximum discharge, 6,000 second-feet (due to failure of reservoirs on Little Fish Creek) Apr. 20, 1938 (gage height, 12.07 feet, datum then in use, from floodmark), from rating curve extended above 1,800 second-feet; minimum, 1 second-foot Jan. 26, 1945; minimum daily, 3.0 second-feet several days during November, December 1943, January 1944.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Regulation and diversions above station for irrigation. Storage in Little Wood Reservoir (capacity, 10,000 acre-feet), 3 miles above station, began Feb. 1°, 1941. Flow is also affected by Condie, Cameron, and Howard Reservoirs (combined capacity, 990 acre-feet) on Little Fish Creek. Capacities are as shown in 11th Biennial Report of Department of Reclamation, State of Idaho.

Cooperation.- Water-stage recorder inspected by Little Wood Reservoir Co. and Water District No. 11C.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	89	62	17	5.5	52	504	422	332	191	159	69
2	62	86	62	17	5.5	50	471	471	329	205	145	68
3	62	86	62	17	5.5	49	405	628	308	225	145	66
4	61	86	62	17	*5	49	344	725	283	218	143	65
5	61	86	64	17	6	48	300	746	266	208	133	72
6	61	86	69	17	6	42	280	721	253	200	124	84
7	61	84	66	17	6	37	266	717	245	188	110	84
8	61	84	65	17	6	39	258	738	288	205	105	84
9	61	84	64	17	6	38	243	721	308	212	99	84
10	81	84	64	17	5.8	56	235	632	277	222	99	82
11	94	84	64	17	5.8	50	258	538	277	215	98	81
12	94	82	66	17	5.8	42	261	497	256	212	89	80
13	94	82	69	17	10	*42	294	450	238	210	86	78
14	94	82	69	17	12	48	366	436	232	225	84	69
15	94	82	56	17	13	53	439	386	208	232	82	69
16	94	82	53	17	22	60	478	363	251	222	81	68
17	94	74	50	17	22	154	489	360	266	215	80	66
18	94	61	*50	17	14	240	500	363	274	210	80	66
19	94	62	50	17	10	291	475	357	269	222	81	65
20	94	66	45	17	8	323	468	357	272	222	91	65
21	94	62	32	17	30	357	475	366	238	212	87	65
22	94	61	25	14	65	415	453	376	208	205	69	62
23	94	62	24	13	61	482	426	357	196	203	50	49
24	94	62	22	17	40	399	405	335	203	196	47	13
25	94	61	17	17	37	344	386	335	205	193	47	30
26	94	61	17	15	34	357	386	338	208	191	46	20
27	94	61	17	7	45	357	405	341	188	186	46	25
28	94	61	17	6	56	386	436	338	168	177	49	39
29	94	62	17	6	-	429	446	317	161	172	70	26
30	94	62	17	6	-	640	429	302	168	168	70	16
31	94	-	17	6.0	-	536	-	344	-	163	70	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,607	94	61	84.1	5,170
November	2,227	89	61	74.2	4,420
December	1,434	69	17	46.3	2,840
Calendar year 1946	58,521	1,010	17	160	116,000
January	464.0	17	6.0	15.0	920
February	547.9	56	5	19.6	1,090
March	6,525	640	37	210	12,940
April	11,581	504	235	386	22,970
May	14,377	746	302	464	28,520
June	7,407	332	161	247	14,690
July	6,325	232	163	204	12,550
August	2,765	159	46	89.2	5,480
September	1,811	84	13	60.4	3,590
Water year 1946-47	58,070.9	746	5	159	115,200

* Winter discharge measurement made on this day.

Note.- No gage-height record Oct. 5-25; discharge computed on basis of range in stage and gate changes for Little Wood Reservoir. Stage-discharge relation affected by ice Dec. 17, 18, 24, Dec. 29 to Jan. 10, Jan. 12-21, 27-30, Feb. 4-9, 18-20.

Little Wood River near Richfield, Idaho

Location.- Water-stage recorder, lat. 43°03', long. 114°08', in sec. 30, T. 4 S., R. 20 E., half a mile upstream from Jim Byrne's Slough and heading of Dietrich Canal, 1 mile east of railroad station at Richfield, and 14 miles downstream from Silver Creek.

Records available.- January 1911 to September 1947 (irrigation seasons only).

Extremes.- Maximum discharge during year, 261 second-feet Apr. 1 (gage height, 2.17 feet); minimum recorded, 40 second-feet May 23 (gage height, 1.11 feet).
1911-47: Maximum discharge recorded, 868 second-feet May 3, 1938 (gage height, 3.97 feet); minimum recorded, 7.6 second-feet June 24, 25, 1920 (gage height, 0.52 foot).

Remarks.- Records good except those for period of no gage-height record, which are fair. Diversions above station for irrigation. Flow partly regulated by Little Wood Reservoir and four small reservoirs on tributaries. River above Silver Creek is dry, except during freshet seasons, because of channel losses and irrigation diversions above Carey.

Cooperation.- Water-stage recorder graph and six discharge measurements furnished by Water District No. 11 AB.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	156	171	171			136	255	125	86	118	84	125
2	162	171	171			a136	246	115	100	117	90	124
3	165	169	171			a136	235	110	112	108	92	124
4	173	169	-			a138	227	112	117	106	95	127
5	176	169	-			a138	213	133	120	117	100	129
6	173	171	h167			a138	202	148	118	117	101	129
7	173	171	-			a140	198	136	115	117	105	129
8	173	171	-			142	195	124	115	115	108	129
9	171	171	-			142	190	120	129	113	110	129
10	169	171	-			144	185	129	144	106	110	129
11	167	171	-			146	182	134	154	105	110	133
12	167	169	-			165	182	134	160	101	113	131
13	167	167	-			160	182	136	158	100	117	127
14	165	167	-			154	185	138	152	100	117	124
15	165	167	-			152	192	140	146	98	117	131
16	167	167	-			154	205	131	144	98	117	134
17	167	167	-			158	221	118	140	98	124	134
18	167	167	-			156	229	101	131	100	125	134
19	167	169	-			158	227	100	118	101	124	136
20	167	173	-			182	227	82	110	103	124	144
21	167	182	-			198	224	52	103	103	125	144
22	167	192	-			213	221	43	98	100	124	148
23	169	192	-			227	221	44	100	100	127	148
24	173	182	-			238	210	45	98	98	129	148
25	178	180	-			238	198	52	101	97	129	148
26	178	185	-			221	176	59	100	93	127	146
27	176	178	-			221	154	59	103	92	133	146
28	173	173	-		138	221	148	65	106	90	134	146
29	171	171	-		-	218	140	69	110	92	133	144
30	171	171	-		-	221	134	76	113	92	127	144
31	171	-	-		-	241	-	80	-	86	125	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,251	178	156	169	10,420
November	5,194	192	167	173	10,300
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	5,432	241	136	175	10,770
April	6,004	255	134	200	11,910
May	3,110	148	43	100	6,170
June	3,601	160	86	120	7,140
July	3,181	118	86	103	6,310
August	3,596	134	84	116	7,130
September	4,064	148	124	135	8,060
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of information furnished by watermaster.
h Computed from staff-gage reading.

Little Wood River at Shoshone, Idaho

Location.- Water-stage recorder, lat. 42°56', long. 114°24', in sec. 2, T. 6 S., R. 17 E., just upstream from diversion dam for town water supply and 400 feet upstream from highway bridge in Shoshone.

Records available.- April 1922 to September 1947 (irrigation seasons only)

Extremes.- Maximum discharge during year, 529 second-feet June 12 (gage height, 3.42 feet); minimum recorded, 30 second-feet Nov. 18 (gage height, 0.64 foot).
1922-47: Maximum discharge recorded, 664 second-feet June 18, 1922; maximum gage height recorded, 4.49 feet June 11, 1944; practically no flow July 29, 1931, Oct. 3, 1938.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Many diversions above and below station for irrigation. Flow affected by operation of Milner-Gooding Canal, which diverts from Snake River and crosses Little Wood River above station, by operation of several reservoirs above Carey, and by Big Wood River water deliveries through Byrne's Slough for Dietrich Canal via Little Wood River at Richfield.

Cooperation.- Water-stage recorder graph and seven discharge measurements furnished by Water District No. 11 AB.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	140	140				131	204	384	463	459	460	375
2	128	137				131	243	377	473	454	460	377
3	131	h140				131	239	401	485	431	473	381
4	a136	h137				131	231	418	483	418	490	384
5	140	h137				131	220	425	477	457	498	393
6	137	h137				100	208	446	471	465	497	388
7	140	h137				80	193	454	446	454	473	390
8	140	h137				80	190	452	456	442	456	395
9	140	h137				78	183	426	465	432	451	400
10	147	h134				80	179	427	463	445	442	390
11	147	h134				82	176	464	497	439	448	372
12	147	131				90	173	514	484	436	473	377
13	147	131				117	166	512	449	430	472	377
14	147	128				117	162	516	437	425	453	379
15	147	131				111	166	507	428	422	425	368
16	147	131				108	173	490	431	425	396	364
17	147	67				131	212	474	431	425	381	370
18	147	32				144	292	446	404	425	373	368
19	147	33				140	328	426	349	428	381	353
20	147	-				144	340	432	391	428	384	349
21	147	-				166	331	427	452	427	381	337
22	150	-				173	311	433	466	431	379	314
23	153	-				186	349	436	462	430	381	303
24	156	-				201	384	439	420	430	398	292
25	162	-				212	412	437	431	427	400	272
26	a160	-				197	375	438	452	423	396	272
27	a158	-				183	344	444	452	426	390	272
28	a156	-			125	183	351	470	452	428	390	268
29	a154	-			-	183	328	475	451	438	386	268
30	a152	-			-	179	347	448	459	456	383	197
31	150	-			-	183	-	458	-	468	375	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	4,547	162	128	147	9,020
November 1-19	2,291	140	32	121	4,540
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	4,303	212	78	139	8,530
April	7,810	412	162	260	15,490
May	13,896	516	377	448	27,560
June	13,480	497	349	449	26,740
July	13,524	468	418	436	26,820
August	13,145	498	373	424	26,070
September	10,345	400	197	345	20,520
Water year	-	-	-	-	-

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

Silver Creek near Picabo, Idaho

Location.- Water-stage recorder, lat. 43°17', long. 114°01', in sec. 1, T. 2 S., R. 20 E., 1½ miles downstream from drain ditch of Blaine County Drainage District No. 1 and 3 miles southeast of Picabo.

Records available.- May 1920 to September 1947 (1922-35, irrigation seasons only).

Average discharge.- 14 years (1920-22, 1935-47), 147 second-feet.

Extremes.- Maximum discharge during year, 212 second-feet Nov. 21, 22; maximum gage height recorded, 3.48 feet Jan. 7 (ice jam); minimum discharge, 68 second-feet May 20 (gage height, 1.00 foot).

1920-47: Maximum discharge, 312 second-feet Apr. 3, 1923; maximum gage height, 3.97 feet Jan. 8, 1942 (ice jam); minimum discharge, 26 second-feet June 2, 1920 (gage height, 0.48 foot).

Remarks.- Records good except those for periods of ice effect, which are poor. Many diversions above station for irrigation. Records of discharge do not include water bypassed around station at times by slough on right bank from which there is some diversion for irrigation.

Cooperation.- Water-stage recorder inspected during irrigation season and one discharge measurement furnished by Water District No. 11 AB.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	168	177	184		138	135	148	114	109	179	131	167
2	185	176	181		136	137	146	106	111	172	135	167
3	202	176	178		135	139	148	104	113	169	142	170
4	206	175	175		135	142	145	106	114	172	151	172
5	196	174	175		133	145	141	106	111	175	156	172
6	191	175	*178		131	146	141	94	110	174	159	170
7	191	176	187		128	142	140	89	112	172	162	170
8	188	179	190		127	142	138	82	116	168	165	171
9	185	181	183		126	142	138	81	124	161	164	167
10	182	181	176	140	126	148	136	81	128	159	162	167
11	180	179	173		126	168	133	84	131	161	164	163
12	178	177	172		132	172	132	87	139	157	168	161
13	177	176	172		160	161	132	87	142	148	172	161
14	176	174	174		170	*158	131	87	142	146	172	165
15	176	174	179		161	159	129	86	146	148	172	164
16	176	175	180		160	168	128	84	145	145	171	164
17	178	173	171		161	168	127	81	144	148	170	167
18	178	173	150		155	166	125	80	143	153	168	173
19	179	180	150		148	164	125	78	143	155	167	178
20	178	195	150		142	162	125	70	143	156	167	179
21	178	209	155		142	159	124	71	143	156	170	178
22	180	208	155		143	157	124	76	142	155	177	178
23	184	197	153		147	157	123	82	142	153	180	176
24	193	195	152	150	151	156	121	83	149	151	178	176
25	193	200	151		148	152	121	87	155	149	178	175
26	188	194	154		146	148	120	89	161	143	177	174
27	183	188	158		142	146	120	88	170	142	177	170
28	180	184	158		138	143	119	94	173	142	176	165
29	179	184	154	*146	-	142	119	102	173	141	176	165
30	178	184	142	142	-	145	117	106	178	136	174	164
31	176	-	138	140	-	150	-	107	-	130	169	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,682	206	168	183	11,270
November	5,489	209	173	183	10,890
December	5,148	190	138	166	10,210
Calendar year 1946	56,975	228	-	156	113,000
January	4,438	-	-	143	8,800
February	3,987	170	126	142	7,910
March	4,719	172	135	152	9,360
April	3,916	148	117	131	7,770
May	2,772	114	70	89.4	5,500
June	4,152	178	109	138	8,240
July	4,814	179	130	155	9,550
August	5,150	180	131	166	10,210
September	5,089	179	161	170	10,090
Water year 1946-47	55,356	209	70	152	109,800

* Winter discharge measurement made on this day.

Note.- Flow in bypass channel, which carries water around gage, measured as 20.6 second-feet Oct. 1; 18.6 second-feet Dec. 6; 7.05 second-feet Jan. 29; 14.9 second-feet Mar. 14; 5.55 second-feet Apr. 16; 0.10 second-foot (estimated) May 28; 4.0 second-feet (estimated) June 24; 0.16 second-foot (estimated) July 11; 4.10 second-feet Aug. 21. Stage-discharge relation was affected by ice Dec. 18-21, Dec. 30 to Feb. 3 (no gage-height record Jan. 12-28; discharge computed on basis of 1 discharge measurement and weather records).

King Hill Canal near Hagerman, Idaho

Location.- Staff gage, lat. 42°52', long. 114°55', in SW¼ sec. 27, T. 6 S., R. 13 E., 430 feet upstream from mouth of inverted syphon crossing Snake River, 1,000 feet downstream from heading at Idaho Power Co.'s canal, half a mile west of highway bridge over Big Wood River, and 3½ miles north of Hagerman.

Records available.- March 1930 to September 1947 (irrigation seasons only except 1939 and 1947).

Extremes.- Maximum discharge observed during year, 343 second-feet May 27 (gage height, 3.68 feet); no flow or small flow from leakage at head gate when gates were closed.
1930-47: Maximum discharge observed, that of May 27, 1947; maximum gage height observed, 3.80 feet July 19-22, 26, 27, 1944; no flow or small flow from leakage at head gate during nonirrigation seasons.

Remarks.- Records good except those for periods when gates were closed, which are poor. Gage usually read twice daily during irrigation season. This canal, which is operated by King Hill Irrigation District to provide water for irrigation of its project, diverts from Idaho Power Co.'s canal, which in turn diverts from Big Wood River (Malad Springs water).

Cooperation.- Gage readings furnished by King Hill Irrigation District.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	238						171	309	334	319	317	293
2	207						171	309	320	319	317	298
3	191						170	309	314	309	317	298
4	190						168	324	312	319	324	295
5	190						171	326	245	319	324	295
6	190						170	326	0	324	326	295
7	190						170	329	0	327	326	295
8	190						168	312	226	329	326	295
9	100						168	310	286	329	326	293
10							168	324	286	329	324	288
11							168	336	295	327	324	283
12							168	333	295	327	324	275
13						0	191	333	286	327	324	281
14							206	326	295	327	324	281
15	3	1	1	0.5	0.5		206	331	304	324	319	281
16							218	326	309	326	319	283
17							227	322	305	329	319	283
18							243	333	309	329	106	275
19							259	334	307	326	0	275
20							256	324	305	322	0	276
21							259	333	305	319	136	276
22							259	336	305	315	206	276
23							259	338	305	315	206	276
24							267	333	319	315	275	276
25							295	336	315	317	298	278
26	2						292	333	319	317	293	278
27							295	336	319	226	292	278
28							295	338	319	6	295	278
29					-		300	331	319	6	293	278
30					-	96	309	322	317	251	293	278
31		-			-	171	-	327	-	317	290	

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,741	238	-	56.2	3,453
November	30	-	-	1	60
December	31	-	-	1	61
Calendar year	-	-	-	-	-
January	15.5	-	-	.5	31
February	14.0	-	-	.5	28
March	267	171	0	8.6	530
April	6,667	309	168	222	13,220
May	10,139	338	309	327	20,110
June	8,475	334	0	282	16,810
July	9,191	329	6	296	18,230
August	8,463	326	0	273	16,790
September	8,510	298	275	284	16,880
Water year 1946-47	53,543.5	338	0	147	106,200

Note.- No gage-height record, Oct. 10 to Mar. 29, June 6, 7, July 28, 29, Aug. 19, 20 (gates closed); discharge computed on basis of discharge measurements made on Oct. 15, Dec. 4, Jan. 27 and engineer's report that canal was dry on Mar. 5. Canal was probably dry downstream from inverted syphon crossing Snake River during these periods.

Mountain Home feeder canal near Mountain Home, Idaho

Location.- Water-stage recorder and concrete control, lat. 43°13', long. 115°42', in sec. 36, T. 2 S., R. 6 E., 40 feet downstream from point of diversion from Canyon Creek and 5 miles north of Mountain Home.

Records available.- April 1924 to September 1929, April 1931 to September 1947.

Extremes.- Maximum discharge during year, 112 second-feet June 21 (gage height, 1.52 feet); no flow Nov. 7-14.
1924-29, 1931-47: Maximum discharge, 226 second-feet Feb. 21, 1927 (gage height, 2.18 feet, datum then in use), from rating curve extended above 120 second-feet; no flow at times during most years.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Canal diverts from Canyon Creek in sec. 36, T. 2 S., R. 6 E., and delivers water to Mountain Home cooperative canal, which heads in Mountain Home feeder canal half a mile below station, for irrigation of about 5,000 acres in Mountain Home Irrigation District. During nonirrigation season and at times when there is a surplus of water for irrigation, canal feeds directly into Mountain Home Reservoir. No diversion from canal above station; three small diversions between station and head gates of Mountain Home cooperative canal. Flow regulated by head gates in Canyon Creek and by Long Tom and Little Camas Reservoirs.

Cooperation.- Water-stage recorder graph furnished by Mountain Home Irrigation District.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.7	3.7	a11			22	h31	86	41	74	36	56
2	8.2	b3.6	a10			22	a36	88	33	76	36	65
3	5.0	b3.5	a9		a12	21	40	88	32	74	42	a64
4	4.3	b3.4	*a7.7			20	40	87	19	69	38	a63
5	4.0	3.4			*14	20	42	a87	12	58	40	a62
6	4.0	1.4			13	20	42	87	10	56	41	a60
7	4.3	0			12	20	42	87	7.7	55	50	a59
8	5.0	0	a8		13	20	38	86	9.0	55	53	a58
9	5.9	0			14	21	37	87	10	61	44	50
10	5.9	0			14	33	36	71	9.0	65	42	48
11	5.9	0			14	a42	36	67	9.0	64	42	48
12	5.4	0	a15		26	a41	36	64	8.6	63	52	46
13	5.4	0	a20		45	41	36	64	9.0	69	56	44
14	a4.7	5.1	a25		35	46	36	65	43	75	57	44
15	4.0	7.2	27		38	50	36	64	50	75	52	43
16	4.0	b6.0	25	a12	37	51	36	61	50	83	61	41
17	4.7	5.9	20		40	53	36	60	63	82	64	41
18	5.0	6.4	16		a37	50	36	59	89	78	54	40
19	a5	7.2	14		a30	a45	35	a75	100	70	53	39
20	a5	9.0	16		28	39	36	80	109	60	44	36
21	a5.5	8.6	16		28	38	35	89	110	42	38	35
22	a6	8.6	15		28	38	34	90	105	42	37	32
23	a7	8.6	15		28	39	34	96	104	51	33	27
24	a6	9.0	15		28	38	35	101	101	58	32	21
25	a5	9.0	16		26	a36	a40	101	99	56	38	7.2
26	a4	10	16		26	a33	a50	103	96	48	40	4.7
27	4.0	13	16		26	31	58	99	88	44	44	4.0
28	4.0	a12	b14		23	30	58	87	76	41	44	3.7
29	4.0	a12	b13		-	30	58	65	74	36	50	3.4
30	4.0	a12	b12		-	29	83	61	75	33	47	3.4
31	4.0	-	a12		-	32	-	52	-	40	45	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	153.9	8.2	4.0	4.96	305
November	168.6	13	0	5.62	334
December	431.7	27	-	13.9	856
Calendar year 1946	14,388.8	143	0	39.4	28,520
January	372	-	-	12.0	738
February	671	45	-	24.0	1,330
March	1,051	53	20	33.9	2,080
April	1,228	83	31	40.9	2,440
May	2,457	103	52	79.3	4,870
June	1,641.3	110	7.7	54.7	3,260
July	1,853	83	33	59.8	3,680
August	1,405	64	32	45.3	2,790
September	1,148.4	65	3.4	38.3	2,280
Water year 1946-47	12,580.9	110	0	34.5	24,960

* Winter discharge measurement made on this day.
a No gage-height record; discharge interpolated, or computed on basis of weather records, 1 discharge measurement, records for Mountain Home cooperative canal, and records for stations on nearby streams.
b Stage-discharge relation affected by ice.
h Computed from staff-gage reading.

Mountain Home cooperative canal near Mountain Home, Idaho

Location.- Water-stage recorder and concrete control, lat. 43°12', long. 115°42', in sec. 36, T. 2 S., R. 6 E., at Lamberton weir, 300 feet downstream from point of diversion from Mountain Home feeder canal and 4½ miles north of Mountain Home.

Records available.- April 1924 to September 1929, April 1931 to September 1947 (discontinued).

Extremes.- Maximum daily discharge during year, 104 second-feet May 25; no flow for long periods.

1924-29, 1931-47: Maximum discharge, 109 second-feet July 16, 1925 (gage height, 1.69 feet, datum then in use); no flow during nonirrigation seasons except occasional stock water runs and leakage through gates.

Remarks.- Records good except those for periods of partly estimated or no gage-height record, which are poor. No diversions between station and head of canal. Flow regulated by gates at point of diversion from Mountain Home feeder canal. Water is used for irrigation of about 5,000 acres in Mountain Home Irrigation District.

Cooperation.- Water-stage recorder graph furnished by Mountain Home Irrigation District.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	f61	f35	h65	a30	54
2							0	f55	28	a64	a30	h63
3							0	f43	26	a62	a37	a62
4							0	f43	18	60	a34	a61
5							0	f43	9.8	52	h36	a60
6							0	f43	7.5	50	a38	a58
7							0	f43	6.1	48	a43	a57
8							0	f43	6.4	48	a47	56
9							0	f43	2.5	53	a40	50
10							0	f43	0	58	a38	47
11							0	f43	0	57	a38	44
12							0	43	0	57	h51	40
13							f12	30	2.0	64	50	39
14							f24	22	8.f	69	51	38
15							f24	22	12	71	47	37
16							f24	22	24	78	52	36
17							h24	f35	46	76	56	36
18							f24	f47	52	72	47	26
19							f23	f53	70	64	49	19
20							f23	71	84	55	43	2.8
21							f22	82	91	38	38	.7
22							f21	86	92	35	36	
23							f21	91	93	44	31	
24							h21	95	h89	50	31	
25							a21	f104	78	48	36	
26							34	h98	69	42	37	a.2
27							40	h98	57	36	41	
28							45	f78	55	a33	42	
29							52	f69	55	28	47	
30							64	f53	60	28	45	
31							-	f43	-	a35	43	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1946	0	0	0	0	0
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	519	64	0	17.3	1,030
May	1,745	104	22	56.3	3,460
June	1,176.9	93	0	39.2	2,330
July	1,640	78	28	52.9	3,250
August	1,284	56	30	41.4	2,550
September	888.3	63	-	29.6	1,760
Water year 1946-47	7,253.2	104	0	19.9	14,380

a No gage-height record; discharge interpolated, or computed on basis of records for Mountain Home feeder canal.
f Computed on basis of partly estimated gage-height record.
h Computed from staff-gage reading.

Bruneau River near Winter Camp Ranch, Idaho

Location.- Water-stage recorder, lat. 42°38', long. 115°42', in sec. 13, T. 9 S., R. 6 E., at Roberson Trail crossing, 6 miles downstream from East Fork, 11 miles northwest of Winter Camp Ranch, and 11 miles south of Hot Spring. Datum of gage is 3,015.68 feet above mean sea level, datum of 1929.

Records available.- November 1946 to September 1947.

Extremes.- Maximum discharge during period, 1,230 second-feet May 9 (gage height, 3.07 feet); minimum daily, 25 second-feet Dec. 31; minimum gage height, 0.49 foot Sept. 7.

Remarks.- Records good. Several small reservoirs and many small diversions for irrigation above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	151	50	90	136	399	546	608	259	62	30
2		-	148	50	102	136	378	646	594	244	60	31
3		-	*138	48	110	143	357	898	569	233	59	31
4		-	133	48	106	141	362	1,060	541	222	62	29
5		-	128	51	104	133	323	1,080	507	212	60	29
6		-	128	60	105	126	313	1,080	474	199	56	29
7		-	138	70	110	121	323	1,140	452	186	53	28
8		-	164	88	115	119	352	1,170	496	175	51	29
9		-	154	86	120	124	389	1,190	541	167	44	29
10		-	141	87	130	119	426	1,140	608	159	42	31
11		-	126	92	137	128	405	1,040	582	151	42	31
12		-	124	93	138	151	389	898	569	138	43	32
13		-	126	91	138	154	384	838	582	131	42	32
14		106	128	82	225	141	431	796	588	126	41	31
15		99	128	68	281	151	512	726	601	114	41	31
16		91	124	58	281	192	582	686	601	112	41	31
17		85	106	58	303	255	627	679	588	110	41	32
18		110	82	56	268	*342	653	705	620	106	38	32
19		108	60	62	222	389	666	719	594	99	38	37
20		112	95	78	202	399	620	740	569	93	38	39
21		126	119	98	181	378	608	761	529	91	36	39
22		121	116	102	172	368	575	761	474	87	36	39
23		131	114	97	167	384	546	740	426	84	36	38
24		126	99	96	161	421	496	698	399	80	36	37
25		136	99	102	175	389	468	679	384	78	37	36
26		133	114	110	170	347	431	666	373	74	36	36
27		133	114	110	154	323	415	672	384	72	35	33
28		154	101	101	151	294	431	719	357	69	33	35
29		186	71	93	-	294	468	698	318	66	31	35
30		167	40	86	-	332	512	660	286	64	30	35
31		-	25	*80	-	399		608	-	62	29	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	-	-	-	-	-
November 14-30	2,122	186	85	125	4,210
December	3,534	164	25	114	7,010
Calendar year	-	-	-	-	-
January	2,451	110	48	79.1	4,860
February	4,618	303	90	165	9,160
March	7,529	421	119	243	14,930
April	13,841	666	313	461	27,450
May	25,439	1,190	546	821	50,460
June	15,214	620	286	507	30,180
July	4,063	259	62	131	8,060
August	1,329	62	29	42.9	2,640
September	987	39	28	32.9	1,960
The period	-	-	-	-	160,900

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 19, 20, Dec. 30 to Feb. 11.

Bruneau River near Hot Spring, Idaho

Location.- Water-stage recorder, lat. 42°46', long. 115°43'30", in SE¼ sec. 34, T. 7 S., R. 6 E., at Dunham Ranch, 1 mile downstream from Hot Creek, 1½ miles south of Hot Spring post office, 9 miles southeast of Bruneau, and about 16 miles downstream from East Fork. Datum of gage is 2,598.5 feet above mean sea level, datum of 1929 (from stadia level circuit by Topographic Branch in 1945).

Records available.- July 1909 to March 1915, October 1943 to September 1947.

Extremes.- Maximum discharge during year, 1,230 second-feet May 9 (gage height, 6.43 feet); minimum, 49 second-feet Dec. 31 (gage height, 3.81 feet).
1909-15, 1943-47: Maximum discharge observed, 5,660 second-feet Mar. 1, 1910 (gage height, 10.6 feet, site and datum then in use), from rating curve extended above 1,200 second-feet; minimum observed, 40 second-feet Jan. 23, Nov. 29, 1911.

Remarks.- Records good. Several small reservoirs and many small diversions from tributaries above station for irrigation; large diversions below.

Rating table, water year 1946-47 (gage height, in feet, and discharge, in second-feet)

3.8	48	4.3	153	5.5	691
3.9	62	4.5	217	6.0	974
4.0	79	4.7	293	6.4	1,210
4.1	100	5.0	435		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	145	194	87	131	184	465	602	680	306	98	65
2	133	136	187	87	142	181	440	680	670	285	96	65
3	147	128	184	83	150	184	410	904	643	277	96	65
4	139	112	181	83	145	187	420	1,080	612	265	96	64
5	133	118	178	87	142	175	390	1,110	576	253	98	64
6	128	142	175	100	142	168	375	1,100	545	239	96	64
7	131	150	178	112	147	165	380	1,150	515	228	92	65
8	131	142	207	128	150	162	400	1,190	550	214	87	67
9	125	136	207	125	156	165	430	1,190	591	210	83	65
10	122	131	187	125	168	165	485	1,170	654	200	81	65
11	122	131	175	131	187	168	460	1,080	638	191	81	67
12	125	131	165	133	191	187	440	945	622	181	81	67
13	122	120	172	131	181	200	435	887	633	175	81	65
14	120	133	172	122	253	187	465	858	638	168	79	65
15	120	139	172	108	333	191	545	789	643	159	81	64
16	120	125	165	96	324	231	612	756	643	156	79	64
17	131	122	159	96	347	293	654	740	633	153	79	65
18	133	139	100	94	319	380	680	762	654	147	77	67
19	136	142	92	102	273	435	691	778	633	142	76	69
20	136	147	136	118	253	450	664	800	617	133	77	74
21	136	159	165	139	231	435	643	823	581	133	74	76
22	139	159	156	142	217	420	633	829	530	128	74	76
23	142	165	162	136	214	435	602	812	475	122	74	76
24	153	162	147	136	207	465	555	772	435	118	72	74
25	162	172	136	142	221	460	530	750	420	115	72	72
26	165	175	153	150	224	405	500	745	415	110	72	72
27	162	172	156	150	200	390	485	745	415	110	70	70
28	159	184	150	142	197	361	495	789	395	105	69	70
29	156	224	115	136	-	351	520	772	361	105	65	69
30	156	210	69	131	-	385	571	734	328	100	64	69
31	150	-	58	133	-	450	-	680	-	98	64	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	4,230	165	96	136	8,390
November	4,451	224	112	148	8,830
December	4,853	207	58	157	9,630
Calendar year 1946	133,790	1,900	58	367	265,400
January	3,685	150	83	119	7,310
February	5,845	347	131	209	11,590
March	9,015	465	162	291	17,880
April	15,375	691	375	512	30,500
May	27,922	1,190	602	872	53,600
June	16,745	680	328	558	33,210
July	5,326	303	98	172	10,560
August	2,484	98	64	80.1	4,930
September	2,040	76	64	68.0	4,050
Water year 1946-47	101,071	1,190	58	277	200,500

Bruneau River near Grand View, Idaho

Location.- Water-stage recorder, lat. 42°56', long. 115°57', in SE¼ sec. 35, T. 5 S., R. 4 E., 0.8 mile downstream from diversion dam for Grand View Canal, 1 mile upstream from mouth, and 8½ miles southeast of Grand View. Datum of gage is 2,372.3 feet above mean sea level, datum of 1929 (from stadia level circuit by Topographic Division in 1945).

Records available.- January 1895 to December 1903 (gage height only January 1900 to December 1903), May 1909 to September 1916, December 1944 to September 1947.

Extremes.- Maximum discharge during year, 995 second-feet May 10 (gage height, 3.55 feet); minimum, 0.9 second-foot Sept. 30 (gage height, 0.45 foot).
1895-1903, 1909-16, 1944-47: Maximum discharge observed, 5,700 second-feet Mar. 2, 1910 (gage height, 10.1 feet from floodmark, site and datum then in use), from rating curve extended above 1,200 second-feet; minimum, that of Sept. 30, 1947.

Remarks.- Records excellent except those below about 10 second-feet, which are fair. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.0	134	227	112	162	236	482	324	486	95	7.0	4.4
2	62	163	220	122	172	226	435	354	509	68	7.0	4.4
3	79	160	217	114	182	233	415	500	509	47	6.6	4.4
4	90	144	208	114	185	236	415	761	500	40	6.6	4.4
5	84	136	202	112	182	223	397	855	435	36	6.6	4.4
6	71	155	214	122	180	214	379	835	411	31	6.3	4.4
7	75	174	202	134	182	205	372	655	491	29	6.3	4.7
8	86	174	223	149	185	202	334	925	545	19	6.3	4.7
9	75	166	239	152	188	202	362	960	608	13	5.9	5.1
10	68	163	223	152	200	205	408	980	648	11	5.9	5.1
11	66	158	208	154	223	205	383	930	653	11	5.5	5.1
12	71	160	197	156	230	223	348	810	622	10	5.5	5.5
13	68	149	197	156	236	242	300	712	617	10	5.5	5.5
14	64	144	202	154	372	236	303	676	532	9.6	5.9	5.5
15	64	163	202	139	435	226	358	599	478	9.6	5.9	5.1
16	62	155	194	129	419	251	411	532	473	9.1	5.5	5.5
17	71	147	185	124	411	307	451	500	473	7.0	5.5	5.5
18	79	147	154	124	390	383	460	500	451	7.0	5.5	5.5
19	77	169	119	122	341	435	478	514	443	7.0	5.1	5.9
20	77	212	146	136	307	464	455	518	408	7.0	5.1	5.9
21	81	194	188	156	290	460	443	554	376	7.0	4.7	6.6
22	81	197	182	172	267	451	415	563	320	7.4	4.7	6.3
23	81	189	185	169	258	460	379	558	264	7.4	4.7	5.9
24	81	194	164	169	251	473	337	532	177	7.4	4.7	5.5
25	100	197	169	172	258	491	297	514	175	7.4	5.1	5.5
26	102	212	182	182	261	435	271	504	154	7.4	4.7	2.6
27	104	209	197	185	245	411	251	500	162	7.4	4.7	1.3
28	100	206	191	180	239	393	245	550	162	7.4	4.4	1.5
29	95	242	162	172	-	376	258	563	129	7.4	4.4	1.3
30	97	245	129	164	-	393	294	540	116	7.4	4.4	1.3
31	93	-	93	167	-	460	-	491	-	7.4	4.7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,411	104	7.0	77.8	4,780
November	5,258	245	134	175	10,430
December	5,821	239	93	188	11,550
Calendar year 1946	113,582.2	1,750	3.8	311	225,300
January	4,565	185	112	147	9,050
February	7,251	435	162	259	14,380
March	9,957	491	202	321	19,750
April	11,136	482	245	371	22,090
May	19,509	980	324	629	38,700
June	12,327	653	116	411	24,450
July	557.3	95	7.0	18.0	1,110
August	170.7	7.0	4.4	5.51	339
September	138.8	6.6	1.3	4.63	275
Water year 1946-47	79,101.8	980	1.3	217	156,900

Wickahoney Creek near Bruneau, Idaho

Location.- Water-stage recorder, lat. 42°47', long. 115°59', in sec. 27, T. 7 S., R. 4 E., 0.3 mile upstream from mouth and 11 miles southwest of Bruneau.
Records available.- December 1938 to September 1947.
Extremes.- Maximum discharge recorded during year, 211 second-feet Feb. 13 (gage height, 2.26 feet); no flow during most of year.
1938-47: Maximum discharge, 2,100 second-feet Jan. 22, 1943 (gage height, 12.4 feet,, from high-water mark), by slope-area method; no flow during long periods of each year.
Remarks.- Records poor.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Discharge	Day	Discharge	Day	Discharge	Day	Discharge	Day	Discharge
Feb. 1	0	Feb. 7	0	Feb. 13	f68	Feb. 19	h5.8	Feb. 25	a0.3
2	0	8	0	14	h28	20	a4	26	a.1
3	0	9	0	15	h48	21	a3	27	0
4	0	10	0	16	a40	22	a2	28	0
5	0	11	0	17	a28	23	†1.2		
6	0	12	0	18	h15	24	a.6		

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1946	821	53	0	2.25	1,630
January	0	0	0	0	0
February	244.0	68	0	8.71	484
March	0	0	0	0	0
April	0	0	0	0	0
May	0	0	0	0	0
June	0	0	0	0	0
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1946-47	244.0	68	0	.67	484

† Field estimate made this day by observer.
a No gage-height record; discharge computed on basis of records for Jacks Creek near Bruneau.
f Discharge computed from partly estimated gage-height record.
h Computed from staff-gage reading.

Jacks Creek near Bruneau, Idaho

Location.- Water-stage recorder, lat. 42°47', long. 115°59', in sec. 27, T. 7 S., R. 4 E., 650 feet upstream from confluence with Wickahoney Creek and 11 miles southwest of Bruneau.
Records available.- November 1938 to September 1947.
Extremes.- Maximum discharge during year, 92 second-feet Feb. 13 (gage height, 3.11 feet); no flow for long periods.
1938-47: Maximum discharge, 908 second-feet Jan. 21, 1943 (gage height, 7.2 feet, from high-water mark), from rating curve extended above 50 second-feet on basis of slope-area determination; no flow for long periods in each year.
Remarks.- Records fair. No regulation; ranch diversions above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Feb.	June	Day	Feb.	June	Day	Feb.	June	Day	Feb.	June	Day	Feb.	June
1	0	0	7	0.7	0	13	34	0	19	2.9	0	25	0.1	0
2	0	0	8	.3	0	14	19	0	20	1.0	0	26	0	0
3	0	.6	9	.1	.1	15	19	0	21	.2	0	27	0	0
4	0	3.8	10	0	0	16	15	0	22	0	0	28	0	0
5	0	.3	11	.4	0	17	11	0	23	0	0	29	-	0
6	0	.1	12	2.5	0	18	5.4	0	24	0	0	30	-	0

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1946	245.1	30	0	.67	486
January	0	0	0	0	0
February	111.6	34	0	3.99	221
March	0	0	0	0	0
April	0	0	0	0	0
May	0	0	0	0	0
June	4.9	3.8	0	.16	9.7
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1946-47	116.5	34	0	.32	231

Owyhee River near Gold Creek, Nev.

Location.- Water-stage recorder, lat. 41°41'10", long. 115°51'30", in NW¼NW¼ sec. 25, T. 44 N., R. 54 E., 500 feet downstream from Wild Horse Dam and 8 miles west of Gold Creek. Altitude, 6,130 feet (from topographic map).

Drainage area.- 209 square miles.

Records available.- March 1916 to September 1925, October 1936 to September 1947.

Average discharge.- 18 years (1917-21, 1922-25, 1936-47), 42.6 second-feet.

Extremes.- Maximum daily discharge during year, 144 second-feet (regulated) June 26; practically no flow Feb. 25 to May 7.
1916-25, 1936-47: Maximum discharge, 1,810 second-feet May 5, 1922 (gage height, 10.11 feet, site and datum then in use), from rating curve extended above 400 second-feet; practically no flow at times when reservoir gates were closed.

Remarks.- Records good. Small diversions above station for irrigation. Flow regulated by Wild Horse Reservoir (see p. 140).

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	0.5						0	96	141	75	79
2	18							0	96	141	75	78
3	17							0	97	139	74	77
4	17							0	97	139	74	76
5	17							0	97	139	73	64
6	17							0	97	138	72	9.5
7	17							0	97	138	72	15
8	17							60	97	135	72	15
9	18							73	97	134	72	15
10	18							16	97	133	71	15
11	18							1.5	97	133	71	15
12	18				0.5			1.5	97	113	71	15
13	18							1.7	97	63	81	15
14	18							1.6	97	63	96	15
15	18		0.5	0.5				23	96	69	96	15
16	18	0.5						45	96	80	94	15
17	18							79	94	80	93	15
18	11							79	94	79	92	15
19	.6							79	93	78	91	15
20	.6							87	93	77	91	15
21	.6							98	93	77	90	15
22	.6							98	93	77	89	15
23	.6							97	112	76	88	15
24	.6				.3			97	142	76	87	14
25	.6				0			96	142	76	86	14
26	.6				0			96	144	76	85	14
27	.6				0			96	142	75	84	14
28	.6				0			96	142	75	83	14
29	.5				-			96	142	75	82	13
30	.5				-			96	142	75	80	13
31	.5	-			-			96	-	75	80	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	334.5	34	0.5	10.8	663
November	15.0	-	-	.5	30
December	15.5	-	-	.5	31
Calendar year 1946	22,400	493	-	61.4	44,430
January	15.5	-	-	.5	31
February	11.8	-	0	.42	23
March	0	0	0	0	0
April	0	0	0	0	0
May	1,609.3	98	0	51.9	3,190
June	3,216	144	93	107	6,380
July	3,045	141	63	98.2	6,040
August	2,540	96	71	81.9	5,040
September	734.5	79	9.5	24.5	1,460
Water year 1946-47	11,540	144	0	31.6	22,890

Note.- Discharge for period of no gage-height record, Nov. 2 to Apr. 10, computed on basis of 3 discharge measurements and records of gate operation at Wild Horse Dam

Owyhee River at Mountain City, Nev.

Location.- Water-stage recorder, lat. 41°50'10", long. 115°57'50", in SW¼ sec. 35, unsurveyed, T. 46 N., R. 53 E., at Mountain City, 1 mile downstream from California Creek.

Drainage area.- 350 square miles.

Records available.- May to December 1913, November 1926 to September 1947.

Average discharge.- 21 years (1926-47), 98.1 second-feet.

Extremes.- Maximum discharge during year, 242 second-feet (regulated) May 9 (gage height, 2.80 feet); minimum not determined, occurred during period of ice effect.
1913, 1927-47: Maximum discharge, 1,830 second-feet Apr. 20, 1936 (gage height, 7.6 feet), from rating curve extended above 600 second-feet; no flow July 29 to Sept. 15, 1931, July 21 to Sept. 12, 1934.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation. Flow partly regulated by Wild Horse Reservoir (see p. 140).

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	*20	31	16		a32	114	124	150	154	67	80
2	46	19	27	14		a35	112	124	145	152	69	80
3	34	18	27	12		a33	109	131	141	148	70	78
4	32	18	26	12		a32	103	128	137	148	70	77
5	32	19	27	13		*31	109	122	137	148	70	77
6	32	19	32	13	35	28	122	116	133	147	70	41
7	32	20	31	14		30	116	110	137	143	70	18
8	32	18	28	14		30	147	120	150	139	69	20
9	33	16	27	15		30	152	230	182	137	69	19
10	32	14	25	16		48	145	152	158	135	67	19
11	33	12	26	15		61	145	110	152	135	67	19
12	33	15	27	14		42	143	110	145	133	67	20
13	32	18	25	12	60	45	150	103	133	78	67	19
14	32	17	25	10		60	172	92	131	60	92	19
15	32	16	24	8		69	196	85	130	58	94	18
16	34	18	20	10	a65	80	208	105	126	72	96	16
17	34	19	18	13	a55	94	211	122	130	75	94	16
18	34	19	16	16	a55	103	208	133	128	75	92	17
19	24	20	18	18	a50	107	192	135	122	75	92	17
20	19	26	20	20	a44	107	192	133	118	75	92	17
21	19	27	22	22	a40	103	184	148	118	73	92	17
22	19	26	21	23	a39	109	172	145	114	73	92	17
23	25	31	21	24	a40	131	154	145	112	72	90	18
24	24	36	22	25	a45	110	147	145	152	70	92	17
25	23	33	22	26	a40	101	137	145	154	69	90	17
26	22	33	22	25	a35	97	130	145	154	69	88	17
27	21	39	24	23	a37	90	130	143	160	69	87	18
28	20	36	22	*22	a33	96	130	184	160	70	85	17
29	20	33	20	20	-	105	131	150	158	70	83	16
30	19	32	19	21	-	128	128	143	156	69	81	16
31	19	-	18	22	-	122	-	147	-	69	81	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	904	61	19	29.2	1,790
November	687	39	12	22.9	1,360
December	733	32	16	23.6	1,450
Calendar year 1946	48,175	888	12	132	95,540
January	528	26	8	17.0	1,050
February	1,228	65	33	43.9	2,440
March	2,289	131	28	73.8	4,540
April	4,489	211	103	150	8,900
May	4,125	230	85	133	8,180
June	4,223	182	112	141	8,380
July	3,060	154	58	98.7	6,070
August	2,505	96	67	80.8	4,970
September	857	80	16	28.6	1,700
Water year 1946-47	25,628	230	8	70.2	50,830

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for station near Owyhee.
Note.- Stage-discharge relation affected by ice Nov. 2, 3, 5, 6, 8-10, 12-17, 21, Dec. 10, 11, 16-22, Dec. 28 to Feb. 15 (no gage-height record Jan. 4-28; discharge computed on bsis of weather records and records for Owyhee River near Gold Creek).

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Owyhee River above China diversion dam, near Owyhee, Nev.

Location.- Water-stage recorder, lat. 41°55'20", long. 116°04'10", in NW¼ sec. 6, T. 46 N., R. 53 E., 1,000 feet downstream from Skull Creek, 1 mile upstream from China Diversion dam, and 2 miles southeast of Owyhee.

Drainage area.- 458 square miles.

Records available.- March 1939 to September 1947.

Extremes (regulated).- Maximum discharge during year, 382 second-feet May 9 (gage height, 4.61 feet); minimum, 15 second-feet Sept. 30
1939-47: Maximum discharge, 1,850 second-feet May 6, 1945 (gage height, 9.18 feet) minimum daily, 2 second-feet Sept. 15-18, 1940.

Remarks.- Records good except those for periods of ice effect, which are fair. Diversions above station for irrigation. Flow partly regulated by Wild Horse Reservoir (see p. 140).

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	*29	42	24		44	149	212	175	172	70	78
2	75	29	40	22		51	145	212	165	167	73	77
3	46	26	38	20		47	148	213	153	162	76	74
4	42	27	37	21		46	134	205	145	161	75	73
5	40	27	39	22		*46	133	191	142	159	72	72
					50							
6	41	28	*50	23		39	153	178	135	157	72	59
7	40	28	46	24		46	148	166	138	153	72	22
8	42	26	42	25		44	184	165	161	148	72	22
9	42	24	39	26		44	223	345	222	143	70	20
10	40	22	34	26		54	204	264	198	140	67	19
11	39	20	35	25		102	200	187	195	141	67	18
12	42	23	39	24		64	208	193	179	140	66	18
13	39	26	35	21		59	232	174	148	96	66	18
14	39	25	34	18	75	76	269	151	139	61	88	17
15	38	24	32	16		93	309	130	133	54	103	18
16	44	26	28	18	87	108	332	143	126	64	104	17
17	44	28	26	20	81	129	343	153	139	72	101	18
18	47	25	24	23	82	148	356	172	136	69	99	20
19	41	26	27	26	73	154	325	173	125	68	95	20
20	29	32	30	30	64	150	321	166	122	69	94	20
21	27	32	32	32	59	147	311	177	122	69	92	19
22	29	38	31	33	57	148	282	177	119	69	32	19
23	43	41	30	34	59	186	258	169	113	69	92	18
24	41	51	32	35	71	155	240	163	149	69	91	18
25	37	37	32	36	60	134	225	165	172	69	89	18
26	33	45	29	34	51	121	218	160	172	68	86	18
27	31	56	34	33	55	108	218	161	184	69	84	17
28	30	50	32	*32	47	114	218	236	187	69	83	16
29	30	44	30	30	-	129	222	180	183	71	81	16
30	29	42	28	31	-	162	219	163	177	72	80	16
31	28	-	26	32	-	159	-	165	-	71	80	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,245	77	27	40.2	2,470
November	957	56	20	31.9	1,900
December	1,053	50	24	34.0	2,090
Calendar year 1946	62,756	1,120	20	172	124,500
January	316	36	16	26.3	1,620
February	1,721	-	-	61.5	3,410
March	3,107	186	39	100	6,160
April	6,933	356	133	231	13,750
May	5,709	345	130	184	11,320
June	4,654	222	113	155	9,230
July	3,161	172	54	102	6,270
August	2,552	104	66	82.3	5,060
September	875	78	16	29.2	1,740
Water year 1946-47	32,783	356	16	89.8	65,020

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 3-6, 10-16, Dec. 17-23, Dec. 28 to Feb. 15.

Owyhee River above Owyhee Reservoir, Oreg.

Location.- Water-stage recorder, lat. 43°13', long. 117°30', in SE¼ sec. 18, T. 27 S., R. 43 E., 3 miles upstream from flow line of Owyhee Reservoir and 8 miles southwest of Watson. Altitude of gage, about 2,690 feet above mean sea level (levels by Bureau of Reclamation).
Drainage area.- 10,400 square miles.
Records available.- October 1930 to September 1947 in reports of Geological Survey. April 1929 to September 1936 in reports of Oregon State engineer.
Average discharge.- 18 years, 849 second-feet.
Extremes.- Maximum discharge during year, 4,290 second-feet Apr. 10 (gage height, 8.51 feet); minimum, 143 second-feet Sept. 2, 4 (gage height, 3.67 feet).
1929-47: Maximum discharge, 16,000 second-feet Mar. 20, 1932, Apr. 19, 1936; maximum gage height, 12.95 feet Mar. 20, 1932; minimum discharge, 103 second-feet Aug. 19, 1932 (gage height, 3.57 feet).
Remarks.- Records good except those for periods of ice effect, which are poor. Diversions above station for irrigation. Flow slightly regulated by 11 small reservoirs which have a total capacity of 52,000 acre-feet.
Cooperation.- Water-stage recorder inspected by Bureau of Reclamation.

Rating table, water year 1946-47, except period of ice effect
(gage height, in feet, and discharge, in second-feet)

3.7	149	5.4	890
3.9	198	5.9	1,240
4.2	288	6.5	1,730
4.5	400	7.2	2,450
4.9	585	8.1	3,630

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	215	312	1,060	b230	309	784	808	694	416	266	195	158
2	215	309	1,020	b200	309	682	834	676	490	269	193	156
3	226	306	939	b170	323	607	855	646	485	285	188	156
4	247	302	772	b150	449	565	932	602	495	288	182	151
5	262	295	658	b180	432	540	911	560	510	278	182	158
6	272	288	596	218	495	530	939	520	505	262	182	160
7	316	292	607	272	624	530	1,110	490	596	244	177	170
8	334	306	1,050	282	742	520	1,550	458	565	241	175	170
9	320	306	1,160	285	827	520	2,590	428	515	253	172	175
10	316	323	784	288	778	495	3,740	412	525	253	170	170
11	323	330	585	278	688	490	3,230	424	535	244	170	167
12	312	338	490	292	796	602	2,470	436	515	238	170	165
13	302	323	436	288	1,300	1,230	2,000	585	646	241	167	167
14	295	309	404	266	2,860	1,110	1,640	658	670	241	170	165
15	288	306	388	b250	3,100	932	1,470	652	629	235	172	167
16	278	306	b300	b220	2,590	1,090	1,420	658	565	235	167	170
17	275	295	b250	b200	2,440	1,460	1,400	624	510	223	165	172
18	278	330	b250	b200	2,410	1,600	1,410	545	458	215	170	172
19	282	345	b260	b200	2,130	1,680	1,420	500	416	209	170	172
20	285	342	b270	b240	1,790	1,670	1,370	485	372	209	170	170
21	285	372	288	b240	1,560	1,540	1,360	432	345	212	170	172
22	292	416	316	b240	1,280	1,370	1,390	392	327	209	167	175
23	298	436	327	b260	1,070	1,260	1,300	368	320	204	170	175
24	298	454	316	278	995	1,250	1,220	368	312	201	167	175
25	309	718	312	272	1,120	1,350	1,120	364	302	204	165	177
26	306	790	312	269	1,460	1,340	1,040	360	292	201	167	177
27	298	706	316	295	1,250	1,120	967	338	288	195	165	167
28	295	1,090	312	316	960	1,000	911	338	282	185	163	188
29	309	1,070	327	298	-	918	814	349	282	188	158	182
30	316	1,170	309	298	-	855	730	353	275	193	156	180
31	316	-	250	306	-	820	-	400	-	198	158	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	8,963	334	215	289	17,780
November	13,485	1,170	288	450	26,750
December	15,664	1,160	250	505	31,070
Calendar year 1946	435,466	7,080	-	1,193	863,800
January	7,781	316	150	251	15,430
February	35,087	3,100	309	1,253	69,590
March	30,460	1,680	490	983	60,420
April	42,951	3,740	730	1,432	85,190
May	15,115	694	338	488	29,980
June	13,443	670	275	448	26,660
July	7,119	288	185	230	14,120
August	5,313	195	156	171	10,540
September	5,079	188	151	169	10,070
Water year 1946-47	200,460	3,740	150	549	397,600

b Stage-discharge relation affected by ice.

Wild Horse Reservoir near Gold Creek, Nev.

Location.- Reference point on Wild Horse Dam on Owyhee River, lat. 41°41'10", long. 115° 51'20", in NE¼NW¼ sec. 25, T. 44 N., R. 54 E., 8 miles west of Gold Creek. Datum of gage is 6,109.18 feet above mean sea level (levels by Office of Indian Affairs).
Drainage area.- 209 square miles.
Records available.- March 1938 to September 1947.
Extremes.- Maximum contents observed during year, 24,220 acre-feet May 6 (gage height, 74.95 feet); minimum observed, 3,410 acre-feet Sept. 27.
1938-47: Maximum contents observed, 34,460 acre-feet Apr. 18, 1942 (gage height, 80.95 feet); no contents at times during each year 1938-41.
Remarks.- Reservoir is formed by concrete-arch dam; storage began Mar. 18, 1938. Capacity, 32,690 acre-feet between gage height 20.0 feet (sill of outlet gate) and 80.0 feet (spillway crest). No dead storage. Water is used for irrigation on Duck Valley project.
Cooperation.- Most of gage-height record and base data for capacity table furnished by Office of Indian Affairs.

Contents, in acre-feet, water year October 1946 to September 1947

Date	Contents	Date	Contents	Date	Contents
Oct. 2	10,960	Feb. 24	b14,300	June 10	20,590
25	10,640	Mar. 5	14,790	26	17,250
Nov. 25	11,270	28	18,510	July 9	13,600
Dec. 6	11,700	Apr. 11	21,070	29	10,080
23	b11,800	28	23,300	Aug. 8	8,780
Jan. 27	12,530	May 6	24,220	30	4,940
28	12,770	8	24,020	Sept.17	3,720
		28	22,390	27	3,410

b Contents computed from gage readings corrected for ice cover.

Owyhee Reservoir at Owyhee Dam, near Nyssa, Oreg.

Location.- Staff gage, lat. 43°38', long. 117°15', in sec. 20, T. 22 S., R. 45 E., 21 miles southwest of Nyssa. Datum of gage is at mean sea level (level by Bureau of Reclamation).
Drainage area.- 11,160 square miles.
Records available.- October 1932 to September 1947.
Extremes.- Maximum contents observed during year, 1,043,500 acre-feet Apr. 20, 21 (elevation, 2,663.68 feet); minimum observed, 659,000 acre-feet Sept. 30 (elevation, 2,625.72 feet).
1932-47: Maximum contents observed, 1,125,000 acre-feet June 11, 1936 (elevation, 2,670.27 feet); minimum observed since full capacity was attained on May 7, 1936, those of Sept. 30, 1947.
Remarks.- Reservoir is formed by concrete arch-gravity dam, completed in September 1932; storage began Oct. 16, 1932. Capacity, 1,121,800 acre-feet between elevations 2,367.5 feet (bottom of sluice gates) and 2,670 feet (top of spillway gate), 715,000 acre-feet between elevations 2,590.2 feet (diversion tunnel) and 2,670 feet. Dead storage below elevation 2,367.5 feet negligible. Figures given herein are of contents above elevation 2,367.5 feet. The reservoir will generally not be drawn below elevation 2,590.2 feet. Water is released through diversion tunnel to South canal for irrigation of lands west of Snake River in the vicinity of Homedale, Idaho, and to North canal for irrigation of lands north and west of Owyhee River, and through sluice gates to river for Owyhee Canal, which diverts about 18 miles downstream. Gage read once daily.
Cooperation.- Gage height record furnished by Bureau of Reclamation.

Monthly elevation and contents, water year October 1946 to September 1947

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	2,641.38	800,700	-
Oct. 31	2,640.95	796,500	-4,200
Nov. 30	2,643.46	821,100	+24,600
Dec. 31	2,647.07	857,700	+36,600
Calendar year 1946	-	-	-64,100
Jan. 31	2,648.61	873,700	+16,000
Feb. 28	2,655.43	947,500	+73,800
Mar. 31	2,660.06	1,000,500	+53,000
Apr. 30	2,663.03	1,035,700	+35,200
May 31	2,656.02	954,200	-81,500
June 30	2,651.70	906,600	-47,600
July 31	2,642.74	814,000	-92,600
Aug. 31	2,633.59	727,700	-86,300
Sept.30	2,625.72	659,000	-68,700
Water year 1946-47	-	-	-141,700

† Time of gage reading not known.

Owyhee River below Owyhee Dam, Oreg.

Location.- Water-stage recorder, lat. 43°39', long. 117°15', in sec. 17, T. 22 S., R. 45 E., three-quarters of a mile downstream from Owyhee Dam. Datum of gage is 2,343.67 feet above mean sea level (levels by Bureau of Reclamation).

Drainage area.- 11,160 square miles.

Records available.- February 1929 to September 1947.

Average discharge.- 18 years, 428 second-feet.

Extremes.- Maximum discharge during year, 222 second-feet June 27 (gage height, 1.62 feet); minimum observed, 7 second-feet Apr. 6 (gates closed at Owyhee Dam).
1934-47: Maximum discharge, 14,600 second-feet Mar. 21, 1932 (gage height, 12.79 feet); no flow for a few hours Aug. 8, 9, 1932, when temporary diversion tunnel at Owyhee Dam was closed.

Remarks.- Records good above 10 second-feet and poor below. Diversions above station for irrigation. Flow regulated by Wild Horse and Owyhee Reservoirs (see preceding page).

Cooperation.- Water-stage recorder inspected by Bureau of Reclamation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66						8	157	163	208	69	120
2	66						8	159	155	208	71	120
3	67						8	159	141	208	72	121
4	43						8	161	141	208	74	121
5	12						8	161	127	208	74	121
6	8						86	168	120	208	74	121
7	8						126	176	123	193	75	121
8	8						126	178	106	159	65	108
9	8						126	178	95	115	46	99
10	8						109	178	84	118	47	99
11	8						98	178	75	135	47	99
12							98	178	77	137	49	99
13							98	178	77	137	51	99
14							98	178	77	137	51	99
15							99	180	78	137	52	99
		8	8	8	8	8						
16							116	187	93	137	52	99
17							129	187	106	118	53	99
18							129	187	108	80	53	98
19							116	187	114	82	53	98
20							106	187	131	82	47	98
21	8						106	187	144	82	40	99
22							106	187	146	82	41	98
23							108	187	146	83	42	99
24							109	187	159	75	42	88
25							109	187	172	74	63	80
26							123	187	174	74	80	80
27							134	187	191	74	80	80
28							146	187	204	74	80	80
29					-		157	182	206	74	102	71
30					-		157	182	206	71	121	65
31		-			-		-	168	-	69	120	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	462	67	-	14.9	916
November	240	-	-	8.0	476
December	248	-	-	8.0	492
Calendar year 1946	215,262	6,840	-	590	472,000
January	248	-	-	8.0	492
February	224	-	-	8.0	444
March	248	-	-	8.0	492
April	2,955	157	-	98.5	5,860
May	5,530	187	157	178	10,970
June	3,939	206	75	131	7,810
July	3,847	208	69	124	7,630
August	1,986	121	40	64.1	3,940
September	2,978	121	65	99.3	5,910
Water year 1946-47	22,905	208	-	62.8	45,430

Note.- No gage-height record Oct. 6-10, Oct. 12 to Apr. 5; flow represents leakage computed on basis of staff-gage readings Oct. 11, Apr. 6.

Jordan Creek above Lone Tree Creek, near Jordan Valley, Ore.

Location.- Water-stage recorder, lat. 42°53', long. 116°59', in NW¼ sec. 19, T. 6 S., R. 5 W., 2 miles upstream from Lone Tree Creek and 7 miles southeast of Jordan Valley.

Records available.- October 1945 to September 1947.

Extremes.- Maximum discharge during year, 676 second-feet Apr. 17 (gage height, 3.26 feet); minimum, 1.5 second-feet Sept. 6; minimum gage height, 0.69 foot Nov. 12, Sept. 6.
1945-47: Maximum discharge, 2,100 second-feet Apr. 19, 1946 (gage height, 5.44 feet); minimum, that of Sept. 6, 1947.

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

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Jan. 4				Jan. 5 to Sept. 30							
1.0	9.0	1.4	38	0.7	1.6	1.1	14	1.5	48	2.3	224
1.1	15	1.5	50	.8	3.8	1.2	20	1.7	79	2.6	330
1.2	21	1.6	65	.9	6.4	1.3	28	1.9	120	2.9	470
1.3	29	1.7	83	1.0	9.5	1.4	37	2.1	168	3.2	640

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.0	19	50	25	32	83	344	362	87	28	4.1	2.0
2	13	14	46	24	39	105	339	384	87	28	3.4	2.3
3	13	16	44	*23	74	90	344	435	77	20	2.9	2.5
4	12	15	42	23	56	90	314	430	90	18	2.9	2.5
5	13	17	42	25	64	83	310	393	81	17	3.1	2.5
6	13	19	56	28	69	67	362	362	74	17	3.1	2.3
7	14	20	62	29	59	77	402	344	69	16	2.9	2.5
8	16	19	54	29	56	77	430	326	67	14	2.9	3.4
9	16	15	50	29	55	76	465	352	98	13	2.7	3.1
10	14	20	44	30	47	111	425	314	98	11	2.5	2.9
11	14	20	43	30	54	163	406	263	134	10	2.5	2.9
12	14	*14	42	29	*120	134	384	243	129	10	2.5	2.9
13	14	18	42	27	339	127	393	218	107	9.2	2.5	2.5
14	14	20	56	25	240	146	445	215	85	8.9	2.3	2.5
15	14	16	81	24	221	204	500	184	76	8.3	2.0	2.5
16	14	15	59	26	201	288	538	166	70	8.3	2.0	2.5
17	15	20	30	30	187	362	634	153	77	7.3	1.8	3.1
18	17	20	35	35	173	402	634	148	74	8.0	1.6	3.1
19	16	24	46	38	163	406	556	143	59	8.3	1.6	3.1
20	16	29	48	38	146	393	580	134	56	7.0	2.3	2.9
21	17	28	46	37	136	380	526	122	55	6.1	2.5	2.9
22	18	31	43	34	132	375	475	109	51	5.9	2.5	2.9
23	20	39	37	34	125	465	435	102	46	5.6	2.9	2.9
24	20	54	34	38	141	402	406	98	39	5.4	2.9	2.9
25	20	42	40	46	143	339	384	92	32	5.4	2.9	3.1
26	19	45	38	61	129	314	375	87	26	5.1	2.9	3.4
27	19	72	39	40	111	288	380	77	26	4.8	3.1	3.4
28	18	70	28	33	90	288	384	81	26	4.6	2.7	3.4
29	17	59	35	33	-	318	398	72	27	4.3	2.5	4.1
30	17	54	27	32	-	339	380	70	26	4.1	2.5	4.8
31	17	-	26	30	-	357	-	85	-	4.1	2.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	483	20	9.0	15.6	958
November	864	72	14	28.8	1,710
December	1,365	81	26	44.0	2,710
Calendar year 1946	86,576.9	2,050	4.6	237	171,700
January	985	61	23	31.8	1,950
February	3,402	339	32	122	6,750
March	7,349	465	67	237	14,580
April	12,948	634	310	432	25,680
May	6,564	435	70	212	13,020
June	2,049	134	26	68.3	4,060
July	322.7	28	4.1	10.4	640
August	81.5	4.1	1.6	2.63	162
September	87.8	4.8	2.0	2.93	174
Water year 1946-47	36,501.0	634	1.6	100	72,390

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 16, Jan. 1-22.

Boise River near Twin Springs, Idaho

Location.- Water-stage recorder, lat. 43°40', long. 115°44', in sec. 27, T. 4 N., R. 6 E., a quarter of a mile upstream from Birch Creek, 1½ miles upstream from flow line of Arrowrock Reservoir, 4 miles downstream from Twin Springs, and 13 miles upstream from Arrowrock.

Drainage area.- 830 square miles.

Records available.- March 1911 to September 1947.

Average discharge.- 36 years, 1,122 second-feet.

Extremes.- Maximum discharge during year, 7,670 second-feet May 9 (gage height, 7.16 feet); minimum, 330 second-feet Nov. 16, Sept. 6, 30 (gage height, 2.21 feet).
1911-47: Maximum discharge, 10,300 second-feet May 17, 1927 (gage height, 8.30 feet), from rating curve extended above 8,000 second-feet; minimum, 109 second-feet Dec. 10, 1944; minimum gage height, 1.56 feet Dec. 15, 16, 1935.

Remarks.- Records excellent except those below 500 second-feet, which are good, and those for periods of ice effect or no gage-height record, which are fair. No diversions or regulation.

Rating table, water year 1946-47, except period of ice effect
(gage height, in feet, and discharge, in second-feet)

2.2	325	3.1	960	5.0	3,520
2.4	420	3.7	1,620	6.0	5,300
2.7	620	4.3	2,440	7.1	7,540

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	456	474	644	460	460	605	1,700	3,460	3,780	1,520	560	352
2	933	395	620	*420	490	668	1,630	4,500	3,710	1,570	538	348
3	644	380	575	410	490	660	1,550	6,110	3,470	1,660	526	361
4	545	420	575	400	460	636	1,480	6,430	3,140	1,600	512	361
5	512	456	575	450	470	605	1,360	6,050	2,840	1,520	500	348
6	480	468	676	480	470	545	1,290	6,050	2,830	1,500	493	338
7	468	480	684	460	470	575	1,200	6,470	2,710	1,500	468	356
8	468	456	668	460	470	575	1,180	7,310	3,040	1,490	462	426
9	450	420	644	480	470	560	1,140	7,350	3,970	1,430	450	395
10	438	432	605	500	520	644	1,130	5,770	3,550	1,360	444	390
11	432	438	612	540	540	708	1,100	4,660	3,140	1,290	444	375
12	426	*400	951	500	580	652	1,120	4,210	2,740	1,180	438	366
13	420	385	1,460	520	800	636	1,300	4,050	2,560	1,100	432	356
14	415	432	f2,160	480	750	692	1,840	3,760	2,580	1,050	420	348
15	415	415	2,150	430	740	789	2,500	3,550	2,640	1,050	420	348
16	410	361	1,500	410	730	1,000	2,770	3,550	2,800	1,020	410	348
17	405	400	1,000	420	740	1,300	2,920	3,680	3,070	960	400	390
18	410	480	915	440	760	1,540	2,860	3,710	3,180	915	395	410
19	405	852	980	450	780	1,710	2,760	3,750	3,150	879	395	375
20	400	1,010	852	510	760	1,780	2,900	3,970	2,950	843	415	370
21	493	716	764	520	740	1,850	3,060	4,090	2,520	807	405	368
22	560	644	732	510	680	1,870	2,980	4,190	2,160	780	400	356
23	780	748	660	500	680	1,910	2,860	3,950	2,080	748	444	348
24	605	852	582	520	720	1,700	2,620	3,850	2,020	724	410	343
25	560	724	636	510	*748	1,520	2,530	4,000	2,100	692	395	338
26	598	700	692	500	748	1,430	2,680	4,100	2,190	668	380	343
27	560	668	660	470	724	1,370	3,000	4,390	2,080	644	370	343
28	532	660	560	440	668	1,430	3,410	4,140	1,840	620	366	338
29	486	716	456	440	-	1,500	3,710	3,660	1,650	605	356	338
30	480	708	470	450	-	1,710	3,470	3,460	1,540	590	352	334
31	468	-	440	450	-	1,820	-	3,750	-	582	352	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff: Inches	Runoff: Acre-feet
October	15,654	933	400	505	0.608	0.70	31,050
November	16,690	1,010	361	556	.670	.75	33,100
December	25,498	2,160	440	823	.992	1.14	50,570
Calendar year 1946	521,813	6,950	337	1,430	1.72	23.37	1,033,000
January	14,530	540	400	469	.565	.65	28,820
February	17,658	800	460	631	.760	.79	35,020
March	34,990	1,910	545	1,129	1.36	1.57	69,400
April	66,050	3,710	1,100	2,202	2.65	2.96	131,000
May	141,970	7,350	3,460	4,580	5.52	6.36	281,600
June	82,030	3,970	1,540	2,734	3.29	3.68	162,700
July	32,897	1,660	582	1,060	1.28	1.47	65,250
August	13,352	560	352	431	.519	.60	26,480
September	10,808	426	334	360	.434	.48	21,440
Water year 1946-47	472,127	7,350	334	1,293	1.56	21.15	936,400

* Winter discharge measurement made on this day.
f Computed from partly estimated gage-height record.
Note.- Stage-discharge relation affected by ice Dec. 30 to about Jan. 31. No gage-height record Jan. 19 to Feb. 24; discharge computed on basis of weather records, records for nearby streams in Boise and Payette River Basins, and records of inflow to Arrowrock and Anderson Ranch Reservoirs.

Arrowrock Reservoir at Arrowrock, Idaho

Location.- Graduations on upstream face of dam on Boise River, lat. 43°36', long. 115°55', in E½ sec. 18, T. 3 N., R. 4 E., at Arrowrock, 22 miles by road east of Boise. Datum of gage is at mean sea level (surveys of Bureau of Reclamation).

Drainage area.- 2,210 square miles.

Records available.- October 1917 to September 1947.

Extremes.- Maximum contents observed during year, 300,900 acre-feet May 9 (elevation, 3,219.0 feet); minimum observed, 69,100 acre-feet Oct. 7-11 (elevation, 3,112.0 feet). 1917-47: Maximum contents observed, 300,900 acre-feet May 4, 5, 1939, May 9, 1947 (elevation, 3,219.0 feet); no usable contents during period in each of several years when sluice gates were open and natural flow was passing through reservoir.

Remarks.- Reservoir is formed by gravity-section concrete-arch dam completed in 1915 and raised 5 feet in 1937; storage began in 1915. Capacity, 291,600 acre-feet between elevations 2,956 feet (11 feet below center line of sluice gates, 8.5 feet below sill) and 3,216 feet (crest of movable spillway at highest position). Dead storage negligible. Figures given herein represent original total contents (including bank storage), which, according to survey by Bureau of Reclamation completed in December 1947, has been reduced 7,700 acre-feet by deposition of silt. Water is used for irrigation of lands in Boise Valley. Gage read once daily about 8 a.m.

Cooperation.- Gage readings and yield table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73,000	103,000	117,500	185,800	219,000	249,800	250,600	295,900	299,400	284,600	237,400	169,500
2	71,440	104,800	117,900	187,100	220,300	249,800	248,400	295,600	299,400	282,500	223,400	165,700
3	71,050	106,600	118,100	188,300	221,500	250,000	246,400	297,200	298,700	281,000	228,400	161,700
4	70,400	108,100	118,300	188,800	222,400	250,300	245,300	297,800	297,800	279,500	227,100	157,500
5	69,880	109,800	118,100	189,400	223,400	250,300	241,900	297,800	297,500	278,000	225,800	153,100
6	69,490	111,500	118,300	190,600	224,700	250,660	240,300	298,100	297,200	276,200	224,200	148,600
7	69,100	113,400	118,600	191,700	225,803	250,300	238,800	298,400	297,200	274,400	222,400	144,200
8	69,100	114,300	119,000	192,900	226,800	250,000	238,800	300,303	297,200	272,303	220,600	140,200
9	69,100	114,100	120,600	193,800	227,800	249,500	238,800	300,900	298,100	270,600	219,000	137,000
10	69,100	113,800	122,800	194,700	229,100	249,500	239,300	300,600	300,000	268,300	217,500	134,400
11	69,100	113,600	125,300	196,200	230,400	250,600	239,300	300,300	299,400	266,000	215,800	135,200
12	69,230	113,200	127,600	197,400	231,700	251,700	238,800	300,000	299,000	263,600	214,000	136,000
13	69,230	112,700	131,400	198,600	233,800	252,600	238,800	299,703	298,400	260,700	212,000	137,000
14	69,230	112.200	136,400	199,500	236,700	251,700	238,800	298,700	298,100	257,900	210,000	137,800
15	69,230	111,800	143,000	200,500	239,000	251,200	242,700	297,200	298,100	255,100	208,200	138,200
16	70,790	111,500	148,800	201,200	241,100	251,400	248,400	297,500	298,100	252,300	206,500	138,200
17	72,610	111,000	152,900	202,200	243,200	251,700	253,700	296,600	298,400	250,300	204,600	135,000
18	74,260	110,600	156,000	202,900	244,500	253,400	259,000	295,900	298,700	248,900	202,700	130,800
19	76,080	110,500	159,200	204,100	245,600	255,600	263,900	295,300	299,000	247,200	200,700	126,800
20	77,760	111,800	162,100	205,503	246,100	257,900	268,000	296,600	299,000	245,600	199,300	122,400
21	79,440	112,500	165,100	206,800	246,700	261,000	271,800	297,200	298,700	244,000	197,400	118,400
22	81,500	113,000	167,600	208,200	247,200	263,600	276,200	297,500	298,400	242,700	195,900	114,300
23	83,750	113,200	169,900	209,000	247,800	266,500	280,100	297,500	297,800	241,400	194,500	110,500
24	86,300	113,900	172,200	210,200	248,400	268,900	284,000	297,800	297,200	239,800	192,700	106,900
25	88,620	114,700	174,600	211,500	248,600	268,900	287,000	297,800	296,600	238,800	190,600	104,200
26	90,860	115,400	176,800	212,800	248,900	266,800	289,700	297,800	294,700	237,200	188,800	101,300
27	93,100	116,100	179,000	214,000	249,500	264,200	292,800	297,800	293,200	236,200	185,500	98,220
28	95,340	116,500	181,200	215,000	249,500	261,900	295,000	297,800	291,300	234,900	182,600	95,180
29	97,200	116,800	182,800	216,000	-	258,200	295,900	298,400	289,100	233,600	179,500	92,140
30	99,070	117,400	183,900	217,000	-	254,000	296,200	299,000	286,700	232,500	176,400	89,100
31	101,100	-	184,800	218,000	-	252,800	-	299,000	-	231,500	173,300	-

Monthly elevation and contents, water year October 1946 to September 1947

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	3,116.8	75,520	-
Oct. 31	3,133.3	101,100	+25,580
Nov. 30	3,142.7	117,400	+16,300
Dec. 31	3,175.8	184,800	+67,400
Calendar year 1946	-	-	+116,870
Jan. 31	3,189.6	218,000	+33,200
Feb. 28	3,201.6	249,500	+31,500
Mar. 31	3,202.8	252,800	+3,300
Apr. 30	3,217.5	296,200	+43,400
May 31	3,218.4	299,000	+2,800
June 30	3,214.4	286,700	-12,300
July 31	3,194.8	231,500	-55,200
Aug. 31	3,170.6	173,300	-58,200
Sept. 30	3,126.0	89,100	-84,200
Water year 1946-47	-	-	+13,580

† Elevation at about 8 a.m.

Boise River at Dowling Ranch, near Arrowrock, Idaho

Location.- Water-stage recorder, lat. 43°35', long. 115°58', in sec. 15, T. 3 N., R. 4 E., at Dowling Ranch, three-quarters of a mile upstream from Moore Creek and 4 miles downstream from Arrowrock.

Drainage area.- 2,220 square miles.

Records available.- March 1911 to September 1947.

Average discharge.- 36 years, 2,243 second-feet.

Extremes (regulated).- Maximum discharge during year, 11,500 second-feet May 9 (gage height, 8.06 feet); minimum, 4 second-feet Feb. 8 (gage height, 0.84 foot); minimum daily recorded, 6 second-feet Oct. 17-21, 24-27, 31, Nov. 2-6, Dec. 30.
1911-47: Maximum discharge, 18,800 second-feet Apr. 20, 1943 (gage height, 9.93 feet); minimum, 1 second-foot Jan. 3, 1945; minimum gage height, 0.62 foot Nov. 21, 22, 1935; minimum daily discharge, 2 second-feet for many days in 1935, 1936, 1942.

Remarks.- Records excellent except those below 20 second-feet, which are fair. Flow regulated by Arrowrock Reservoir (see preceding page) and Anderson Ranch Reservoir (see p. 152). No diversion above station.

Cooperation.- Two discharge measurements furnished by Water District No. 12-A.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,870	7	1,040	8	8	820	3,890	6,450	6,500	3,890	3,030	2,620
2	1,720	6	1,040	8	8	820	4,440	6,350	6,480	3,810	3,040	2,630
3	1,510	6	1,040	8	8	820	4,810	7,560	5,640	3,730	3,060	2,720
4	1,410	6	1,040	8	8	820	4,810	8,090	5,060	3,690	3,080	2,750
5	1,260	6	1,040	8	7	820	4,170	8,060	4,700	3,690	3,100	2,850
6	1,160	6	1,050	8	*7	820	3,810	8,410	4,570	3,690	3,130	2,800
7	1,050	238	1,050	8	8	928	3,260	8,870	4,440	3,710	3,130	2,770
8	946	727	840	8	8	1,000	2,900	10,500	4,620	3,770	3,060	2,420
9	919	1,040	13	8	7	1,000	2,900	11,300	5,130	3,770	3,100	2,040
10	892	1,040	8	8	7	901	2,900	10,300	5,960	3,790	3,130	947
11	856	1,030	8	8	7	748	2,900	9,560	5,550	3,770	3,130	230
12	856	1,030	10	8	13	692	2,920	9,080	5,040	3,770	3,130	242
13	865	1,030	10	8	16	1,130	2,920	8,670	4,440	3,750	3,150	258
14	865	1,020	10		12	1,490	2,920	7,810	4,260	3,730	3,150	284
15	376	1,020	10		10	1,380	2,960	5,860	4,280	3,730	3,170	410
16	8	1,020	9	7	10	1,310	3,260	4,770	4,340	3,730	3,150	1,480
17	6	1,020	8		216	1,150	3,500	4,730	4,590	3,750	3,130	2,620
18	6	1,020	8		584	1,010	3,690	4,770	5,010	3,730	3,120	2,550
19	6	1,010	8		700	1,020	3,930	4,920	5,150	3,690	3,100	2,740
20	6	1,020	*8		700	777	4,090	5,990	5,060	3,640	3,100	2,700
21	6	1,020	8		700	819	4,110	6,580	4,750	3,580	2,970	2,630
22	7	1,030	8		764	1,040	4,130	6,820	4,320	3,430	2,890	2,600
23	7	1,030	8	8	804	1,050	4,150	6,820	4,070	3,370	2,800	2,550
24	6	1,030	8		812	1,600	4,170	7,030	3,830	3,260	2,490	2,010
25	6	1,030	8		812	2,600	4,190	7,200	4,320	3,210	2,380	1,990
26	6	1,040	8		812	3,030	4,190	7,310	4,340	3,130	2,370	2,040
27	6	1,040	8		812	3,010	4,770	7,140	4,280	3,100	2,360	2,110
28	54	1,040	7		812	3,210	5,840	6,610	4,190	3,100	2,340	2,120
29	90	1,040	8	7	-	3,930	6,530	6,040	4,170	3,040	2,310	2,090
30	8	1,040	6		-	3,610	6,660	6,060	4,090	3,030	2,310	2,080
31	6	-	7		-	2,690	-	6,290	-	3,030	2,520	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	16,789	1,870	6	542	33,300
November	23,642	1,040	6	788	46,890
December	8,334	1,050	6	269	16,530
Calendar year 1946	1,021,692	12,500	-	2,799	2,027,000
January	237	-	-	7.6	470
February	8,672	812	7	310	17,200
March	46,045	3,930	692	1,485	91,330
April	119,720	6,660	2,900	3,991	237,500
May	225,950	11,300	4,730	7,289	448,200
June	143,180	6,500	3,830	4,773	284,000
July	110,110	3,890	3,030	3,552	218,400
August	89,930	3,170	2,310	2,901	178,400
September	60,281	2,850	230	2,009	119,600
Water year 1946-47	852,890	11,300	-	2,337	1,692,000

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Jan. 7-31.

Diversions from Boise River between Dowling Ranch and Boise gaging stations, Idaho

Between Dowling Ranch and Boise gaging stations, 6 canals divert water from Boise River for irrigation.

Records of total diversion during irrigation seasons for each canal for years 1919-46, and daily flow of New York Canal February 1939 to September 1947 in reports of Geological Survey. Records of daily diversion for each canal during irrigation seasons from 1916 to 1947 on file in office of Idaho State Reclamation Engineer.

Daily or several times weekly gage readings obtained, frequent discharge measurements made, and records summarized under direction of W. E. Welsh, watermaster for Boise River.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							620	3,470	3,490	2,870	2,340	1,920
2							1,080	3,510	3,440	2,820	2,350	1,900
3							1,080	3,570	3,400	2,770	2,410	1,960
4							1,080	3,580	3,360	2,760	2,380	2,000
5							1,090	3,520	3,200	2,770	2,440	2,110
6							1,300	3,580	3,090	2,820	2,450	2,120
7							1,310	3,570	3,040	2,810	2,510	2,120
8							1,440	3,560	3,000	2,830	2,390	2,040
9							1,450	3,570	2,560	2,860	2,420	1,930
10							1,540	3,500	2,590	2,860	2,430	1,730
11							1,560	3,560	2,670	2,860	2,420	53
12							1,710	3,550	2,680	2,860	2,430	53
13							2,030	3,500	2,670	2,840	2,430	52
14							2,040	3,540	2,780	2,790	2,430	52
15							2,280	3,530	3,180	2,740	2,460	51
16							2,510	3,510	3,180	2,740	2,460	386
17							2,780	3,530	3,370	2,760	2,460	1,780
18							2,970	3,510	3,570	2,780	2,410	2,100
19							3,080	3,550	3,380	2,740	2,390	2,290
20							3,150	3,560	3,390	2,720	2,400	2,410
21							3,270	3,540	3,400	2,670	2,360	2,360
22							3,340	3,550	3,400	2,630	2,300	2,390
23							3,350	3,530	3,400	2,550	2,240	2,350
24							3,350	3,540	3,200	2,510	2,110	2,030
25							3,380	3,540	3,030	2,460	2,110	1,740
26							3,390	3,540	3,020	2,430	2,100	1,760
27							3,450	3,520	2,990	2,350	2,100	1,900
28							3,520	3,510	2,930	2,330	2,110	1,860
29							3,400	3,500	2,950	2,340	2,050	1,860
30							3,460	3,500	2,940	2,330	2,030	1,810
31							-	3,520	-	2,340	1,990	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	70,010	3,520	620	2,334	138,900
November	109,560	3,580	3,470	3,534	217,300
December	93,300	3,570	2,560	3,110	185,100
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	70,010	3,520	620	2,334	138,900
May	109,560	3,580	3,470	3,534	217,300
June	93,300	3,570	2,560	3,110	185,100
July	82,940	2,870	2,330	2,675	164,500
August	71,910	2,510	1,990	2,320	142,600
September	49,117	2,410	51	1,637	97,420
The period	-	-	-	-	945,800

Boise River at Boise, Idaho

Location.- Water-stage recorder, lat. 43°37', long. 116°13', in SW¼ 10, T. 3 N., R. 2 E., at Capitol Boulevard Bridge at Boise. Datum of gage is 2,675.46 feet above mean sea level (datum of Corps of Engineers, Boise River Surveys).

Records available.- March 1938 to September 1939 (gage heights only), February 1940 to September 1947.

Extremes.- Maximum discharge during year, 8,820 second-feet May 9 (gage height, 7.69 feet); minimum, 20 second-feet Feb. 28, Mar. 1, 6 (gage height, 2.77 feet); minimum daily, 22 second-feet Mar. 6, 7.

1940-47 (regulated): Maximum discharge, 21,000 second-feet Apr. 20, 1943 (gage height, 10,00 feet, site and datum then in use); minimum, 7 second-feet Dec. 16, 1942 (gage height, 1.79 feet, site and datum then in use); minimum daily, 8 second-feet Mar. 8-15, Dec. 6, 1941.

Remarks.- Records good except those for period of no gage-height record, which are fair. Flow regulated by Arrowrock Reservoir (see p. 144). New York, Ridenbaugh, and several smaller canals divert between Moore Creek and this station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	389	118	152	a127	142	25	4,120	3,750	3,480	1,270	820	765
2	426	118	124	133	148	27	4,320	3,530	3,550	1,200	809	755
3	396	113	108	85	148	27	4,480	4,550	2,970	1,120	787	809
4	418	105	105	92	159	30	4,380	5,320	2,350	1,060	787	787
5	410	110	95	97	152	25	3,900	5,300	2,030	1,080	787	842
6	347	113	136	113	152	22	3,190	5,550	1,940	1,030	798	798
7	328	95	130	139	152	22	2,810	5,910	1,860	1,040	787	820
8	286	65	130	136	133	27	2,140	7,400	2,070	1,080	776	675
9	280	35	134	133	133	25	2,120	8,390	2,930	1,060	787	382
10	275	41	197	127	159	71	2,120	8,120	3,820	1,040	831	334
11	244	34	188	139	162	113	1,940	7,060	3,580	1,060	842	304
12	244	30	351	127	206	40	1,770	6,460	3,120	1,040	842	292
13	275	28	820	121	474	118	1,730	6,040	2,230	1,060	864	286
14	270	27	1,080	124	566	695	1,510	5,280	1,630	1,090	853	322
15	347	24	1,300	97	410	725	1,360	3,680	1,400	1,100	864	361
16	210	25	888	105	142	647	1,380	2,070	1,320	1,100	853	584
17	118	25	611	102	50	611	1,550	1,880	1,430	1,090	842	620
18	102	27	450	118	40	458	1,470	1,900	1,820	1,090	831	602
19	118	40	466	133	34	516	1,610	1,940	2,100	1,080	820	532
20	113	244	450	133	36	516	1,730	2,810	2,050	1,060	820	458
21	115	184	368	136	29	1,430	1,750	3,500	1,820	1,030	809	410
22	130	115	316	139	27	1,920	1,710	3,750	1,270	975	745	368
23	152	100	286	142	28	2,010	1,650	3,780	1,000	962	755	354
24	166	152	259	152	28	2,210	1,550	3,950	950	912	647	354
25	152	145	249	159	28	3,070	1,530	4,080	1,380	888	403	322
26	142	159	249	159	29	3,720	1,530	4,220	1,590	875	389	292
27	145	177	259	166	25	3,720	1,880	4,100	1,570	864	368	286
28	139	142	a238	155	24	3,450	2,930	3,720	1,510	853	368	347
29	219	148	a210	136	-	3,600	3,700	3,120	1,470	842	347	328
30	145	166	a170	133	-	3,620	3,920	2,900	1,430	820	375	328
31	115	-	a130	136	-	2,460	-	3,210	-	820	507	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	7,216	426	102	233	14,310
November	2,905	244	24	96.8	5,760
December	10,649	1,300	95	344	21,120
Calendar year 1946	652,487	10,800	24	1,788	1,294,000
January	3,994	166	85	129	7,920
February	3,816	566	24	136	7,570
March	35,950	3,720	22	1,160	71,310
April	71,780	4,480	1,360	2,393	142,400
May	137,270	8,390	1,880	4,428	272,300
June	61,670	3,820	950	2,056	122,300
July	31,591	1,270	820	1,019	62,660
August	22,113	864	347	713	43,860
September	14,717	842	286	491	29,190
Water year 1946-47	403,671	8,390	22	1,106	800,700

a No gage-height record; discharge computed on basis of records for Moore Creek near Arrowrock.

Diversions from Boise River between Boise and Notus gaging stations, Idaho

Between Boise and Notus gaging stations, 21 principal canals and several small farm laterals divert water from Boise River for irrigation.

Records of total diversion during irrigation seasons for each canal for years 1919-46, in reports of Geological Survey. Records of daily diversion for each canal during irrigation seasons from 1916 to 1947 on file in office of Idaho State Reclamation Engineer.

Daily or several times weekly gage readings obtained, frequent discharge measurements made, and records summarized under direction of W. E. Welsh, watermaster for Boise River.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							123	2,300	2,080	2,030	1,490	1,210
2							155	2,360	1,970	2,060	1,420	1,340
3							165	2,160	1,910	1,980	1,410	1,390
4							173	2,340	1,830	1,860	1,360	1,430
5							179	2,430	1,820	1,860	1,380	1,530
6							189	2,460	1,820	1,840	1,450	1,590
7							199	2,480	1,770	1,820	1,370	1,610
8							201	2,470	1,700	1,760	1,320	1,650
9							201	2,470	1,630	1,770	1,300	1,360
10							216	2,450	1,540	1,810	1,320	1,190
11							232	2,380	1,460	1,820	1,380	1,120
12							209	2,360	1,320	1,850	1,430	1,100
13							289	2,350	1,510	1,840	1,420	1,100
14							391	2,350	1,520	1,880	1,450	1,110
15							566	2,290	1,560	1,840	1,470	1,120
16							651	2,210	1,610	1,900	1,460	1,320
17							909	2,270	1,450	1,890	1,440	1,330
18							963	2,310	1,510	1,850	1,460	1,280
19							994	2,330	1,910	1,840	1,440	1,270
20							1,110	2,380	1,960	1,800	1,470	1,210
21							1,260	2,410	1,940	1,800	1,420	1,180
22							1,420	2,410	1,780	1,770	1,390	1,150
23							1,530	2,390	1,690	1,750	1,380	1,080
24							1,660	2,380	1,820	1,720	1,400	1,080
25							1,760	2,360	1,840	1,740	1,060	1,070
26							1,900	2,350	2,030	1,670	1,040	1,040
27							1,780	2,340	2,100	1,660	1,020	1,000
28							2,200	2,320	2,140	1,630	1,020	1,020
29							2,230	2,260	1,960	1,600	954	1,040
30							2,260	2,210	2,120	1,580	928	1,010
31							-	2,180	-	1,500	925	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	26,115	2,260	123	870	51,800
May	72,760	2,480	2,160	2,347	144,300
June	53,300	2,140	1,320	1,777	105,700
July	55,720	2,060	1,500	1,797	110,500
August	40,775	1,490	925	1,315	80,880
September	36,930	1,650	1,000	1,231	73,250
The period	-	-	-	-	566,400

Boise River at Notus, Idaho

Location.- Water-stage recorder, lat. 43°43', long. 116°48', in SE¼ sec. 34, T. 5 N., R. 4 W., 360 yards upstream from steel highway bridge, a quarter of a mile southeast of Notus, and 7 miles northwest of Caldwell. Datum of gage is 2,288.55 feet above mean sea level (datum of Corps of Engineers - Boise River Surveys).

Records available.- April 1920 to September 1947

Average discharge.- 25 years (1920-22, 1924-47), 1,092 second-feet.

Extremes (regulated).- Maximum discharge during year, 7,640 second-feet May 10 (gage height, 7.43 feet); minimum not determined, occurred during periods of fragmentary gage-height record; minimum daily, 24 second-feet July 4.
1920-47: Maximum discharge, 20,500 second-feet Apr. 20, 1943 (gage height, 10.43 feet); minimum observed, 10 second-feet Aug. 18, 21, 1920.

Remarks.- Records good except those for periods of fragmentary gage-height record, which are fair. Station is below all large diversions for irrigation in Boise Valley; many diversions above. Flow regulated by Arrowrock Reservoir (see p. 144) and Anderson Ranch Reservoir (see p. 152).

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	268	656	716	584	545	378	3,700	2,100	2,660	96	41	37
2	346	632	698	573	556	394	4,460	1,790	2,970	45	45	37
3	508	614	662	562	573	399	4,850	2,170	2,900	34	46	33
4	534	608	632	545	562	416	4,830	3,420	2,150	f24	47	37
5	562	602	626	540	556	390	4,710	3,720	1,760	f25	41	36
6	562	602	573	568	556	374	3,660	3,640	1,550	f25	40	41
7	551	632	638	573	551	374	3,450	4,000	1,490	29	42	49
8	626	668	638	584	545	374	2,590	4,790	1,570	f28	37	113
9	590	626	638	579	540	378	2,460	6,430	2,620	f26	33	205
10	568	632	644	584	551	390	2,390	7,410	3,420	32	34	169
11	596	626	692	602	551	444	2,300	6,220	3,840	f30	36	168
12	692	596	692	602	602	472	2,040	5,840	3,360	f26	32	137
13	674	579	1,000	590	801	399	1,940	5,250	2,580	f28	35	109
14	680	573	1,470	579	1,000	562	1,600	4,550	1,790	33	39	102
15	814	568	1,980	463	996	1,070	1,310	3,450	1,160	38	56	88
16	1,090	551	1,730	540	847	1,090	1,040	1,620	814	41	42	71
17	896	551	1,310	513	626	1,030	1,090	903	662	41	44	88
18	762	556	996	498	513	966	854	762	910	40	46	153
19	704	568	931	534	477	875	794	692	910	41	46	273
20	692	620	952	540	453	903	827	723	875	44	49	295
21	674	782	896	573	439	1,180	794	1,690	827	61	48	256
22	674	736	854	562	421	2,230	626	2,230	551	95	44	210
23	692	662	814	562	412	2,450	492	2,300	296	56	44	193
24	692	644	798	568	399	2,500	279	2,290	106	42	38	171
25	692	692	768	590	403	3,180	140	2,510	60	44	39	149
26	692	736	762	608	399	4,040	90	2,740	54	41	48	152
27	692	782	782	579	399	4,040	73	2,780	56	44	48	143
28	680	782	762	596	390	3,930	438	2,760	57	42	42	137
29	674	736	723	573	-	3,640	1,420	2,160	57	49	36	139
30	756	723	644	545	-	3,900	2,150	1,780	99	46	36	149
31	692	-	620	545	-	3,220	-	2,250	-	44	37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	20,325	1,090	268	656	40,310
November	19,335	782	551	644	38,350
December	26,631	1,980	573	859	52,820
Calendar year 1946	615,089	10,400	35	1,685	1,220,000
January	17,454	608	463	563	34,620
February	15,663	1,000	390	559	31,070
March	45,988	4,040	374	1,483	91,220
April	57,397	4,850	73	1,913	113,800
May	94,970	7,410	692	3,064	188,400
June	42,154	3,840	54	1,405	83,610
July	1,290	96	24	41.6	2,560
August	1,291	56	32	41.6	2,560
September	3,940	295	33	131	7,810
Water year 1946-47	346,438	7,410	24	949	687,100

f Fragmentary gage-height record; discharge computed from partly estimated gage height.

Middle Fork Boise River near Twin Springs, Idaho

Location.- Water-stage recorder, lat. 43°42'45", long. 115°37'50", in sec. 4, T. 4 N., R. 7 E., 1,000 feet upstream from confluence with North Fork Boise River, 1,000 feet upstream from Trout dale ranger station, and 4½ miles northeast of Twin Springs.

Drainage area.- 382 square miles.

Records available.- October 1946 to September 1947.

Extremes.- Maximum discharge during year, 3,830 second-feet May 9 (gage height, 6.88 feet); minimum, 168 second-feet Jan. 16; minimum gage height, 1.77 feet Sept. 7, 30.

Remarks.- Records excellent except those for Mar. 1 to Apr. 30, which are good, and those for periods of ice effect or no gage-height record, which are fair. No diversion or regulation above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	270	246	309	215	210	285	712	1,570	2,170	894	334	202
2	500	207	295	*205	225	299	685	2,080	2,120	952	327	196
3	350	213	282	195	231	295	655	2,910	1,960	1,040	316	205
4	300	237	278	190	210	289	630	3,090	1,730	1,000	313	202
5	270	237	285	200	216	275	587	2,930	1,550	946	302	196
6	260	231	331	225	219	262	564	2,940	1,530	934	295	185
7	250	237	338	215	216	265	528	3,250	1,500	946	289	196
8	250	231	327	205	219	268	515	3,680	1,680	946	275	237
9	240	219	309	210	219	265	506	3,640	2,090	899	265	219
10	240	228	292	225	240	292	494	2,870	1,830	855	265	210
11	230	225	313	235	240	306	485	2,290	1,600	806	265	207
12	230	213	477	220	278	292	494	2,030	1,400	728	259	199
13	220	216	728	230	382	295	560	1,930	1,330	670	259	196
14	220	222	1,010	210	364	316	750	1,770	1,390	645	253	191
15	220	213	899	185	349	364	988	1,680	1,470	635	249	193
16	220	202	635	180	345	452	1,090	1,720	1,600	611	243	193
17	220	213	432	190	349	564	1,160	1,850	1,800	569	237	205
18	220	231	393	200	367	660	1,170	1,900	1,900	542	237	205
19	220	364	432	210	371	723	1,140	1,960	1,880	520	234	202
20	220	412	375	230	356	750	1,200	2,130	1,760	494	246	199
21	270	323	352	240	341	778	1,280	2,220	1,430	477	240	199
22	300	302	334	228	327	789	1,260	2,300	1,230	460	237	193
23	400	356	309	231	316	806	1,210	2,140	1,190	440	253	191
24	300	378	292	246	331	723	1,140	2,120	1,170	424	234	185
25	289	338	299	231	*338	655	1,090	2,230	1,270	409	228	185
26	309	331	302	234	331	611	1,140	2,320	1,350	397	219	188
27	289	313	302	216	323	587	1,270	2,480	1,240	382	213	188
28	275	309	269	196	302	602	1,450	2,270	1,080	371	207	185
29	252	338	240	195	-	621	1,630	1,980	958	364	205	185
30	253	334	237	200	-	701	1,560	1,880	882	352	199	182
31	243	-	213	205	-	745	-	2,120	-	349	199	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff: Inches	Runoff: Acre-feet
October	8,330	500	220	269	0.704	0.81	16,520
November	8,119	412	202	271	.709	.79	16,100
December	11,889	1,010	213	384	1.01	1.16	23,580
Calendar year	-	-	-	-	-	-	-
January	6,597	246	180	213	.558	.64	13,080
February	8,215	382	210	293	.767	.80	16,290
March	15,135	806	262	488	1.28	1.47	30,020
April	27,943	1,630	485	931	2.44	2.72	55,420
May	72,280	3,680	1,570	2,332	6.10	7.04	143,400
Juue	46,090	2,170	882	1,536	4.02	4.49	91,420
July	20,057	1,040	349	647	1.69	1.95	39,780
August	7,897	334	199	255	.668	.77	15,660
September	5,919	237	182	197	.516	.58	11,740
Water year 1946-47	238,471	3,680	180	653	1.71	23.22	473,000

* Winter discharge measurement made on this day.

Note.- No gage-height record Oct. 1-24; discharge computed on basis of records for Boise River near Twin Springs and records for other nearby streams. Stage-discharge relation affected by ice Jan. 1-21, 29, 30.

South Fork Boise River near Featherville, Idaho

Location.- Water-stage recorder, lat. 43°29'40", long. 115°18'20", in lot 6, NE¼ sec. 19, T. 2 N., R. 10 E., 2½ miles upstream from Deer Creek and 8 miles southwest of Featherville.

Drainage area.- 635 square miles.

Records available.- April 1945 to September 1947.

Extremes.- Maximum discharge during year, 4,300 second-feet May 9 (gage height, 6.75 feet); minimum, 158 second-feet Dec. 31; minimum gage height, 1.59 feet Dec. 31, Sept. 7.
1945-47: Maximum discharge, that of May 9, 1947; minimum recorded, 126 second-feet Dec. 2, 1945 (gage height, 1.40 feet).

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	281	a265	246	206	212	263	864	2,060	2,100	850	259	187
2	512	a220	249	206	223	304	831	2,510	2,080	838	259	184
3	340	a210	239	192	223	300	786	3,310	1,960	831	256	187
4	292	a240	256	187	212	284	746	3,610	1,800	805	252	187
5	274	a260	270	203	214	274	702	3,460	1,680	766	246	180
6	259	a260	304	b240	214	249	683	3,430	1,650	746	242	174
7	256	263	281	226	214	266	647	3,700	1,590	727	236	174
8	252	256	270	206	206	266	647	4,030	1,740	721	230	203
9	252	233	266	212	203	256	635	4,040	1,890	690	223	198
10	249	252	256	230	214	281	653	3,310	1,690	659	223	192
11	242	246	270	259	226	274	665	2,770	1,560	617	226	187
12	242	223	319	220	*246	249	702	2,560	1,430	578	223	184
13	242	230	387	233	281	259	864	2,360	1,350	547	220	177
14	239	259	467	233	274	284	1,230	2,210	1,390	522	214	174
15	239	236	467	b190	266	323	1,560	2,080	1,430	502	212	174
16	236	209	369	b180	266	419	1,700	2,090	1,500	482	209	182
17	239	242	217	b185	266	562	1,760	2,180	1,610	467	203	187
18	239	266	223	b200	270	683	1,790	2,240	1,660	443	198	192
19	236	335	296	b210	270	772	1,730	2,280	1,640	419	198	192
20	236	369	308	b240	270	812	1,800	2,370	1,560	405	212	195
21	281	308	270	b250	266	857	1,860	2,430	1,400	392	214	192
22	323	296	259	233	292	877	1,830	2,510	1,240	374	214	190
23	405	323	236	230	296	864	1,780	2,400	1,170	361	230	187
24	315	311	209	239	304	766	1,650	2,320	1,110	352	223	187
25	246	281	242	233	323	702	1,570	2,380	1,110	340	217	187
26	a310	296	327	233	323	690	1,630	2,410	1,130	323	200	190
27	a295	281	311	214	311	690	1,810	2,560	1,090	308	195	187
28	a280	274	236	200	284	727	2,000	2,440	996	304	195	187
29	a275	274	192	200	-	772	2,120	2,200	919	296	192	187
30	a270	266	*203	203	-	898	2,030	2,080	877	288	190	187
31	a260	-	174	203	-	919	-	2,110	-	281	187	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	8,617	512	236	278	0.438	0.50	17,090
November	7,984	369	209	266	.419	.47	15,840
December	8,619	467	174	278	.438	.50	17,100
Calendar year 1946	305,387	4,000	174	837	1.32	17.89	605,700
January	6,696	259	180	216	.340	.39	13,280
February	7,169	323	203	256	.403	.42	14,220
March	16,142	919	249	521	.820	.95	32,020
April	39,275	2,120	635	1,309	2.06	2.30	77,900
May	82,440	4,040	2,060	2,660	4.19	4.82	163,500
June	44,352	2,100	877	1,480	2.33	2.60	87,970
July	16,234	850	281	524	.825	.96	32,200
August	6,798	259	187	219	.345	.40	13,480
September	5,591	203	174	186	.293	.33	11,090
Water year 1946-47	249,917	4,040	174	685	1.08	14.64	495,700

* 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.

Anderson Ranch Reservoir at Anderson Ranch Dam, Idaho

Location.- Staff gage, lat. 43°21'30", long. 115°27'10", in SE¼ sec. 1, T. 1 S., R. 8 E., on inlet structure of outlet works of dam on South Fork Boise River, 1½ miles downstream from Camas Creek and 3 miles northwest of Bennett (Dixie Store). Datum of gage is at mean sea level (surveys by Bureau of Reclamation).
Drainage area.- 980 square miles.
Records available.- December 1945 to September 1947.
Extremes.- Maximum contents observed during year, 140,000 acre-feet June 18, 19 (elevation, 4,101.1 feet); minimum observed, 1,742 acre-feet Sept. 9, 10, 16-20, 22-27, 29, 30 (elevation, 3,994.7 feet).
1945-47: Maximum contents observed, that of June 18, 19, 1947; minimum, no usable contents prior to Jan. 27, 1946.
Remarks.- Reservoir is formed by earth-fill dam, under construction. Storage began Dec. 15, 1945. Usable contents, 464,200 acre-feet between elevations 3,992 and 4,196 feet (top of spillway gates). Elevation of spillway crest, 4,174 feet, and of top of dam, 4,206 feet. Dead storage below 3,992 feet is 28,980 acre-feet. Figures given herein represent usable contents. Water is used for irrigation of lands in Boise Valley. Gage read once daily about 8 a.m.
Cooperation.- Gage readings and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,940	2,336	-	-	25,020	-	100,100	72,080	-	136,300	76,240	-
2	2,402	2,336	2,468	5,537	-	-	101,200	73,850	129,400	135,700	72,960	1,808
3	2,736	-	2,468	6,029	26,260	49,720	99,360	-	131,200	135,000	69,760	1,808
4	2,669	2,138	2,402	6,597	26,840	50,800	97,410	-	132,700	134,300	66,650	1,808
5	2,602	2,138	2,402	-	27,510	51,760	-	89,870	133,900	133,600	63,490	1,808
6	-	2,204	2,602	7,682	28,100	52,480	-	94,620	135,000	133,000	60,420	1,808
7	2,402	2,270	2,669	8,344	28,780	53,210	95,830	99,180	-	132,100	57,440	-
8	2,402	2,270	-	9,014	29,380	-	95,140	102,100	-	131,400	54,550	1,808
9	2,402	2,270	2,602	9,692	-	-	94,270	105,900	138,400	130,500	51,160	1,742
10	2,336	-	2,602	10,300	30,670	55,670	92,390	-	138,200	129,400	47,840	1,742
11	2,336	2,270	2,602	11,000	31,380	56,800	91,550	-	138,400	128,600	44,730	1,808
12	2,270	2,270	2,669	-	32,190	57,700	-	106,500	138,200	127,500	41,680	1,808
13	-	2,204	3,004	12,330	33,120	58,720	-	104,600	138,400	126,400	38,610	1,808
14	2,270	2,204	3,406	13,210	34,050	59,630	90,210	103,500	-	125,400	35,720	-
15	2,270	2,204	-	13,610	34,990	-	88,220	104,300	-	124,300	32,190	1,676
16	2,270	2,204	4,085	14,180	-	-	86,590	107,600	139,300	123,000	28,780	1,742
17	2,270	-	3,813	14,590	36,680	63,900	85,290	-	139,800	120,200	25,590	1,742
18	2,270	2,204	3,339	15,090	37,530	66,100	84,170	-	140,000	117,300	22,600	1,742
19	2,204	2,336	3,071	-	38,500	68,480	-	121,200	140,000	114,500	18,920	1,742
20	-	2,602	3,071	16,510	39,370	70,920	-	122,200	139,800	111,600	15,760	1,742
21	2,270	2,736	3,071	17,280	40,140	73,700	81,320	123,300	139,500	108,800	13,050	-
22	2,336	2,669	-	18,050	-	-	80,070	124,700	138,800	105,700	9,844	1,742
23	2,802	2,669	2,870	18,750	-	-	78,990	126,000	137,900	103,000	7,245	1,742
24	2,669	-	2,736	19,450	43,030	81,950	77,760	-	137,900	99,890	5,187	1,742
25	2,669	2,736	-	20,160	44,270	84,170	76,390	-	137,900	97,230	4,085	1,742
26	2,602	2,736	2,736	-	45,300	86,260	-	125,600	137,900	94,270	3,205	1,742
27	-	2,736	2,736	21,690	46,330	88,380	-	126,200	137,900	91,380	2,736	1,742
28	2,535	2,736	2,736	22,320	47,260	90,370	72,660	127,500	137,700	88,550	2,336	-
29	2,468	2,736	-	22,970	-	-	72,370	128,400	137,200	85,780	2,204	1,742
30	2,402	2,736	3,881	23,710	-	-	72,370	-	136,800	83,050	2,006	1,742
31	2,336	-	4,496	24,270	-	97,410	-	a128,900	-	79,600	a1,940	-

Monthly elevation and contents, water year October 1946 to September 1947

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	3,995.0	1,940	-
Oct. 31	3,995.6	2,336	+396
Nov. 30	3,996.2	2,736	+400
Dec. 31	3,998.8	4,496	+1,760
Calendar year 1946	-	-	+4,496
Jan. 31	4,023.2	24,270	+19,774
Feb. 28	4,045.1	47,260	+22,990
Mar. 31	4,080.2	97,410	+50,150
Apr. 30	4,064.4	72,370	-25,040
May 31	-	a128,900	+56,530
June 30	4,099.7	136,800	+7,900
July 31	4,069.2	79,600	-57,200
Aug. 31	-	a1,940	-77,660
Sept. 30	3,994.7	1,742	-198
Water year 1946-47	-	-	-198

† Elevation at about 8 a.m.
a No gage reading; contents interpolated.

South Fork Boise River at Anderson Ranch Dam, Idaho

Location.- Water-stage recorder, lat. 43°00', long. 115°29', in SW¼ sec. 11, T. 1 S., R. 8 E., 600 feet upstream from Dixie Creek, 1½ miles downstream from Anderson Ranch Reservoir, and 2¼ miles northwest of Bennett (Dixie store).

Drainage area.- 982 square miles. Prior to October 1946, 992 square miles (including that of Dixie Creek).

Records available.- April 1943 to September 1947 (include flow of Dixie Creek prior to October 1946 and exclude Dixie Creek thereafter).

Extremes.- Maximum discharge during year, 5,250 second-feet Apr. 9 (gage height, 7.78 feet); minimum, 1 second-foot Mar. 1-3, 5-9.
1943-47: Maximum discharge, 9,100 second-feet Apr. 17, 1943 (gage height, 10.06 feet); minimum, that of Mar. 1-3, 5-9, 1947.

Remarks.- Records excellent except those below 10 second-feet, which are poor. Some water stored in Little Camas Reservoir and diverted for irrigation of about 5,000 acres of land in vicinity of Mountain Home. Flow regulated by Anderson Ranch Reservoir beginning Dec. 15, 1945.

Cooperation.- Water-stage recorder inspected by Bureau of Reclamation.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Dec. 16-27)

Oct. 1 to Dec. 27		Dec. 28 to Sept. 30					
2.6	285	1.1	1	1.7	52	3.5	685
2.9	405	1.2	4	1.9	86	4.0	1,020
3.2	550	1.3	8	2.2	152	5.0	1,860
3.5	730	1.4	16	2.6	268	6.0	2,910
		1.5	26	3.0	422	7.1	4,290

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	285	348	387	5	b2	2	516	2,120	2,360	1,270	1,990	255
2	392	340	378		3	2	1,620	1,920	1,980	1,260	1,940	246
3	450	320	364		3	2	2,460	1,570	1,450	1,250	1,900	242
4	436	313	356		2	2	1,180	1,350	1,460	1,250	1,870	239
5	414	320	369		2	2	1,320	1,820	1,460	1,240	1,830	236
6	400	332	400		2	2	1,320	2,220	1,470	1,230	1,810	233
7	382	340	414		2	2	1,330	2,960	1,480	1,220	1,770	227
8	374	*340	414		2	2	1,340	3,500	1,490	1,220	1,870	233
9	364	336	405		2	2	1,800	3,780	1,960	1,210	1,910	239
10	356	332	396		2	7	1,350	4,080	2,100	1,210	1,850	242
11	348	332	387		2	7	1,350	4,240	1,940	1,210	1,810	239
12	344	328	418	b4	b3	2	1,350	4,210	1,680	1,200	1,760	230
13	340	313	490		*b3	3	1,340	3,770	1,510	1,190	1,710	224
14	336	313	574		2	*3	2,300	2,790	1,510	1,190	1,880	221
15	332	320	676		3	3	2,930	1,490	1,510	1,190	1,930	218
16	332	313	676		3	3	2,910	450	1,520	1,600	1,830	218
17	332	310	604		2	3	2,910	445	1,680	1,990	1,750	224
18	328	320	515		2	2	2,900	436	1,890	1,970	1,900	227
19	324	352	475		2	3	2,890	1,620	1,970	1,950	1,860	233
20	324	405	465		2	4	2,870	2,360	1,940	1,940	1,690	236
21	336	423	460		2	3	2,870	2,370	1,880	1,930	1,790	239
22	364	428	436		2	4	2,860	2,370	1,860	1,910	1,680	239
23	418	428	418		2	6	2,830	2,720	1,530	1,890	1,390	239
24	436	432	382		3	6	2,810	2,920	1,310	1,870	1,040	236
25	423	428	364		2	4	2,810	2,920	1,310	1,850	745	236
26	414	428	369	b2	2	6	2,790	2,690	1,300	1,830	554	233
27	410	423	387		2	4	2,770	2,360	1,290	1,820	431	236
28	396	410	170		2	5	2,760	2,360	1,290	1,790	355	236
29	382	400	b6		-	6	2,760	2,360	1,280	1,770	309	239
30	364	396	6		-	6	2,760	2,360	1,280	1,920	282	239
31	356	-	*16		-	129	-	2,360	-	2,020	268	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	11,492	450	285	371	22,790
November	10,823	432	310	361	21,470
December	12,177	676	6	393	24,150
Calendar year 1946	415,391	6,040	-	1,138	823,900
January	105	-	-	3.4	208
February	63	3	2	2.2	125
March	237	129	2	7.6	470
April	66,006	2,930	516	2,200	130,900
May	74,921	4,240	436	2,417	148,600
June	48,670	2,360	1,280	1,622	96,540
July	48,390	2,020	1,190	1,561	95,980
August	45,704	1,990	268	1,474	90,650
September	7,034	255	218	234	13,950
Water year 1946-47	325,622	4,240	-	892	645,833

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

South Fork Boise River near Lenox, Idaho

Location.- Water-stage recorder, lat. 43°30', long. 115°41', in sec. 24, T. 2 N., R. 6 E., 1½ miles upstream from Smith Creek, 4 miles upstream from flow line of Arrowrock Reservoir, 4 miles west of discontinued Lenox post office, 13 miles upstream from mouth, and 17 miles upstream from Arrowrock Dam.

Drainage area.- 1,090 square miles.

Records available.- March 1911 to December 1947 (discontinued).

Average discharge.- 34 years (1911-45), 960 second-feet.

Extremes.- Maximum discharge during period October 1946 to December 1947, 5,280 second-feet (regulated) Apr. 9 (gage height, 7.55 feet); minimum, 26 second-feet (regulated) Nov. 23, 1947 (gage height, 1.03 feet).

1911-47: Maximum discharge, 9,550 second-feet Apr. 17, 1943 (gage height, 10.05 feet); minimum, 26 second-feet (regulated) Feb. 6, 1946, Nov. 23, 1947.

Remarks.- Records excellent except those for periods of no gage-height record, which are fair. Some water stored in Little Camas Reservoir and diverted for irrigation of about 5,000 acres of land in vicinity of Mountain Home. Storage in Anderson Ranch Reservoir began Dec. 15, 1945.

Discharge, in second-feet, 1946-47

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	309	387	423	54		55	402	2,390	2,420	1,270	2,060	306
2	375	383	411	47		62	1,420	1,990	2,210	1,270	2,010	298
3	464	359	403	44		61	2,750	1,750	1,480	1,260	1,960	287
4	469	344	395	42		64	1,290	1,390	1,470	1,250	1,930	284
5	452	344	399	42		62	1,410	1,710	1,470	1,250	1,900	280
6	436	352	452		40	60	1,410	2,270	1,470	1,250	1,860	276
7	419	359	448			58	1,410	2,790	1,470	1,240	1,820	273
8	411	359	448			60	1,410	3,560	1,480	1,240	1,890	273
9	399	363	448			61	1,870	3,820	1,820	1,230	1,970	273
10	391	363	436			147	1,420	4,090	2,170	1,220	1,920	276
11	387	363	423			147	1,410	4,340	1,950	1,220	1,860	276
12	379	359	452			109	1,400	4,320	1,760	1,220	1,810	276
13	375	352	511			99	1,400	3,990	1,490	1,220	1,750	269
14	375	344	607			105	2,140	3,060	1,480	1,220	1,850	259
15	371	344	700			110	3,040	2,020	1,480	1,200	1,990	259
16	367	344	715	40		107	3,030	538	1,480	1,480	1,910	255
17	367	336	670			114	3,020	520	1,590	2,030	1,800	255
18	367	344	579		80	112	3,020	516	1,820	2,020	1,890	262
19	363	371	533			107	3,010	1,250	1,930	1,990	1,970	266
20	363	431	520			103	2,980	2,400	1,920	1,980	1,750	269
21	371	452	516			103	2,970	2,410	1,860	1,980	1,780	273
22	391	456	502			103	2,970	2,410	1,860	1,960	1,770	276
23	431	469	481			114	2,950	2,660	1,640	1,940	1,480	280
24	469	469	456		79	107	2,920	2,980	1,290	1,930	1,160	280
25	464	464	431		74	99	2,900	2,980	1,290	1,910	862	280
26	452	464	427	44	67	94	2,890	2,880	1,280	1,900	665	280
27	448	464	448	46	62	91	2,860	2,410	1,280	1,880	533	280
28	431	456	384	41	57	89	2,860	2,410	1,280	1,840	444	280
29	419	444	82	40	-	89	2,850	2,420	1,280	1,820	383	280
30	403	431	52	40	-	89	2,850	2,420	1,280	1,930	344	280
31	395	-	49	40	-	116	-	2,420	-	2,080	325	-

Note.- No gage-height record Jan. 5-25, Jan. 30 to Feb. 23; discharge computed on basis of weather records and records for station at Anderson Ranch Dam and other nearby streams.

1947

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	280	387	38	7	280	121	35	13	356	39	-	19	498	39	-	25	391	37	-
2	280	387	37	8	287	57	32	14	352	39	-	20	464	37	-	26	383	38	-
3	280	383	37	9	291	50	32	15	344	40	-	21	444	36	-	27	375	38	-
4	280	379	36	10	306	46	-	16	359	41	-	22	427	36	-	28	371	37	-
5	280	375	36	11	336	43	-	17	456	40	-	23	415	33	-	29	371	35	-
6	280	367	35	12	352	41	-	18	516	39	-	24	403	38	-	30	379	37	-
																31	387	-	-

Monthly discharge, in second-feet, 1946-47

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October 1946	12,513	469	309	404	24,820
November	11,770	469	336	392	23,350
December	13,761	715	49	444	27,290
Calendar year 1946	440,824	6,270	-	1,208	874,300
January 1947	1,280	54	-	41.3	2,540
February	1,739	-	-	62.1	3,450
March	2,897	147	55	93.5	5,750
April	68,262	3,040	402	2,275	135,400
May	77,114	4,340	516	2,488	153,000
June	48,700	2,420	1,280	1,623	96,600
July	49,230	2,080	1,200	1,588	97,650
August	47,646	2,060	325	1,537	94,500
September	8,261	306	255	275	16,390
Water year 1946-47	343,173	4,340	-	940	680,700
October 1947	11,223	516	280	362	22,260
November	3,315	387	33	110	6,580
December 1-9	318	38	32	35.3	631

Lime Creek near Bennett, Idaho

Location.- Water-stage recorder, lat. 43°25', long. 115°16', in SW¼NE¼ sec. 16, T. 1 N., R. 10 E., 0.4 mile upstream from flow line of Anderson Ranch Reservoir, 2 miles upstream from mouth, and 12 miles northeast of Bennett.

Drainage area.- 131 square miles.

Records available.- June 1945 to September 1947.

Extremes.- Maximum discharge during year, 302 second-feet May 4 (gage height, 3.88 feet); minimum, 13 second-feet Aug. 30 (gage height, 2.13 feet).
1945-47: Maximum discharge, 1,180 second-feet Apr. 19, 1946 (gage height, 6.11 feet); minimum, 9 second-feet Aug. 25, 1945.

Remarks.- Records good except those for period of ice effect, which are fair. No diversion or regulation.

Rating tables, water year 1946-47, except period of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Dec. 14, July 15 to Sept. 30)

Oct. 1 to Dec. 14		Dec. 15 to Sept. 30			
2.3	28	2.0	12	2.9	90
2.6	47	2.1	16	3.2	142
2.8	67	2.3	27	3.6	229
3.0	97	2.5	43	3.9	307
3.2	135	2.7	64		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	32	38			44	166	205	98	39	16	15
2	54	24	38			53	166	236	96	38	15	14
3	36	30	37	23		50	152	270	92	35	15	15
4	33	33	38			49	138	291	83	34	16	14
5	32	36	39			47	125	280	79	32	16	15
6	32	37	52		33	38	127	262	79	30	15	14
7	32	*37	46			48	118	267	75	30	15	15
8	32	36	43			46	113	270	90	29	14	18
9	32	31	41			46	111	257	108	28	15	18
10	32	36	40	30		54	114	224	83	28	15	18
11	31	35	41			71	113	210	79	26	15	17
12	32	30	56		*36	63	120	217	71	25	15	17
13	31	34	74		41	64	150	187	66	24	15	16
14	31	36	119		40	89	192	175	63	23	15	16
15	31	33	100		40	123	222	162	62	21	15	17
16	32	24	61		41	152	227	154	60	20	14	17
17	32	38	44		42	183	229	150	61	20	14	17
18	32	38	58	27	44	183	234	144	58	20	14	18
19	31	51	77		52	187	229	138	55	20	15	18
20	32	49	55		49	181	229	134	55	19	16	19
21	36	36	53		53	185	229	132	54	19	15	19
22	38	41	52		56	179	219	129	52	18	15	18
23	44	48	43	34	80	190	207	121	51	18	18	18
24	35	44	40		101	146	192	116	48	18	17	18
25	34	40	48		77	134	181	111	46	18	16	18
26	33	40	47		65	138	187	104	44	18	15	18
27	32	40	46		56	134	198	104	48	18	15	18
28	32	40	32		44	140	210	104	45	17	14	18
29	30	40	28	33	-	150	210	95	43	17	14	18
30	32	39	*23		-	198	205	93	42	17	14	18
31	31	-	23		-	194	-	104	-	17	15	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	1,048	54	30	33.8	0.258	0.30	2,080
November	1,108	51	24	36.9	.282	.31	2,200
December	1,532	119	23	49.4	.377	.43	3,040
Calendar year 1946	36,337	886	21	99.6	.760	10.31	72,090
January	933	-	-	30.1	.230	.23	1,850
February	1,280	101	-	45.7	.349	.38	2,540
March	3,559	198	38	115	.878	1.01	7,080
April	5,313	234	111	177	1.35	1.51	10,540
May	5,446	291	93	176	1.34	1.55	10,800
June	1,986	108	42	66.2	.505	.56	3,940
July	736	39	17	23.7	.181	.21	1,460
August	468	18	14	15.1	.115	.13	928
September	510	19	14	17.0	.130	.14	1,010
Water year 1946-47	23,919	291	14	65.5	.500	6.77	47,450

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 29 to Feb. 20.

Fall Creek near Anderson Ranch Dam, Idaho

Location.- Water-stage recorder, lat. 43°26'00", long 115°23'10", in SE¼ sec. 9, T. 1 N., R. 9 E., 1½ miles below Mill Creek and 6 miles northeast of Anderson Ranch Dam.

Drainage area.- 55.3 square miles.

Records available.- April 1945 to September 1947.

Extremes.- Maximum discharge during year, 324 second-feet May 3; maximum gage height recorded, 6.07 feet Jan. 5 (ice jam); minimum, 9.5 second-feet Sept. 18 (gage height, 2.45 feet).

1945-47: Maximum discharge, 793 second-feet Apr. 17, 1946; maximum gage height, that of Jan. 5, 1947; minimum discharge, that of Sept. 18, 1947.

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

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Jan. 6				Feb. 13 to Sept. 30			
2.5	14	3.2	56	2.5	11	3.4	81
2.7	20	3.5	89	2.7	19	3.8	143
2.9	30	3.9	143	2.9	30	4.2	221
				3.1	47	4.6	316

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	20	22			34	136	221	116	44	17	12
2	34	19	23			34	129	257	115	42	16	12
3	22	19	22	23		33	121	290	108	40	16	12
4	20	19	22			32	115	295	96	37	16	12
5	19	20	24			31	107	283	91	36	16	12
6	19	20	28			29	102	276	91	34	16	12
7	19	*21	26		25	29	96	285	84	33	16	13
8	19	21	25			29	95	285	96	32	15	15
9	19	19	24			29	94	271	116	32	15	15
10	18	20	24	25		31	94	230	101	31	15	14
11	18	20	28			30	95	206	94	29	16	13
12	18	20	57			29	104	200	82	29	16	13
13	18	22	70		*28	29	133	188	80	28	15	12
14	18	21	132		26	33	186	174	74	25	15	12
15	18	21	101		26	42	223	167	71	24	15	13
16	18	18	68		26	62	230	165	68	24	15	13
17	18	21	50	21	27	98	234	163	68	23	15	13
18	18	21	38		29	118	230	157	65	23	17	13
19	18	23	42		31	129	228	157	64	23	12	14
20	18	23	42		30	133	239	157	61	22	15	14
21	21	21	38		31	141	236	157	59	21	15	14
22	23	21	36		32	143	225	156	57	20	15	13
23	30	25	34	27	34	141	206	148	54	20	16	13
24	24	23	32		38	123	190	147	52	20	15	13
25	23	22	33		40	115	182	145	51	19	15	12
26	22	23	35		40	113	190	141	49	19	14	12
27	22	24	35		37	116	204	138	54	18	14	12
28	20	24	30		35	124	221	131	51	18	14	13
29	19	25	25	25	-	131	221	123	49	18	12	13
30	20	24	*23		-	152	210	118	46	18	12	13
31	19	-	23		-	148	-	120	-	16	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	635	34	18	20.5	0.371	0.43	1,260
November	640	25	18	21.3	.385	.43	1,270
December	1,212	132	22	39.1	.707	.82	2,400
Calendar year 1946	31,477	680	-	86.2	1.56	21.19	62,440
January	761	-	-	24.5	.443	.51	1,510
February	810	40	-	28.9	.523	.54	1,610
March	2,461	152	29	79.4	1.44	1.66	4,880
April	5,076	239	94	169	3.06	3.41	10,070
May	5,951	295	118	192	3.47	4.00	11,800
June	2,261	116	46	75.4	1.36	1.52	4,480
July	818	44	16	26.4	.477	.55	1,620
August	463	17	12	14.9	.269	.31	918
September	387	15	12	12.9	.233	.26	768
Water year 1946-47	21,475	295	12	58.8	1.06	14.44	42,590

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 17-19, Dec. 29 to about Jan. 20. No gage-height record Jan. 7 to Feb. 12; discharge computed on basis of weather records and records for nearby streams.

Little Camas Canal at heading, near Bennett, Idaho

Location.- Staff gage, lat. 43°21'30", long. 115°23', in sec. 9, T. 1 S., R. 9 E., 400 feet downstream from Little Camas Reservoir, 4 miles northeast of Bennett, and 22 miles northeast of Mountain Home.

Records available.- June to November 1917, April 1924 to September 1947.

Extremes.- Maximum discharge observed during year, 63 second-feet Aug. 2; maximum gage height, 2.50 feet July 24, 25; no flow during long periods.
1917, 1924-47: Maximum discharge observed, 77 second-feet Apr. 27-30, May 1, 3, 9, 1924; no flow during nonirrigation seasons.

Remarks.- Records fair. Gage read once daily. Canal diverts from Little Camas Reservoir (South Fork Boise River drainage) in sec. 9, T. 1 S., R. 9 E., and discharges into Long Tom Creek Basin, where water is stored in Long Tom Reservoir for irrigation of 5,000 acres of land near Mountain Home. No diversion above station. Flow regulated by head gates at Little Camas Reservoir.

Cooperation.- Gage readings furnished by Mountain Home Irrigation District.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	23	32	55	54	58	53
2						0	23	32	55	54	63	53
3						0	23	36	55	54	60	52
4						0	23	36	55	54	59	52
5						0	23	38	56	53	58	55
6						0	23	40	55	53	59	55
7						0	23	40	55	53	58	28
8						0	23	42	55	53	58	a14
9						0	23	46	55	54	54	5
10						0	23	46	55	55	54	0
11						0	23	46	55	54	54	0
12						0	23	46	54	54	54	0
13						0	23	51	55	53	54	0
14						0	25	51	55	54	52	0
15						0	25	55	54	54	54	0
16						0	25	55	54	54	54	0
17						0	25	57	54	54	54	0
18						6	25	57	54	54	54	0
19						12	25	56	55	54	54	0
20						12	25	56	54	54	54	0
21						12	9	56	55	54	54	0
22						12	0	56	55	54	54	0
23						12	0	56	55	54	54	0
24						20	0	56	54	54	53	0
25						20	8	56	55	27	53	0
26						20	25	56	56	0	53	0
27						20	25	55	54	9	54	0
28						23	26	56	55	32	54	0
29						23	32	56	54	34	54	0
30						23	32	56	55	39	54	0
31						23	-	56	-	53	54	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1946	4,065	51	0	11.1	8,070
January	0	0	0	0	0
February	0	0	0	0	0
March	238	23	0	7.7	472
April	631	32	0	21.0	1,250
May	1,533	57	32	49.5	3,040
June	1,643	56	54	54.8	3,260
July	1,486	55	0	47.9	2,950
August	1,710	63	52	55.2	3,390
September	367	55	0	12.2	728
Water year 1946-47	7,608	63	0	20.8	15,090

a No gage-height record; discharge interpolated between gate changes.

Moore Creek near Arrowrock, Idaho

Location.- Staff gage, lat. 43°35', long. 115°59', in sec. 21, T. 3 N., R. 4 E., at bridge on Boise-Arrowrock highway, a quarter of a mile upstream from mouth and 3 miles southwest of Arrowrock.

Drainage area.- 426 square miles.

Records available.- October 1914 to November 1915 (discharge measurements only), December 1915 to September 1947.

Average discharge.- 31 years (1916-47), 294 second-feet.

Extremes.- Maximum discharge observed during year, 1,120 second-feet Dec. 14 (gage height, 3.80 feet); minimum observed, 27 second-feet Sept. 3, 5, 6, 7 (gage height, 0.46 foot).

1915-47: Maximum discharge, 6,610 second-feet Apr. 8, 1943 (gage height, 7.1 feet, from high-water mark); minimum observed, 7.9 second-feet Aug. 13-15, 17, 18, 1924.

Remarks.- Records good except those for Jan. 31 to Feb. 5 and those for periods of ice effect, which are fair. Gage read once daily except Mar. 24 to May 31, when it was usually read twice daily. No large diversion above station.

Cooperation.- Gage readings furnished by Water District No. 12 A.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	82	274	116	131	316	802	680	412	129	44	28
2	195	85	246	100	134	340	791	725	412	114	41	28
3	139	82	215	b80	145	322	760	868	398	117	39	27
4	104	82	205	b85	131	340	715	868	392	117	37	28
5	75	68	188	94	131	340	658	846	358	108	37	27
6	68	85	215	b100	*131	304	640	840	364	100	35	27
7	65	93	225	b110	128	304	599	835	334	98	35	27
8	75	93	215	106	122	292	582	846	370	93	34	37
9	71	89	205	106	124	292	566	926	558	88	32	37
10	71	82	192	116	145	412	550	835	503	77	32	42
11	124	91	181	141	142	582	518	760	475	84	32	39
12	59	89	668	110	190	510	506	685	405	81	32	37
13	65	71	834	116	534	468	526	671	358	79	32	41
14	65	80	1,120	122	496	510	594	622	340	77	34	39
15	66	85	1,050	94	454	574	695	590	316	73	32	37
16	64	65	780	91	419	680	740	566	298	68	32	39
17	66	82	436	83	426	802	760	558	304	66	32	46
18	68	89	393	87	440	868	775	542	286	62	31	48
19	68	238	393	110	433	938	760	530	256	62	31	81
20	68	376	*342	116	384	926	780	526	244	58	31	56
21	82	280	311	122	391	926	755	522	256	58	32	50
22	93	205	288	120	377	890	720	503	226	54	32	46
23	128	231	254	130	419	974	685	486	198	54	31	44
24	130	311	231	134	440	840	630	472	187	54	34	42
25	116	241	236	134	412	755	617	468	178	52	35	42
26	120	236	225	145	384	725	612	454	168	50	34	42
27	112	317	225	134	358	671	626	450	160	50	32	46
28	94	254	188	96	328	658	668	444	168	48	31	44
29	89	302	141	102	-	653	690	433	164	46	29	44
30	82	308	116	120	-	700	676	412	151	64	29	42
31	85	-	110	126	-	857	-	416	-	46	28	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	2,760	195	53	89.0	0.209	0.24	5,470
November	4,732	376	82	158	.371	.41	9,390
December	10,702	1,120	110	345	.810	.93	21,230
Calendar year 1946	163,652	3,920	25	448	1.05	14.28	324,600
January	3,446	145	80	111	.261	.30	6,840
February	8,349	534	122	298	.700	.73	16,560
March	18,769	974	292	605	1.42	1.64	37,230
April	19,994	802	506	666	1.56	1.75	39,660
May	19,379	926	412	625	1.47	1.69	38,440
June	9,239	558	151	308	.723	.81	18,340
July	2,327	129	46	75.1	.176	.20	4,620
August	1,032	44	28	33.3	.078	.09	2,050
September	1,213	81	27	40.4	.095	.11	2,410
Water year 1946-47	101,942	1,120	27	279	.655	8.90	202,200

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

New York Canal near Barber, Idaho

Location.- Water-stage recorder at trapezoidal concrete-lined canal section, lat. 43°33', long. 116°07', in SE¼NE¼ sec. 32, T. 3 N., R. 3 E., 1 mile south of Barber and 1¾ miles downstream from head gates at Boise River diversion dam and power plant.

Records available.- February 1939 to September 1947.

Extremes.- Maximum discharge during year, 2,930 second-feet May 10 (gage height, 9.16 feet); no flow for long periods during year.
1939-47: Maximum discharge, 2,980 second-feet May 10, 1945; maximum gage height, 9.34 feet June 10, 1945; no flow for long periods each year.

Remarks.- Records excellent. Canal diverts from Boise River in sec. 3, T. 2 N., R. 3 E., 8 miles below Moore Creek, for irrigation of 166,396 acres included in Boise project of Bureau of Reclamation and as a feeder canal for Lake Lowell near Caldwell (see following page). Flow regulated by head gates.

Cooperation.- Five discharge measurements furnished by Board of Control for Boise project.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,080	0	1,120		0	1,050	510	2,830	2,870	2,260	1,860	1,510
2	998	0	1,130		0	1,060	744	2,840	2,850	2,240	1,880	1,520
3	837	0	1,130		0	1,070	981	2,860	2,800	2,220	1,890	1,580
4	762	0	1,120		0	1,090	981	2,870	2,720	2,220	1,900	1,630
5	680	0	1,130		0	1,080	1,040	2,850	2,620	2,240	1,930	1,720
6	613	0	1,110		0	1,040	1,180	2,870	2,540	2,260	1,970	1,730
7	572	74	1,130		0	1,100	1,230	2,860	2,500	2,260	2,000	1,710
8	491	618	1,070		0	1,220	1,280	2,870	2,390	2,280	1,960	1,610
9	462	1,065	70		0	1,220	1,290	2,880	2,140	2,320	2,000	1,460
10	464	1,130	0		0	1,230	1,290	2,880	2,220	2,330	2,000	788
11	476	1,120	0		0	1,210	1,400	2,900	2,230	2,320	2,000	0
12	476	1,110	0		0	1,160	1,490	2,880	2,200	2,300	2,000	0
13	474	1,100	0		0	1,170	1,590	2,850	2,250	2,260	2,000	0
14	476	1,100	0		0	1,210	1,800	2,860	2,500	2,220	2,010	0
15	138	1,100	0		0	1,210	2,020	2,860	2,650	2,180	2,020	0
16	0	1,100	0		405	1,290	2,180	2,860	2,740	2,170	2,020	457
17	0	1,090	0		518	1,360	2,380	2,860	2,820	2,210	2,000	1,720
18	0	1,110	0		908	1,380	2,560	2,860	2,810	2,210	1,980	1,690
19	0	1,140	0		1,090	1,380	2,650	2,860	2,800	2,180	1,960	1,960
20	0	1,110	0		1,050	1,060	2,720	2,870	2,810	2,140	1,960	1,990
21	0	1,090	0		1,040	0	2,740	2,860	2,800	2,120	1,910	1,960
22	0	1,100	0		1,050	0	2,740	2,850	2,790	2,060	1,860	1,920
23	0	1,140	0		1,120	0	2,720	2,860	2,740	2,060	1,750	1,920
24	0	1,140	0		1,160	0	2,750	2,860	2,500	2,020	1,690	1,370
25	0	1,120	0		1,140	0	2,760	2,860	2,440	1,960	1,690	1,330
26	0	1,120	0		1,110	0	2,770	2,860	2,430	1,880	1,690	1,390
27	0	1,140	0		1,100	0	2,800	2,850	2,380	1,850	1,690	1,460
28	0	1,150	0		1,060	365	2,800	2,860	2,370	1,860	1,660	1,440
29	0	1,140	0		-	988	2,790	2,850	2,370	1,850	1,640	1,430
30	0	1,140	0		-	995	2,820	2,870	2,360	1,830	1,600	1,440
31	0	-	0		-	724	-	2,870	-	1,840	1,560	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	8,999	1,080	0	290	17,850
November	25,247	1,150	0	842	50,080
December	9,010	1,130	0	291	17,870
Calendar year 1946	446,159	2,900	0	1,222	885,000
January	0	0	0	0	0
February	12,751	1,160	0	455	25,290
March	26,662	1,380	0	860	52,880
April	59,006	2,820	510	1,967	117,000
May	88,720	2,900	2,830	2,862	176,000
June	76,640	2,870	2,140	2,555	152,000
July	66,150	2,330	1,830	2,134	131,200
August	58,080	2,020	1,560	1,874	115,200
September	38,735	1,990	0	1,291	76,830
Water year 1946-47	470,000	2,900	0	1,288	932,200

Lake Lowell near Caldwell, Idaho

Location.- Staff gages attached to outlet structures at each end of reservoir. One gage is at lower embankment, lat. 43°35', long. 116°45', in SE¼ sec. 19, T. 3 N., R. 3 W., 5 miles south and 2 miles west of Caldwell; the other is at upper embankment, lat. 43°34', long. 116°39', in NW¼ sec. 36, T. 3 N., R. 3 W., 1 mile south and 4 miles west of Nampa. Datum of gage is 2,500.5 feet above mean sea level (surveys of Bureau of Reclamation).

Records available.- October 1917 to September 1947.

Extremes.- Maximum contents observed during year, 176,500 acre-feet Apr. 16 (gage height, 29.93 feet); minimum observed, 16,150 acre-feet Oct. 18.
1917-47: Maximum contents observed, 178,900 acre-feet Apr. 27, 28, 1922, Apr. 24, 1932 (gage height, 30.18 feet); minimum observed, 5,390 acre-feet Oct. 22, 1924.

Remarks.- Reservoir is formed by two earth embankments; dams were completed and storage began in 1908. Capacity, 177,150 acre-feet between gage heights 0.0 foot (sill of outlet gates) and 30.0 feet (maximum operation level). Dead storage, about 13,000 acre-feet. Below gage height 12.0 feet reservoir divides into two pools. In addition to water received from local drainage, reservoir receives water from Boise River through New York Canal of Boise project. Water is used for irrigation of lower project lands. Figures given herein represent usable contents. Gages read once daily.

Cooperation.- Gage readings and capacity table furnished by Board of Control for Boise project.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22,760	20,510	75,240	91,960	91,960	115,200	159,600	168,000	148,200	154,800	90,670	35,110
2	22,270	20,820	77,300	91,960	91,960	117,300	160,300	167,000	148,900	152,500	88,900	33,680
3	21,830	21,050	79,440	91,530	91,960	119,000	161,200	166,000	150,100	150,200	86,790	32,530
4	21,300	21,360	82,020	91,530	91,960	121,200	162,800	165,100	151,900	147,900	84,770	31,150
5	20,820	21,520	84,080	91,530	91,960	123,100	164,200	163,900	153,300	145,700	82,710	29,920
6	20,480	21,680	85,680	91,390	91,960	124,900	166,000	162,900	155,000	143,400	80,460	28,580
7	20,040	21,920	87,560	91,390	91,960	126,900	167,100	161,300	156,800	141,200	78,503	27,390
8	19,760	22,080	89,680	91,390	91,960	128,800	168,600	160,200	158,700	139,000	76,370	26,300
9	19,460	23,170	91,740	91,390	91,960	131,100	170,300	158,700	161,000	136,700	74,190	25,460
10	18,980	25,650	92,460	91,390	92,170	133,300	171,800	157,700	162,700	134,200	71,650	24,620
11	18,590	27,910	92,460	91,390	92,170	135,600	172,700	156,600	164,400	131,300	69,460	23,990
12	18,140	30,240	92,460	91,390	92,170	137,700	173,600	156,600	166,700	129,900	67,490	23,670
13	17,810	32,620	92,460	91,390	92,170	139,900	174,600	156,200	168,500	127,800	65,480	23,170
14	17,340	35,020	92,460	91,390	92,170	141,800	175,600	155,800	170,800	125,800	63,500	22,630
15	16,950	37,490	92,390	91,390	92,170	143,900	176,200	156,100	172,900	123,600	61,660	21,930
16	16,560	39,840	92,390	91,390	92,170	146,000	176,500	156,400	174,800	121,400	59,720	21,250
17	16,360	42,080	92,390	91,390	93,110	148,100	176,200	156,800	175,400	119,200	57,980	20,790
18	16,150	44,340	92,320	91,390	94,120	150,100	175,800	156,900	176,200	117,300	56,330	21,590
19	16,750	46,690	92,320	91,390	93,280	152,100	174,800	157,100	176,300	115,100	54,580	22,760
20	16,890	49,260	92,320	91,390	97,180	154,200	174,300	156,800	176,100	113,200	52,630	23,900
21	17,070	51,890	92,240	91,390	99,380	156,300	174,200	156,000	174,400	111,100	50,760	25,030
22	17,570	54,063	92,240	91,390	101,300	156,800	173,900	155,100	173,400	109,300	48,980	27,150
23	17,860	56,100	92,240	91,460	103,300	156,700	173,600	154,000	172,600	107,400	47,610	28,250
24	18,160	58,460	92,170	91,740	105,200	156,500	173,300	153,000	171,300	105,600	45,940	29,570
25	18,530	60,810	92,170	91,740	107,000	156,400	172,800	152,000	169,800	103,600	44,660	31,080
26	18,830	63,130	92,030	91,740	108,800	155,900	172,300	151,200	167,200	101,700	43,600	32,770
27	19,130	65,610	92,030	91,890	111,200	155,600	171,700	150,200	164,700	99,830	42,310	34,500
28	19,510	68,060	92,030	91,890	113,300	155,100	171,100	149,400	162,000	98,130	40,940	36,460
29	19,740	70,420	92,030	91,890	-	154,900	170,500	148,700	159,400	96,300	39,470	38,410
30	19,970	73,010	92,030	91,890	-	155,900	169,600	148,000	157,000	94,330	37,890	40,420
31	20,200	-	91,960	91,960	-	158,200	-	147,700	-	92,530	36,550	-

Monthly gage height and contents, water year October 1946 to September 1947

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30 (upper)	7.88	23,350	-
(lower)	7.60	-	-
Oct. 31 (upper)	7.00	20,200	-3,150
(lower)	6.90	-	-
Nov. 30	17.08	73,010	+52,810
Dec. 31	19.85	91,960	+18,950
Calendar year 1946	-	-	+360
Jan. 31	19.85	91,960	00
Feb. 28	22.70	113,300	+21,340
Mar. 31	28.00	158,200	+44,900
Apr. 30	29.22	169,600	+11,400
May 31	26.83	147,700	-21,900
June 30	27.87	157,000	+9,300
July 31	19.93	92,530	-64,470
Aug. 31 (upper)	10.80	36,550	-55,980
(lower)	10.60	-	-
Sept.30 (upper)	11.60	40,420	+3,870
(lower)	11.35	-	-
Water year 1946-47	-	-	+17,070

Malheur River near Drewsey, Oreg.

Location.- Water-stage recorder, lat. 43°47', long. 118°20', in SE¼ sec. 31, T. 20 S., R. 36 E., 300 feet downstream from crossing of Burns-Ontario highway, half a mile downstream from Cottonwood Creek, and 3 miles southeast of Drewsey. Datum of gage is 3,479.29 feet above mean sea level, datum of 1929.
Drainage area.- 982 square miles.
Records available.- June to December 1920, April to September 1921, June 1939 to September 1947. April to September 1923 and June 1926 to June 1939 at site 7 miles downstream. Records practically equivalent.
Average discharge.- 21 years (1926-47), 167 second-feet.
Extremes.- Maximum discharge during year, 4,210 second-feet Apr. 13 (gage height, 11.41 feet), from rating curve extended above 2,100 second-feet; minimum, 4.1 second-feet Sept. 4-8 (gage height, 2.44 feet).
1920-21, 1923, 1926-47: Maximum discharge, 4,290 second-feet Feb. 27, 1940 (gage height, 11.35 feet), from rating curve extended above 2,100 second-feet; no flow at times.
Revisions.- The maximum discharge for the water year 1927 has been revised to 2,300 second-feet Feb. 21, 1927 (gage height, 6.46 feet).
Remarks.- Records fair except those for periods of ice effect or no gage-height record, which are poor. Several small diversions above station for irrigation.
Revisions.- Revised figures of discharge, in second-feet, for some days in the water year 1927, superseding those published in Water-Supply Paper 653, are given herewith:

Apr. 3 832
4 805

Month	Maximum	Minimum	Mean	Runoff in acre-feet
April	1,120	405	677	40,300
Water year 1926-27	(figures not changed)			

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	48	90			124	405	237	86	23	5.1	5.8
2	21	52	86			122	380	228	110	21	5.1	5.8
3	26	45	88			128	354	228	128	20	5.4	4.8
4	26	43	90			124	331	254	104	18	5.1	4.4
5	27	51	108		b145	122	292	273	92	17	5.4	4.1
6	30	58	110			110	295	264	116	17	5.4	4.1
7	48	62	100	a25		102	280	273	101	15	5.8	4.1
8	47	57	90			112	268	280	120	15	5.8	4.1
9	52	49	86			112	283	288	139	15	5.4	4.4
10	53	54	81		91	144	268	261	150	14	5.8	5.1
11	51	62	81		96	247	259	237	112	13	7.8	5.1
12	49	57	90		1,190	187	252	211	93	13	7.3	4.8
13	49	46	144		3,120	155	256	185	78	13	7.3	4.8
14	45	b42	181	b56	822	155	283	160	70	12	6.8	4.8
15	51	b45	229		427	180	300	139	62	13	6.8	4.8
16	52	b50	185		441	232	328	114	55	13	6.8	5.4
17	53	54			788	271	344	101	66	13	6.8	6.1
18	57	67			637	302	424	92	70	13	6.5	6.6
19	57	72			362	341	515	90	59	11	6.1	7.3
20	51	88			264	a375	471	88	52	11	6.1	6.5
21	51	76			235	a380	429	85	48	11	6.1	5.8
22	52	70			225	413	370	80	44	11	6.1	6.5
23	56	72		b90	216	449	328	74	40	10	6.5	6.8
24	58	81	a115		230	424	295	72	36	8.9	7.3	7.3
25	60	79			211	359	259	67	28	7.8	6.8	9.4
26	a58	78			180	357	249	62	24	7.3	7.3	11
27	a55	103			146	362	242	58	24	7.3	6.8	10
28	52	123			120	364	240	58	24	7.3	6.1	11
29	45	121			-	372	235	60	24	6.8	6.8	13
30	49	123			-	389	240	55	24	5.8	5.8	17
31	54	-			-	405	-	58	-	5.4	5.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,454	60	19	46.9	2,880
November	2,027	123	42	67.6	4,020
December	3,564	229	-	115	7,070
Calendar year 1946	79,282.8	1,540	7.1	217	157,200
January	1,911	-	-	61.6	3,790
February	11,106	3,120	-	397	22,030
March	7,919	449	102	255	15,710
April	9,475	515	235	316	18,790
May	4,732	288	55	153	9,390
June	2,179	150	24	72.6	4,320
July	388.6	23	5.4	12.5	771
August	194.0	7.8	5.1	6.26	385
September	200.7	17	4.1	6.69	398
Water year 1946-47	45,150.3	3,120	4.1	124	89,550

a No gage-height record; discharge computed on basis of records for Malheur River below Warmsprings Reservoir, North Fork Malheur River above Agency Valley Reservoir, near Beulah, and Warmsprings Reservoir outflow.
b Stage-discharge relation affected by ice.

Malheur River below Warmsprings Reservoir, near Riverside, Oreg.

Location.- Hook gage, lat. 43°34', long. 118°12', in SW¼ sec. 17, T. 23 S., R. 37 E., 1 mile downstream from Warmsprings Dam, 3 miles upstream from South Fork, and 4 miles northwest of Riverside.
Drainage area.- 1,100 square miles.
Records available.- December 1914 to July 1917, March 1919 to September 1947. January 1906 to March 1907 and December 1908 to September 1910 at site at Riverside, 4 miles downstream, in reports of Geological Survey. October 1910 to November 1914 at site at Riverside, in reports of State engineer.
Average discharge.- 35 years (1909-16, 1919-47), 173 second-feet.
Extremes.- Maximum discharge observed during year, 695 second-feet July 2-11 (gage height, 5.32 feet); minimum, about 1 second-foot (estimate by Bureau of Reclamation) Oct. 12 to Apr. 7.
1906-7, 1908-17, 1919-47: Maximum discharge observed, 5,490 second-feet Mar. 2, 1910; no flow at times.
Remarks.- Records good above 50 second-feet and poor below. Gage read once daily. Flow completely regulated since November 1919 by Warmsprings Reservoir (see p.164). Several small diversions above station for irrigation.

Rating table, water year 1946-47 (gage height, in feet, and discharge, in second-feet)

2.8	1.3	3.4	22	4.4	248
2.9	3.0	3.6	39	4.7	386
3.0	5.3	3.8	68	5.0	535
3.1	8.5	4.0	110	5.3	685
3.2	12	4.2	171		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	175	1	1	1	1	1	1	425	396	675	329	565
2	168	1	1	1	1	1	1	435	396	680	329	545
3	164	1	1	1	1	1	1	435	324	695	329	520
4	154	1	1	1	1	1	1	455	193	695	329	495
5	154	1	1	1	1	1	1	465	154	695	329	490
6	154	1	1	1	1	1	1	465	154	695	343	495
7	138	1	1	1	1	1	64	465	154	695	357	495
8	103	1	1	1	1	1	110	480	154	695	357	480
9	78	1	1	1	1	1	110	480	154	695	376	455
10	78	1	1	1	1	1	110	465	154	695	510	435
11	78	1	1	1	1	1	110	465	110	685	570	425
12	33	1	1	1	1	1	110	440	87	670	570	425
13	1	1	1	1	1	1	135	386	87	670	570	415
14	1	1	1	1	1	1	154	315	82	670	585	406
15	1	1	1	1	1	1	224	261	40	625	595	401
16	1	1	1	1	1	1	333	261	40	545	595	381
17	1	1	1	1	1	1	450	320	96	490	590	372
18	1	1	1	1	1	1	550	372	310	475	600	367
19	1	1	1	1	1	1	550	372	415	475	635	343
20	1	1	1	1	1	1	435	381	465	470	625	324
21	1	1	1	1	1	1	329	396	495	450	625	324
22	1	1	1	1	1	1	329	396	530	430	625	324
23	1	1	1	1	1	1	329	396	575	420	625	324
24	1	1	1	1	1	1	329	396	615	410	625	310
25	1	1	1	1	1	1	329	396	635	410	630	306
26	1	1	1	1	1	1	329	396	635	401	620	288
27	1	1	1	1	1	1	352	396	635	376	610	261
28	1	1	1	1	1	1	386	396	635	348	610	248
29	1	1	1	1	-	1	386	396	655	329	600	240
30	1	1	1	1	-	1	401	396	675	329	575	220
31	1	-	1	1	-	a1	-	396	-	329	575	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,496	175	1	48.3	2,970
November	30	1	1	1.0	60
December	31	1	1	1.0	61
Calendar year 1946	68,008	862	0	186	134,900
January	31	1	1	1.0	61
February	28	1	1	1.0	56
March	31	1	1	1.0	61
April	6,950	550	1	232	13,790
May	12,499	480	261	403	24,790
June	10,030	675	40	334	19,890
July	16,922	695	329	546	33,560
August	16,243	635	329	524	32,220
September	11,679	585	220	389	23,160
Water year 1946-47	75,970	695	1	208	150,700

a No gage-height record; discharge interpolated.

Malheur River near Hope, Oreg.

Location.- Water-stage recorder, lat. 43°57', long. 117°29', in SW¼ sec. 5, T. 19 S., R. 43 E., half a mile upstream from intake of Vines Canal and 6½ miles west of Hope.
Drainage area.- 3,030 square miles.
Records available.- May 1919 to September 1947 (incomplete prior to October 1922).
Average discharge.- 24 years (1922-25, 1926-47), 219 second-feet.
Extremes.- Maximum discharge during year, 2,970 second-feet Feb. 13 (gage height, 4.91 feet); minimum, 28 second-feet Apr. 17.

1919-47: Maximum discharge, 8,100 second-feet Feb. 5, 1925 (gage height, 8.1 feet), from rating curve extended above 3,000 second-feet; minimum, 3.5 second-feet Sept. 2, 1919 (gage height, 0.02 foot).

The two greatest floods known occurred in March 1894 and March 1910.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Vale-Oregon Canal diverts at Namorf; no other large diversions above station, but many small ones. Flow regulated by Warmsprings and Agency Valley Reservoirs (see following page).

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-Nov. 23)

Oct. 1 to Feb. 13

0.8	40	1.6	202	3.0	990
.9	51	1.8	274	3.5	1,430
1.0	64	2.0	356	4.0	1,930
1.2	96	2.3	510		
1.4	142	2.6	690		

Feb. 14 to Sept. 30

0.6	24	1.2	93
.7	31	1.4	138
.8	40	1.6	198
.9	50	1.8	272
1.0	62	2.0	356

Note.- Same as preceding table above 2.0 feet.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	79	58	68			72	60	202	192	241	144	192
2	78	55	64			72	65	205	192	237	144	195
3	79	55	58			69	62	230	205	245	149	185
4	76	54	58			68	41	222	166	260	144	172
5	74	54	60			65	39	237	104	264	146	160
					100							
6	72	56	62			63	41	249	88	256	149	176
7	76	56	66			63	40	252	75	260	149	179
8	78	56	68			63	39	241	73	276	152	188
9	74	56	66			63	40	260	69	268	141	179
10	67	58	66			63	51	280	68	276	138	163
11	60	60	64		93	65	48	276	62	284	188	160
12	59	60	*63		366	66	46	280	58	292	169	144
13	59	59	61		1,850	66	43	288	54	305	160	144
14	72	59	60		648	75	36	252	47	305	166	136
15	79	58	59		313	73	35	219	45	305	158	128
				70								
16	72	56	58		237	69	38	169	45	326	152	128
17	64	54			570	68	34	182	44	264	149	116
18	60	52			301	66	68	192	37	230	152	110
19	63	61			216	65	146	182	106	208	158	104
20	60	66			166	65	146	188	141	205	176	108
21	59	66	55		136	65	144	195	149	202	176	99
22	58	68			119	65	141	202	160	195	176	101
23	54	67			104	65	133	202	169	198	185	101
24	59	64			95	63	133	202	158	195	185	106
25	58	60			91	63	155	198	166	182	185	104
26	60	56	58		86	63	188	198	163	198	185	97
27	56	62	60		81	62	202	222	182	192	179	88
28	55	66			*76	62	212	233	192	169	176	83
29	55	68			-	62	226	226	205	179	176	76
30	56	70	60		-	61	188	202	216	146	182	75
31	56	-			-	60	-	202	-	146	182	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,027	79	54	65.4	4,020
November	1,790	70	52	59.7	3,550
December	1,854	68	-	59.8	3,680
Calendar year 1946	79,313	1,820	-	217	157,300
January	2,170	-	-	70.0	4,300
February	6,548	1,850	-	234	12,990
March	2,030	75	60	65.5	4,030
April	2,840	226	34	94.7	5,630
May	6,888	288	169	222	13,660
June	3,631	216	37	121	7,200
July	7,309	326	146	236	14,500
August	5,071	188	138	164	10,060
September	3,997	195	75	133	7,930
Water year 1946-47	46,155	1,850	34	126	91,550

* Winter discharge measurement made on this day.

Note.- No gage-height record Nov. 24 to Dec. 11, Jan. 3-9, 14-24; discharge computed on basis of unpublished records for Malheur River near Namorf. Stage-discharge relation affected by ice Dec. 17-25, Dec. 28 to Jan. 2, Jan. 10-13, Jan. 25 to Feb. 10.

Reservoirs in Malheur River Basin, Oreg.

Warmsprings Reservoir.- Tape gage, lat. 43°35', long. 118°12', in SE¼ sec. 8, T. 23 S., R. 37 E., at dam on Malheur River, 4 miles upstream from South Fork and 4 miles northwest of Riverside. Datum of gage is 3,327 feet above mean sea level (surveys of Bureau of Reclamation); gage readings have been reduced to elevations above mean sea level. Drainage area, 1,100 square miles. Records available, January 1920 to September 1947. Maximum contents observed during year, 145,300 acre-feet Apr. 17 (elevation, 3,395.45 feet); minimum observed, 11,400 acre-feet Sept. 30 (elevation, 3,345.95 feet). Maximum contents observed during period 1920-47, 196,000 acre-feet Apr. 7, 1942 (elevation, 3,407.08 feet); no contents Sept. 18 to Nov. 1, 1929, Aug. 26 to sometime in November 1935.

Reservoir is formed by concrete-arch dam; capacity, 191,000 acre-feet between elevations 3,327 feet (bottom of outlet tunnel) and 3,406 feet (top of 5-foot flashboards). Dead storage, 1,400 acre-feet below elevation 3,327 feet, not included in records presented. Records given herein represent contents above elevation 3,327 feet. Storage began in 1919. In 1926 a half interest in reservoir was purchased by the Federal Government for Vale project of Bureau of Reclamation. Water used to irrigate lands on both sides of river between Namorf and Ontario. Once-daily gage readings and data for computing capacity table furnished by Bureau of Reclamation.

Agency Valley Reservoir.- Pressure gage with mercury column, lat. 43°55', long. 118°09', in SW¼ sec. 15, T. 19 S., R. 37 E., at dam on North Fork Malheur River, a quarter of a mile northwest of Beulah. Gage readings are elevations above mean sea level by original surveys of Bureau of Reclamation, or 7.72 feet less than elevations above mean sea level, datum of 1929. Drainage area, 420 square miles. Records available, December 1935 to September 1947. Maximum contents observed during year, 60,020 acre-feet Apr. 20 (elevation, 3,340.05 feet); minimum observed, 22,030 acre-feet Oct. 7 (elevation, 3,314.83 feet). Maximum contents during period 1935-47, 62,770 acre-feet May 3, 1941 (elevation, 3,341.50 feet); minimum observed since full capacity was attained on Apr. 8, 1938, 18,060 acre-feet Feb. 19, 20, 1943 (elevation, 3,311.11 feet).

Reservoir is formed by earth-fill rock-faced dam; storage began in December 1935. Capacity, 59,920 acre-feet between elevations 3,263.21 feet (bottom of outlet tunnel) and 3,340 feet (top of 17-foot spillway gates); with gates lowered the capacity is 32,220 acre-feet. No dead storage. Water is used for irrigation of lands below Juntura, on Vale project of Bureau of Reclamation. Capacity table and daily gage readings furnished by Bureau of Reclamation.

Other reservoirs.- There are several other reservoirs in the Malheur River Basin, all with less than 3,500 acre-feet capacity except Willow Creek No. 3 Reservoir near Malheur, which has a capacity of 49,000 acre-feet.

Monthly elevation and contents, water year October 1946 to September 1947

Date	Warmsprings Reservoir			Agency Valley Reservoir		
	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)	Elevation (feet)‡	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	a82,600	-	-	a22,250	-
Oct. 31	3,377.35	82,080	-520	3,316.61	24,100	+1,850
Nov. 30	3,378.85	86,820	+4,740	3,319.82	28,020	+3,920
Dec. 31	3,381.05	93,860	+7,040	3,322.86	32,030	+4,010
Calendar year 1946	-	-	+21,160	-	-	-3,170
Jan. 31	3,382.14	97,460	+3,600	3,325.15	35,240	+3,210
Feb. 28	3,389.00	120,800	+23,340	3,331.15	44,360	+9,120
Mar. 31	3,393.55	137,700	+16,900	3,336.05	52,670	+8,310
Apr. 30	3,394.99	143,500	+5,800	3,338.31	56,760	+4,090
May 31	3,390.43	126,000	-17,500	3,331.15	44,360	-12,400
June 30	-	a109,200	-16,800	3,330.37	43,120	-1,240
July 31	3,374.03	71,890	-37,310	3,320.80	29,280	-13,840
Aug. 31	3,360.37	36,010	-35,880	3,316.48	23,960	-5,320
Sept.30	3,345.95	11,400	-24,610	3,316.20	23,620	-340
Water year 1946-47	-	-	-71,200	-	-	+1,370

† Gage reading observed about 10 a.m.
‡ Gage reading observed about 9 a.m.
a No gage-height record; contents interpolated.

North Fork Malheur River above Agency Valley Reservoir, near Beulah, Oreg.

Location.- Water-stage recorder, lat. 43°58', long. 118°11', in sec. 33, T. 18 S., R. 37 E., at M. W. Scott's ranch, 3 miles upstream from Warm Springs Creek and 4 miles northwest of Agency Valley Dam and Beulah.

Drainage area.- 355 square miles.

Records available.- Janaury to September 1914, June 1936 to September 1947.

Average discharge.- 11 years, 123 second-feet.

Extremes.- Maximum discharge during year, 1,010 second-feet Feb. 12 (gage height, 4.35 feet); minimum, 17 second-feet Dec. 18 (gage height, 0.18 foot).
1914, 1936-47: Maximum discharge recorded, that of Feb. 12, 1947; maximum gage height, 4.60 feet Mar. 26, 1940; minimum discharge recorded, 15 second-feet Jan. 4, 1944 (corrected), but may have been less at times during periods of ice effect.

Remarks.- Records good except those for periods of ice effect, which are poor. A few diversions above station for irrigation.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 12		Feb. 12 to Sept. 30			
0.4	30	0.6	35	1.8	238
.6	47	.8	56	2.2	332
.8	71	1.0	85	2.6	435
1.0	102	1.2	117	3.0	555
1.2	137	1.5	172		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	b52	b60	b38		80	170	211	107	62	43	40
2	50	42	b64	42		96	166	217	129	59	42	40
3	51	b40	b65	42		88	166	238	129	57	41	41
4	52	b45	74			90	154	263	122	56	41	40
5	55	b52	78		b85	85	147	275	109	55	41	39
6	55	b60	72			73	139	277	112	54	40	40
7	57	58	67			88	132	282	104	52	40	41
8	58	b45	67			79	134	282	119	51	40	44
9	56	b40	62	b55		79	134	277	119	51	40	44
10	54	b58	64			124	132	252	107	51	40	44
11	51	56	67		68	127	138	224	103	51	41	43
12	51	42	86		526	98	139	208	95	51	41	41
13	51	b40	100		344	99	148	189	90	50	40	41
14	52	b40	116	*b56	166	112	168	174	88	52	40	40
15	52	b42	112		136	120	204	166	85	51	40	40
16	51	44	89		288	134	229	158	87	49	39	41
17	54	b55	37		211	148	275	152	98	48	39	43
18	55	64	40		126	158	337	148	85	48	38	43
19	54	91	92		104	176	291	143	79	46	38	43
20	55	74	92		93	189	279	138	76	45	39	43
21	67	62	88		98	191	252	132	74	42	41	42
22	66	62	78		101	202	231	131	67	43	40	41
23	68	74	64	b65	106	197	220	127	66	42	40	40
24	61	68	68		114	170	211	120	67	43	39	41
25	59	64	76		98	160	204	117	66	43	39	42
26	62	67	76		96	158	200	114	64	43	39	42
27	55	91	77		80	156	204	114	66	43	39	41
28	b45	94	57		84	150	211	114	69	45	39	45
29	b50	94	51		-	164	215	107	66	44	40	46
30	58	b62	34		-	180	222	107	64	43	40	45
31	46	-	b35		-	176	-	114	-	43	40	-

Month	Seoond-foot-days	Maximum	Minimum	Mean	Runoff in aore-feet
October	1,700	68	45	54.8	3,370
November	1,778	94	40	59.3	3,530
Deoember	2,208	116	34	71.2	4,380
Calendar year 1946	51,906	822	-	142	103,000
January	1,833	-	-	59.1	3,640
February	3,689	526	-	132	7,320
March	4,147	202	73	134	8,230
April	5,852	337	132	195	11,610
May	5,571	282	107	180	11,050
June	2,712	129	64	90.4	5,380
July	1,513	62	42	48.8	3,000
August	1,239	43	38	40.0	2,460
September	1,256	46	39	41.9	2,490
Water year 1946-47	33,498	526	-	91.8	66,460

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

North Fork Malheur River at Beulah, Oreg.

Location.- Staff gage, lat. 43°54', long. 118°09', in NE¼ sec. 22, T. 19 S., R. 37 E., at Beulah, a quarter of a mile downstream from Agency Valley Dam and 12 miles northwest of Juntura. Datum of gage is 3,262.47 feet above mean sea level, datum of 1929.
Drainage area.- 420 square miles.
Records available.- January 1936 to September 1947. March 1909 to June 1912 and November 1913 to July 1914 at site 6 miles downstream. June 1926 to December 1935 at site three-quarters of a mile downstream, below intakes of two canals with combined capacity of about 10 second-feet.
Average discharge.- 12 years (1935-47), 126 second-feet.
Extremes.- Maximum discharge observed during year, 433 second-feet Apr. 25 to May 16 (gage height, 2.46 feet); minimum, 2 second-feet (estimated) Oct. 13-31, Mar. 1 to Apr. 19.
1909-12, 1913-14, 1926-47: Maximum discharge, 7,000 second-feet (regulated by sudden storage release) May 7, 1942 (gage height, 8.4 feet, from floodmark); maximum unregulated, 5,910 second-feet Mar. 20, 1910; no flow at times; minimum prior to construction of dam, 5 second-feet Dec. 28, 1910, Jan. 26, 27, 1911.
Remarks.- Records good except those for Oct. 13 to Apr. 19, which are poor. Gage read once daily, twice daily at times. Flow regulated by Agency Valley Reservoir (see p. p. 164). Small diversions above station for irrigation; practically entire summer flow is diverted below station and above Juntura.
Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Rating tables, water year 1946-47 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Jan. 13		Jan. 14 to Sept. 30					
0.8	51	0.3	6	0.8	53	2.0	304
.9	63	.4	13	1.0	82	2.3	385
		.5	21	1.2	116	2.5	445
		.6	30	1.4	156		
		.7	40	1.7	227		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57							433	240	260	255	40
2	57							433	217	260	255	40
3	57							433	198	260	255	40
4	57							433	163	260	255	40
5	57						a2	433	93	260	255	40
6	57							433	45	260	255	40
7	57			a6				433	30	260	252	40
8	57							433	22	260	252	40
9	57						2	433	6	260	252	40
10	57					a2		433	6	260	119	40
11	57							433	6	260	53	40
12	20							433	6	260	50	40
13								433	6	260	40	40
14				6			a2	433	6	260	40	40
15		a3	a4		a4			433	6	260	40	40
16								424	49	260	40	40
17								349	88	260	40	39
18								294	96	260	40	39
19						2		294	107	260	40	39
20							203	294	107	260	40	39
21							304	294	107	260	40	38
22	a2						304	294	107	260	40	38
23				a6			317	294	107	260	40	38
24							352	294	107	260	40	38
25						a2	394	294	161	260	40	38
26							433	294	213	260	40	38
27							433	288	234	260	40	38
28							433	283	255	260	40	37
29					-		433	268	260	257	40	36
30					-		433	260	260	257	40	36
31		-			-		-	250	-	257	40	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	685	57	-	22.1	1,360
November	90	-	-	3.0	179
December	124	-	-	4.0	246
Calendar year 1946	57,112	812	-	156	113,300
January	186	-	-	6.0	369
February	112	-	-	4.0	222
March	62	-	-	2.0	123
April	4,077	433	-	136	8,090
May	11,263	433	250	363	22,340
June	3,308	260	6	110	6,560
July	8,051	260	257	260	15,970
August	3,268	255	40	107	6,480
September	1,171	40	36	39.0	2,320
Water year 1946-47	32,397	433	-	83.8	64,260

a No gage-height record; discharge computed on basis of discharge measurements made on Jan. 14, Mar. 19, Apr. 9, and estimated Agency Valley Reservoir outflow.

Bully Creek near Vale, Oreg.

Location.- Water-stage recorder and concrete control, lat. 43°58', long. 117°21', in SW¼ sec. 33, T. 18 S., R. 44 E., 5 miles southwest of Vale.

Records available.- October 1945 to September 1947 in reports of Geological Survey; March 1937 to September 1945 in files of State engineer. August 1903 to March 1907, February 1910 to May 1917, March 1922 to June 1923 at site 9 miles upstream, in reports of Geological Survey; February to June 1919 in reports of State engineer. April 1904 to December 1905 at site at Vale, 6 miles downstream, in reports of Geological Survey; May to September 1938 in files of State engineer. April 1933 to May 1936 (fragmentary), at site 3 miles upstream, in files of State engineer. Records at various sites not equivalent because of diversions and increasing return flow from Vale-Oregon Canal since 1931.

Average discharge.- 11 years (1933-34, 1937-47), 44.2 second-feet.

Extremes.- Maximum discharge during year, 990 second-feet Feb. 13 (gage height, 4.60 feet, from floodmark), from rating curve extended above 120 second-feet on basis of area-velocity studies; minimum, 2 second-feet Apr. 7-9, 12-16.
1903-7, 1910-17, 1919, 1922-23, 1933-47: Maximum discharge, 6,240 second-feet Mar. 1, 1910 (gage height, 8.6 feet, site and datum then in use), from rating curve extended above 1,200 second-feet; no flow at times.

Remarks.- Records fair except those for Nov. 1-30, Feb. 13-20, Apr. 11-23, May 15 to June 30, which are poor. No regulation. Small diversions above station for irrigation; considerable return flow at times from Vale-Oregon Canal of Bureau of Reclamation.

Cooperation.- Water-stage recorder inspected by employee of Bureau of Reclamation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	13	15	b11	12	18	3	8	22	15	8	12
2	20	12	15	b10	12	17	3	8	21	15	7	13
3	20	13	16	b9	22	15	3	10	34	18	8	14
4	19	13	15	b9	28	15	3	11	36	18	8	23
5	19	13	16	b10	22	14	3	12	40	16	9	22
6	17	13	16	b10	19	13	3	13	41	15	10	10
7	18	15	15	b10	17	12	2	12	37	15	9	10
8	19	14	15	b10	15	13	2	12	27	15	11	12
9	18	15	a15	b10	15	12	3	13	25	15	10	12
10	17	15	a14	10	13	13	34	16	25	15	10	12
11	17	14	*14	11	12	11	3	25	35	14	11	12
12	15	13	14	b10	56	10	2	36	42	13	10	11
13	15	12	14	b9	584	10	2	22	33	14	10	10
14	15	12	14	b9	*258	10	2	32	18	14	10	10
15	13	13	14	b8	158	9	2	37	17	15	11	11
16	14	12	13	b9	e200	9	3	13	16	22	11	11
17	16	13	b12	b8	e120	9	4	13	17	13	11	11
18	14	13	b11	b8	e80	9	3	14	16	13	12	11
19	13	15	12	b9	e60	8	4	14	15	12	11	12
20	13	14	12	b9	e45	8	15	14	15	12	10	12
21	13	14	12	b10	36	8	6	17	16	14	11	12
22	13	15	12	b10	33	8	4	18	30	14	11	12
23	13	14	11	11	33	8	5	18	16	13	12	12
24	12	14	12	11	31	8	6	18	14	13	12	13
25	12	14	12	12	29	7	7	18	14	13	12	13
26	12	14	12	12	26	7	7	17	14	13	10	15
27	12	16	14	b14	24	7	7	18	16	12	10	18
28	12	16	11	b14	21	7	8	18	19	11	10	16
29	13	16	11	b14	-	5	7	18	17	10	11	16
30	13	16	b11	b12	-	4	7	20	16	11	11	15
31	13	-	b11	b15	-	3	-	20	-	11	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	469	20	12	15.1	930
November	416	16	12	13.9	825
December	411	16	11	13.3	815
Calendar year 1946	16,806	410	11	46.0	33,330
January	324	15	8	10.5	643
February	1,981	584	12	70.8	3,930
March	307	18	3	9.9	609
April	163	34	2	5.4	323
May	535	37	8	17.3	1,060
June	704	42	14	23.5	1,400
July	434	22	10	14.0	861
August	319	12	7	10.3	633
September	393	23	10	13.1	780
Water year 1946-47	6,456	584	2	17.7	12,810

* Winter discharge measurement made on this day.
a No gage-height record; discharge interpolated.
b Stage-discharge relation affected by ice.
e Stage-discharge relation indefinite; discharge computed on basis of weather records and records for North Fork Malheur River above Agency Valley Reservoir, near Beulah.

South Fork Payette River at Lowman, Idaho

Location.- Water-stage recorder, lat. 44°05', long. 115°37'30", in SW¼ sec. 27, T. 9 N., R. 7 E., 1,200 feet upstream from Rock Creek, half a mile northwest of Lowman post office, and 4,100 feet downstream from Clear Creek.

Drainage area.- 456 square miles.

Records available.- May 1941 to September 1947.

Extremes.- Maximum discharge during year, 4,460 second-feet May 9 (gage height, 6.32 feet); minimum, 214 second-feet Jan. 28 (gage height, 2.63 feet).
1941-47: Maximum discharge, 4,860 second-feet May 29, 1943 (gage height, 6.53 feet); minimum, 148 second-feet Dec. 9, 1944 (gage height, 2.40 feet).

Remarks.- Records excellent except those for periods of ice effect, which are good. No regulation. Several small diversions for irrigation and placer mining, the return flow from which enters river above station.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

2.7	238	4.1	1,260
2.8	278	4.5	1,710
3.0	373	5.0	2,340
3.3	553	5.6	3,210
3.7	880	6.3	4,420

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb	Mar.	Apr.	May	June	July	Aug.	Sept.
1	458	406	434	358	314	353	826	1,810	3,130	1,380	633	390
2	657	358	422	314	333	373	808	2,380	3,080	1,420	618	390
3	501	363	412	305	323	368	782	3,130	2,920	1,500	603	422
4	452	400	417	333	314	358	756	3,370	2,710	1,500	603	400
5	446	390	422	363	314	348	697	3,350	2,460	1,440	582	384
6	422	390	446	422	314	333	665	3,420	2,460	1,420	567	378
7	412	390	440	395	305	348	633	3,660	2,360	1,450	546	400
8	406	378	428	378	300	348	618	4,190	2,640	1,480	534	422
9	395	358	422	380	300	343	611	4,350	3,080	1,460	527	417
10	384	384	412	390	310	373	596	3,560	2,780	1,400	520	422
11	378	368	464	390	318	378	589	2,940	2,550	1,340	514	400
12	373	338	*589	360	384	353	603	2,720	2,310	1,240	501	390
13	368	348	764	340	452	363	722	2,690	2,200	1,160	494	378
14	363	363	952	340	406	378	970	2,570	2,180	1,140	488	373
15	358	343	871	310	395	428	1,200	2,480	2,190	1,120	476	373
16	358	323	673	300	400	520	1,260	2,510	2,300	1,100	470	378
17	358	348	464	320	*390	641	1,300	2,620	2,500	1,050	458	520
18	353	412	452	325	400	748	1,240	2,670	2,540	998	458	434
19	353	673	534	360	406	826	1,180	2,670	2,540	970	452	412
20	353	618	488	370	390	853	1,260	2,810	2,470	943	464	395
21	446	501	470	350	390	871	1,320	2,940	2,170	916	458	390
22	527	476	464	340	378	898	1,310	3,020	1,910	880	470	384
23	596	527	434	340	373	907	1,280	2,940	1,790	853	470	373
24	476	520	422	340	378	817	1,220	2,940	1,770	817	452	368
25	452	476	428	340	390	764	1,220	3,100	1,820	773	434	368
26	546	476	434	333	390	730	1,300	3,240	1,890	748	422	373
27	482	446	422	314	373	714	1,450	3,470	1,850	722	417	368
28	452	458	363	258	353	756	1,650	3,490	1,690	697	412	363
29	422	470	338	310	-	817	1,790	3,100	1,540	681	406	358
30	417	452	305	305	-	880	1,760	2,900	1,410	657	400	353
31	400	-	310	300	-	871	-	3,110	-	649	395	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff: Per square mile	Runoff: Inches	Runoff: Acre-feet
October	13,364	657	353	431	0.945	1.09	26,510
November	12,753	673	323	425	.932	1.04	25,300
December	14,896	952	305	481	1.05	1.21	29,550
Calendar year 1946	336,471	3,640	254	922	2.02	27.44	667,300
January	10,583	422	258	341	.748	.86	20,990
February	10,093	452	300	360	.789	.82	20,020
March	18,058	907	333	583	1.28	1.47	35,820
April	31,616	1,790	589	1,054	2.31	2.58	62,710
May	94,150	4,350	1,810	3,037	6.66	7.68	186,700
June	69,240	3,130	1,410	2,308	5.06	5.65	137,300
July	33,904	1,500	649	1,094	2.40	2.77	67,250
August	15,244	633	395	492	1.08	1.24	30,240
September	11,776	520	353	393	.862	.96	23,360
Water year 1946-47	335,677	4,350	258	920	2.02	27.37	665,800

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Jan. 9-25, 29-31, Feb. 8-10.

South Fork Payette River near Garden Valley, Idaho

Location.- Water-stage recorder, lat. 44°04', long. 115°56', in sec. 1, T. 8 N., R. 4 E., at Garden Valley ranger station, 300 feet upstream from Station Creek, 2.7 miles southeast of Garden Valley, and 5.9 miles upstream from Middle Fork.

Drainage area.- 779 square miles.

Records available.- May 1921 to September 1947.

Average discharge.- 23 years (1924-47), 1,217 second-feet.

Extremes.- Maximum discharge during year, 6,470 second-feet May 9 (gage height, 5.83 feet); minimum, 317 second-feet Jan. 29 (gage height, 1.48 feet); minimum daily, 385 second-feet Nov. 16, Jan. 28.

1921-47: Maximum discharge observed, 10,600 second-feet May 26, 1928 (gage height, 8.0 feet); minimum, 75 second-feet Dec. 15, 1935, Jan. 26, 1936 (gage height, 0.70 foot), from rating curve extended below 280 second-feet; minimum daily, 196 second-feet Dec. 10, 1944.

Remarks.- Records good except those for periods of ice effect or faulty gage-height record, which are fair. Practically no diversions above station. Since Nov 2, 1930, flow has been regulated by Deadwood Reservoir (see p. 175).

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,150	502	577	470	428	495	1,240	2,700	4,080	2,120	1,380	1,620
2	1,370	422	569	440	441	562	1,190	3,410	4,820	2,110	1,380	1,550
3	1,020	410	531	425	461	554	1,140	4,540	4,620	2,160	1,420	1,530
4	943	475	524	475	428	524	1,100	5,020	4,340	2,150	1,470	1,470
5	866	475	531	520	428	502	1,030	4,940	4,020	2,070	1,480	1,440
6	791	468	577	560	435	468	992	4,980	3,970	2,020	1,490	1,480
7	693	482	562	540	422	502	934	5,300	3,810	2,000	1,490	1,500
8	684	461	554	520	402	498	924	5,940	4,160	2,040	1,590	1,500
9	625	428	539	530	402	482	904	6,320	5,030	2,020	1,680	1,480
10	600	447	516	540	430	569	895	5,300	4,730	1,940	1,740	1,540
11	584	447	577	550	441	584	885	4,450	4,410	1,850	1,900	1,420
12	502	404	904	500	582	539	895	4,310	4,000	1,740	1,800	1,420
13	461	397	*1,260	480	783	531	1,030	4,450	3,780	1,630	1,670	1,450
14	454	441	1,710	480	667	546	1,370	4,400	3,660	1,590	1,670	1,440
15	454	416	1,560	440	609	600	1,770	4,320	3,630	1,560	1,630	1,440
16	447	385	1,180	440	617	728	1,940	4,400	3,680	1,550	1,650	1,440
17	441	422	800	450	600	934	2,030	4,500	3,920	1,550	1,670	1,590
18	441	502	745	450	*609	1,050	1,950	4,520	3,920	1,540	1,770	1,390
19	435	924	819	500	609	1,160	1,870	4,520	3,880	1,570	1,740	1,250
20	435	1,000	737	a510	584	1,220	1,980	4,690	3,780	1,610	1,740	1,190
21	562	701	701	a500	584	1,260	2,090	4,860	3,440	1,630	1,730	1,060
22	642	642	684	a480	569	1,290	2,060	4,980	3,070	1,630	1,660	1,010
23	895	710	634	a480	569	1,350	2,020	4,840	2,850	1,630	1,610	856
24	642	745	584	482	569	1,240	1,900	4,790	2,780	1,610	1,540	837
25	584	650	600	475	569	1,120	1,860	4,920	2,760	1,540	1,620	719
26	693	650	617	488	577	1,080	2,000	5,110	2,790	1,510	1,820	667
27	617	617	609	447	562	1,050	2,230	5,620	2,760	1,480	1,770	650
28	569	617	524	385	524	1,090	2,540	5,640	2,580	1,470	1,670	617
29	516	650	428	*428	-	1,170	2,790	5,150	2,370	1,430	1,730	617
30	509	642	420	428	-	1,270	2,700	4,790	2,190	1,420	1,670	625
31	495	-	410	416	-	1,300	-	4,940	-	1,410	1,570	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	20,120	1,370	435	649	39,910
November	16,532	1,000	385	551	32,790
December	21,983	1,710	410	709	43,600
Calendar year 1946	557,871	5,680	360	1,528	1,106,000
January	14,829	560	385	478	29,410
February	14,861	763	402	531	29,480
March	26,258	1,350	468	847	52,080
April	48,259	2,790	885	1,609	95,720
May	148,650	6,320	2,700	4,795	294,800
June	110,630	5,030	2,190	3,688	219,400
July	53,580	2,160	1,410	1,728	106,300
August	50,750	1,900	1,380	1,637	100,700
September	36,798	1,620	617	1,227	72,990
Water year 1946-47	563,250	6,320	385	1,543	1,117,000

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for stations at Lowman and near Banks.

Note.- Stage-discharge relation affected by ice Dec. 30 to Jan 19, Feb. 8-10.

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South Fork Payette River near Banks, Idaho

Location.- Water-stage recorder, lat. 44°05'30", long. 116°06', in sec. 28, T. 9 N., R. 3 E., 1 mile upstream from North Fork Payette River and 1½ miles northeast of Banks.

Drainage area.- 1,200 square miles.

Records available.- August 1921 to September 1947.

Average discharge.- 26 years, 1,627 second-feet.

Extremes.- Maximum discharge during year, 9,100 second-feet May 9 (gage height, 8.72 feet); minimum, 555 second-feet Nov. 16 (gage height, 0.64 foot).
1921-47: Maximum discharge, 13,800 second-feet May 17, 1927 (gage height, 10.6 feet, from floodmarks); minimum, about 225 second-feet Dec. 15, 1935, Jan. 26, 1936, Dec. 26, 1939.

Remarks.- Records excellent except those for period of no gage-height record, which are good. Small diversions above station for irrigation. Since Nov. 2, 1930, flow has been regulated by Deadwood Reservoir (see p. 175).

Rating table, water year 1946-47 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Jan. 4 to Feb. 16, Apr. 9 to July 3)

0.7	585	3.0	2,160	6.0	5,390
1.4	990	4.0	3,100	7.2	7,050
2.0	1,390	5.0	4,150	8.5	8,960

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,260	728	1,040	762	640	864	2,220	3,860	5,870	2,530	1,550	1,760
2	1,800	651	996	717	678	948	2,140	4,760	5,820	2,480	1,520	1,700
3	1,210	590	930	629	717	978	2,060	6,240	5,560	2,510	1,550	1,670
4	1,100	678	906	690	678	954	1,980	6,960	5,230	2,500	1,590	1,620
5	1,020	700	912	762	678	912	1,860	6,870	4,830	2,420	1,600	1,560
6	948	700	1,010	882	684	852	1,780	6,900	4,750	2,340	1,620	1,580
7	864	728	996	864	668	876	1,670	7,340	4,560	2,320	1,600	1,600
8	852	700	972	834	662	882	1,640	8,150	5,000	2,320	1,670	1,670
9	804	651	942	864	662	876	1,610	8,880	6,400	2,280	1,780	1,590
10	780	678	900	882	700	1,160	1,580	7,660	6,030	2,200	1,800	1,680
11	762	678	1,000	900	706	1,240	1,530	6,410	5,550	2,100	2,000	1,550
12	700	634	2,040	816	888	1,130	1,540	6,070	5,000	2,020	1,960	1,520
13	651	590	2,670	792	1,480	1,080	1,710	6,340	4,690	1,900	1,780	1,570
14	646	673	3,400	786	1,250	1,110	2,180	6,140	4,520	1,830	1,780	1,550
15	640	640	3,090	700	1,080	1,200	2,800	5,940	4,410	1,790	1,750	1,550
16	634	596	2,300	706	1,080	1,400	3,030	5,900	4,450	1,770	1,770	1,550
17	629	646	1,610	762	1,070	1,710	3,160	5,970	4,700	1,780	1,780	1,710
18	629	786	1,360	744	1,080	1,940	3,110	5,960	4,650	1,750	1,900	1,560
19	624	1,620	1,480	840	1,060	2,120	3,010	5,870	4,570	1,780	1,890	1,360
20	629	1,770	1,330	858	1,010	2,200	3,150	6,050	4,440	1,820	1,880	1,330
21	774	1,130	1,230	822	1,000	2,270	3,250	6,230	4,110	1,820	1,900	a1,250
22	804	1,010	1,170	792	984	2,300	3,150	6,330	3,640	1,810	1,820	a1,200
23	1,210	1,190	1,080	786	1,000	2,490	3,080	6,280	3,390	1,820	1,800	a1,020
24	894	1,280	1,010	798	1,010	2,280	2,870	6,020	3,280	1,810	1,710	a975
25	816	1,080	1,010	780	1,010	2,080	2,830	6,130	3,240	1,720	1,750	a850
26	912	1,080	1,020	792	996	1,990	3,000	6,350	3,260	1,700	1,980	a820
27	858	1,040	1,030	750	972	1,910	3,300	6,700	3,240	1,670	1,950	a800
28	798	1,080	894	646	912	1,940	3,690	6,790	3,090	1,640	1,820	a750
29	739	1,210	734	646	-	2,050	4,030	6,160	2,860	1,600	1,880	a750
30	728	1,160	722	678	-	2,240	3,920	5,760	2,650	1,580	1,850	a750
31	717	-	651	646	-	2,340	-	5,870	-	1,570	1,700	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	26,232	1,600	624	846	52,030
November	26,697	1,770	590	890	52,950
December	40,435	3,400	651	1,304	80,200
Calendar year 1946	807,241	8,180	555	2,212	1,601,000
January	23,926	900	629	772	47,460
February	25,335	1,460	640	905	50,250
March	48,322	2,490	852	1,559	95,800
April	76,880	4,030	1,530	2,563	152,500
May	196,890	8,880	3,860	6,351	390,500
June	133,790	6,400	2,650	4,460	265,400
July	61,180	2,530	1,570	1,974	121,300
August	54,930	2,000	1,520	1,772	109,000
September	40,845	1,760	750	1,362	81,010
Water year 1946-47	755,482	8,880	624	2,070	1,498,000

a No gage-height record; discharge computed on basis of records for North Fork Payette River near Banks and Payette River near Horseshoe Bend.

Payette River near Horseshoe Bend, Idaho

Location.- Water-stage recorder, lat. 43°56', long. 116°11'30", in SW¼SW¼ sec. 14, T. 7 N., R. 2 E., 100 feet east of tracks of Idaho Northern branch of Oregon Short Line Railroad and 1½ miles north of Horseshoe Bend. Datum of gage is 2,623.5 feet above mean sea level (levels by Corps of Engineers).
Drainage area.- 2,230 square miles.
Records available.- November 1912 to September 1916, July 1919 to September 1947. February 1906 to November 1912 at site 2 miles upstream.
Average discharge.- 36 years (1907-15, 1919-47), 3,017 second-feet.
Extremes.- Maximum discharge during year, 16,900 second-feet May 9 (gage height, 8.33 feet); minimum, 827 second-feet Nov. 16 (gage height, 1.03 feet).
1906-16, 1919-47: Maximum discharge, 22,100 second-feet June 9, 1921 (gage height, 9.57 feet); minimum, 350 second-feet Dec. 17, 1935 (gage height, 0.26 foot), from rating curve extended below 600 second-feet.
Remarks.- Records excellent except those for Nov. 18 to Dec. 12 and those for periods of ice effect or no gage-height record, which are good. Flow regulated by Deadwood Reservoir (see p. 175), Payette Lake (see p. 178), and Lake Fork Reservoir (see p. 185). Several diversions from tributaries above station for irrigation.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 18 to Dec. 12)

1.1	890	4.0	5,090
1.5	1,300	5.0	7,270
2.0	1,900	6.0	9,740
2.5	2,560	7.0	12,600
3.0	3,280	8.3	16,800

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,570	1,180	a2,700	1,500	1,150	1,600	4,830	7,250	11,200	4,280	2,110	2,070
2	2,020	1,070	a2,500	1,360	1,200	1,700	4,550	8,240	11,000	3,980	2,110	1,990
3	1,690	899	a2,100	1,300	1,260	1,760	4,280	10,200	10,700	3,820	2,120	1,960
4	1,570	971	1,820	1,350	1,230	1,750	4,070	11,400	10,600	3,770	2,160	1,930
5	1,460	1,070	1,860	1,430	1,240	1,670	3,750	11,900	10,200	3,600	2,160	1,860
6	1,340	1,170	2,260	1,600	1,240	1,590	3,550	12,500	9,900	3,470	2,160	1,870
7	1,230	1,210	2,410	1,610	1,210	1,610	3,410	13,400	9,140	3,280	2,150	1,910
8	1,200	1,140	2,260	1,580	1,180	1,630	3,360	14,900	9,140	3,020	2,220	1,980
9	1,160	1,050	2,080	1,540	1,140	1,640	3,360	16,500	11,000	2,950	2,330	1,930
10	1,110	1,060	1,950	1,580	1,200	*1,980	3,360	16,100	11,100	2,910	2,360	2,120
11	1,080	1,070	2,100	1,700	1,230	2,160	3,310	15,300	10,900	2,800	2,530	1,910
12	1,020	1,010	4,510	1,530	1,610	2,040	3,240	14,900	10,200	2,690	2,490	1,870
13	962	935	*6,360	1,450	2,340	2,030	3,420	14,700	9,430	2,550	2,330	1,900
14	926	980	7,960	1,350	2,530	2,060	4,070	13,700	8,800	2,460	2,320	1,860
15	926	990	7,570	1,250	2,430	2,200	4,950	12,600	8,220	2,380	2,220	1,850
16	917	971	5,500	1,250	2,340	2,520	5,400	11,800	7,620	2,340	2,220	1,850
17	908	980	3,540	1,280	2,220	2,950	5,600	11,500	7,620	2,330	2,210	2,030
18	899	1,210	2,760	1,250	2,210	3,330	5,670	11,200	7,570	2,300	2,330	2,020
19	899	2,870	2,730	1,400	2,160	3,750	5,600	11,000	7,690	2,330	2,320	1,820
20	899	4,430	2,710	1,450	1,980	4,070	5,820	11,200	7,910	2,380	2,320	1,820
21	1,070	2,940	2,620	1,450	1,960	4,230	6,010	11,200	7,620	2,420	2,360	1,710
22	1,340	2,250	2,590	1,350	1,910	4,300	5,710	11,300	6,950	2,380	2,290	1,670
23	1,870	2,250	2,480	*1,400	1,910	4,810	5,500	11,200	6,270	2,380	2,280	1,470
24	1,700	2,730	2,320	1,400	1,980	4,360	5,290	11,000	5,650	2,380	2,170	1,420
25	1,480	2,520	2,250	1,400	2,080	3,860	5,190	11,200	5,460	2,330	2,130	1,310
26	1,510	2,330	2,370	1,380	1,990	3,770	5,350	11,500	5,330	2,300	2,370	1,270
27	1,470	2,190	2,480	1,300	1,900	3,800	5,770	11,700	5,290	2,260	2,320	1,260
28	1,380	2,280	2,210	*1,150	1,710	3,860	6,470	12,000	5,170	2,240	2,170	1,220
29	1,260	a3,000	1,890	1,150	-	4,120	7,110	11,500	4,930	2,200	2,220	1,200
30	1,180	a2,900	1,560	1,200	-	4,550	7,200	11,000	4,630	2,190	2,170	1,190
31	1,150	-	1,460	1,150	-	4,870	-	11,100	-	2,150	2,020	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	39,196	2,020	899	1,264	77,740
November	51,656	4,430	899	1,722	102,500
December	91,910	7,960	1,460	2,965	182,300
Calendar year 1946	1,417,760	15,000	899	3,884	2,812,000
January	43,090	1,700	1,150	1,390	85,470
February	48,540	2,530	1,140	1,734	96,280
March	90,570	4,870	1,590	2,922	179,600
April	145,200	7,200	3,240	4,840	288,000
May	374,990	16,500	7,250	12,100	743,800
June	247,240	11,200	4,630	8,241	490,400
July	84,870	4,280	2,150	2,738	168,300
August	69,670	2,530	2,020	2,247	138,200
September	52,270	2,120	1,190	1,742	103,700
Water year 1946-47	1,339,202	16,500	899	3,669	2,656,000

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of recorded range in stage and records for South Fork Payette River near Banks and North Fork Payette River near Smiths Ferry.
Note.- Stage-discharge relation affected by ice Dec. 30 to Jan. 4, Jan. 13 to Feb. 2.

Payette River near Emmett, Idaho

Location.- Water-stage recorder, lat. 43°56', long. 116°27', in sec. 22, T. 7 N., R. 1 W., three-eighths of a mile downstream from Black Canyon Dam and 5 miles northeast of Emmett.

Records available.- June 1925 to September 1947.

Average discharge.- 22 years, 2,868 second-feet.

Extremes.- Maximum discharge during year, 17,900 second-feet (regulated) May 9 (gage height, 11.13 feet); minimum, 508 second-feet (regulated) Nov. 15 (gage height, 2.14 feet); minimum daily, 810 second-feet (regulated) Oct. 14.
1925-47: Maximum discharge, 22,800 second-feet May 1, 1938 (gage height, 12.90 feet); minimum daily, 3 second-feet Jan. 10-14, Feb. 2, 22-25, 1938, when gates in dam were closed.

Remarks.- Records good. Diversions above station for irrigation. Flow regulated by diversion at and operation of gates in Black Canyon Dam and by Deadwood Reservoir (see p. 175), Payette Lake (see p. 178), and Lake Fork Reservoir (see p. 185).

Cooperation.- Gage-height record collected in cooperation with Bureau of Reclamation.

Rating table, water year 1946-47 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Feb. 12 to July 26)

2.4	760	7.0	7,780
3.0	1,420	8.0	9,860
4.0	2,690	9.0	12,200
5.0	4,170	10.0	15,000
6.0	5,880	10.6	16,800

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,060	1,160	3,220	1,590	1,370	1,850	5,340	6,810	10,900	3,540	1,220	1,210
2	1,370	1,160	2,690	1,620	1,410	1,860	4,900	7,700	10,900	3,120	1,200	1,210
3	1,640	992	2,370	1,480	1,620	1,840	4,580	9,930	10,800	2,970	1,190	1,230
4	1,210	1,050	2,320	1,420	1,420	1,820	4,230	11,200	10,600	2,900	1,190	1,230
5	1,210	1,040	2,340	1,430	1,460	1,950	3,880	11,700	10,300	2,760	1,190	1,190
6	1,200	1,000	2,720	1,480	1,490	1,830	3,610	12,100	9,980	2,560	1,190	1,160
7	1,110	1,220	3,000	1,700	1,520	1,780	3,550	13,200	9,170	2,300	1,190	1,150
8	1,020	1,190	2,800	1,710	1,460	1,840	3,440	14,600	9,250	2,040	1,190	1,150
9	1,020	1,010	2,620	1,640	1,360	1,830	3,430	16,700	11,600	1,930	1,270	1,140
10	937	1,020	2,430	1,790	1,480	2,620	3,480	16,400	11,600	1,900	1,300	1,210
11	937	1,070	2,330	1,890	1,460	2,750	3,400	15,400	11,100	1,730	1,340	1,230
12	915	1,020	4,280	1,820	1,660	2,520	3,310	14,600	10,500	1,610	1,350	1,200
13	830	959	7,080	f1,600	3,680	2,430	3,400	15,000	9,620	1,430	1,370	1,180
14	810	970	9,060	f1,460	3,490	2,380	4,030	13,800	9,040	1,350	1,350	1,170
15	1,040	1,040	9,340	f1,460	3,240	2,470	4,850	12,600	8,520	1,310	1,300	1,100
16	970	1,270	7,110	1,350	3,140	2,830	5,310	11,700	7,740	1,270	1,210	1,000
17	992	1,180	4,900	f1,280	2,960	3,420	5,500	11,300	7,560	1,240	1,200	1,010
18	992	1,240	3,380	f1,230	2,660	3,820	5,520	11,000	7,380	1,260	1,260	1,430
19	992	3,000	3,140	f1,300	2,520	4,220	5,410	10,900	7,340	1,270	1,310	1,240
20	937	5,650	3,210	f1,480	2,560	4,590	5,540	11,000	7,500	1,280	1,320	1,360
21	1,010	3,600	3,100	f1,540	1,980	4,810	5,790	11,000	7,270	1,280	1,430	1,290
22	1,410	2,830	2,940	1,580	1,640	4,780	5,430	11,000	6,520	1,300	1,420	1,230
23	1,640	2,960	2,840	1,600	1,640	5,290	5,260	11,000	5,830	1,320	1,380	1,060
24	1,990	3,520	2,690	1,600	1,660	4,880	4,880	10,700	5,080	1,320	1,430	1,000
25	1,620	3,120	2,510	1,670	1,670	4,470	4,740	10,800	4,690	1,370	1,460	926
26	1,400	3,340	2,560	1,680	1,680	4,030	4,800	11,100	4,640	1,340	1,440	860
27	1,580	3,430	2,730	1,860	1,700	4,200	5,170	11,300	4,540	1,340	1,370	860
28	1,490	3,300	2,650	1,520	1,790	4,120	6,010	11,700	4,390	1,300	1,370	860
29	1,380	3,980	2,250	1,240	-	4,360	6,560	11,200	4,170	1,270	1,370	860
30	1,160	3,800	1,890	1,480	-	4,810	6,790	10,800	3,880	1,240	1,360	926
31	1,160	-	1,580	1,320	-	5,290	-	10,800	-	1,240	1,260	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	37,032	1,990	810	1,195	73,450
November	62,121	5,650	959	2,071	123,200
December	108,080	9,340	1,580	3,486	214,400
Calendar year 1946	1,424,405	16,900	810	3,902	2,825,000
January	47,820	1,890	1,230	1,543	94,850
February	55,720	3,680	1,360	1,990	110,500
March	101,690	5,290	1,780	3,280	201,700
April	142,140	6,790	3,310	4,738	281,900
May	369,040	16,700	6,810	11,900	732,000
June	242,410	11,600	3,880	8,080	480,800
July	54,090	3,540	1,240	1,745	107,300
August	40,430	1,460	1,190	1,304	80,190
September	33,672	1,430	860	1,122	66,790
Water year 1946-47	1,294,245	16,700	810	3,546	2,567,000

f Discharge computed from average of hourly readings of long-distance gage at power plant furnished by Bureau of Reclamation.

Payette River near Payette, Idaho

Location.- Water-stage recorder, lat. 44°02'30", long. 116°55'30", in SW¼ sec. 10, T. 8 N., R. 5 W., at highway bridge, 1½ miles south of Payette.

Records available.- August 1935 to September 1947. January 1895 to July 1897 (incomplete) at site 2 miles downstream.

Average discharge.- 12 years (1935-47), 3,025 second-feet.

Extremes.- Maximum discharge during year, 16,700 second-feet May 10 (gage height, 10.83 feet); minimum, 659 second-feet July 17; minimum gage height, 4.12 feet Oct. 15, July 17; minimum daily discharge, 695 second-feet July 17, 18.
1895-97, 1935-47: Maximum discharge observed, 28,300 second-feet June 4, 1896 (gage height, 9.30 feet, site and datum then in use); minimum, 180 second-feet Oct. 13, 20, 1935 (gage height, 2.04 feet); minimum daily, 220 second-feet Oct. 5, 1935.

Remarks.- Records excellent. Many diversions above station for irrigation. Flow regulated by Black Canyon Dam and reservoirs on tributary streams.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 20 to Dec. 30, Feb. 13-21, Mar. 10 to May 2)

Oct. 1 to May 2				May 3 to Sept. 30			
4.1	866	6.0	3,710	4.1	635	6.8	4,990
4.3	1,120	6.8	5,310	4.3	880	7.6	6,740
4.6	1,520	7.6	7,320	4.6	1,280	8.6	9,250
5.2	2,390	8.6	10,300	5.2	2,150	9.6	12,200
				6.0	3,460	10.8	16,600

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	978	1,550	3,980	1,830	1,530	1,970	5,440	6,100	10,900	3,010	731	855
2	1,090	1,530	3,240	b1,850	1,550	2,020	5,200	6,510	10,800	2,690	731	855
3	1,520	1,480	2,890	b1,800	1,810	2,100	4,940	8,120	10,800	2,380	719	868
4	1,410	1,260	2,640	b1,800	1,700	1,980	4,570	9,810	10,600	2,240	707	855
5	1,210	1,350	2,620	b1,700	1,700	2,080	4,250	10,500	10,400	2,160	719	880
6	1,220	1,330	2,910	b1,800	1,700	2,080	4,140	10,900	9,930	1,990	731	842
7	1,200	1,410	3,310	b1,900	1,720	1,940	3,890	11,700	9,450	1,860	731	868
8	1,180	1,590	3,240	2,000	1,660	2,080	3,710	13,000	8,980	1,700	731	958
9	1,180	1,480	3,050	2,000	1,620	2,020	3,780	14,800	10,600	1,390	743	1,050
10	1,120	1,410	2,800	1,930	1,580	2,540	3,780	16,300	11,800	1,250	830	1,040
11	1,060	1,380	2,620	2,140	*1,620	3,070	3,670	14,900	11,300	1,210	868	1,180
12	1,070	1,420	3,480	2,120	1,940	2,910	3,570	14,300	10,700	1,130	880	1,110
13	1,030	1,330	6,670	2,080	4,250	2,670	3,500	14,700	9,870	1,080	971	1,080
14	928	1,210	8,720	1,650	3,850	2,670	3,710	13,800	9,030	932	919	1,060
15	928	1,320	10,200	a1,600	3,750	2,650	4,410	12,700	8,450	792	919	1,050
16	1,080	1,530	8,450	a1,600	3,570	2,910	4,920	11,600	7,760	755	842	997
17	1,040	1,550	*5,900	a1,500	3,440	3,580	5,180	11,000	7,330	695	805	958
18	1,070	1,580	4,080	a1,550	3,160	3,820	5,220	10,700	7,260	695	805	1,110
19	1,080	1,980	3,430	a1,650	2,640	4,230	5,200	10,500	6,900	755	842	1,290
20	1,170	5,400	3,530	a1,800	2,830	4,610	5,070	10,300	7,020	755	906	1,170
21	1,220	4,750	3,390	1,910	2,700	4,900	5,440	10,400	6,990	768	906	1,220
22	1,530	3,480	3,280	1,810	1,790	4,960	5,180	10,500	6,300	805	971	1,060
23	1,740	3,140	3,170	1,720	1,810	5,290	4,900	10,400	5,580	780	997	1,080
24	2,260	3,980	2,990	1,740	1,810	5,270	4,630	10,200	4,790	818	984	893
25	2,120	3,580	2,810	1,800	1,810	4,800	4,330	10,100	4,260	855	1,060	918
26	1,740	3,800	2,760	1,810	1,830	4,350	4,270	10,500	3,930	893	1,060	842
27	1,810	4,210	2,960	2,100	1,830	4,330	4,550	10,500	3,880	855	1,010	805
28	1,860	3,750	3,070	1,790	1,880	4,350	5,050	11,100	3,860	818	1,010	780
29	1,740	4,310	2,640	1,560	-	4,490	5,740	10,800	3,640	792	997	780
30	1,590	4,430	2,240	1,590	-	4,820	6,150	10,300	3,370	792	984	768
31	1,520	-	1,970	1,600	-	5,290	-	10,300	-	780	945	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	41,694	2,260	928	1,345	82,700
November	72,520	5,400	1,210	2,417	143,800
December	119,040	10,200	1,970	3,840	236,100
Calendar year 1946	1,411,688	15,900	493	3,868	2,800,000
January	55,730	2,140	1,500	1,798	110,500
February	63,080	4,250	1,530	2,253	125,100
March	106,580	5,290	1,940	3,438	211,400
April	138,390	6,150	3,500	4,613	274,500
May	347,340	16,300	6,100	11,200	688,900
June	236,480	11,800	3,370	7,883	469,100
July	38,425	3,010	695	1,240	76,210
August	27,054	1,060	707	873	53,660
September	29,222	1,290	768	974	57,960
Water year 1946-47	1,275,555	16,300	695	3,495	2,530,000

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for station near Emmett.
b Stage-discharge relation affected by ice.

Clear Creek at Lowman, Idaho

Location.- Staff gage, lat. 44°05', long. 115°37', in SW¼SE¼ sec. 27, T. 9 N., R. 7 E., at highway bridge at Lowman, 550 feet upstream from mouth.

Drainage area.- 59.6 square miles.

Records available.- May 1941 to September 1947.

Extremes.- Maximum discharge observed during year, 540 second-feet May 8; maximum gage height observed, 4.25 feet Jan. 6 (ice jam); minimum discharge observed, 29 second-feet Nov. 2, 3.

1941-47: Maximum discharge observed, 754 second-feet May 31, 1943; maximum gage height observed, 6.10 feet Jan. 9, 10, 1942 (ice jam), site and datum then in use; minimum daily discharge, 16 second-feet Dec. 10, 1944.

Remarks.- Records fair except those for periods of ice effect or no gage-height record, which are poor. Gage read once daily. Feeder canal for small power plants diverts about 1 mile above gage; water is returned to creek above station except that used for irrigation of small pasture adjacent to Lowman.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	39	39		42	40	a108	323	391	a100	42	33
2	52	29	a39		43	36	100	433	a380	98	42	31
3	a45	29	a38		42	a38	89	523	376	a100	a42	31
4	a43	47	a38		42	a36	82	490	361	a98	42	a32
5	42	a47	a39		41	34	79	a490	340	a94	a39	31
6	37	47	44		41	36	70	482	323	a90	37	31
7	35	a47	47		41	34	a66	506	344	84	35	a33
8	35	42	44		41	34	64	540	379	78	35	34
9	35	42	42		40	33	64	498	394	78	35	38
10	a34	42	39		39	34	61	465	a370	74	a35	34
11	33	37	61		40	38	70	433	327	a70	a35	32
12	35	35	*83		42	40	82	441	307	a66	a35	32
13	33	47	129		44	44	89	433	294	65	a36	32
14	33	a42	137		47	48	a110	417	287	60	37	a33
15	33	39	118		44	54	a130	a400	281	60	a37	a33
16	31	38	a90	40	a45	56	a160	402	260	57	a36	35
17	31	44	66		*46	72	176	402	254	a56	a35	40
18	a32	47	66		a45	88	197	387	242	a54	35	35
19	33	97	72		44	97	191	402	a240	a53	a35	33
20	35	55	66		42	107	208	394	225	52	35	32
21	35	49	60		44	111	a220	a400	205	52	37	32
22	a45	49	a58		44	118	219	a420	a190	a51	40	32
23	61	58	a54		44	114	202	410	173	50	35	32
24	a54	49	a50		a44	a110	214	410	163	50	33	32
25	52	47	a50		44	a105	197	441	149	47	33	33
26	52	52	52		42	100	236	425	142	45	a33	a33
27	49	a49	49		42	93	266	417	a140	44	a33	33
28	a45	49	42		44	97	297	425	137	44	33	a32
29	a42	49	39		-	104	303	417	a125	44	33	31
30	a40	47	39	(*)	-	118	291	410	112	a43	33	31
31	a40	-	39		-	114	-	402	-	42	a33	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	1,239	61	31	40.0	0.671	0.77	2,460
November	1,390	97	29	46.3	.777	.87	2,760
December	1,829	137	38	59.0	.990	1.14	3,630
Calendar year 1946	41,047	501	-	112	1.88	25.61	81,420
January	1,240	-	-	40.0	.671	.77	2,460
February	1,199	47	39	42.8	.718	.75	2,380
March	2,183	118	33	70.4	1.18	1.36	4,330
April	4,641	303	61	155	2.60	2.90	9,210
May	13,438	540	323	433	7.27	8.39	26,650
June	7,911	394	112	264	4.43	4.94	15,690
July	1,999	100	42	64.5	1.08	1.25	3,960
August	1,116	42	33	36.0	.604	.70	2,210
September	986	40	31	32.9	.552	.62	1,960
Water year 1946-47	39,171	540	29	107	1.80	24.46	77,700

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for South Fork Payette River at Lowman and Deadwood River near Lowman.

Note.- Stage-discharge relation affected by ice Nov. 16, Dec. 17-21, Dec. 29 to Feb. 11 (no gage-height record Jan. 1, 8, 9, 13, 19, 27, 31, Feb. 1, 2; discharge computed on basis of weather records and records for South Fork Payette River at Lowman and Deadwood River near Lowman).

Deadwood Reservoir near Lowman, Idaho

Location.- Staff gage, lat. 44°18', long. 115°39', in SE¼ sec. 8, T. 11 N., R. 7 E., at dam on Deadwood River, 15 miles north of Lowman. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Drainage area.- 108 square miles.

Records available.- October 1935 to September 1947.

Extremes.- Maximum elevation observed during year, 5,336.35 feet May 27-29; minimum observed, 5,291.0 feet Sept. 30.
1935-47: Maximum elevation observed, 5,337.1 feet June 1, 2, 1943; minimum observed, 5,260.1 feet Oct. 1, 1935.

Remarks.- Reservoir is formed by concrete arch dam, completed in 1930; storage began Nov. 2, 1930. Reported capacity, 160,400 acre-feet between elevations 5,230.0 feet (minimum operating level because of fish protection, 27 feet above sill of emergency gate in front of needle valve) and 5,334.0 feet (crest of spillway). Storage below elevation 5,230.0 feet, about 1,500 acre-feet. Water is used to augment flow of Payette River at Black Canyon power plant near Emmett. During late fall of 1936, Bureau of Reclamation cut a transmountain canal to divert a small flow of water from a tributary to Johnson Creek in Salmon River Basin to Deadwood River Basin for supplemental storage in Deadwood Reservoir. Discharge measurements of June 11, and July 22 indicate flow in this canal of 21.5 and 4.42 second-feet, respectively. Reservoir gage read once daily about 8 a.m.

Cooperation.- Gage readings furnished by Bureau of Reclamation.

Gage height, in feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	307.4	307.7	310.3	312.85	314.7	316.25	318.5	325.3	336.1	335.1	330.7	308.9
2	307.1	307.75	310.4	312.9	314.8	316.3	318.6	325.9	336.1	335.05	330.35	308.0
3	306.9	307.8	310.45	312.95	314.85	316.35	318.7	326.6	336.05	335.0	330.0	307.2
4	306.7	307.9	310.5	312.95	314.9	316.4	318.8	327.5	336.0	334.95	329.6	306.6
5	306.5	307.9	310.6	313.0	314.95	316.45	318.9	328.4	335.95	334.9	329.2	305.7
6	306.3	308.0	310.7	313.1	315.0	316.5	319.0	329.3	335.9	334.9	328.8	304.85
7	306.2	308.1	310.75	313.2	315.05	316.55	319.2	330.2	335.85	334.9	328.35	304.0
8	306.15	308.15	310.85	313.2	315.1	316.6	319.3	331.25	335.85	334.85	327.8	303.25
9	306.1	308.2	310.9	313.25	315.15	316.65	319.4	332.4	335.9	334.85	327.2	302.5
10	306.05	308.25	311.0	313.3	315.2	316.7	319.5	333.6	336.15	334.8	326.6	301.6
11	306.0	308.3	311.05	313.35	315.25	316.75	319.6	334.4	336.05	334.8	325.8	300.8
12	305.95	308.35	311.15	313.4	315.3	316.8	319.7	335.05	336.0	334.75	325.0	300.0
13	306.1	308.4	311.25	313.5	315.4	316.85	319.8	335.55	335.9	334.7	324.4	299.1
14	306.15	308.45	311.5	313.55	315.45	316.9	319.9	335.8	335.85	334.7	323.7	298.2
15	306.2	308.5	311.65	313.6	315.5	317.0	320.0	335.95	335.8	334.65	323.05	297.3
16	306.3	308.55	311.75	313.65	315.55	317.05	320.2	336.05	335.7	334.65	322.4	296.4
17	306.35	308.6	311.8	313.7	315.6	317.1	320.4	336.1	335.7	334.6	321.6	295.5
18	306.4	208.75	311.9	313.75	315.7	317.2	320.7	336.15	335.7	334.5	320.8	294.6
19	306.4	309.0	311.95	313.85	315.75	317.25	321.1	336.15	335.65	334.35	320.0	293.9
20	306.45	309.2	312.0	313.9	315.8	317.3	321.4	336.2	335.6	334.15	319.2	293.3
21	306.6	309.3	312.05	313.95	315.85	317.4	321.7	336.2	335.55	333.9	318.4	292.7
22	306.75	309.4	312.15	314.0	315.9	317.5	322.0	336.25	335.5	333.65	317.6	292.2
23	306.9	308.6	312.2	314.05	315.95	317.6	322.3	336.25	335.4	333.35	316.9	291.9
24	307.0	309.7	312.25	314.15	316.0	317.7	322.6	336.25	335.35	333.05	316.2	291.6
25	307.1	309.8	312.4	314.2	316.05	317.8	322.9	336.25	335.3	332.75	315.5	291.4
26	307.25	309.9	312.45	314.3	316.1	317.9	323.2	336.3	335.3	332.5	314.5	291.35
27	307.3	310.0	312.55	314.35	316.15	318.0	323.5	336.35	335.25	332.15	313.5	291.25
28	307.4	310.1	312.6	314.4	316.2	318.1	323.9	336.35	335.25	331.9	312.6	291.2
29	307.45	310.2	312.7	314.5	-	318.2	324.4	336.35	335.2	331.55	311.7	291.15
30	307.6	310.25	312.75	314.55	-	318.3	324.85	336.2	335.15	331.3	310.7	291.0
31	307.65	-	312.8	314.6	-	318.4	-	336.15	-	331.0	-	-

Note.- Add 5,000 feet to obtain elevation above mean sea level.

Deadwood River below Deadwood Reservoir, near Lowman, Idaho

Location.- Water-stage recorder, lat. 44°18', long. 115°39', in NE¼ sec. 17, T. 11 N., R. 7 E., 300 feet upstream from Wilson Creek, a quarter of a mile downstream from Deadwood Dam at lower end of Deadwood Basin, 15 miles north of Lowman, and 18 miles upstream from mouth.

Drainage area.- 108 square miles.

Records available.- October 1926 to September 1947.

Average discharge.- 20 years (1927-47), 198 second-feet.

Extremes.- Maximum discharge during year, 1,310 second-feet (regulated) Aug. 25 (gage height, 4.59 feet); minimum not determined, occurred during period of no gage-height record when gates in dam were closed.
1926-47: Maximum discharge, 2,150 second-feet May 26, 1928 (gage height, 5.67 feet, site and datum then in use); small amount of leakage from reservoir for long periods during 1930-47 when gates in dam were closed.

Remarks.- Records good except those below 10 second-feet, which are poor. Flow regulated since Nov. 2, 1930, by Deadwood Reservoir (see preceding page). During late fall of 1936, Bureau of Reclamation cut a transmountain canal to divert a small flow from a tributary of Johnson Creek in Salmon River Basin to Deadwood River Basin for supplemental storage in Deadwood Reservoir. Discharge measurements of June 11 and July 22 indicated flow in this canal of 21.5 and 4.42 second-feet, respectively.

Discharge, in second-feet, wster year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	529		6			a5		a6	970	374	586	1,120
2	395		6		a5	a5		a6	960	354	618	1,060
3	351	a3	5	a4		h5		h6	935	342	669	995
4	326		5		h5		a5	h6	910	328	708	955
5	277	h3	5					a6	856	315	740	975
6	209		6	h4	a5	a5		a6	814	304	758	990
7	169		6				h5	a6	781	293	823	955
8	152	a4	5					a6	809	285	965	920
9	128		5					a6	975	275	1,030	970
10	126		4	a4	h5	h5	a5	15	995	262	1,140	930
11	72	h4	6			a5		176	950	250	1,200	885
12	8		16			h5		392	866	240	1,080	940
13	5		16	h4				606	809	235	1,050	965
14	4		16				h5	767	767	225	1,030	965
15	a4	a4	16		a5	a5		856	726	220	1,040	965
16	a4		16	a4				915	704	257	1,060	965
17	a4		a4			h5		955	704	317	1,140	895
18	a4	12	a4		h5		a5	980	682	380	1,180	749
19	a4	16	a4					995	664	448	1,160	682
20	a4	13	a4	h4		a5		1,010	635	504	1,170	586
21	6	8	a4		a5			1,040	598	540	1,150	529
22	10	6	a4				h5	1,050	559	578	1,100	412
23	11	10	h4					1,050	526	610	1,030	351
24	7	10	a4	a5	h5	h5		1,040	497	598	1,020	270
25	6	6	a4					1,050	480	586	1,190	191
26	7	6	a4		a5			1,070	457	586	1,280	171
27	5	5	a4	h6		a5	a5	1,080	448	590	1,200	152
28	4	5	a4					1,080	438	578	1,190	144
29	a4	7	a4		-			1,080	419	578	1,220	156
30	a4	7	h4	a6	-	h5		1,030	395	578	1,140	169
31	a4	-	a4		-	a5	-	995	-	582	1,120	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,843	529	4	91.7	5,640
November	174	16	-	5.8	345
December	199	16	4	6.4	395
Calendar year 1946	97,146	1,090	-	266	192,700
January	140	-	-	4.5	278
February	140	-	-	5.0	278
March	155	-	-	5.0	307
April	150	-	-	5.0	298
May	19,286	1,080	6	622	38,250
June	21,329	995	395	711	42,310
July	12,612	610	220	407	25,020
August	31,787	1,280	586	1,025	63,050
September	21,012	1,120	144	700	41,680
Water year 1946-47	109,827	1,280	-	301	217,900

a No gage-height record; gates closed; discharge interpolated, or computed on basis of weather records.
h Computed from staff-gage reading.

Deadwood River near Lowman, Idaho

Location.- Water-stage recorder, lat. 44°05', long. 115°40', in sec. 29, T. 9 N., R. 7 E., 700 feet upstream from mouth and 2½ miles west of Lowman.

Records available.- August 1921 to September 1947.

Average discharge.- 26 years, 373 second-feet.

Extremes.- Maximum discharge during year, 1,740 second-feet (regulated) May 27; maximum gage height, 3.68 feet Jan. 16 (ice jam); minimum discharge, 46 second-feet (regulated) Nov. 2; minimum daily, 56 second-feet (regulated) Nov. 2.
1921-47: Maximum discharge, 4,230 second-feet May 9, 1928 (gage height, 5.17 feet), from rating curve extended above 3,200 second-feet; minimum recorded, 28 second-feet (regulated) Nov. 4, 1935 (gage height, 0.83 foot); minimum daily, 34 second-feet (regulated) Nov. 4, 1935.

Remarks.- Records good except those for periods of ice effect, which are fair. Flow regulated since Nov. 2, 1930, by Deadwood Reservoir (see p. 175). Small amount of water diverted from tributary of Johnson Creek in Salmon River Basin to Deadwood River Basin during year.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

1.0	46	1.6	164	2.6	674
1.1	58	1.8	232	2.9	906
1.2	73	2.0	319	3.3	1,300
1.4	112	2.3	481	3.7	1,800

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	647	80	106			70	*269	732	1,510	620	667	1,150
2	568	56	106			85	261	924	1,520	593	681	1,090
3	435	77	97	70		84	248	1,150	1,470	574	724	1,050
4	412	87	97			81	236	1,190	1,450	555	754	986
5	364	87	97			79	218	1,160	1,370	530	777	986
					70							
6	310	80	106			71	207	1,160	1,320	518	800	1,000
7	236	86	102			82	196	1,220	1,260	505	840	995
8	232	77	102			82	193	1,310	1,370	493	950	959
9	190	68	97			81	190	1,390	1,630	464	1,030	986
10	186	77	93			90	190	1,190	1,600	452	1,120	1,000
11	180	73	124		75	93	183	1,130	1,530	435	1,240	933
12	82	60	*221		90	89	193	1,300	1,430	412	1,120	959
13	73	68	310		130	89	236	1,490	1,340	401	1,070	995
14	73	82	440		100	95	334	1,580	1,270	385	1,060	995
15	73	70	359		90	108	440	1,630	1,200	374	1,060	995
16	73	68	244	80	85	136	481	1,670	1,160	380	1,080	995
17	72	80	150		*84	170	512	1,690	1,160	440	1,140	977
18	72	99	136		83	203	493	1,670	1,120	505	1,210	848
19	72	225	160		82	232	493	1,670	1,080	561	1,190	761
20	73	196	140		81	248	524	1,690	1,040	613	1,200	710
21	119	124	134		85	257	542	1,690	977	654	1,180	633
22	139	112	129		85	265	536	1,690	915	667	1,120	548
23	156	126	122		85	282	518	1,670	856	696	1,060	440
24	106	.24	115		85	261	493	1,650	815	696	1,020	396
25	99	110	117		85	236	493	1,660	777	681	1,170	291
26	112	110	122		85	228	536	1,690	754	681	1,330	248
27	95	102	114		85	221	606	1,720	724	681	1,270	236
28	87	102	84		75	240	681	1,700	710	667	1,210	196
29	77	119		70	-	257	724	1,630	688	660	1,260	193
30	80	119	70		-	287	710	1,570	654	660	1,190	203
31	77	-			-	287	-	1,540	-	660	1,130	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,570	647	72	180	11,050
November	2,944	225	56	98.1	5,840
December	4,434	440	-	143	8,790
Calendar year 1946	180,087	2,020	50	493	357,200
January	2,370		-	76.5	4,700
February	2,270	130	-	81.1	4,500
March	5,089	287	70	164	10,090
April	11,936	724	183	398	23,670
May	45,156	1,720	732	1,457	89,570
June	34,700	1,630	654	1,157	68,830
July	17,213	696	374	555	34,140
August	32,653	1,330	667	1,053	64,770
September	22,754	1,150	193	758	45,130
Water year 1946-47	187,089	1,720	56	513	371,100

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 19, 20, 24, Dec. 29 to Mar. 10 (no gage-height record Jan. 17, 19-25, Jan. 28 to Feb. 4; discharge computed on basis of weather records and records for other stations in South Fork Payette River Basin).

Payette Lake at McCall, Idaho

Location.- Water-stage recorder, lat. 44°55', long. 116°07', in sec. 8, T. 18 N., R. 3 E., at outlet of lake on North Fork Payette River, at McCall. Datum of gage is 4,982.24 feet above mean sea level, adjustment of 1912.

Drainage area.- 144 square miles.

Records available.- August 1921 to September 1947 (fragmentary prior to Nov. 23, 1943).

Extremes.- Maximum gage height during year, 8.13 feet June 18; minimum, 1.69 feet Oct. 19. 1921-47: Maximum gage height observed, 8.75 feet July 13, 1935; minimum observed, 0.95 foot Oct. 3, 1931.

Remarks.- Flow from Payette Lake is regulated within natural range by taintor gates and removable stop logs of a buttress and slab-type dam completed in November 1943. During period 1923 to 1943 lake was regulated by structure consisting of a series of concrete-filled cribs supporting removable flashboards. Some regulation is reported to have been effected by timber flashboards for several years prior to 1923. Lake area is approximately 5,000 acres. No capacity table has been developed. Water is used for irrigation of lands in vicinity of Emmett. No diversion above station.

Cooperation.- Water-stage recorder inspected by U. S. Forest Service.

Gage height, in feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.86	2.44	3.86	f2.88	2.22	2.08	2.48	4.50	6.13	7.70	6.46	4.09
2	1.88	2.46	3.89	f2.82	2.22	2.09	2.49	4.72	6.24	7.69	6.35	4.06
3	1.87	2.46	3.92	f2.76	2.21	2.10	2.51	5.19	6.16	7.70	6.24	4.05
4	1.86	2.47	3.95	f2.71	2.19	2.12	2.51	5.66	6.05	7.70	6.13	4.03
5	1.87	2.48	4.00	f2.66	2.17	2.12	2.50	5.93	6.02	7.70	6.02	4.00
6	1.83	2.49	4.05	f2.61	2.16	2.11	2.50	6.12	6.13	7.76	5.91	3.97
7	1.82	2.51	4.08	2.56	2.16	2.11	2.49	6.32	6.28	7.83	5.80	3.98
8	1.81	2.53	4.09	-	2.15	2.13	2.48	6.64	6.51	7.90	5.67	3.97
9	1.80	2.52	4.11	-	2.13	2.14	2.48	7.02	7.02	7.92	5.56	3.96
10	1.78	2.53	4.13	-	2.12	2.18	2.52	6.83	7.18	7.97	5.43	3.94
11	1.77	2.54	4.17	-	2.11	2.19	2.56	6.29	7.11	7.98	5.31	3.92
12	1.77	2.54	4.27	-	2.16	2.18	2.60	5.87	6.94	7.99	5.22	3.89
13	1.75	2.55	4.30	-	2.19	2.17	2.65	5.65	6.85	7.99	5.13	3.87
14	1.74	2.56	4.33	-	2.18	2.16	2.75	5.48	6.89	8.00	5.03	3.84
15	1.73	2.56	4.35	-	2.17	2.15	2.89	5.35	7.10	8.00	4.94	3.75
16	1.72	2.56	4.34	-	2.17	2.14	3.07	5.32	7.40	7.99	4.90	3.68
17	1.71	2.58	4.28	-	2.16	2.15	3.25	5.33	7.88	7.92	4.82	3.60
18	1.71	2.65	4.18	-	2.15	2.17	3.43	5.31	8.11	7.86	4.70	3.50
19	1.70	2.87	4.11	-	2.14	2.18	3.57	5.23	8.08	7.81	4.62	3.40
20	1.72	3.02	4.07	-	2.13	2.21	3.71	5.25	7.99	7.74	4.56	3.30
21	1.78	3.08	4.04	-	2.13	2.24	3.82	5.36	7.84	7.66	4.40	3.20
22	1.87	3.15	4.00	-	2.12	2.29	3.86	5.42	7.81	7.56	4.37	3.11
23	2.01	3.24	3.95	2.24	2.12	2.34	3.89	5.42	7.85	7.46	4.34	3.02
24	2.07	3.32	3.86	2.24	2.11	2.37	3.89	5.47	7.86	7.35	4.32	2.92
25	2.12	3.39	3.76	2.23	2.10	2.37	3.90	5.63	7.85	7.23	4.30	2.83
26	2.24	3.49	3.66	2.24	2.10	2.37	3.92	5.83	7.85	7.11	4.27	2.75
27	2.30	3.57	3.55	2.22	2.09	2.37	3.96	6.03	7.88	6.99	4.24	2.85
28	2.34	3.68	3.40	2.21	2.09	2.37	4.08	6.16	7.86	6.88	4.21	2.58
29	2.37	3.77	3.26	2.20	-	2.38	4.26	6.05	7.78	6.78	4.17	2.51
30	2.39	3.82	3.14	2.20	-	2.42	4.44	5.93	7.71	6.68	4.14	2.44
31	2.40	-	2.98	2.20	-	2.47	-	5.99	-	6.58	4.12	-

f Gage height partly estimated.

North Fork Payette River at McCall, Idaho

Location.- Water-stage recorder, lat. 44°54'30", long. 116°07'30", in sec. 8, T. 18 N., R. 3 E., at McCall, a quarter of a mile downstream from outlet of Payette Lake.

Drainage area.- 144 square miles.

Records available.- September 1908 to June 1917, May 1919 to September 1947.

Average discharge.- 36 years (1908-16, 1919-47), 346 second-feet.

Extremes.- Maximum discharge during year, 3,470 second-feet May 9 (gage height, 6.99 feet); minimum, 13 second-feet Nov. 22-24; minimum gage height, 1.49 feet Nov. 22-25. 1908-17, 1919-47: Maximum discharge, 4,260 second-feet June 10, 1933, maximum gage height, 7.5 feet June 5, 1909, June 10, 1933; practically no flow Nov. 5-8, 1931, Nov. 17-24, 1933, Nov. 14-27, 1935, Oct. 22 to Nov. 11, 1938.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Flow partly regulated by Payette Lake. Since water year 1939 some water by-passed station through fish hatchery (see p. 183).

Cooperation.- Water-stage recorder inspected by employee of U. S. Forest Service.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	49	45	316	113	89	187	1,700	1,880	443	347	69
2	44	50	50	290	115	90	190	2,100	1,980	429	343	64
3	42	49	55	266	113	92	192	2,250	1,920	429	343	61
4	41	50	63	246	109	95	192	2,350	1,780	429	347	61
5	42	48	72	228	108	95	190	2,430	1,270	273	347	63
6	37	48	84	215	104	92	192	2,550	1,160	171	351	71
7	36	48	85	204	102	93	190	2,720	1,210	166	347	71
8	34	46	92	190	99	99	190	3,010	1,300	161	347	72
9	34	42	95	179	97	100	156	3,230	1,530	163	347	71
10	32	42	99	174	93	108	46	3,250	1,620	161	347	60
11	31	42	108	168	93	109	46	2,800	1,570	163	328	52
12	31	42	181	163	102	108	49	2,400	1,470	163	256	52
13	28	42	276	163	108	106	51	2,180	1,290	163	253	52
14	28	42	283	156	106	104	54	2,000	800	163	260	54
15	27	42	290	148	106	102	60	1,890	446	161	263	58
16	26	42	280	144	106	102	84	1,830	312	212	260	80
17	25	42	266	136	102	104	124	1,840	659	269	256	270
18	24	44	253	130	102	106	171	1,830	1,240	263	253	270
19	23	50	269	126	100	109	212	1,770	1,360	260	253	270
20	23	49	298	121	99	115	253	1,790	1,280	260	253	270
21	26	50	280	119	97	121	343	1,870	1,010	294	189	270
22	27	33	269	115	95	134	457	1,920	595	347	95	265
23	34	13	280	117	93	146	472	1,920	637	347	93	260
24	60	13	368	119	93	153	470	1,800	733	343	93	255
25	48	14	355	117	92	156	470	1,810	758	347	90	250
26	50	14	424	119	90	156	470	1,950	758	347	85	240
27	48	14	501	117	90	156	600	2,090	764	347	84	235
28	48	21	457	113	89	156	780	2,210	764	343	79	230
29	48	31	416	111	-	161	1,000	2,090	690	343	76	225
30	49	38	376	111	-	171	1,300	1,830	496	347	75	220
31	49	-	339	111	-	184	-	1,800	-	343	71	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,136	60	23	36.6	2,250
November	1,150	50	13	38.3	2,280
December	7,309	501	45	236	14,500
Calendar year 1946	136,675	2,410	13	374	271,100
January	5,032	316	111	162	9,980
February	2,816	115	89	101	5,590
March	3,712	184	89	120	7,360
April	9,191	1,300	46	306	18,230
May	67,210	3,250	1,700	2,168	133,300
June	33,282	1,980	312	1,109	66,010
July	8,650	443	161	279	17,160
August	7,131	351	71	230	14,140
September	4,541	270	52	151	9,010
Water year 1946-47	151,160	3,250	13	414	299,800

Note.- No gage-height record Apr. 24 to May 4, Sept. 12-30; discharge computed on basis of recorded range in stage, records for Payette Lake, North Fork Payette River at Cascade, and Lake Fork Payette River above Jumbo Creek, near McCall.

North Fork Payette River at Cascade, Idaho

Location.- Water-stage recorder, lat. 44°31', long. 116°02', in NE¼ sec. 36, T. 14 N., R. 3 E., at Cascade, 285 feet downstream from Halleck and Howard mill dam, half a mile upstream from Beaver Creek, and 2½ miles downstream from Willow Creek. Prior to Jan. 28, 1947, staff gage at same site and datum.

Drainage area.- 626 square miles.

Records available.- May 1941 to September 1947.

Extremes.- Maximum discharge during year, 7,320 second-feet May 10 (gage height, 6.29 feet); minimum observed, 127 second-feet Nov. 13 (gage height, 0.76 foot); minimum daily, 170 second-feet Nov. 13.

1941-47: Maximum discharge recorded, that of May 10, 1947; minimum observed, 53 second-feet (gates in mill dam closed) Sept. 18, 1944 (gage height, 0.40 foot); minimum daily, 68 second-feet Sept. 18, 1944.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Gage read twice daily Oct. 1 to Jan. 27. Flow regulated by Payette Lake (see p. 178), Lake Fork Reservoir (see p.185), and occasionally by Halleck and Howard mill dam. Several diversions from tributaries above station for irrigation.

Cooperation.- Gage readings furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	245	310	a900	540	375	375	1,680	2,580	4,270	1,380	482	206
2	284	a290	701	450	390	373	1,450	2,700	4,270	1,110	482	211
3	345	a250	634	480	400	388	1,320	3,000	4,460	1,040	482	224
4	331	239	616	480	410	402	1,250	3,510	4,640	848	490	219
5	284	352	790	480	410	400	1,120	4,020	4,470	827	475	215
6	a268	359	1,040	500	420	390	1,040	4,500	4,050	722	475	206
7	252	324	1,050	550	420	380	1,040	5,120	3,360	506	490	202
8	252	304	a900	520	410	395	1,060	5,640	3,320	431	482	233
9	252	a290	810	480	400	388	1,120	6,370	3,840	506	467	267
10	239	a280	770	500	400	*425	1,190	7,140	4,360	506	490	257
11	239	a280	872	550	390	535	1,140	7,150	4,430	498	490	247
12	252	258	1,800	520	390	560	1,110	6,740	4,110	467	490	228
13	a240	170	2,320	480	650	572	1,210	6,280	3,700	453	453	211
14	221	245	2,970	400	675	599	1,370	5,720	3,310	431	424	197
15	221	271	a2,800	400	654	663	1,530	5,130	2,820	402	396	202
16	221	233	1,600	400	589	731	1,590	4,680	2,140	390	370	233
17	215	a220	967	400	571	827	1,540	4,430	2,260	376	370	321
18	215	511	740	420	570	955	1,630	4,350	2,650	402	357	376
19	209	1,650	*790	460	527	1,100	1,810	4,270	3,080	431	357	424
20	a220	1,470	900	480	503	1,180	1,770	4,220	3,330	438	370	424
21	290	894	900	460	479	1,150	1,630	4,190	3,220	438	383	409
22	395	616	920	420	487	1,220	1,500	4,200	2,920	438	390	402
23	580	701	900	470	519	1,320	1,530	4,200	2,370	453	370	402
24	495	a890	820	450	634	1,120	1,510	4,120	2,020	482	316	409
25	388	894	800	450	625	1,010	1,500	4,190	1,780	490	287	416
26	418	598	900	440	562	1,060	1,530	4,100	1,860	498	262	431
27	a410	730	920	410	495	1,110	1,770	4,230	1,990	498	252	431
28	366	a1,000	850	370	440	1,150	2,060	4,490	1,950	498	237	416
29	331	1,360	700	380	-	1,280	2,280	4,540	1,910	506	224	396
30	304	1,210	600	*390	-	1,450	2,480	4,490	1,710	490	219	376
31	304	-	580	375	-	1,660	-	4,420	-	482	215	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	9,286	580	209	300	18,420
November	17,199	1,650	170	573	34,110
December	32,860	2,970	580	1,060	65,180
Calendar year 1946	398,963	4,950	170	1,093	791,400
January	14,105	550	370	455	27,980
February	13,795	675	375	493	27,360
March	25,168	1,660	373	812	49,920
April	44,560	2,480	1,040	1,486	88,380
May	144,720	7,150	2,580	4,668	287,000
June	94,600	4,640	1,710	3,153	187,600
July	17,437	1,380	376	562	34,590
August	12,047	490	215	389	23,890
September	9,191	431	197	306	18,230
Water year 1946-47	434,968	7,150	170	1,192	862,700

* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated or computed on basis of records for station near Smiths Ferry and other stations in Payette River Basin.

Note.- Stage discharge relation affected by ice Dec. 20 to Feb. 14, Feb. 28, Mar. 1, 5, 6.

North Fork Payette River near Smiths Ferry, Idaho

Location.- Water-stage recorder, lat. 44°16', long. 116°04', in SW¼ sec. 23, T. 11 N., R. 3 E., 450 feet downstream from Beaver Creek, 2½ miles downstream from Tripod Creek, and 2 5/8 miles southeast of Smiths Ferry. Datum of gage is 4,505.9 feet above mean sea level (levels by Bureau of Reclamation).
Drainage area.- 893 square miles.
Records available.- May 1941 to October 1947 (discontinued).
Extremes.- Maximum discharge during period (October 1946 to October 1947), 8,620 second-feet May 11 (gage height, 10.68 feet); minimum, 223 second-feet Nov. 3, 4, 14 (gage height, 2.71 feet).
1941-47: Maximum discharge, 9,110 second-feet June 3, 1943 (gage height, 10.70 feet); minimum, 99 second-feet (regulated) Sept. 19, 1944 (gage height, 2.05 feet), from rating curve extended below 150 second-feet; minimum daily, 115 second-feet Dec. 11, 1944.
Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Payette Lake (see p.), Lake Fork Reservoir (see p.), and occasionally by mill dam at Cascade. Several diversions from tributaries above station for irrigation.

Discharge, in second-feet, 1946-47

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	284	399	1,270	650	450	620	2,150	2,910	5,040	1,600	504	254
2	327	363	1,030	560	470	620	1,980	3,160	4,950	1,340	508	249
3	360	304	*909	600	490	640	1,820	3,640	5,000	1,200	489	254
4	373	304	855	590	500	650	1,700	4,120	5,160	1,190	481	257
5	348	360	933	600	510	640	1,550	4,700	5,140	1,120	489	257
6	318	433	1,220	630	500	630	1,460	5,190	4,910	1,030	481	251
7	307	402	1,300	670	490	620	1,430	5,660	4,250	855	481	254
8	301	386	1,140	670	460	627	1,430	6,390	4,040	581	481	260
9	298	357	1,040	610	450	627	1,480	7,140	4,590	613	477	293
10	293	360	970	620	450	613	1,520	7,940	4,930	627	473	321
11	287	363	1,180	700	470	*740	1,510	8,510	5,120	608	481	304
12	281	342	2,570	630	600	770	1,460	8,360	4,950	585	481	290
13	293	324	3,400	580	750	800	1,530	7,880	4,530	563	477	273
14	276	284	4,200	500	950	820	1,710	7,140	4,070	541	451	254
15	273	360	3,810	490	1,000	900	1,890	6,360	3,600	516	416	241
16	276	333	2,520	480	950	960	2,000	5,700	2,900	477	402	254
17	270	310	1,470	480	940	1,130	2,010	5,340	2,690	451	389	316
18	270	473	1,100	480	940	1,260	2,080	5,150	2,660	440	382	379
19	270	1,610	1,060	540	930	1,480	2,070	5,080	2,990	477	376	402
20	273	2,400	1,200	560	840	1,670	2,200	5,020	3,350	504	379	433
21	327	1,590	1,190	550	840	1,710	2,200	5,000	3,330	508	382	448
22	440	1,080	1,210	500	800	1,770	2,000	4,970	3,080	489	402	440
23	604	1,040	1,180	*550	800	1,980	1,940	4,940	2,590	470	406	433
24	657	1,340	1,100	540	850	1,650	1,930	4,900	2,150	508	373	433
25	537	1,300	1,090	540	900	1,430	1,900	4,910	1,990	525	342	440
26	516	1,050	1,190	520	860	1,500	1,940	4,900	1,840	525	321	448
27	516	1,040	1,230	480	800	1,590	2,080	4,900	1,900	520	304	451
28	485	1,340	1,150	450	660	1,650	2,350	5,020	1,900	520	290	451
29	430	1,690	909	450	-	1,860	2,590	5,080	1,890	520	279	440
30	402	1,640	808	460	-	2,000	2,780	5,080	1,800	525	265	423
31	392	-	750	450	-	2,210	-	5,140	-	516	260	-

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 31 to Mar. 7, Mar. 11-16 (no gage-height record Jan. 18-22, Jan. 28 to Feb. 11; discharge computed on basis of weather records and records for North Fork Payette River at Cascade, Payette River near Horseshoe Bend, and South Fork Payette River at Banks).

1947

Day	Discharge	Day	Discharge	Day	Discharge
Oct. 1	409	Oct. 6	348	Oct. 11	508
2	389	7	336	12	590
3	376	8	351	13	395
4	370	9	363	14	440
5	360	10	437		

Monthly discharge, in second-feet, 1946-47

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October 1946	11,284	657	270	364	22,380
November	23,577	2,400	284	783	46,760
December	44,984	4,200	750	1,451	89,220
Calendar year 1946	530,907	6,000	270	1,455	1,053,000
January 1947	17,130	700	450	553	33,980
February	19,650	1,000	450	702	38,980
March	36,167	2,210	613	1,167	71,740
April	56,690	2,780	1,430	1,890	112,400
May	170,230	8,510	2,910	5,491	337,600
June	107,340	5,160	1,800	3,578	212,900
July	20,944	1,600	440	676	41,540
August	12,722	508	260	410	25,230
September	10,203	451	241	340	20,240
Water year 1946-47	530,921	8,510	241	1,455	1,053,000
October 1-14, 1947	5,672	590	336	405	11,250

North Fork Payette River near Banks, Idaho

Location.- Water-stage recorder, lat. 44°07', long. 116°06', in SE¼ sec. 16, T. 9 N., R. 3 E., 40 feet downstream from steel highway bridge, 2½ miles north of Banks, and 3 miles upstream from confluence with South Fork. Datum of gage is 3,081.13 feet above mean sea level, preliminary unadjusted elevation.

Drainage area.- 933 square miles.

Records available.- April to September 1947.

Extremes.- Maximum discharge during period not determined, occurred during periods of no record; minimum, 246 second-feet Sept. 15, 16 (gage height, 4.53 feet).

Remarks.- Records excellent. Flow regulated by Payette Lake (see p.178), Lake Fork Reservoir (see p.185), and occasionally by mill dam at Cascade. Several diversions from tributaries above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										-	539	263
2										-	543	256
3										-	536	256
4										-	528	263
5										-	528	266
6										-	521	256
7										-	517	261
8										-	517	263
9										-	513	292
10										-	510	332
11										-	521	320
12										-	521	303
13										-	517	284
14								h7,490		-	488	263
15										-	453	251
16										-	426	251
17										h513	415	303
18										499	409	396
19										524	402	426
20										539	396	456
21							h2,530			539	412	481
22										536	422	467
23										524	429	464
24										539	399	456
25									h2,190	562	363	464
26										566	338	478
27										558	320	481
28										558	300	481
29										554	286	474
30										558	273	453
31										547	266	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff: Inches	Runoff: Acre-feet
October							
November							
December							
Calendar year	-	-	-	-	-	-	-
January	-	-	-	-			-
February	-	-	-	-			-
March	-	-	-	-			-
April	-	-	-	-			-
May	-	-	-	-			-
June	-	-	-	-			-
July 17-31	8,116	566	499	541			16,100
August	13,608	543	266	439			26,990
September	10,660	481	251	355			21,140
Water year	-	-	-	-			-

h Computed from wire-weight gage readings.

Fish hatchery diversion at McCall, Idaho

Location.- Staff gage and Parshall flume, lat. 44°54'30", long. 116°07' in sec. 8, T. 18 N., R. 3 E., immediately below outlet from fish hatchery tanks, just above point of return to North Fork Payette River, and 1 mile west of McCall.

Records available.- October 1942 to September 1947.

Extremes.- Maximum discharge observed during year, 6.7 second-feet May 10 (gage height, 1.40 feet); minimum observed, 2.1 second-feet Aug. 18-24, 26; minimum gage height observed, 0.65 foot Aug. 21.
1942-47: Maximum discharge observed, that of May 10, 1947; no flow Sept. 22 to Nov. 7, 1943.

Remarks.- Records fair. Gage read once daily. Flow regulated by fish hatchery, water for which is diverted from Payette Lake or North Fork Payette River and bypasses gaging station on that stream.

Cooperation.- Gage readings furnished by Idaho State Fish and Game Commission.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3 3	3.3	3.3	3.6	3.2	2.8	3.1	3.6	3.6	3.0	2.7	2.3
2	3.3	3.3	3.3	3.6	3.2	2.7	3.1	3.7	3.6	2.9	2.7	2.3
3	3.3	3.3	3.3	3.6	3.2	2.8	3.1	3.8	3.6	2.9	2.6	2.3
4	3.3	3.3	3.3	3.6	3.2	2.8	3.1	3.8	3.6	2.9	2.6	2.4
5	3.3	3.4	3.3	3.6	3.2	2.8	3.1	4.0	3.6	2.7	2.6	2.4
6	3.3	3.4	3.4	3.6	3.2	2.7	3.2	4.0	3.6	2.8	2.6	2.4
7	3.3	3.4	3.3	3.6	3.2	2.7	3.2	4.3	3.6	2.9	2.6	2.3
8	3.3	3.4	3.3	3.5	3.2	2.8	3.2	4.6	3.6	2.9	2.6	2.4
9	3.3	3.4	3.4	3.5	3.2	2.8	3.1	4.6	3.6	2.8	2.7	2.4
10	3.3	3.4	3.4	3.5	3.2	2.8	3.1	6.7	3.6	2.8	2.7	2.4
11	3.3	3.4	3.6	3.5	3.2	2.8	3.0	5.3	3.6	2.8	2.7	2.5
12	3.3	3.4	3.6	3.4	3.2	2.8	3.0	4.6	3.6	2.7	2.6	2.6
13	3.3	3.4	3.6	3.4	3.2	2.8	3.0	4.0	3.6	2.7	2.6	2.6
14	3.3	3.3	3.6	3.4	3.2	2.8	3.1	4.0	3.4	2.7	2.2	2.6
15	3.3	3.4	3.6	3.4	3.2	2.8	3.1	3.9	3.4	2.6	2.3	2.4
16	3.3	3.4	3.6	3.4	3.2	2.8	3.2	3.9	3.4	2.6	2.2	2.4
17	3.3	3.3	3.6	3.4	3.2	2.8	3.3	3.8	3.4	2.6	2.2	2.4
18	3.3	3.4	3.6	3.4	3.2	2.8	3.3	3.8	3.6	2.6	2.1	2.4
19	3.3	3.4	3.6	3.3	3.2	2.9	3.3	3.7	3.3	2.7	2.1	2.6
20	3.2	3.4	3.6	3.3	3.1	2.9	3.4	3.6	2.8	2.6	2.1	2.5
21	3.2	3.4	3.6	3.3	3.1	3.0	3.4	3.6	2.8	2.4	2.1	2.6
22	3.2	3.4	3.6	3.3	3.2	3.0	3.4	3.6	3.0	2.2	2.1	2.6
23	3.2	3.4	3.6	3.3	3.2	3.1	3.4	3.6	3.0	2.4	2.1	2.6
24	3.4	3.4	3.6	3.3	3.1	3.1	3.4	3.6	3.0	2.3	2.1	2.6
25	3.3	3.4	3.6	3.3	3.1	3.1	3.4	3.7	3.1	2.4	2.2	2.6
26	3.3	3.3	3.6	3.3	2.8	3.1	3.4	3.8	3.1	2.4	2.1	2.6
27	3.3	3.3	3.6	3.3	2.8	3.1	3.4	3.8	3.1	2.4	2.3	2.6
28	3.3	3.3	3.6	3.3	2.8	3.1	3.4	3.7	3.0	2.5	2.3	2.6
29	3.3	3.3	3.6	3.3	-	3.1	3.5	3.7	3.0	2.5	2.3	2.6
30	3.3	3.3	3.6	3.2	-	3.1	3.6	3.7	3.0	2.6	2.3	2.6
31	3.3	-	3.6	3.2	-	3.1	-	3.6	-	2.6	2.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	102.0	3.4	3.2	3.29	202
November	100.9	3.4	3.3	3.36	200
December	108.9	3.6	3.3	3.51	216
Calendar year 1946	1,025.9	4.1	2.0	2.81	2,040
January	105.7	3.6	3.2	3.41	210
February	88.0	3.2	2.8	3.14	175
March	89.8	3.1	2.7	2.90	178
April	97.3	3.6	3.0	3.24	193
May	124.1	6.7	3.6	4.00	246
June	100.2	3.6	2.8	3.34	199
July	81.9	3.0	2.2	2.64	162
August	73.7	2.7	2.1	2.38	146
September	74.6	2.6	2.3	2.49	148
Water year 1946-47	1,147.1	6.7	2.1	3.14	2,280

Lake Fork Payette River above Jumbo Creek, near McCall, Idaho

Location.- Water-stage recorder, lat. 44°55', long. 115°59', in NE¼ sec. 8, T. 18 N., R. 4 E., 200 feet upstream from bridge at abandoned power plant, a quarter of a mile upstream from Jumbo Creek, 3½ miles upstream from Lake Fork Reservoir dam, and 5½ miles east of McCall.

Drainage area.- 48.9 square miles.

Records available.- October 1945 to September 1947.

Extremes.- Maximum discharge during year, 1,570 second-feet May 7 (gage height, 8.19 feet); minimum, 14 second-feet Sept. 7.
1945-47: Maximum discharge, that of May 7, 1947; minimum observed, 14 second-feet Oct. 15, 16, 1945, Sept. 7, 1947.

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

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second feet)
(Shifting-control method used Jan. 29 to Mar. 18)

2.2	14	4.0	102	6.5	570
2.4	20	4.5	144	7.0	788
2.7	31	5.0	204	7.5	1,080
3.0	45	5.5	289	7.9	1,310
3.5	71	6.0	405		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	57	70	40	32	34	85	502	783	238	49	16
2	43	b48	64	35	33	35	81	906	702	259	47	15
3	31	b48	62	35	32	34	78	1,160	613	263	46	18
4	28	52	62	40	32	34	75	1,100	590	237	44	17
5	27	52	62	40	32	32	71	1,030	508	222	43	15
6	25	53	66	40	*b30	b30	69	1,060	609	221	42	15
7	24	52	60	40	b29	*33	66	1,220	563	219	38	24
8	24	48	59	40	b28	33	66	1,310	778	203	37	33
9	23	44	56	40	b27	32	64	1,270	862	182	35	26
10	22	46	55	40	30	33	64	778	625	169	33	32
11	21	43	67	40	29	32	62	613	502	153	32	24
12	21	45	*79	38	34	31	64	590	488	134	31	21
13	20	b44	111	38	44	31	77	617	508	123	30	19
14	20	44	148	38	38	33	113	574	491	118	29	18
15	19	40	123	35	37	36	163	597	522	111	27	17
16	18	41	87	38	37	41	187	638	659	103	26	20
17	18	41	b35	38	36	48	216	654	819	94	25	29
18	17	60	b41	38	35	56	203	613	646	88	23	25
19	18	133	b56	38	b33	63	194	617	586	82	22	22
20	22	86	50	38	b29	71	224	707	465	78	26	20
21	63	69	50	38	35	76	206	730	368	73	29	19
22	122	64	50	38	34	85	193	711	360	75	25	18
23	102	88	45	38	34	84	189	693	368	71	26	17
24	68	78	45	38	35	76	178	739	394	66	23	16
25	93	68	45	38	35	73	214	819	397	62	21	16
26	156	66	45	38	34	71	268	862	389	60	19	20
27	90	71	45	34	33	70	344	890	397	57	19	18
28	*74	98	b40	27	32	75	456	788	293	55	18	17
29	62	90	b40	*34		82	537	646	179	53	21	16
30	62	78	b40	33	-	95	495	630	198	52	17	15
31	58	-	b40	32	-	90	-	778	-	50	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	1,413	156	17	45.6	0.933	1.07	2,800
November	1,837	133	40	61.2	1.25	1.40	3,640
December	1,898	148	35	61.2	1.25	1.44	3,760
Calendar year 1946	53,729	806	17	147	3.01	40.86	106,600
January	1,157	40	27	37.3	.763	.88	2,290
February	929	44	27	33.2	.679	.71	1,840
March	1,649	95	30	53.2	1.09	1.25	3,270
April	5,302	537	62	177	3.62	4.03	10,520
May	24,842	1,310	502	801	16.4	18.89	49,270
June	15,662	862	179	522	10.7	11.91	31,070
July	3,971	263	50	128	2.62	3.02	7,880
August	919	49	16	29.6	.605	.70	1,820
September	598	33	15	19.9	.407	.45	1,190
Water year 1946-47	60,177	1,310	15	165	3.37	45.75	119,400

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.- No gage-height record Dec. 20-27, Jan. 1-28; discharge computed on basis of weather records and records for Johnson Creek near Yellowpine and Lake Fork Payette River below Lake Irrigation District Canal.

Lake Fork Reservoir near McCall, Idaho

Location.- Staff gage and graduations on concrete gate-control structure of dam on Lake Fork Payette River, lat. 44°54', long. 116°03', in NW¼NW¼ sec. 13, T. 18 N., R. 3 E., 3 miles east of McCall. Datum of gage is at mean sea level (levels by Lake Irrigation District).

Records available.- April 1926 to September 1947.

Extremes.- Maximum contents observed during year, 19,300 acre-feet June 29 (elevation, 5,118.48 feet); probably no storage at times during fall and winter.
1926-47: Maximum contents observed, 19,740 acre-feet June 19, 1941 (elevation, 5,118.75 feet); probably no storage above elevation 5,101.0 feet during fall and winter of most years.

Remarks.- Reservoir is formed by earth- and rock-fill dam completed in 1926. Capacity, 16,940 acre-feet between elevations 5,101.0 feet (lower limit of capacity table, 4.0 feet above gate sill of outlet) and 5,117.0 feet (top of flashboards, 5.0 feet above spillway crest). Dead storage unknown. Water is used for irrigation of about 6,800 acres of land in vicinity of Norwood. Figures given herein represent contents above 5,101.0 feet. There is some usable storage below elevation 5,101.0 feet, but natural flow passing through reservoir when outlet gates are operating prevents withdrawal of storage to elevation of sill of gates. Gage read once daily. Time of reading variable. Storage figures from gage heights as observed.

Cooperation.- Elevation record and capacity table furnished by Lake Irrigation District.

Contents, in acre-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	18,200	11,600	3,518
2									-	18,520	11,220	3,372
3									-	18,650	10,860	3,226
4									-	18,720	10,530	3,088
5									-	18,680	10,070	2,919
6									-	18,670	9,810	2,815
7								16,270	-	18,640	9,436	2,722
8									-	18,590	9,108	2,644
9									-	18,520	8,838	2,588
10									18,130	18,360	8,541	2,553
11									-	18,200	8,190	2,539
12			7,147						-	18,060	7,990	2,504
13									-	17,920	7,739	2,455
14									-	17,710	7,525	2,392
15									-	17,520	7,122	2,329
16									-	17,190	6,895	-
17									-	16,910	6,652	-
18									-	16,550	6,395	-
19									-	16,270	6,174	-
20									-	15,930	5,838	-
21									-	15,570	5,606	-
22									-	15,230	5,394	-
23									-	14,860	5,150	-
24									18,170	14,490	4,938	-
25									18,240	14,080	4,758	1,989
26									18,440	13,770	4,547	-
27									18,770	13,340	4,359	-
28	6,769								19,090	13,040	4,182	-
29									19,300	12,640	4,024	-
30									18,850	12,270	3,801	-
31									-	11,940	3,680	-

Monthly elevation and contents, water year October 1946 to September 1947

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
June 30	5,118.20	18,850	-
July 31	5,113.75	11,940	-6,910
Aug. 31	5,107.07	3,680	-8,260

Lake Fork Payette River below Lake Irrigation District Canal, near McCall, Idaho

Location.- Water-stage recorder, lat. 44°54', long. 116°03', in SW¼ sec. 13, T. 18 N., R. 3 E., 300 feet downstream from diversion dam for Lake Irrigation District Canal, half a mile downstream from Lake Fork Reservoir, and 3 miles southeast of McCall.

Records available.- October 1940 to September 1947.

Extremes.- Maximum discharge during year, 1,520 second-feet May 9 (gage height, 6.39 feet); minimum, 11 second-feet (regulated) Sept. 11 (gage height, 2.36 feet).
1940-47: Maximum discharge, that of May 9, 1947; minimum, 0.4 second-feet (regulated) Mar. 27, 28, 1944; minimum gage height, 1.76 feet Mar. 28, 1944.

Remarks.- Records good except those for Sept. 8-30, which are fair. Flow regulated by Lake Fork Reservoir (see preceding page). Lake Irrigation District Canal diverts above station.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

2.4	12	3.1	78	5.0	690
2.5	16	3.3	110	5.6	1,000
2.6	22	3.6	170	6.4	1,460
2.7	30	4.0	276		
2.9	51	4.4	418		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	32	41	142	a48	48	96	24	690	49	81	55
2	32	31	44	140	a47	48	98	27	795	39	82	49
3	32	31	135	136	a46	48	100	214	730	50	81	48
4	33	31	267	130	a45	48	100	700	680	67	80	47
5	31	32	267	126	a44	47	100	1,070	476	72	78	43
6	31	32	264	119	*43	b44	100	1,090	422	72	80	40
7	31	32	259	114	b42	44	100	1,150	353	70	82	41
8	31	31	256	108	b41	*44	98	1,300	357	71	80	37
9	31	31	253	103	b41	44	98	1,420	621	74	74	31
10	30	31	247	98	b40	46	96	1,220	680	87	72	a15
11	30	32	247	95	40	46	96	945	579	72	72	12
12	30	31	*247	92	41	47	96	795	395	67	71	12
13	30	33	244	87	42	44	96	740	328	75	71	12
14	30	32	244	84	43	43	100	680	239	86	65	12
15	30	33	244	81	43	43	108	640	234	86	63	13
16	30	32	242	78	44	43	119	645	305	81	61	16
17	30	33	234	74	44	44	130	665	538	80	63	17
18	30	37	228	70	44	49	138	675	575	78	63	17
19	30	43	225	68	44	52	81	635	542	84	61	18
20	30	43	223	65	44	56	21	602	498	87	63	18
21	32	41	217	61	44	61	21	588	406	82	64	19
22	33	37	212	60	43	68	21	476	364	82	65	19
23	33	40	207	59	43	74	21	598	279	84	67	19
24	33	39	202	58	49	78	21	529	215	84	65	19
25	33	38	194	56	52	81	21	570	177	88	63	19
26	33	37	180	55	52	81	21	621	146	90	61	19
27	33	38	175	54	51	82	22	730	172	84	61	19
28	33	42	163	b52	b49	84	23	765	184	81	60	19
29	32	43	152	51	-	86	24	650	159	84	60	a19
30	32	42	148	a50	-	90	24	552	92	81	59	a19
31	32	-	146	a49	-	95	-	561	-	78	59	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	972	33	30	31.4	1,930
November	1,060	43	31	35.3	2,100
December	6,407	267	41	207	12,710
Calendar year 1946	51,030	852	10	140	101,200
January	2,615	142	49	84.4	5,190
February	1,249	52	40	44.6	2,480
March	1,808	95	43	58.3	3,590
April	2,190	138	21	73.0	4,340
May	21,877	1,420	24	706	43,390
June	12,231	795	92	408	24,260
July	2,365	90	39	76.3	4,690
August	2,127	82	59	68.6	4,220
September	743	55	12	24.8	1,470
Water year 1946-47	55,644	1,420	12	152	110,400

* Winter discharge measurement made on this day.
a No gage-height record; discharge interpolated, or computed on basis of range in stage, weather records, and records for station above Jumbo Creek, Johnson Creek at Yellowpine, and Lake Irrigation District Canal.
b Stage-discharge relation affected by ice.

Lake Irrigation District Canal near McCall, Idaho

Location.- Staff gage, lat. 44°54', long. 116°03', in SW¼ sec. 13, T. 18 N., R. 3 E., 600 feet downstream from head of canal, half a mile south of Lake Fork Reservoir, and 3 miles east of McCall. Prior to May 1947, staff gage at same site at different datum.
Records available.- May 1926 to September 1947.
Extremes.- Maximum discharge observed during year, 176 second-feet June 7, 8 (gage height, 3.8 feet); no flow for long periods.
1926-47: Maximum discharge observed that of June 7, 8, 1947; no flow or small amount of leakage through head gate during nonirrigation seasons.
Remarks.- Records good except those for periods of no gage-height record, which are poor. Staff gage read once or twice daily. No diversion between head and station. Canal diverts from right bank of Lake Fork Payette River in SW¼ sec. 13, T. 18 N., R. 3 E., for irrigation of 6,800 acres of land near McCall and Norwood, in the Lake Irrigation District project.
Cooperation.- Gage readings furnished by Lake Irrigation District.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	99	156	141	42
2								0	0	165	139	42
3								0	0	168	138	42
4									0	169	137	44
5								a2	104	167	136	48
6									158	168	133	49
7								2.0	176	169	123	49
8									176	164	115	44
9									125	162	112	39
10									121	166	101	33
11									122	164	94	24
12									95	162	89	30
13									133	161	88	33
14									149	165	89	32
15								a2	149	168	91	32
16									146	171	91	
17									143	172	91	
18									141	173	90	
19									125	171	88	a30
20									125	170	85	
21									137	170	82	
22								68	143	171	78	
23								102	147	171	73	a5
24								109	145	168	63	
25								109	126	165	56	5.4
26								125	133	160	53	
27								125	141	151	50	
28								125	145	149	49	a5
29								125	146	152	48	
30								141	149	147	44	
31								141	-	142	42	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year	-	-	-	-	-
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	1,206	141	0	38.9	2,390
June	3,699	176	0	123	7,340
July	5,077	173	142	164	10,070
August	2,809	141	42	90.6	5,570
September	808.4	49	-	26.9	1,600
Water year 1946-47	13,599.4	176	0	37.3	26,970

a No gage-height record; discharge interpolated, or computed on basis of inflow-outflow study of Lake Fork Reservoir, record of gate changes, and records for Lake Fork Payette River below Lake Irrigation District Canal.

Cruzen Canal at Lake Fork, Idaho

Location.- Staff gage, lat. 44°50', long. 116°04', in NE¼ sec. 3, T. 17 N., R. 3 E., 500 feet below head gates and 1 mile northeast of town of Lake Fork.
Records available.- August 1938 to September 1947 (fragmentary).
Remarks.- Records good. Staff gage read once or twice daily. Flow regulated at head gate of canal. No diversion between head and station. Canal diverts water from right bank of Lake Fork Payette River in NE¼ sec. 3, T. 17 N., R. 3E., for irrigation. Discharge measurements of 2.96 and 9.82 second-feet made on Oct. 28, May 8, respectively.
Cooperation.- Gage readings furnished by Lake Irrigation District.

Monthly discharge, 1946-47

Month	Maximum	Minimum	Mean	Runoff in acre-feet
May 22-31	56	16	34.1	676
June	56	15	38.5	2,290
July	53	33	50.3	3,090
August	53	46	48.8	3,000
September	42	12	20.5	1,220
The period	-	-	-	10,280

Weiser River at Tamarack, Idaho

Location.- Staff gage, lat. 44°57', long. 116°23', in sec. 30, T. 19 N., R. 1 E., 0.4 mile southeast of Tamarack.

Drainage area.- 36.5 square miles.

Records available.- September 1936 to September 1947.

Average discharge.- 11 years, 40.2 second-feet.

Extremes.- Maximum discharge observed during year, 346 second-feet Dec. 14 (gage height, 4.00 feet); minimum observed, 1.0 second-feet Sept. 2 (gage height, 0.55 foot).
1936-47: Maximum discharge observed, 775 second-feet Mar. 27, 1940 (gage height, 6.00 feet); minimum observed, that of Sept. 2, 1947.

Remarks.- Records fair except those for periods of backwater from beaver dams, doubtful or no gage-height record, and periods when gage readings are not representative of mean for the day, which are poor. Gage read once daily. No diversion above station. Diurnal fluctuation caused by mill pond at Tamarack. Small flow from Boulder Creek in Salmon River Basin enters Weiser River above station through transmountain diversion during late irrigation season.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.5	a9.0	137	a48	17	39	173	103	a16	13	6.5	a5.8
2	a6.0	7.4	a90	40	17	39	170	99	15	a12	a5.5	3.4
3	5.5	8.0	a65	a30	14	a37	160	103	d14	11	5 5	6.0
4	5.5	a7.5	a65	d33	13	35	140	98	a15	11	5.5	a6.0
5	5.5	7.4	128	d35	13	33	135	88	d14	11	6.0	a6.0
6	a5.5	a7.4	a110	a37	13	33	129	78	d13	10	a6.5	6.8
7	a5.5	7.4	104	37	13	33	107	71	d12	a9.0	6.8	8.3
8	e5.5	a7.4	a90	d30	13	34	101	170	a18	c8.0	5.5	a8.5
9	a5.5	7.4	85	28	13	34	101	71	a26	a7.0	6.8	a8.3
10	e5.5	7.4	a70	a26	a13	34	97	71	a23	c6 5	6.0	8.3
11	a5.5	7.4	102	24	13	a35	93	64	22	a6.5	a6.0	a7.5
12	e5.5	a7.4	146	22	15	33	d90	56	19	6.5	6.0	a6.5
13	a5.5	a7.4	276	a22	a17	32	109	50	19	6.8	6.0	6.0
14	a5.5	7 4	346	22	19	51	113	49	19	6.5	5.5	6.0
15	e5.5	a7.7	338	21	28	78	a125	37	19	a6.0	6.5	a6.5
16	a5.5	8.0	296	a21	30	84	131	35	18	6.0	a6.8	7.1
17	a5.5	8.0	144	21	36	101	162	d30	19	6.0	7.1	a7.5
18	e5.5	44	a130	21	a40	120	a160	d25	19	c6.0	a6.5	8.3
19	e5.5	a140	125	22	44	162	153	22	19	c6.0	6.0	a7.5
20	e5.5	d120	a95	a21	54	170	146	22	a18	a6.0	6.2	6.8
21	a8.0	94	78	21	52	186	132	22	16	c6.0	7.1	6.8
22	e11	64	d75	21	52	200	119	22	15	c6.0	a6.5	a6.5
23	15	63	a65	21	50	186	114	21	15	a6.0	6.2	6.2
24	e15	76	d60	20	a50	178	112	20	a15	c6.0	a6.5	a6.0
25	e15	d65	a60	19	50	143	104	19	15	c5.0	a6.5	a6.0
26	14	a60	d60	19	47	133	102	19	a15	c5.0	7.1	6.2
27	e12	a100	d60	a18	44	a130	106	18	17	c5.0	a6.0	6.2
28	a10	a130	d55	18	41	129	113	d16	15	a5.0	5.5	6.8
29	9.2	151	d50	18	-	124	a113	d14	13	e5.0	a5.5	a6.5
30	a9.0	144	48	17	-	165	112	a13	13	a5.0	5.5	a6.5
31	8.6	-	46	17	-	180	-	15	-	a5.0	5.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	238.3	15	5.5	7.69	473
November	1,380.6	151	7.4	46.0	2,740
December	3,599	346	46	116	7,140
Calendar year 1946	21,939.0	580	4.5	60.1	43,520
January	770	48	17	24.8	1,530
February	821	54	13	29.3	1,630
March	2,971	200	32	95.8	5,890
April	3,723	173	90	124	7,380
May	1,441	103	13	46.5	2,860
June	506	26	12	16.9	1,000
July	219.8	13	5.0	7.09	436
August	191.4	7.1	5.5	6.17	380
September	200.8	8.5	3.4	6.69	398
Water year 1946-47	16,061.9	346	3.4	44.0	31,860

a No gage-height record; discharge interpolated, or computed on basis of weather records and records for other stations on Weiser River.
c Backwater from beaver dams; discharge computed as explained in footnote a.
d Doubtful gage-height record; discharge computed as explained in footnote a.
e Gage reading not representative of mean for the day because of diurnal fluctuation; discharge computed as explained in footnote a.

Weiser River at Starkey, Idaho

Location.- Water-stage recorder, lat. 44°51', long. 116°27', in sec. 34, T. 18 N., R. 1 W., at Starkey Hot Springs, 200 feet upstream from Warm Springs Creek and 10 miles north of Council.

Drainage area.- 106 square miles.

Records available.- August to September 1920, March 1939 to September 1947.

Extremes.- Maximum discharge during year, 771 second-feet Nov. 19 (gage height, 4.28 feet); minimum, 13 second-feet Aug. 27, Sept. 3; minimum gage height, 1.39 feet Sept. 3.

1920, 1939-47: Maximum discharge, 2,450 second-feet Mar. 27, 1940 (gage height, 6.00 feet), from rating curve extended above 700 second-feet by logarithmic plotting; minimum, 8.0 second-feet Aug. 31, 1939, Aug. 23, 1940; minimum gage height, 1.04 feet Aug. 31, 1939.

Remarks.- Records excellent except those for periods of no gage-height record, which are fair. Diurnal fluctuation at low flow caused by mill pond at Tamarack. Several small diversions from river and tributaries above station.

Rating tables, water year 1946-47 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 17

1.7	22	2.0	43
1.8	28	2.1	53
1.9	35	2.3	79

Note.- Same as following table above 2.3 feet.

Apr. 18 to Sept. 30

1.4	13	1.9	38	3.0	238
1.5	16	2.1	55	3.4	378
1.6	20	2.3	79	3.8	541
1.7	26	2.5	113	4.2	729
1.8	32	2.7	155		

Discharge, in second-foot, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	35	287	a82	48	104	386	367	115	51	19	16
2	32	25	232	a68	50	108	378	394	111	47	19	15
3	26	26	194	a60	44	99	359	441	100	43	23	14
4	23	32	183	a65	42	100	333	425	106	42	16	17
5	20	32	197	87	43	90	301	386	99	39	18	16
6	20	32	273	100	41	82	277	355	99	37	17	16
7	31	34	267	102	41	85	251	348	93	37	17	24
8	26	32	241	79	41	84	235	326	137	37	17	24
9	31	29	211	79	40	84	226	378	186	34	16	22
10	29	32	186	84	43	102	214	322	162	33	18	21
11	27	30	214	79	43	121	205	273	151	28	17	20
12	28	28	308	72	85	115	200	260	131	28	17	19
13	26	26	478	68	144	111	214	270	121	28	17	19
14	27	31	674	65	125	119	264	238	111	23	17	18
15	26	28	704	58	117	140	340	211	104	24	16	18
16	26	25	541	65	123	183	390	197	109	24	16	20
17	27	31	394	54	131	254	409	186	113	23	16	22
18	27	94	a290	53	137	329	409	175	108	22	16	22
19	28	519	a260	63	133	398	394	168	97	22	16	22
20	30	378	214	60	125	429	398	160	90	24	17	21
21	47	223	200	59	125	433	370	151	82	24	17	20
22	59	165	178	55	119	457	344	146	76	24	17	20
23	60	241	153	58	123	445	326	137	81	24	17	20
24	45	273	137	59	137	401	304	135	81	23	18	19
25	46	220	127	58	137	351	297	135	81	21	15	20
26	48	191	123	55	131	333	308	135	82	21	16	21
27	40	241	123	46	125	308	336	137	81	22	15	20
28	35	378	89	36	109	301	363	123	62	21	15	20
29	34	433	85	52	-	311	398	97	57	18	15	20
30	34	363	a82	47	-	378	398	95	53	18	16	20
31	32	-	a78	41	-	401	-	109	-	19	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,013	60	20	32.7	2,010
November	4,227	519	25	141	8,380
December	7,723	704	78	249	15,320
Calendar year 1946	60,578	1,290	13	166	120,200
January	2,009	102	36	64.8	3,980
February	2,602	144	40	92.9	5,160
March	7,256	457	82	234	14,390
April	9,627	409	200	321	19,090
May	7,280	441	95	235	14,440
June	3,079	186	53	103	6,110
July	881	51	18	28.4	1,750
August	523	23	15	16.9	1,040
September	586	24	14	19.5	1,160
Water year 1946-47	46,806	704	14	128	92,830

a No gage-height record; discharge computed on basis of weather records and records for other stations on Weiser River.

Weiser River near Council, Idaho

Location.- Water-stage recorder, lat. 44°41', long. 116°29', in sec. 29, T. 16 N., R. 1 W., 0.7 mile downstream from Cottonwood Creek, 2 miles upstream from Middle Fork, and 3¼ miles southwest of Council.

Drainage area.- 390 square miles.

Records available.- April 1937 to September 1947.

Average discharge.- 10 years, 406 second-feet.

Extremes.- Maximum discharge during year, 2,050 second-feet Feb. 13 (gage height, 5.77 feet); minimum, 38 second-feet July 14 (gage height, 0.71 foot
1937-47: Maximum discharge, 6,700 second-feet Mar. 16 or 17, 1938 (gage height, 7.6 feet, from floodmark, site and datum then in use), from rating curve extended above 3,500 second-feet; minimum, 22 second-feet June 29, 1940.

Remarks.- Records good except those for periods of ice effect, which are fair. Flow partly regulated by Lost Valley Reservoir (see p. 193) and other reservoirs. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	88	751	225	136	341	886	910	344	162	70	68
2	64	72	611	182	149	350	876	1,010	341	147	72	65
3	62	62	518	147	157	347	836	1,150	338	131	75	65
4	57	69	503	157	145	341	778	1,180	357	121	76	69
5	56	72	639	176	*151	309	720	1,130	332	116	71	65
6	55	75	854	214	147	279	664	1,100	324	106	70	69
7	56	76	733	211	145	282	603	1,080	306	95	70	81
8	57	72	707	220	147	301	571	1,080	451	76	71	91
9	58	69	635	192	151	338	552	1,220	611	61	72	88
10	57	72	*544	186	142	868	518	1,040	518	55	71	89
11	56	71	607	184	138	742	495	863	459	48	72	86
12	56	68	768	176	576	615	477	845	402	43	75	88
13	56	63	1,050	b165	1,490	552	499	858	376	40	75	86
14	56	70	1,450	b155	814	544	587	778	344	43	75	84
15	55	66	1,530	b145	773	575	742	702	315	66	75	64
16	55	58	1,260	b140	800	660	840	599	324	78	73	51
17	57	69	925	b140	814	809	895	552	382	78	72	56
18	56	162	782	b140	737	945	915	518	318	72	72	55
19	57	1,180	711	b155	631	1,040	905	503	290	71	71	57
20	60	981	599	168	556	1,070	915	473	272	75	70	56
21	84	484	540	158	525	1,060	863	451	264	85	71	55
22	112	386	469	157	495	1,120	818	423	261	80	70	51
23	136	858	412	151	503	1,140	782	386	254	84	73	50
24	102	764	369	155	529	1,010	729	369	239	85	72	49
25	96	571	347	157	506	900	707	366	223	85	71	48
26	100	652	335	188	462	840	720	366	211	85	70	50
27	93	1,290	369	166	434	773	768	369	227	84	66	51
28	84	1,450	374	b125	379	742	840	335	214	86	65	51
29	76	1,280	261	142	-	746	915	287	196	88	65	51
30	78	960	223	136	-	872	940	277	182	84	64	51
31	77	-	218	b125	-	940	-	321	-	80	66	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,174	136	50	70.1	4,310
November	12,110	1,450	58	404	24,020
December	19,992	1,530	216	645	39,650
Calendar year 1946	184,439	3,010	37	505	365,800
January	5,138	225	125	166	10,190
February	12,632	1,490	136	451	25,060
March	21,451	1,140	279	692	42,550
April	22,356	940	477	745	44,340
May	21,541	1,220	277	695	42,730
June	9,675	611	182	322	19,190
July	2,610	162	40	84.2	5,180
August	2,201	76	64	71.0	4,370
September	1,940	91	48	64.7	3,850
Water year 1946-47	133,820	1,530	40	367	265,400

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

Weiser River near Cambridge, Idaho

Location.- Water-stage recorder, lat. 44°35', long. 116°38', in NE¼ sec. 1, T. 14 N., R. 3 W., 2¼ miles northeast of Cambridge and 2½ miles upstream from Rush Creek.

Drainage area.- 605 square miles.

Records available.- March 1939 to September 1947.

Extremes.- Maximum discharge during year, 3,360 second-feet Nov. 27; maximum gage height, 7.18 feet Feb. 12 (ice jam); minimum discharge, 43 second-feet (regulated) Aug. 1 (gage height, 0.87 foot); minimum daily, 61 second-feet Sept. 5, 6.
1939-47: Maximum discharge, 6,670 second-feet Mar. 31, 1940 (gage height, 8.30 feet); minimum, 23 second-feet (regulated) Oct. 1, 1943 (gage height, 0.78 foot); minimum daily, 27 second-feet Sept. 2, 3, 1940.

Remarks.- Records good except those for periods of ice effect, or no gage-height record, which are fair. Flow partly regulated by Lost Valley Reservoir (see p. 193) and other reservoirs. Diversions above station for irrigation.

Rating table, water year 1946-47, except period of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 1 to Sept. 30)

1.0	61	2.1	252	4.0	1,170
1.2	82	2.5	372	5.0	1,910
1.5	126	2.9	530	6.0	2,820
1.8	183	3.3	736		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	156	1,180	333	187	508	1,180	a1,500	813	247	76	65
2	87	118	969	279	213	530	1,170	a1,700	813	225	76	64
3	96	101	825	a210	225	526	1,140	a2,100	789	206	75	63
4	88	106	789	a220	204	568	1,060	a2,200	777	191	76	63
5	85	112	927	a245	202	490	982	h2,110	719	181	76	61
6	83	116	1,370	288	*206	[illegible]	915	1,960	714	161	73	61
7	83	123	1,130	a285	200	437	843	2,050	664	144	73	66
8	87	116	1,080	a300	202	453	813	2,070	939	130	75	85
9	86	108	1,000	a270	202	521	795	2,300	1,340	120	75	81
10	88	112	867	a265	213	1,600	754	1,930	1,130	112	72	81
11	88	113	1,230	a260	216	1,320	a700	1,620	1,010	102	71	88
12	87	107	1,780	a250	b650	1,050	a680	1,590	885	94	72	86
13	88	101	2,020	240	b2,600	915	a750	1,690	813	88	73	85
14	87	108	2,750	230	1,640	861	h867	1,500	748	86	71	86
15	87	108	2,430	213	1,320	879	a1,150	1,400	675	92	68	83
16	83	98	1,880	194	1,310	957	a1,280	1,300	669	110	66	66
17	85	104	1,390	198	1,330	1,110	a1,360	1,230	807	113	65	75
18	86	208	1,170	191	1,190	1,270	a1,410	1,150	680	108	65	74
19	83	1,630	1,090	220	1,010	1,370	a1,380	1,120	602	107	65	75
20	90	1,450	921	237	867	1,420	a1,440	1,100	554	104	66	73
21	124	766	837	232	813	1,410	a1,360	1,070	490	110	66	70
22	185	602	736	216	760	1,460	h1,320	1,030	437	104	65	70
23	260	1,300	643	213	748	1,540	a1,300	945	396	100	69	68
24	169	1,250	582	218	783	1,350	a1,150	915	369	101	70	66
25	155	885	539	230	742	1,220	a1,100	915	339	101	68	63
26	159	1,100	530	242	675	1,140	a1,100	915	320	100	67	65
27	146	2,430	617	268	643	1,060	a1,250	915	362	95	65	67
28	130	2,720	437	194	549	1,010	h1,460	867	324	91	63	67
29	116	2,190	369	216	-	1,010	a1,550	736	302	92	62	68
30	118	1,550	346	213	-	1,140	a1,600	680	276	85	62	65
31	115	-	308	185	-	1,260	-	789	-	85	63	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	3,396	260	72	110	6,740
November	19,962	2,720	98	665	39,590
December	32,739	2,750	308	1,056	64,940
Calendar year 1946	297,436	4,050	72	815	590,000
January	7,355	333	185	237	14,590
February	19,900	2,600	187	711	39,470
March	30,803	1,600	418	994	61,100
April	33,859	1,600	680	1,129	67,160
May	43,397	2,300	680	1,400	86,080
June	19,756	1,340	276	659	39,190
July	3,785	247	85	122	7,510
August	2,149	76	62	69.3	4,260
September	2,157	88	61	71.9	4,280
Water year 1946-47	219,258	2,750	61	601	434,900

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for other Weiser River stations.
b Stage-discharge relation affected by ice.
h Computed from staff-gage reading.

Weiser River above Crane Creek, near Weiser, Idaho

Location.- Water-stage recorder, lat. 44°18', long. 116°48', in sec. 10, T. 11 N., R. 4 W., 1 mile upstream from Crane Creek and 9 miles northeast of Weiser.

Drainage area.- 1,160 square miles.

Records available.- July 1920 to September 1947.

Average discharge.- 26 years (1921-47), 852 second-feet.

Extremes.- Maximum discharge during year, 5,310 second-feet Nov. 28; maximum gage height, 8.91 feet Feb. 12 (ice jam); minimum, 45 second-feet Aug. 8 (gage height, 0.95 foot).
1920-47: Maximum discharge, 16,900 second-feet Mar. 19, 1932 (gage height, 10.8 feet, from floodmarks), from rating curve extended above 9,000 second-feet by logarithmic plotting; minimum, 5 second-feet (estimated) Aug. 11 to Sept. 10, 1931.

Remarks.- Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow partly regulated by Lost Valley Reservoir (see p. 193) and other reservoirs. Diversions above station for irrigation.

Rating table, water year 1946-47, except period of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 14 to Sept. 1)

0.9	48	1.6	260	3.5	1,770
1.0	66	1.9	407	4.0	2,430
1.1	88	2.2	588	4.8	3,690
1.2	115	2.6	880	5.5	4,910
1.4	181	3.0	1,230		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	196	1,820	549	280	840	1,510	1,980	1,340	396	73	64
2	115	208	1,460	463	310	848	1,450	2,210	1,380	354	68	68
3	130	181	1,220	400	330	856	1,450	2,820	1,320	320	59	73
4	150	164	1,120	370	300	1,050	1,350	3,100	1,360	a280	59	73
5	143	174	1,190	380	300	920	1,270	3,010	1,260	a250	57	77
6	134	181	2,160	430	310	770	1,180	2,980	1,230	a225	55	75
7	134	189	1,730	430	300	740	1,110	3,010	1,160	a200	57	79
8	140	196	1,520	440	300	762	1,050	3,170	1,370	a175	48	96
9	143	185	1,540	420	300	800	1,080	3,360	2,360	a150	53	130
10	140	181	1,280	400	310	3,010	1,010	3,120	2,220	127	59	134
11	140	189	1,390	380	320	2,520	952	2,490	1,890	121	61	137
12	143	185	2,860	370	1,100	1,820	912	2,210	1,570	112	61	137
13	146	178	*3,250	360	4,500	1,530	920	2,580	1,410	104	62	127
14	143	170	4,000	340	3,000	1,380	1,030	2,330	1,290	96	68	121
15	143	185	3,830	320	2,740	1,330	1,240	2,140	1,160	91	62	121
16	140	178	2,930	300	2,620	1,350	1,450	1,980	1,100	88	61	121
17	137	164	2,080	300	2,320	1,480	1,560	1,880	1,270	102	61	112
18	137	192	1,670	290	2,300	1,650	1,660	1,770	1,140	102	62	118
19	140	876	1,520	330	*1,820	1,760	1,650	1,710	1,000	104	64	121
20	146	2,320	1,320	350	1,450	1,820	1,700	1,690	928	96	66	121
21	160	1,140	1,170	350	1,330	1,820	1,660	1,650	848	93	77	118
22	215	848	1,080	320	1,270	1,820	1,580	1,610	785	99	64	115
23	344	1,350	960	310	1,210	2,060	1,560	1,470	676	99	77	112
24	315	1,960	880	320	1,240	1,840	1,470	1,410	608	93	86	102
25	252	1,240	816	340	1,170	1,620	1,450	1,400	562	96	91	99
26	240	1,290	800	360	1,080	1,510	1,500	1,420	523	91	88	99
27	252	3,590	896	400	1,010	1,380	1,600	1,420	542	96	81	93
28	223	4,780	832	300	904	1,320	1,770	1,380	523	91	73	93
29	204	3,840	622	320	-	1,300	1,960	1,210	487	79	73	93
30	196	2,490	601	310	-	1,380	2,050	1,120	446	81	70	99
31	196	-	493	270	-	1,580	-	1,200	-	81	62	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,353	344	112	173	10,620
November	29,020	4,780	164	967	57,560
December	49,040	4,000	493	1,582	97,270
Calendar year 1946	460,125	8,290	64	1,261	912,700
January	11,222	549	270	362	22,260
February	34,424	4,500	280	1,229	68,280
March	44,866	3,010	740	1,447	88,990
April	42,134	2,050	912	1,404	83,570
May	64,830	3,360	1,120	2,091	128,600
June	33,758	2,360	446	1,125	66,960
July	4,492	396	79	145	8,910
August	2,058	91	48	66.4	4,080
September	3,128	137	64	104	6,200
Water year 1946-47	324,325	4,780	48	889	643,300

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for station near Cambridge.
Note.- Stage-discharge relation affected by ice Jan. 3 to Feb. 14 (no gage-height record Jan. 13 to Feb. 9; discharge computed on basis of weather records and records for station near Cambridge).

West Fork Weiser River near Fruitvale, Idaho

Location.- Staff gage, lat. 44°50', long. 116°28', in NW¼ sec. 9, T. 17 N., R. 1 W., at bridge, 1¼ miles northwest of Fruitvale and 1½ miles upstream from mouth.
Drainage area.- 78 square miles.
Records available.- October 1910 to January 1913, October 1919 to September 1925, April 1937 to September 1947.
Average discharge.- 15 years (1911-12, 1919-22, 1924-25, 1937-47), 91.7 second-feet.
Extremes.- Maximum daily discharge during year, 337 second-feet May 3, 4; maximum gage height, 3.89 feet Feb. 13 (ice jam); minimum discharge observed, 3.0 second-feet Oct. 1, 5, 6, 17 (gage height, 1.15 feet).
1910-13, 1919-25, 1937-47: Maximum discharge observed, 1,170 second-feet Mar. 31, 1940; minimum observed, 0.5 second-foot July 23-27, 1911.
Remarks.- Records fair except those for periods of ice effect or no gage-height record, which are poor. Gage usually read once daily. Several diversions above and below station for irrigation. Flow regulated by Lost Valley Reservoir (see following page)

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	a12	80	b51	b24	82	227	270	14	20	57	50
2	e5.0	a15	65	b40	b25	71	a220	300	16	19	59	51
3	3.4	15	57	b32	b25	a72	217	337	22	16	57	51
4	a3.2	15	a70	b33	b23	71	193	a337	26	14	57	a51
5	3.0	13	82	b33	*b24	65	180	331	a27	14	54	49
6	3.0	9.0	80	b40	b23	68	163	331	28	14	54	a52
7	4.9	9.0	86	a40	b23	57	151	331	28	14	54	54
8	3.8	11	86	b44	b23	68	148	318	41	14	57	51
9	3.8	a10	71	b35	b24	a80	133	a290	65	12	54	51
10	3.8	9.0	*65	b32	b22	116	130	270	58	a13	54	51
11	3.8	9.8	74	b32	b22	116	123	217	57	14	54	51
12	3.8	a10	94	b32	b110	110	126	212	54	12	a54	51
13	3.8	11	155	b31	b300	100	133	188	51	6.3	57	49
14	3.8	9.0	222	b29	133	100	184	151	145	22	57	a23
15	3.8	9.0	248	a28	126	116	227	144	43	57	54	10
16	3.4	8.6	242	b27	133	135	a270	54	43	54	54	10
17	3.0	a12	197	b28	148	163	288	43	43	51	54	10
18	3.8	23	175	b28	133	217	288	41	51	a46	54	10
19	4.0	a37	155	b29	116	242	300	43	49	43	57	10
20	4.9	34	137	b30	107	242	300	41	41	57	57	10
21	a6.2	24	120	b28	104	259	291	22	a38	57	a56	10
22	7.4	24	107	b28	94	300	270	22	32	54	54	9.6
23	8.2	75	a92	b24	110	270	253	26	30	57	57	9.0
24	7.4	50	a82	b24	110	245	232	26	30	57	54	9.0
25	6.7	a47	74	b27	110	217	237	26	30	62	54	9.6
26	11	44	71	b31	98	207	232	19	a30	65	53	10
27	8.6	108	68	b28	86	193	a240	20	30	62	51	10
28	7.4	150	e65	b26	86	180	259	14	22	57	54	10
29	7.4	137	65	b25	-	193	288	14	22	57	51	10
30	9.0	96	b52	a24	-	a210	294	14	20	62	50	a10
31	8.2	-	a50	b24	-	217	-	14	-	61	51	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	162.5	11	3.0	5.24	322
November	1,034.4	150	8.6	34.5	2,050
December	3,287	248	50	106	6,520
Calendar year 1946	40,285.0	836	2.2	110	79,900
January	963	51	24	31.1	1,910
February	2,362	300	22	84.4	4,680
March	4,780	300	57	154	9,480
April	6,597	300	123	220	13,080
May	4,466	337	14	144	8,860
June	1,086	65	14	36.2	2,150
July	1,163.3	85	6.3	37.5	2,310
August	1,694	59	50	54.6	3,360
September	842.2	54	9.0	28.1	1,670
Water year 1946-47	28,437.4	337	3.0	77.9	56,390

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Lost Creek near Tamarack and inflow between stations on Weiser River at Starkey and near Council.
b Stage-discharge relation affected by ice.
e Staff-gage readings not representative of mean for day; discharge computed as explained in footnote a.

Lost Valley Reservoir near Tamarack, Idaho

Location.- Staff gage, lat. 44°57'30", long. 116°28', in sec. 28, T. 19 N., R. 1 W., a short distance upstream from outlet gates near left end of dam on Lost Creek, 4 miles west of Tamarack and 16 miles north of Council.
Drainage area.- 29.4 square miles.
Records available.- May to September 1924, May 1926 to September 1947.
Extremes.- Maximum gage height observed during year, 26.40 feet June 11; minimum observed, 17.40 feet Sept. 3.
1924, 1926-47: Maximum gage height observed, 26.90 feet May 14, 1940; no storage at times during several years prior to 1938.
Remarks.- Reservoir is formed by earth dam completed in 1910 and raised 6 feet in 1929. Permanent spillway crest is at gage height 22.96 feet; during 1938 temporary flashboard structure was raised to permit storage to gage height about 26 feet. Water is used for irrigation of lands in Weiser River Basin.
Cooperation.- Several gage readings furnished by Lost Valley Reservoir Co.

Gage height, in feet, of Lost Valley Reservoir near Tamarack, Idaho, water year October 1946 to September 1947

Date	Gage height	Date	Gage height	Date	Gage height
Oct. 23	17.70	May 21	25.10	July 19	25.25
25	17.83	24	25.40	29	23.59
Mar. 14	23.57	June 11	26.40	Aug. 27	18.08
May 1	24.95	12	26.36	Sept. 3	17.40
15	24.50	27	26.22		

Lost Creek near Tamarack, Idaho

Location.- Water-stage recorder, lat. 44°57', long. 116°28', in sec. 28, T. 19 N., R. 1 W., a quarter of a mile downstream from dam of Lost Valley Reservoir, 4 miles west of Tamarack, and 16 miles north of Council.
Drainage area.- 29.4 square miles.
Records available.- January 1910 to August 1914, May 1920 to September 1921, May 1924 to September 1947.
Average discharge.- 17 years (1930-47), 35.4 second-feet.
Extremes (regulated since 1910).- Maximum discharge during year, 222 second-feet May 5, 6 (gage height, 2.70 feet); practically no flow Sept. 14 (gage height, 0.67 foot); minimum daily, 1 second-foot Oct. 1-24.
1910-14, 1920-21, 1924-47: Maximum discharge, about 688 second-feet May 17, 18, 1921 (gage height, 4.29 feet); practically no flow at times when gates in dam were closed.
Remarks.- Records good except those below 10 second-feet and those for periods of no gage-height record, which are fair. No diversion between reservoir and station; practically entire flow diverted below station during irrigation season. Flow regulated by Lost Valley Reservoir (see p. 193).
Cooperation.- Water-stage recorder inspected by Lost Valley Reservoir Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1	4	4				106	174	8	15	68	58
2	1	4	4				106	179	10	14	66	58
3	1	4	4	25			106	190	12	14	66	58
4	1	4	4				102	210	15	13	66	58
5	1	4	5				98	222	16	13	66	58
					15							
6	1	4	5				90	222	18	13	66	56
7	1	4	5			21	84	216	18	12	65	56
8	1	4	6	23			80	210	27	11	65	56
9	1	4	9				74	210	33	10	65	56
10	1	4	14				70	193	34	10	65	56
11	1	4	22				65	168	38	9	65	55
12	1	4	30		20		65	153	34	9	64	54
13	1	4	47	19			68	141	34	25	64	54
14	1	4	78			21	78	128	33	53	64	32
15	1	4	106			20	101	86	32	71	62	5
16	1	4	116			20	120	23	32	66	62	5
17	1	4	109			22	136	22	35	61	61	5
18	1	4	102	16		29	148	25	33	59	61	5
19	1	4	98			39	158	28	32	61	61	5
20	1	4	88		25	52	163	31	31	69	60	5
21	1	4	77			65	163	25	29	69	60	5
22	1	4	68			81	158	12	26	69	60	5
23	1	4	60			93	150	15	26	69	60	5
24	1	4	54			98	143	15	24	69	59	5
25	2	4	49			96	138	10	22	69	59	5
26	4	4	46	15		93	138	13	22	69	59	5
27	4	4	46			88	143	12	18	69	59	5
28	4	4	40			87	153	7	16	69	59	5
29	4	4	38		-	88	165	6	16	69	58	5
30	4	4	35		-	96	174	6	15	69	58	5
31	4	-	34		-	102	-	7	-	68	58	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	50	4	1	1.6	99
November	120	4	4	4.0	238
December	1,403	116	4	45.3	2,780
Calendar year 1946	17,159	350	1	47.0	34,030
January	580	-	-	18.7	1,150
February	585	-	-	20.9	1,160
March	1,463	102	-	47.2	2,900
April	3,543	174	65	118	7,030
May	2,959	222	6	95.5	5,870
June	737	36	8	24.6	1,460
July	1,366	71	9	44.1	2,710
August	1,931	68	58	62.3	3,830
September	845	58	5	28.2	1,680
Water year 1946-47	15,582	222	1	42.7	30,910

Note.- No gage-height record Jan. 1 to Mar. 13; discharge computed on basis of weather records and records for stations on other Weiser River tributaries and nearby streams.

Middle Fork Weiser River near Mesa, Idaho

Location.- Staff gage, lat. 44°39', long. 116°27', in NW¼ sec. 10, T. 15 N., R. 1 W., at old highway bridge, 1½ miles north of Mesa and 2½ miles upstream from mouth.
Drainage area.- 86.5 square miles.
Records available.- August 1919 to November 1921, April 1937 to September 1947. October 1910 to August 1913 at site three-quarters of a mile upstream.
Average discharge.- 10 years (1937-47), 118 second-feet.
Extremes.- Maximum discharge observed during year, 925 second-feet May 9; maximum gage height observed, 3.54 feet Jan. 18 (ice jam); minimum observed, 0.4 second-foot Sept. 3 (gage height, 0.30 foot).
1919-21, 1937-47: Maximum discharge observed, 1,380 second-feet May 1, 1938, from rating curve extended above 1,000 second-feet; no flow at times in 1937, 1939-41.
Remarks.- Records good except those for periods of ice effect and those for Apr. 10-30, which are fair. Gage read twice daily. Mesa Orchards Canal diverts about 6½ miles above station.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1, 4, Apr. 14-29)

Oct. 1 to Apr. 13				Apr. 14 to Sept. 30					
0.8	15	1.6	119	0.4	1.1	1.0	26	2.1	278
.9	21	1.9	191	.5	2.1	1.1	37	2.4	409
1.0	29	2.2	281	.6	4.3	1.2	50	2.8	635
1.1	39	2.5	390	.7	7.7	1.4	82	3.2	925
1.2	51	2.9	580	.8	12	1.6	123		
1.4	81			.9	18	1.8	176		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	25	165	70	40	90	151	434	340	110	1.7	0.8
2	31	26	151	55	55	76	148	e500	290	95	2.0	0.7
3	29	24	109	40	45	75	141	733	278	95	1.7	0.5
4	17	35	109	45	45	76	151	775	260	92	1.9	0.7
5	23	36	139	50	*50	73	148	865	278	77	1.9	0.6
6	23	35	153	55	45	55	139	691	278	59	1.9	0.8
7	23	36	146	55	45	58	111	684	278	58	1.7	1.1
8	20	31	137	50	45	81	137	768	395	52	1.3	1.6
9	20	32	111	50	45	126	139	918	564	44	1.2	2.1
10	21	31	113	50	45	191	137	740	444	41	1.0	3.0
11	20	30	*181	50	54	143	107	609	439	38	1.2	2.5
12	21	28	295	45	194	109	123	514	349	32	1.0	2.3
13	20	33	344	45	315	95	107	705	286	27	1.0	3.6
14	20	34	565	40	153	101	154	570	278	26	1.0	7.7
15	20	32	386	40	155	109	215	520	256	25	1.0	14
16	20	29	268	40	146	113	232	492	274	22	1.0	16
17	19	30	183	40	160	143	237	525	278	21	1.0	20
18	19	132	163	40	148	143	258	531	241	19	1.1	17
19	19	390	175	45	109	146	273	508	234	16	1.0	16
20	20	158	146	45	95	155	304	470	221	16	1.2	17
21	45	103	146	45	95	160	291	454	207	14	1.3	17
22	67	103	111	40	97	178	268	464	176	11	1.3	15
23	68	255	103	40	99	208	262	514	148	11	1.5	15
24	41	165	105	40	94	163	264	476	143	11	1.6	16
25	39	143	105	45	93	*165	296	429	140	8.2	1.6	12
26	57	146	99	50	94	143	335	459	130	7.7	1.6	15
27	35	340	103	50	81	e140	350	449	140	7.0	1.6	16
28	34	351	85	40	64	143	380	362	133	4.3	1.5	14
29	32	265	70	40	-	132	466	306	116	3.6	1.5	15
30	32	163	70	40	-	153	459	294	114	2.8	1.2	14
31	26	-	70	35	-	158	-	336	-	2.0	1.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	895	68	14	28.9	1,780
November	3,241	390	24	108	6,430
December	5,106	565	70	165	10,130
Calendar year 1946	49,819.2	696	.2	136	98,820
January	1,415	70	35	45.6	2,810
February	2,705	315	40	96.6	5,370
March	3,901	208	55	126	7,740
April	6,783	466	107	226	13,450
May	17,095	918	294	551	33,910
June	7,708	564	114	257	15,290
July	1,047.6	110	2.0	33.8	2,080
August	42.5	2.0	1.0	1.37	84
September	277.0	20	.5	9.23	549
Water year 1946-47	50,216.1	918	.5	138	99,620

* Winter discharge measurement made on this day.
e Gage readings not representative of mean for day; discharge computed on basis of weather records, inflow to Weiser River between stations near Council and near Cambridge, and records for nearby streams.
Note.- Stage-discharge relation affected by ice Dec. 28 to Feb. 10.

Mesa Orchards Canal near Mesa, Idaho

Location.- Staff gage, lat. 44°38', long. 116°25', in sec. 14, T. 15 N., R. 1 W., 1,500 feet upstream from end of flume, 1½ miles northeast of Mesa, and 3 miles downstream from head gates.

Records available.- 1924, 1928-47 (irrigation seasons only except 1947).

Extremes.- Maximum discharge observed during year, 39 second-feet July 18-23, 27, 30; maximum gage height observed, 2.71 feet July 18, 21-23; no flow for long periods during irrigation season.
1924, 1928-47: Maximum discharge observed, 39 second-feet July 17, 1945, July 18-23, 27, 30, 1947; maximum gage height observed, that of July 18, 21-23, 1947; no flow during nonirrigation seasons.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Gage usually read twice daily and gate changes noted. Canal diverts from Middle Fork Weiser River in SE¼NW¼ sec. 9, T. 15 N., R. 1 E., for irrigation of Mesa orchards and for domestic supply of Mesa. Flow regulated by gates in diversion dam and waste gates in flume above gage.

Cooperation.- Gage readings furnished by The Mesa Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	a2				0	20	13	35	36	37	21
2	4.6	a1				0	18	13	31	36	36	21
3	4.8	0				0	20	13	24	33	35	22
4	5.3	0				0	11	6.2	21	33	35	22
5	5.3	0				0	14	9.2	21	34	35	21
6		0				0	12	12	19	34	35	21
7		0				0	12	14	18	35	33	24
8		0				0	12	16	19	35	32	26
9		0				0	12	20	18	36	32	25
10		0				0	12	15	19	37	32	22
11		0				0	8	18	18	36	31	20
12		0				0	12	16	17	37	32	18
13	a5	0				0	11	16	17	37	31	13
14		0				0	5.4	16	18	37	30	8.8
15		0				0	5.4	14	18	37	a28	8.2
16		0				0	5.4	15	18	38	a27	7.0
17		0				0	9.6	15	17	38	25	6.8
18		0				0	14	15	17	39	27	5.4
19		0				0	15	14	18	39	27	4.7
20		0				0	16	17	16	39	27	4.1
21		0				0	14	19	21	35	28	2.8
22		0				0	13	21	24	39	28	3.0
23		0				0	13	26	29	39	29	3.0
24	a2	0				0	12	29	35	37	27	4.5
25		0				0	12	30	35	38	26	6.3
26		0				0	12	30	36	38	25	4.6
27		0				0	13	30	36	39	24	4.8
28		0				0	17	32	36	37	23	4.5
29	2.3	0				a7	20	33	36	37	23	3.5
30	a2	0				14	15	33	36	38	22	5.6
31	a2	-				18	-	35	-	37	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	120.8	5.3	2	3.90	240
November	3	2	0	.1	6
December	0	0	0	0	0
Calendar year	-	-	-	-	-
January	0	0	0	0	0
February	0	0	0	0	0
March	39	18	0	1.3	77
April	385.8	20	5.4	12.9	765
May	605.4	35	6.2	19.5	1,200
June	723	36	16	24.1	1,430
July	1,140	39	33	36.8	2,260
August	904	37	22	29.2	1,790
September	363.6	26	2.8	12.1	721
Water year 1946-47	4,284.6	39	0	11.7	8,490

a No gage-height record; discharge interpolated, or computed on basis of weather records and reported gate changes.

Johnson Creek below Johnson Park, near Council, Idaho

Location.- Water-stage recorder, lat. 44°46', long. 116°38', in SE¼ sec. 36, T. 17 N., R. 3 W., 50 feet downstream from Johnson Park Creek, three-quarters of a mile southeast of Johnson Park, and 10 miles northwest of Council.

Drainage area.- 5 square miles.

Records available.- March 1941 to September 1947 (no winter records).

Extremes.- Maximum discharge during year, 103 second-feet May 2 (gage height, 2.14 feet); minimum recorded, 0.4 second-foot Oct. 16 (gage height, 0.35 foot).

1941-47: Maximum discharge, 201 second-feet (revised) May 30, 1945 (gage height, 3.00 feet), from rating curve extended above 75 second-feet; minimum recorded, that of Oct. 16, 1946.

Revisions.- The maximum discharge for the water year 1945 has been revised to 201 second-feet May 30 (gage height, 3.00 feet), superseding figure published in Water-Supply Paper 1043.

Remarks.- Records fair except those for periods of no gage-height record, which are poor. No diversion or regulation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4					a2.0	11	56	33	8.7	1.8	1.3
2	1.5					a2.0	10	76	30	8.1	1.8	1.3
3	1.4					a2.0	9.9	76	31	6.7	1.8	1.3
4	1.3					a2.0	9.1	73	27	6.4	1.8	1.2
5	1.5					a2.0	8.7	73	25	6.2	1.7	1.2
6	1.4					a2.0	8.3	75	23	6.2	1.6	1.2
7	1.5					a2.0	7.6	80	27	5.2	1.6	1.8
8	1.4					a2.0	7.6	78	50	5.0	1.6	1.3
9	1.4					a2.0	7.2	84	35	4.7	1.6	1.2
10	1.3					a2.0	7.2	66	30	4.5	1.6	1.2
11	1.3					a2.0	7.2	60	26	4.1	1.6	1.2
12	1.3					a2.0	8.0	60	23	3.9	1.6	1.2
13	1.2					a3.0	11	58	22	3.8	1.6	1.2
14	1.3					3.8	17	53	20	3.6	1.6	1.2
15	1.3					4.1	22	51	18	3.4	1.6	1.3
16	1.2					4.7	28	48	23	3.2	1.6	1.4
17	1.2					5.7	29	47	23	3.0	1.5	1.3
18	1.5					6.2	28	44	18	2.8	1.4	1.4
19	1.4					7.2	29	46	16	2.7	1.4	1.4
20	2.3					8.3	27	44	15	2.6	1.4	1.4
21	4.7					9.5	25	43	14	2.4	1.4	1.4
22	12					11	25	41	13	2.4	1.4	1.4
23	5.2					11	25	40	12	2.3	1.4	1.4
24	3.4					11	28	39	12	2.3	1.4	1.4
25	3.6					11	34	38	11	2.3	1.4	1.5
26	3.6					9.5	40	38	11	2.3	1.4	1.5
27	a3.0					8.7	46	40	11	2.3	1.4	1.5
28	a3.0					9.1	49	37	11	2.2	1.4	1.5
29	a3.0					10	49	33	10	2.1	1.4	1.5
30	a3.0					13	46	30	9.5	2.0	1.3	1.5
31	h2.3					12	-	30	-	2.0	1.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	74.9	12	1.2	2.42	149
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	182.8	13	2.0	5.90	363
April	659.8	49	7.2	22.0	1,310
May	1,657	84	30	53.5	3,290
June	629.5	50	9.5	21.0	1,250
July	119.4	8.7	2.0	3.85	237
August	47.4	1.8	1.3	1.53	94
September	40.6	1.8	1.2	1.35	81
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of records for Little Weiser River near Indian Valley and stations on nearby streams having similar drainage areas.
h Computed from staff-gage reading.

Bacon Creek near Mesa, Idaho

Location.- Water-stage recorder, lat. 44°37'30", long. 116°28'40", in NE¼ sec. 20, T. 15 N., R. 1 W., 1¾ miles west of Mesa and 5½ miles upstream from mouth.

Records available.- June 1944 to September 1947.

Extremes.- Maximum discharge during year, 28 second-feet Feb. 12 (gage height, 2.94 feet), from rating curve extended above 18 second-feet; minimum not determined, occurred during period of no gage-height record

1944-47: Maximum discharge recorded, 50 second-feet Mar. 20, 1946; minimum observed, 0.6 second-foot (discharge measurement) Dec. 11, 1944.

Remarks.- Records fair except those for periods of ice effect or no gage-height record, which are poor. Bacon Creek is the natural wasteway for irrigation water on Mesa orchards tract, and natural flow is augmented by surface and sub-surface runoff from this source.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		5.0	5.4			2.4	14	9.4	14	11	14	10
2		2.3	4.9			2.5	13	9.0	16	11	14	9.9
3		1.8	4.3			3.5	15	7.5	16	11	13	10
4		1.8	4.4			3.8	13	6.5	12	12	14	10
5		1.6	6.5	3		2.7	11	6.9	11	12	15	10
6		1.6	6.4		*1	2.6	8.9	8.6	10	12	14	10
7		1.8	4.4			2.7	10	8.2	11	12	15	14
8		1.5	4.9			3.4	12	5.6	18	12	15	18
9		1.5	4.6			4.2	12	8.8	19	12	14	15
10		1.6	4.1			8.3	11	8.1	17	13	14	14
11	3	1.6	*9.9			5.2	12	8.6	14	13	13	11
12		1.3	11		6.5	4.1	13	13	13	13	12	8.2
13		1.3	11		8.0	4.0	12	12	13	14	12	7.8
14		1.3	12		3.2	4.0	9.2	11	12	13	11	7.6
15		1.3	8.2	2	4.5	3.9	7.5	9.3	13	12	11	6.3
16		1.3	6.2		5.5	3.6	6.6	8.3	13	12	10	8.3
17		1.3	5.1		9.5	3.4	7.2	7.8	11	12	10	7.6
18		3.0	4.8		5.5	3.3	10	7.6	11	13	11	6.9
19		8.7	5.0		3.9	3.0	11	7.2	11	14	11	6.3
20		4.1	4.6		3.5	2.9	12	7.2	10	14	11	5.7
21	f4.6	2.3	4.5		3.9	2.9	11	7.8	7.6	14	11	4.8
22	f6.0	2.5	4.1		3.9	3.6	10	6.1	8.7	14	11	4.2
23	5.2	5.8	3.6		4.1	3.1	10	5.2	9.8	14	11	3.9
24	4.4	3.2	3.5		3.5	2.6	10	6.4	10	14	11	4.1
25		2.9	3.6		3.3	*2.5	9.6	6.5	8.7	14	11	6.3
26	3	6.8	3.9	1	2.9	2.5	9.0	6.1	9.2	13	10	5.8
27		14	6.2		2.8	2.4	9.6	7.7	11	13	9.8	5.7
28		16	3.3		2.5	2.2	11	8.0	11	14	9.8	4.8
29	2.3	11	2.9		-	3.1	14	8.7	11	14	9.6	2.1
30	3.0	6.8	3		-	7.7	10	9.6	12	14	8.9	1.9
31	3.0	-	3		-	12	-	12	-	14	10	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	100.5	6.0	-	3.24	199
November	117.0	16	1.3	3.90	232
December	169.3	12	2.9	5.46	336
Calendar year 1946	3,152.6	40	-	8.64	6,250
January	61.0	-	-	2.0	121
February	88.0	9.5	-	3.14	175
March	118.1	12	2.2	3.81	234
April	324.6	15	6.6	10.8	644
May	254.7	13	5.2	8.22	505
June	364.0	19	7.6	12.1	722
July	400	14	11	12.9	793
August	367.1	15	8.9	11.8	728
September	240.2	18	1.9	8.01	476
Water year 1946-47	2,604.5	19	-	7.14	5,160

* Winter discharge measurement made on this day.

f Computed on basis of partly estimated gage-height record.

Note.- No gage-height record Oct. 1-20, 25-28, Dec. 30 to Feb. 5, Feb. 7-11, July 29-31; discharge computed on basis of weather records and records for stations on other Weiser River tributaries and Mesa Orchards Canal near Mesa. Stage-discharge relation affected by ice about Jan. 1 to Feb. 10.

Pine Creek near Cambridge, Idaho

Location.- Staff gage, lat. 44°35', long. 116°44', in SW¼ sec. 32, T. 15 N., R. 3 W., 300 feet upstream from West Fork and 3.2 miles northwest of Cambridge.

Records available.- April 1938 to September 1947.

Extremes.- Maximum discharge observed during year, 204 second-feet May 9 (gage height, 2.42 feet); minimum observed, 1.6 second-feet Aug. 27, 28 (gage height, 0.43 foot).
1938-47: Maximum discharge observed, 392 second-feet Apr. 1, 1940 (gage height, 3.26 feet), from rating curve extended above 250 second-feet; minimum observed, that of Aug. 27, 28, 1947.

Remarks.- Records good except those below 10 second-feet, which are fair, and those for periods of ice effect, which are poor. Gage read twice daily. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.6	12	24	19	15	33	47	77	72	10	2.9	1.9
2	8.6	11	23	17	17	33	48	127	71	10	3.1	1.8
3	8.6	9.5	21	15	14	34	45	182	77	9.0	3.3	2.1
4	8.2	9.5	22	15	14	34	42	164	72	8.6	2.9	2.5
5	9.5	10	27	16	15	32	39	162	68	7.8	3.3	2.5
6	9.0	12	30	17	*16	29	37	160	66	7.4	2.9	2.5
7	10	12	27	17	16	31	37	162	59	7.4	3.3	5.8
8	11	11	27	15	15	32	36	188	80	7.0	3.3	4.3
9	10	12	26	15	15	33	37	203	92	6.6	3.5	3.1
10	10	13	24	15	15	60	33	124	69	4.9	3.3	2.5
11	10	12	*29	14	15	58	32	101	64	3.8	3.3	2.5
12	12	12	57	14	60	55	32	88	60	3.8	3.5	2.9
13	10	12	56	14	98	50	34	94	52	3.1	2.7	4.0
14	10	12	54	13	71	47	36	82	48	2.7	2.1	4.9
15	10	12	54	13	62	54	41	82	47	2.5	2.3	5.2
16	11	11	44	13	63	54	47	83	49	2.9	2.1	4.9
17	10	12	34	13	75	54	50	85	63	2.9	2.5	4.0
18	12	16	32	13	63	60	52	85	55	2.9	2.5	3.8
19	12	24	33	14	58	70	55	88	47	3.1	2.5	3.5
20	14	20	28	14	49	66	49	94	33	2.9	3.1	3.3
21	19	16	27	14	47	65	48	92	28	3.1	3.5	3.1
22	20	20	24	14	46	63	49	91	25	2.5	3.3	3.3
23	18	23	23	13	47	60	47	87	24	2.9	3.1	3.1
24	18	20	22	13	43	55	48	88	22	2.9	3.1	4.3
25	19	18	21	15	43	*51	49	86	22	3.1	2.9	4.3
26	15	20	22	16	40	49	60	83	22	2.9	1.9	3.5
27	11	35	22	15	35	49	65	86	21	2.1	1.8	3.3
28	12	50	18	14	33	47	76	83	15	2.1	1.8	2.9
29	12	34	19	14	-	45	80	82	14	2.1	1.8	3.3
30	12	28	19	14	-	51	80	79	12	2.1	1.9	3.8
31	13	-	19	13	-	50	-	70	-	2.1	1.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	373.5	20	8.2	12.0	741
November	519.0	50	9.5	17.3	1,030
December	908	57	18	29.3	1,800
Calendar year 1946	17,108.6	251	2.3	46.9	33,940
January	451	19	13	14.5	895
February	1,100	98	14	39.3	2,180
March	1,504	70	29	48.5	2,980
April	1,431	80	32	47.7	2,840
May	3,358	203	70	108	6,660
June	1,449	92	12	48.3	2,870
July	137.2	10	2.1	4.43	272
August	85.4	3.5	1.8	2.75	169
September	102.9	5.8	1.8	3.43	204
Water year 1946-47	11,419.0	203	1.8	31.3	22,640

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Jan. 2-10, 12-24, Jan. 28 to Feb. 1, Feb. 8-10.

Little Weiser River near Indian Valley, Idaho

Location.- Staff gage, lat. 44°30', long. 116°24', in NE¼ sec. 1, T. 13 N., R. 1 W., 60 feet downstream from barn at Richardson Ranch, 1 mile upstream from diversion feeding C. Ben Ross Reservoir, and 4¾ miles southeast of Indian Valley.

Drainage area.- 31.9 square miles.

Records available.- April 1938 to September 1947. June 1920 to February 1921, March to September 1923, and February 1924 to October 1927 at nearby sites.

Extremes.- Maximum discharge observed during year, 740 second-feet May 9 (gage height, 4.20 feet); minimum daily, 12 second-feet Nov. 2, 3.
1920-21, 1923-27, 1938-47: Maximum discharge observed, about 1,840 second-feet Feb. 4, 1925; minimum observed, 3.6 second-feet Aug. 28-30, Sept. 4, 5, 1924.

Remarks.- Records good except those for periods of ice effect or nonrepresentative or no gage-height record, which are fair. Gage read twice daily. One small ranch diversion above station. Many diversions below station for irrigation including feeder canal to C. Ben Ross Reservoir.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	13		52	38	72	144	334	313	95	24	13
2	24	12		41	50	64	141	441	292	88	24	16
3	17	12		38	38	63	141	512	326	83	22	14
4	16	18		38	37	64	124	522	297	79	21	14
5	15	18		43	47	56	117	515	255	77	21	13
			130									
6	15	18		52	*45	52	116	515	290	73	20	13
7	16	18		52	45	52	109	621	260	67	19	25
8	16	17		44	41	52	109	644	432	62	19	18
9	16			45	40	53	117	683	479	57	18	16
10	15			46	41	108	108	492	448	56	18	16
11	15		*139	45	38	88	103	414	402	53	16	15
12	15		345	41	155	82	106	495	345	50	16	15
13	15	17	359	38	272	80	125	473	318	46	17	13
14	15		602	36	175	86	150	417	290	42	16	13
15	15		367	b36	163	105	183	385	262	39	16	13
16	15		211	37	155	117	207	382	267	38	15	14
17	14		207	37	146	139	216	370	253	36	15	17
18	14		173	b37	140	146	213	370	222	34	15	17
19	14		144	38	e100	153	213	365	209	33	15	15
20	15		127	36	e90	153	245	367	192	33	16	14
21	25		109	35	e90	153	243	382	171	32	16	14
22	32		112	35	92	196	225	353	163	30	15	14
23	32		92	35	93	190	218	345	152	30	16	13
24	24	180	90	b35	92	155	198	373	134	30	16	13
25	22		90	39	87	148	202	353	127	30	15	13
26	25		86	b42	78	137	225	326	129	30	14	14
27	17		84	b42	78	136	222	332	124	28	14	14
28	16		e60	b39	60	136	295	340	116	26	13	13
29	14		66	39	-	143	315	287	109	25	13	14
30	14		58	39	-	155	318	260	103	24	13	13
31	14	-	b58	31	-	150	-	382	-	24	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	547	32	14	17.6	0.215	0.25	1,080
November	2,619	-	12	87.3	1.07	1.19	5,190
December	4,879	602	58	157	1.92	2.22	9,680
Calendar year 1946	44,286.9	602	9.0	121	1.48	20.12	87,840
January	1,243	52	31	40.1	.490	.56	2,470
February	2,524	272	38	90.1	1.10	1.15	5,010
March	3,484	196	52	112	1.37	1.58	6,910
April	5,448	318	103	182	2.22	2.47	10,810
May	13,050	683	260	421	5.14	5.93	25,880
June	7,480	479	103	249	3.04	3.40	14,840
July	1,450	95	24	46.8	.571	.66	2,880
August	521	24	13	16.8	.205	.24	1,030
September	439	25	13	14.6	.178	.20	871
Water year 1946-47	43,684	683	12	120	1.47	19.85	86,650

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
e Gage height not representative of average for day; discharge computed on basis of weather records and records for other stations in Weiser River Basin.
Note.- No gage-height record Oct. 11, 12, 14-28, Oct. 30 to Nov. 7, Nov. 9 to Dec. 10, Dec. 24-26, Feb. 18, Aug. 24; discharge computed on basis of weather records and records for other stations in Weiser River Basin.

Crane Creek Reservoir near Midvale, Idaho

Location.- Staff gage, lat. 44°22', long. 116°37', in SE¼ sec. 19, T. 12 N., R. 2 W., at gate-control structure near left end of dam on Crane Creek, 10 miles southeast of Midvale.

Drainage area.- 242 square miles.

Records available.- November 1923 to September 1947.

Extremes.- Maximum gage height observed during year, 48.6 feet Feb. 14, Apr. 26; minimum observed, 29.5 feet Oct. 6, 18.
1923-47: Maximum gage height observed, 56.3 feet Feb. 22, 1927; no usable contents Sept. 23, 1928, to Feb. 28, 1929, Sept. 25 to Dec. 1, 1929.

Remarks.- Reservoir is formed by earth dam completed in 1910 and raised in 1920-21. Capacity is reported to be about 60,000 acre-feet at gage height 55.0 feet (elevation of spillway crest). Water is used for irrigation of lands in the lower Weiser Valley. Gage read once daily.

Cooperation.- Gage readings furnished by Crane Creek Reservoir Administration Board.

Gage height, in feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	44.8	-	-	48.5	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
3	30.0	-	-	-	-	-	-	-	48.1	-	43.6	-
4	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	37.4
6	29.5	-	-	-	-	46.0	-	48.5	-	48.0	-	37.2
7	-	-	-	44.3	-	-	-	-	-	48.0	42.8	-
8	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	48.5	-	-	-	-	-
10	-	31.7	42.0	-	45.2	-	48.5	-	-	47.5	-	-
11	-	-	-	-	-	-	-	-	48.2	-	-	36.3
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	44.4	48.2	47.3	-	-	-	-	-	-
14	-	-	-	-	48.6	-	48.5	-	48.3	-	-	-
15	-	-	-	-	-	-	-	-	-	46.8	-	-
16	-	-	-	-	48.4	-	-	-	-	-	41.2	-
17	-	-	-	-	-	-	-	-	-	46.6	-	-
18	29.5	-	-	-	-	47.7	-	-	-	-	-	-
19	-	-	-	-	-	-	-	48.3	-	-	-	-
20	-	-	43.8	-	47.0	-	-	-	-	-	-	-
21	-	-	-	44.4	-	-	-	-	-	45.9	40.3	35.0
22	-	-	-	-	-	-	-	-	48.2	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	35.0	-	-	45.7	-	-	-	-	-	-	-
26	31.7	-	-	-	-	-	48.6	-	-	45.0	-	-
27	-	-	-	-	-	-	-	-	-	-	-	
28	-	-	-	44.8	45.6	-	-	-	-	-	-	-
29	31.7	39.5	-	-	-	48.1	-	48.1	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	44.2	-	-	-	-	48.1	-	-	38.4	-

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Crane Creek near Midvale, Idaho

Location.- Water-stage recorder and concrete control, lat. 44°22', long. 116°37'30", in SE¼ sec. 19, T. 12 N., R. 2 W., 400 feet downstream from Crane Creek Dam and 10 miles southeast of Midvale.

Drainage area.- 242 square miles.

Records available.- October 1910 to April 1916, May 1924 to September 1947.

Average discharge.- 26 years (1912-15, 1924-47), 70.6 second-feet.

Extremes (regulated since 1911).- Maximum discharge during year, 824 second-feet Feb. 16 (gage height, 3.20 feet); minimum not determined, probably occurred during period of no gage-height record.

1910-16, 1924-47: Maximum discharge observed, 4,240 second-feet Dec. 3, 1910 (gage height, 8.9 feet), from rating curve extended above 3,500 second-feet; practically no flow at times in many years when gates in dam were closed.

Remarks.- Records good except those below 1 second-foot, which are poor. Flow regulated by Crane Creek Reservoir (see p. 201). No large diversion above station.

Cooperation.- Water-stage recorder inspected by Crane Creek Reservoir Administration Board.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40				54	33		15	17	8	165	151
2	40				54	32		16	17	8	163	151
3	36				52	31		a16	14	8	163	149
4	28				52	31		a16	11	8	163	146
5	28				52	31	a0.8	a17	11	8	163	135
6	16				52	14		17	10	19	162	121
7					50	3		17	10	f48	162	119
8					50	2		18	10	f97	162	118
9					50	.8		18	10	f97	162	115
10					50	2	.6	18	10	f103	160	115
11					50	.8		18	10	127	160	115
12					50	.8		18	10	128	158	109
13					311	.8		18	9	128	158	85
14				a.2	686	.8	a.5	17	8	128	157	85
15		a.2	a.2		776	.8		16	8	132	157	84
16	a.2				794	.8		16	9	145	157	84
17					818	.8		16	9	160	157	83
18					812	.8		16	8	177	155	83
19					812			13	8	177	155	83
20					621			8	8	177	155	83
21					482		a.2	8	8	177	155	84
22					477			8	8	175	155	85
23					477			10	8	177	154	84
24					477			18	8	177	154	84
25					233	a.8		18	8	179	154	85
26	h.2				72		9	18	9	170	154	84
27					72		18	17	8	162	154	83
28				30	50		16	17	8	163	154	83
29	a.2			59	-		15	17	8	162	152	83
30				58	-		15	17	8	163	152	83
31		-		56	-		-	17	-	163	151	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	192.0	40	-	6.19	381
November	6.0	-	-	.20	12
December	6.2	-	-	.20	12
Calendar year 1946	36,943.2	888	-	101	73,280
January	208.4	59	-	6.72	413
February	8,560	818	50	306	16,980
March	196.6	-	-	6.34	390
April	85.6	18	-	2.85	170
May	489	18	8	15.8	970
June	288	17	8	9.6	571
July	3,751	179	8	121	7,440
August	4,883	165	151	158	9,690
September	3,052	151	83	102	6,050
Water year 1946-47	21,717.8	818	-	59.5	43,080

a No gage-height record; discharge interpolated, or computed on basis of observer's reports of gate changes.
f Computed from partly estimated gage-height record.
h Computed from staff-gage reading.

Crane Creek at mouth, near Weiser, Idaho

Location.- Water-stage recorder and concrete control, lat. 44°18', long. 116°47', in sec 14, T. 11 N., R. 4 W., just downstream from steel highway bridge at Harris Ranch, a quarter of a mile upstream from mouth, and 10 miles northeast of Weiser.

Drainage area.- 288 square miles.

Records available - July 1920 to September 1947.

Average discharge.- 26 years (1921-47), 78.2 second-feet.

Extremes (regulated).- Maximum discharge during year, 1,610 second-feet Feb. 12 (gage height, 6.09 feet); minimum, 0.5 second-foot Apr. 18 (gage height, 1.52 feet); minimum daily, 1.8 second-feet Apr. 18.

1920-47: Maximum discharge, 2,350 second-feet about Feb. 7, 1925 (gage height, 6.80 feet, from well-defined marks on gage), from rating curve extended above 1,000 second-feet; minimum, 0.2 second-foot May 26, 1931; minimum daily, 1 second-foot or less at times during many years; minimum gage height, 1.30 feet Jan. 21, 1922.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Flow regulated by Crane Creek Reservoir (see p. 201). Several small ditches divert above station for irrigation.

Rating tables, water year 1946-47 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 12

1.6	1.2	2.2	20	3.5	183
1.7	2.3	2.3	26	3.8	249
1.8	4.0	2.5	40	4.2	354
1.9	6.5	2.7	57	4.6	503
2.0	10.0	2.9	79		
2.1	14	3.2	126		

Feb. 12 to Sept. 30

2.7	57	3.5	195	4.4	460
2.9	81	3.8	268	4.8	645
3.2	132	4.1	355	5.2	895

Note.- Same as preceding table below 2.7 feet.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	6.2	16	6.2	53	33	6.0	16	12	6.0	152	142
2	42	6.0	13	5.8	56	32	6.0	15	14	6.2	150	140
3	42	5.8	11	a5.0	62	34	6.2	14	17	6.5	152	138
4	34	5.8	10	a6.0	56	35	6.0	14	12	6.2	150	140
5	34	5.8	12	h8.6	57	31	6.0	14	11	6.2	146	130
6	31	5.8	55	a8.0	63	27	6.2	14	12	7.2	148	115
7	11	5.8	21	a8.0	64	12	6.2	13	10	27	148	119
8	6.5	5.8	14	a7.5	59	8.6	6.8	10	16	71	144	117
9	6.0	5.5	18	a7.5	55	9.3	24	16	20	84	144	113
10	5.5	5.8	13	a7.0	54	134	14	14	16	87	146	111
11	5.5	6.0	11	a7.0	54	53	9.3	14	16	115	146	110
12	5.5	5.8	13	6.5	496	23	7.2	14	16	117	144	110
13	5.5	6.0	17	a6.5	499	16	6.0	15	16	119	146	81
14	5.5	6.0	29	a6.0	679	13	6.0	16	14	119	148	78
15	5.2	6.0	18	a6.0	827	12	5.8	14	14	121	142	81
16	5.2	6.0	12	a6.0	827	10	5.5	13	14	136	142	81
17	5.0	6.0	7.9	a6.0	841	9.3	3.5	13	13	148	144	81
18	5.0	7.6	7.9	a8.0	834	9.0	1.8	14	11	169	142	81
19	5.2	11	7.2	h11	820	8.2	2.0	14	11	169	142	81
20	5.2	13	7.2	a11	687	7.9	3.7	10	9.6	169	146	81
21	5.5	9.0	7.2	a11	485	7.6	4.0	6.5	7.2	171	148	80
22	5.8	9.0	6.8	a10	480	7.6	4.0	4.8	6.0	171	148	80
23	6.0	32	6.8	a10	480	9.0	3.7	3.5	4.0	171	146	80
24	5.8	17	6.5	9.6	480	8.6	3.7	3.5	3.3	165	146	80
25	5.5	9.3	6.5	7.9	298	7.6	3.2	8.2	3.5	165	144	81
26	5.5	47	6.8	29	72	6.8	3.0	9.6	3.5	165	142	81
27	5.5	240	9.3	18	68	6.5	8.2	10	3.8	156	142	81
28	5.5	96	9.6	12	57	6.5	14	11	4.8	156	142	81
29	5.5	59	8.2	54	-	6.5	15	11	5.5	156	144	81
30	5.8	27	6.2	55	-	6.8	16	12	6.2	156	142	81
31	5.8	-	7.2	53	-	7.2	-	12	-	156	142	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	369.0	42	5.0	11.9	732
November	677.0	240	5.5	22.6	1,340
December	394.3	55	6.2	12.7	782
Calendar year 1946	43,284.2	1,310	5.0	119	85,840
January	413.1	55	5.0	13.3	819
February	9,663	841	53	342	18,370
March	598.0	134	6.5	19.3	1,190
April	213.0	24	1.8	7.10	422
May	369.1	16	3.5	11.9	732
June	322.4	20	3.3	10.7	639
July	3,477.3	171	6.0	112	6,900
August	4,498	152	142	145	8,920
September	2,936	142	78	97.9	5,820
Water year 1946-47	23,830.2	841	1.8	65.3	47,270

a No gage-height record; discharge computed on basis of weather records and records for other streams in Weiser River Basin and Jordan Creek near Jordan Valley.
h Computed from staff-gage reading.

Weiser Irrigation District Canal near Weiser, Idaho

Location.- Water-stage recorder, lat. 44°15', long. 116°51', in sec. 32, T. 11 N., R. 4 W., 3¼ miles downstream from headworks of canal and 7 miles east of Weiser.

Records available.- April 1920 to September 1947 (winter records fragmentary).

Extremes.- Maximum discharge during year, 217 second-feet July 1 (gage height, 3.08 feet); minimum not determined; may have been practically dry at times during period of no record.

1920-47: Maximum discharge, 221 second-feet July 15, 1932; maximum gage height, 3.43 feet May 5, 1926; no flow at times when gates were closed.

Remarks.- Records good except those below 5.0 second-feet, which are poor. Canal diverts water from Weiser River in sec. 35, T. 11 N., R. 4 W., 3¼ miles above station for irrigation of about 9,000 acres included in projects of Weiser and Weiser Bench Irrigation Districts. One farm lateral diverts a quarter of a mile above station.

Cooperation.- Water-stage recorder graph furnished by Weiser Irrigation District.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	148	42	-		-	-	2.5	186	191	213	189	179
2	148	42	-		-	-	2.5	192	187	212	189	178
3	149	42	-		-	-	a2.5	194	187	208	184	180
4	152	42	-		-	-	2.5	196	188	202	180	176
5	152	42	-		-	-	2.5	197	187	197	178	177
6	151	42	-		-	-	2.9	195	188	200	177	166
7	148	42	-		-	-	2.9	196	172	183	179	169
8	145	42	-		-	-	2.5	197	73	191	176	177
9	146	41	-		-	-	2.5	196	60	200	177	187
10	141	39	-		7.8	-	58	197	55	185	a178	190
11	127	39	-		7.8	-	107	192	166	188	180	187
12	93	39	-		12	-	a106	189	168	185	182	182
13	73	40	12		11	-	104	192	168	173	181	177
14	68	40	12		5.7	-	107	190	168	161	189	171
15	59	41	13		4.1	-	110	189	166	158	187	173
16	59	40	13		3.7	-	112	189	166	165	182	174
17	58	35	13		3.7	-	116	189	167	182	178	170
18	56	35	-		-	-	112	189	167	203	175	170
19	56	38	-		-	-	113	188	167	208	175	171
20	56	40	-		-	-	119	188	176	209	176	170
21	55	36	-		-	-	119	187	186	207	179	169
22	58	35	-		-	-	117	189	186	208	179	166
23	60	33	-		-	-	116	189	184	209	181	165
24	53	37	-		-	-	131	190	199	204	186	160
25	47	35	-		-	-	163		212	206	186	158
26	42	35	-		-	2.5	163		210	205	189	157
27	46	36	-		-	2.5	163	a190	211	202	192	154
28	45	31	-		-	2.5	168		212	199	188	153
29	42	30	-		-	2.5	173		211	189	188	a140
30	43	30	-		-	2.5	176		210	188	185	127
31	42	-	-		-	2.5	-	190	-	194	182	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,719	152	42	87.7	5,390
November	1,141	42	30	38.0	2,260
December 13-17	63	13	12	12.6	125
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February 10-17	55.8	12	3.7	6.98	111
March 26-31	15.0	2.5	2.5	2.50	30
April	2,676.3	176	2.5	89.2	5,310
May	5,926	197	186	191	11,750
June	5,188	212	55	173	10,290
July	6,034	213	158	195	11,970
August	5,647	192	175	182	11,200
September	5,073	190	127	169	10,060
Water year	-	-	-	-	-

a No gage-height record: discharge interpolated between gate changes.

Mann Creek near Weiser, Idaho

Location.- Staff gage, lat. 44°24', long. 116°54', in sec. 11, T. 12 N., R. 5 W., at Richards Ranch, 11 miles northeast of Weiser and 12 miles upstream from mouth.

Drainage area.- 56 square miles.

Records available.- March 1911 to September 1913, July to November 1920, April 1937 to September 1947.

Average discharge.- 12 years (1911-13, 1937-47), 43.0 second-feet.

Extremes.- Maximum discharge observed during year, 157 second-feet Feb. 13; maximum gage height, 4.5 feet Feb. 12 or 13 (ice jam) from floodmark; minimum observed, 0.4 second-foot Aug. 28.

1911-13, 1920, 1937-47: Maximum discharge, 1,540 second-feet Mar. 27, 1940 (gage height, 5.45 feet, from floodmark, site and datum then in use), from rating curve extended above slope-area determination at gage height 4.21 feet; no flow Aug. 18 to Sept. 22, 1937, July 31 to Sept. 13, 1939.

Remarks.- Records fair except those for period of ice effect, which are poor. Gage read twice daily. One diversion above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.9	6.2	22	12	9.4	38	75	61	14	7.2	1.5	0.7
2	4.0	4.9	18	11	9.4	32	76	58	13	6.8	1.5	.7
3	4.3	3.2	17	10	9.4	29	66	63	23	6.8	1.5	1.0
4	4.3	5.5	18	10	9.0	29	66	61	19	5.4	1.4	1.2
5	4.0	5.5	38	10	9.0	28	63	61	14	5.0	1.5	1.0
6	4.0	5.8	44	11	9.9	30	63	50	14	4.7	1.5	1.0
7	5.2	5.8	26	11	9.9	26	61	44	14	4.7	1.7	1.8
8	5.2	6.2	27	11	9.4	26	59	44	23	4.4	1.7	2.3
9	4.9	5.2	24	10	9.9	26	63	45	25	4.1	1.5	1.8
10	4.9	6.2	19	10	11	89	51	40	20	3.5	1.5	1.8
11	4.6	6.2	23	9	*11	55	50	34	18	3.2	1.5	1.8
12	4.6	5.2	*50	9	68	47	50	34	16	3.8	1.5	1.7
13	4.6	4.6	54	9	146	40	56	30	15	3.8	1.5	1.5
14	4.3	5.8	64	9	50	53	66	32	13	3.5	1.5	1.4
15	4.3	5.8	53	9	56	66	70	30	8.6	2.9	1.4	1.4
16	4.3	4.6	41	9	70	68	82	25	10	2.6	1.4	1.7
17	4.3	6.9	36	9	68	98	83	22	7.7	2.6	1.4	2.6
18	4.6	8.6	30	9	51	113	82	20	5.9	2.3	1.2	2.0
19	4.9	21	34	9	40	96	83	18	9.0	2.0	1.2	2.0
20	5.2	16	29	9	39	104	80	16	10	2.0	1.2	1.8
21	6.6	8.0	24	9.0	39	125	80	15	9.5	2.0	1.4	1.8
22	7.2	8.3	21	9.4	36	106	76	16	9.0	1.8	1.5	1.8
23	8.6	16	20	10	42	102	64	15	9.0	1.7	1.5	1.5
24	6.9	12	18	10	44	115	61	15	8.6	1.7	1.5	1.8
25	6.9	11	16	9.9	42	78	61	14	8.2	2.0	1.4	1.5
26	8.6	14	17	12	38	82	59	12	8.6	2.0	1.2	1.4
27	6.9	79	17	10	38	100	61	11	9.5	1.8	.9	1.7
28	5.8	95	9.9	8.6	39	87	61	13	8.6	1.4	.4	1.5
29	5.2	38	16	9.4	-	91	63	13	8.6	1.7	.7	1.7
30	6.2	26	14	9.0	-	87	63	13	7.7	1.7	.7	1.8
31	5.8	-	* 12	9.9	-	85	-	14	-	1.5	.7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	164.1	8.6	2.9	5.29	325
November	446.5	95	3.2	14.9	886
December	851.9	64	9.9	27.5	1,690
Calendar year 1946	16,488.0	381	1.6	45.2	32,700
January	303.2	12	8.6	9.78	601
February	1,013.3	146	9.4	36.2	2,010
March	2,151	125	26	69.4	4,270
April	1,994	83	50	66.5	3,960
May	939	63	11	30.3	1,860
June	379.5	25	5.9	12.6	753
July	100.6	7.2	1.4	3.25	200
August	41.0	1.7	.4	1.32	81
September	47.7	2.6	.7	1.59	95
Water year 1946-47	8,431.8	146	.4	23.1	16,730

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Jan. 1-20.

Monroe Creek above Sheep Creek, near Weiser, Idaho

Location.- Staff gage, lat. 44°20', long. 116°56', in SW¼ sec. 34, T. 12 N., R. 5 W., on farm road bridge adjacent to U. S. Highway 95, 0.5 mile above Sheep Creek and 6 miles north of Weiser.

Records available.- October 1945 to September 1947.

Extremes.- Maximum discharge observed during year, 142 second-feet Feb. 12 (gage height, 2.10 feet); no flow about Aug. 1 to Sept. 7, Sept. 16, 17.
1945-47: Maximum discharge observed, 170 second-feet Mar. 18, 19, 1946 (gage height, 2.40 feet); no flow about Aug. 1 to Sept. 7, Sept. 16, 17, 1947.

Remarks.- Records fair except those for periods of ice effect or no gage-height record, which are poor. Diversions above station for irrigation and storage in Barton Reservoir.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	0.4	9.0	6.2	b4.5	12		0.4	0.2			0
2	1.9	.4	8.0	6.2	b4.5	13		.4	.2			0
3	2.3	.4	8.0	6.2	b4.5	11		.4	.3			0
4	2.3	.4	8.5	5.4	b4.5	12		.3	.3			0
5	2.3	.4	9.0	5.4	b4.5	13		.3	.2			0
6	2.3	.4	9.0	5.4	4.7	14	a8	.3	.2			0
7	2.3	.4	15	5.4	5.0	13		.2	.3			0
8	2.3	.4	10	5.4	5.0	14		.3	3.4	a.3		.1
9	2.3	.4	9.0	5.4	5.4	17		.3	3.4			.1
10	2.3	.4	9.0	4.7	7.3	58		.3	2.7			.1
11	2.3	.4	9.0	4.7	*4.3	29	6.6	.2	2.2			.1
12	2.3	.6	*10	4.3	86	18		.2	1.7			.1
13	2.3	.7	9.0	4.3	74	16		.3	1.2			.1
14	2.3	.7	9.0	4.3	64	14		.2	.7			.1
15	2.3	1.0	9.0	4.3	28	15		.2	.6			.1
16	1.9	1.0	8.5	4.3	22	14	a6	.1	.5			0
17	1.9	.7	8.0	b4.5	21	13		.1				0
18	1.9	1.0	8.0	b4.5	19	13		.1				.1
19	1.9	1.0	8.0	b4.5	17	13		.1				.1
20	a1.5	1.3	8.0	b4.5	15	12		.2				.2
21	a1.0	1.4	8.0	5.0	14	11	4.7	.2				.2
22		1.4	7.3	5.4	14	11	3.9	.2				.2
23	a.5	1.4	6.5	5.8	14	10	4.2	.2				.2
24		2.3	5.8	5.4	15	9.0	3.9	.2	a.5	a.1		.3
25	.5	3.8	5.8	5.0	14	a8.3	4.2	.2				.3
26	a.4	80	5.8	5.0	13	7.6	3.7	.2				.4
27	.4	38	5.8	*4.7	11		3.4	.2				.4
28	.4	19	6.2	b4.5	11		2.2	.2				.4
29	.5	9.0	6.2	b4.5	-	a8.0	1.0	.2				.4
30	.5	8.0	6.2	b4.5	-		.5	.2				.4
31	.4	-	6.2	b4.5	-		-	.2	-			-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	48.4	2.3	0.4	1.56	96
November	176.7	80	.4	5.89	350
December	249.8	15	5.8	8.06	495
Calendar year 1946	4,086.4	130	.2	11.2	8,100
January	154.2	6.2	4.3	4.97	306
February	506.2	86	4.3	18.1	1,000
March	430.9	58	-	13.9	855
April	172.3	-	.5	5.74	342
May	7.1	.4	.1	.23	14
June	25.1	3.4	-	.84	50
July	6.1	-	-	.20	12
August	0	0	0	0	0
September	4.4	.4	0	.15	8.7
Water year 1946-47	1,781.2	86	0	4.88	3,530

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

Unity Reservoir near Unity, Oreg.

Location.- Staff gage and low-water reference mark, lat. 44°30', long. 118°11', in SW¼ sec. 21, T. 12 S., R. 37 E., at Unity Dam on Burnt River, just downstream from Job Creek, half a mile downstream from confluence of North, Middle, and South Forks of Burnt River, and 4½ miles north of Unity. Datum of gage is at mean sea level, datum of Bureau of Reclamation. (To convert elevations to datum of 1929, add 0.12 foot.)

Drainage area.- 309 square miles.

Records available.- March 1938 to September 1947.

Extremes.- Maximum contents observed during year, 25,220 acre-feet Apr. 16-18, Apr. 28 to May 6 (elevation, 3,820.0 feet); minimum observed, 590 acre-feet Sept. 30 (elevation, 3,780.0 feet).

1938-47: Maximum contents observed, 25,770 acre-feet Apr. 13, 1942 (elevation, 3,820.8 feet); minimum observed, that of Sept. 30, 1947.

Remarks.- Reservoir is formed by earth-fill dam with concrete spillway and outlet works, completed by Bureau of Reclamation in 1937; storage began Feb. 19, 1938. Capacity, 25,220 acre-feet between elevations 3,776.5 feet (bottom of outlet gates) and 3,820.0 feet (top of radial gates on spillway when closed). Dead storage, 600 acre-feet below elevation 3,776.5 feet. Records given herein represent usable contents. Water used for irrigation of lands in Burnt River Irrigation District near Hereford and Bridgeport. Gage read or water surface elevation measured from reference mark once daily by employee of Burnt River Irrigation District. Month-end contents computed from capacity table based on surveys by Bureau of Reclamation.

Monthly elevation and contents, water year October 1946 to September 1947

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	3,790.9	4,452	-
Oct. 31	3,791.2	4,600	+148
Nov. 30	3,794.7	6,445	+1,845
Dec. 31	3,800.5	9,920	+3,475
Calendar year 1946	-	-	+1,198
Jan. 31	3,797.8	8,110	-1,810
Feb. 28	3,803.5	11,910	+3,800
Mar. 31	3,818.8	24,130	+12,220
Apr. 30	3,820.0	25,220	-1,090
May 31	3,814.8	20,600	-4,620
June 30	3,808.6	15,600	-5,000
July 31	d3,800.0	10,240	-5,360
Aug. 31	3,791.9	4,950	-5,290
Sept.30	3,780.0	590	-4,360
Water year 1946-47	-		-3,862

d Doubtful gage height; contents computed on basis of gage height 1 foot higher.

Burnt River near Hereford, Oreg.

Location.- Water-stage recorder, lat. 44°30', long. 118°11', in SE¼ sec. 21, T. 12 S., R. 37 E., at entrance to canyon, 1,250 feet downstream from Unity Dam, 0.7 mile downstream from South Fork, and 7 miles west of Hereford. Datum of gage is 3,756.75 feet above mean sea level, datum of 1929. supplemental adjustment of 1947.

Drainage area.- 309 square miles.

Records available.- March 1915 to September 1916, October 1928 to September 1947.

Average discharge.- 18 years (1929-47), 71.4 second-feet.

Extremes.- Maximum discharge during year, 436 second-feet (regulated) Apr. 17, 18 (gage height, 4.14 feet); no flow part of each day Oct. 12, 13, Dec. 9-13.
1915-16, 1928-47: Maximum discharge, 2,220 second-feet Apr. 17, 1943 (gage height, 4.06 feet), caused by opening of automatic spillway gates, from rating curve extended above 1,300 second-feet by logarithmic plotting; no flow at times; minimum discharge before construction of Unity Reservoir Dam, 1.6 second-feet Aug. 31, 1935.

Remarks.- Records good except that for Oct. 12 and those below 10 second-feet, which are poor. Many small diversions above station for irrigation; Van Cleve ditch diverts below gage but above cableway. Flow regulated by Unity Reservoir (see preceding page) and partly regulated by reservoir (capacity, about 700 acre-feet) on South Fork Burnt River, 3 miles above mouth.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	87	21	28	74	69	18	43	168	130	105	106	96
2	87	21	28	74	69	18	129	210	128	100	80	95
3	86	21	28	74	69	18	260	210	126	98	79	93
4	86	21	28	74	69	14	294	210	126	106	79	91
5	86	21	28	74	69	15	310	210	126	102	78	89
6	84	21	28	74	69	9	284	189	125	100	77	88
7	83	21	28	74	69	8	235	152	122	98	84	87
8	82	21	28	74	59	8	223	139	126	102	87	88
9	80	21	11	74	69	7	183	132	120	102	101	86
10	80	21	0	74	69	7	134	122	132	101	106	84
11	79	21	0	74	69	7	40	120	126	106	102	82
12	a40	21	0	74	69	9	13	125	122	108	102	80
13	9	21	19	74	42	8	16	130	126	100	102	80
14	14	22	44	74	24	8	19	128	125	98	102	79
15	14	22	44	74	24	8	31	124	122	98	98	78
16	15	22	44	74	24	10	111	139	126	92	87	77
17	18	23	44	73	24	10	294	136	126	83	92	83
18	21	23	44	73	24	10	433	130	124	82	79	88
19	21	23	44	72	24	10	430	124	120	80	91	86
20	21	23	44	72	24	10	360	124	115	79	91	78
21	21	23	44	72	19	10	226	120	109	79	80	66
22	21	24	44	71	17	10	191	148	106	79	88	57
23	21	24	44	71	17	10	191	147	105	79	105	87
24	21	24	53	69	18	12	202	142	105	79	108	112
25	20	24	59	69	18	14	178	140	104	79	104	116
26	20	26	59	69	18	14	152	139	100	79	102	111
27	20	28	69	69	18	14	122	139	96	79	102	105
28	20	27	74	69	18	15	122	137	100	79	101	111
29	20	27	74	69	-	15	159	134	108	80	100	116
30	21	27	74	69	-	15	150	131	104	80	98	109
31	21	-	74	69	-	32	-	130	-	95	97	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,319	87	9	42 5	2,620
November	685	28	21	22.8	1,360
December	1,230	74	0	39 7	2,440
Calendar year 1946	42,179	663	0	116	83,650
January	2,240	74	69	72.3	4,440
February	1,171	69	17	41.8	2,320
March	373	32	7	12.0	740
April	5,535	433	13	184	10,980
May	4,529	210	120	146	8,980
June	3,530	132	96	118	7,000
July	2,827	108	78	91.2	5,610
August	2,908	108	77	93.8	5,770
September	2,698	116	57	89.9	5,350
Water year 1946-47	29,045	433	0	79.6	57,610

a No gage-height record; discharge interpolated.

Powder River at Salisbury, Oreg.

Location.- Water-stage recorder, lat. 44°39', long. 117°52', in NE¼ sec. 36, T. 10 S., R. 39 E., 700 feet downstream from Salisbury siding of Sumpter Valley Railroad and Stices Gulch and 8½ miles south of Baker. Datum of gage is 3,632.31 feet above mean sea level, datum of 1929, supplementary adjustment of 1947.
Drainage area.- 219 square miles (revised).
Records available.- December 1903 to August 1914 and October 1928 to September 1947 in reports of Geological Survey. January 1904 to July 1914 and June 1926 to September 1936 in reports of State engineer.
Average discharge.- 29 years (1904-13, 1926-28, 1929-47), 109 second-feet.
Extremes.- Maximum discharge during year, 657 second-feet May 8 (gage height, 4.40 feet); minimum, 4.5 second-feet Sept. 6, 7 (gage height, 1.13 feet).
1903-14, 1926-47: Maximum discharge, 1,820 second-feet Mar. 20, 1910 (gage height, 7.05 feet, site and datum then in use); no flow Aug. 31, 1909, Sept. 7, 1931.
Remarks.- Records good except those for periods of ice effect, which are poor. Diversions above station for irrigation.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to May 7						May 8 to Sept. 30	
1.2	7.5	1.6	43	2.7	243	1.1	3.3
1.3	13	1.8	72	3.2	351	1.2	7.4
1.4	21	2.0	107	3.8	495	1.3	13
1.5	31	2.3	163	4.3	629	Note.- Same as preceding table above 1.3 feet.	

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	29	54	b45	86	100	f203	283	173	56	11	5.8
2	11	b27	50	b43	102	98	195	360	203	54	11	5.4
3	11	b26	50	b42	107	94	189	503	211	49	11	5.4
4	11	b25	57	b42	74	91	177	590	195	43	11	4.9
5	12	b29	58	b42	69	80	171	601	175	44	11	4.9
6	11	30	57	b42	62	70	157	604	171	41	11	4.9
7	11	26	54	b45	60	77	142	609	161	32	9.1	4.9
8	13	24	51	49	56	77	140	632	179	29	8.5	5.8
9	12	b22	50	51	54	75	138	590	205	28	8.5	5.8
10	12	25	47	b49	50	114	131	455	197	27	8.5	5.8
11	12	24	50	b47	49	125	112	369	185	28	9.1	5.8
12	12	25	93	b46	121	96	112	329	167	25	9.1	5.8
13	12	b25	125	b45	121	93	127	311	150	23	9.1	5.8
14	12	b25	161	b45	103	100	167	287	138	22	8.5	5.8
15	13	b22	171	b44	96	118	231	272	127	21	8.5	6.2
16	13	b22	125	b44	111	150	279	264	123	21	7.4	6.6
17	13	27	75	b45	116	239	322	260	127	20	7.0	6.6
18	14	29	68	46	114	329	365	245	114	19	6.6	7.4
19	14	42	b66	46	107	349	353	235	102	19	6.2	8.0
20	18	41	b63	51	103	340	338	233	98	18	6.2	8.5
21	24	37	b60	56	109	329	300	229	91	24	6.2	8.5
22	29	36	b57	53	125	338	264	229	77	15	5.8	9.1
23	32	43	b54	72	142	336	239	219	75	15	5.8	9.6
24	37	44	51	94	142	296	227	203	74	16	5.8	10
25	36	43	58	123	134	258	217	203	66	16	5.8	10
26	35	44	58	161	121	227	217	203	60	12	6.2	10
27	38	60	58	131	107	199	235	207	64	13	6.6	10
28	33	75	b55	84	103	193	254	205	69	14	6.6	9.6
29	30	75	b52	b78	-	199	283	183	66	12	6.2	9.1
30	27	55	b49	b74	-	217	300	169	58	9.1	5.8	8.5
31	28	-	b46	69	-	f221	-	177	-	10	6.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	597	38	11	19.3	1,180
November	1,057	75	22	35.2	2,100
December	2,123	171	46	68.5	4,210
Calendar year 1946	50,458.7	836	8.6	138	100,100
January	1,904	161	42	61.4	3,780
February	2,744	142	49	98.0	5,440
March	5,628	349	70	182	11,160
April	6,585	365	112	220	13,060
May	10,259	632	169	331	20,350
June	3,901	211	58	130	7,740
July	775.1	56	9.1	25.0	1,540
August	245.3	11	5.8	7.91	487
September	214.5	10	4.9	7.15	425
Water year 1946-47	36,032.9	632	4.9	98.7	71,470

b Stage-discharge relation affected by ice.
f Computed on basis of partly estimated gage-height record.

Powder River near Haines, Oreg.

Location.- Water-stage recorder, lat. 44°56', long. 117°57', in S½ sec. 21, T. 7 S., R. 39 E., a tenth of a mile upstream from Muddy Creek, 1 mile downstream from Rock Creek, and 1.7 miles north of Haines.

Drainage area.- 572 square miles.

Records available.- October 1946 to September 1947.

Extremes.- Maximum discharge during year, 458 second-feet May 11 (gage height, 3.75 feet); minimum, 2.5 second-feet Aug. 6.

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

Rating tables, water year 1946-47, except periods of ice effect or shifting control (gage height, in feet, and discharge, in second-feet)

Oct. 2 to Feb. 11				Feb. 12 to Sept. 30					
0.5	7.5	1.0	43	0.1	2.5	0.6	25	2.1	188
.6	12	1.3	74	.2	5.5	.7	32	2.9	309
.7	17	1.8	132	.3	9.5	.9	48	3.8	468
.8	24			.4	14	1.3	88		
				.5	19	1.7	135		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a7.5	38	74	b32	43	165	173	20	34	18	5	4
2	7.5	36	68	b33	54	178	175	17	46	17	4.5	4.5
3	a7.5	33	68	b33	64	180	168	38	140	15 •	4.5	4
4	a7.5	29	67	b28	74	173	162	103	191	14	4.5	4.5
5	a12	34	71	24	86	160	156	135	199	14	4.5	4.5
6	a11	38	76	26	88	142	154	157	195	16	4	4.5
7	a11	48	75	28	88	143	144	216	182	18	3.5	4.5
8	a13	40	73	30	85	148	139	314	231	10	3.5	4.5
9	a12	31	*71	31	84	152	152	409	334	10	3.5	5
10	a12	38	71	33	88	188	138	451	301	9.5	3.5	5
11	a12	41	73	35	96	220	129	424	280	10	3.5	5.5
12	a12	40	*94	36	328	216	112	340	238	11	3.5	5.5
13	12	40	107	37	*231	191	94	256	210	9.5	3.5	5.5
14	12	40	114	b38	225	174	88	192	194	8.5	3.5	5.5
15	13	37	130	b36	242	170	80	153	177	7.5	3.5	5.5
16	13	28	*130	38	261	171	85	127	169	7.5	3	5
17	13	28	114	b33	249	180	111	105	164	9.5	3	4.5
18	13	41	b95	b32	226	194	156	97	138	10	3.5	4.5
19	13	43	88	31	216	219	189	78	109	8.5	3.5	4.5
20	14	51	93	32	202	254	213	56	88	8.5	3.5	4.5
21	15	55	93	33	196	279	203	38	75	8.5	3.5	4.5
22	18	53	93	34	199	287	194	25	56	8	3.5	4.5
23	21	73	78	36	206	290	171	23	44	7.5	4	5
24	20	75	70	39	212	293	122	21	36	7	4.5	4.5
25	27	72	.65	44	205	267	76	21	24	6.5	4	5
26	35	74	73	62	181	226	67	23	16	6	3.5	4.5
27	37	78	83	b63	177	202	52	23	21	5.5	4	4.5
28	37	86	b70	b63	148	185	31	26	26	5	4	5
29	38	83	b54	56	-	171	23	20	24	4	4	5
30	38	78	b46	b47	-	165	23	24	20	5	4	5
31	37	-	35	b43	-	164	-	33	-	5	4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	551	38	7.5	17.8	1,090
November	1,481	86	28	49.4	2,940
December	2,512	130	35	81.0	4,980
Calendar year	-	-	-	-	-
January	1,166	63	24	37.6	2,310
February	4,554	328	43	163	9,030
March	6,147	293	142	198	12,190
April	3,780	213	23	126	7,500
May	3,965	451	17	128	7,860
June	3,962	334	16	132	7,860
July	300	18	4	9.68	595
August	118	5	3	3.81	234
September	143	55	4	4.77	284
Water year 1946-47	28,679	451	3	78.6	56,870

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for station at Salisbury.
b Stage-discharge relation affected by ice.
Note.- Shifting-control method used Mar. 22 to Apr. 19, Apr. 24 to May. 8.

Powder River near Robinette, Oreg.

Location.- Staff gage, lat. 44°46', long. 118°04', in SE¼ sec. 22, T. 9 S., R. 46 E., downstream from all tributaries, 2 miles northwest of Robinette and 2½ miles upstream from mouth.

Drainage area.- 1,710 square miles.

Records available.- September 1928 to September 1947.

Average discharge.- 19 years, 476 second-feet.

Extremes.- Maximum discharge observed during year, 2,230 second-feet May 10 (gage height, 4.26 feet); minimum observed, 67 second-feet Aug. 14.
1928-47: Maximum discharge observed, 4,180 second-feet June 15, 16, 1933 (gage height, 6.9 feet, site and datum then in use); minimum observed, 18 second-feet Sept. 2-10, 1930.

Remarks.- Records fair except those for periods of ice effect and July to September, which are poor. Gage read twice daily. Many diversions above station for irrigation, none below. One canal with capacity of about 5 second-feet diverts around station on left bank.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

0.5	62	1.4	270	3.0	1,120
.7	90	1.7	390	3.5	1,520
.9	128	2.0	525	4.0	1,970
1.1	175	2.5	790	4.5	2,470

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	132	318	274	b170	235	535	826	904	1,380	394	135	99
2	135	330	314	b170	282	535	814	1,090	1,400	378	132	103
3	143	278	314	b170	302	540	814	1,560	1,350	374	128	99
4	150	266	298	b150	322	530	814	1,610	1,380	358	135	94
5	155	256	298	b140	334	540	760	1,750	1,400	342	124	88
6	155	226	294	b140	346	540	675	1,850	1,420	350	101	97
7	155	205	294	b160	399	570	640	2,060	1,430	342	95	118
8	155	193	278	b200	535	580	635	2,160	1,460	330	88	120
9	158	187	249	242	719	570	645	2,010	1,390	310	80	118
10	162	175	*246	220	790	590	640	1,660	1,400	270	82	120
11	158	187	310	b210	874	610	600	1,460	1,380	246	82	114
12	155	232	502	b200	1,220	650	580	1,380	1,240	235	87	106
13	155	342	670	b180	1,390	692	570	1,340	1,220	208	78	112
14	160	399	702	b160	*1,560	702	645	1,240	1,140	187	70	114
15	160	412	605	b160	1,420	724	772	1,180	1,060	170	76	114
16	168	422	498	b180	1,330	766	826	1,120	1,010	165	84	112
17	162	430	366	b210	1,120	766	892	1,010	994	168	88	110
18	160	417	350	b230	1,040	766	1,020	917	1,020	162	92	116
19	168	389	330	b260	880	760	1,000	917	832	160	97	114
20	162	453	318	b300	820	730	1,040	973	808	155	101	112
21	172	422	286	338	686	730	1,020	938	d700	155	94	106
22	181	408	266	346	640	742	973	987	635	150	99	103
23	193	270	263	334	645	748	898	966	585	146	104	97
24	211	238	238	350	680	766	838	959	550	143	114	97
25	226	235	229	306	670	766	784	1,020	530	148	104	92
26	242	260	214	298	580	820	748	1,080	507	152	103	90
27	256	314	220	256	555	808	778	1,190	507	150	97	95
28	278	430	266	226	550	808	826	1,330	430	146	94	97
29	282	370	246	226	-	850	931	1,290	399	137	90	101
30	298	298	217	211	-	844	832	1,300	378	141	88	97
31	306	-	b180	223	-	820	-	1,340	-	139	95	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,753	306	132	186	11,410
November	9,462	489	175	315	18,770
December	10,135	702	180	327	20,100
Calendar year 1946	270,259	2,800	108	740	536,100
January	6,986	350	140	225	13,820
February	20,924	1,560	235	747	41,500
March	21,398	850	530	690	42,440
April	23,836	1,040	570	795	47,280
May	40,591	2,160	904	1,309	80,510
June	29,935	1,460	378	998	59,380
July	6,911	394	137	223	13,710
August	3,037	135	70	98.0	6,020
September	3,155	120	88	105	6,260
Water year 1946-47	182,103	2,160	70	499	361,200

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge computed on basis of records for stations at Salisbury and near Haines.

Wolf Creek near North Powder, Oreg.

Location.- Water-stage recorder, lat. 45°03', long. 118°01', in SE¼ sec. 11, T. 6 S., R. 38 E., 5 miles northwest of North Powder.

Drainage area.- 32.9 square miles.

Records available.- May 1913 to July 1914 (incomplete), September 1946 to September 1947.

Extremes.- Maximum discharge during year, 162 second-feet Apr. 17 (gage height, 3.24 feet), from rating curve extended above 99 second-feet; minimum, 0.5 second-foot Aug. 21. 1913-14, 1946-47: Maximum discharge observed, 260 second-feet Apr. 14, 1914 (gage height, 2.70 feet, site and datum then in use); minimum observed, that of Aug. 21, 1947.

Remarks.- Records fair except those for December to February, which are poor. Many small diversions above station for irrigation.

Discharge, in second-feet, 1946-47

1946

Day	Discharge	Day	Discharge
Sept.23	1.5	Sept.27	1.3
24	1.5	28	1.5
25	1.3	29	1.5
26	1.3	30	1.3

1946-47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	3.4	5.1	b3.5	3.4	b14	50	89	13	5.6	1.5	0.9
2	1.1	2.1	3.9	b3.5	3.4	13	49	98	16	5.3	2.5	.9
3	1.1	1.7	4.2	b3.5	3.7	13	47	98	16	6.6	1.7	.9
4	1.1	2.5	4.2	b3.0	3.1	12	44	93	17	5.9	1.5	.9
5	1.9	2.9	4.5	b3.0	3.1	11	39	84	14	5.3	1.1	.9
6	1.7	3.1	4.8	b3.5	3.1	11	35	75	12	5.1	1.1	.9
7	1.9	3.1	4.5	b4.0	2.9	10	31	63	12	5.6	1.0	1.7
8	1.9	2.9	4.5	b4.5	2.9	10	33	57	14	5.1	1.0	2.3
9	1.9	2.9	*4.5	4.8	2.9	10	33	55	25	4.8	1.1	2.1
10	1.9	3.1	4.8	5.1	2.9	12	33	51	28	4.8	1.1	2.1
11	1.9	3.1	7.9	4.8	2.9	12	33	40	24	4.8	1.1	1.9
12	1.9	2.5	29	4.2	3.9	11	34	36	19	4.8	1.0	1.7
13	1.7	2.5	*27	4.2	*5.3	11	41	28	20	4.8	.9	1.5
14	1.7	3.4	25	b3.5	5.1	13	63	24	20	4.8	.9	1.7
15	1.7	2.9	23	b2.5	5.6	15	93	23	19	4.5	.9	1.5
16	1.7	2.5	*16	b2.5	6.6	24	96	21	21	3.9	1.0	1.7
17	1.9	3.1	b14	b3.0	7.3	36	111	20	21	3.9	1.1	1.9
18	1.9	3.4	b13	b3.0	7.9	49	142	22	17	2.9	1.1	2.1
19	1.9	4.2	13	b3.0	9.0	59	138	23	19	1.7	1.1	2.3
20	2.7	3.4	12	b3.0	9.3	66	131	22	18	1.7	.8	1.7
21	3.1	3.1	12	b3.0	9.7	71	114	22	17	1.7	.6	1.7
22	3.4	3.4	10	3.1	11	75	96	19	15	1.5	.7	1.5
23	5.4	4.5	7.9	3.1	14	67	87	15	9.0	1.3	.8	1.5
24	3.7	3.9	7.6	3.9	16	58	79	15	5.1	1.1	.8	1.5
25	3.9	3.9	7.9	4.7	16	50	76	15	3.4	1.3	.8	1.5
26	4.2	3.4	7.9	3.4	b15	44	82	14	2.7	1.3	.8	1.9
27	2.9	5.1	6.9	b3.4	b14	38	90	11	3.1	1.3	.8	2.1
28	2.3	5.9	b5.5	b3.0	b13	38	100	12	5.9	1.5	.8	2.3
29	2.7	6.2	b4.5	b3.0	-	41	104	11	9.0	1.0	.8	3.1
30	2.9	3.7	b4.0	b3.0	-	48	99	13	7.6	1.0	.9	1.9
31	2.5	-	b3.5	3.4	-	49	-	14	-	.9	1.1	-

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

Monthly discharge, in second-feet, 1946-47

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
September 23-30, 1946	11.2	1.5	1.3	1.40	22
October 1946	69.6	4.2	1.1	2.25	138
November	101.8	6.2	1.7	3.39	202
December	302.6	29	3.5	9.76	600
Calendar year	-	-	-	-	-
January 1947	108.1	5.1	2.5	3.49	214
February	203.0	16	2.9	7.25	403
March	992	75	10	32.0	1,970
April	2,203	142	31	73.4	4,370
May	1,183	98	11	38.2	2,350
June	442.8	28	2.7	14.8	878
July	105.8	6.6	.9	3.41	210
August	32.4	2.5	.6	1.05	64
September	50.6	3.1	.9	1.69	100
Water year 1946-47	5,794.7	142	.6	15.9	11,500

Imnaha River above Gumboot Creek, Oreg.

Location.- Water-stage recorder, lat. 45°11', long. 116°53', in sec. 30 or 31, T. 4 S., R. 48 E., 0.1 mile upstream from Gumboot Creek and 5 miles northeast of Coverdale forest guard station.

Records available.- October 1944 to September 1947.

Extremes.- Maximum discharge during year, 1,490 second-feet May 7 (gage height, 3.90 feet); minimum recorded, 41 second-feet Nov. 16 (gage height, 0.66 foot), but flow may have been less during periods of ice effect or no gage-height record.
1944-47: Maximum discharge, 1,540 second-feet May 8, 1946 (gage height, 3.97 feet); minimum recorded, 14 second-feet Dec. 10, 1944.

Remarks.- Records good except those below 100 second-feet, which are fair, and those for periods of ice effect or no gage-height record, which are poor. No regulation or diversion above station.

Rating tables, water year 1946-47, except period of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Mar. 2				Mar. 3 to Sept. 30			
0.8	56	1.5	175	0.8	62	2.1	355
1.0	62	1.8	248	1.0	89	2.5	515
1.2	115	2.1	341	1.2	120	3.0	780
				1.5	180	3.5	1,120
				1.8	258	4.0	1,600

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81	87	160			a95	209	515	853	377	152	83
2	85	79	143			a100	212	720	840	388	148	82
3	78	85	137			89	202	886	732	400	144	88
4	76	93	145			86	194	950	682	381	142	82
5	78	87	157			83	185	977	621	374	136	81
6	75	79	160		a80	78	176	1,030	621	381	134	79
7	75	79	149			83	167	1,210	680	377	129	96
8	75	75	145	a80		79	165	1,290	1,080	370	125	92
9	74	74	133			82	167	1,080	924	359	124	86
10	71	76	126			86	167	828	738	341	122	85
11	69	74	133		h84	83	165	738	626	314	120	82
12	69	68	147			81	169	709	590	298	117	79
13	68	71	175			82	202	692	600	291	115	76
14	67	75	198			89	261	665	586	288	110	75
15	66	71	217			104	324	665	595	282	110	75
16	64	62	186	a60		129	352	682	732	261	107	76
17	64	76	a170			165	374	682	792	250	106	79
18	64	122	a160			187	362	665	726	238	104	81
19	66	321	a190			204	370	698	704	230	101	79
20	85	191	a180			212	359	756	610	222	102	75
21	106	153	168		a140	217	334	798	524	212	102	72
22	124	141	147			227	320	786	506	207	100	70
23	115	173	139			214	314	768	506	199	100	68
24	96	166	115			199	301	810	524	194	96	67
25	115	151	112	a100		187	327	886	529	187	94	67
26	129	141	110			180	366	957	515	178	92	71
27	101	157	106			176	415	1,030	476	173	89	68
28	93	184	92			178	472	998	423	169	86	66
29	90	191	a75		.	190	511	860	385	162	86	66
30	87	171	*b60		-	220	498	828	368	158	86	66
31	82	-	b60		-	217	-	860	-	154	86	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,588	129	64	83.5	5,130
November	3,573	321	62	119	7,090
December	4,395	217	60	142	8,720
Calendar year 1946	106,079	1,360	40	291	210,400
January	2,620	-	-	84.5	5,200
February	3,264	-	-	117	6,470
March	4,402	227	78	142	8,730
April	8,640	511	165	288	17,140
May	26,019	1,290	515	839	51,610
June	19,066	1,080	386	636	37,820
July	8,415	400	154	271	16,690
August	3,465	152	86	112	6,870
September	2,312	96	66	77.1	4,590
Water year 1946-47	88,759	1,290	60	243	176,100

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

Imnaha River at Imnaha, Oreg.

Location.- Water-stage recorder, lat. 45°34', long. 116°51', in SW¼ sec. 16, T. 1 N., R. 48 E., at Imnaha, three-eighths of a mile downstream from Sheep Creek.

Drainage area.- 705 square miles.

Records available.- June 1928 to September 1947.

Average discharge.- 19 years, 444 second-feet.

Extremes.- Maximum discharge during year, 2,140 second-feet May 8 (gage height, 4.95 feet); minimum, 113 second-feet Sept. 22-24 (gage height, 1.94 feet).
1928-47: Maximum discharge, 5,400 second-feet May 23, 1942 (gage height, 6.70 feet), from rating curve extended above 1,800 second-feet; minimum observed, 16 second-feet Nov. 22, 1931.

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

Rating tables, water year 1946-47, except period of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to May 8					May 9 to Sept. 30				
2.0	150	2.8	450	4.2	1,420	2.0	129	2.8	420	4.2	1,410
2.2	210	3.2	665	4.7	1,890	2.2	191	3.2	620	4.7	1,890
2.5	320	3.7	1,000	5.2	2,390	2.5	295	3.7	965	5.2	2,390

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	159	217	520	270		312	738	1,220	1,180	520	191	118
2	194	201	475	191		324	713	1,470	1,190	515	185	113
3	173	170	436	b170		304	689	1,790	1,080	530	175	121
4	167	201	432			292	647	1,880	1,040	505	169	118
5	179	204	450		a210	276	611	1,850	942	480	172	116
6	173	201	480			259	566	1,860	912	475	169	116
7	167	204	460			262	535	1,900	935	470	159	126
8	170	194	450			259	520	2,020	1,320	456	156	150
9	167	188	418			252	520	2,000	1,480	442	156	138
10	162	201	387	a210		270	500	1,640	1,230	424	159	138
11	159	194	410		*217	284	485	1,490	1,060	416	153	132
12	159	185	550		414	266	480	1,400	958	371	153	126
13	156	173	701		600	270	530	1,340	965	355	150	121
14	156	204	848		535	292	695	1,260	920	343	144	118
15	153	188	932		515	332	918	1,190	898	339	141	116
16	153	170	848		520	405	992	1,180	989	323	138	121
17	153	198	653	a140	500	540	1,080	1,150	1,150	303	135	129
18	153	220	611		480	653	1,050	1,100	1,020	295	132	135
19	150	671	641		455	719	1,060	1,080	997	288	129	132
20	167	594	566		428	738	1,070	1,140	920	274	132	126
21	231	465	525		414	751	992	1,180	801	260	144	121
22	231	423	470		392	796	925	1,170	745	253	141	118
23	270	495	428		378	770	883	1,110	706	250	144	113
24	224	578	400		382	689	842	1,110	706	242	138	116
25	234	535	382		382	629	869	1,190	719	239	135	121
26	276	485	374	a260	374	605	948	1,270	712	232	129	135
27	245	470	374		352	566	1,070	1,400	693	222	126	138
28	228	530	300		340	556	1,200	1,400	626	218	124	129
29	214	594	270		-	583	1,310	1,210	570	211	118	126
30	217	556	*259		-	707	1,280	1,140	530	201	118	126
31	204	-	220		-	751	-	1,210	-	198	121	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	5,844	276	150	189	11,590
November	9,909	671	170	330	19,650
December	15,270	932	220	493	30,290
Calendar year 1946	215,075	2,600	120	589	426,600
January	6,761		-	218	13,410
February	9,778	600	-	349	19,390
March	14,712	796	252	475	29,180
April	24,718	1,310	480	824	49,030
May	43,350	2,020	1,080	1,398	85,980
June	27,994	1,480	530	933	55,530
July	10,650	530	198	344	21,120
August	4,536	191	118	146	9,000
September	3,753	150	113	125	7,440
Water year 1946-47	177,275	2,020	113	486	351,600

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of range in stage, weather records, and records for Grande Ronde River at Troy.
b Stage-discharge relation affected by ice.

Salmon River near Obsidian, Idaho

Location.- Water-stage recorder, lat. 43°58', long. 114°48', in sec. 3, T. 7 N., R. 14 E., three-eighths of a mile below irrigation diversion dam, 1 mile upstream from Lost Creek, and 2½ miles southeast of Obsidian.

Drainage area.- 94.7 square miles.

Records available.- November 1940 to September 1947.

Extremes.- Maximum discharge during year, 523 second-feet May 7 (gage height, 3.86 feet); minimum, 6 second-feet Aug. 27 to Sept. 9.
1940-47: Maximum discharge, 664 second-feet May 30, 1943; maximum gage height recorded, 4.74 feet sometime between Dec. 5, 1940, and Jan. 23, 1941 (ice jam); minimum discharge, 2 second-feet Sept. 7-11, 1942, Apr. 1, 1945.

Remarks.- Records good except those for Dec. 16 to Mar. 12, which are poor. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	46	35				31	139	282	110	13	6
2	42	45	35				31	220	282	109	12	6
3	38	45	37				31	339	262	113	13	6
4	36	44	36				31	366	234	110	12	6
5	36	45	36		(*)		31	370	211	107	10	6
6	35	45	35				31	399	214	107	10	6
7	35	46	34			26	32	441	208	109	10	6
8	35	45	33				32	482	228	109	10	6
9	35	43	33				32	482	234	104	9	6
10	37	43	33				33	386	220	98	9	14
11	39	43	33				33	332	208	95	9	24
12	44	41	33				33	303	185	74	9	24
13	46	41	34			*32	34	276	173	63	8	28
14	46	41	34			32	35	244	166	60	8	28
15	48	40	33	22	23	31	40	237	171	54	8	28
16	48	39	28			32	45	247	182	50	8	30
17	47	40	22			33	50	253	211	47	8	30
18	47	41	25			34	49	253	222	34	7	30
19	48	41				34	49	262	231	29	7	30
20	47	40				35	55	282	231	28	8	30
21	51	39				34	61	285	220	30	8	28
22	54	39				31	63	289	192	62	7	28
23	54	38				30	63	276	171	88	7	28
24	50	38				30	60	269	160	86	7	28
25	50	38	25			30	64	282	155	46	7	29
26	52	38				30	75	296	157	20	7	30
27	50	37				30	92	328	157	17	6	28
28	49	37				30	112	310	147	17	6	30
29	*48	37			-	30	126	279	137	16	6	32
30	48	36			-	31	120	269	124	14	6	33
31	48	-			-	30	-	279	-	13	6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,384	54	35	44.6	2,740
November	1,231	46	36	41.0	2,440
December	914	37	22	29.5	1,810
Calendar year 1946	28,687	439	8	78.6	56,900
January	682	-	-	22.0	1,350
February	644	-	-	23.0	1,280
March	911	35	-	29.4	1,810
April	1,574	126	31	52.5	3,120
May	9,475	482	139	306	18,790
June	5,975	282	124	199	11,850
July	2,019	113	13	65.1	4,000
August	261	13	6	8.4	518
September	644	33	6	21.5	1,280
Water year 1946-47	25,714	482	6	70.4	50,990

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 1-4, 12-16, 25, 30, Dec. 1, 7-9, Dec. 15 to Mar. 12, Mar. 14, 15, 25, 27-29, Apr. 3, 5 (no gage-height record Dec. 26 to Feb. 4, Feb. 6 to Mar. 12; discharge computed on basis of weather records and records for station at Stanley and nearby streams).

Salmon River below Valley Creek, at Stanley, Idaho

Location.- Water-stage recorder, lat. 44°14', long. 114°55', in SE¼SE¼ sec. 34, T. 11 N., R. 13 E., three-quarters of a mile downstream from Valley Creek and 1¼ miles northeast of Stanley. Datum of gage is 6,190.32 feet above mean sea level, datum of 1929.

Drainage area.- 535 square miles.

Records available.- July 1925 to September 1947.

Average discharge.- 22 years, 603 second-feet.

Extremes.- Maximum discharge during year, 3,270 second-feet May 9 (gage height, 3.50 feet); minimum, 241 second-feet Feb. 28, but may have been less during period of ice effect.
1925-47: Maximum discharge, 5,020 second-feet June 27, 1927 (gage height, 4.41 feet), from rating curve extended above 4,000 second-feet; minimum, 100 second-feet (estimated) Nov. 20-30, 1929.

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	573	472	436			297	377	1,460	2,500	1,300	630	370
2	755	436	458			307	377	1,730	2,540	1,280	613	364
3	597	429	451			307	370	2,090	2,450	1,310	597	390
4	533	458	458			307	370	2,300	2,270	1,340	589	377
5	517	451	458			302	364	2,380	2,090	1,340	573	364
6	502	458	458			292	364	2,450	2,090	1,340	549	358
7	487	465	436			302	358	2,620	1,930	1,360	533	370
8	487	458	429			302	364	2,880	1,980	1,410	509	383
9	472	436	429			297	358	3,200	2,180	1,450	509	390
10	465	443	429			312	358	2,950	2,080	1,400	502	396
11	458	443	436			312	358	2,480	2,000	1,350	494	403
12	465	398	443			302	364	2,320	1,780	1,280	480	403
13	465	390	458		310	312	403	2,330	1,650	1,210	472	396
14	465	429	487			307	480	2,080	1,610	1,160	465	390
15	485	403	487	*280		307	557	1,890	1,820	1,120	451	383
16	451	377	360			*312	597	1,830	1,710	1,110	436	390
17	443	423	270			312	654	1,820	1,920	1,070	423	509
18	443	480	290			318	687	1,840	2,050	1,030	423	458
19	436	630	380			324	687	1,860	2,120	980	423	429
20	436	517	383			324	791	1,960	2,190	950	443	416
21	533	472	370			329	845	2,060	2,190	930	436	410
22	589	494	383			341	883	2,150	1,920	921	436	403
23	654	549	370			353	864	2,180	1,710	921	436	390
24	549	541	341			347	836	2,180	1,590	892	423	390
25	549	517	364			341	883	2,260	1,570	836	410	390
26	646	517	383		312	353	980	2,360	1,620	748	410	410
27	549	502	383		312	341	1,100	2,610	1,670	712	403	410
28	525	494	341		297	353	1,260	2,830	1,610	687	396	403
29	487	487	300		-	358	1,340	2,540	1,500	662	383	403
30	494	458	285		-	377	1,400	2,390	1,380	646	370	403
31	458	-	280		-	383	-	2,480	-	638	370	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	15,948	755	436	514	0.961	1.11	31,630
November	14,025	630	377	468	.875	.97	27,820
December	12,196	487	280	393	.735	.85	24,190
Calendar year 1946	275,243	2,780	280	754	1.41	19.12	546,000
January	8,680	-	-	280	.523	.60	17,220
February	8,671	-	-	310	.579	.60	17,200
March	10,031	383	292	324	.606	.70	19,900
April	19,829	1,400	358	654	1.22	1.36	38,930
May	70,490	3,200	1,460	2,274	4.25	4.90	139,800
June	57,520	2,540	1,380	1,917	3.58	4.00	114,100
July	33,381	1,450	638	1,077	2.01	2.32	66,210
August	14,587	630	370	471	.880	1.01	28,930
September	11,951	509	358	398	.744	.83	23,700
Water year 1946-47	277,109	3,200	-	759	1.42	19.25	549,600

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 16-19, Dec. 29 to Feb. 25 (no gage-height record Jan. 3-7, 11-21, 23-28, 31, Feb. 13-18, 20-25; discharge computed on basis of weather records and records for station below Yankee Fork, near Clayton and other stations on nearby streams).

Salmon River below Yankee Fork, near Clayton, Idaho

Location.- Water-stage recorder, lat. 44°16', long. 114°44', in sec. 20, T. 11 N., R. 15 E., a quarter of a mile downstream from Sunbeam Dam and Yankee Fork and 18 miles upstream from Clayton.

Drainage area.- 841 square miles.

Records available.- October 1921 to September 1947.

Average discharge.- 24 years (1922-24, 1925-47), 883 second-feet.

Extremes.- Maximum discharge during year, 6,060 second-feet May 9 (gage height, 8.58 feet); minimum daily, 290 second-feet Jan. 15.
1921-47: Maximum discharge, 8,000 second-feet (estimated) June 27, 1927; minimum, 160 second-feet (estimated) Nov. 25-30, 1929.

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

Rating tables, water year 1946-47, except period of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 30				May 1 to Sept. 30			
2.0	275	3.5	1,090	2.5	491	5.0	2,160
2.1	320	4.0	1,440	3.0	754	6.0	3,030
2.3	415	4.5	1,800	3.5	1,040	7.0	4,070
2.6	565	5.0	2,200	4.0	1,380	8.5	5,950
3.0	780	5.1	2,280	4.5	1,760		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	708	600	495	340	420	395	605	2,340	4,000	1,840	809	491
2	1,000	545	525	340	440	420	595	3,100	4,040	1,820	798	486
3	798	520	525	330	420	430	580	4,040	3,850	1,850	770	522
4	703	555	555	340	420	425	565	4,410	3,550	1,870	760	501
5	676	570	555	370	425	430	535	4,420	3,220	1,850	743	486
6	648	570	555	390	415	395	545	4,650	3,200	1,840	722	476
7	626	590	530	380	400	420	520	5,060	2,980	1,840	700	486
8	615	570	525	370	400	425	525	5,600	3,040	1,890	674	511
9	605	545	535	370	405	420	520	5,950	3,330	1,940	658	511
10	590	a540	525	360	450	435	510	5,120	3,170	1,860	652	527
11	575	a520	530	360	420	440	510	4,250	3,080	1,780	636	527
12	585	a470	540	350	430	420	520	3,860	2,820	1,660	620	516
13	585	a530	550	350	460	435	595	3,810	2,650	1,560	610	506
14	585	a540	585	300	445	435	846	3,430	2,620	1,480	589	496
15	580	a490	*590	290	445	440	1,080	3,180	2,640	1,440	573	491
16	575	a530	505	330	440	*450	1,170	3,190	2,750	1,420	552	501
17	570	a560	350	370	430	470	1,300	3,270	3,020	1,360	547	684
18	570	595	350	370	410	510	1,280	3,320	3,150	1,300	537	610
19	565	736	450	380	405	560	1,200	3,310	3,230	1,250	537	558
20	565	642	500	380	395	590	1,310	3,480	3,280	1,210	558	542
21	648	580	500	390	410	620	1,430	3,700	3,180	1,180	547	537
22	720	590	500	400	420	637	1,480	3,840	2,790	1,150	552	527
23	840	648	480	400	425	632	1,450	3,800	2,490	1,130	558	516
24	708	632	460	400	410	590	1,350	3,770	2,360	1,090	537	506
25	692	605	490	400	420	555	1,380	3,920	2,330	1,040	532	511
26	822	610	510	400	420	565	1,540	4,100	2,400	951	527	542
27	720	600	500	400	410	525	1,810	4,640	2,430	911	522	532
28	676	595	450	370	385	560	2,130	4,960	2,320	882	516	522
29	605	585	380	390	-	590	2,250	4,330	2,140	854	506	522
30	620	540	350	400	-	642	2,240	3,980	1,980	826	491	516
31	570	-	340	*400	-	632	-	4,020	-	820	491	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff: Inches	Runoff: Acre-feet
October	20,345	1,000	565	656	0.780	0.90	40,350
November	17,203	736	470	573	.681	.76	34,120
December	15,235	590	340	491	.584	.67	30,220
Calendar year 1946	394,035	4,370	340	1,080	1.28	17.41	781,500
January	11,420	400	290	368	.438	.51	22,650
February	11,775	460	385	421	.501	.52	23,360
March	15,493	642	395	500	.595	.69	30,730
April	32,371	2,250	510	1,079	1.28	1.43	64,210
May	124,850	5,950	2,340	4,027	4.79	5.52	247,600
June	88,020	4,040	1,960	2,934	3.49	3.89	174,600
July	43,894	1,940	820	1,416	1.68	1.94	87,060
August	18,824	809	491	607	.722	.83	37,340
September	15,659	684	476	522	.621	.69	31,060
Water year 1946-47	415,089	5,950	290	1,137	1.35	18.35	823,300

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for station near Challis.
Note.- Stage-discharge relation affected by ice Dec. 17 to Feb. 2.

Salmon River near Challis, Idaho

Location.- Water-stage recorder, lat. 44°23', long. 114°15', in sec. 7, T. 12 N., R. 19 E. 250 feet downstream from Bayhorse Creek and 9 miles south of Challis. Datum of gage is 5,163.99 feet above mean sea level, datum of 1929.

Drainage area.- 1,800 square miles.

Records available.- October 1928 to September 1947.

Average discharge.- 19 years, 1,305 second-feet.

Extremes.- Maximum discharge during year, 8,730 second-feet May 9 (gage height, 7.52 feet); minimum, 370 second-feet Dec. 18 (gage height, 1.58 feet).
1928-47: Maximum discharge, 10,500 second-feet May 30, 1943 (gage height, 8.07 feet); minimum, 160 second-feet Dec. 14, 1940.

Remarks.- Records excellent except those for period of ice effect, which are fair. Some diversion above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	903	866	715	500	632	570	929	2,830	5,830	2,780	1,380	782
2	1,510	818	742	500	693	649	903	3,680	5,830	2,770	1,350	770
3	1,300	754	742	500	660	654	878	5,200	5,550	2,860	1,320	800
4	1,120	788	794	520	638	644	866	6,040	5,110	2,910	1,300	806
5	1,070	818	794	570	632	632	824	6,060	4,680	2,870	1,260	770
6	1,030	824	794	610	622	585	818	6,330	4,560	2,870	1,220	754
7	1,010	854	764	600	590	616	788	7,020	4,370	2,900	1,180	742
8	988	842	764	600	565	627	794	8,040	4,430	3,010	1,150	788
9	974	800	770	590	531	616	782	8,540	4,780	3,060	1,110	782
10	948	806	759	570	575	622	776	7,570	4,620	2,910	1,090	812
11	922	818	764	570	660	649	764	6,260	4,470	2,830	1,070	800
12	922	742	782	570	671	616	770	5,530	4,080	2,640	1,050	806
13	910	693	*794	560	704	632	842	5,350	3,830	2,500	1,030	782
14	910	782	824	510	688	660	1,070	4,950	3,740	2,420	1,000	764
15	903	782	842	470	676	710	1,420	4,470	3,780	2,370	981	764
16	896	704	764	470	710	748	1,570	4,350	3,990	2,320	955	764
17	884	754	531	560	704	782	1,700	4,510	4,560	2,240	929	903
18	878	776	498	570	660	830	1,780	4,660	4,740	2,140	903	942
19	866	942	682	570	622	878	1,650	4,640	4,840	2,090	896	854
20	860	994	748	590	585	929	1,690	4,900	4,970	2,030	929	824
21	896	830	715	600	610	968	1,860	5,220	4,780	1,990	948	806
22	994	866	720	600	654	994	1,910	5,530	4,190	1,950	922	794
23	1,150	896	704	600	688	1,000	1,900	5,460	3,710	1,930	948	776
24	1,050	922	654	600	671	916	1,770	5,460	3,490	1,870	916	764
25	1,000	872	693	600	649	854	1,720	5,690	3,440	1,770	884	759
26	1,100	884	782	590	638	854	1,860	6,060	3,590	1,670	872	800
27	1,060	860	754	580	622	818	2,130	6,540	3,590	1,580	860	800
28	1,010	854	693	526	580	842	2,560	7,350	3,410	1,520	842	782
29	929	842	575	550	-	896	2,780	6,470	3,150	1,460	818	782
30	910	800	530	590	-	994	2,760	5,870	2,910	1,430	788	776
31	866	-	500	*585	-	974	-	5,850	-	1,410	782	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	30,769	1,510	860	993	0.552	0.64	61,030
November	24,783	994	693	826	.459	.51	49,160
December	22,187	842	498	716	.398	.46	44,010
Calendar year 1946	569,831	6,360	498	1,561	.867	11.78	1,130,000
January	17,421	610	470	562	.312	.36	34,550
February	17,930	710	531	640	.356	.37	35,560
March	23,759	1,000	570	766	.426	.49	47,120
April	42,864	2,780	764	1,429	.794	.89	85,020
May	176,430	8,540	2,830	5,691	3.16	3.65	349,900
June	129,020	5,830	2,910	4,301	2.39	2.67	255,900
July	71,100	3,060	1,410	2,294	1.27	1.47	141,000
August	31,683	1,380	782	1,022	.568	.65	62,840
September	23,848	942	742	795	.442	.49	47,300
Water year 1946-47	611,794	8,540	470	1,676	.931	12.65	1,213,000

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 30 to Jan. 27.

Salmon River at Salmon, Idaho

Location.- Water-stage recorder, lat. 45°11', long. 113°54', in sec. 6, T. 21 N., R. 22 E., just upstream from Lemhi River, near Rose ranch buildings, 1,000 feet downstream from island, and three-eighths of a mile downstream from highway bridge at Salmon.

Drainage area.- 3,760 square miles.

Records available.- April 1912 to September 1916, July 1919 to September 1947.

Average discharge.- 30 years (1913-16, 1920-47), 1,799 second-feet.

Extremes.- Maximum discharge during year, 10,100 second-feet May 10 (gage height, 7.05 feet); minimum not determined, occurred during period of ice effect or no gage-height record.

1912-16, 1919-47: Maximum discharge observed, 16,400 second-feet June 12, 1921 (gage height, 9.35 feet, staff gage at site 700 feet upstream); minimum, 242 second-feet Jan. 8, 1937 (gage height, 1.50 feet).

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,440	1,580	1,470	1,010	*1,040	1,120	1,630	3,530	6,870	3,690	1,760	1,100
2	1,860	1,580	1,400	1,030	1,120	1,150	1,580	3,860	6,810	3,550	1,730	1,100
3	2,290	1,500	1,420	1,070	1,230	1,240	1,560	5,350	6,500	3,510	1,740	1,100
4	2,000	1,470	1,440	1,100	1,250	1,240	1,520	6,790	6,200	3,530	1,700	1,100
5	1,850	1,510	1,490	1,150	1,220	1,240	1,490	7,250	5,800	3,570	1,630	1,090
6	1,800	1,520	1,500	1,190	1,200	1,210	1,440	7,370	5,600	3,510	1,590	1,070
7	1,760	1,540	1,500	1,200	1,200	1,180	1,420	8,040	5,400	3,470	1,540	1,060
8	1,730	1,560	1,460	1,200	1,130	1,200	1,390	8,730	5,400	3,550	1,470	1,060
9	1,700	1,520	1,440	1,190	1,080	1,220	1,380	9,530	5,600	3,650	1,440	1,110
10	1,670	1,490	1,450	1,180	1,030	1,230	1,360	9,650	5,450	3,630	1,390	1,120
11	1,650	1,500	1,450	1,170	1,080	1,260	1,350	8,300	5,350	3,510	1,400	1,140
12	1,630	1,490	1,470	1,160	1,230	1,220	1,330	7,250	5,200	3,330	1,390	1,140
13	1,630	1,380	1,490	1,130	1,320	1,180	1,350	6,810	5,000	3,160	1,360	1,130
14	1,590	1,390	1,500	1,070	1,380	1,240	1,490	6,570	4,750	3,020	1,340	1,100
15	1,600	1,470	1,520	1,030	1,330	1,350	1,850	5,940	4,740	2,890	1,320	1,110
16	1,600	1,420	*1,520	1,100	1,340	1,470	2,190	5,600	4,780	2,840	1,300	1,120
17	1,590	1,380	1,350	1,120	1,390	*1,500	2,330	5,600	5,130	2,780	1,270	1,310
18	1,590	1,450	1,120	1,130	1,360	1,510	2,480	5,720	5,540	2,670	1,240	1,420
19	1,590	1,510	1,100	1,130	1,260	1,560	2,480	5,720	5,640	2,580	1,230	1,400
20	1,590	1,780	1,310	1,130	1,230	1,620	2,360	5,770	5,720	2,510	1,250	1,320
21	1,590	1,660	1,400	1,130	1,200	1,650	2,480	6,020	5,920	2,440	1,300	1,280
22	1,650	1,560	1,350	1,130	1,200	1,700	2,580	6,280	5,470	2,380	1,310	1,270
23	1,730	1,600	1,380	1,130	1,260	1,760	2,600	6,390	4,970	2,340	1,280	1,260
24	1,860	1,650	1,350	1,110	1,380	1,660	2,550	6,280	4,640	2,290	1,300	1,250
25	1,760	1,620	1,300	1,100	1,320	1,550	2,430	6,360	4,420	2,190	1,270	1,240
26	1,760	1,580	1,350	1,110	1,240	1,490	2,430	6,650	4,440	2,110	1,240	1,280
27	1,860	1,590	1,450	1,030	1,230	1,470	2,620	7,060	4,530	2,000	1,230	1,340
28	1,780	1,580	1,400	940	1,190	1,420	3,020	8,040	4,440	1,920	1,220	1,330
29	1,730	1,580	1,280	1,020	-	1,470	3,410	7,670	4,240	1,850	1,200	1,340
30	1,630	1,560	1,060	1,000	-	1,590	3,530	7,030	3,980	1,790	1,140	1,350
31	1,630	-	1,060	990	-	1,700	-	6,870	-	1,790	1,110	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	53,140	2,290	1,440	1,714	105,400
November	46,020	1,780	1,380	1,534	91,280
December	42,780	1,520	1,060	1,380	84,850
Calendar year 1946	736,738	6,510	886	2,018	1,461,000
January	34,180	1,200	940	1,100	67,800
February	34,440	1,390	1,030	1,230	68,310
March	43,400	1,760	1,120	1,400	86,080
April	61,630	3,530	1,330	2,054	122,200
May	208,030	9,650	3,530	6,711	412,600
June	158,530	6,870	3,980	5,284	314,400
July	88,050	3,690	1,790	2,840	174,600
August	42,690	1,760	1,110	1,380	84,680
September	35,940	1,420	1,060	1,198	71,280
Water year 1946-47	848,830	9,650	940	2,326	1,683,000

* Winter discharge measurement made on this day.

Note.- No gage-height record Jan. 4-31, June 3-14; discharge computed on basis of weather records and records for stations near Challis. Stage-discharge relation affected by ice Jan. 2, 3, Feb. 1-3, and probably Jan. 4-31.

Salmon River near Shoup, Idaho

Location.- Staff gage, lat. 45°19'30", long. 114°25', in sec. 13, T. 23 N., R. 17 E., 200 feet downstream from highway bridge, 1 mile downstream from Panther Creek, and 8 miles southwest of Shoup. Prior to May 4, 1947, and Aug. 9-30, 1947, wire-weight gage 200 feet upstream at different datum.

Drainage area.- 6,270 square miles.

Records available.- October 1944 to September 1947.

Extremes.- Maximum discharge observed during year, 16,600 second-feet May 10 (gage height, 7.79 feet); minimum observed, 1,290 second-feet Feb. 28, but may have been less during period of ice effect.

1944-47: Maximum discharge observed, that of May 10, 1947; minimum observed, 1,040 second-feet Sept. 12, 13, 1945 (gage height, 1.93 feet, site and datum then in use), but may have been less during winter periods.

Remarks.- Records fair. Gage read once daily. Diversions above station for irrigation.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to May 3, Aug. 9-30				May 4 to Aug. 8, Aug. 31 to Sept. 30			
2.2	1,290	5.0	5,440	1.1	1,530	4.0	7,100
2.5	1,610	6.0	7,310	1.5	2,070	5.0	9,450
3.0	2,240	7.0	9,300	2.0	2,840	6.0	11,900
4.0	3,720			3.0	4,850	7.8	16,600

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,930	2,340	2,240			1,350	2,410	5,240	9,900	5,510	2,380	1,560
2	2,660	2,190	2,060			1,460	2,630	e6,400	10,300	5,070	2,380	1,630
3	3,660	2,120	1,920			1,770	2,460	8,960	9,700	5,070	2,380	1,630
4	3,250	2,040	1,950			1,920	2,450	11,500	9,900	5,070	2,380	1,610
5	2,770	1,980	2,030			1,780	2,420	12,400	9,780	5,070	2,240	e1,700
6	2,760	2,060	2,210	1,600		1,530	2,310	12,400	9,310	4,850	2,240	1,530
7	2,740	2,160	2,110		1,500	1,560	2,240	13,700	8,730	4,850	2,080	1,530
8	2,600	2,160	2,110			1,570	2,190	14,600	8,490	5,070	1,940	1,530
9	2,580	2,190	1,980			1,650	2,040	16,100	8,970	5,070	1,840	1,530
10	2,520	2,160	1,880			1,620	2,010	16,600	9,450	5,070	1,830	1,660
11	2,460	2,120	1,980			1,860	1,890	13,400	8,730	4,850	1,800	1,660
12	2,410	2,150	2,140			1,650	1,980	11,400	8,250	4,650	1,780	1,660
13	2,390	1,990	2,560			1,680	2,120	10,900	8,020	4,430	1,710	1,630
14	2,370	1,970	2,460			1,750	2,310	10,400	7,790	4,220	1,620	1,630
15	2,340	1,950	2,510	1,400		2,150	2,660	9,700	7,560	4,220	1,590	1,610
16	2,310	1,930	2,280			2,300	3,500	9,210	7,330	4,010	1,590	1,580
17	2,240	1,950	*1,880			2,320	3,670	8,970	7,790	3,800	1,600	1,580
18	2,210	1,990	1,410			*2,440	3,770	9,210	8,250	3,600	1,590	2,070
19	2,180	2,020	1,360		1,700	2,480	3,980	9,310	8,250	3,600	1,560	2,220
20	2,160	2,450	1,900			2,420	3,850	8,970	8,020	3,400	1,560	2,100
21	2,150	2,380	1,990			2,420	4,020	9,210	8,250	3,210	1,610	1,990
22	2,160	2,240	1,860			2,520	3,990	9,780	8,020	3,210	1,710	1,990
23	2,300	2,320	1,930			2,820	3,940	9,450	7,330	3,030	1,610	1,960
24	2,560	2,240	1,890			2,700	3,930	9,450	6,640	3,030	1,730	1,930
25	2,440	2,370	a1,900	1,700		2,620	3,770	9,780	6,180	3,030	1,670	1,930
26	2,550	2,270	1,980		1,670	2,460	3,830	9,900	6,180	2,860	1,620	2,130
27	2,420	2,190	2,070		1,310	2,190	3,960	10,200	6,410	2,860	1,650	2,100
28	2,410	2,310	1,850		1,290	2,180	4,530	10,600	6,410	2,700	1,610	2,100
29	2,420	2,410	1,700		-	2,230	4,790	10,800	6,180	2,700	1,570	2,130
30	2,380	2,510	1,400	1,400	-	2,300	5,170	10,000	5,820	2,540	1,510	2,160
31	2,270	-	1,400		-	2,510	-	9,700	-	2,380	1,530	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	76,600	3,660	1,930	2,471	151,900
November	65,160	2,450	1,930	2,172	129,200
December	60,940	2,560	1,360	1,968	120,900
Calendar year 1946	1,014,830	9,480	1,140	2,780	2,013,000
January	47,800	-	-	1,542	94,810
February	44,570	-	1,290	1,592	88,400
March	64,210	2,820	1,350	2,071	127,400
April	94,820	5,170	1,890	3,161	188,100
May	328,240	16,600	5,240	10,590	651,100
June	241,940	10,300	5,820	8,065	479,900
July	123,030	5,510	2,380	3,969	244,000
August	55,910	2,380	1,510	1,804	110,900
September	54,070	2,220	1,530	1,802	107,200
Water year 1946-47	1,257,290	16,600	1,290	3,445	2,494,000

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for other Salmon River stations.
e Gage reading inaccurate or not representative of mean for day; discharge computed on basis of records for other Salmon River stations.

Note.- Stage-discharge relation affected by ice Dec. 29 to Feb. 25 (no gage-height record Feb. 3-14, 18, 19; discharge computed on basis of weather records and records for other Salmon River stations).

Salmon River near French Creek, Idaho

Location.- Staff gage, lat. 45°26', long. 115°59', in sec. 8, T. 24 N., R. 4 E., 100 feet downstream from Fall Creek, 2½ miles northeast of French Creek post office, and 16 miles east of Riggins, Idaho.

Drainage area.- 12,270 square miles.

Records available.- October 1944 to September 1947.

Extremes.- Maximum discharge during year, 67,300 second-feet May 9 (gage height, 30.7 feet, from floodmark); minimum daily, 3,000 second-feet Jan. 15; minimum gage height observed, 2.62 feet Jan. 16.
1944-47: Maximum discharge observed, that of May 9, 1947; minimum observed, 1,890 second-feet Dec. 12, 1944 (gage height, 1.44 feet).

Remarks.- Records excellent except those for periods of ice effect, which are good. Gage read twice daily. Amount of water diverted above station for irrigation is a negligible percentage of total flow.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

2.4	2,990	6.0	7,900	17.0	32,100
3.0	3,710	8.0	11,800	21.0	41,800
4.0	4,940	11.0	18,200	25.0	51,900
5.0	6,250	14.0	25,000	30.4	66,500

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,420	5,580	5,930	3,640	3,500	3,940	8,050	26,600	41,700	17,000	6,180	4,080
2	5,660	5,490	5,620	3,600	3,600	4,000	7,790	30,900	40,200	15,900	6,150	4,030
3	7,320	4,990	5,280	3,500	3,800	4,290	7,620	43,600	39,400	15,600	6,020	4,070
4	7,040	4,650	5,240	3,400	*4,000	4,360	7,460	52,300	37,600	15,400	5,930	4,240
5	6,320	4,860	5,260	3,600	4,100	4,260	7,160	53,900	35,700	15,100	5,920	4,220
6	5,980	5,160	*5,280	3,900	4,110	4,150	6,930	54,800	34,400	14,400	5,680	4,110
7	5,800	5,300	5,240	4,200	3,960	3,950	6,690	57,200	32,900	14,200	5,520	4,020
8	5,640	5,340	5,000	4,100	3,820	3,950	6,480	a61,000	32,700	13,800	5,340	4,220
9	5,490	5,150	4,980	3,960	3,530	4,010	6,390	66,400	36,000	13,600	5,170	4,360
10	5,360	4,990	4,980	3,810	3,310	4,070	6,260	60,900	35,700	13,200	5,060	4,430
11	5,230	4,940	5,070	3,900	3,520	4,350	6,210	52,100	33,000	13,100	4,990	4,540
12	5,100	4,890	6,240	3,600	3,810	4,420	6,080	45,400	30,900	12,400	4,990	4,420
13	5,040	4,660	7,570	3,400	4,520	4,300	6,190	42,300	29,500	11,800	4,930	4,320
14	4,990	4,340	8,010	3,300	4,890	4,320	7,080	40,600	28,600	11,300	4,880	4,320
15	4,940	4,590	8,300	3,000	5,210	4,600	9,480	38,700	28,000	10,800	4,790	4,080
16	4,890	4,490	7,480	3,200	5,060	5,150	12,000	37,800	28,500	10,200	4,690	4,060
17	4,840	4,290	6,600	3,300	5,020	5,970	13,800	37,900	30,800	9,920	4,620	4,530
18	4,790	4,600	5,280	3,400	5,260	6,850	14,600	38,300	30,800	9,610	4,540	4,820
19	4,730	5,760	4,090	3,450	5,110	7,690	14,400	37,500	29,900	9,150	4,450	5,100
20	4,720	6,600	4,890	3,650	4,790	8,300	14,300	38,300	28,700	8,890	4,430	4,990
21	5,080	6,380	5,430	3,720	4,630	8,600	14,300	39,400	26,900	8,550	4,540	4,800
22	5,640	5,770	5,420	4,050	4,560	8,770	14,200	40,300	25,300	8,320	4,680	4,740
23	6,750	5,670	5,300	4,260	4,630	*8,930	13,800	39,700	23,400	8,010	5,000	4,520
24	6,630	6,140	5,000	4,530	4,820	8,620	13,200	39,500	22,100	7,820	4,930	4,430
25	6,360	6,020	4,750	4,520	5,190	7,900	13,000	40,500	21,200	7,620	4,800	4,360
26	7,420	5,890	4,630	4,550	4,840	7,480	13,200	42,900	20,800	7,420	4,600	4,340
27	7,150	5,660	5,190	4,400	4,480	6,980	15,100	44,800	22,400	7,150	4,490	4,500
28	6,660	5,770	5,110	3,900	3,970	6,790	18,900	45,100	21,800	6,820	4,400	4,630
29	6,220	6,170	4,480	3,500	-	6,800	23,600	43,100	19,700	6,570	4,340	4,600
30	6,060	6,280	3,670	3,330	-	7,250	27,300	38,700	18,300	6,390	4,280	4,680
31	5,770	-	3,710	3,400	-	7,880	-	39,600	-	6,250	4,150	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	178,040	7,420	4,420	5,743	0.468	0.54	353,100
November	160,420	6,600	4,290	5,347	.436	.49	318,200
December	169,030	8,300	3,670	5,453	.444	.51	335,300
Calendar year 1946	3,511,900	40,300	2,770	9,622	.784	10.64	6,967,000
January	116,070	4,550	3,000	3,744	.305	.35	230,200
February	122,040	5,260	3,310	4,359	.355	.37	242,100
March	182,930	8,930	3,940	5,901	.481	.55	362,800
April	341,570	27,300	6,080	11,390	.928	1.04	677,500
May	1,370,100	66,400	26,600	44,200	3.60	4.15	2,718,000
June	886,900	41,700	18,300	29,560	2.41	2.69	1,759,000
July	336,290	17,000	6,250	10,850	.884	1.02	667,000
August	154,490	6,180	4,150	4,984	.406	.47	306,400
September	132,560	5,100	4,020	4,419	.360	.40	262,900
Water year 1946-47	4,150,440	66,400	3,000	11,370	.927	12.58	8,232,000

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for station at Whitebird.
Note.- Stage-discharge relation affected by ice Jan. 2-8, 12-19, 27-29, Jan. 31 to Feb. 5.

Salmon River at Whitebird, Idaho

Location.- Water-stage recorder, lat. 45°45', long. 116°20', in sec. 22, T. 28 N., R. 1 E., just upstream from Whitebird Creek, half a mile downstream from Canfield-Joseph highway bridge, and 1 mile southwest of Whitebird.

Drainage area.- 13,550 square miles, including that of Whitebird Creek.

Records available.- August 1910 to September 1917, October 1919 to September 1947.

Average discharge.- 35 years, 10,380 second-feet.

Extremes.- Maximum discharge during year, 84,500 second-feet May 9 (gage height, 30.35 feet); minimum, 3,170 second-feet sometime during period Jan. 3-16 (gage height, 11.92 feet).

1910-17, 1919-47: Maximum discharge observed, 88,800 second-feet June 9, 1921 (gage height, 31.2 feet), from rating curve extended above 75,000 second-feet; minimum, 1,580 second-feet Dec. 11, 1932 (gage height, 10.23 feet), from rating curve extended below 2,200 second-feet.

Maximum stage known, about 37.5 feet, present datum, June 1894 (discharge, 120,000 second-feet).

Remarks.- Records excellent except those for periods of no gage-height record, which are good. Amount of water diverted above station for irrigation is a negligible percentage of total flow.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,860	6,220	7,460	4,430	3,880	4,720	9,900	31,600	47,100	18,300	6,640	4,410
2	5,460	6,160	6,910	4,270	4,050	4,700	9,730	35,400	45,500	17,300	6,600	4,340
3	7,460	5,740	6,520	4,140	4,390	4,860	9,480	49,700	43,800	16,800	6,500	4,320
4	7,830	5,420	6,380	4,050	4,520	5,160	9,240	63,000	41,800	16,500	6,440	4,450
5	7,190	5,460	6,420	4,200	4,520	5,120	8,950	67,100	39,400	16,000	6,420	4,560
6	6,640	5,690	6,560	4,600	4,480	4,900	8,580	67,900	37,500	15,500	6,240	4,410
7	6,340	5,840	6,600	4,800	4,400	4,750	8,260	70,700	36,600	15,100	6,020	4,380
8	6,140	5,900	6,340	4,700	4,200	4,660	7,990	77,400	36,500	14,700	5,840	4,520
9	5,960	5,780	6,140	4,600	4,000	4,740	7,810	82,500	40,100	14,500	5,670	4,750
10	5,800	5,650	6,060	4,300	3,800	4,860	7,680	77,700	40,200	14,300	5,540	4,880
11	5,650	5,540	6,120	4,400	4,100	5,230	7,530	64,800	37,000	14,000	5,420	4,970
12	5,540	5,460	7,480	4,300	4,600	5,400	7,400	54,700	33,900	13,500	5,400	4,930
13	5,460	5,270	9,430	4,000	5,200	5,290	7,460	49,300	32,200	12,700	5,400	4,740
14	5,380	4,970	10,900	3,700	5,500	5,250	8,240	46,600	31,000	12,000	5,340	4,570
15	5,340	4,950	11,600	3,500	5,800	5,460	10,400	43,900	30,200	11,500	5,230	4,450
16	5,290	5,120	11,100	3,600	5,700	5,940	13,600	42,800	30,700	11,100	5,210	4,410
17	5,250	4,860	9,510	3,780	5,700	6,810	16,000	42,800	33,800	10,800	5,080	4,810
18	5,170	5,040	7,640	3,830	5,800	7,940	17,400	43,000	34,000	10,300	4,970	5,250
19	5,120	7,210	6,580	4,030	5,700	8,980	17,600	42,300	32,600	9,930	4,840	5,550
20	5,080	8,560	6,500	4,070	5,500	9,830	17,500	43,500	31,300	9,580	4,720	5,630
21	5,400	7,940	6,910	4,200	5,300	10,300	17,400	44,600	29,100	9,240	4,840	5,330
22	6,160	7,140	6,620	4,360	5,200	10,600	17,200	45,700	27,300	8,980	5,080	5,120
23	7,420	6,910	6,480	4,590	5,300	11,000	16,700	45,000	25,200	8,700	5,420	4,970
24	7,550	7,610	6,220	4,900	5,500	10,700	16,000	44,700	23,800	8,490	5,570	4,840
25	7,250	7,480	5,820	5,080	5,800	10,000	15,500	45,800	22,600	8,280	5,270	4,750
26	8,300	7,100	5,630	5,040	5,600	9,220	15,800	48,500	22,000	8,080	5,080	4,700
27	8,420	6,870	5,860	5,060	5,200	8,720	17,400	51,100	23,700	7,810	4,930	4,770
28	7,750	7,140	6,100	4,650	4,810	8,330	21,200	52,000	24,000	7,500	4,790	4,990
29	7,230	7,770	5,520	4,270	-	8,280	26,600	48,800	21,600	7,230	4,700	4,990
30	6,720	7,940	4,950	3,800	-	8,720	31,500	45,100	19,800	7,000	4,610	4,930
31	6,460	-	4,150	3,750	-	9,510	-	44,000	-	6,790	4,480	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	195,620	8,420	4,860	6,310	0.466	0.54	388,000
November	188,740	8,560	4,860	6,291	.464	.52	374,400
December	216,510	11,600	4,150	6,984	.515	.59	429,400
Calendar year 1946	4,040,650	46,100	3,380	11,070	.817	11.07	8,014,000
January	133,000	5,080	3,500	4,290	.317	.37	263,800
February	138,550	5,800	3,800	4,948	.365	.38	274,800
March	219,980	11,000	4,660	7,096	.524	.60	436,300
April	406,050	31,500	7,400	13,540	.999	1.11	805,400
May	1,612,000	82,500	31,600	52,000	3.84	4.42	3,197,000
June	974,100	47,100	19,800	32,470	2.40	2.67	1,932,000
July	362,510	18,300	6,790	11,690	.863	.99	719,000
August	168,290	6,640	4,480	5,429	.401	.46	333,800
September	143,720	5,630	4,320	4,791	.354	.39	285,100
Water year 1946-47	4,759,070	82,500	3,500	13,040	.962	13.04	9,439,000

Note.- No gage-height record Jan. 4-16, Feb. 7-27; discharge computed on basis of weather records and records for station near French Creek.

Alturas Lake Creek near Obsidian, Idaho

Location.- Water-stage recorder, lat. 43°56', long. 114°50', in SW¼ sec. 9, T. 7 N., R. 14 E., 1 mile downstream from outlet of Perkins Lake, 1½ miles downstream from outlet of Alturas Lake, and 4 miles south of Obsidian.

Drainage area.- 35.7 square miles.

Records available.- November 1940 to September 1947.

Extremes.- Maximum discharge during year, 463 second-feet May 9 (gage height, 4.92 feet); minimum, 14 second-feet Sept. 16, 20-25; minimum gage height, 1.97 feet Sept. 21, 24, 25.

1940-47: Maximum discharge, 612 second-feet May 31, 1943 (gage height, 5.30 feet); minimum recorded, 10 second-feet Apr. 3, 1945.

Remarks.- Records good except those for periods of ice effect, which are poor. No diversion or regulation above station.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 31		Jan. 1 to Sept. 30			
2.0	16	1.9	10	3.0	103
2.1	22	2.0	16	3.5	164
2.2	29	2.1	21	4.0	244
2.3	37	2.3	36	4.4	327
2.4	46	2.6	62	4.9	457

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	26	28				34	134	306	158	43	17
2	33	26	27				32	159	325	154	41	17
3	31	24	26				32	209	316	156	40	17
4	29	23	26				31	273	291	159	38	18
5	28	23	25		(*)		30	320	267	158	36	18
6	26	23	26				30	344	254	155	34	17
7	26	23	26			23	30	381	239	154	32	17
8	26	24	25	28			29	421	237	154	32	17
9	25	23	25				28	451	257	152	30	17
10	23	23	26				28	424	255	147	28	18
11	23	23	24				27	354	242	139	27	16
12	22	22	26				27	302	219	131	26	16
13	22	21	29			*25	27	269	203	122	25	16
14	21	21	33			25	28	244	199	114	24	15
15	21	21	34			25	30	216	207	107	24	15
16	21	19			24	25	32	203	223	102	23	14
17	20	19				25	37	203	255	96	22	15
18	20	21				25	42	211	289	90	21	15
19	20	28				25	47	223	306	85	20	15
20	19	36				28	52	239	313	81	21	14
21	23	36				30	58	257	304	77	20	14
22	25	37				28	63	279	261	73	20	14
23	29	39				33	68	289	231	69	20	14
24	28	37	32	25		32	73	296	211	65	20	14
25	28	35				32	77	304	204	60	20	14
26	31	35				31	81	318	207	57	20	16
27	29	34				30	88	346	212	54	19	16
28	28	32				30	98	358	201	51	19	17
29	*27	31			-	30	111	332	182	48	18	16
30	26	30			-	33	124	311	168	47	18	16
31	26	-			-	35	-	302	-	45	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	778	33	19	25.1	0.703	0.81	1,540
November	815	39	19	27.2	.762	.85	1,620
December	918	-	-	29.6	.829	.96	1,820
Calendar year 1946	27,902	440	-	76.4	2.14	29.07	55,350
January	820	-	-	26.5	.742	.85	1,630
February	672	-	-	24.0	.672	.70	1,330
March	823	35	-	26.5	.742	.86	1,630
April	1,494	124	27	49.8	1.39	1.56	2,960
May	8,972	451	134	289	8.10	9.35	17,800
June	7,384	325	168	246	6.89	7.69	14,650
July	3,260	159	45	105	2.94	3.40	6,470
August	799	43	18	25.8	.723	.83	1,580
September	475	18	14	15.8	.443	.49	942
Water year 1946-47	27,210	451	14	74.5	2.09	28.35	53,980

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 3, 12, 13, 16, 20, 22, 30, Dec. 1, 7-9, Dec. 16 to Mar. 21, Mar. 24, 25, 27-29, Apr. 3, 5, 7, 10-12 (no gage-height record Jar. 28 to Feb. 4, Mar. 9; discharge computed on basis of weather records and records for nearby streams).

Valley Creek at Stanley, Idaho

Location.- Staff gage, lat. 44°13', long. 114°56', in sec. 3, T. 10 N., R. 13 E., a quarter of a mile upstream from mouth, three-eighths of a mile downstream from upper Stanley, and three-quarters of a mile upstream from lower Stanley.

Drainage area.- 176 square miles.

Records available.- December 1910 to October 1913, May 1921 to September 1947.

Average discharge.- 27 years (1911-13, 1922-47), 184 second-feet.

Extremes.- Maximum discharge observed during year, 1,150 second-feet May 9 (gage height, 3.33 feet); minimum daily, 56 second-feet Feb. 28.
1910-13, 1921-47: Maximum discharge observed, 1,850 second-feet May 29, 1921 (gage height, 4.4 feet), from rating curve extended above 1,300 second-feet; minimum, 40 second-feet (estimated) Nov. 17-30, 1929, Dec. 8-13, 1932.

Remarks.- Records fair. Gage read three times weekly except for period Mar. 22 to July 20, when daily readings were made. Diversions above station for irrigation.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

0.9	43	1.6	191	2.6	640
1.0	58	1.8	258	3.0	900
1.2	94	2.0	335	3.4	1,210
1.4	138	2.3	475		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a110	113	a90		a70	a62	96	893	935	356	160	92
2	194	a113	113		a76	a68	88	907	935	356	a158	a92
3	a140	113	a110		b72	68	84	865	795	365	a153	92
4	122	a113	109		a70	a68	81	795	730	374	150	a90
5	a118	a113	a105		b72	68	84	865	767	383	a147	88
6	a114	113	104		a70	a62	81	935	718	356	140	a88
7	113	a113	a100		b68	72	81	921	646	374	a137	a88
8	a110	113	a96		a66	a72	84	994	670	383	131	88
9	104	a110	96		a64	a70	92	1,150	823	430	a130	a95
10	a102	a107	a94		b70	72	92	1,060	730	392	a128	115
11	100	104	92		a74	a70	96	865	694	374	126	a110
12	a98	a100	a96		79	70	96	809	586	339	a120	109
13	a96	96	*102	b80	a84	a70	117	879	525	323	113	a103
14	96	a96	a106		83	a70	150	706	500	307	a108	a101
15	a96	96	a108		a82	d74	177	634	500	284	104	100
16	96	a100	109		a80	*77	194	646	520	284	a100	a120
17	a96	113	a80		79	d78	213	670	622	276	a98	194
18	96	a120	96		a70	a82	254	622	622	269	96	a160
19	a96	a150	a94		68	d84	248	646	646	262	a94	129
20	a94	140	92		a62	a86	276	670	646	240	92	a120
21	156	a96	a96		65	a88	299	706	622	a230	a92	a117
22	a160	96	a100		a65	d90	315	730	520	a230	a96	111
23	171	a110	b98		a65	d88	331	767	480	220	113	a108
24	a150	a102	a96		65	d88	356	809	450	210	a107	104
25	140	96	100		a64	92	430	851	450	188	100	a108
26	a160	a98	a98		b64	96	450	795	460	a184	a98	111
27	a140	100	96		a62	96	500	823	490	a180	96	a110
28	131	a98	a80		b56	96	646	1,090	460	177	96	a110
29	a116	96	a78	b70	-	96	658	935	420	a170	96	109
30	117	a92	b80	(*)	-	100	646	795	374	166	a94	a109
31	a115	-	a80		-	104	-	865	-	a163	a92	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	3,747	194	94	121	0.687	0.79	7,430
November	3,220	150	92	107	.608	.68	6,390
December	2,994	113	78	96.6	.549	.63	5,940
Calendar year 1946	80,256	891	63	220	1.25	16.95	159,200
January	2,420	-	-	78.1	.444	.51	4,800
February	1,965	84	56	70.2	.399	.42	3,900
March	2,477	104	62	79.9	.454	.52	4,910
April	7,315	658	81	244	1.39	1.55	14,510
May	25,698	1,150	622	829	4.71	5.43	50,970
June	18,336	935	374	611	3.47	3.87	36,370
July	8,845	430	163	285	1.62	1.87	17,540
August	3,565	160	92	115	.653	.75	7,070
September	3,271	194	88	109	.619	.69	6,490
Water year 1946-47	83,853	1,150	56	230	1.31	17.71	166,300

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

Yankee Fork Salmon River near Clayton, Idaho

Location.- Water-stage recorder, lat. 44°17', 114°44', in sec. 17, T. 11 N., R. 15 E., half a mile upstream from mouth and 17 miles west of Clayton.

Drainage area.- 195 square miles.

Records available.- May 1921 to September 1947.

Average discharge.- 24 years (1922-24, 1925-47), 191 second-feet.

Extremes.- Maximum discharge during year, 2,240 second-feet May 8 (gage height, 5.94 feet); minimum discharge not determined, occurred during period of ice effect.
1921-47: Maximum discharge, 3,360 second-feet June 12, 1921 (gage height, 6.79 feet, site and datum then in use), from rating curve extended above 2,300 second-feet; minimum, 10 second-feet (estimated) Dec. 5, 6, 1927.

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	82	63				131	560	1,190	424	148	82
2	155	73	66				125	900	1,130	430	145	80
3	119	67	66				115	1,370	1,050	443	139	87
4	107	69	66				114	1,490	954	437	136	84
5	105	77	66				106	1,510	848	424	131	80
				50		45						
6	100	81	64		40		105	1,600	848	414	127	78
7	94	88	60				100	1,830	804	414	124	80
8	91	81	60				100	2,150	820	405	119	85
9	90	71	60				100	2,090	876	359	117	84
10	88	73	60				90	1,630	832	372	115	85
11	84	76	60				92	1,260	798	352	115	85
12	87	66	62				h94	1,050	745	329	112	82
13	83	59	62				160	984	724	310	111	80
14	81	70	62			50	243	906	750	286	108	77
15	82	68	*67				349	882	776	276	106	78
16	81	66	60				378	954	826	271	102	79
17	77	64	50			*63	411	1,050	859	256	101	117
18	78	77	62			75	375	1,120	870	243	99	101
19	74	85	62	45		90	324	1,080	859	234	98	90
20	76	85	62			120	329	1,160	842	222	102	86
					45	140						
21	82	74				160	364	1,280	734	220	102	84
22	89	74				160	375	1,350	632	209	98	84
23	112	77				150	369	1,280	579	198	102	82
24	98	76				140	335	1,260	568	190	96	80
25	95	72		60		130	318	1,320	568	182	95	79
26	120	72				120	355	1,410	591	174	92	86
27	109	72				110	460	1,640	572	168	90	83
28	104	72				h122	553	1,780	532	163	89	80
29	85	71			40	130	564	1,440	490	159	87	79
30	*91	64		50	-	150	524	1,270	450	154	84	79
31	81	-			-	140	-	1,240	-	150	84	-
				(*)								

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	2,901	155	74	93.6	0.480	0.55	5,750
November	2,202	88	59	73.4	.376	.42	4,370
December	1,860	67	-	60.0	.308	.35	3,690
Calendar year 1946	80,508	1,250	-	221	1.13	15 35	159,700
January	1,415	-	-	45.6	.234	.27	2,810
February	1,205	-	-	43.0	.221	.23	2,390
March	2,700	160	-	87.1	.447	.51	5,360
April	8,058	564	90	269	1.38	1.54	15,980
May	40,846	2,150	560	1,318	6.76	7.79	81,020
June	23,117	1,190	450	771	3.95	4.41	45,850
July	8,908	443	150	287	1.47	1.70	17,670
August	3,374	148	84	109	.559	.64	6,690
September	2,516	117	77	83.9	.430	.48	4,990
Water year 1946-47	99,102	2,150	-	272	1.39	18.89	196,600

* Winter discharge measurement made on this day.
h Computed from staff-gage reading.
Note.- Stage-discharge relation affected by ice Nov. 15, Dec. 2 to about Mar. 22. No gage-height record Dec. 29 to Mar. 20, Mar. 22-27, 29-31, Apr. 6-11, 13; discharge computed on basis of 2 discharge measurements, weather records, inflow between stations on Salmon River below Yankee Fork and below Valley Creek, and records for nearby streams.

Challis Creek near Challis, Idaho

Location.- Water-stage recorder, lat. 44°34', long. 114°19', in sec. 2, T. 14 N., R. 18 E., an eighth of a mile downstream from Eddy Creek, 6 miles northwest of Challis, and 6¾ miles upstream from mouth.

Drainage area.- 85 square miles.

Records available.- October 1943 to September 1947.

Extremes.- Maximum discharge during year, 388 second-feet May 9 (gage height, 2.07 feet); minimum, 14 second-feet Nov. 12, 30, but may have been less during winter period; minimum gage height, 0.08 foot Nov. 12.
1943-47: Maximum discharge, that of May 9, 1947; minimum, 8 second-feet Mar. 17, 1946 (gage height, -0.20 foot).

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	*22	18		(*)		23	79	204	82	38	25
2	44	21	19				23	110	207	79	37	25
3	34	23	19				22	158	194	78	35	25
4	32	26	19				22	192	180	75	34	25
5	30	25	19				20	207	171	74	33	23
6	29	21	19				20	223	163	69	32	23
7	28	22	18			15	19	251	152	67	34	24
8	28	21	18				20	291	152	69	34	25
9	28	20	18				19	355	146	68	32	24
10	27	21	18				19	320	146	67	33	25
11	28	21	19				20	284	146	64	34	25
12	29	21	*20				20	260	135	61	32	25
13	27	21	20			16	22	248	126	60	32	23
14	28	24	20			17	28	226	120	56	32	23
15	27	22	20			18	44	215	122	56	29	23
16	27	20	18	15	15	20	38	210	124	55	28	23
17	26	20				*f22	42	212	127	54	27	31
18	27	21				24	45	220	126	52	26	29
19	25	22				25	43	220	122	48	26	28
20	27	22				25	46	215	127	48	29	27
21	28	21				25	47	220	126	48	29	26
22	28	22	1.			27	44	234	118	47	30	24
23	28	22				25	41	223	108	47	31	23
24	27	22				23	40	217	103	45	28	22
25	28	21				22	40	215	99	43	28	23
26	31	20				22	42	217	96	41	28	26
27	28	20	17			20	49	245	97	40	27	25
28	27	20	17			22	57	260	97	40	26	25
29	26	20	15		-	24	66	237	92	39	25	27
30	26	19	15		-	27	71	223	86	38	25	30
31	24	-	15		-	25	-	220	-	36	25	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	879	44	24	28.4	1,740
November	643	26	19	21.4	1,280
December	551	20	-	17.8	1,090
Calendar year 1946	13,630	143	-	37.3	27,030
January	465	-	-	15.0	922
February	420	-	-	15 0	833
March	609	27	-	19.6	1,210
April	1,052	71	19	35 1	2,090
May	7,007	355	79	226	13,900
June	4,012	207	86	134	7,960
July	1,746	82	36	56.3	3,460
August	939	38	25	30.3	1,860
September	752	31	22	25.1	1,490
Water year 1946-47	19,075	355	-	52.3	37,840

* Winter discharge measurement made on this day.
f Computed from partly estimated gage-height record.
Note.- Stage-discharge relation affected by ice Nov. 13, 16, 17, 21, Dec. 1-4. 8, and most of period Dec. 17 to Mar. 16. No gage-height record Oct. 26-31, Jan. 5-31, Feb. 2 to Mar. 16; discharge computed on basis of recorded range in stage, weather records, and records for nearby streams.

Pahsimeroi River near May, Idaho

Location.- Staff gage, lat. 44°42', long. 114°03', in W½ sec. 25, T. 16 N., R. 20 E., a quarter of a mile downstream from old highway bridge on Challis-Salmon River highway, a quarter of a mile upstream from mouth, and 10 miles northwest of May. Datum of gage is 4,636.95 feet above mean sea level, adjustment of 1912.

Records available.- October 1929 to September 1947.

Average discharge.- 17 years (1930-47), 200 second-feet.

Extremes.- Maximum discharge observed during year, 341 second-feet Nov. 29, 30 (gage height, 2.66 feet); minimum observed, 130 second-feet May 29.
1929-47: Maximum discharge observed, 454 second-feet May 30, 1943 (gage height, 2.81 feet); minimum observed, 75 second-feet Apr. 28, 1934.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Gage read once daily. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a280	329	337	240	247	291	299	204	153	224	171	185
2	a320	322	333	237	254	295	303	195	a170	217	171	182
3	a310	322	333	237	262	299	310	176	a180	207	171	185
4	a300	322	322	233	262	287	314	163	a200	204	168	198
5	a300	325	318	233	265	295	303	148	a220	195	168	201
6	a290	325	318	233	262	295	310	141	a230	185	166	201
7	a290	333	318	237	258	291	306	146	a230	173	168	201
8	a290	329	318	233	265	287	299	143	a230	179	168	201
9	a290	322	314	230	269	291	299	171	a230	171	168	204
10	a290	325	310	233	265	295	295	163	a230	168	171	204
11	a290	322	314	240	262	291	295	150	a230	166	168	204
12	a290	322	318	244	265	299	299	139	240	166	168	201
13	a290	318	322	244	291	303	314	141	251	168	168	201
14	a290	314	318	240	325	303	295	158	224	171	173	201
15	287	306	318	240	310	303	295	166	220	168	173	210
16	287	310	310	251	310	306	291	166	230	171	176	217
17	291	310	299	247	306	310	287	160	244	179	179	254
18	295	325	295	251	310	314	287	158	233	176	176	284
19	291	333	291	254	291	306	280	150	240	173	179	265
20	303	337	280	251	291	306	276	143	237	173	192	254
21	303	333	284	251	299	306	269	143	227	176	182	258
22	310	337	287	244	295	306	265	141	230	176	185	265
23	310	337	284	247	299	303	265	139	237	a174	185	265
24	314	333	287	258	291	299	262	137	237	171	182	272
25	314	329	a286	258	291	299	251	132	230	173	182	276
26	318	325	284	262	295	303	244	132	237	171	185	306
27	329	322	284	262	295	303	237	135	230	168	188	314
28	333	329	272	258	291	303	233	132	224	168	188	308
29	329	341	269	258	-	303	224	130	220	173	185	318
30	329	341	262	258	-	299	217	137	227	173	179	310
31	329	-	251	254	-	299	-	139	-	171	182	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	9,392	333	280	303	18,630
November	9,778	341	306	326	19,390
December	9,336	337	251	301	18,520
Calendar year 1946	87,034	356	103	238	172,600
January	7,618	262	230	246	15,110
February	7,926	325	247	283	15,720
March	9,290	314	287	300	18,430
April	8,424	314	217	281	16,710
May	4,678	204	130	151	9,280
June	6,721	251	153	224	13,330
July	5,526	224	166	178	10,960
August	5,465	192	166	176	10,840
September	7,143	318	182	238	14,170
Water year 1946-47	91,297	341	130	250	181,100

a No gage-height record; discharge interpolated, or computed on basis of inflow between Salmon River near Challis and Salmon River at Salmon, weather records, and records for other nearby streams.

Panther Creek near Shoup, Idaho

Location.- Staff gage, lat. 45°19', long. 114°23', in sec. 19, T. 23 N., R. 18 E., 25 feet downstream from bridge on private road, 1 mile upstream from mouth, and 7 miles southwest of Shoup.

Drainage area.- 529 square miles.

Records available.- October 1944 to September 1947.

Extremes.- Maximum discharge observed during year, 2,500 second-feet May 9; maximum gage height observed, 4.4 feet Jan. 6 (backwater from ice); minimum discharge observed, 35 second-feet Dec. 17 (gage height, -0.08 foot).
1944-47: Maximum discharge observed, that of May 9, 1947; maximum gage height observed, that of Jan. 6, 1947; minimum discharge observed, that of Dec. 17, 1946.

Remarks.- Records good except those for periods of ice effect, which are fair. Gage read once daily. Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	127	100		110	67	193	816	1,100	430	185	113
2	304	109	100		*125	84	190	989	1,100	410	179	113
3	238	105	105		110	92	179	1,690	1,100	410	185	113
4	222	105	109		100	84	185	1,880	962	410	202	113
5	193	109	109		105	81	193	1,920	930	391	202	113
6	179	105	109		100	77	166	1,960	930	372	163	109
7	166	109	105		92	77	158	2,220	930	372	158	109
8	166	115	77		60	77	158	2,300	897	372	153	113
9	158	115	84		90	77	153	2,500	897	354	147	113
10	147	109	105		100	77	142	2,030	866	372	147	123
11	140	113	113		110	77	142	1,700	834	354	147	118
12	140	100	127		110	77	142	1,530	773	318	150	113
13	140	100	132		120	77	142	1,410	773	300	147	113
14	140	110	137	95	95	81	210	1,210	744	300	142	113
15	140	92	137		95	77	314	1,210	750	290	142	109
16	140	88	105		95	84	350	1,210	744	283	142	109
17	132	115	*35		95	113	380	1,170	761	250	137	113
18	127	127	109		90	*142	418	1,170	715	250	127	125
19	123	147			85	158	410	1,140	688	250	113	125
20	115	127			82	190	426	1,100	660	244	113	127
21	118	118			84	207	446	1,100	650	234	127	113
22	118	118			92	238	446	1,100	608	234	137	113
23	118	118		120	92	225	384	1,100	559	225	155	125
24	127	115			92	202	365	1,060	584	219	147	125
25	137	109			88	153	369	1,100	559	219	158	125
26	158	109			92	163	391	1,140	559	207	147	118
27	153	113		70	77	127	391	1,250	536	207	142	118
28	147	118		53	70	137	603	1,250	559	190	137	118
29	127	118		58	-	140	756	1,100	450	185	127	132
30	127	113	85	80	-	196	767	1,030	430	185	118	132
31	125	-		100	-	196	-	1,100	-	185	113	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	4,674	304	109	151	0.285	0.33	9,270
November	3,376	147	88	113	.214	.24	6,700
December	3,358	137	35	108	.204	.24	6,660
Calendar year 1946	69,774	834	-	191	.361	4.91	138,400
January	2,831	-	53	91.3	.173	.20	5,620
February	2,656	125	60	94.9	.179	.19	5,270
March	3,853	238	67	124	.234	.27	7,640
April	9,569	767	142	319	.603	.67	18,980
May	43,485	2,500	816	1,403	2.65	3.06	86,250
June	22,648	1,100	430	755	1.43	1.59	44,920
July	9,022	430	185	291	.550	.63	17,890
August	4,589	202	113	148	.280	.32	9,100
September	3,516	132	109	117	.221	.25	6,970
Water year 1946-47	113,577	2,500	35	311	.588	7.99	225,300

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 12-14, Dec. 19 to Jan. 26, Jan. 30 to Feb. 6, Feb. 9-20.

Middle Fork Salmon River near Cape Horn, Idaho

Location.- Water-stage recorder, lat. 44°25', long. 115°11', in sec. 34, T. 13 N., R. 11 E., 1,100 feet downstream from Little Beaver Creek, half a mile downstream from confluence of Marsh and Beaver Creeks, and 2 miles northwest of Cape Horn.

Drainage area.- 138 square miles.

Records available.- September 1928 to September 1947 (no winter records 1941-45).

Average discharge.- 15 years (1928-41, 1945-47, 207 second-feet.

Extremes.- Maximum discharge during year, 2,110 second-feet May 8 (gage height, 6.05 feet); minimum recorded, 44 second-feet Nov. 12, but was probably less during winter period. 1928-47: Maximum discharge, 2,340 second-feet June 9, 1933, and about May 31, 1943; maximum gage height, 6.26 feet June 9, 1933; minimum discharge recorded, 31 second-feet Apr. 14, 1945 (gage height, 2.12 feet), but may have been less during some winters.

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	138	98	85				89	620	1,250	427	167	107
2	190	90	88				89	892	1,280	414	164	107
3	130	90	88				89	1,250	1,170	410	162	117
4	121	103	88				87	1,390	1,100	402	162	109
5	119	99	88				87	1,440	994	386	157	105
6	111	94	89				87	1,500	1,060	375	152	105
7	107	96	90				83	1,620	949	363	150	115
8	105	92	85			70	83	1,820	1,100	363	145	115
9	105	98	83				85	1,840	1,190	367	143	115
10	99	92	83				83	1,470	1,040	344	143	119
11	98	89	85				83	1,240	962	322	141	111
12	99	84	85				85	1,190	862	308	141	107
13	96	90	87				96	1,120	820	290	138	103
14	96	94	89				117	1,030	808	280	134	101
15	98	86	80			*78	141	1,020	814	267	132	101
				80	75							
16	96	88				76	162	1,080	856	257	130	107
17	94	90				78	182	1,120	898	245	127	164
18	94	92				82	192	1,130	868	238	125	141
19	92	103				82	198	1,150	844	229	125	121
20	96	95				83	220	1,220	796	220	130	117
21	130	90				83	238	1,290	730	215	125	115
22	162	97				89	248	1,310	642	212	127	111
23	150	99				87	248	1,260	600	203	130	107
24	121	98	85			83	245	1,270	580	198	123	107
25	130	94				83	261	1,310	570	192	119	107
26	157	94				83	294	1,380	570	187	117	111
27	136	96				80	352	1,530	580	185	117	107
28	132	96				83	443	1,460	546	179	113	105
29	*99	94			-	85	518	1,270	496	177	109	103
30	103	90			-	90	537	1,230	456	174	109	103
31	101	-			-	90	-	1,330	-	172	109	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	3,605	190	92	116	0.841	0.97	7,150
November	2,811	103	84	93.7	.679	.76	5,580
December	2,653	-	-	85.6	.620	.71	5,260
Calendar year 1946	95,827	1,470	-	263	1.91	25.81	190,100
January	2,480	-	-	80.0	.580	.67	4,920
February	2,100	-	-	75.0	.543	.57	4,170
March	2,395	90	-	77.3	.560	.65	4,750
April	5,722	537	83	191	1.38	1.54	11,350
May	39,782	1,840	620	1,283	9.30	10.72	78,910
June	25,431	1,280	456	848	6.14	6.85	50,440
July	8,601	427	172	277	2.01	2.32	17,060
August	4,166	167	109	134	.971	1.12	8,260
September	3,363	164	101	112	.812	.91	6,670
Water year 1946-47	103,109	1,840	-	282	2.04	27.79	204,500

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 3, 12, 13, 15, 16, 20-22, Dec. 1-5, Dec. 16 to about Mar. 13. No gage-height record Dec. 24 to Mar. 14; discharge computed on basis of weather records and records for nearby streams.

Bear Valley Creek near Cape Horn, Idaho

Location.- Water-stage recorder, lat. 44°26', long. 115°17', in sec. 29, T. 13 N., R. 10 E., 250 feet downstream from Fir Creek, 3 miles upstream from mouth, and 7 miles northwest of Cape Horn.

Drainage area.- 180 square miles.

Records available.- September 1921 to September 1928 (fragmentary), October 1928 to September 1947 (no winter records 1941-45).

Average discharge.- 15 years (1928-41, 1945-47), 252 second-feet.

Extremes.- Maximum discharge during year, 2,890 second-feet May 9 (gage height, 5.13 feet); minimum, 55 second-feet Nov. 12 (gage height, 1.18 feet), but may have been less during winter period.

1921-47: Maximum discharge, 3,450 second-feet June 9, 1933 (gage height, 5.49 feet) from rating curve extended above 2,000 second-feet; minimum recorded, 28 second-feet Nov. 11, 1931.

Remarks.- Records good except those for about Mar. 15 to June 12, which are fair, and those for periods of ice effect or no gage-height record, which are poor. No regulation or diversion above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	156	119	105				108	847	1,430	445	164	104
2	288	108	110				112	1,120	1,440	420	161	102
3	188	110	110				106	1,470	1,440	395	156	114
4	151	130	110				110	1,750	1,400	381	156	114
5	140	130	110				106	1,890	1,280	367	151	106
6	130	125	110				110	1,940	1,260	353	148	104
7	124	117	100				108	2,020	1,150	344	143	108
8	121	110	98			90	112	2,270	1,270	330	138	130
9	119	112	96				112	2,740	1,770	322	135	121
10	114	121	98				112	2,140	1,490	317	133	133
11	110	106	98				112	1,780	1,310	304	133	121
12	112	98	102				112	1,620	1,100	292	130	114
13	110	100	100				128	1,680	1,000	275	130	110
14	110	110	104				156	1,580	968	267	128	106
15	110	100	108	100	95	*100	198	1,580	931	255	126	106
16	104	100				106	233	1,540	931	244	124	108
17	102	110				112	255	1,550	1,020	240	119	151
18	102	112				112	255	1,510	931	233	117	140
19	104	156				112	259	1,450	861	222	117	121
20	106	117				114	292	1,520	826	215	124	117
21	167	110				114	322	1,510	786	211	128	112
22	211	121				108	335	1,490	694	205	124	112
23	288	135				106	344	1,410	651	201	133	110
24	173	120	100			110	330	1,390	627	198	124	108
25	161	115				110	357	1,420	591	191	119	108
26	205	115				108	410	1,460	573	188	114	112
27	158	119				110	494	1,520	585	182	110	112
28	138	119				112	591	1,560	561	176	108	110
29	*124	110			-	114	694	1,350	516	173	106	110
30	126	110			-	114	740	1,270	484	170	104	108
31	119	-			-	110	-	1,390	-	167	104	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	4,469	288	102	144	0.800	0.92	8,860
November	3,465	156	98	116	.644	.72	6,870
December	3,159	110	-	102	.567	.65	6,270
Calendar year 1946	124,441	1,920	-	341	1.89	25.72	246,800
January	3,100	-	-	100	.556	.64	6,150
February	2,660	-	-	95.0	.528	.55	5,280
March	3,132	114	-	101	.561	.65	6,210
April	7,713	740	106	257	1.43	1.59	15,300
May	49,697	2,740	847	1,603	8.91	10.27	98,570
June	29,876	1,770	484	996	5.53	6.17	59,260
July	8,283	445	167	267	1.48	1.71	16,430
August	4,007	164	104	129	.717	.83	7,950
September	3,432	151	102	114	.633	.71	6,810
Water year 1946-47	122,993	2,740	-	337	1.87	25.41	244,000

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 3-6, 13-16, 21, 24-26, Nov. 29 to Dec. 11, Dec. 16 to about Mar. 10. No gage-height record Jan. 1 to Mar. 14; discharge computed on basis of weather records and records for stations on nearby streams.

Big Creek near Big Creek, Idaho

Location.- Staff gage, lat. 45°07', long. 114°55', in sec. 31, T. 21 N., R. 13 E., 1¼ miles downstream from Cabin Creek, 2 miles southeast of Wallace Ranch, and 19½ miles east of Big Creek post office.

Drainage area.- 470 square miles.

Records available.- September 1944 to September 1947.

Extremes.- Maximum discharge observed during year, 4,010 second-feet May 9 (gage height, 5.80 feet); minimum observed, 66 second-feet Dec. 17 (discharge measurement), but may have been less during period of ice effect.
1944-47: Maximum discharge observed, that of May 9, 1947; minimum observed, that of Dec. 17, 1946.

Remarks.- Records fair except those for periods of ice effect or no gage-height record, which are poor. No regulation; small diversions for irrigation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a250	a260	a210				a330	a1,500	2,060	769	313	197
2	417	225	211				305	1,930	2,020	792	298	a200
3	a380	184	204				a310	a2,500	1,880	816	290	218
4	a360	171	a204				335	2,780	1,760	804	a289	204
5	343	a210	211				a300	a2,900	1,660	769	283	190
6	a330	211	a208				275	a3,100	1,520	714	275	184
7	a320	a218	197			140	261	3,200	1,580	703	264	190
8	313	*218	164				a260	a3,700	1,520	725	261	211
9	335	218	a170				a260	4,010	1,490	714	254	208
10	a320	a220	a190				a260	a3,600	1,440	692	250	204
11	a310	197	a200				268	2,290	1,400	649	246	200
12	305	184	a210				261	1,930	1,360	588	a246	197
13	298	a170	a215				268	1,840	1,280	578	243	190
14	a295	177	a230			a160	a400	1,720	1,260	558	a240	187
15	298	a170	a240	150	140	a180	534	1,700	1,360	539	239	a188
16	275	165	a160			*204	583	1,720	1,320	510	239	190
17	a290	197	*66			246	764	1,800	1,400	483	232	a205
18	290	a210	90			313	a700	1,930	1,380	465	a220	194
19	a290	218				a340	665	1,970	1,290	447	a210	190
20	a300	225				351	a600	2,000	1,250	429	a210	197
21	305	a210				367	563	1,980	1,190	408	a220	204
22	328	204				375	634	1,970	1,110	400	a220	197
23	a350	a210	180			367	a600	1,930	998	391	218	190
24	335	190				335	573	2,020	1,050	375	218	184
25	a250	a190				a290	a620	2,200	1,020	367	a218	171
26	320	197				290	a680	2,250	1,070	351	211	187
27	305	211				a290	775	2,340	1,190	335	208	174
28	a300	a220				305	a1,000	2,380	1,210	328	208	180
29	290	225	150		-	a340	a1,250	2,020	891	320	a206	184
30	275	218			-	359	1,360	1,880	821	328	204	187
31	268	-			-	375	-	2,160	-	320	197	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	9,645	417	250	311	0.662	0.76	19,130
November	6,123	260	165	204	.434	.48	12,140
December	5,600	240	66	181	.385	.44	11,110
Calendar year 1946	158,862	2,000	66	435	.926	12.56	315,100
January	4,650	-	-	150	.319	.37	9,220
February	3,920	-	-	140	.298	.31	7,780
March	7,307	375	-	236	.502	.58	14,490
April	15,994	1,360	260	533	1.13	1.27	31,720
May	71,250	4,010	1,500	2,298	4.89	5.64	141,300
June	40,780	2,060	821	1,359	2.89	3.23	80,890
July	16,667	816	320	538	1.14	1.32	33,060
August	7,430	313	197	240	.511	.59	14,740
September	5,802	218	171	193	.411	.46	11,510
Water year 1946-47	195,168	4,010	66	535	1.14	15.45	387,100

* Winter discharge measurement made on this day.
a No gage-height record or gage readings in error or not representative of average for day; discharge interpolated, or computed on basis of weather records and records for Johnson Creek at Yellow Pine and Panther Creek near Shoup.
Note.- Stage-discharge relation affected by ice Nov. 16, Dec. 17 to about Mar. 13 (no gage-height record Dec. 19, 21, Jan. 19 to Mar. 13; discharge computed on basis of weather records and records for Johnson Creek at Yellow Pine and Panther Creek near Shoup).

South Fork Salmon River near Knox, Idaho

Location.- Water-stage recorder, lat. 44°39', long. 115°42', in NW¼ sec. 11, T. 15 N., R. 6 E., 800 feet downstream from Curtis Creek, 1 mile upstream from Warm Lake Creek, 1½ miles southwest of Knox, and 21 miles northeast of Cascade.

Drainage area.- 92 square miles.

Records available.- September 1928 to September 1947.

Average discharge.- 19 years, 130 second-feet.

Extremes.- Maximum discharge during year, 1,410 second-feet May 9 (gage height, 6.13 feet); minimum, 30 second-feet Oct. 29, but may have been less during winter period.
1928-47: Maximum discharge observed, 1,560 second-feet June 9, 1933 (gage height, 4.69 feet, site and datum then in use), from rating curve extended above 1,000 second-feet; minimum observed, 16 second-feet Feb. 17, Aug. 19, 20, 1931, Nov. 16, 1944.

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

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Jan. 21		Jan. 28 to Sept. 30					
2.5	34	2.5	37	3.2	157	4.6	624
2.6	46	2.6	48	3.5	227	5.0	817
2.8	76	2.7	62	3.8	315	5.5	1,070
3.0	116	2.9	97	4.2	458	6.0	1,340
3.2	163						

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	50	80			54	130	485	733	222	70	41
2	86	43	72			56	126	680	728	210	67	40
3	59	43	72			56	120	892	652	200	65	54
4	52	52	*71		45	55	122	962	629	193	64	46
5	49	54	71			54	112	957	551	186	61	41
6	47	54	74			50	105	982	551	177	59	40
7	46	54	70	55	*42	56	99	1,050	530	170	58	52
8	46	49	66		41	55	99	1,160	757	164	56	56
9	46	46	65		40	55	99	1,330	857	155	55	51
10	45	47	63		45	56	97	1,080	699	149	55	55
11	44	46	70		48	55	97	887	629	142	55	46
12	44	45	86		52	56	103	842	576	134	54	45
13	44	45	110		65	55	124	837	555	130	54	44
14	44	47	151		59	58	175	757	530	124	52	42
15	44	45	156		56	61	220	728	505	118	51	42
16	44	43	95		58	65	240	723	530	114	49	45
17	44	50	54		58	76	254	723	559	110	48	65
18	44	60	70		56	83	251	699	501	106	48	52
19	44	146	80		56	93	246	704	485	103	47	47
20	47	99	70	50	52	101	296	728	447	99	51	46
21	91	78	68		55	*110	280	752	395	95	51	45
22	130	68	70		55	118	271	747	366	92	52	44
23	110	87	64		55	124	266	723	346	88	55	42
24	71	84	62		55	120	249	747	325	86	49	41
25	70	71	64		55	118	260	787	315	84	47	42
26	82	68	66		55	118	289	832	312	83	46	45
27	63	73	65		55	120	332	842	309	79	45	44
28	59	99	60		50	124	377	787	280	76	44	42
29	49	110	52	45	-	136	431	718	257	76	42	42
30	54	93	52		-	140	458	675	235	74	42	42
31	50	-	52		-	142	-	767	-	72	42	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	1,802	130	44	58.1	0.632	0.73	3,570
November	1,949	146	43	65.0	.707	.79	3,870
December	2,321	156	52	74.9	.814	.94	4,600
Calendar year 1946	64,150	970	-	176	1.91	25.95	127,200
January	1,585	-	-	51.1	.555	.64	3,140
February	1,433	65	40	51.2	.557	.58	2,840
March	2,620	142	50	84.5	.918	1.06	5,200
April	6,328	458	97	211	2.29	2.56	12,550
May	25,563	1,330	485	825	8.97	10.33	50,700
June	15,144	857	235	505	5.49	6.12	30,040
July	3,911	222	72	126	1.37	1.58	7,760
August	1,634	90	42	52.7	.573	.66	3,240
September	1,379	65	40	46.0	.500	.56	2,740
Water year 1946-47	65,669	1,330	-	180	1.96	26.55	130,200

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 2-5, 13, 15, 16, Dec. 1-3, Dec. 16 to Feb. 11, Feb. 19, 20, Feb. 24 to Mar. 1, Mar. 5, 6, 30, 31 (no gage-height record Dec. 26, 27, Jan. 22-27, Feb. 1-6; discharge computed on basis of weather records and records for Johnson Creek at Yellow Pine and other stations on nearby streams.

Johnson Creek near Landmark ranger station, Idaho

Location.- Water-stage recorder, lat. 44°41', long. 115°33', in sec. 31, T. 16 N., R. 8 E., 0.5 mile downstream from Bob Cat Creek, 0.8 mile upstream from Lunch Creek, 1½ miles north of Landmark ranger station, and 20 miles south of Yellow Pine.

Drainage area.- 54.7 square miles.

Records available.- October 1942 to September 1947.

Extremes.- Maximum discharge during year, 1,240 second-feet May 8, 9 (gage height, 5.62 feet); minimum not determined (probably occurred during period of ice effect); minimum gage height, 1.88 feet Nov. 12.
1942-47: Maximum discharge, that of May 8, 9, 1947; minimum observed, 7.8 second-feet Feb. 6, 1943, discharge measurement; minimum gage height recorded, 1.79 feet Nov. 25, 1943, Nov. 16, 1944.

Remarks.- Records good except those for periods of ice effect, which are poor. During late fall of 1936, the Bureau of Reclamation cut a transmountain canal to divert a small flow from a tributary of Johnson Creek to Deadwood River Basin to supplement storage in Deadwood Reservoir. Discharge measurements of June 11 and July 22 indicated flow in this canal of **21.5** and **4.42** second-feet, respectively.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 7-9)

1.8	8	2.6	105	4.4	665
1.9	14	2.9	163	4.8	883
2.0	22	3.2	233	5.3	1,220
2.1	32	3.6	352		
2.3	57	4.0	494		

Discharge, in second-feet, water year October **1945** to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27							320	487	132	25	13
2	48							472	502	125	24	13
3	30							670	443	119	24	18
4	25		(*)		(*)			779	439	112	23	17
5	22							818	386	105	22	15
		25		13	9							
6	20							883	390	98	21	14
7	19					11	25	969	359	95	20	16
8	18		25					1,100	468	88	19	19
9	18							1,150	583	83	19	18
10	18							796	476	78	19	23
11	16							646	425	72	18	18
12	17							623	355	68	18	16
13	16							642	333	63	18	15
14	16						38	600	320	58	18	14
15	16	20					40	596	304	53	17	14
16	16						49	614	326	50	17	15
17	16						64	605	355	48	16	27
18	17	30					68	566	317	45	16	21
19	16	31		12			72	554	295	43	16	18
20	18	29	20		11		82	592	272	40	17	17
21	34					(*)	90	600	236	38	18	15
22	47						96	587	218	37	18	14
23	50					20	102	541	206	36	20	14
24	33						102	541	199	34	18	14
25	38						107	566	194	33	17	14
		25										
26	47						123	578	196	32	16	15
27	32						152	578	206	30	14	15
28	29		15				190	525	172	29	14	14
29	28			*	-		230	461	155	28	14	14
30	27				-		266	439	140	27	13	14
31	27	-			-		-	502	-	26	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff: Inches	Runoff: Acre-feet
October	801	50	16	25.8	0.472	0.54	1,590
November	730	31	-	24.3	.444	.50	1,450
December	665	-	-	21.5	.393	.45	1,320
Calendar year 1946	36,438	660	-	99.8	1.82	24.77	72,280
January	367	-	-	11.8	.216	.25	728
February	288	-	-	10.3	.188	.20	571
March	485	-	-	15.6	.285	.33	962
April	2,196	266	-	73.2	1.34	1.49	4,360
May	19,913	1,150	320	642	11.7	13.54	39,500
June	9,757	583	140	325	5.94	6.63	19,350
July	1,925	132	26	62.1	1.14	1.31	3,820
August	562	25	13	18.1	.331	.38	1,110
September	484	27	13	16.1	.294	.33	960
Water year 1946-47	38,173	1,150	-	105	1.92	25.95	75,720

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Oct. 31 to Nov. 18, Nov. 21 to Apr. 13 (no gage-height record Jan. 27 to Feb. 3; discharge computed on basis of weather records, and records for station at Yellow Pine and other stations on nearby streams).

Johnson Creek at Yellow Pine, Idaho

Location.- Water-stage recorder, lat. 44°58', long. 115°30', in NE¼ sec. 29, T. 19 N., R. 8 E., 700 feet upstream from mouth and a quarter of a mile southwest of Yellow Pine post office.

Drainage area.- 213 square miles.

Records available.- August 1928 to September 1947.

Average discharge.- 19 years, 306 second-feet.

Extremes.- Maximum discharge during year, 4,530 second-feet May 9 (gage height, 6.94 feet); minimum, 53 second-feet Feb. 9 (gage height, 1.02 feet).
1928-47: Maximum discharge, 5,150 second-feet June 9, 1933 (gage height, 7.62 feet), from rating curve extended above 2,800 second-feet; minimum, 22 second-feet Nov. 30, 1933; minimum gage height, 0.70 foot Nov. 30, 1937.

Remarks.- Records good. Small diversion from Johnson Creek Basin to Deadwood River Basin (see "Remarks" for station near Landmark ranger station).

Rating table, water year 1946-47 (gage height, in feet, and discharge, in second-feet)

1.1	64	2.3	418	4.5	1,830
1.2	80	2.6	560	5.0	2,300
1.4	118	3.0	770	6.0	3,390
1.6	167	3.5	1,070	6.6	4,110
1.9	260	4.0	1,420		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sept.
1	114	136	125	110	91	89	173	1,110	1,970	615	154	87
2	190	106	127	89	96	93	173	1,610	1,990	600	149	85
3	149	104	125	100	89	91	170	2,200	1,730	590	144	96
4	130	125	125	108	89	89	167	2,460	1,660	560	139	100
5	120	127	125	108	91	87	162	2,520	1,490	530	134	89
6	114	127	127	106	89	78	159	2,680	1,490	510	130	85
7	112	125	116	108	87	89	157	3,020	1,440	491	125	89
8	106	118	125	106	84	87	157	3,580	1,790	468	123	106
9	108	112	120	106	82	85	157	4,060	1,990	445	118	102
10	102	118	116	108	89	91	151	2,640	1,640	427	118	108
11	100	114	125	108	94	89	151	2,080	1,480	401	118	104
12	102	94	127	102	100	85	149	1,940	1,340	371	116	94
13	98	98	134	104	106	85	167	1,990	1,300	346	116	89
14	98	116	146	100	96	87	215	1,850	1,270	326	112	87
15	98	104	157	89	96	91	282	1,840	1,250	307	110	87
16	98	93	132	102	98	96	334	1,920	1,330	292	108	93
17	98	112	93	100	98	104	392	1,930	1,420	278	104	112
18	98	132	112	98	94	112	392	1,870	1,310	267	104	114
19	98	164	149	102	93	120	384	1,790	1,270	253	102	106
20	102	130	130	98	85	125	432	1,960	1,160	240	106	102
21	144	118	132	100	96	136	440	2,060	1,000	234	110	102
22	199	118	132	98	93	146	445	2,060	945	221	118	98
23	247	139	125	98	93	149	458	1,950	897	208	125	93
24	173	125	120	102	93	146	436	2,010	885	202	112	89
25	173	123	123	98	93	141	458	2,100	867	193	106	91
26	247	120	127	100	93	144	545	2,240	855	190	102	91
27	179	125	125	91	89	139	666	2,270	909	179	96	93
28	162	136	104	72	78	149	814	2,090	781	173	93	93
29	134	139	98	91	-	159	963	1,840	698	167	91	94
30	146	130	100	87	-	176	1,030	1,750	640	162	87	94
31	130	-	100	85	-	179	-	2,000	-	162	87	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	4,169	247	98	134	0.629	0.73	8,270
November	3,628	164	94	121	.568	.63	7,200
December	3,822	157	93	123	.577	.67	7,580
Calendar year 1946	145,090	2,270	75	398	1.87	25.34	287,700
January	3,074	110	72	99.2	.466	.54	6,100
February	2,575	106	78	92.0	.432	.45	5,110
March	3,537	179	78	114	.535	.62	7,020
April	10,779	1,030	149	359	1.69	1.88	21,380
May	67,420	4,069	1,110	2,174	10.2	11.77	133,700
June	38,797	1,990	640	1,293	6.07	6.77	76,950
July	10,408	615	162	336	1.58	1.82	20,640
August	3,557	154	87	115	.540	.62	7,060
September	2,873	108	85	95.8	.450	.50	5,700
Water year 1946-47	154,639	4,060	72	424	1.99	27.00	306,700

Secesh River near Burgdorf, Idaho

Location.- Water-stage recorder, lat. 45°14', long. 115°49', in N½ sec. 23, T. 22 N., R. 5 E., at highway bridge 1¼ miles upstream from Long Gulch Creek and 5½ miles southeast of Burgdorf.

Drainage area.- 102 square miles.

Records available.- April 1943 to September 1947.

Extremes.- Maximum discharge during year, 1,580 second-feet May 7 (gage height, 7.12 feet); minimum not determined, occurred during winter period.
1943-47: Maximum discharge recorded, that of May 7, 1947; minimum observed, 29 second-feet (discharge measurement) Jan. 30, 1945, but may have been less during periods of ice effect.

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	69	65				90	603	837	287	88	52
2	92	60	65				85	854	783	270	85	50
3	74	60	60				80	1,110	703	259	84	60
4	67	65	60				80	1,200	698	248	79	58
5	71	75	60				76	1,230	632	234	78	52
6	70	74	60			(*)	72	1,280	652	224	76	51
7	65	71	50	40	33		71	1,360	603	214	74	62
8	61	70	60			35	71	1,450	652	207	71	80
9	61	69	60				70	1,390	662	198	70	67
10	59	66	60				71	1,080	584	187	71	76
11	58	67	60				71	917	548	183	71	71
12	58	55	65				75	849	494	174	70	61
13	58	55	70				94	821	490	162	69	56
14	58	65	80				137	777	465	156	67	54
15	59	55	85			40	187	766	448	152	64	53
16	56	45	50			50	212	788	490	146	64	66
17	56	65	30			60	237	793	594	137	61	90
18	55	88	*48			70	224	761	503	133	60	78
19	59	162				80	224	815	465	127	59	70
20	62	75		35	35	85	230	821	432	124	61	64
21	111	70				90	217	843	389	118	71	61
22	158	70				95	200	826	357	115	69	59
23	137	75	45			95	194	804	340	113	71	58
24	*96	70				85	194	832	337	109	66	56
25	127	70				80	227	865	324	108	62	58
26	158	70				75	287	900	327	106	58	62
27	94	70				70	364	941	486	101	56	64
28	90	70				70	444	883	382	98	56	59
29	74	70		33	-	80	548	783	334	92	53	58
30	78	60	40		-	90	575	756	305	91	52	59
31	76	-			-	90	-	883	-	90	53	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	2,456	158	55	79.2	0.776	0.90	4,870
November	2,106	162	45	70.2	.688	.77	4,180
December	1,653	85	-	53.3	.523	.60	3,280
Calendar year 1946	62,826	971	-	172	1.69	22.91	124,600
January	1,135	-	-	36.6	.359	.41	2,250
February	956	-	-	34.1	.334	.35	1,900
March	1,795	95	-	57.9	.568	.65	3,560
April	5,707	575	70	190	1.86	2.08	11,320
May	28,981	1,450	603	935	9.17	10.57	57,480
June	15,316	837	305	511	5.01	5.58	30,380
July	4,959	287	90	160	1.57	1.81	9,840
August	2,089	88	52	67.4	.661	.76	4,140
September	1,865	90	50	62.2	.610	.68	3,700
Water year 1946-47	69,018	1,450	-	189	1.85	25.16	136,900

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 2-4, 12-17, Nov. 20 to Apr. 4 (no gage-height record Dec. 28 to Jan. 11; discharge computed on basis of weather records and records for Warren Creek and other nearby streams).

Warren Creek near Warren, Idaho

Location.- Water-stage recorder, lat. 45°17', long. 115°42', in sec. 3, T. 22 N., R. 6 E., 30 feet downstream from bridge on Warren-McCall road, a tenth of a mile downstream from Steamboat Creek, and 1.3 miles northwest of Warren.

Drainage area.- 37 square miles.

Records available.- February 1943 to September 1947.

Extremes.- Maximum discharge during year, 541 second-feet May 7 (gage height, 5.39 feet); minimum, 5.5 second-feet Dec. 17 (gage height, 2.45 feet).
1943-47: Maximum discharge observed, 790 second-feet May 27, 1943 (gage height, 5.37 feet, site then in use), from rating curve extended above 350 second-feet; minimum, 4.2 second-feet Dec. 27, 1943 (gage height, 2.31 feet).

Remarks.- Records good. No diversion or regulation above station. Small amount of flow bypasses station through debris from dredging operations.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	19	17	13	11	11	29	206	230	57	17	10
2	26	14	17	12	11	11	28	306	214	53	16	9.9
3	20	14	16	12	11	11	27	437	197	52	16	13
4	18	18	16	12	10	10	27	472	188	50	15	12
5	18	18	16	12	10	9.9	25	479	170	47	15	11
6	17	18	15	12	9.9	*9.2	24	499	170	45	15	11
7	16	18	12	12	10	10	22	518	157	42	14	12
8	16	16	16	11	10	10	23	502	159	41	14	15
9	15	15	16	11	10	9.9	22	499	153	39	14	14
10	14	16	16	11	10	9.9	21	414	138	38	14	14
11	14	15	16	11	11	9.9	21	354	128	37	14	13
12	14	12	16	11	11	9.9	22	318	115	34	13	12
13	14	13	16	11	12	10	29	295	109	32	13	12
14	14	16	16	11	12	11	43	274	104	31	13	11
15	14	13	16	11	11	13	60	267	100	29	12	11
16	13	11	12	11	11	16	70	269	109	28	12	13
17	13	16	8.8	11	10	19	77	272	119	27	12	18
18	12	17	*14	11	9.7	23	77	265	106	26	12	18
19	13	28	17	11	9.9	26	76	274	99	25	11	15
20	13	20	16	11	9.5	28	76	274	94	24	13	15
21	18	18	15	11	10	30	72	276	84	22	16	14
22	28	19	14	11	10	32	71	269	77	22	15	13
23	28	21	13	11	10	31	69	265	74	22	15	12
24	22	19	13	11	10	28	67	265	70	21	13	12
25	27	19	13	11	11	26	74	269	67	20	12	12
26	32	18	14	12	9.9	24	88	276	68	20	12	13
27	24	18	13	9.5	9.5	22	113	283	97	19	12	13
28	22	18	11	10	10	23	140	265	77	18	11	12
29	19	18	12	b10	-	26	168	237	71	18	11	12
30	20	13	13	b10	-	29	188	223	64	18	11	13
31	17	-	13	b10	-	29	-	256	-	18	11	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	566	32	12	18.3	0.495	0.57	1,120
November	508	28	11	16.9	.457	.51	1,010
December	448.8	17	8.8	14.5	.392	.45	890
Calendar year 1946	15,757.8	250	8.0	43.2	1.17	15.84	31,250
January	344.5	13	9.5	11.1	.300	.35	683
February	290.4	12	9.5	10.4	.281	.29	576
March	567.7	32	9.2	18.3	.495	.57	1,130
April	1,849	188	21	61.6	1.66	1.86	3,670
May	10,078	518	206	325	8.78	10.13	19,990
June	3,608	230	64	120	3.24	3.63	7,160
July	975	57	18	31.5	.851	.98	1,930
August	414	17	11	13.4	.362	.42	821
September	385.9	18	9.9	12.9	.349	.39	765
Water year 1946-47	20,035.3	518	8.8	54.9	1.48	20.15	39,740

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

Mud Creek near Tamarack, Idaho

Location.- Water-stage recorder, lat. 45°00', long. 116°21', in sec. 9, T. 19 N., R. 1 E., 0.5 mile upstream from Little Mud Creek, 3½ miles northeast of Tamarack, and 5 miles upstream from mouth.

Drainage area.- 15.8 square miles.

Records available.- April 1937 to September 1940 (incomplete), September 1945 to September 1947.

Extremes.- Maximum discharge during year not determined, occurred during period of no gage-height record; minimum, 1.1 second-feet Sept. 5-7, 14-16; minimum gage height recorded, 2.03 feet Oct. 18.

1937-38, 1945-47: Maximum discharge observed, about 300 second-feet probably on May 1, 1938 (gage height, 3.34 feet, from floodmark, site and datum then in use); minimum, probably less than half a second-foot during late summer of 1937.

Remarks.- Record good except those for periods of ice effect or no gage-height record, which are poor. No diversion or regulation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	2.7	30			10	68	54	7.8	4.8	1.7	1.2
2	2.9	2.7	25			10	66	55	7.8	4.5	1.7	1.2
3	2.4	2.7	21			9	64	58	7.5	4.5	1.7	1.5
4	2.2	3.3	23		(*)	9	60	54	7.8	4.5	1.6	1.3
5	2.1	3.4	25	10	3	9	54	47	8.1	4.1	1.6	1.2
6	2.1	3.4	31			9	50	40	8.1	3.9	1.5	1.1
7	2.1	3.2	31			9.7	45	34	7.5	3.7	1.5	1.7
8	2.1	2.7	28			9.4	45	30	11	3.7	1.5	1.5
9	2.1	2.7	*25			9.1	43	32	11	3.4	1.6	1.4
10	2.1	2.7	23			10	41	25	9.4	3.2	1.6	1.4
11	2.1	2.7				10	39	20	8.8	3.2	1.5	1.3
12	2.1	2.5				9.7	40	20	7.8	3.2	1.5	1.2
13	2.1	2.7				9.7	48	17	7.5	3.0	1.5	1.2
14	2.1	3.0				11	65	15	7.3	3.0	1.5	1.2
15	2.1	3.0		60	5	14	84	13	7.0	2.7	1.5	1.1
16	2.1	3.0			8	22	90	12	7.5	2.7	1.5	1.4
17	2.2	3.2				39	87	11	13	2.6	1.5	1.5
18	2.2	18				60	84	11	8.8	2.6	1.4	1.5
19	2.2	48				75	76	10	8.4	2.5	1.4	1.4
20	3.4	36				80	74	9.4	8.1	2.4	1.5	1.3
21	5.0	17			13	90	68	9.1	7.3	2.4	1.5	1.3
22	7.5	14			13	95	65	8.4	7.0	2.2	1.5	1.3
23	5.7	18			14	*88	61	8.1	6.5	2.2	1.6	1.3
24	4.8	19			13	78	56	7.8	6.2	2.0	1.5	1.3
25	5.0	17			13	68	55	7.5	6.0	2.0	1.5	1.3
26	5.7	16		20	12	62	58	7.5	6.0	2.1	1.5	1.3
27	3.9	21			11	60	62	7.3	6.2	2.0	1.4	1.3
28	3.2	35			10	58	66	7.0	6.0	1.8	1.3	1.4
29	2.9	43			-	58	67	6.8	6.0	1.8	1.3	1.4
30	3.0	33			-	60	62	6.8	5.5	1.8	1.2	1.4
31	2.9	-			-	70	-	7.8	-	1.8	1.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	94.7	7.5	2.1	3.05	0.193	0.22	188
November	384.6	48	2.5	12.8	.810	.91	763
December	1,082	-	-	34.9	2.21	2.55	2,150
Calendar year 1946	8,323.6	256	1.6	22.8	1.44	19.60	16,510
January	183	-	-	5.90	.373	.43	363
February	209	14	-	7.46	.472	.49	415
March	1,211.6	95	9	39.1	2.47	2.85	2,400
April	1,843	90	39	61.4	3.89	4.34	3,660
May	651.5	58	6.8	21.0	1.33	1.53	1,290
June	232.9	13	5.5	7.76	.491	.55	462
July	90.3	4.8	1.8	2.91	.184	.21	179
August	46.3	1.7	1.2	1.49	.094	.11	92
September	39.9	1.7	1.1	1.33	.084	.09	79
Water year 1946-47	6,068.8	-	1.1	16.6	1.05	14.28	12,040

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 1-4, 8-13, 15, 16, about Dec. 17 to Feb. 21, Feb. 23 to Mar. 8. No gage-height record Dec. 8, Dec. 10 to Feb. 3, Mar. 18-22, Mar. 26 to Apr. 8; discharge computed on basis of weather records and records for stations on nearby streams.

Grande Ronde River near Hilgard, Oreg.

Location.- Water-stage recorder, lat. 45°19', long. 118°16', near center of sec. 11, T. 3 S., R. 36 E., half a mile upstream from lower reservoir site of Bureau of Reclamation, three-quarters of a mile upstream from Spring Creek, and 3 miles southwest of Hilgard.

Drainage area.- 489 square miles.

Records available.- October 1945 to September 1947 in reports of Geological Survey. March 1937 to September 1945 in files of State engineer.

Average discharge.- 10 years, 241 second-feet.

Extremes.- Maximum discharge during year, 3,240 second-feet Dec. 12 (gage height, 5.22 feet); minimum, 7.0 second-feet Nov. 13 (gage height, 0.67 foot).
1937-47: Maximum discharge, that of Dec. 12, 1946; minimum, 6 second-feet Aug. 10, 12-29, Sept. 1-4, 1940.

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

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 11				Dec. 12 to Sept. 30							
0.8	13	1.4	124	0.7	15	1.2	107	2.0	373	3.5	1,110
1.0	29	1.6	193	.8	24	1.4	168	2.5	570	4.0	1,560
1.2	63	1.8	265	1.0	54	1.7	267	3.0	800	4.5	2,190

Discharge, in second-feet, water year October 1946 to September 194

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	55	186	b60	184	250	570	655	213	113	27	20
2	24	44	158	b60	233	267	566	745	250	101	25	18
3	24	30	141	b60	270	243	558	838	292	93	24	17
4	27	41	131	b60	230	223	530	850	323	87	22	17
5	34	42	121	b62	210	197	518	800	291	82	21	16
6	34	57	*105	b64	190	152	498	760	267	76	21	17
7	36	55	114	b66	190	194	466	755	243	74	20	20
8	39	46	102	b69	190	174	486	730	295	72	20	27
9	36	34	98	b75	*181	168	506	750	498	64	20	29
10	34	50	95	b83	148	316	502	602	530	62	21	28
11	33	44	201	b90	149	384	486	522	494	64	22	28
12	30	28	2,070	96	358	302	462	478	438	62	21	23
13	30	18	*1,300	96	518	281	454	442	392	54	20	21
14	29	39	1,020	b93	542	320	494	395	351	52	20	20
15	29	52	894	b90	*542	380	566	369	312	52	19	19
16	26	39	*710	b86	660	490	602	348	295	49	18	18
17	26	50	414	b84	646	602	720	334	295	46	18	20
18	26	61	351	b83	578	673	1,030	312	253	42	18	21
19	28	89	b330	b83	506	696	1,070	302	223	39	17	22
20	35	75	309	b84	454	668	1,100	295	210	36	17	22
21	83	72	270	85	426	646	984	281	203	34	18	22
22	75	86	230	76	450	720	850	267	178	33	19	20
23	89	105	168	69	510	760	760	247	162	33	19	20
24	72	127	140	113	538	682	678	233	149	32	20	20
25	78	118	152	190	466	624	624	223	137	32	19	20
26	92	168	187	344	380	590	610	213	134	32	18	21
27	69	218	168	298	270	538	628	216	162	32	17	25
28	59	261	96	b270	330	514	664	200	174	30	16	22
29	50	261	69	b240	-	506	682	181	152	29	15	24
30	52	200	59	223	-	538	700	194	131	28	17	28
31	39	-	b60	203	-	554	-	264	-	27	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,359	92	23	43.8	2,700
November	2,565	261	18	85.5	5,090
December	10,449	2,070	59	337	20,730
Calendar year 1946	99,208	2,070	15	272	196,800
January	3,655	344	60	118	7,250
February	10,347	660	146	370	20,520
March	13,652	760	152	440	27,080
April	19,364	1,100	454	645	38,410
May	13,801	850	181	445	27,370
June	8,037	530	131	268	15,940
July	1,662	113	27	53.6	3,300
August	609	27	15	19.6	1,210
September	645	29	16	21.5	1,280
Water year 1946-47	86,145	2,070	15	236	170,900

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

Grande Ronde River at La Grande, Oreg.

Location (revised).- Water-stage recorder, lat. 45°21', long. 118°08', in sec. 36, T. 2 S., R. 37 E., 2 miles northwest of La Grande and 4 miles downstream from Fivepoint Creek. Datum of gage is 2,831.25 feet above mean sea level, datum of 1929.
Drainage area.- 678 square miles.
Records available.- February 1918 to June 1923, October 1925 to September 1947. November 1903 to September 1915 at Hilgard, 4 miles upstream.
Average discharge.- 33 years (1905-9, 1910-11, 1912-15, 1918-20 1921-22, 1925-47), 346 second-feet.
Extremes.- Maximum discharge during year, 5,320 second-feet Dec. 12 (gage height, 7.58 feet); minimum, 14 second-feet Aug. 29.
1903-15, 1918-23, 1925-47: Maximum discharge, 8,880 second-feet Mar. 18, 1932 (gage height, 8.90 feet); minimum, 3.9 second-feet Aug. 26, 1940 (gage height, 1.23 feet).
Remarks.- Records good except those for period of ice effect, which are poor. Some discharge measurements made at cable 3 miles above station. Small diversions above station for irrigation.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet and discharge, in second-feet)

Oct. 1 to Dec. 11				Dec. 12 to Sept. 30							
1.7	26	2.3	150	1.4	12	1.8	54	2.4	210	4.0	1,130
1.8	38	2.5	210	1.5	18	1.9	72	2.7	335	4.6	1,660
1.9	55	2.8	330	1.6	27	2.0	92	3.1	540	5.3	2,430
2.1	98	3.1	475	1.7	40	2.2	143	3.5	775	6.4	3,790

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	61	258	b125		425	854	903	262	138	31	22
2	27	57	214	121		430	847	1,010	290	124	30	20
3	28	48	195			380	827	1,110	330	114	28	18
4	31	46	189			355	788	1,120	385	109	27	17
5	37	53	183		b350	317	756	1,000	335	99	25	17
6	40	69	168			250	716	994	326	92	24	17
7	40	67	165			304	668	980	294	86	23	21
8	45	61	156			282	704	973	400	82	22	26
9	43	52	*150		*b290	278	749	1,030	622	76	22	34
10	40	59	145		b350	496	736	834	662	74	23	31
11	38	57	474		b86	692	710	710	617	76	24	31
12	36	45	3,670		b1,030	524	668	639	551	70	24	27
13	36	30	*2,690		1,110	485	662	578	496	65	23	24
14	36	48	1,960		910	534	723	518	450	63	22	22
15	36	48	1,650		*910	617	847	475	390	65	21	22
16	33	38	1,230	b215	1,110	762	903	445	360	58	20	22
17	32	59	756		1,070	980	1,110	425	375	54	19	22
18	32	73	606		959	1,090	1,640	395	312	51	18	23
19	34	93	b560		827	1,150	1,680	365	270	48	17	24
20	40	100	496		730	1,100	1,720	355	250	46	17	25
21	73	80	425		668	1,040	1,490	340	242	43	17	24
22	86	106	365		692	1,190	1,270	322	218	40	19	23
23	98	118	282		788	1,240	1,110	294	196	39	20	22
24	86	153	242		861	1,110	987	282	182	37	20	22
25	89	150	226		756	987	910	270	165	39	19	22
26	103	198	270		634	924	875	254	156	40	18	25
27	89	290	274		470	834	889	254	192	39	17	27
28	71	362	178		524	788	938	242	206	37	17	26
29	65	366	153			768	966	218	186	36	16	26
30	65	290	132		-	820	980	222	156	35	17	32
31	55	-	b130		-	847	-	312	-	32	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,591	103	27	51.3	3,160
November	3,277	366	30	109	6,500
December	18,592	3,670	130	600	36,880
Calendar year 1946	151,771	3,670	19	416	301,000
January	6,481	-	-	209	12,850
February	18,175	1,110	-	649	36,050
March	21,999	1,240	250	710	43,630
April	28,723	1,720	662	957	56,970
May	17,919	1,120	218	578	35,540
June	9,876	662	156	329	19,590
July	2,007	138	32	64.7	3,980
August	660	31	16	21.3	1,310
September	714	34	17	23.8	1,420
Water year 1946-47	130,014	3,670	16	356	257,900

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

Grande Ronde River at Rondowa, Oreg.

Location.- Water-stage recorder, lat. 45°44', long. 117°47', in NW¼ sec. 23, T. 3 N., R. 40 E., at Rondowa, 500 feet downstream from Wallowa River. Datum of gage is 2,281.4 feet above mean sea level, datum of 1929 (Union Pacific System track profile).

Drainage area.- 2,555 square miles.

Records available.- October 1926 to September 1947.

Average discharge.- 21 years, 1,907 second-feet.

Extremes.- Maximum discharge during year, 10,800 second-feet Dec. 12, 15; maximum gage height, 6.83 feet Dec. 12; minimum discharge, 445 second-feet Sept. 5, 6 (gage height, 1.15 feet).

1926-47: Maximum discharge, 18,300 second-feet (revised) Mar. 18, 1932 (gage height, 9.30 feet); minimum, 225 second-feet Dec. 19, 1935.

Revisions.- The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede those shown in the water-supply papers indicated.

Water-Supply Paper	Water year	Date	Gage height (feet)	Discharge (second-feet)
653.....	1927	June 9	6.58	10,100
673.....	1928	Mar. 11	7.70	13,300
693.....	1929	June 16	6.01	8,550
738.....	1932	Mar. 18	9.30	18,300
753.....	1933	June 16	7.1	11,500
813.....	1936	Apr. 19	7.03	11,300
863.....	1938	May 28	6.18	9,000
883.....	1939	Mar. 25	6.47	9,780
983.....	1943	Apr. 16	6.67	10,300

Remarks.- Records good except those for period of no gage-height record, which are poor. Many diversions above station for irrigation. Flow slightly regulated by Wallowa Lake Reservoir.

Revisions.- Revised figures of discharge for high-water periods in the water years 1927 to 1929, 1932, 1933, 1936, 1938, and 1943 are given herewith. They supersede those published in Water-Supply Papers 653, 673, 693, 738, 753, 813, 863, and 983.

Day (water year)	Discharge (second-feet)	Day (water year)	Discharge (second-feet)	Day (water year)	Discharge (second-feet)	Day (water year)	Discharge (second-feet)
1926-27		1931-32		1932-33		1935-36	
May 15	7,230	Apr. 17	8,780	June 2	9,370	Apr. 25	8,280
16	8,310	18	8,360	3	9,670	May 11	8,010
17	8,700	19	7,880	4	10,100	12	8,180
18	7,120	20	7,470	5	10,400	13	8,510
June 8	8,730	May 2	7,260	6	9,720	14	10,200
9	9,590	3	7,540	7	8,730	15	10,100
10	8,520	4	8,420	8	7,910	16	8,240
11	8,160	5	8,650	9	8,360		
12	7,940	6	8,650	10	10,600	1937-38	
13	7,940	7	8,860	11	10,300	May 27	7,710
14	7,860	8	9,160	12	8,920	28	8,570
15	7,500	9	9,320	13	10,400	29	7,540
		10	9,640	14	10,100		
1927-28		11	10,100	15	10,800	1942-43	
Jan. 13	7,660	12	10,400	16	11,300	Mar. 30	8,420
14	7,030	13	11,300	17	10,500	31	8,940
Mar. 10	7,560	14	11,400	18	8,600	Apr. 1	9,370
11	11,800	15	10,100			2	8,810
12	8,340	16	8,860	1935-36		3	8,490
		17	8,140	Apr. 13	8,620	15	9,320
1928-29		18	7,960	14	8,880	16	10,000
May 22	7,070	19	8,140	15	9,100	17	9,700
23	7,690	20	8,440	16	9,460	18	9,370
24	8,110	21	8,920	17	8,940	19	9,830
25	7,030	22	8,700	18	10,800	20	9,270
June 16	7,810	23	7,760	19	10,700	21	8,940
				20	10,000		
1931-32		1932-33		21	9,430		
Mar. 18	12,900	May 30	8,140	22	9,780		
19	14,000	31	9,270	23	9,210		
Apr. 16	9,210	June 1	9,400	24	8,970		

Revised monthly discharge of Grande Ronde River at Rondowa, Oreg.

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
May 1927	150,000	8,700	3,230	4,839	297,500
June	182,290	9,590	3,230	6,076	361,600
Water year 1926-27	821,299	9,590	466	2,250	1,628,000
Calendar year 1927	956,837	9,590	-	2,621	1,898,000
January 1928	88,170	7,660	1,230	2,844	174,900
March	160,730	11,800	1,210	5,185	318,800
Water year 1927-28	1,030,214	11,800	470	2,815	2,044,000
Calendar year 1928	856,460	11,800	393	2,340	1,699,000
May 1929	138,590	8,110	2,820	4,471	274,900
June	134,480	7,810	3,060	4,483	266,700
Water year 1928-29	567,540	8,110	353	1,555	1,126,000
Calendar year 1929	557,395	8,110	310	1,527	1,106,000
March 1932	162,290	14,000	1,620	5,235	321,900
April	227,570	-	5,170	7,586	451,400
May 1932	244,270	11,400	3,670	7,880	484,500
Water year 1931-32	908,598	14,000	301	2,489	1,802,000
Calendar year 1932	932,111	14,000	340	2,554	1,849,000
May 1933	169,300	9,270	3,740	5,461	335,800
June	237,200	11,300	3,920	7,907	470,500
Water year 1932-33	806,128	11,300	424	2,209	1,598,000
Calendar year 1933	825,396	11,300	462	2,261	1,636,000
April 1936	196,640	10,800	1,300	6,555	390,000
May	204,310	10,200	4,020	6,591	405,200
Water year 1935-36	666,647	10,800	256	1,821	1,322,000
Calendar year 1936	664,414	10,800	256	1,815	1,318,000
May 1938	161,050	8,570	3,400	5,195	319,400
Water year 1937-38	713,340	8,570	308	1,954	1,415,000
Calendar year 1938	703,627	8,570	373	1,928	1,396,000
March 1943	105,360	8,940	1,900	3,399	209,000
April	236,200	10,000	5,480	7,873	468,500
Water year 1942-43	1,070,574	10,000	448	2,933	2,123,000
Calendar year 1943	1,037,865	10,000	448	2,843	2,059,000

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	623	951	1,580		a1,800	2,090	3,320	5,100	4,540	2,060	729	469
2	647	906	1,430		a2,300	2,060	3,320	6,380	4,450	2,080	720	463
3	647	843	1,340		a2,300	2,020	3,260	7,640	4,070	2,180	704	457
4	639	834	1,280		a2,500	1,970	3,170	7,960	3,970	2,150	671	451
5	655	834	1,260		a1,900	1,850	3,070	8,010	3,690	2,060	655	451
6	647	843	1,240		1,850	1,760	2,960	8,080	3,780	2,020	623	451
7	639	861	1,200		1,810	1,710	2,790	8,520	3,730	1,990	587	517
8	647	852	1,190		1,740	1,740	2,760	8,940	4,850	1,900	566	601
9	647	834	1,180		1,670	1,850	2,830	8,240	5,760	1,830	545	580
10	639	843	1,170		1,650	2,810	2,790	6,890	5,180	1,780	545	608
11	631	843	2,480		1,690	3,420	2,690	6,000	4,580	1,660	538	594
12	631	825	8,880	a1,000	2,870	3,000	2,620	5,500	4,180	1,530	538	566
13	631	772	8,700		3,950	2,690	2,620	5,160	4,010	1,430	538	545
14	623	780	9,350		3,730	2,560	2,880	4,850	3,780	1,370	538	517
15	623	763	10,200		3,640	2,570	3,350	4,620	3,680	1,340	517	510
16	615	720	7,780		3,920	2,740	3,620	4,540	3,930	1,240	503	510
17	608	746	6,000		3,840	3,070	4,090	4,450	4,350	1,160	503	538
18	615	807	4,980		3,680	3,410	5,020	4,280	4,260	1,110	496	573
19	615	960	4,200		3,410	3,640	5,360	4,260	4,070	1,050	482	566
20	712	996	a3,600		3,100	3,730	5,560	4,450	3,800	996	482	552
21	951	942	a3,000		2,930	3,750	5,320	4,560	3,050	942	496	538
22	924	969	a2,750		2,790	3,970	5,080	4,540	2,690	906	503	524
23	1,070	1,120	a2,500		2,810	4,120	4,850	4,260	2,540	870	517	524
24	969	1,250	a2,200		2,830	3,970	4,620	4,280	2,480	843	510	517
25	1,130	1,230	a2,000		2,780	3,780	4,430	4,520	2,530	843	517	545
26	1,570	1,570	a1,800		2,590	3,620	4,370	4,830	2,530	825	510	647
27	1,250	1,660	a1,500	a1,990	2,380	3,370	4,500	5,160	2,880	816	489	615
28	1,100	1,910	a1,300		2,200	3,170	4,810	5,160	2,570	807	475	580
29	1,030	1,900	a1,250		-	3,080	5,160	4,540	2,350	780	469	608
30	996	1,750	a1,200		-	3,170	5,220	4,200	2,180	746	457	594
31	942	-	a1,200		-	3,300	-	4,790	-	738	463	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	24,666	1,570	608	796	48,920
November	31,114	1,910	720	1,037	61,710
December	99,740	10,200	1,170	3,217	197,800
Calendar year 1946	985,286	10,200	525	2,699	1,954,000
January	38,920	-	-	1,255	77,200
February	74,660	3,950	1,650	2,666	148,100
March	89,990	4,120	1,710	2,903	178,500
April	116,440	5,560	2,620	3,881	231,000
May	174,710	8,940	4,200	5,636	346,500
June	110,260	5,760	2,180	3,675	218,700
July	42,052	2,180	738	1,357	83,410
August	16,886	729	457	545	33,490
September	16,211	647	451	540	32,150
Water year 1946-47	835,649	10,200	451	2,289	1,657,000

Peak discharge.- Dec. 12 (5 p.m.) 10,800 sec.-ft.; Dec. 15 (6 a.m.) 10,800 sec.-ft.: May 8 (3 to 5 a.m.) 9,370 sec.-ft.; May 28 (4:30 a.m.) 5,460 sec.-ft.; June 9 (6 to 9 a.m.) 5,900 sec.-ft.

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

Grande Ronde River at Troy, Oreg.

Location.- Wire-weight gage, lat. 45°57', long. 117°27', in NW¼ sec. 4, T. 5 N., R. 43 E. (revised), at bridge at Troy, 100 feet downstream from Wenaha River.

Drainage area.- 3,275 square miles.

Records available.- August 1944 to September 1947.

Extremes.- Maximum discharge observed during year, 30,000 second-feet (supersedes figure shown in Water-Supply Paper 1080) Dec. 15 (gage height, 23.20 feet); minimum observed, 592 second-feet Aug. 18.
1944-47: Maximum discharge observed, that of Dec. 15, 1946; minimum observed, 470 second-feet Sept. 11, 1944.

Remarks.- Records good except those for periods of doubtful or no gage-height record, which are fair. Flow slightly regulated by Wallowa Lake and Minam Lake Reservoirs. Many diversions for irrigation near La Grande, Enterprise, and Wallowa; no diversion around station.

Rating tables, water year 1946-47 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 11		Dec. 12 to Sept. 30					
14.7	750	14.7	550	16.5	2,890	19.2	9,950
15.0	1,010	15.0	790	17.0	3,840	20.0	13,000
15.5	1,550	15.5	1,350	17.7	5,520	21.2	18,400
16.0	2,220	16.0	2,090	18.4	7,380	23.2	30,000
16.6	3,240						

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	766	1,150	2,700	1,910	2,790	3,060	5,270	6,830	5,020	2,430	880	613
2	782	1,100	2,500	1,790	3,390	2,960	5,170	7,670	5,120	2,460	870	613
3	782	1,070	2,220	1,670	3,390	2,860	4,970	9,740	4,920	2,540	860	606
4	782	1,080	2,070	1,730	3,590	2,750	4,770	9,950	4,630	2,480	820	606
5	782	1,050	1,900	1,790	2,860	2,660	4,340	10,300	4,290	2,270	781	606
6	766	1,030	1,880	1,760	2,720	2,430	4,390	10,300	4,290	2,260	754	606
7	814	1,030	1,830	1,790	2,560	2,350	4,060	10,300	4,200	2,320	736	628
8	798	1,050	1,830	1,760	2,430	2,350	3,930	11,300	a6,000	2,220	709	745
9	798	1,030	1,830	1,490	2,400	2,820	4,110	9,880	6,610	2,120	684	800
10	774	1,030	1,850	1,550	2,370	3,390	3,970	8,540	6,090	2,000	676	840
11	766	1,010	g3,240	1,490	2,400	5,420	3,840	7,670	5,470	1,960	644	800
12	766	992	g17,400	1,490	3,710	4,530	3,800	6,880	a5,000	1,740	620	727
13	750	974	17,100	1,460	d6,300	4,150	a3,800	6,460	a4,500	1,720	606	692
14	750	956	23,300	1,490	4,770	3,880	4,150	6,090	4,430	1,550	620	668
15	750	956	30,000	1,520	5,570	3,840	4,920	5,780	4,290	1,490	620	652
16	766	920	14,400	1,490	5,090	4,240	5,170	5,570	4,200	1,430	606	700
17	750	992	9,330	1,520	5,020	4,820	6,250	5,270	4,480	1,230	606	709
18	766	1,170	8,220	1,490	4,770	5,520	7,610	5,140	4,820	1,210	592	754
19	750	1,320	6,250	1,460	4,480	a5,700	7,730	5,020	4,720	1,180	606	781
20	766	1,430	5,320	1,490	4,200	a5,900	7,970	4,970	4,060	1,180	636	763
21	1,320	1,390	4,820	1,490	4,110	a5,900	7,550	4,920	3,590	1,080	606	772
22	1,150	1,340	4,060	1,460	4,060	6,300	7,050	4,920	3,240	1,060	620	754
23	1,430	1,550	3,630	1,460	4,020	6,460	6,780	5,170	3,030	1,020	620	736
24	1,550	1,830	3,240	2,340	4,060	6,200	6,250	5,170	2,800	1,000	636	727
25	1,700	1,850	a3,000	2,400	4,110	6,010	6,250	5,270	2,800	1,000	652	754
26	1,800	2,070	2,860	5,270	4,060	5,270	6,040	5,520	2,800	980	652	1,010
27	1,600	2,310	2,660	3,930	3,430	5,020	6,300	5,780	2,890	960	636	940
28	1,360	2,530	2,090	2,860	3,060	4,920	6,460	5,990	3,060	920	620	781
29	1,300	2,670	2,000	2,750	-	4,630	6,830	5,270	2,890	900	613	790
30	1,170	2,770	1,880	2,690	-	4,820	6,720	4,820	2,560	910	613	800
31	1,150	-	1,910	2,720	-	5,170	-	4,920	-	890	620	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	30,954	1,800	750	999	61,400
November	41,650	2,770	920	1,388	82,610
December	187,320	30,000	1,830	6,043	371,500
Calendar year 1946	1,380,884	30,000	675	3,783	2,739,000
January	61,510	5,270	1,460	1,984	122,000
February	106,720	6,300	2,370	3,811	211,700
March	136,330	6,460	2,350	4,398	270,400
April	166,450	7,970	3,800	5,548	330,100
May	211,410	11,300	4,820	6,820	419,300
June	126,800	6,610	2,560	4,227	251,500
July	48,510	2,540	890	1,565	96,220
August	20,814	880	592	671	41,280
September	21,973	1,010	606	732	43,580
Water year 1946-47	1,160,441	30,000	592	3,179	2,302,000

a No gage-height record; discharge computed on basis of records for station at Wallowa.
d Doubtful gage-height record; discharge computed as explained in footnote a.
g Computed from graph based on once- or twice-daily gage readings.

Catherine Creek near Union, Oreg.

Location.- Water-stage recorder, lat. 45°09', long. 117°47', in SE¼ sec. 2, T. 5 S., R. 40 E., 3 miles downstream from Little Catherine Creek and 6 miles southeast of Union. Datum of gage is 3,082.11 feet above mean sea level, datum of 1929.
Drainage area.- 105 square miles.
Records available.- May 1906 to May 1907 (gage height only), August 1911 to December 1912, March to September 1915, February 1918 to August 1919, October 1925 to September 1947.
Average discharge.- 23 years (1911-12, 1918-19, 1925-44, 1945-47), 117 second-feet.
Extremes.- Maximum discharge during year, 844 second-feet May 7 (gage height, 3.44 feet); minimum recorded, 18 second-feet Nov. 12, but may have been less during periods of ice effect.
1906-7, 1911-12, 1915, 1918-19, 1925-47: Maximum discharge observed, 1,240 second-feet May 21, 1912, June 3 or 4, 1933; minimum recorded, 4 second-feet Nov. 26, 27, 1930.
Remarks.- Records good March to September, fair October to February except those for periods of ice effect, which are poor. A few small diversions above station for irrigation, and some water diverted into Big Creek, in Powder River Basin.

Rating tables, water year 1946-47, except period of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Dec. 5)

Oct. 1 to Jan. 28

0.7	21	1.0	47
.8	28	1.2	71
.9	37	1.4	100

Note.- Same as following table above 1.4 feet.

Jan. 29 to Sept. 30

0.7	19	1.2	68	2.2	284
.8	26	1.4	100	2.5	383
.9	34	1.6	135	2.8	503
1.0	44	1.9	200	3.3	760

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	32	50		151	77	161	424	272	100	a40	27
2	27	30	46		172	71	151	565	284	97	a40	26
3	26	b29	45		122	65	141	672	251	95	a39	26
4	27	b28	50		102	63	135	710	232	92	38	25
5	27	b30	56		97	58	126	710	210	88	37	25
6	27	34	56		88	53	115	710	213	85	36	26
7	27	32	55		b86	52	107	727	210	82	34	40
8	27	30	52		b84	52	110	732	290	78	34	37
9	26	31	*50		b82	50	112	630	340	74	34	35
10	26	31	47		b80	54	110	502	290	78	34	41
11	26	30	84		b72	52	110	436	254	77	34	32
12	26	24	149		*b90	50	115	405	226	74	33	31
13	25	33	216		126	50	139	372	213	71	33	29
14	24	34	260	b55	124	55	200	350	200	68	32	28
15	24	32	218		119	68	272	343	193	68	32	28
16	22	33	*155		117	95	306	343	218	64	32	29
17	24	31	112		114	139	343	326	229	62	31	31
18	23	34	b100		108	170	375	316	208	59	30	31
19	23	43	b90		103	193	382	330	198	56	29	30
20	30	36	b80		97	200	364	340	181	53	29	29
21	37	32	75		93	203	326	343	159	53	30	28
22	44	35	68		92	208	290	336	147	51	30	27
23	37	55	63		90	193	275	323	141	50	30	27
24	42	46	61		95	170	260	326	135	50	29	26
25	52	42	57		97	149	272	333	131	48	29	28
26	49	45	58		97	139	303	347	131	47	28	35
27	34	51	58	102	88	133	354	354	137	46	28	30
28	30	54	54	106	83	137	405	333	126	44	28	28
29	32	56	b53	186	-	149	436	290	117	42	28	28
30	32	51	b52	155	-	172	413	278	107	41	28	28
31	27	-	b51	133	-	170	-	300	-	41	28	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	927	52	22	29.9	1,840
November	1,104	56	24	36.8	2,190
December	2,821	260	45	84.5	5,200
Calendar year 1946	47,945	796	22	131	95,100
January	2,112	186	-	68.1	4,190
February	2,869	172	72	102	5,690
March	3,490	208	50	113	6,920
April	7,208	436	107	240	14,300
May	13,506	732	278	436	26,790
June	6,043	340	107	201	11,990
July	2,034	100	41	65.6	4,030
August	997	40	28	32.2	1,980
September	891	41	25	29.7	1,770
Water year 1946-47	43,802	732	22	120	86,890

Note.- * Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Grande Ronde River near Hilgard and at La Grande and Powder River at Salisbury.
b Stage-discharge relation affected by ice.

Indian Creek near Imbler, Oreg.

Location.- Water-stage recorder, lat. 45°26', long. 117°49', in S½ sec. 33, T. 1 S., R. 40 E., 200 yards upstream from North Fork and 7 miles southeast of Imbler.

Drainage area.- 22 square miles.

Records available.- October 1945 to September 1947 in reports of Geological Survey. March 1938 to September 1945 in files of Oregon State engineer.

Extremes.- Maximum discharge during year, 484 second-feet May 9, from rating curve extended above 220 second-feet; maximum gage height, 4.09 feet sometime during period Jan. 4-7 (ice jam); minimum discharge recorded, 1.8 second-feet Oct. 18, but may have been less during period of ice effect.

1938-47: Maximum discharge, 730 second-feet May 28, 1946, from rating curve extended above 220 second-feet; maximum gage height, that during period Jan. 4-7, 1947; minimum discharge, 0.1 second-foot Nov. 15, 1939 (gage height, 0.05 foot).

Remarks.- Records fair June 1 to Sept. 24, poor Oct. 1 to May 31, Sept. 24-30. No diversion or regulation above station.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	8.1	16				41	180	113	41	9.2	4.0
2	4.8	b7.6	14				41	290	109	40	9.2	3.8
3	4.2	b7.2	13				41	364	96	37	8.9	3.8
4	4.2	b7.0	14				39	370	93	34	8.1	3.6
5	4.4	*b7.5	14				37	382	86	33	7.8	3.4
6	4.2	7.8	14				34	400	115	30	7.6	3.4
7	4.2	7.3	*14				32	430	105	29	7.3	8.9
8	4.4	6.4	13				33	430	203	28	7.3	5.9
9	4.4	6.4	12				32	430	315	26	7.3	7.6
10	4.0	6.1	12			a25	32	305	222	25	7.1	8.1
11	3.8	5.9	30				30	246	172	24	6.8	5.6
12	4.0	b5.5	67				29	207	138	23	6.8	5.4
13	3.8	b7.0	96				31	189	119	22	6.6	4.9
14	3.8	b7.5	136				37	169	104	22	6.4	4.4
15	3.6	b7.0	115				46	155	95	21	6.1	4.2
16	3.3	b7.5	84	a30	a35		50	150	93	20	5.9	6.1
17	3.4	b7.0	b65				70	150	91	20	5.6	6.8
18	3.3	8.9	b55				121	140	79	18	5.6	6.4
19	3.8	11	b50			*26	131	140	73	18	5.2	5.6
20	12	9.4	44			27	134	148	68	17	5.0	5.2
21	14	9 2	41			29	119	152	63	16	5.0	4.8
22	12	8.9	37			37	107	147	59	16	5.0	4.4
23	10	12	33			39	93	138	54	15	5.0	4.0
24	10	10	30			38	86	138	50	15	4.8	3.8
25	16	10	29			36	82	138	48	15	4.6	a4.5
26	17	16	29			35	86	138	49	13	4.4	a5.5
27	12	20	26			34	96	145	55	12	4.2	a5.0
28	8.9	24	b25			34	115	133	53	12	4.2	a4.5
29	9.2	26	b24		-	35	145	115	49	11	4.0	a4.5
30	9.2	19	b23		-	39	158	107	45	10	4.8	a4.5
31	7.6	-	b23		-	40	-	121	-	10	4.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	213.5	17	3.3	6.89	0.313	0.36	423
November	303.2	26	5.5	10.1	.459	.51	601
December	1,198	136	12	38.6	1.75	2.02	2,380
Calendar year 1946	20,049.1	646	3.3	54.9	-	-	39,780
January	930	-	-	30.0	1.36	1.57	1,840
February	980	-	-	35.0	1.59	1.66	1,940
March	899	-	-	29.0	1.32	1.52	1,780
April	2,128	158	29	70 9	3.22	3.60	4,220
May	6,747	430	107	218	9.91	11.41	13,380
June	3,014	315	45	100	4.55	5.10	5,980
July	673	41	10	21.7	.986	1.14	1,330
August	190.4	9.2	4.0	6.14	.279	.32	378
September	152.6	8.9	3.4	5.09	.231	.26	303
Water year 1946-47	17,428.7	430	3.3	47.7	2.17	29.48	34,560

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Catherine Creek near Union.
b Stage-discharge relation affected by ice.

East Fork Wallowa River near Joseph, Oreg.

Location.- Staff gage, lat. 45°16', long. 117°13', in SW¼ sec. 29, T. 3 S., R. 45 E., a quarter of a mile upstream from mouth, 1 mile upstream from Wallowa Lake, and 6 miles south of Joseph. Datum of gage is 4,517.69 feet above mean sea level, datum of 1929.
Drainage area.- 9.6 square miles.
Records available.- July 1924 to September 1947.
Average discharge.- 23 years, 12.0 second-feet.
Extremes.- Maximum discharge during year not determined, stage reached at least 2.00 feet on May 30 (discharge, 91 second-feet); minimum discharge observed, 0.4 second-foot Feb. 9, Mar. 2, 9 (gage height, 0.52 foot).
1924-47: Maximum discharge, 300 second-feet July 25, 1937 (gage height, 3.63 feet, from floodmark), computed on basis of rating curve extended above 80 second-feet and unpublished records of storage in Wallowa Lake Reservoir; minimum observed, 0.1 second-foot (regulated) Dec. 7, 1929, Nov. 1, 6, 1935.
Remarks.- Records poor. Gage read twice daily. Wallowa Falls power plant of Pacific Power & Light Co. diverts water 1 mile above station.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 31 to July 9)

Oct. 1 to May 30						May 31 to Sept. 30					
0.6	1.4	1.0	11	1.6	44	0.7	1.4	1.0	7.7	1.3	20
.7	3.1	1.1	16	1.8	64	.8	2.9	1.1	11	1.5	31
.8	5.3	1.2	20	1.9	77	.9	5.0	1.2	15	1.8	54
.9	7.9	1.4	31								

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.9	6.3	5.1		a1.0	b1.4	1.1	18	50	31	10	3.3
2	8.4	a6.0	3.3		.9	*b1.4	1.1	33	48	29	11	3.1
3	7.9	a5 5	3.5		1.1	1.4	1.3	36	45	29	12	3.1
4	7.4	a5.0	3.1		1.4	1.0	1.6	33	44	31	7.7	2.2
5	8.2	4.6	3.5		2.5	1.0	1.4	37	37	30	7.7	2.5
6	9.4	4.4	4.6		1.9	1.3	3.5	37	37	28	9.7	2.2
7	6.3	4.1	5.3		2.4	3.1	2.5	41	37	27	9.0	9.0
8	6.0	3.5	4 6		1.7	2.4	2.4	38	57	25	9.0	4.3
9	6.3	5 3	4.1		1.4	1.7	2.4	36	52	26	8.7	2.7
10	6 8	e9.0	5.3	a2.5	.9	2.4	2.4	34	49	25	9.4	3.3
11	6.6	5.3	4.8		1.4	2.2	2.0	34	40	24	8.0	2.5
12	6.3	5 1	5.1		*4.4	2.2	2.4	27	36	23	5.3	2.2
13	7.4	a5 0	5.1		3.3	2.2	1.9	28	32	21	4.5	2.9
14	6 3	a4.8	5.6		3.9	2.4	2.4	26	33	21	6.1	2.9
15	6.3	4.6	7.1		3.1	3.5	4.6	28	37	23	5.5	2.2
18	3.9	a4.6	5.3		2.2	e.4	4.4	30	40	22	5.0	2.9
17	3.5	4.4	b5.3		1.7	3.9	3.9	33	42	22	8.0	4.1
18	4.4	6.0	a5.0		2.7	4.8	5.8	33	44	20	3.3	2.9
19	5.3	2.7	b4.5		3.1	1.9	5.3	33	44	17	4.3	3.1
20	9.7	2.7	a4.0	2.9	5.3	1.9	2.5	33	44	16	4.3	3.1
21	7.4	2.9	3.9	3 5	3.5	1.7	3.9	40	38	16	4.3	6.6
22	11	2.7	3.5	2.4	4.8	2.0	3.5	38	37	14	5.3	5.5
23	8.4	8.4	3.1	2.2	2.2	3.1	3.5	38	34	14	6.6	2.5
24	7.4	7.9	3.5	2.7	1.7	1.7	4.4	43	35	14	4.5	2.5
25	10	4.8	4.4	2.7	1.4	2.0	4.4	48	37	14	4.5	2.0
26	10	4.8	3.3	2.7	b1.4	1.0	6 8	48	37	13	5.0	3.3
27	9.4	5.3	2.4	b2.5	b1.4	1.1	7.4	60	38	13	4.3	3.9
28	6.6	4.8	a2.4	b2.5	a1.4	1.1	7.9	57	35	12	4.1	2.4
29	7.6	4.6	b2.2	a2 0	-	1.4	10	58	32	12	4.1	2.0
30	6.3	5.6	a2.2	a1.5	-	2.0	10	70	31	10	4.8	2.2
31	6.3	-	a2.0	a1.5	-	1.3	-	47	-	9.4	4.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	224.7	11	3.5	7.25	446
November	150 7	9.0	2.7	5.02	299
December	127.1	7.1	2.0	4.10	252
Calendar year 1946	5,906.2	85	1.4	16.2	11,720
January	76.6	3.5	1.5	2.47	152
February	64.1	5.3	.9	2.29	127
March	62.9	4.8	1.0	2.03	125
April	116.7	10	1.1	3.89	231
May	1,195	70	18	38.5	2,370
June	1,202	57	31	40.1	2,380
July	631.4	31	9.4	20.4	1,250
August	200.8	12	3.3	6.48	398
September	97.4	9.0	2.0	3.25	193
Water year 1946-47	4,149.4	70	.9	11.4	8,220

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Hurricane Creek near Joseph.
b Stage-discharge relation affected by ice.
e Gage height not representative of average for day; discharge computed on basis of gage readings and record of power-plant operation.

Wallowa Falls power-plant tailrace near Joseph, Oreg.

Location.- Staff gage and sharp-crested weir, lat. 45°16', long. 117°13', in SE¼ sec. 29, T. 3 S., R. 45 E., a quarter of a mile upstream from mouth and 6 miles south of Joseph. Datum of gage is 4,624.70 feet above mean sea level, datum of 1939.

Records available.- August 1924 to September 1947.

Average discharge.- 23 years, 7.72 second-feet.

Extremes.- Maximum daily discharge during year, 12 second-feet on many days; maximum gage height observed, 0.76 foot Sept. 11, 12; no flow many times when power plant was shut down.

1924-47: Maximum discharge, 17 second-feet Dec. 1, 8, 1930, Jan. 9, 10, 1931, Nov. 27 to Dec. 1, Dec. 4-6, 1944; no flow at times.

Remarks.- Records poor. Gage read hourly. Flow regulated for impulse wheel in power-house. Water diverted at dam on East Fork Wallowa River into conduit 1 mile above powerhouse and discharged into West Fork a quarter of a mile below station.

Rating tables, water year 1946-47 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Sept. 1-13)

Oct. 1 to Sept. 13		Sept. 14 to Sept. 30	
0.42	5.1	0.31	4.6
.5	6.7	.4	6.7
.6	9.0	.5	9.4
.7	11.4	.6	12.3
.8	14.0		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	11	11	11	9.2	9.5	10	10	6.9	9.5	9.7	11
2	9.5	10	12	10	10	10	10	10	9.0	11	9.7	11
3	9.0	11	10	10	9.5	9.2	10	10	9.0	11	10	11
4	7.8	12	12	11	10	9.5	10	10	9.2	8.8	10	11
5	9.5	12	12	11	9.7	9.2	10	10	9.0	8.5	10	10
6	10	12	11	10	9.7	9.2	8.9	10	9.5	9.2	10	10
7	10	12	10	9.5	9.2	9.5	9.5	10	9.5	10	10	10
8	11	12	11	9.7	9.5	9.0	10	10	8.5	10	10	10
9	9.7	11	11	9.5	10	9.5	9.5	10	9.7	9.2	9.7	10
10	9.7	7.1	11	9.2	9.7	9.0	9.7	9.5	9.5	10	9.5	11
11	9.7	11	12	9.7	9.5	9.5	9.7	8.5	9.5	9.2	9.5	11
12	9.5	10	12	10	9.2	9.0	9.7	11	10	10	10	11
13	9.0	11	12	9.7	9.2	9.0	10	11	9.7	10	11	11
14	9.7	11	12	10	9.2	8.8	9.7	11	9.2	10	10	12
15	10	11	12	10	9.5	9.0	9.7	10	7.6	9.0	10	d12
16	11	10	12	9.5	10	9.7	10	10	10	9.5	10	d12
17	11	11	12	9.7	9.7	10	10	8.8	9.5	9.5	8 8	d12
18	10	12	12	11	9.5	9.2	10	6.3	9.7	9.2	11	d12
19	11	12	12	9.7	9.5	9.2	10	8.8	9.5	8.5	11	12
20	10	12	12	8.8	9.2	9.5	10	9 2	8.5	8 8	11	12
21	11	12	11	8.5	9.5	9.7	10	8.8	9.7	9.2	11	12
22	11	12	11	9.5	9.5	10	10	8.5	8.5	10	11	12
23	12	11	11	9.2	9.5	9.5	10	9.0	10	9.5	10	12
24	12	11	11	9.5	9.7	9.7	10	7.6	9.2	9.7	9.0	12
25	11	12	11	10	10	9.5	10	5.2	9.0	9.5	10	12
26	11	12	11	9.7	9.5	10	9.7	9.2	10	9.0	10	12
27	10	11	11	10	9.7	9.5	9.5	8.8	9.7	9.0	10	12
28	11	11	11	10	9.5	9.5	10	9.2	10	9.2	11	12
29	11	11	11	10	-	9.2	11	9.2	8.5	10	10	12
30	11	11	11	11	-	9.2	10	8.1	11	10	10	12
31	11	-	11	11	-	9.7	-	9.7	-	10	9.7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	319.1	12	7.8	10.3	633
November	335.1	12	7.1	11.2	665
December	352	12	10	11.4	698
Calendar year 1946	3,306.7	12	4.7	9.06	6,560
January	307.4	11	8.5	9.92	610
February	267.9	10	9.2	9.57	531
March	292.0	10	8.8	9.42	579
April	296.6	11	8.9	9.89	588
May	287.4	11	5.2	9.27	570
June	278.6	11	6.9	9.29	553
July	296.0	11	8.5	9.55	587
August	312.6	11	8.8	10.1	620
September	342.0	12	10	11.4	678
Water year 1946-47	3,686.7	12	5.2	10.1	7,310

d Doubtful gage-height record; discharge computed on basis of 1 discharge measurement and by interpolation.

Hurricane Creek near Joseph, Oreg.

Location.- Water-stage recorder, lat. 45°20', long. 117°18', in NE¼ sec. 3, T. 3 S., R. 44 E., upstream from intake of Moonshine ditch and 3½ miles southwest of Joseph.

Drainage area.- 31 square miles.

Records available.- April to September 1915, April 1924 to September 1947.

Average discharge.- 20 years (1927-47), 66.9 second-feet.

Extremes.- Maximum discharge during year, 534 second-feet May 7 (gage height, 2.82 feet); minimum, 18 second-feet Feb. 26.
1915, 1924-47: Maximum discharge, 774 second-feet July 7, 1943 (gage height, 3.13 feet); minimum,3.4 second-feet Feb. 10, 1938, Feb. 6, 1946 (ice jams upstream).

Remarks.- Records good Apr. 15 to Sept. 30, fair Oct. 1 to Apr. 14 except those for periods of no gage-height record, which are poor. No diversion or regulation above station.

Rating tables water year 1946-47 (gage height, in feet, and discharge in second-feet)

Oct. 22 to Dec. 2

1.2	22	1.5	53
1.3	31	1.6	67
1.4	41	1.8	102

Dec. 20 to Sept. 30

1.1	21	1.5	59	2.3	235
1.2	27	1.7	89	2.5	335
1.3	35	1.9	123	2.7	450
1.4	46	2.1	170		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a30	38	34	31	25	22	34	116	308	168	83	36
2	a33	36	33	29	25	23	33	266	291	197	79	35
3	a32	35	a32	30	25	22	33	330	258	207	81	37
4	a35	36	a35	31	25	22	33	330	232	200	79	35
5	a35	35	a40	33	25	22	33	330	210	207	76	35
6	a35	35	a40	32	24	22	32	368	218	214	73	34
7	a35	34	a39	31	24	22	a30	420	228	221	72	51
8	a35	33	a38	30	23	22	a30	420	379	210	70	39
9	a33	33	a37	29	23	22	a30	357	340	204	67	39
10	a33	33	a35	29	23	22	a30	262	244	194	63	38
11	a33	33	a45	29	a24	22	a30	218	204	179	60	36
12	a33	32	a60	29	a24	21	a30	197	200	173	59	34
13	a32	32	a75	29	25	21	a40	191	204	176	56	33
14	a30	32	a90	26	25	22	a50	188	204	179	55	33
15	a30	32	a100	26	24	23	60	197	232	168	54	31
16	a38	32	a80	28	24	26	66	207	330	150	52	34
17	a32	34	a65	28	23	29	72	210	346	141	50	36
18	a30	41	a55	27	23	29	66	210	340	145	49	37
19	a30	45	a50	26	23	31	65	232	330	138	49	35
20	a35	39	45	26	22	32	63	253	258	123	49	33
21	a40	37	44	26	23	33	62	266	194	121	47	33
22	49	38	42	26	23	35	59	253	191	119	46	31
23	39	43	40	27	23	33	58	244	210	112	44	30
24	43	39	39	27	23	33	56	280	240	105	42	30
25	69	39	38	26	23	33	59	324	248	99	40	30
26	60	37	37	25	22	32	66	357	244	94	39	34
27	49	38	36	22	22	32	81	374	218	95	39	32
28	43	37	32	23	23	33	94	352	176	95	38	30
29	42	36	32	25	-	34	107	318	155	91	38	31
30	41	34	30	25	-	35	92	330	152	87	38	29
31	38	-	30	25	-	34	-	346	-	86	37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	1,162	69	28	37.5	1.21	1.39	2,300
November	1,078	45	32	35.9	1.16	1.29	2,140
December	1,428	100	30	46.1	1.49	1.71	2,830
Calendar year 1946	32,621	454	12	89.4	2.88	39.14	64,710
January	856	33	22	27.6	.890	1.03	1,700
February	661	25	22	23.6	.761	.79	1,310
March	844	35	21	27.2	.877	1.01	1,670
April	1,594	107	30	53.1	1.71	1.91	3,160
May	8,746	420	116	282	9.10	10.49	17,350
June	7,384	379	152	246	7.94	8.83	14,650
July	4,698	221	86	152	4.90	5.64	9,320
August	1,724	83	37	55.6	1.79	2.07	3,420
September	1,031	51	29	34.4	1.11	1.24	2,040
Water year 1946-47	31,206	420	21	85.5	2.76	37.43	61,890

a No gage-height record; discharge computed on basis of records for Bear Creek near Wallowa, Lostine River near Lostine, and Catherine Creek near Union.

Lostine River near Lostine, Oreg.

Location.- Water-stage recorder, lat. 45°26', long. 117°26', in NW¼ sec. 34, T. 1 S., R. 43 E., 3½ miles south of Lostine and 10 miles upstream from mouth.

Records available.- August 1912 to March 1914, April to September 1915, July 1925 to September 1947.

Average discharge.- 20 years (1912-13, 1928-47), 180 second-feet.

Extremes.- Maximum discharge during year, 1,500 second-feet May 7 (gage height, 6.16 feet); minimum, 36 second-feet Sept. 1, 2, 4, 5 (gage height, 0.85 foot).
1912-14, 1915, 1925-47: Maximum discharge, 2,540 second-feet May 27, 1913; minimum recorded, 10 second-feet Nov. 28-30, 1936.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. No large diversions above station. Flow slightly regulated by Minam Lake Reservoir.

Rating table, water year 1946-47, except period of ice effect
(gage height, in feet, and discharge, in second-feet)

0.8	33	1.8	135	4.0	660
1.0	48	2.2	201	4.8	960
1.2	66	2.7	303	5.8	1,360
1.5	96	3.3	450		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		90	82		62	56	114	452	912	390	114	38
2		84	78		74	60	112	872	951	472	108	37
3		82	77		64	58	108	1,060	709	535	104	40
4		81	a80		62	56	104	1,120	622	505	106	39
5		78	a82		61	55	102	1,120	547	496	97	37
6		77	a82		60	53	97	1,190	409	517	90	38
7	a55	76	a80		60	54	a94	1,320	595	526	85	63
8		73	a75		56	53	90	1,330	952	511	83	59
9		70	a70		58	53	89	1,040	896	481	79	55
10		70	*70		61	61	88	748	656	445	74	61
11		69	106	b60	61	59	84	580	514	398	70	54
12		63	142		78	54	85	496	455	368	67	49
13	78	64	203		82	53	103	475	475	370	64	47
14	a75	63	258		73	56	147	475	490	365	62	46
15	a70	59	290		70	59	199	505	556	355	60	43
16	a65	56	205		70	69	230	565	776	305	57	50
17	a70	62	b163		69	83	268	592	928	277	54	53
18	a75	60	150		67	94	264	601	936	273	52	55
19	a70	82	141		66	104	254	474	880	262	51	55
20	67	74	128		63	108	248	765	692	240	49	49
21	a75	73	120		64	116	228	836	505	224	49	49
22	a100	75	114	57	62	127	207	832	462	218	48	46
23	a80	95	107	61	62	124	199	776	502	201	47	43
24	87	85	104	65	62	118	192	888	571	181	45	42
25	183	85	102	68	61	113	196	984	619	169	42	44
26	201	88	101	68	62	112	224	1,080	660	148	42	60
27	141	94	100	b59	b57	103	275	1,190	646	142	42	52
28	117	94	b87	b56	58	104	355	1,160	465	141	40	48
29	109	89	85	b60	-	108	428	952	380	132	39	47
30	102	83	b80	b56	-	114	418	896	350	125	39	45
31	92	-	b75	b56	-	117	-	1,050	-	118	40	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	2,517	201	-	81.2	4,990
November	2,294	95	56	76.5	4,550
December	3,637	290	70	117	7,210
Calendar year 1946	88,051	1,300	-	241	174,600
January	1,866	-	-	60.2	3,700
February	1,805	82	56	64.5	3,580
March	2,554	127	53	82.4	5,070
April	5,602	428	84	187	11,110
May	26,424	1,330	452	852	52,410
June	19,011	952	350	634	37,710
July	9,890	535	118	319	19,620
August	1,999	114	39	64.5	3,960
September	1,444	63	37	48.1	2,860
Water year 1946-47	79,043	1,330	37	217	156,800

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Hurricane Creek near Joseph and Bear Creek near Wallowa.
b Stage-discharge relation affected by ice.

Bear Creek near Wallowa, Oreg.

Location.- Water-stage recorder, lat. 45°32', long. 117°33', in NE¼ sec. 34, T. 1 N., R. 42 E., at bridge 3 miles southwest of Wallowa.

Records available.- April to September 1915, November 1931 to September 1947. April 1924 to November 1931 (incomplete) at site 1 mile upstream above intakes of two irrigation ditches with a combined capacity of about 3 second-feet.

Average discharge.- 18 years (1929-47), 104 second-feet.

Extremes.- Maximum discharge during year, 992 second-feet May 7 (gage height, 2.88 feet), from rating curve extended above 490 second-feet; minimum recorded, 8.8 second-feet Sept. 4, 5, but may have been less during period of no gage-height record.
1915, 1924-47: Maximum discharge, 1,620 second-feet Apr. 22, 1936 (gage height, 3.82 feet, from floodmarks), from rating curve extended above 950 second-feet; minimum, 3 second-feet Jan. 20, Feb. 1, 1937.

Remarks.- Records fair except those for Dec. 29 to Feb. 2, which are poor. Small diversions above station for irrigation.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 12 to Dec. 14,
July 12 to Sept. 30)

0.6	8.8	1.1	48	1.9	270
.7	13	1.2	64	2.1	385
.8	19	1.3	83	2.4	580
.9	26	1.5	130	2.7	830
1.0	35	1.7	189		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	70	94		a45	51	128	373	421	193	23	10
2	20	59	83		a50	50	122	604	403	212	23	9.6
3	20	54	75		45	48	118	794	373	216	21	10
4	20	56	74		44	45	110	776	391	193	20	9.2
5	20	58	68		43	42	103	692	355	180	20	9.2
6	20	58	62		40	39	96	692	385	177	19	9.2
7	20	56	58		39	38	87	749	397	170	18	18
8	20	53	56		38	38	87	708	531	158	18	14
9	20	50	54		38	38	85	552	588	144	17	16
10	18	48	*50		38	45	81	421	490	130	17	17
11	18	45	96		39	47	77	373	403	112	17	15
12	19	38	200		59	44	77	349	355	103	17	15
13	18	40	314		90	43	101	343	343	98	16	14
14	18	39	385		92	44	161	337	325	94	15	13
15	18	38	433		92	53	216	343	343	83	14	13
16	17	35	355	a45	92	75	240	367	415	74	14	16
17	17	38	270		87	110	270	367	433	66	14	17
18	17	45	223		83	136	270	373	409	61	13	17
19	17	59	186		77	150	276	403	391	58	13	16
20	33	56	155		72	152	270	439	314	51	12	15
21	56	54	138		68	158	244	464	236	47	12	15
22	87	58	120		64	167	223	452	223	44	13	15
23	85	75	105		61	161	200	433	231	39	13	15
24	87	83	98		59	147	186	445	253	36	12	14
25	174	81	92		59	136	186	497	253	35	12	14
26	193	87	90		54	122	216	552	281	33	11	17
27	144	96	f81		53	112	266	531	320	31	11	15
28	115	105	66		54	110	331	478	253	29	10	17
29	98	110	b60		-	122	367	421	212	28	10	17
30	87	101	b55		-	133	349	415	189	26	11	15
31	74	-	b50		-	130	-	445	-	24	10	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,590	193	17	51.3	3,150
November	1,845	110	35	61.5	3,660
December	4,246	433	50	137	8,420
Calendar year 1946	53,216	740	15	146	105,500
January	1,395	-	-	45	2,770
February	1,675	92	38	59.8	3,320
March	2,786	167	38	89.9	5,530
April	5,543	367	77	185	10,990
May	15,188	794	337	490	30,120
June	10,516	588	189	351	20,860
July	2,945	216	24	95.0	5,840
August	466	23	10	15.0	924
September	427.2	18	9.2	14.2	847
Water year 1946-47	48,622.2	794	9.2	133	96,430

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Hurricane Creek near Joseph, Lostine River near Lostine, and Catherine Creek near Union.
b Stage-discharge relation affected by ice.
f Computed on basis of partly estimated gage height.

Asotin Creek near Asotin, Wash.

Location.- Staff gage, lat. 46°20', long. 117°12', in sec. 20, T. 10 N., R. 45 E., half a mile upstream from Washington Water Power Co.'s diversion for water supply and irrigation, 4 miles upstream from George Creek, and 8 miles west of Asotin.

Drainage area.- 171 square miles.

Records available.- August 1928 to September 1947. March 1904 to November 1906 and August 1910 to October 1911 at practically same site.

Average discharge.- 19 years (1928-47), 58.6 second-feet.

Extremes.- Maximum discharge observed during year, 562 second-feet Dec. 15 (gage height, 2.70 feet); minimum observed, 24 second-feet Aug. 26-28.
1904-6, 1910-11, 1928-47: Maximum discharge observed, 1,180 second-feet Apr. 15, 1904 (gage height, 4.3 feet, datum then in use); minimum observed, 16 second-feet Jan. 5, 1937.

Remarks.- Records good except those for periods of ice effect or shifting control, which are fair. Gage read twice daily. Large part of low flow diverted for irrigation.

Cooperation.- Gage-height record furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	37	76	54	58	71	97	149	73	40	30	26
2	30	34	67	b55	224	68	98	184	73	40	30	26
3	29	33	*65	b55	84	67	97	224	71	39	30	26
4	29	33	65	b55	84	67	97	224	78	38	30	26
5	30	34	63	b55	84	63	95	210	71	38	30	26
6	29	35	61	b60	84	58	89	210	76	38	29	26
7	29	35	61	b60	86	57	84	210	71	37	29	30
8	28	35	58	58	87	60	83	224	80	36	28	31
9	28	35	56	56	87	57	83	210	76	36	28	32
10	28	35	55	56	86	63	81	160	73	36	29	36
11	28	35	62	54	86	65	78	149	68	36	29	32
12	28	34	160	54	333	63	77	138	65	36	29	32
13	28	33	316	54	197	61	78	128	65	34	29	29
14	28	33	350	51	172	62	86	118	62	34	28	28
15	28	33	543	b50	160	62	109	109	60	36	28	30
16	28	32	418	b50	149	71	109	100	57	34	27	39
17	30	33	284	b50	128	78	118	98	57	34	27	40
18	30	47	197	49	118	97	149	95	55	34	27	38
19	30	118	160	49	109	100	149	92	52	32	26	35
20	33	109	138	48	100	109	160	94	52	32	26	32
21	43	78	128	*48	100	118	149	89	50	32	25	29
22	43	71	118	47	90	118	138	86	48	32	25	31
23	41	74	109	57	86	128	128	84	48	32	25	30
24	38	92	95	86	85	109	118	81	46	32	26	29
25	39	80	89	62	84	100	118	80	46	32	25	29
26	47	77	89	87	78	98	118	78	47	32	25	36
27	40	77	86	68	74	94	128	73	47	32	25	33
28	38	90	86	60	77	86	138	73	46	32	25	30
29	37	90	78	61	-	86	160	70	44	31	26	28
30	37	80	58	63	-	94	160	70	42	30	26	30
31	35	-	56	58	-	95	-	77	-	30	26	-

Month	Second-foot-days	Maximum	Minimum	Mean	Runoff in acre-feet
October	1,016	47	27	32.8	2,020
November	1,662	118	32	55.4	3,300
December	4,247	543	55	137	8,420
Calendar year 1946	28,321	543	27	77.6	56,180
January	1,770	87	47	57.1	3,510
February	3,188	333	58	114	6,320
March	2,525	128	57	81.5	5,010
April	3,372	160	77	112	6,690
May	3,987	224	70	129	7,910
June	1,799	80	42	60.0	3,570
July	1,067	40	30	34.4	2,120
August	848	30	25	27.4	1,680
September	925	40	26	30.8	1,830
Water year 1946-47	26,406	543	25	72.3	52,380

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.- Shifting-control method used Oct. 1 to Feb. 1, July 28 to Sept. 7, Sept. 14-30.

Selway River above Meadow Creek, near Lowell, Idaho

Location.- Water-stage recorder, lat. 46°03', long. 115°18', in sec. 11, T. 31 N., R. 9 E., a quarter of a mile upstream from Meadow Creek, 1½ miles upstream from Selway Falls, 13 miles upstream from gaging station on Selway River near Lowell, and 16.5 miles southeast of Lowell post office.

Drainage area.- 1,550 square miles.

Records available.- October 1944 to September 1947.

Extremes.- Maximum discharge during year, 32,600 second-feet May 8 (gage height, 18.62 feet, from floodmark), gage height and discharge supersede those figures published in Water-Supply Paper 1080; minimum, 481 second-feet Sept. 7 (gage height, 2.58 feet).
1944-47: Maximum discharge, that of May 8, 1947; minimum daily, 175 second-feet Dec. 12, 1944.

Remarks.- Records excellent except those for periods of ice effect or no gage-height record, which are good. Small diversions to Bitterroot River Basin from headwaters are reported and are shown on maps in T. 32 N., R. 16 E.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 9 to Aug. 23)

Oct. 1 to May 2						May 8 to Sept. 30					
2.6	625	4.5	2,160	8.0	7,390	2.6	490	4.5	1,770	9.0	8,700
3.0	855	5.0	2,750	9.0	9,260	3.0	700	5.0	2,250	11.0	13,300
3.5	1,200	6.0	4,100	10.0	11,300	3.5	1,000	6.0	3,470	14.0	20,800
4.0	1,640	7.0	5,650	12.4	16,900	4.0	1,360	7.0	5,000	17.3	29,200

Discharge, in second-fset, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	642	2,340	2,080	1,700	1,200	1,670	3,790	12,800	12,100	4,300	1,040	540
2	1,270	2,140	2,000	1,600	1,250	1,620	3,710	16,800	11,600	4,410	1,020	525
3	1,450	1,780	1,860	1,400	1,300	1,590	3,690	a23,000	11,100	4,620	960	520
4	1,260	1,900	1,830	1,300	1,260	1,540	3,690	a25,000	10,200	4,570	940	530
5	1,170	1,890	1,820	1,400	1,240	1,450	3,500	a26,000	9,450	4,110	898	510
6	1,080	1,830	1,790	1,700	1,230	1,360	3,300	a26,000	10,200	3,920	856	490
7	1,010	1,790	1,720	1,700	1,200	1,310	3,080	a27,000	9,840	3,900	820	505
8	959	1,690	*1,640	1,500	1,170	1,310	2,960	a29,000	9,580	3,820	778	634
9	933	1,600	1,650	1,350	1,100	1,270	2,920	a28,000	12,400	3,640	754	662
10	907	1,580	1,640	1,400	1,200	1,360	2,870	21,200	10,600	3,300	730	718
11	862	1,520	4,280	1,450	1,400	1,540	2,780	16,500	9,050	3,110	718	694
12	831	1,410	6,360	1,340	1,480	1,600	2,670	14,100	8,340	2,870	724	634
13	807	1,280	7,210	1,290	2,150	1,620	2,870	13,500	8,460	2,640	748	580
14	789	1,350	9,680	1,150	2,230	1,690	3,850	12,900	8,300	2,540	718	530
15	771	1,400	10,400	1,100	2,100	1,890	5,650	12,700	7,940	2,390	667	515
16	747	1,160	7,610	1,150	2,120	2,150	6,570	13,300	8,460	2,280	640	618
17	724	1,240	5,740	1,150	2,260	2,530	7,300	13,700	10,000	2,140	618	868
18	708	1,510	4,730	1,150	2,280	2,980	7,660	13,500	8,900	1,980	601	886
19	691	1,980	4,260	1,150	2,200	3,430	7,370	13,500	8,400	1,890	580	796
20	765	1,920	3,640	1,150	2,060	*3,820	7,730	14,100	6,920	1,800	585	718
21	1,280	1,670	3,180	1,150	1,970	4,030	7,260	15,000	6,050	1,690	684	662
22	1,560	1,640	2,880	1,180	1,880	4,340	6,760	14,600	5,700	1,610	979	645
23	2,120	2,040	2,630	1,460	1,920	4,300	6,260	13,600	5,610	1,500	1,150	640
24	1,750	2,220	2,390	1,820	2,050	3,900	5,920	14,000	5,630	1,420	868	612
25	4,670	2,030	2,200	1,780	2,060	3,500	6,090	15,400	5,700	1,350	736	580
26	7,190	2,070	2,190	1,830	1,900	3,270	6,890	16,600	5,730	1,300	678	570
27	4,520	2,090	2,140	1,560	1,750	3,020	8,540	17,800	7,800	1,220	634	580
28	3,670	2,330	1,940	1,270	1,770	2,910	11,200	16,000	6,050	1,160	606	575
29	3,090	2,410	1,570	1,200	-	3,050	13,700	13,000	5,100	1,110	585	580
30	2,760	2,290	1,700	*1,250	-	3,440	14,100	11,800	4,500	1,070	565	742
31	2,460	-	1,600	1,230	-	3,860	-	12,700	-	1,040	555	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff: Inches	Runoff: Acre-feet
October	53,446	7,190	642	1,724	1.11	1.28	106,000
November	54,060	2,410	1,160	1,802	1.16	1.30	107,200
December	106,360	10,400	1,570	3,431	2.21	2.55	211,000
Calendar year 1946	1,250,302	14,900	498	3,425	2.21	29.98	2,480,000
January	42,860	1,830	1,100	1,383	.892	1.03	85,010
February	47,730	2,280	1,100	1,705	1.10	1.15	94,670
March	77,350	4,340	1,270	2,495	1.61	1.86	153,400
April	174,680	14,100	2,670	5,823	3.76	4.19	346,500
May	533,100	29,000	11,800	17,200	11.1	12.79	1,057,000
June	249,710	12,400	4,500	8,324	5.37	5.99	495,300
July	78,700	4,620	1,040	2,539	1.64	1.89	156,100
August	23,435	1,150	555	756	.488	.56	46,480
September	18,659	886	490	622	.401	.45	37,010
Water year 1946-47	1,480,090	29,000	490	4,000	2.58	35.04	2,896,000

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for station near Lowell.
Note.- Stage-discharge relation affected by ice Dec. 30 to Jan. 11, Jan. 14-21, Jan. 29 to Feb. 3, Feb. 9-11.

Selway River near Lowell, Idaho

Location.- Water-stage recorder, lat. 46°05', long. 115°31', in sec. 25, T. 32 N., R. 7 E., a quarter of a mile upstream from O'Hara Creek and 7 miles upstream from Lowell post office.

Drainage area.- 1,910 square miles.

Records available.- April 1911 to September 1912 (gage heights or fragmentary discharge records only), October 1929 to September 1947.

Average discharge.- 18 years (1929-47), 3,321 second-feet.

Extremes.- Maximum discharge during year, 37,000 second-feet May 8 (gage height, 13.71 feet); minimum, 612 second-feet Sept. 7 (gage height, 2.83 feet).
1929-47: Maximum discharge, that of May 8, 1947; minimum, probably less than 100 second-feet Jan. 8, 1937, during period of ice effect.

Remarks.- Records excellent. No diversion.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	817	2,860	2,580	2,160	1,510	2,180	4,500	15,400	15,100	5,460	1,240	691
2	1,760	2,600	2,440	1,880	1,670	2,120	4,390	18,900	14,500	5,540	1,220	666
3	2,010	2,150	2,280	1,450	1,760	2,050	4,390	27,400	13,800	5,730	1,160	666
4	1,600	2,250	2,250	1,520	1,580	1,980	4,390	29,800	12,800	5,680	1,140	674
5	1,500	2,280	2,250	1,730	1,570	1,840	4,140	30,700	11,800	5,160	1,090	651
6	1,360	2,190	2,210	2,040	1,570	1,720	3,940	30,700	12,600	4,910	1,040	628
7	1,260	2,160	2,110	2,070	1,540	1,640	3,650	32,400	12,300	4,850	1,000	651
8	1,210	2,010	2,020	1,800	1,450	1,620	3,540	34,600	11,900	4,720	963	808
9	1,170	1,900	2,020	1,580	1,320	1,580	3,490	33,200	15,000	4,540	925	843
10	1,140	1,850	2,020	1,640	1,410	1,730	3,430	25,300	13,500	4,180	916	925
11	1,080	1,800	5,420	1,720	1,680	1,950	3,310	19,800	11,600	3,920	898	889
12	1,040	1,670	8,750	1,550	1,810	2,080	3,180	17,400	10,700	3,580	898	808
13	1,020	1,490	9,650	1,490	2,710	2,090	3,490	16,700	10,700	3,270	934	740
14	992	1,540	13,000	1,420	3,010	2,190	4,610	16,100	10,600	3,110	898	674
15	972	1,640	13,800	1,260	2,870	2,460	6,730	15,800	10,000	2,920	843	651
16	934	1,410	10,600	1,320	2,910	2,780	7,880	16,400	10,600	2,740	817	748
17	907	1,420	7,440	1,380	3,100	3,230	8,840	16,800	12,500	2,550	791	1,070
18	889	1,730	6,000	1,340	3,110	3,750	9,420	16,600	11,200	2,370	765	1,090
19	861	2,340	5,440	1,370	3,010	4,270	9,000	16,600	10,500	2,240	748	992
20	954	2,360	4,650	1,380	2,790	4,670	9,480	17,200	8,720	2,110	740	898
21	1,740	2,010	4,060	1,360	2,680	4,890	8,840	18,200	7,840	1,980	817	834
22	2,210	1,950	3,690	1,360	2,570	5,260	8,200	17,900	7,140	1,900	1,160	800
23	3,230	2,420	3,340	1,680	2,620	5,230	7,620	16,700	7,000	1,800	1,430	782
24	2,480	2,740	3,040	2,110	2,780	4,740	7,170	17,000	6,980	1,690	1,080	748
25	5,790	2,490	2,810	2,180	2,790	4,220	7,420	18,300	7,000	1,610	934	723
26	9,550	2,580	2,790	2,280	2,570	3,960	8,440	19,700	7,000	1,550	861	715
27	5,610	2,620	2,790	2,110	2,320	3,620	10,500	20,900	9,720	1,460	808	732
28	4,440	2,960	2,440	1,640	2,340	3,500	13,900	19,400	7,850	1,380	765	723
29	3,750	3,040	2,010	1,550	-	3,650	16,400	16,300	6,550	1,340	740	707
30	3,360	2,870	2,090	1,670	-	4,100	16,700	14,800	5,780	1,290	715	925
31	2,990	-	1,980	1,560	-	4,560	-	15,400	-	1,240	707	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	68,626	9,550	817	2,214	1.16	1.34	136,100
November	65,330	3,040	1,410	2,178	1.14	1.27	129,600
December	137,970	15,800	1,980	4,451	2.33	2.69	273,700
Calendar year 1946	1,522,661	17,300	674	4,172	2.18	29.65	3,020,000
January	51,590	2,280	1,260	1,664	.871	1.00	102,300
February	63,050	3,110	1,320	2,252	1.18	1.23	125,100
March	95,660	5,260	1,580	3,086	1.62	1.86	189,700
April	210,990	16,700	3,180	7,033	3.68	4.11	418,500
May	642,400	34,600	14,800	20,720	10.8	12.51	1,274,000
June	313,080	15,100	5,780	10,440	5.47	6.10	621,000
July	96,820	5,730	1,240	3,123	1.64	1.89	192,000
August	29,043	1,430	707	937	.491	.57	57,610
September	23,452	1,090	628	782	.409	.46	46,520
Water year 1946-47	1,798,011	34,600	628	4,926	2.58	35.03	3,566,000

Clearwater River at Kamiah, Idaho

Location.- Water-stage recorder, lat. 46°14', long. 116°01', in sec. 1, T. 33 N., R. 3 E., a quarter of a mile downstream from highway bridge at Kamiah, three-quarters of a mile downstream from Lawyer Creek, and 6 miles downstream from South Fork. Datum of gage is 1,162.52 feet above mean sea level, datum of 1929, supplementary adjustment of 1947.

Drainage area.- 4,850 square miles.

Records available.- August 1910 to September 1947.

Average discharge.- 37 years, 7,888 second-feet.

Extremes.- Maximum discharge during year, 69,900 second-feet May 8 (gage height, 16.07 feet); minimum, 1,290 second-feet Sept. 6 (gage height, 3.22 feet).
1910-47: Maximum discharge observed, 81,400 second-feet June 10, 1933 (gage height, 16.53 feet, former site); minimum, probably less than 200 second-feet Jan. 8, 1937, during period of ice effect.

Remarks.- Records excellent above 4,000 second-feet and good below. Some diurnal regulation at low flow caused by power plant on South Fork.

Rating table, water year 1946-47 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 1 to July 10)

3.2	1,260	7.0	10,000	12.0	35,300
3.9	2,220	8.0	13,900	14.0	51,300
4.5	3,270	9.0	18,300	15.7	66,300
5.0	4,310	10.0	23,000		
6.0	6,850	11.0	28,600		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,570	5,280	5,840	4,960	3,840	5,250	11,400	31,300	28,100	10,800	2,520	1,490
2	2,130	5,010	5,420	4,700	4,220	5,060	11,200	36,500	26,400	10,500	2,520	1,440
3	3,590	4,310	5,150	3,530	4,560	5,010	11,300	50,000	25,300	10,600	2,430	1,420
4	2,870	4,030	4,940	3,190	3,960	4,910	11,400	55,600	24,200	10,500	2,330	1,420
5	2,620	4,270	5,030	3,570	3,880	4,610	10,700	57,700	22,400	9,800	2,270	1,400
6	2,460	4,200	4,910	4,330	3,860	4,270	10,100	57,900	23,100	9,190	2,180	1,350
7	2,250	4,200	4,700	4,750	3,730	4,110	9,520	60,400	23,600	8,930	2,120	1,360
8	2,130	4,050	4,540	4,360	3,510	4,050	9,120	66,100	22,000	8,670	2,020	1,610
9	2,060	3,780	4,590	3,880	3,230	4,050	9,520	66,200	28,600	8,290	1,950	1,820
10	2,020	3,690	4,540	3,880	3,180	4,160	9,420	53,600	27,300	7,790	1,890	2,070
11	1,980	3,650	8,540	4,110	3,590	4,790	9,090	40,700	23,600	7,400	1,880	2,040
12	1,890	3,490	20,500	3,900	4,220	5,130	8,570	35,300	21,200	6,910	1,880	1,810
13	1,850	3,080	21,600	3,630	7,370	5,080	8,770	33,400	20,800	6,210	1,910	1,650
14	1,820	2,910	26,700	3,510	7,340	5,230	10,600	32,200	20,900	5,890	1,940	1,520
15	1,810	3,230	30,400	2,990	7,080	5,600	14,500	30,500	19,400	5,580	1,820	1,570
16	1,770	3,120	26,100	3,060	7,230	6,180	17,000	31,100	19,400	5,250	1,740	1,510
17	1,730	2,710	18,300	3,290	7,340	6,940	18,700	31,400	22,900	4,960	1,680	2,280
18	1,700	3,310	14,200	3,120	7,280	7,880	21,400	31,200	22,100	4,630	1,620	2,570
19	1,680	4,680	12,700	3,190	7,050	8,890	21,100	30,000	20,100	4,400	1,600	2,240
20	1,690	5,580	11,200	3,250	6,570	9,760	22,000	31,900	17,800	4,160	1,560	2,040
21	2,570	4,660	9,590	3,210	6,290	10,400	20,500	33,000	15,600	4,010	1,610	1,860
22	3,780	4,270	8,700	3,250	6,160	11,700	19,000	33,200	14,300	3,800	1,820	1,770
23	5,450	5,230	7,920	3,920	6,160	12,500	17,800	30,600	13,900	3,610	2,620	1,730
24	4,910	6,740	7,140	6,020	6,490	11,600	16,700	30,200	13,600	3,450	2,490	1,680
25	6,720	5,940	6,570	6,210	6,490	10,300	16,900	32,300	13,500	3,290	2,010	1,620
26	19,800	6,050	6,350	6,510	6,050	9,760	18,400	34,200	13,100	3,230	1,790	1,600
27	11,400	6,020	6,790	5,790	5,450	9,060	21,400	36,400	17,300	3,120	1,680	1,610
28	8,480	6,510	5,860	4,720	5,300	8,610	26,400	35,200	16,000	2,950	1,600	1,620
29	7,050	6,820	5,010	4,090	-	8,700	32,100	29,300	13,300	2,820	1,550	1,580
30	6,210	6,510	4,770	4,200	-	9,630	35,000	26,600	11,700	2,710	1,520	1,660
31	5,600	-	4,770	3,980	-	11,200	-	27,300	-	2,640	1,490	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	123,590	19,800	1,570	3,987	0.822	0.95	245,100
November	137,330	6,820	2,710	4,578	.944	1.05	272,400
December	313,370	30,400	4,540	10,110	2.08	2.40	621,600
Calendar year 1946	3,116,140	35,200	1,390	8,537	1.76	23.83	6,182,000
January	127,100	6,510	2,990	4,100	.845	.97	252,100
February	151,430	7,370	3,180	5,408	1.12	1.16	300,400
March	224,420	12,500	4,050	7,239	1.49	1.72	445,100
April	479,610	35,000	8,570	15,990	3.30	3.68	951,300
May	1,211,300	66,200	26,600	39,070	8.06	9.29	2,403,000
June	601,500	28,600	11,700	20,050	4.13	4.61	1,193,000
July	186,090	10,800	2,640	6,003	1.24	1.43	369,100
August	60,040	2,620	1,490	1,937	.399	.46	119,100
September	51,340	2,570	1,350	1,711	.353	.39	101,800
Water year 1946-47	3,667,120	66,200	1,350	10,050	2.07	28.11	7,274,000

Clearwater River at Spalding, Idaho

Location.- Water-stage recorder, lat. 46°25', long. 116°51', in lot 22, sec. 22, T. 36 N., R. 4 W., a quarter of a mile downstream from Lapwai Creek and three-eighths of a mile northwest of Spalding post office.

Drainage area.- 9,570 square miles.

Records available.- March 1926 to September 1947.

Average discharge.- 21 years, 14,000 second-feet.

Extremes.- Maximum discharge during year, 114,000 second-feet May 8; maximum gage height, 19.22 feet Jan. 24 (ice jam); minimum discharge, 2,530 second-feet Sept. 7 (gage height, 2.80 feet).

1926-47: Maximum discharge, 178,000 second-feet Dec. 23, 1933, from rating curve extended above 100,000 second-feet by logarithmic plotting; maximum gage height, 25.6 feet Jan. 5, 1928 (present site and datum), from floodmark (ice jam); minimum discharge probably less than 500 second-feet Jan. 9, 1937, during period of ice effect.

Remarks.- Records excellent. Small diversions from lower tributaries; slight diurnal fluctuation at times caused by power plant on South Fork.

Rating table, water year 1946-47, except periods of ice effect
(gage heights, in feet, and discharge, in second-feet)

2.8	2,530	6.5	13,400	14.0	64,300
3.2	3,270	8.0	20,500	16.0	84,700
4.0	5,040	10.0	32,200	18.1	108,000
5.0	7,870	12.0	47,000		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,830	g8,420	12,900	10,300	9,330	12,500	27,900	55,500	43,100	16,500	4,750	2,900
2	2,860	g8,330	11,700	10,400	10,200	11,900	26,200	58,300	39,700	15,800	4,630	2,810
3	4,630	g7,300	11,000	8,000	13,200	12,000	25,100	75,200	37,900	15,600	4,540	2,740
4	5,450	g6,450	10,200	6,500	11,500	12,500	24,400	87,000	37,200	15,500	4,400	2,650
5	4,350	g6,790	10,600	7,500	*10,700	12,100	23,100	92,000	34,700	15,000	4,310	2,650
6	4,130	6,900	10,400	9,500	10,200	10,900	21,600	92,300	34,900	14,000	4,150	2,600
7	3,810	6,900	9,950	10,500	9,750	10,400	20,800	93,900	37,200	13,400	4,000	2,560
8	3,600	6,930	9,580	9,500	8,950	10,100	19,400	106,000	33,700	13,000	3,870	2,720
9	3,470	6,640	9,680	8,300	8,130	10,000	19,500	108,000	42,200	12,500	3,700	3,680
10	3,410	6,210	*9,720	8,200	7,560	11,000	20,600	96,800	46,800	12,000	3,620	3,890
11	3,370	6,130	15,000	8,700	8,220	13,000	20,700	72,100	38,600	11,600	3,600	4,240
12	3,250	5,930	48,200	8,500	10,200	13,800	19,000	61,400	34,000	11,300	3,550	3,720
13	3,150	5,550	47,200	8,000	19,000	13,300	18,400	57,200	31,800	10,400	3,530	3,290
14	3,110	4,920	61,600	7,800	22,500	13,400	20,200	54,900	33,100	9,720	3,620	2,980
15	3,070	5,040	85,800	6,600	21,100	14,000	25,600	51,800	30,100	9,300	3,490	2,750
16	3,070	5,370	75,300	6,300	21,100	15,200	30,100	51,200	28,700	8,820	3,310	2,980
17	g2,940	4,850	45,600	7,000	21,000	17,000	32,400	50,500	31,800	8,360	3,190	4,940
18	g2,880	5,160	33,000	7,000	20,200	19,200	38,000	49,700	34,200	7,870	3,130	5,420
19	g2,860	10,500	28,100	7,000	18,800	21,200	41,100	47,600	30,000	7,470	3,030	4,560
20	g2,900	12,600	24,300	7,000	17,000	22,400	43,300	50,200	27,500	7,140	2,960	4,130
21	g3,780	10,000	21,200	7,000	15,800	22,900	40,400	51,000	24,300	6,840	2,920	3,850
22	7,750	8,590	19,200	7,000	15,600	24,700	36,800	51,500	22,000	6,550	3,110	3,530
23	8,750	9,720	17,400	9,000	15,800	27,900	34,300	48,200	21,000	6,300	3,830	3,330
24	9,750	14,800	15,800	18,000	16,700	25,700	32,200	46,800	20,500	6,040	5,060	3,210
25	9,470	12,800	14,400	19,500	16,600	22,700	32,000	48,400	20,000	5,820	4,040	3,110
26	31,000	12,900	13,600	20,000	15,500	21,000	33,600	50,800	19,500	5,680	3,510	3,090
27	g20,000	13,600	14,300	18,000	13,600	19,800	38,100	53,200	22,200	5,630	3,230	3,170
28	g13,900	16,600	13,100	14,200	13,000	18,500	46,200	53,200	24,100	5,420	3,070	3,170
29	g11,500	16,600	11,100	11,400	-	18,200	55,200	48,000	20,300	5,160	2,960	3,070
30	g10,000	14,800	10,100	10,800	-	19,700	61,600	40,400	18,000	5,040	2,880	2,940
31	g9,240	-	10,200	10,100	-	26,000	-	39,700	-	4,870	2,880	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff: Inches	Runoff: Acre-feet
October	204,280	31,000	2,830	6,590	0.689	0.79	405,200
November	267,330	16,600	4,850	8,911	.931	1.04	530,200
December	730,240	85,800	9,580	23,560	2.46	2.84	1,448,000
Calendar year 1946	6,076,040	85,800	2,740	16,650	1.74	23.62	12,050,000
January	307,600	20,000	6,300	9,923	1.04	1.20	610,100
February	401,240	22,500	7,560	14,330	1.50	1.56	795,800
March	523,000	27,900	10,000	16,870	1.76	2.03	1,037,000
April	927,800	61,600	18,400	30,930	3.23	3.61	1,840,000
May	1,940,800	108,000	39,700	62,610	6.54	7.54	3,850,000
June	919,100	46,800	18,000	30,640	3.20	3.57	1,823,000
July	298,630	16,500	4,870	9,633	1.01	1.16	592,300
August	112,870	5,060	2,880	3,641	.380	.44	223,900
September	110,680	5,420	2,560	3,356	.351	.39	199,700
Water year 1946-47	6,733,570	108,000	2,560	18,450	1.93	26.17	13,360,000

* Winter discharge measurement made on this day.
g Computed from graph based on staff-gage readings at auxiliary gage.
Note.- Stage-discharge relation affected by ice Jan. 3-27.

Lochsa River near Lowell, Idaho

Location.- Water-stage recorder, lat. 46°09', long. 115°35', in SW¼SE¼ sec. 33, T. 33 N., R. 7 E., three-quarters of a mile upstream from Lowell post office, seven-eighths of a mile upstream from mouth, and 1½ miles downstream from Pete King Creek.

Drainage area.- 1,180 square miles.

Records available.- November 1910 to August 1912 (gage heights only), October 1929 to September 1947.

Average discharge.- 18 years (1929-47), 2,500 second-feet.

Extremes.- Maximum discharge during year, 24,500 second-feet May 9 (gage height, 11.11 feet); minimum, 438 second-feet Sept. 7; minimum gage height, 1.55 feet Oct. 1.
1929-47: Maximum discharge, 34,800 second-feet June 10, 1933 (gage height, 13.44 feet), from rating curve extended above 25,000 second-feet; minimum, probably less than 100 second-feet Jan. 8, 1937, during period of ice effect.

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

Rating table, water year 1946-47, (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used June 19 to Sept. 30)

1.5	424	3.5	2,660	8.0	13,100
1.6	493	4.0	3,470	9.0	16,500
2.0	820	5.0	5,420	10.7	22,900
2.5	1,340	6.0	7,700		
3.0	1,950	7.0	10,200		

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	472	1,900	2,190	1,980	1,470	1,850	3,790	11,200	9,930	3,650	877	508
2	811	1,730	2,080	1,780	1,690	1,780	3,700	13,400	9,540	3,580	877	493
3	1,060	1,500	1,960	1,490	1,640	1,770	3,630	16,800	9,130	3,580	839	479
4	848	1,470	1,960	1,470	1,520	1,730	3,600	18,500	9,000	3,450	811	465
5	802	1,530	1,950	1,650	1,520	1,620	3,370	19,700	8,200	3,250	784	458
6	730	1,510	1,900	1,780	1,500	1,510	3,250	19,900	8,800	3,070	757	452
7	680	1,500	1,810	1,760	1,460	1,470	3,020	20,900	8,630	2,950	730	472
8	638	1,420	1,790	1,620	1,360	1,460	2,940	22,500	8,080	2,830	704	630
9	630	1,340	1,780	1,510	1,300	1,430	2,950	22,900	11,500	2,690	680	663
10	622	1,330	1,780	1,510	1,310	1,510	2,950	17,700	10,100	2,600	671	820
11	606	1,300	4,900	1,560	1,410	1,700	2,890	13,900	8,500	2,510	654	671
12	591	1,220	6,750	1,460	1,720	1,730	2,800	12,900	7,770	2,360	663	599
13	575	1,060	7,700	1,410	2,720	1,700	2,970	12,100	7,680	2,140	688	545
14	567	1,070	9,860	1,350	2,600	1,780	3,780	11,900	7,630	2,020	663	500
15	567	1,150	13,100	1,200	2,540	1,870	5,190	11,400	6,910	1,940	622	479
16	552	1,070	10,100	1,250	2,540	2,040	5,870	11,600	6,930	1,810	591	599
17	537	1,030	7,120	1,270	2,570	2,260	6,450	11,300	8,330	1,700	575	1,040
18	530	1,400	5,420	a1,250	2,390	2,800	7,240	11,200	7,650	1,610	552	868
19	530	2,180	4,840	1,250	2,390	2,800	6,980	11,100	7,080	1,510	530	748
20	591	2,210	4,170	1,240	2,230	3,030	7,390	11,700	6,090	1,430	523	705
21	1,320	1,770	3,650	1,250	2,190	3,200	6,910	12,200	5,440	1,370	545	646
22	1,560	1,700	3,300	1,280	2,140	3,910	6,470	12,000	5,020	1,310	680	614
23	1,980	2,330	2,990	1,780	2,190	4,100	6,090	11,100	4,860	1,250	1,070	591
24	1,630	2,620	2,760	2,250	2,260	3,790	5,870	11,100	4,700	1,200	848	567
25	4,620	2,300	2,570	2,030	2,250	3,400	6,160	11,900	4,600	1,140	680	537
26	6,960	2,360	2,510	2,120	2,040	3,230	6,930	12,500	4,540	1,130	614	530
27	3,780	2,350	2,540	a1,900	1,870	2,990	8,330	13,100	5,940	1,070	575	552
28	2,840	2,630	2,220	a1,550	1,910	2,910	10,200	12,300	5,360	1,000	545	530
29	2,360	2,660	1,940	a1,500	-	2,940	12,100	10,400	4,500	975	523	515
30	2,160	2,420	1,940	a1,550	-	3,350	12,300	9,540	3,960	945	508	583
31	1,950	-	1,910	1,490	-	3,830	-	10,200	-	915	515	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff: Inches	Runoff: Acre-feet
October	44,099	6,960	472	1,423	1.21	1.39	87,470
November	52,060	2,660	1,030	1,735	1.47	1.64	103,300
December	121,490	13,100	1,780	3,919	3.32	3.83	241,000
Calendar year 1946	1,114,042	13,200	458	3,052	2.59	35.13	2,210,000
January	48,490	2,250	1,200	1,564	1.33	1.53	96,180
February	54,840	2,720	1,300	1,959	1.66	1.73	108,800
March	75,200	4,100	1,430	2,426	2.06	2.37	149,200
April	166,120	12,300	2,800	5,537	4.69	5.24	329,500
May	428,940	22,900	9,540	13,840	11.7	13.52	850,800
June	216,400	11,500	3,960	7,213	6.11	6.82	429,200
July	62,985	3,650	915	2,032	1.72	1.99	124,900
August	20,894	1,070	508	674	.571	.66	41,440
September	17,859	1,040	452	595	.504	.56	35,420
Water year 1946-47	1,309,377	22,900	452	3,587	3.04	41.28	2,597,000

a No gage-height record; discharge computed on basis of weather records and records for Selway River near Lowell.

South Fork Clearwater River near Elk City, Idaho

Location.- Wire-weight gage, lat. 45°49', long. 115°32', in NE¼ sec. 25, T. 29 N., R. 7 E., at bridge on road to Orogrande, 0.2 mile upstream from Crooked River and 4½ miles west of Elk City.

Drainage area.- 261 square miles.

Records available.- September 1944 to September 1947.

Extremes.- Maximum discharge observed during year, 2,200 second-feet May 9 (gage height, 11.86 feet); minimum observed, 30 second-feet Sept. 5, 6 (gage height, 7.66 feet).
1944-47: Maximum discharge observed, that of May 9, 1947; minimum daily, 17 second-feet Dec. 11, 1944; minimum gage height observed, 7.53 feet Nov. 17, 1944, Sept. 3, 1945.

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	63	a116	90	85	130	620	1,450	a600	273	59	35
2	127	51	116	80	a85	a140	630	1,640	465	254	56	34
3	92	a47	112	65	*90	145	640	1,820	422	236	a53	34
4	63	63	110	65	85	145	640	a1,900	465	a220	51	32
5	50	68	114	a80	85	135	610	1,930	432	203	49	30
6	a50	74	116	110	80	125	a570	1,780	441	a215	49	30
7	50	78	*97	110	75	120	540	1,720	408	230	47	a34
8	56	83	a100	95	70	120	555	1,740	a400	176	44	62
9	51	86	104	85	a70	a120	555	1,970	465	142	40	49
10	49	a75	108	75	80	120	550	1,810	480	131	a39	70
11	43	75	222	85	80	130	525	1,470	436	181	38	56
12	42	74	815	a80	85	130	540	1,300	394	165	38	43
13	a42	74	800	75	110	135	a620	1,200	342	a120	38	38
14	41	80	820	70	130	140	700	1,100	354	101	38	a36
15	40	70	a650	60	135	180	870	1,010	a300	101	38	37
16	40	69	372	65	a150	a240	920	947	292	95	37	38
17	36	a80	329	68	150	300	1,070	865	376	88	a37	92
18	38	116	350	70	155	380	1,300	a880	333	85	38	95
19	35	137	325	a70	155	*480	1,260	898	284	83	40	78
20	a35	152	280	70	145	550	a1,300	865	284	a82	40	56
21	75	135	250	75	140	575	1,130	765	277	81	40	a50
22	108	122	a220	75	140	630	1,080	720	a240	78	51	44
23	216	114	180	80	a145	a660	1,040	715	222	78	78	41
24	157	a130	120	110	155	590	920	655	209	75	a70	41
25	222	116	a90	130	155	545	908	a580	184	75	43	38
26	372	118	86	a125	140	520	952	580	184	72	40	38
27	a240	114	88	110	120	520	a1,050	540	505	a70	40	38
28	120	116	85	90	120	525	1,190	520	350	69	38	a38
29	108	122	a75	90	-	560	1,360	480	a320	66	40	37
30	99	120	90	90	-	a580	1,540	446	292	62	40	50
31	74	-	90	90	-	620	-	560	-	60	a37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	2,809	372	35	90.6	0.347	0.40	5,570
November	2,822	152	47	94.1	.361	.40	5,600
December	7,430	820	75	240	.920	1.06	14,740
Calendar year 1946	85,135	1,200	32	233	.893	12.13	168,900
January	2,633	130	60	84.9	.325	.38	5,220
February	3,215	155	70	115	.441	.46	6,380
March	10,290	660	120	332	1.27	1.47	20,410
April	26,185	1,540	525	873	3.34	3.73	51,940
May	34,856	1,970	446	1,124	4.31	4.97	69,140
June	10,756	600	184	359	1.38	1.53	21,330
July	3,967	273	60	128	.490	.57	7,870
August	1,386	78	37	44.7	.171	.20	2,750
September	1,394	95	30	46.5	.178	.20	2,760
Water year 1946-47	107,743	1,970	30	295	1.13	15.37	213,700

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for station near Grangeville.
Note.- Stage-discharge relation affected by ice Dec. 18-21, 23, 24, Dec. 30 to Mar. 21.

South Fork Clearwater River near Grangeville, Idaho

Location.- Water-stage recorder, lat. 45°55', long. 116°01', in SE¼NW¼ sec. 30, T. 30 N., R. 4 E., just downstream from powerhouse of Washington Water Power Co. and 6 miles southeast of Grangeville.
Drainage area.- 865 square miles.
Records available.- November 1910 to September 1916, April 1923 to September 1947.
Average discharge.- 28 years (1912-16, 1923-47), 808 second-feet.
Extremes.- Maximum discharge during year, 6,100 second-feet May 9 (gage height, 9.02 feet); no flow part of day Aug. 27 (result of regulation); minimum daily, 140 second-feet (regulated) Sept. 6.
1910-16, 1923-47: Maximum discharge observed, 9,830 second-feet May 30, 1912 (gage height, 9.7 feet), from rating curve extended above 6,500 second-feet; no flow part of day Aug. 27, 1947; minimum daily, 41 second-feet Nov. 22, 1931.
Remarks.- Records excellent except those for Apr. 25 to May 10, which are good, and those for periods of ice effect, which are fair. Diurnal fluctuation caused by power plant just above station. No diversion for irrigation.
Cooperation.- Water-stage recorder inspected by Washington Water Power Co. in connection with a Federal Power Commission project.

Rating tables, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Apr. 25 to May 9, Sept. 6-30)

Oct. 1 to May 2				May 3 to Sept. 30					
2.8	149	4.7	1,180	2.7	118	3.6	441	6.0	2,270
3.1	240	5.3	1,700	2.8	142	4.0	649	7.0	3,460
3.4	362	6.0	2,430	3.0	199	4.5	960	8.7	5,670
3.8	575	6.7	3,280	3.2	268	5.0	1,340		
4.2	810	7.4	4,270						

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	177	353	438	b430	b375	575	1,600	3,510	2,110	1,080	280	150
2	325	305	438	b350	b380	575	1,600	4,240	1,900	1,020	264	151
3	402	262	423	b300	*b380	564	1,620	4,960	1,810	974	261	141
4	297	285	423	b300	b375	548	1,620	5,320	1,880	967	246	156
5	262	326	417	b350	377	492	1,510	5,400	1,720	906	239	147
6	255	317	433	b500	362	465	1,460	5,250	1,890	860	236	140
7	227	358	*392	b500	b340	460	1,370	5,280	1,720	815	236	147
8	224	330	387	b450	b310	460	1,370	5,360	1,650	777	199	226
9	207	301	392	b400	b300	454	1,390	5,660	2,130	730	212	219
10	217	297	382	b350	b340	470	1,380	5,240	2,030	712	209	271
11	201	309	866	b375	353	498	1,320	4,320	1,980	747	222	272
12	192	281	2,200	b360	377	504	1,280	3,920	1,740	695	209	199
13	192	210	2,340	b350	509	514	1,380	3,690	1,710	622	202	187
14	195	258	2,360	b325	564	558	1,670	3,380	1,680	594	204	153
15	174	289	2,210	b290	603	654	2,160	3,100	1,560	557	187	161
16	183	227	1,840	b300	648	762	2,330	3,000	1,640	526	181	187
17	180	251	1,160	b310	660	894	2,540	2,880	2,160	500	178	362
18	177	344	1,020	322	684	1,080	3,070	2,720	1,890	485	166	349
19	186	470	1,110	b320	690	*1,240	3,290	2,780	1,670	461	162	288
20	174	433	1,000	317	642	1,340	3,310	2,770	1,540	441	170	246
21	301	348	860	344	630	1,390	2,960	2,640	1,410	422	178	216
22	454	362	804	344	619	1,580	2,760	2,490	1,300	408	199	206
23	630	460	726	372	642	1,610	2,530	2,350	1,240	376	243	199
24	492	482	630	487	684	1,480	2,350	2,290	1,200	358	236	184
25	619	433	564	597	684	1,340	2,320	2,300	1,140	362	193	174
26	1,110	412	602	580	608	1,320	2,410	2,310	1,190	349	166	198
27	630	428	654	492	520	1,220	2,660	2,360	1,840	341	155	185
28	504	476	449	402	548	1,230	2,960	2,310	1,520	315	168	190
29	417	531	362	b400	-	1,300	3,310	2,090	1,300	295	150	188
30	392	492	b410	b410	-	1,450	3,620	1,960	1,160	303	158	179
31	353	-	b410	b400	-	1,570	-	2,050	-	284	145	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	10,349	1,110	174	334	0.386	0.44	20,530
November	10,630	531	210	354	.409	.46	21,080
December	26,702	2,360	362	861	.995	1.15	52,960
Calendar year 1946	293,837	3,560	127	805	.931	12.63	582,800
January	12,027	597	290	388	.449	.52	23,860
February	14,204	690	300	507	.586	.61	28,170
March	28,607	1,610	454	923	1.07	1.23	56,740
April	65,150	3,620	1,280	2,172	2.51	2.80	129,200
May	107,930	5,660	1,960	3,482	4.03	4.64	214,100
June	49,710	2,160	1,140	1,657	1.92	2.14	98,600
July	18,282	1,060	284	590	.682	.79	36,260
August	6,254	280	145	202	.234	.27	12,400
September	6,071	362	140	202	.234	.26	12,040
Water year 1946-47	355,916	5,660	140	975	1.13	15.31	705,900

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

North Fork Clearwater River at Bungalow ranger station, Idaho

Location.- Water-stage recorder, lat. 46°38', long. 115°30', in sec. 18, T. 38 N., R. 8 E., at Bungalow ranger station, 300 feet downstream from mouth of Orogrande Creek, 1,000 feet downstream from steel highway bridge, and 17 miles northeast of Pierce.

Drainage area.- 996 square miles.

Records available.- September 1944 to September 1947.

Extremes.- Maximum discharge during year, 19,700 second-feet May 8 (gage height, 9.17 feet); minimum, 597 second-feet Oct. 19, Sept. 6; minimum gage height, 2.58 feet Oct. 19.

1944-47: Maximum discharge, that of May 8, 1947; minimum daily, 350 second-feet Dec. 12, 1944.

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

Cooperation.- Water-stage recorder inspected by U. S. Forest Service ranger at Bungalow ranger station.

Rating table, water year 1946-47, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Dec. 23)

2.6	570	4.5	3,720
2.9	870	5.0	5,070
3.2	1,230	6.0	8,210
3.6	1,850	7.5	13,500
4.0	2,610	9.0	19,000

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	642	1,460	2,330	2,050	1,700	1,990	4,360	10,800	6,840	2,630	969	670
2	1,130	1,310	2,200	1,710	b2,000	1,940	4,310	12,100	6,520	2,510	958	651
3	936	1,110	2,030	b1,400	2,490	1,980	4,230	13,900	6,360	2,410	925	651
4	782	1,190	2,010	b1,300	2,180	1,920	4,100	14,900	6,210	2,330	958	630
5	750	1,200	1,990	b1,450	2,070	1,760	3,800	15,400	5,660	2,240	925	620
6	700	1,220	1,890	b1,800	1,900	1,660	3,530	15,300	5,960	2,120	881	600
7	680	1,220	1,800	b1,900	1,730	1,630	3,300	16,200	5,450	2,050	870	620
8	680	1,150	1,800	b1,800	1,570	1,620	3,180	18,400	5,570	1,980	848	750
9	690	1,090	1,760	b1,600	1,540	1,570	3,140	17,700	7,220	1,900	826	950
10	680	1,090	1,830	b1,600	1,580	1,650	3,160	14,500	8,460	1,870	837	960
11	660	1,060	5,730	b1,600	1,820	1,760	3,070	12,500	5,780	1,990	826	900
12	651	b940	6,930	b1,500	1,990	1,820	2,990	11,500	5,420	1,820	826	780
13	642	b850	7,980	b1,400	2,670	1,830	3,210	11,300	5,330	1,700	848	700
14	660	947	11,200	b1,300	2,690	1,980	4,180	11,000	5,190	1,620	804	650
15	642	1,050	15,300	b1,200	2,760	2,110	5,540	10,500	4,700	1,570	771	650
16	624	903	11,900	b1,100	2,840	2,320	6,080	10,300	4,640	1,500	760	950
17	615	969	8,340	b1,200	2,900	2,570	6,550	9,900	5,270	1,440	740	1,600
18	615	1,880	6,520	1,380	2,840	2,880	6,870	9,580	4,700	1,400	730	1,100
19	615	2,880	5,480	1,480	2,650	3,230	6,800	9,630	4,470	1,360	710	900
20	815	2,220	4,580	1,440	2,470	3,480	7,350	9,730	4,130	1,310	710	850
21	1,730	1,820	4,000	1,480	2,370	3,620	7,000	10,000	3,840	1,270	760	750
22	1,490	1,730	3,580	1,490	2,300	4,420	6,740	9,630	3,600	1,240	1,060	730
23	1,820	2,630	3,230	1,930	2,370	4,530	6,580	9,080	3,430	1,200	1,200	700
24	1,430	2,550	2,920	2,610	2,490	4,070	6,550	8,910	3,320	1,180	859	680
25	4,880	2,320	2,670	2,240	2,510	3,620	6,960	9,020	3,160	1,160	782	660
26	4,810	2,490	2,650	2,390	2,260	3,410	7,720	9,050	3,140	1,150	740	690
27	2,740	2,570	2,570	2,200	2,110	3,180	9,050	9,220	3,580	1,090	710	720
28	2,110	3,340	2,280	1,750	2,180	3,120	10,500	8,570	3,300	1,060	690	710
29	1,780	3,010	1,920	1,710	-	3,210	11,700	7,650	3,070	1,050	680	700
30	1,650	2,630	2,030	1,830	-	3,800	11,600	6,680	2,820	1,020	700	720
31	1,490	-	1,920	1,730	-	4,420	-	7,320	-	1,000	710	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	40,139	4,880	615	1,295	1.30	1.50	79,610
November	50,829	3,340	850	1,694	1.70	1.90	100,800
December	133,370	15,300	1,760	4,302	4.32	4.98	264,500
Calendar year 1946	1,074,943	15,300	615	2,945	2.96	40.15	2,132,000
January	51,580	2,610	1,100	1,664	1.67	1.93	102,300
February	62,980	2,900	1,540	2,249	2.26	2.35	124,900
March	83,100	4,530	1,570	2,681	2.69	3.10	164,800
April	174,150	11,700	2,990	5,805	5.83	6.50	345,400
May	350,250	18,400	6,680	11,300	11.3	13.08	694,700
June	145,140	7,220	2,820	4,838	4.86	5.42	287,900
July	50,160	2,630	1,000	1,618	1.62	1.87	99,490
August	25,613	1,200	680	826	.829	.96	50,800
September	23,242	1,600	600	775	.778	.87	46,100
Water year 1946-47	1,190,553	18,400	600	3,262	3.28	44.46	2,361,000

b Stage-discharge relation affected by ice.

Note.- Incomplete or no gage-height record Sept. 4-29; discharge computed on basis of partial recorder record, weather records, and records for station near Ahsahka.

North Fork Clearwater River near Ahsahka, Idaho

Location.- Water-stage recorder, lat. 46°31', long. 116°18', in SE¼ sec. 26, T. 37 N., R. 1 E., at Bruce's Eddy, 1½ miles northeast of Ahsahka and 2 miles upstream from mouth.

Drainage area.- 2,440 square miles.

Records available.- August 1926 to September 1947.

Average discharge.- 21 years, 5,243 second-feet.

Extremes.- Maximum discharge during year, 46,300 second-feet Dec. 15 (gage height, 23.26 feet); minimum, 1,110 second-feet Oct. 18, 19 (gage height, 2.78 feet).
1926-47: Maximum discharge, 100,000 second-feet Dec. 23, 1933 (gage height, 35.5 feet, from floodmarks), from rating curve extended above 24,000 second-feet by logarithmic plotting; minimum, probably less than 250 second-feet Jan. 8, 1937, during period of ice effect.

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

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a1,700	2,680	5,400	4,360	3,740	5,250	11,900	20,500	12,400	5,070	1,890	1,360
2	a2,100	2,580	4,860	4,120	*4,230	4,980	11,100	21,800	11,800	4,840	1,860	1,320
3	1,970	2,220	4,500	3,280	5,660	5,110	10,400	24,900	11,100	4,650	1,820	1,280
4	f1,560	2,050	4,300	2,920	f4,000	5,410	10,000	27,500	11,400	4,450	1,850	1,240
5	h1,370	2,190	4,590	3,210	a4,300	5,070	9,200	28,900	10,500	4,250	1,810	1,230
6	a1,300	2,210	4,360	3,980	a4,200	4,590	8,540	29,000	11,400	4,110	1,740	1,190
7	a1,300	2,290	4,130	4,340	a4,000	4,430	7,940	29,600	11,000	3,950	1,690	1,230
8	a1,300	2,250	4,050	4,050	3,680	4,320	7,550	f34,800	10,400	3,760	1,650	1,490
9	a1,300	2,120	4,120	3,570	3,370	4,190	7,480	34,900	13,400	3,610	1,610	1,870
10	a1,250	2,040	*4,210	3,520	3,310	4,680	7,740	f29,800	13,400	3,450	1,600	1,920
11	a1,250	2,040	11,200	3,670	3,650	5,590	7,880	23,700	11,500	3,500	1,600	1,790
12	1,200	1,960	18,500	3,500	4,360	5,820	7,280	21,300	10,400	3,430	1,580	1,520
13	1,190	1,770	16,700	3,330	6,840	5,600	7,300	20,000	9,950	3,220	1,600	1,390
14	1,180	1,650	26,100	3,140	7,980	5,810	8,600	19,400	10,500	3,080	1,600	1,300
15	1,180	1,730	40,900	2,690	7,980	6,130	11,100	18,100	9,180	2,970	1,530	1,260
16	1,150	1,830	29,900	2,450	8,300	6,800	11,900	17,700	8,650	2,840	1,480	1,840
17	1,130	1,650	18,600	2,710	8,360	7,780	12,800	16,700	9,740	2,740	1,460	3,110
18	1,130	2,860	14,000	b3,200	8,080	8,800	14,800	16,200	9,450	2,630	1,440	2,170
19	1,130	6,480	11,800	b3,200	7,480	9,730	14,900	15,700	8,670	2,540	1,410	1,770
20	1,220	5,670	9,950	b3,200	6,770	10,000	16,300	16,000	8,080	2,460	1,370	1,740
21	2,720	4,160	8,720	3,240	6,350	10,100	15,200	16,500	7,460	2,380	1,420	1,630
22	3,240	3,690	7,940	3,040	6,190	11,500	14,200	16,100	6,980	2,330	1,480	1,510
23	3,820	4,970	7,220	3,710	6,340	12,200	13,500	15,200	6,690	2,260	1,980	1,440
24	3,260	6,480	6,560	6,900	6,840	10,900	13,100	14,700	6,490	2,190	1,930	1,400
25	5,180	5,370	6,050	7,050	6,830	9,500	13,400	14,900	6,200	2,150	1,560	1,360
26	11,100	5,520	5,860	7,140	6,340	8,730	14,600	15,100	5,990	2,170	1,450	1,440
27	5,450	5,910	5,920	6,560	5,730	8,080	16,600	15,300	6,470	2,160	1,400	1,490
28	3,950	8,020	5,290	5,140	5,600	7,670	18,900	14,900	6,270	2,070	1,350	1,420
29	3,310	7,280	4,540	4,320	-	7,730	21,600	13,100	5,850	2,040	1,330	1,350
30	3,040	6,190	4,370	4,330	-	8,880	23,000	12,000	5,400	1,980	1,320	1,330
31	2,790	-	4,280	a4,200	-	11,900	-	12,600	-	1,920	1,380	

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff Inches	Runoff Acre-feet
October	74,770	11,100	1,130	2,412	0.989	1.14	148,300
November	107,860	8,020	1,650	3,595	1 47	1.64	213,900
December	308,920	40,900	4,050	9,965	4.08	4.71	612,700
Calendar year 1946	2,315,640	40,900	1,130	6,344	2.60	35.29	4,592,000
January	124,070	7,140	2,450	4,002	1.64	1.89	246,100
February	160,510	8,360	3,310	5,732	2.35	2.45	318,400
March	227,280	12,200	4,190	7,332	3.00	3.46	450,800
April	368,810	23,000	7,280	12,290	5.04	5.62	731,500
May	626,900	34,900	12,000	20,220	8.29	9.56	1,243,000
June	276,720	13,400	5,400	9,224	3.78	4.22	548,900
July	95,200	5,070	1,920	3,071	1.26	1.45	188,800
August	49,190	1,980	1,320	1,587	.650	.75	97,570
September	46,390	3,110	1,190	1,546	.634	.71	92,010
Water year 1946-47	2,466,620	40,900	1,130	6,758	2.77	37.60	4,892,000

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Clearwater River at Kamiah and at Spalding.
b Stage-discharge relation affected by ice.
f Computed from partly estimated gage-height record.
h Computed from staff-gage readings.

Potlatch Creek at Kendrick, Idaho

Location.- Wire-weight gage, lat. 46°37', long. 116°39', in NW¼ sec. 25, T. 38 N., R. 3 W., at Mill Street Bridge in Kendrick, 0.9 mile downstream from Bear Creek and 3.2 miles upstream from Middle Potlatch Creek.

Drainage area.- 460 square miles.

Records available.- October 1945 to September 1947.

Extremes.- Maximum discharge observed during year, 3,660 second-feet Dec. 1f (gage height, 8.24 feet); minimum observed, 5.0 second-feet Aug. 20, 29, Sept. 6; minimum gage height observed, 3.35 feet Aug. 20.

1945-47: Maximum discharge observed, 7,600 second-feet (revised) Dec. 28, 1945 (gage height, 10.35 feet); minimum observed, 4.3 second-feet Aug. 25; mirimum gage height observed, 3.28 feet Oct. 12-16, 1945.

Revisions.- The maximum discharge for the water year 1946 has been revised to 7,600 second-feet Dec. 28, 1945 (gage height, 10.35 feet), superseding figure published in Water-Supply Paper 1063.

Remarks.- Records fair except those for periods of ice effect, which are poor. Gage read once or twice daily. No diversion or regulation.

Discharge, in second-feet, water year October 1946 to September 1947

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	25	202	110	*398	408	1,430	295	66	23	8.0	5.8
2	8.9	30	159	72	1,590	431	1,170	256	93	23	8.0	6.0
3	9.2	27	126	60	1,330	541	921	232	79	23	7.8	7.0
4	15	24	109	64	990	749	845	213	102	20	8.6	6.2
5	12	23	114	70	827	701	766	185	116	18	7.2	5.4
6	10	28	114	75	595	448	677	166	150	18	6.8	5.0
7	12	37	100	70	534	502	617	148	162	15	7.0	5.2
8	11	33	102	65	477	454	575	142	182	15	6.2	6.5
9	11	27	240	60	448	465	568	372	178	15	7.0	7.5
10	9.8	36	*199	62	377	1,240	647	290	169	13	6.2	14
11	9.2	31	864	64	332	1,470	693	206	145	15	6.0	14
12	9.8	27	1,690	60	342	1,100	561	166	93	12	5.8	14
13	9.5	25	2,490	55	2,690	970	490	148	87	12	6.0	11
14	9.2	24	1,790	52	2,420	855	454	111	109	14	5.4	8.6
15	8.9	26	3,420	50	2,180	864	448	104	102	12	5.5	8.0
16	9.5	22	1,830	55	2,030	883	419	102	87	14	5.5	18
17	9.5	24	610	60	1,860	911	425	98	70	12	5.8	29
18	9.2	28	508	60	1,640	980	1,060	94	66	12	5.4	47
19	9.2	188	398	60	1,570	1,020	980	87	63	10	5.4	37
20	14	185	308	60	1,110	940	1,310	80	55	10	5.0	26
21	34	169	282	60	1,130	911	911	74	48	10	5.4	26
22	68	102	264	65	1,180	864	725	68	44	8.9	5.5	22
23	62	150	236	150	1,270	827	581	63	40	8.9	5.8	20
24	63	159	195	2,910	1,200	733	454	57	37	8.9	6.5	18
25	68	172	159	2,840	1,110	677	414	54	36	8.9	6.2	15
26	66	286	199	3,200	775	581	392	51	36	8.9	6.0	16
27	62	308	192	1,910	484	547	372	48	35	8.9	6.8	18
28	43	534	111	741	496	459	346	44	34	11	6.2	24
29	37	403	106	725	-	414	356	41	33	9.2	5.0	20
30	29	268	104	717	-	490	332	43	32	8.0	5.4	19
31	24	-	110	490	-	1,570	-	44	-	8.3	5.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff	
						Inches	Acre-feet
October	760.1	68	7.2	24.5	0.053	0.06	1,510
November	3,421	534	22	114	.248	.28	6,790
December	17,331	3,420	100	559	1.22	1.40	34,380
Calendar year 1946	151,215.0	3,420	4.3	414	.900	12.22	299,900
January	15,092	3,200	50	487	1.06	1.22	29,930
February	31,385	2,690	332	1,121	2.44	2.54	62,250
March	23,985	1,570	408	774	1.68	1.94	47,570
April	19,939	1,430	332	665	1.45	1.61	39,550
May	4,082	372	41	132	.287	.33	8,100
June	2,549	182	32	85.0	.185	.21	5,060
July	405.9	23	8.0	13.1	.028	.03	805
August	192.8	8.6	5.0	6.22	.014	.02	382
September	479.2	47.0	5.0	16.0	.035	.04	950
Water year 1946-47	119,622.0	3,420	5.0	328	.713	9.68	237,300

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 31, Jan. 1, 3-23.

Measurements of stream flow in the Snake River Basin made at points other than gaging stations are given in the following table:

Miscellaneous discharge measurements in Snake River Basin during water year October 1946 to September 1947*

Date	Stream	Tributary to or diverting from--	Locality	Discharge (sec.-ft.)
Snake River main stem, Idaho				
May 9	Snake River.....	Columbia River.....	SW¼ sec. 16, T. 1 S., R. 45 E., at site of former gaging station, 400 feet above Bear Creek, 5,600 feet above Calamity Point dam site, and 7½ miles southeast of Irwin, Idaho.	18,120
Nov. 20	....do.....	.....do.....	Sec. 11, T. 9 S., R. 14 E., 1,500 feet below Clear Lakes Outlet and 4½ miles north of Buhl, Idaho.	6,440
July 19	....do.....	....do.....	SE¼ sec. 35, T. 9 N., R. 30 E., at crossing of U. S. Highway 395/410, 2½ miles east of Pasco, Wash.	30,200
Sept. 5	....do.....	....do.....	....do.....	18,600
Henrys Fork Basin, Idaho				
June 24	Big Springs Creek	Henrys Fork.....	Sec. 32, T. 14 N., R. 44 E., at site of former station half a mile southeast of Big Springs, Idaho, railroad station and ¼ mile below road bridge.	179
Mud Lake Basin, Idaho				
Mar. 19	Birch Creek.....	Mud Lake.....	Sec. 11, T. 10 N., R. 29 E., 1.8 miles below State Highway 28 crossing, 2 miles south of Kaufman ranger station, and 29 miles west of Small, Idaho.	112
Little Lost River Basin, Idaho				
Apr. 30	Dry Creek.....	Little Lost River...	Sec. 36, T. 10 N., R. 24½ E., at downstream toe of Dry Creek Dam and 36 miles northwest of Howe, Idaho.	16.2
30	....do.....	....do.....	Sec. 13, T. 10 N., R. 25 E., 2 miles below Taylor Ranch, 8½ miles below Dry Creek Dam, and 36 miles northwest of Howe, Idaho.	0
Big Lost River Basin, Idaho				
May 9	Zollinger ditch..	Big Lost River.....	Sec. 32, T. 8 N., R. 23 E., 500 feet east of gaging station on Big Lost River (east channel) above Mackay Reservoir, 3 miles above Mackay Dam, and 7½ miles northeast of Mackay, Idaho.	8.12
Tributaries between Portneuf River and Salmon Falls Creek, Idaho				
Mar. 20	Rock Creek.....	Snake River.....	Sec. 33, T. 10 S., R. 31 E., 4.7 miles south of Rockland, Idaho.	11.0
12	Blue Lakes Outlet (2 channels).	....do.....	SW¼SW¼ sec. 28, T. 9 S., R. 17 E., at mouth, 4 miles north of Twin Falls, Idaho.	221
Apr. 25	....do.....	....do.....	....do.....	223
May 27	....do.....	....do.....	....do.....	208
July 22	....do.....	....do.....	....do.....	214
Aug. 30	....do.....	....do.....	....do.....	218
Salmon Falls Creek Basin, Nev.				
Apr. 13	Salmon Falls Creek.	Snake River.....	Sec. 30, T. 45 N., R. 64 E., at U. S. Highway 93 bridge, 1.4 miles south of Contact, Nev.	94.9
May 20	....do.....	....do.....	....do.....	155
July 23	....do.....	....do.....	....do.....	27.2
Sept. 1	....do.....	....do.....	....do.....	20.0
Canyon Creek Basin, Idaho				
Oct. 15	Ake lateral No. 2	Mountain Home feeder canal.	Sec. 36, T. 2 S., R. 6 E., at head, 5 miles north of Mountain Home, Idaho.	0.70
Dec. 4	....do.....	....do.....	....do.....	.52
Feb. 5	....do.....	....do.....	....do.....	1.01
14	....do.....	....do.....	....do.....	†1.06
Apr. 1	....do.....	....do.....	....do.....	6.03
8	....do.....	....do.....	....do.....	†6.0
30	....do.....	....do.....	....do.....	4.95

† Field estimate.

* Includes measurements made in the Owhyee and Imnaha River Basins in 1945.

Miscellaneous discharge measurements in Snake River Basin during water year October 1946 to September 1947--Continued

Canyon Creek Basin, Idaho--Continued

Date	Stream	Tributary to or diverting from--	Locality	Discharge (sec.-ft.)
June 5	Ake lateral No. 2.	Mountain Home feeder canal.	Sec. 36, T. 2 S., R. 6 E., at head 5 miles north of Mountain Home, Idaho.	3.07
July 14	....do.....	....do.....	....do.....	2.52
16	....do.....	....do.....	....do.....	2.33
Aug. 26	....do.....	....do.....	....do.....	2.42

Bruneau River Basin, Nev.

Sept.15	Bruneau River....	Snake River.....	Sec. 21, T. 44 N., R. 57 E., 2 miles northwest of Charleston, Nev.	†0.3
13	....do.....	....do.....	Near southeast corner T. 46 N., R. 56 E., 9 miles southeast of Rowland, Nev.	3.4
12	....do.....	....do.....	Sec. 5, T. 46 N., R. 56 E., below Meadow Creek, 1¾ miles south of Rowland, Nev.	5.0
13	Mason Creek.....	Bruneau River.....	Sec. 36, T. 43 N., R. 57 E., at mouth, 6½ miles southeast of Charleston, Nev.	Dry
13	Willow Creek.....	....do.....	Sec. 14, T. 43 N., R. 57 E., at road crossing near mouth, 4 miles south of Charleston, Nev.	‡Trickle
13	Seventy-Six Creek	....do.....	Sec. 26, T. 44 N., R. 57 E., near Charleston, Nev.	‡Trickle
13	Badger Creek.....	....do.....	Sec. 27, T. 44 N., R. 57 E., at road crossing near mouth, 1 mile northwest of Charleston, Nev.	†.2
14	Copper Creek.....	....do.....	Near lat. 41°45', long. 115°30', about 5 miles above mouth and 5½ miles northeast of Charleston, Nev.	1.4
13	....do.....	....do.....	Sec. 16, T. 44 N., R. 57 E., at road crossing 1 mile above mouth and 3 miles northwest of Charleston, Nev.	†.4
13	Deer Creek.....	....do.....	Sec. 32, T. 45 N., R. 57 E. (unsurveyed) at mouth, 6½ miles northwest of Charleston, Nev.	†.2
13	Cottonwood Creek.	....do.....	Sec. 19, T. 45 N., R. 57 E. (unsurveyed) at road crossing below diversion, 8 miles northwest of Charleston, Nev.	‡Trickle
13	Little Cottonwood Creek.	....do.....	Sec. 19, T. 45 N., R. 57 E. (unsurveyed) at road crossing 8½ miles northwest of Charleston, Nev.	‡Trickle
13	Miller Creek.....	....do.....	Sec. 7, T. 45 N., R. 57 E. (unsurveyed) at road crossing below diversion 10½ miles northwest of Charleston, Nev.	†.3
13	Coon Creek.....	....do.....	Sec. 31, T. 46 N., R. 57 E. (unsurveyed) 100 feet above mouth, 11½ miles northwest of Charleston, Nev.	1.4
12	Meadow Creek.....	....do.....	Sec. 25, T. 46 N., R. 55 E., 6 miles southwest of Rowland, Nev.	†.8
12	....do.....	....do.....	Sec. 5, T. 46 N., R. 56 E., at mouth 1¾ miles south of Rowland, Nev.	†.2
16	McDonald Creek...	....do.....	Sec. 17, T. 47 N., R. 56 E., near mouth, 1½ miles north of Rowland, Nev.	†.4
15	Jarbidge River...	....do.....	Sec. 28, T. 46 N., R. 58 E., 2 miles south of Jarbidge, Nev.	8.5
15	....do.....	....do.....	Sec. 32, T. 15 S., R. 9 E., 150 feat upstream from East Fork Jarbidge River, 14 miles west of Three Creek, Idaho.	9.0
15	East Fork Jarbidge River.	Jarbidge River.....	Sec. 32, T. 15 S., R. 9 E., 50 feet above mouth, 14 miles west of Three Creek, Idaho.	8.7

† Field estimate.
‡ Less than 0.1 second-foot.

Owyhee River Basin, Oreg.

1945				
Oct. 13	Owyhee River.....	Snake River.....	Sec. 9, T. 31 S., R. 41 E., below Crooked Creek, Oreg.	207
7	Crooked Creek....	Owyhee River.....	1¼ miles above mouth, near Rome, Oreg.	25.5

Malheur River Basin, Oreg.

1947				
Mar. 19	Warmsprings Creek	North Fork Malheur River.	Sec. 1 or 2, T. 19 S., R. 37 E., near Beulah, Oreg.	8.3
May 22	....do.....	....do.....	....do.....	†.5
July 19	....do.....	....do.....	....do.....	†.5

† Field estimate.

Miscellaneous discharge measurements in Snake River Basin during water year October 1946 to September 1947--Continued

Payette River Basin, Idaho

Date	Stream	Tributary to or diverting from--	Locality	Discharge (sec.-ft.)
Nov. 1	Idaho Power Co. canal.	Payette River.....	Sec. 27, T. 7 N., R. 2 E., about ½ mile west of Horseshoe Bend and 2.3 miles above Horseshoe Bend power plant of Idaho Power Co.	841

Weiser River Basin, Idaho

May 7	Johnson Creek....	Weiser River.....	SE¼ sec. 36, T. 17 N., R. 3 W., above Johnson Park Creek and 10 miles northwest of Council, Idaho.	52.2
June 12	....do.....	....do.....	....do.....	16.2
July 30	....do.....	....do.....	....do.....	2.26
May 7	Johnson Park Creek	Johnson Creek.....	SE¼ sec. 36, T. 17 N., R. 3 W., at mouth, and 10 miles northwest of Council, Idaho.	29.7
June 12	....do.....	....do.....	....do.....	5.96
Sept. 4	....do.....	....do.....	....do.....	†.14

† Field estimate.

Burnt River Basin, Oreg.

July 9	Burnt River.....	Snake River.....	Sec. 25, T. 11 S., R. 42 E., at private road bridge, 3 miles west of Durkee, Oreg.	61.2
June 7	Van Cleve ditch..	Burnt River.....	Near southwest corner Sec. 21, T. 12 S., R. 37 E. at intake below gage but above cableway on Burnt River, near Hereford, Oreg.	4.5
July 10	....do.....	....do.....	....do.....	3.1
Sept. 5	....do.....	....dc.....	....do.....	4.0

Imnaha River Basin, Oreg.

1945				
July 27	Imnaha River.....	Snake River.....	T. 5 S., R. 27 E., at Coverdale forest guard station.	237
Aug. 23	....do.....	....do.....	....do.....	98.4
Oct. 9	....do.....	....do.....	....do.....	59.7
1947				
Sept.15	....do.....	....do.....	....do.....	76.6

Salmon River Basin, Idaho

Oct. 24	Secesh River.....	South Fork Salmon River.	Sec. 35, T. 22 N., R. 5 E., 1,000 feet below mouth of Alex Creek and 7 miles southeast of Burgdorf, Idaho.	97.6
17	Warren Creek.....	Salmon River.....	Sec. 15, T. 23 N., R. 6 E., 30 feet below Schissler Creek and 5 miles northwest of Warren, Idaho.	24.1

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