DEPARTMENT OF THE INTERIOR
Ray Lyman Wilbur, Secretary

U. S. GEOLOGICAL SURVEY
George Otis Smith, Director

WATER-SUPPLY PAPER 613

SURFACE WATER SUPPLY OF THE UNITED STATES

1925

PART XII. NORTH PACIFIC SLOPE DRAINAGE BASINS

B. SNAKE RIVER BASIN

NATHAN C. GROVER, Chief Hydraulic Engineer
G. C. BALDWIN, G. L. PARKER, C. G. PAULSEN
A. B. PURTON, and F. F. HENSHAW
District Engineers

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SURFACE WATER SUPPLY OF SNAKE RIVER BASIN, 1925

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting records of measurements of flow made on streams in the United States during the year ending September 30, 1925.

The data presented in these reports were collected by the United States Geological Survey under the following authority contained in the organic law (20 Stat. L., p. 394):

Provided, That this officer [the Director] shall have the direction of the Geological Survey and the classification of public lands and examination of the geological structure, mineral resources, and products of the national domain.

The work was begun in 1888 in connection with special studies relating to irrigation in the West. Since the fiscal year ending June 30, 1895, successive appropriation bills passed by Congress have carried the following items:

For gaging the streams and determining the water supply of the United States, and for the investigation of underground currents and artesian wells, and for the preparation of reports upon the best methods of utilizing the water resources.

Annual appropriations for the fiscal years ending June 30, 1895–1925

1895	$12,500.00	1908–1910	100,000.00
1896	24,500.00	1911–1917	150,000.00
1897–1899	50,000.00	1918	175,000.00
1900	70,000.00	1919	148,244.10
1901–1902	100,000.00	1920	175,000.00
1903–1906	200,000.00	1921–1923	180,000.00
1907	150,000.00	1924–1925	170,000.00

In the execution of the work many private and State organizations have cooperated, either by furnishing data or by assisting in collecting data. Acknowledgments for cooperation of the first kind are made in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 10.

Measurements of stream flow have been made at about 5,120 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July, 1925, 1,710 gaging stations were being maintained by the Survey and the cooperating organizations. Many miscellaneous discharge measurements were made at other points. In connection with this work data were also collected in regard to precipitation, evaporation, storage reservoirs, river profiles,

and water power in many sections of the country and will be made available in water-supply papers from time to time.

DEFINITION OF TERMS

The volume of water flowing in a stream—the "run-off" or "discharge"—is expressed in various terms, each of which has become associated with a certain class of work. These terms may be divided into two groups—(1) those that represent a rate of flow, as second-feet, gallons per minute, miner's inches, and discharge in second-feet per square mile, and (2) those that represent the actual quantity of water as run-off in inches, acre-feet, and millions of cubic feet. The principal terms used in this series of reports are second-feet, second-feet per square mile, run-off in inches, and acre-feet. They may be defined as follows:

"Second-feet" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of water flowing in a channel of rectangular cross section 1 foot wide and 1 foot deep at an average velocity of 1 foot per second. It is generally used as a fundamental unit from which others are computed.

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

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

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

The following terms not in common use are here defined:

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

"Control," a term used to designate the section or sections of the stream channel below the gage which determine the stage-discharge relation at the gage. It should be noted that the control may not be the same section or sections at all stages.

The "point of zero flow" for a gaging station is that point on the gage—the gage height—at which water ceases to flow over the control.

EXPLANATION OF DATA

The data presented in this report cover the year beginning October 1, 1924, and ending September 30, 1925. At the beginning of January in most parts of the United States much of the precipitation

in the preceding three months is stored as ground water, in the form of snow or ice, or in ponds, lakes, and swamps, and this stored water passes off in the streams during the spring break-up. At the end of September, on the other hand, the only stored water available for run-off is possibly a small quantity in the ground; therefore the run-off for the year beginning October 1 is practically all derived from precipitation within that year.

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from

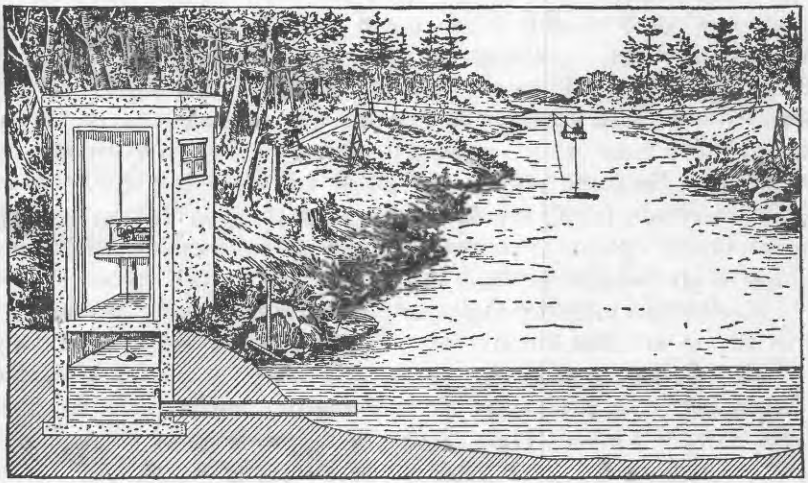

FIGURE 1.—Typical gaging station

direct readings on a staff or chain gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter. The general methods are outlined in standard textbooks on the measurement of river discharge. A typical gaging station equipped with water-stage recorder and measuring cable and car is shown in Figure 1.

From the discharge measurements rating tables are prepared that give the discharge for any stage. The application of the daily gage heights to these rating tables gives the daily discharge from which the monthly and yearly mean discharge is computed.

The data presented for each gaging station in the area covered by this report comprise a description of the station, a table giving records of discharge measurements, a table showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off.

If the base data are insufficient to determine the daily discharge, tables giving daily gage height and records of discharge measurements are published.

The description of the station gives, in addition to statements regarding location and equipment, information in regard to any condition that may affect the permanence of the stage-discharge relation, covering such subjects as the occurrence of ice, the use of the stream for log driving, shifting of control, and the cause and effect of backwater; it gives also information as to diversions that decrease the flow at the gage, artificial regulation, maximum and minimum recorded stages, and the accuracy of the records.

The table of daily discharge gives, in general, the discharge in second-feet corresponding to the mean of the gage heights read each day. At stations on streams subject to sudden or rapid diurnal fluctuations the discharge obtained from the rating table and the mean daily gage height may not be the true mean discharge for the day. If such stations are equipped with water-stage recorders, the mean daily discharge may be obtained by averaging discharge at regular intervals during the day or by using the discharge integrator, an instrument operating on the principle of the planimeter and containing as an essential element the rating curve of the station.

In the table of monthly discharge the column headed "Maximum" gives the mean flow for the day when the mean gage height was highest. As the gage height is the mean for the day it does not indicate correctly the stage when the water surface was at crest height and the corresponding discharge was consequently larger than given in the maximum column. Likewise, in the column headed "Minimum" the quantity given is the mean flow for the day when the mean gage height was lowest. The column headed "Mean" is the average flow in cubic feet per second during the month. On this average flow computations recorded in the remaining columns, which are defined on page 2, are based.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily (1) on the permanency of the stage-discharge relation and (2) on the accuracy of observation of stage, measurements of flow, and interpretation of records.

A paragraph in the description of the station gives information regarding the (1) permanence of the stage-discharge relation, (2) precision with which the discharge rating curve is defined, (3) refinement of gage readings, (4) frequency of gage readings, and (5) methods of applying daily gage height to the rating table to obtain the daily discharge.

For the rating tables "well defined" indicates, in general, that the rating is probably accurate within 5 per cent; "fairly well defined," within 10 per cent; "poorly defined," within 15 to 25 per cent. These notes are very general and are based on the plotting of the individual measurements with reference to the mean rating curve.

The monthly means for any station may represent with high accuracy the quantity of water flowing past the gage, but the figures showing discharge per square mile and run-off in inches may be subject to gross errors caused by the inclusion of large noncontributing districts in the measured drainage area, by lack of information concerning water diverted for irrigation or other use, or by inability to interpret the effect of artificial regulation of the flow of the river above the station. "Second-feet per square mile" and "run-off in inches" are therefore not computed if such errors appear probable. The computations are also omitted for stations on streams draining areas in which the annual rainfall is less than 20 inches. All figures representing "second-feet per square mile" and "run-off in inches" published in the earlier reports by the Survey should be used with caution because of possible inherent sources of error not known to the Survey.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and the discharge recorded does not show the water supply available for further development, as prior appropriations below the stations must first be satisfied. To give an idea of the amount of prior appropriations, a paragraph on diversions is presented in each station description. The figures given can not be considered exact but represent the best information available.

The tables of monthly discharge give only a general idea of the flow at the station and should not be used for other than preliminary estimates; the tables of daily discharge allow more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on data previously published.

PUBLICATIONS

Investigation of water resources by the United States Geological Survey has consisted in large part of measurements of the volume of flow of streams and studies of the conditions affecting that flow, but it has comprised also investigation of such closely allied subjects as irrigation, water storage, water powers, underground waters, and quality of waters. Most of the results of these investigations have been published in the series of water-supply papers, but some have appeared in the bulletins, monographs, professional papers, and annual reports.

The result of stream-flow measurements are now published annually in 12 parts, each part covering an area whose boundaries coincide with natural drainage as indicated below:

Part I. North Atlantic slope basins (St. John River to York River).
II. South Atlantic slope and eastern Gulf of Mexico Basins (James River to the Mississippi).
III. Ohio River Basin.
IV. St. Lawrence River Basin.
V. Upper Mississippi River and Hudson Bay Basins.
VI. Missouri River Basin.
VII. Lower Mississippi River Basin.
VIII. Western Gulf of Mexico Basins.
IX. Colorado River Basin.
X. Great Basin.
XI. Pacific slope basins in California.
XII. North Pacific slope basins, in three volumes:
A, Pacific slope basins in Washington and upper Columbia River Basin.
B, Snake River Basin.
C, Pacific slope basins in Oregon and lower Columbia River Basin.

Water-supply papers and other publications of the United States Geological Survey containing data in regard to the water resources of the United States may be obtained or consulted as indicated 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 of the United States.

3. Complete sets are available for consultation in the local offices of the water-resources branch of the Geological Survey, as follows:

Boston, Mass., 2500 Customhouse.
Albany, N. Y., 904 Home Savings Bank Building.
Trenton, N. J., Statehouse.
Charlottesville, Va., University of Virginia.
Asheville, N. C., 608 City Hall Building.
Chattanooga, Tenn., 830 Power Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Chicago, Ill., 1510 Consumers Building.
Madison, Wis., care of Railroad Commission of Wisconsin.
Rolla, Mo., Rolla Building, School of Mines and Metallurgy.
Helena, Mont., 45–46 Federal Building.
Denver, Colo., 403 Post Office Building.
Salt Lake City, Utah, 313 Federal Building.
Idaho Falls, Idaho, 228 Federal Building.
Boise, Idaho, Federal Building.
Tacoma, Wash., 406 Federal Building.
Portland, Oreg., 606 Post Office Building.
San Francisco, Calif., 303 Customhouse.
Los Angeles, Calif., 600 Federal Building.
Tucson, Ariz., 104 Agriculture Building, University of Arizona.
Austin, Tex., State Capitol.
Honolulu, Hawaii, Territorial Office Building.

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

Stream-flow records have been obtained at more than 5,120 points in the United States, and the data obtained have been published in the reports tabulated below:

Stream-flow data in reports of the United States 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	Mean discharge in second-feet	1884 to Dec. 31, 1892.
14th A, pt. 2	Monthly discharge (long-time records, 1871 to 1893)	1888 to Dec. 31, 1893.
B 131	Descriptions, measurements, gage heights, and ratings	1893 and 1894.
16th A, pt. 2	Descriptive information only	
B 140	Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years).	1895.
W 11	Gage heights (also gage heights for earlier years)	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years).	1895 and 1896.
W 15	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas.	1897.
W 16	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte, and western United States.	1897.
19th A, pt. 2	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27	Measurements, ratings, and gage heights, eastern United States, eastern Mississippi River, and Missouri River.	1898.
W 28	Measurements, ratings, and gage heights, Arkansas River and western United States.	1898.
20th A, pt. 4	Monthly discharge (also for many earlier years)	1898.
W 35 to 39	Descriptions, measurements, gage heights, and ratings	1899.
21st A, pt. 4	Monthly discharge	1899.
W 47 to 52	Descriptions, measurements, gage heights, and ratings	1900.
22d A, pt. 4	Monthly discharge	1900.
W 65, 66	Descriptions, measurements, gage heights, and ratings	1901.
W 75	Monthly discharge	1901.
W 82 to 85	Complete data	1902.
W 97 to 100	do	1903.
W 124 to 135	do	1904.
W 165 to 178	do	1905.
W 201 to 214	do	1906.
W 241 to 252	do	1907–8.
W 261 to 272	do	1909.
W 281 to 292	do	1910.
W 301 to 312	do	1911.
W 321 to 332	do	1912.
W 351 to 362	do	1913.
W 381 to 394	do	1914.
W 401 to 414	do	1915.
W 431 to 444	do	1916.
W 451 to 464	do	1917.
W 471 to 484	do	1918.
W 501 to 514	do	1919–20.
W 521 to 534	do	1921.
W 541 to 554	do	1922.
W 561 to 574	do	1923.
W 581 to 594	do	1924.
W 601 to 614	do	1925.

The records at most of the stations discussed in these reports extend over a series of years, and miscellaneous measurements at many points other than regular gaging stations have been made

each year. An index of the reports containing records obtained prior to 1904 has been published in Water-Supply Paper 119.

The table following gives, by years and drainage basins, the numbers of the papers on surface-water supply published from 1899 to 1918. The data for any particular station will, as a rule, be found in the reports covering the years during which the station was maintained. For example, data for Machias River at Whitneyville, Maine, 1903 to 1921, are published in Water-Supply Papers 97, 124, 165, 201, 241, 261, 281, 301, 321, 351, 381, 401, 431, 451, 471, 501, and 521, which contain records for the New England streams from 1903 to 1921. Results of miscellaneous measurements are published by drainage basins.

Numbers of water-supply papers containing results of stream measurements, 1889-1925

[For basins included see p. 6]

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII		
												A	B	C
1899 [a]	35	[b] 35, 36	36	36	36	[e] 36, 37	37	37	[d] 37, 38	38, [e] 39	38, [f] 39	38	38	38
1900 [g]	47, [h] 48	48	48, [i] 49	49	49	49, [i] 50	50	50	50	51	51	51	51	51
1901	65, 75	65, 75	65, 75	65, 75	[k] 65, 66, 75	66, 75	[k] 65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82	[b] 82, 83	83	[l] 82, 83	[k] 83, 85	84	[k] 83, 84	84	85	85	85	85	85	85
1903	97	[b] 97, 98	98	97	[k] 98, 99, [m] 100	99	[k] 98, 99	99	100	100	100	100	100	100
1904	[n] 124, [o] 125, [p] 126	[p] 126, 127	128	129	[k] 128, 130	130, [q] 131	[k] 128, 131	132	133	133, [r] 134	134	135	135	135
1905	[n] 165, [o] 166, [p] 167	[p] 167, 168	169	170	171	172	[k] 169, 173	174	175, [s] 177	176, [r] 177	177	178	178	[t] 177, 178
1906	[n] 201, [o] 202, [p] 203	[p] 203, 204	205	206	207	208	[k] 205, 209	210	211	212, [r] 213	213	214	214	214
1907-8	241	242	243	244	245	246	247	248	249	250, [r] 251	251	252	252	252
1909	261	262	263	264	265	266	267	268	269	270, [r] 271	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

[a] Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Tables for monthly discharge for 1899 in Twenty-first Annual Report, Part IV.
[b] James River only.
[c] Gallatin River.
[d] Green and Gunnison Rivers and Grand River above junction with Gunnison.
[e] Mohave River only.
[f] Kings and Kern Rivers and south Pacific slope basins.
[g] Rating tables and index to Water-Supply Papers 47-52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52. Tables for monthly discharge for 1900 in Twenty-second Annual Report, Part IV.
[h] Wissahickon and Schuylkill Rivers to James River.
[i] Scioto River.
[j] Loup and Platte Rivers near Columbus, Nebr., and all tributaries below junction with Platte.
[k] Tributaries of Mississippi from east.
[l] Lake Ontario and tributaries to St. Lawrence River proper.
[m] Hudson Bay only.
[n] New England rivers only.
[o] Hudson River to Delaware River, inclusive.
[p] Susquehanna River to Yadkin River, inclusive.
[q] Platte and Kansas Rivers.
[r] Great Basin in California, except Truckee and Carson River Basins.
[s] Below junction with Gila.
[t] Roque, Umpqua, and Siletz Rivers only.

COOPERATION

During the year ending September 30, 1925, work in the Snake River Basin was carried on in cooperation with the States of Idaho, Oregon, Nevada, and Washington, effected under agreement made between the Director of the United States Geological Survey and the State engineers or other officials and authorized by legislative acts appropriating money.

Special acknowledgments are due to W. G. Swendsen, commissioner of reclamation of Idaho; Rhea Luper, State engineer of Oregon; Robert A. Allen, State engineer of Nevada; and Dan A. Scott and Erle J. Barnes, directors of the Department of Conservation and Development of Washington, for the efficient manner in which they represented their States in the investigations.

Acknowledgments are due also to the United States Bureau of Reclamation and the United States Office of Indian Affairs, which permitted the freest use of data gathered exclusively for them and paid for by them. The United States Weather Bureau and the United States Forest Service furnished hydrometric and climatic data.

The following municipal corporations, private companies, and individuals have aided: City of Boise, city of Pocatello, Idaho Water District No. 36, Idaho Power Co., Weiser Irrigation District, Crane Creek Reservoir Administration Board, Minidoka Irrigation District, Twin Falls Canal Co., North Side Canal Co. (Ltd.), Murtaugh Irrigation District, Love & Von Brecht, Southern Idaho Land & Power Co., Grangeville Electric Light & Power Co., Inland Power & Light Co., Westfall Irrigation District, Warmsprings Irrigation District, Malheur Land Co., water commissioner for Big Lost River, water masters for Big Wood, Little Wood, and Boise Rivers, and Malheur County, Oreg.

Acknowledgment for gage-height records and discharge measurements furnished by cooperating parties is made in the descriptions of gaging stations.

DIVISION OF WORK

The data for stations in Wyoming and on Snake River above Milner, Idaho, for the tributaries that enter the river above Idaho Falls, and for a few stations on the lower Blackfoot River and its tributaries, were collected and prepared for publication under the direction of G. C. Baldwin, district engineer, assisted by C. A. McClelland, L. L. Bryan, Mans H. Coffin, Wendell Dawson, Leo K. Homer, and Mrs. Bessie M. Rees.

The data for stations in Idaho (except in the upper Snake River Basin) and in the Salmon Falls Creek Basin in Nevada, were collected and prepared under the direction of C. G. Paulsen, district engineer, assisted by Berkeley Johnson, F. M. Veatch, and Miss E. H. Haugse.

The data for stations in Oregon were collected and prepared for publication under the direction of Fred F. Henshaw, district engineer, assisted by G. H. Canfield, Wendell Dawson, and E. O. Hokanson.

The data for stations in Nevada were collected and prepared for publication under the direction of A. B. Purton, district engineer, assisted by J. W. Mangan, M. T. Wilson, D. M. Corbett, and Miss Lysle Christensen.

The data for Tucannon River near Pomeroy, Wash., were collected and prepared for publication under the direction of G. L. Parker, district engineer, assisted by D. J. F. Calkins, R. B. Kilgore, J. S. Gatewood, K. N. Vaksvik, and J. M. Rogers.

The manuscript was reviewed and assembled by J. W. Mangan.

GAGING-STATION RECORDS

SNAKE RIVER

SNAKE RIVER AT SOUTH BOUNDARY OF YELLOWSTONE NATIONAL PARK

LOCATION.—A quarter of a mile below junction of Lewis and Snake Rivers, half a mile north of Snake River Park ranger station and south boundary of Yellowstone National Park, and 25 miles north of Moran, Wyo.

DRAINAGE AREA.—490 square miles (measured on topographic maps).

RECORDS AVAILABLE.—June 19, 1913, to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on right bank referred to auxiliary chain gage on bridge. Overhanging chain gage on right bank 2½ miles above used only as reference gage. Read by Joseph Markham.

DISCHARGE MEASUREMENTS.—Made from cable 225 feet below upper reference gage or by wading.

CHANNEL AND CONTROL.—Bed composed of coarse gravel; clean except for occasional lodgment of drift. Control probably permanent at ordinary stages. One channel at gage but divided by an island into two channels at control. Condition at upper auxiliary location similar except that the stream is in one channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during periods October 1–17 and June 16 to July 15, 7.24 feet at 11 p. m. June 20 (discharge, 6,450 second-feet); minimum stage, 2.49 feet from 8 to 11 a. m. October 1 (discharge, 229 second-feet); probably even lower stages occurred during period of no record.

1913–1925: Maximum discharge recorded in 1925; minimum stage, 1.4 feet October 26–31, 1915 (discharge, 160 second-feet).

ICE.—Stage-discharge relation not affected by ice, the formation of which is prevented by hot springs above gage.

DIVERSIONS.—None above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent. Rating curves fairly well defined. Operation of water-stage recorder satisfactory. Daily discharge obtained by applying mean daily gage height to rating table. Records good.

COOPERATION.—Gage-height record partly furnished by United States Bureau of Reclamation.

Discharge measurements of Snake River at south boundary of Yellowstone National Park during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
October 2	2.60	256	July 11	4.74	1,630
June 23	6.32	4,330	August 8	[a] 3.30	623

[a] By overhanging chain gage 2½ miles above bridge.

Daily discharge, in second-feet, of Snake River at south boundary of Yellowstone National Park, for the year ending September 30, 1925

Day	Oct.	June	July	Day	Oct.	June	July	Day	Oct.	June	July
1	236		3,760	11	336		1,680	21		5,170	
2	254		3,190	12	350		1,600	22		4,720	
3	289		3,100	13	342		1,490	23		5,080	
4	296		2,750	14	342		1,380	24		4,590	
5	302		3,560	15	342		1,240	25		4,500	
6	312		2,920	16	342	4,020		26		4,440	
7	322		2,660	17	342	3,740		27		4,230	
8	328		2,420	18		4,250		28		4,210	
9	336		2,050	19		4,990		29		4,190	
10	332		1,850	20		5,330		30		4,120	
								31			

NOTE.—No record Oct. 18 to June 15 and July 16 to Sept. 30. [a] No gage-height record obtained Oct. 14–16; discharge interpolated.

Monthly discharge of Snake River at south boundary of Yellowstone National Park, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1–17	350	236	318	10,700
June 16–30	5,330	3,740	4,510	134,000
July 1–15	3,760	1,240	2,380	70,800

JACKSON LAKE AT MORAN, WYO.

LOCATION.—In sec. 18, T. 45 N., R. 114 W., a short distance above gates at outlet of lake at Moran, Teton County.

RECORDS AVAILABLE.—June 1, 1909, to September 30, 1925. Records for years 1909 and 1910 fragmentary.

GAGE.—Inclined staff on right shore just below engineer's cottage; read by Joseph Markham. Zero of gage, 6,700 feet above sea level.

COOPERATION.—Gage-height record and table showing storage capacity of lake furnished by United States Bureau of Reclamation.

Jackson Lake impounds water for the irrigation of lands in the upper Snake River Valley and in the Minidoka and Twin Falls tracts. It has a capacity of 847,000 acre-feet between the elevations 6,730 and 6,769 feet, sea-level datum.

Daily contents, in acre-feet, of Jackson Lake at Moran, Wyo., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,410	42,330	72,000	98,150	132,910	163,810	189,850	262,260	629,160	845,950	667,780	389,580
2	2,410	43,210	72,900	99,070	134,420	164,790	191,040	265,180	642,630	846,210	653,730	381,820
3	2,920	43,910	73,980	100,170	135,930	165,570	192,230	270,210	654,460	846,720	640,470	374,740
4	4,810	44,620	74,890	101,270	137,440	166,350	193,220	275,020	664,870	846,720	629,890	368,340
5	6,190	45,500	75,790	102,550	138,950	167,130	194,410	281,310	674,330	847,230	618,620	363,950
6	7,220	46,200	76,690	103,650	140,460	168,100	195,600	288,270	684,080	848,250	607,870	360,000
7	8,080	46,900	77,600	104,750	141,970	168,880	196,780	295,900	692,620	847,230	598,340	360,440
8	8,940	47,780	78,500	106,030	143,480	169,660	197,970	304,390	703,630	847,000	588,850	360,440
9	9,800	48,840	79,400	107,140	144,630	170,640	199,160	312,960	711,740	847,740	578,170	360,440
10	11,000	49,900	80,310	108,250	145,390	171,420	200,750	319,390	720,580	847,740	566,620	360,440
11	14,620	51,130	81,210	109,370	146,160	172,390	202,330	326,690	730,210	847,230	556,250	361,760
12	16,850	52,180	82,110	110,670	146,930	173,170	204,340	333,630	738,620	847,000	544,300	363,070
13	17,720	53,430	83,020	111,970	147,690	173,950	206,750	342,310	746,530	847,230	532,600	364,830
14	18,590	54,680	83,920	113,270	148,460	174,920	209,170	350,570	754,500	847,230	521,660	365,920
15	19,460	55,930	84,820	114,760	149,420	175,900	212,180	359,350	764,710	847,230	511,430	367,460
16	20,330	57,000	85,730	116,060	150,380	176,870	215,600	368,560	776,950	844,420	501,470	369,000
17	21,540	58,070	86,630	117,550	151,340	177,850	221,230	378,280	786,980	839,840	492,700	370,530
18	23,800	59,140	87,530	118,480	152,300	178,820	225,900	388,470	797,280	830,430	484,390	371,860
19	26,060	60,210	88,440	119,410	153,260	179,600	229,780	401,400	809,400	821,020	477,280	374,070
20	27,980	61,100	89,360	120,150	154,210	180,380	232,840	415,710	821,020	809,400	470,870	375,620
21	29,720	61,990	90,090	120,900	155,360	181,160	236,100	433,760	830,180	799,040	464,680	377,840
22	31,110	62,880	90,820	121,640	156,320	181,940	239,360	458,280	836,790	788,490	458,050	379,170
23	32,320	63,950	91,560	123,130	157,470	182,720	242,630	473,840	840,610	777,960	451,230	380,720
24	33,720	65,020	92,290	124,060	158,430	183,520	245,930	489,700	842,390	767,450	444,180	382,270
25	34,940	66,090	93,020	124,060	159,580	184,310	248,620	504,930	843,920	756,240	437,360	383,380
26	35,990	66,800	93,750	125,170	160,540	184,900	250,890	521,420	845,440	745,050	430,820	384,480
27	37,050	68,050	94,490	126,310	161,690	185,500	253,170	537,980	845,950	733,920	425,410	385,810
28	38,100	69,120	95,220	127,630	162,840	186,090	255,440	554,840	847,000	721,810	420,450	386,920
29	39,160	70,010	95,950	128,760	-------	186,680	257,720	572,040	847,480	708,790	413,690	388,910
30	40,220	70,910	96,690	130,080	-------	187,480	259,990	592,170	848,250	695,300	405,870	390,020
31	41,270	-------	97,230	131,590	-------	188,470	-------	611,930	-------	682,130	397,820	-------

SNAKE RIVER NEAR MORAN, WYO.

LOCATION.—In sec. 17, T. 45 N., R. 114 W., 1½ miles below Moran post office, Teton County, and United States Bureau of Reclamation dam at outlet of Jackson Lake. No large tributaries between dam and station.

DRAINAGE AREA.—820 square miles.

RECORDS AVAILABLE.—September 21, 1903, to September 30, 1925.

GAGE.—Vertical staff on left bank. Datum lowered 1.0 foot July 26, 1915. Stevens water-stage recorder installed June 14, 1917, on bank to rear of staff gage. Gage read by Joseph Markham.

DISCHARGE MEASUREMENTS.—Made from cable 100 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed of gravel and boulders. Control practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.72 feet at 6 p. m. July 31 (discharge, 9,210 second-feet); minimum discharge, 11 second-feet November 14 to March 21.

1903–1925: Maximum stage recorded, 10.41 feet at 8 p. m. June 12, 1918 (discharge, 15,100 second-feet); practically no flow during a few days in 1907 and 1909 as a result of closing of gates in Jackson Lake Dam.

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—None between dam and station and practically none above Jackson Lake.

REGULATION.—Flow controlled by operation of gates in Jackson Lake Dam. Storage capacity of reservoir, 847,000 acre-feet.

ACCURACY.—Stage-discharge relation permanent after July 1. Rating curves well defined. Staff gage read once daily October 20 to May 22. Water-stage recorder operation satisfactory during remainder of year. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Snake River near Moran, Wyo., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 4	0.14	19.6	June 22	5.31	4,330	Aug. 7	6.63	6,900
Oct. 13	.07	14.5	June 23	6.77	7,060	Aug. 7	6.27	6,250
June 21	5.35	4,360	July 11	4.79	3,780			
June 21	4.24	2,870	Aug. 6	6.50	6,630			

Daily discharge, in second-feet, of Snake River near Moran, Wyo., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	348	14	11	11	11	11	22	50	153	7,280	9,100	5,240
2	420	14	11	11	11	11	24	54	78	5,340	8,880	4,880
3	369	14	11	11	11	11	28	52	56	5,210	8,140	4,400
4	22	14	11	11	11	11	28	52	54	4,880	7,430	3,750
5	20	14	11	11	11	11	32	52	58	4,150	6,970	3,340
6	20	14	11	11	11	11	35	52	64	6,030	6,710	1,930
7	19	14	11	11	11	11	41	50	73	5,160	6,570	873
8	18	14	11	11	11	11	45	50	87	3,820	6,520	1,240
9	17	13	11	11	11	11	49	49	58	3,310	6,930	1,180
10	15	13	11	11	11	11	52	45	54	3,750	7,050	563
11	15	13	11	11	11	11	52	45	49	3,690	7,290	42
12	14	12	11	11	11	11	52	45	47	3,080	7,370	34
13	14	12	11	11	11	11	52	45	52	2,980	7,290	34
14	14	11	11	11	11	11	52	45	54	2,780	6,990	32
15	14	11	11	11	11	11	52	45	64	2,890	6,440	32
16	14	11	11	11	11	11	52	45	80	5,100	6,030	30
17	14	11	11	11	11	11	52	108	64	6,610	5,540	29
18	18	11	11	11	11	11	52	108	69	7,230	4,900	29
19	19	11	11	11	11	11	52	108	666	7,830	4,640	32
20	18	11	11	11	11	11	52	98	2,910	8,160	4,370	30
21	15	11	11	11	11	11	52	82	3,790	7,600	4,390	30
22	14	11	11	11	11	12	52	73	5,480	7,740	4,370	30
23	14	11	11	11	11	14	43	64	6,830	7,350	4,370	29
24	14	11	11	11	11	15	43	90	6,590	7,390	4,390	27
25	14	11	11	11	11	16	43	92	6,540	7,350	4,390	26
26	14	11	11	11	11	18	43	95	6,570	7,390	4,390	26
27	14	11	11	11	11	18	45	131	6,350	7,600	4,370	27
28	14	11	11	11	11	18	47	131	6,060	8,000	4,350	26
29	14	11	11	11	------	18	49	197	6,480	8,530	4,670	27
30	14	11	11	11	------	18	50	312	7,730	8,820	5,290	27
31	14	------	11	11	------	18	------	204	------	8,970	5,280	------

NOTE.—Mean of hourly discharges used Oct. 3, June 19–22, 30, July 1, 16, Aug. 29, Sept. 6, and 10. Discharge interpolated Oct. 12.

Monthly discharge of Snake River near Moran, Wyo., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	420	14	50.9	3,130
November	14	11	12.1	720
December	11	11	11.0	676
January	11	11	11.0	676
February	11	11	11.0	611
March	18	11	12.8	787
April	52	22	44.8	2,670
May	312	45	86.1	5,290
June	7,730	47	2,240	133,000
July	8,970	2,780	6,000	369,000
August	9,100	4,350	5,980	368,000
September	5,240	26	933	55,500
The year	9,100	11	1,300	940,000

SNAKE RIVER NEAR HEISE, IDAHO

LOCATION.—In sec. 5, T. 3 N., R. 41 E., 600 feet above Anderson Dam, in Bonneville County, 3 miles above Heise, and 25 miles below site of station formerly maintained near Lyon. Several small creeks enter between old site and present station.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—September 25, 1910, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank; inspected by Moore, Smith, and Kremer.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet above gage.

CHANNEL AND CONTROL.—Bed composed of rock ledge, coarse gravel, and cobblestones. One channel at all stages. Control formed by Anderson Dam, parts of which washed out during the high-water periods of 1917 and 1918 but have recently been repaired.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.93 feet at 8 a. m. May 22 (discharge, 25,100 second-feet); minimum discharge probably less than 2,100 second-feet some time during ice-affected period in December.

1910–1925: Maximum discharge recorded, about 52,000 second-feet June 16, 1918; minimum discharge occurred in December, 1924.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—No large diversions above station. A small ditch having a capacity of about 25 second-feet diverts just above station.

REGULATION.—Flow controlled to a large extent by storage in Jackson Lake Reservoir.

ACCURACY.—Stage-discharge relation not permanent; affected by ice November 26 to January 22 and February 7–12. Standard rating curve well defined. Water-stage recorder operation satisfactory. Daily discharge determined by applying mean daily gage height to rating table. Shifting-control method used March 29, 30, and May 16–20. Records good.

Discharge measurements of Snake River near Heise, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	2.00	2,970	May 21	7.47	22,900	Aug. 15	5.13	12,800
Dec. 1	[a] 1.85	2,450	May 25	7.04	21,400	Aug. 20	4.33	9,800
Jan. 9	[a] 3.60	2,350	June 4	6.04	16,400	Aug. 24	4.14	8,810
Feb. 3	1.46	2,410	July 3	6.77	20,200	Sept. 5	4.06	8,640
Mar. 6	1.43	2,280	July 14	5.40	13,900	Sept. 9	3.24	6,020
Apr. 28	3.88	6,990	July 16	5.22	13,200	Sept. 19	2.76	4,720
May 13	5.99	15,000	July 30	5.63	14,800			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Snake River near Heise, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr	May	June	July	Aug.	Sept.
1	2,950	2,880	2,450		2,340	2,180	3,380	8,350	22,300	23,200	15,000	9,870
2	2,760	2,850			2,340	2,260	3,340	9,390	19,600	22,100	15,100	9,800
3	2,950	2,790			2,390	2,260	3,610	11,000	17,900	19,800	15,100	9,540
4	3,420	2,790			2,590	2,180	4,310	12,400	16,600	19,400	14,600	9,020
5	3,200	2,810		2,420	2,960	2,260	5,360	12,700	15,600	18,800	13,700	8,560
6	2,950	2,850			3,360	2,370	5,610	13,500	15,000	18,300	13,000	8,210
7	2,950	2,730				2,540	5,080	14,700	14,100	19,400	12,500	7,430
8	2,950	2,680				2,640	4,540	16,800	13,400	18,300	12,300	5,950
9	2,880	2,680		2,350	2,670	2,630	4,820	15,600	13,000	16,800	12,000	5,920
10	3,120	2,730				2,470	5,890	14,700	13,100	15,700	12,400	5,950
11	3,320	2,720				2,320	7,180	15,200	14,200	15,600	12,600	5,660
12	3,240	2,570				2,290	8,490	15,900	13,800	15,100	12,800	4,850
13	3,100	2,470			2,180	2,290	9,540	15,000	13,200	14,200	12,700	4,560
14	2,960	2,290			2,260	2,240	10,100	15,200	12,800	13,800	12,900	4,590
15	2,900	2,390			2,180	2,280	10,900	15,900	13,200	13,200	12,800	4,540
16	2,980	2,390	2,100	2,250	2,260	2,310	10,700	16,700	14,200	13,400	12,000	4,440
17	3,000	2,340			2,260	2,290	12,100	17,200	14,800	15,000	11,400	4,360
18	3,160	2,320			2,340	2,290	13,300	17,900	14,000	16,400	10,900	4,340
19	3,930	2,400			2,260	2,310	11,100	19,400	14,700	16,600	10,100	4,610
20	4,040	2,660			2,260	2,360	9,460	20,700	16,800	17,000	9,650	4,590
21	3,750	2,920			2,180	2,420	8,460	22,900	19,800	16,900	9,240	4,800
22	3,510	2,790			2,260	2,660	8,140	24,700	21,600	16,500	9,170	4,930
23	3,380	2,810		2,340	2,100	3,060	8,100	22,800	22,600	16,300	9,020	4,690
24	3,280	2,700		2,260	2,260	3,360	7,760	21,000	23,700	15,700	8,950	4,540
25	3,120	2,520		2,260	2,260	3,200	7,240	21,000	22,400	15,200	8,880	4,440
26	3,040			2,340	2,180	3,160	6,950	20,700	22,100	14,700	8,950	4,340
27	2,980			2,420	2,180	3,200	6,950	20,600	22,100	14,500	9,390	4,260
28	2,940	2,400		2,340	2,180	3,300	6,950	21,100	21,600	14,300	9,950	4,190
29	3,000			2,340	-------	3,400	6,950	21,600	21,000	14,500	9,610	4,190
30	3,020			2,340	-------	3,970	7,370	22,700	21,900	14,900	9,280	4,310
31	2,940	-------		2,420	-------	3,700	--------	23,500	--------	15,200	9,830	------

NOTE.—Discharge estimated Nov. 26 to Jan. 22 and Feb. 7 to 12; actual measured discharges used Dec. 1 and Jan. 9.

Monthly discharge of Snake River near Heise, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	4,040	2,760	3,150	194,000
November	2,920	----------	2,600	155,000
December	----------	----------	2,110	130,000
January	----------	----------	2,320	143,000
February	----------	----------	2,410	134,000
March	3,970	2,180	2,650	163,000
April	13,300	3,340	7,460	444,000
May	24,700	8,350	17,400	1,070,000
June	23,700	12,800	17,400	1,040,000
July	23,200	13,200	16,500	1,010,000
August	15,100	8,880	11,500	707,000
September	9,870	4,190	5,720	340,000
The year	24,700	----------	7,640	5,530,000

GREAT FEEDER CANAL NEAR RIRIE, IDAHO

LOCATION.—In sec. 36, T. 4 N., R. 40 E., 4 miles east of Ririe and 14 miles east and south of Rigby, Jefferson County. Diversion gates of canal 2 miles below Heise gaging station.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 31, 1923, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank 700 feet below head of canal; inspected by Moore and Kremer.

DISCHARGE MEASUREMENTS.—Made from cable 500 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of cobbles and gravel drift. Banks fairly clean. One channel at all stages. Control fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded for periods October 1 to November 13 and April 29 to September 30, 7.56 feet at 4.30 a. m. June 21 (discharge, 4,740 second-feet); minimum stage, 0.80 foot at 11 a. m. April 29 (discharge, 61 second-feet).

1923–1925: Same as given above.

ICE.—Stage-discharge relation seriously affected by ice. Observations discontinued during winter.

DIVERSIONS.—None above and none below gage of sufficient size to affect stage-discharge relation.

REGULATION.—Flow is regulated by canal head gates.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Water-stage recorder operation satisfactory. Daily discharge obtained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Great Feeder Canal near Ririe, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	4.55	1,680	June 13	6.15	3,200	Aug. 17	5.61	2,620
Apr. 29	.80	61.2	June 20	7.35	4,480	Sept. 2	5.38	2,440
May 23	6.32	3,430	July 6	6.76	3,730	Sept. 8	3.62	1,120
May 27	6.52	3,580	July 14	6.52	3,570	Sept. 26	4.24	1,490
June 11	5.75	2,750	July 31	5.91	2,970			

Daily discharge, in second-feet, of Great Feeder Canal near Ririe, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	1,660	1,050		982	3,520	3,970	2,930	2,380
2	1,160	1,020		2,220	3,400	3,800	2,940	2,380
3	1,650	992		2,370	3,460	3,680	2,940	2,180
4	1,780	980		2,470	3,420	3,630	2,890	2,010
5	1,730	986		2,480	3,400	3,570	2,870	1,970
6	1,620	1,050		2,540	3,430	3,740	2,850	1,930
7	1,580	1,070		2,540	3,300	3,960	2,790	1,560
8	1,570	1,040		2,540	3,190	3,920	2,750	1,150
9	1,610	1,020		2,610	3,100	3,820	2,520	1,110
10	1,690	1,020		2,750	3,200	3,690	2,690	1,100
11	1,770	1,020		2,740	3,250	3,650	2,720	1,290
12	1,810	825		2,780	3,280	3,570	2,740	1,370
13	1,770	698		2,740	3,190	3,520	2,780	1,330
14	1,730			2,730	3,130	3,580	2,820	1,330
15	1,740			2,750	3,170	3,470	2,810	1,250
16	1,730			2,800	3,310	3,500	2,710	1,300
17	1,740			2,810	3,380	3,240	2,630	1,250
18	1,810			2,930	3,320	3,000	2,560	1,410
19	1,980			3,050	3,910	3,010	2,450	1,570
20	2,010			3,300	4,480	3,040	2,380	1,580
21	1,960			3,510	4,160	3,060	2,330	1,610
22	1,850			3,250	4,000	3,040	2,300	1,640
23	1,670			3,130	3,800	3,030	2,260	1,620
24	1,650			3,370	3,560	3,000	2,220	1,630
25	1,620			3,680	3,690	2,970	2,210	1,320
26	1,610			3,650	4,080	2,950	2,210	1,490
27	1,470			3,630	4,230	2,930	2,300	1,470
28	1,360			3,590	4,100	2,960	2,380	1,460
29	1,270		61	3,560	3,990	2,940	2,340	1,010
30	1,110			3,580	3,980	2,910	2,310	1,360
31	1,080			3,570		2,930	2,380	

NOTE.—No record obtained Nov. 14 to Apr. 28, Apr. 30–31. Mean hourly dishcarge used May 1, Sept. 7, 25, and 29. Staff reading only Apr. 29.

Monthly discharge of Great Feeder Canal near Ririe, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2,010	1,080	1,650	101,000
November 1-13	1,070	698	982	25,300
May	3,680	982	2,920	180,000
June	4,480	3,100	3,580	213,000
July	3,970	2,910	3,360	207,000
August	2,940	2,210	2,580	159,000
September	2,380	1,010	1,540	91,600

SNAKE RIVER AT LORENZO, IDAHO

LOCATION.—In sec. 33, T. 5 N., R. 39 E., 500 feet above Yellowstone Branch of Oregon Short Line Railroad bridge and one-fourth mile north of Lorenzo, Jefferson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 17, 1924, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank; installed April 17, 1924; inspected by Messrs. Anderson and Sauer.

DISCHARGE MEASUREMENTS.—Made from cable 1,000 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel drift and sand. One channel at gage. Two channels below bridge. Control subject to shift during high-water period.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period April 1 to September 30, 6.25 feet at 3 p. m. May 22 (discharge, 19,700 second-feet); minimum mean discharge, 1,480 second-feet September 28; actual minimum discharge probably occurred on September 29 when gage well was clogged.

1924–1925: Maximum stage recorded, 6.25 feet May 22, 1925 (discharge, 19,700 second-feet); minimum stage, 0.04 foot September 21, 1924 (discharge, 310 second-feet).

ICE.—Stage-discharge relation seriously affected by ice. No observations made during winter.

DIVERSIONS.—Numerous canal diversions above and below station.

REGULATION.—Flow controlled to a large extent by storage in Jackson Lake Reservoir.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying mean daily gage height to rating table. Shifting-control method used for short periods. Records good.

Discharge measurements of Snake River at Lorenzo, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 1	1.83	2,300	July 10	4.31	9,590	Aug. 14	3.59	7,320
May 16	5.00	11,800	July 15	3.67	6,870	Aug. 21	2.91	4,930
May 23	5.96	17,600	July 17	3.79	7,340	Sept. 5	2.77	4,680
June 5	4.29	8,920	July 19	4.39	10,400	Sept. 12	1.73	2,340
July 1	5.54	15,100	July 21	4.41	10,400	Sept. 19	1.32	1,700
July 8	4.85	12,200	July 28	3.86	8,110			

Daily discharge, in second-feet, of Snake River at Lorenzo, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	2,310	7,530	14,800	15,000	8,660	5,000	16	9,140	12,000	7,310	6,720	6,690	1,980
2	2,290	7,170	12,400	15,800	8,740	5,060	17	10,200	12,400	7,780	8,010	6,290	1,880
3	2,470	8,390	10,900	13,000	8,820	5,090	18	11,700	12,600	6,920	10,300	5,960	1,780
4	3,000	9,630	9,890	12,700	8,510	4,940	19	10,100	13,600	6,860	10,300	5,500	1,680
5	3,890	10,000	9,020	12,200	7,820	4,610	20	8,580	14,600	7,860	10,400	5,260	1,710
6	4,290	10,400	8,430	11,800	7,310	4,350	21	7,310	16,400	10,400	10,400	5,000	1,780
6	3,890	11,400	7,780	12,500	6,920	4,190	22	6,890	18,900	12,600	10,200	4,750	1,780
8	3,400	13,400	7,200	12,100	6,820	3,610	23	6,920	17,100	13,600	10,100	4,480	1,640
9	3,400	12,800	6,890	10,800	6,620	3,320	24	6,520	14,600	16,100	9,680	4,370	1,670
10	4,560	11,200	6,860	9,590	6,790	3,340	25	5,900	14,200	14,500	9,300	4,290	1,660
11	5,710	11,000	7,530	9,390	6,960	3,000	26	5,870	13,700	13,700	8,860	4,290	2,330
12	6,690	11,700	7,420	8,900	7,060	2,400	27	6,890	13,100	13,800	8,540	4,500	1,610
13	7,860	11,200	6,920	7,930	7,140	2,100	28	6,920	13,300	13,400	8,310	4,920	1,480
14	8,510	11,100	6,620	7,350	7,200	2,090	29	6,920	13,500	12,800	8,510	4,800	1,790
15	9,060	11,700	6,720	6,790	7,170	2,070	30	7,280	14,500	13,500	8,820	4,610	1,820
							31	-------	15,600	-------	8,860	4,940	------

NOTE.—No record obtained Oct. 1 to Mar. 31. Discharge interpolated Apr. 10, Sept. 17 and 18. Mean hourly discharge used Sept. 26 and 29.

Monthly discharge of Snake River at Lorenzo, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	11,700	2,290	6,280	374,000
May	18,900	7,170	12,500	769,000
June	16,100	6,620	10,000	595,000
July	15,800	6,720	10,100	621,000
August	8,820	4,290	6,230	383,000
September	5,090	1,480	2,730	162,000
The period				2,900,000

DIVERSIONS FROM SNAKE RIVER BETWEEN HEISE AND SHELLEY GAGING STATIONS, IDAHO

Between Heise and Shelley gaging stations 50 separate canals divert water from Snake River for irrigation. More than one-third of these head in the Great Feeder, an old channel of the river, which has been equipped with head gates. Gaging stations are maintained at head of each canal by the United States Geological Survey for the Idaho State Department of Reclamation to facilitate distribution of the water. Records are available from June 1, 1919, to September 30, 1925.

Stage-discharge relation on most of the canals is affected by growth of aquatic plants or by operation of check gates. Rating curves well defined. Gages read to hundredths daily June 1 to August 31, on alternate days during month of May, and occasional readings during September. Records good.

Combined daily discharge, in second-feet, of canals diverting from Snake River between the Heise and Shelley gaging stations, for the irrigation season of 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	851	7,590	9,160	7,920	5,480	16	3,350	6,640	7,690	6,300	3,600
2	939	7,360	8,840	7,750	5,400	17	3,430	7,420	7,620	6,060	3,680
3	1,030	7,260	7,950	7,760	4,960	18	3,390	7,830	7,490	5,870	3,770
4	1,150	7,160	7,190	7,630	4,710	19	3,550	9,090	7,530	5,620	3,870
5	1,260	6,820	6,670	7,460	4,400	20	3,820	9,500	7,540	5,560	3,820
6	1,400	6,580	6,410	7,170	4,140	21	4,040	9,740	8,000	5,520	3,650
7	1,520	6,200	6,170	7,020	3,900	22	4,230	9,710	8,100	5,790	3,280
8	1,580	6,090	6,220	7,060	3,570	23	4,510	9,650	8,110	5,980	3,100
9	1,790	5,610	6,230	6,770	3,640	24	4,730	9,950	7,750	5,900	3,020
10	2,100	5,740	7,010	6,930	3,720	25	5,130	9,930	7,690	6,040	3,000
11	2,640	5,970	7,440	6,900	3,670	26	5,700	9,980	7,580	5,990	1,780
12	2,760	5,900	7,530	6,900	3,560	27	6,230	9,970	7,820	6,080	2,940
13	2,930	5,700	8,350	6,750	3,520	28	6,680	9,840	7,870	6,120	2,800
14	2,930	5,970	8,690	6,690	3,180	29	7,370	9,680	7,970	5,770	2,130
15	2,940	6,200	8,230	6,560	3,540	30	7,640	9,270	8,000	5,360	2,640
						31	7,630	-------	8,080	5,530	------

Combined monthly discharge of canals diverting from Snake River between the Heise and Shelley gaging stations, for the irrigation season of 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May	7,640	851	3,520	216,000
June	9,980	5,610	7,810	465,000
July	9,160	6,170	7,640	470,000
August	7,920	5,360	6,480	398,000
September	5,480	1,780	3,620	215,000
The period				1,760,000

NOTE.—Riley Canal does not divert in this section and is not included in summary.

SNAKE RIVER NEAR SHELLEY, IDAHO

LOCATION.—In sec. 17, T. 1 N., R. 37 E., a quarter of a mile above Woodville highway bridge and 3 miles north of Shelley, Bingham County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 18, 1915, to September 30, 1925.

GAGE.—Water-stage recorder on right bank; inspected by C. A. McCurdy.

DISCHARGE MEASUREMENTS.—Made from cable 600 feet above gage or by wading.

CHANNEL AND CONTROL.—Control formed by lava-rock reef extending across channel about 500 feet below gage. Banks high and clean at gage and control.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period October 1 to November 8 and April 3 to September 30, 12.54 feet at 5 p. m. May 23 (discharge, 27,600 second-feet); minimum stage, 4.16 feet from 1 to 2.30 p. m. October 3 (discharge, 1,020 second-feet).

1915–1925: Maximum stage recorded, 16.97 feet at 1.30 p. m. June 17, 1918 (discharge, 47,200 second-feet); minimum stage, 3.61 feet at 1.30 p. m. September 19, 1924 (discharge, 666 second-feet).

ICE.—Stage-discharge relation probably seriously affected by ice; observations discontinued during winter.

DIVERSIONS.—Practically the entire normal summer flow of river above station is appropriated by numerous diversions in the Idaho Falls district.

REGULATION.—Normal flow during the irrigation season is augmented by release of stored flood waters in Jackson Lake for use on the Minidoka and Twin Falls tracts.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined. Operation of water-stage recorder satisfactory except for short periods. Daily discharge obtained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Snake River near Shelley, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 31	5.61	2,700	May 26	11.58	23,600	July 27	7.91	9,400
Apr. 3	6.60	4,970	June 15	8.22	10,800	Sept. 1	7.29	7,130
Apr. 20	9.40	14,800	June 17	8.50	11,600	Sept. 26	6.45	4,650

Daily discharge, in second-feet, of Snake River near Shelley, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	1,260	2,820		9,790	23,200	19,800	9,080	7,180
2	1,200	2,920		10,900	21,900	22,000	9,360	7,220
3	1,080	2,940	5,030	12,100	19,200	21,200	9,640	7,150
4	1,240	2,880	5,420	14,100	17,000	19,900	9,860	7,090
5	1,450	2,900	6,270	15,600	15,800	19,600	9,430	7,020
6	1,660	2,970	7,250	16,400	14,900	19,300	8,830	6,690
7	1,610	3,110	7,420	17,200	14,100	19,300	8,270	6,430
8	1,550	3,210	6,990	19,600	13,600	20,400	7,830	6,010
9	1,530		6,330	21,900	13,000	18,500	7,490	5,210
10	1,680		6,490	21,100	12,000	16,000	7,490	5,090
11	1,850		7,420	19,200	11,900	14,200	7,690	5,120
12	2,280		8,550	18,700	12,400	12,800	7,860	4,680
13	2,450		9,670	18,800	12,000	11,100	8,200	4,060
14	2,540		10,800	18,400	11,300	9,320	8,520	3,930
15	2,530		11,900	19,200	10,700	8,380	9,080	3,620

Daily discharge, in second-feet, of Snake River near Shelley, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
16	2,510		13,000	19,700	10,800	7,690	9,180	3,580
17	2,540		14,200	20,400	11,600	8,100	8,660	3,580
18	2,630		15,300	21,100	11,600	10,300	8,200	3,480
19	2,750		16,300	21,500	10,300	11,000	7,560	3,440
20	3,110		15,100	22,400	10,000	11,200	6,850	3,550
21	3,420		13,500	24,200	11,800	11,200	6,400	3,880
22	3,380		12,000	26,000	15,200	10,900	6,050	4,680
23	3,230		11,700	27,300	16,800	10,900	5,610	4,880
24	3,110		11,500	26,400	18,500	11,000	5,390	4,970
25	2,940		10,800	24,900	19,400	10,700	5,240	4,940
26	2,880		9,860	23,800	18,400	10,100	5,120	4,740
27	2,810		9,540	22,400	18,200	9,540	5,240	4,740
28	2,660		9,540	21,500	18,200	8,720	5,800	4,600
29	2,650		9,540	21,200	17,800	8,380	6,490	4,490
30	2,660		9,460	21,400	17,800	8,550	6,790	4,540
31	2,680			22,300		8,860	6,690	

NOTE.—No record obtained Nov. 9 to Apr. 2. No gage-height record; discharge interpolated Apr. 12–17, May 8, 21, and Sept. 3, 4. Staff gage reading used Nov. 8.

Monthly discharge of Snake River near Shelley, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,420	1,080	2,320	143,000
November 1–8	3,210	2,820	2,970	47,100
April 3–30	16,300	5,030	10,000	555,000
May	27,300	9,790	20,000	1,230,000
June	23,200	10,000	15,000	893,000
July	22,000	7,690	13,200	812,000
August	9,860	5,120	7,550	464,000
September	7,220	3,440	5,020	299,000

DIVERSIONS FROM SNAKE RIVER BETWEEN SHELLEY AND BLACKFOOT BRIDGE GAGING STATIONS, IDAHO

Fourteen separate canals divert water from Snake River for irrigation between Shelley and Blackfoot Bridge gaging stations. Gaging stations are maintained at heading of each canal by the United States Geological Survey for the Idaho State Department of Reclamation to facilitate distribution of the water. Records are available from May 19, 1924, to September 30, 1925. From June 1, 1919, to September 30, 1923, diversions from Snake River were summarized in two groups with the station at Porterville Bridge for the intermediate point. After October 1, 1923, the intermediate point was at Blackfoot Bridge.

Stage-discharge relation on most of the canals is affected by growth of aquatic plants or by operation of check gates. Rating curves are well defined. Gages read to hundredths on alternate days during May, daily June 1 to August 31, and occasionally during September. Records good.

Combined daily discharge, in second-feet, of canals diverting from Snake River between Shelley and Blackfoot Bridge gaging stations, for the irrigation season of 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	885	3,250	3,590	3,080	2,510	16	1,940	3,030	3,250	2,670	1,800
2	1,070	3,120	3,540	3,050	2,460	17	1,910	3,170	3,300	2,560	1,770
3	1,160	2,570	3,310	3,010	2,390	18	1,940	3,230	3,380	2,480	1,720
4	1,270	2,160	3,080	2,950	2,360	19	1,980	3,270	3,350	2,490	1,690
5	1,440	2,120	2,880	2,890	2,340	20	2,130	3,460	3,370	2,520	1,690
6	1,600	1,900	2,770	2,860	2,290	21	2,340	3,650	3,330	2,550	1,680
7	1,760	1,690	2,820	2,890	2,240	22	2,510	3,760	3,320	2,580	1,450
8	1,800	1,830	2,890	2,820	2,190	23	2,650	3,760	3,280	2,540	1,260
9	1,830	1,950	2,840	2,820	2,080	24	2,610	3,800	3,240	2,470	1,180
10	1,820	2,140	2,940	2,820	2,070	25	2,570	3,520	3,170	2,450	1,110
11	1,830	2,460	2,250	2,900	2,080	26	2,730	3,490	3,150	2,460	1,110
12	1,820	2,540	2,180	2,830	2,010	27	2,910	3,600	3,050	2,470	1,120
13	1,800	2,660	2,340	2,770	1,920	28	3,070	3,580	3,160	2,570	1,120
14	1,800	2,800	3,260	2,790	1,880	29	3,220	3,540	3,160	2,620	1,100
15	1,890	2,900	3,330	2,770	1,810	30	3,240	3,520	3,140	2,560	950
						31	3,230		3,110	2,450	

NOTE.—No record obtained Oct. 1 to Apr. 30. Discharge interpolated for a few days of no gage-height record in May and September.

Combined monthly discharge of canals diverting from Snake River between the Shelley and Blackfoot Bridge gaging stations, for the irrigation season of 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May	3,240	885	2,090	129,000
June	3,800	1,690	2,950	176,000
July	3,590	2,180	3,090	190,000
August	3,080	2,450	2,700	166,000
September	2,510	950	1,780	106,000
The period				767,000

SNAKE RIVER (NOS. 1 AND 2 CHANNELS) BELOW BLACKFOOT BRIDGE, NEAR BLACKFOOT, IDAHO

LOCATION.—In NW. ¼ T. 3 S., R. 35 E., half a mile below Blackfoot Bridge and 2 miles west of Blackfoot, Bingham County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 24, 1924, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank of No. 2 channel one-fourth mile below head of island where No. 1 channel comes out of river; inspected by D. G. Taylor.

DISCHARGE MEASUREMENTS.—Made from cables (No. 1 channel, one-fourth mile above gage; No. 2 channel, 50 feet below gage) or by wading.

CHANNEL AND CONTROL.—Bed composed of cobble in gravel drift. Control subject to occasional shifts. Banks low and subject to overflow at high stages. Two channels at gage, except at low stages, when No. 1 channel is dry.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 7.37 feet at 10 p. m. May 23 (discharge, 19,100 second-feet); minimum mean daily discharge about 20 second-feet October 1–11.

1924–1925: Maximum stage recorded, 7.37 feet at 10 p. m. May 23, 1925, (discharge, 19,100 second-feet); river dry on numerous days in summer of 1924.

ICE.—Stage-discharge relation probably seriously affected by ice; observations discontinued during winter.

DIVERSIONS.—Practically the entire normal summer flow of river above station is appropriated by numerous diversions in the Idaho Falls district. One small canal diverts between this station and the station at Clough ranch.

REGULATION.—Normal flow during irrigation season is augmented by the release of stored flood waters in Jackson Lake for use on the Minidoka and Twin Falls tracts.

ACCURACY.—Stage-discharge relation changed for low water during the period of record. Rating curves well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspecting recorder graph or as noted in footnote to table of daily discharge. Records good.

At this point Snake River is divided into three channels, which are listed from east to west as Nos. 1, 2, and 3. One gage serves for Nos. 1 and 2 channels and one gage for No. 3 channel.

Discharge measurement of Snake River (Nos. 1 and 2 channels) below Blackfoot Bridge, near Blackfoot, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 24	2.42	1,790	June 8	5.52	9,720	Aug. 13	4.05	4,420
May 7	6.08	12,200	June 16	4.68	6,340	Aug. 22	3.30	2,750
May 14	6.23	13,600	June 29	5.94	11,500	Aug. 31	3.58	3,340
May 22	7.08	17,500	July 16	3.66	3,430	Sept. 5	3.80	3,720
June 4	6.04	12,100	Aug. 1	4.23	4,790	Sept. 22	3.08	2,420

Daily discharge, in second-feet, of Snake River (Nos. 1 and 2 channels) below Blackfoot Bridge, near Blackfoot, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	May	June	July	Aug.	Sept
1		1,510		15,200	12,600	4,860	3,570
2		1,630		14,900	14,200	5,090	3,730
3		1,650		13,600	14,600	5,450	3,880
4		1,560		11,800	13,400	5,670	3,880
5		1,560		11,100	13,400	5,550	3,750
6	20	1,610		10,400	13,300	5,060	3,550
7			12,300	10,100	13,100	4,530	3,380
8			13,100	9,600	14,000	4,050	3,140
9			14,800	9,030	13,000	3,790	2,650
10			15,100	8,350	11,200	3,660	2,400
11	350		13,900	7,740	10,100	3,860	2,460
12	759		13,300	8,020	9,210	4,070	2,260
13	943		13,400	7,820	7,740	4,320	1,850
14	1,130		13,000	7,150	5,270	4,640	1,680
15	1,180		13,400	6,450	4,240	5,060	1,550
16	1,190		13,800	6,240	3,570	5,420	1,320
17	1,310		14,400	6,480	3,400	5,120	1,330
18	1,370		15,000	6,850	4,800	4,770	1,370
19	1,450		15,200	5,870	6,000	4,270	1,390
20	1,620		15,600	5,120	6,140	3,620	1,270
21	1,910		16,200	5,770	6,380	3,140	1,760
22	1,990		17,300	8,230	6,240	2,750	2,320
23	1,870		18,800	10,100	6,140	2,440	2,820
24	1,750		18,700	10,900	6,380	2,250	2,930
25	1,610		17,400	12,500	6,270	2,120	3,040
26	1,540		16,500	12,000	5,900	2,050	2,840
27	1,480		16,000	11,600	5,420	2,040	2,820
28	1,380		14,900	11,700	4,740	2,230	2,680
29	1,340		13,800	11,500	4,320	2,910	2,570
30	1,390		13,900	11,400	4,320	3,180	2,550
31	1,440		14,500		4,580	3,260	

NOTE.—No gage-height record Oct. 1–11; discharge estimated on basis of flow in No. 3 channel and engineers' estimates. Discharge interpolated Oct. 23 and May 28. No record Nov. 7 to May 6.

Monthly discharge of Snake River (Nos. 1 and 2 channels) below Blackfoot Bridge near Blackfoot, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,990	----------	942	57,900
November 1-6	1,650	1,510	1,590	18,900
May 7-31	18,800	12,300	15,000	744,000
June	15,200	5,120	9,580	570,000
July	14,600	3,400	8,190	504,000
August	5,670	2,040	3,910	240,000
September	3,880	1,270	2,560	152,000

SNAKE RIVER (NO. 3 CHANNEL) BELOW BLACKFOOT BRIDGE, NEAR BLACKFOOT, IDAHO

LOCATION.—In NW. ¼ T. 3 S., R. 35 E., 2 miles below Blackfoot highway bridge and 3½ miles southwest of Blackfoot, Bingham County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 3, 1924, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank; inspected by D. G. Taylor.

DISCHARGE MEASUREMENTS.—Made from cable 40 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of coarse gravel over cobbles. Banks not subject to overflow except at extremely high stages. One channel at gage, several overflow channels cross island between Nos. 2 and 3 channels at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 6.01 feet at 10 p. m. May 23 (discharge, 4,940 second-feet); minimum stage, 1.97 feet at 4 a. m. October 4 (discharge, 90 second-feet).

1924–1925: Maximum stage recorded, 6.01 feet at 10 p. m. May 23, 1925 (discharge, 4,940 second-feet); channel dry several days during August and September, 1924.

ICE.—Stage-discharge relation probably seriously affected by ice; observations discontinued during winter.

DIVERSIONS.—Practically the entire normal summer flow of the river above station is appropriated by numerous diversions in the Idaho Falls district. One small canal diverts between this station and the station at Clough ranch.

REGULATION.—Normal flow during irrigation season is augmented by the release of stored flood waters in Jackson Lake for use on the Minidoka and Twin Falls tracts.

ACCURACY.—Stage-discharge relation not permanent. Rating curves well defined. Operation of water-stage recorder satsifactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. Records good.

At this point Snake River is divided into three channels, which are listed from east to west as Nos. 1, 2, and 3. One gage serves for Nos. 1 and 2 channels and one gage for No. 3 channel.

Discharge measurements of Snake River (No. 3 channel) below Blackfoot Bridge, near Blackfoot, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 24	2.52	337	June 16	3.82	1,360	Aug. 13	3.38	970
May 9	5.26	3,420	June 29	4.69	2,380	Aug. 22	2.98	644
May 22	5.67	4,280	July 3	5.29	3,410	Aug. 31	3.09	733
June 4	4.94	2,920	July 14	3.64	1,230	Sept. 16	2.50	324
June 8	4.45	2,110	July 16	3.25	885			
June 12	4.16	1,830	Aug. 1	3.50	1,130			

Daily discharge, in second-feet, of Snake River (No. 3 channel) below Blackfoot Bridge, near Blackfoot, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	May	June	July	Aug.	Sept.
1	195	285		3,850	2,710	1,100	800
2	154	309		3,740	3,200	1,140	834
3	146	309		3,200	3,370	1,220	852
4	161	291		2,880	3,010	1,240	861
5	274	291	2,260	2,590	3,010	1,220	825
6	431	303	2,340	2,380	3,000	1,120	782
7	489	326	2,520	2,300	2,960	1,030	748
8	452	364	2,830	2,160	3,260	915	700
9	459		3,380	2,020	3,000	870	607
10	533		3,550	1,870	2,440	843	562
11	596		3,130	1,740	2,160	888	562
12	438		3,030	1,760	1,900	924	526
13	474		3,050	1,700	1,630	991	432
14	518		2,860	1,540	1,220	1,040	395
15	496		3,030	1,390	1,030	1,120	352
16	474		3,150	1,350	906	1,190	335
17	474		3,330	1,390	843	1,140	347
18	452		3,550	1,430	1,100	1,080	335
19	418		3,600	1,240	1,310	982	341
20	445		3,760	1,070	1,340	843	341
21	511		3,930	1,200	1,380	732	401
22	431		4,250	1,620	1,360	645	548
23	397		4,770	2,050	1,340	577	692
24	339		4,770	2,240	1,390	541	708
25	309		4,350	2,670	1,350	499	732
26	297		4,050	2,510	1,280	478	692
27	280		3,810	2,400	1,210	478	692
28	263		3,600	2,440	1,070	534	668
29	258		3,380	2,430	991	660	645
30	263		3,400	2,360	1,000	740	652
31	274		3,600		1,070	748	

NOTE.—No record Nov. 9 to May 4. Shifting-control method used June 14 and July 8. No gage-height record May 29; discharge interpolated.

Monthly discharge of Snake River (No. 3 channel) below Blackfoot Bridge, near Blackfoot, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	596	146	377	23,200
November 1-8	364	285	310	4,920
May 5-31	4,770	2,260	3,450	185,000
June	3,850	1,070	2,120	126,000
July	3,370	843	1,830	113,000
August	1,240	478	888	54,600
September	861	335	599	35,600

Combined daily discharge, in second-feet, of Snake River (Nos. 1, 2, and 3 channels) below Blackfoot Bridge, near Blackfoot, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	May	June	July	Aug.	Sept.
1	215	1,800		19,000	15,300	5,960	4,370
2	174	1,940		18,600	17,400	6,230	4,560
3	166	1,960		16,800	18,000	6,670	4,730
4	181	1,850		14,700	16,400	6,910	4,740
5	294	1,850		13,700	16,400	6,770	4,580
6	451	1,910		12,800	16,300	6,180	4,330
7	509		14,800	12,400	16,100	5,560	4,130
8	472		15,900	11,800	17,300	4,960	3,840
9	479		18,200	11,000	16,000	4,660	3,260
10	553		18,600	10,200	13,600	4,500	2,960
11	946		17,000	9,480	12,300	4,750	3,020
12	1,200		16,300	9,780	11,100	4,990	2,790
13	1,420		16,400	9,520	9,370	5,310	2,280
14	1,650		15,900	8,690	6,490	5,680	2,080
15	1,680		16,400	7,840	5,270	6,180	1,900
16	1,660		17,000	7,590	4,480	6,610	1,660
17	1,780		17,700	7,870	4,240	6,260	1,680
18	1,820		18,600	8,280	5,900	5,850	1,700
19	1,870		18,800	7,110	7,310	5,250	1,730
20	2,060		19,400	6,190	7,480	4,460	1,610
21	2,420		20,100	6,970	7,760	3,870	2,160
22	2,420		21,600	9,850	7,600	3,400	2,870
23	2,270		23,600	12,200	7,480	3,020	3,510
24	2,090		23,500	13,100	7,770	2,790	3,640
25	1,920		21,800	15,200	7,620	2,620	3,770
26	1,840		20,600	14,500	7,180	2,530	3,530
27	1,760		19,800	14,000	6,630	2,520	3,510
28	1,640		18,500	14,100	5,810	2,760	3,350
39	1,600		17,200	13,900	5,310	3,570	3,220
20	1,650		17,300	13,800	5,320	3,920	3,200
31	1,710		18,100		5,650	4,010	

Combined monthly discharge of Snake River (Nos. 1, 2, and 3 channels) below Blackfoot Bridge, near Blackfoot, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2,420	166	1,320	81,200
November 1–6	1,960	1,800	1,880	22,400
May 7–31	23,600	14,800	18,500	917,000
June	19,000	6,190	11,700	696,000
July	18,000	4,240	10,000	615,000
August	6,910	2,520	4,800	295,000
September	4,740	1,610	3,160	188,000

DIVERSION FROM SNAKE RIVER BETWEEN BLACKFOOT BRIDGE AND CLOUGH RANCH GAGING STATIONS, IDAHO

Between Blackfoot Bridge and Clough ranch gaging stations, one small canal (Smith Maxwell Canal) diverts water from Snake River for irrigation. A gaging station is maintained at heading of canal by the United States Geological Survey for the Idaho State Department of Reclamation to facilitate distribution of the water. Records are available from May 1 to September 30, 1924 and 1925.

Stage-discharge relation is affected by growth of aquatic plants. Rating curve fairly well defined. Gage read to hundredths daily May 14 to September 30. Discharge estimated May 1–13. Records fair.

Daily discharge, in second-feet, of one canal diverting from Snake River between Blackfoot Bridge and Clough ranch gaging stations, for the irrigation season of 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	1	12	26	9	2	16	17	12	2	0	0
2	1	12	27	8	2	17	17	13	1	0	0
3	1	10	29	9	2	18	18	15	2	0	0
4	1	8	27	9	2	19	20	11	9	0	0
5	1	8	28	9	3	20	24	8	9	0	0
6	1	8	27	6	3	21	25	4	10	0	0
7	1	7	27	4	3	22	26	16	10	0	0
8	1	4	24	2	1	23	14	19	9	0	0
9	1	3	9	2	1	24	15	18	10	0	0
10	1	3	6	1	0	25	14	23	10	0	0
11	1	4	4	2	0	26	13	22	8	0	0
12	1	3	3	3	0	27	14	21	7	0	0
13	1	10	3	2	0	28	13	21	10	0	0
14	12	9	3	4	0	29	20	21	12	0	0
15	17	10	3	1	0	30	20	21	5	0	0
						31	20	------	9	0	------

NOTE.—No record obtained Oct. 1 to Apr. 30. Discharge estimated May 1–13.

Monthly discharge of one canal diverting from Snake River between Blackfoot Bridge and Clough ranch gaging stations, for the irrigation season of 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May	26	1	10.7	658
June	23	3	11.9	708
July	29	1	11.9	732
August	9	0	2.29	141
September	3	0	.63	37
The period				2,280

SNAKE RIVER AT CLOUGH RANCH, NEAR BLACKFOOT, IDAHO [1]

LOCATION.—In sec. 31, T. 3 S., R 34 E., a quarter of a mile below mouth of Blackfoot River and 14 miles southwest of Blackfoot, Bingham County. Blackfoot River is the only large tributary between station and mouth of Henrys Fork, 60 miles above. Portneuf and Bannock Rivers and about 2,500 second-feet of spring water enter between this station and station at Neeley.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—June 6, 1910, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank; installed July 6, 1913; inspected by J. A. Clough.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of very coarse gravel. Two channels at low and medium stages. Control shifts slightly during high water.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 10.59 feet at 3 a. m. May 24 (discharge, 24,700 second-feet); minimum stage, 2.12 feet at 1 p. m. October 4 (discharge, 442 second-feet).

1910–1925: Maximum stage recorded, 14.8 feet (approximately) at 5 p. m. June 18, 1918 (discharge, about 46,200 second-feet); exact discharge uncertain because of probable shift in stage-discharge relation at about this time. Minimum stage, 1.93 feet at 6 p. m. August 25, 1919 (discharge, 118 second-feet).

[1] Formerly known as "Snake River near Blackfoot."

ICE.—Floating ice sometimes present for short periods; stage-discharge relation apparently not affected.

DIVERSIONS.—Practically entire normal summer flow of river is diverted above station.

REGULATION.—Flow regulated by storage in Jackson Lake Reservoir and in Blackfoot-Marsh Reservoir on Blackfoot River. Practically entire summer flow is released water from these reservoirs.

ACCURACY.—Stage-discharge relation changed during high water in May. Rating curves well defined. Operation of water-stage recorder satisfactory except for short periods in winter when clock stopped and occasional staff gage readings were used. Daily discharge ascertained by applying mean daily gage height to rating table. Shifting-control method used May 21–23. Records good.

Discharge measurements of Snake River at Clough ranch, near Blackfoot, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 8	3.95	2,420	June 6	7.91	13,300	Aug. 12	5.30	5,360
Feb. 4	4.11	2,750	June 29	8.14	14,800	Aug. 31	4.97	4,600
Apr. 24	7.32	10,700	July 10	8.18	14,400	Sept. 14	3.85	2,440
May 18	9.34	18,800	Aug. 4	5.97	7,140	Sept. 18	3.59	2,010
May 26	9.76	21,200						

Daily discharge, in second-feet, of Snake River at Clough ranch, near Blackfoot, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	521	2,130	2,580	1,940	2,400	2,560	5,140	8,300	20,000	15,400	6,090	5,000
2	474	2,220	2,760	2,130	2,510	2,510	5,030	8,900	19,600	17,500	6,350	5,230
3	467	2,220	2,610	2,100	2,630	2,450	4,700	10,000	17,700	18,500	6,880	5,230
4	467	2,120	2,780	2,120	2,740	2,420	4,700	11,400	16,000	17,000	7,020	5,110
5	614	2,080	2,710	2,160	2,980	2,450	5,380	13,000	14,600	17,000	7,020	5,000
6	826	2,180	2,660	2,180	3,340	2,510	6,360	13,900	13,600	17,000	6,350	4,760
7	879	2,260	2,630	2,130	3,480	2,630	6,880	14,700	13,300	16,600	5,840	4,540
8	826	2,400	2,450	2,110	3,480	2,810	6,620	15,600	12,700	17,900	5,110	4,320
9	799	2,370	2,030	2,090	3,280	2,860	5,860	18,100	11,800	16,800	4,880	3,800
10	888	2,390	2,120	2,070	3,010	2,840	5,730	19,200	10,900	14,200	4,760	3,450
11	1,050	2,510	2,450	2,000	2,740	2,760	6,360	17,700	9,870	12,500	5,000	3,580
12	1,220	2,630	2,340	1,990	2,420	2,590	7,570	16,200	10,000	11,200	5,230	3,450
13	1,650	2,690	2,610	1,980	2,480	2,550	8,900	16,200	9,700	9,540	5,590	2,910
14	1,850	2,940	2,810	1,970	2,710	2,500	10,400	15,800	8,910	6,880	5,960	2,520
15	1,900	2,830	2,660	1,920	2,720	2,430	11,200	16,400	8,150	5,470	6,480	2,250
6	1,870	2,860	2,860	1,930	2,640	2,430	12,100	16,800	7,860	4,650	7,020	2,050
17	1,930	2,860	2,320	1,940	2,630	2,430	12,700	17,500	8,150	4,320	6,740	2,080
18	2,010	2,910	1,150	1,940	2,580	2,450	13,400	18,500	8,600	5,470	6,350	2,060
19	2,080	2,910	1,050	1,980	2,550	2,480	15,400	18,700	7,430	7,290	5,590	2,140
20	2,250	2,880	954	2,020	2,510	2,400	14,800	19,200	6,350	7,430	4,760	2,230
21	2,610	2,840	668	2,060	2,610	2,430	13,200	19,900	7,020	7,710	4,210	2,570
22	2,710	2,880	629	2,100	2,550	2,480	11,600	21,600	9,540	7,710	3,800	3,410
23	2,630	2,960	562	2,140	2,580	2,590	11,000	23,700	12,300	7,710	3,390	4,210
24	2,260	2,940	500	2,180	2,500	2,880	10,700	24,300	13,100	7,860	3,150	4,430
25	2,120	2,910	660	2,190	2,590	3,280	10,000	22,600	15,400	7,860	3,000	4,430
26	2,080	2,760	820	2,240	2,630	3,390	9,220	21,300	14,800	7,430	2,840	4,100
27	2,030	2,560	980	2,300	2,590	3,340	8,600	19,800	14,000	7,020	2,900	4,100
28	1,930	2,610	1,140	2,280	2,560	3,320	8,600	18,300	14,400	6,090	3,180	3,900
29	1,920	2,610	1,210	2,240	------	3,370	8,450	17,900	14,200	5,470	4,000	3,700
30	1,970	2,610	1,400	2,250	------	3,680	8,450	17,900	14,000	5,470	4,650	3,700
31	2,000	------	1,670	2,310	------	4,380	------	18,700	------	5,840	4,650	------

NOTE.—No. gage-height record Dec. 19, 25–27, Jan. 8–9, 12–13, 19–23, May 6–7; discharge interpolated.

Monthly discharge of Snake River at Clough ranch, near Blackfoot, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2,710	467	1,580	97,200
November	2,960	2,080	2,600	155,000
December	2,860	500	1,830	113,000
January	2,310	1,920	2,100	129,000
February	3,480	2,400	2,730	152,000
March	4,380	2,400	2,780	171,000
April	15,400	4,700	8,970	534,000
May	24,300	8,300	17,200	1,060,000
June	20,000	6,350	12,100	720,000
July	18,500	4,320	10,300	633,000
August	7,020	2,840	5,120	315,000
September	5,230	2,050	3,680	219,000
The year	24,300	467	5,930	4,300,000

SNAKE RIVER AT NEELEY, IDAHO

LOCATION.—In sec. 11, T. 8 S., R. 30 E., half a mile north of Neeley post office, Power County, 4 miles northwest of American Falls, and 32 miles above Minidoka Dam. Portneuf and Bannock Rivers and 2,500 second-feet of spring water enter Snake River between this station and station at Clough ranch. Raft River enters 18 miles below Neeley.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 17, 1906, to September 30, 1925.

GAGE.—Friez water-stage recorder installed August 8, 1910, on left bank at same site and datum as staff gage previously used; inspected by A. J. Ayers.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Bed of river at measuring section rough, especially near right bank. One channel at all stages. Control composed of lava rock, probably partly overlain with coarse gravel; shifts slightly.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 10.04 feet at 11 p. m. May 24 (discharge, 26,800 second-feet); minimum stage, about 2.97 feet from 11 a. m. to 4 p. m. October 7 while float well was being deepened (discharge, about 1,040 second-feet).

1906–1925: Actual maximum stage doubtful; maximum mean daily stage, 13.5 feet June 20, 1918 (discharge, 48,400 second-feet); minimum stage and discharge occurred October 7, 1924.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Numerous canals near Blackfoot and Idaho Falls divert practically the entire normal summer flow of Snake River.

REGULATION.—Summer flow augmented by stored water from Jackson Lake for use on Minidoka and Twin Falls tracts. Considerable diurnal fluctuation at low stages due to operation of power plant 4 miles upstream.

ACCURACY.—Stage-discharge relation fairly permanent; affected by ice December 18 to January 2 and January 4–6. Rating curve well defined above 1,800 second-feet. Operation of water-stage recorder satisfactory except for periods during winter when well was frozen. Daily discharge ascertained by application of mean daily gage height to rating table except as noted in footnote to table of daily discharge. Records excellent except for December and January for which they are good.

Discharge measurements of Snake River at Neeley, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 2	4.99	5,430	June 2	9.18	22,300	Aug. 12	5.89	8,110
Apr. 25	7.46	14,300	July 11	7.95	16,700	Sept. 15	5.06	5,460
May 27	9.42	23,100	Do	7.87	16,100			

Daily discharge, in second-feet, of Snake River at Neeley, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,790	4,740	5,210	4,700	5,540	5,430	7,900	11,710	21,040	16,400	8,480	7,430
2	2,830	4,770	5,290		5,600	5,430	8,170	11,870	22,160	18,120	9,140	7,930
3	2,600	4,790	5,460	5,150	5,980	5,430	8,000	12,800	21,540	20,440	9,360	7,860
4	2,600	4,740	5,290		6,130	5,210	7,760	13,850	19,210	20,090	9,830	8,000
5	2,280	4,790	5,510	5,200	6,470	5,400	8,270	15,280	17,830	19,020	9,910	7,900
6	2,320	4,690	5,260		6,840	5,290	8,960	16,630	16,950	19,460	9,650	7,830
7	2,180	4,790	5,460	5,290	6,970	5,510	10,090	16,950	16,260	19,410	8,960	7,560
8	3,160	5,070	5,150	4,880	6,940	5,690	10,130	17,790	15,860	19,210	8,240	7,500
9	3,320	5,230	4,930	5,150	6,840	5,920	9,540	19,210	15,020	20,290	7,830	7,040
10	3,520	5,260	4,640	5,010	6,160	6,010	9,000	21,140	14,370	18,300	7,460	6,470
11	3,600	5,180	4,900	4,880	5,860	5,770	8,960	21,700	13,300	16,220	7,560	6,530
12	3,670	5,320	4,900	4,750	5,570	5,630	9,940	19,900	12,560	14,750	8,030	6,440
13	3,980	5,400	5,120	4,610	5,370	5,430	11,160	19,210	12,930	13,090	8,170	6,070
14	4,330	5,430	5,460	4,610	5,490	5,320	12,720	19,170	12,110	11,350	8,410	5,660
15	4,380	5,540	5,370	4,740	5,770	5,400	13,810	18,930	11,270	8,720	8,860	5,320
16	4,430	5,400	5,600	4,610	5,490	5,290	14,670	19,460	10,700	8,000	9,500	4,880
17	4,510	5,510	5,260	4,480	5,600	5,210	15,950	19,900	10,660	6,970	9,760	4,790
18	4,560	5,490		4,610	5,430	5,350	16,360	20,890	10,960	7,200	9,280	5,010
19	4,560	5,600	3,900	4,740	5,460	5,370	17,320	21,390	10,850	9,680	8,620	5,090
20	4,740	5,570		4,740	5,510	5,040	18,350	21,440	9,280	9,650	8,170	4,930
21	4,820	5,540		4,820	5,490	5,070	17,550	22,060	9,000	9,980	7,400	5,630
22	5,320	5,660		5,210	5,490	5,230	16,040	22,730	10,320	10,540	6,720	5,770
23	5,180	5,630		4,740	5,460	5,210	14,890	24,250	13,220	10,350	6,470	6,720
24	4,980	5,630		4,900	5,430	5,540	14,370	25,820	14,800	10,320	5,860	7,500
25	4,900	5,570	3,250	5,120	5,370	5,830	13,980	26,260	16,040	10,620	5,720	7,230
26	4,560	5,490		5,070	5,570	6,250	13,300	24,900	17,320	10,470	5,660	6,840
27	4,400	5,260		5,120	5,510	6,010	12,400	23,350	16,670	9,910	5,720	6,780
28	4,580	5,210		5,260	5,430	6,350	12,030	21,040	16,310	9,460	5,690	6,620
29	4,690	5,180		5,230	-------	6,070	11,990	20,340	16,580	8,480	5,920	6,620
30	4,560	5,150	3,750	5,370	-------	6,530	11,790	19,900	16,360	8,340	6,880	6,970
31	4,710	-------		5,370	-------	6,780	--------	20,290	--------	8,480	7,330	------

NOTE.—Discharge estimated on account of ice Dec. 18 to Jan. 2 and Jan. 4–6 by comparison with flow at Clough ranch gaging station. Discharge interpolated Jan. 10–12 and 18.

Monthly discharge of Snake River at Neeley, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	5,320	2,180	3,970	244,000
November	5,660	4,690	5,250	312,000
December	5,600	----------	4,460	274,000
January	5,370	4,480	4,950	304,000
February	6,970	5,370	5,810	323,000
March	6,780	5,040	5,610	345,000
April	18,350	7,760	12,200	726,000
May	26,260	11,710	19,700	1,210,000
June	22,160	9,000	14,700	875,000
July	20,440	6,970	13,000	799,000
August	9,910	5,660	7,890	485,000
September	8,000	4,790	6,560	390,000
The year	26,260	2,180	8,690	6,290,000

LAKE WALCOTT NEAR MINIDOKA, IDAHO

LOCATION.—In sec. 1, T. 9 S., R. 25 E., in backwater of United States Bureau of Reclamation Dam, 6 miles southeast of Minidoka post office, Minidoka County.

RECORDS AVAILABLE.—April 1, 1909, to September 30, 1925; gage heights only prior to October 1, 1918.

GAGE.—Hook gage in wooden stilling well on face of dam at entrance to power house. Zero of gage, 4,200 feet above sea level.

ACCURACY.—Gage heights occasionally affected by wind. No record December 20 to 31 on account of ice in well.

COOPERATION.—Gage-height record and table of contents furnished by United States Bureau of Reclamation.

Lake Walcott impounds water for the irrigation of lands in the North Side Minidoka project and the South Side Minidoka project of the United States Bureau of Reclamation. It has a capacity of 107,240 acre-feet between elevations 4,236 and 4,246 feet; elevation of spillway, 4,240 feet, sea-level datum.

Daily contents, in acre-feet, of Lake Walcott near Minidoka, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	570	86,800	90,060	89,830	90,410	91,110	91,110	94,490	102,540	106,390	104,580	87,500
2	1,430	86,680	89,600	89,360	90,640	90,990	93,550	95,310	103,140	107,110	103,620	88,660
3	1,910	88,550	90,530	89,360	90,990	90,290	93,550	96,270	103,020	106,630	104,580	90,410
4	2,290	85,640	90,760	89,600	91,570	90,990	93,440	97,720	101,330	106,510	105,190	92,160
5	2,380	85,290	89,600	89,600	91,690	90,760	92,510	99,520	100,610	104,820	107,490	94,250
6	1,620	86,330	90,290	89,600	91,690	91,460	92,860	100,850	102,660	104,220	108,990	95,550
7	1,330	87,270	89,940	89,830	92,510	91,340	94,370	101,090	104,340	103,980	108,860	97,470
8	1,140	87,500	90,180	89,360	92,390	91,230	95,180	100,610	106,630	103,620	108,240	99,640
9	2,860	87,620	89,830	89,600	92,620	91,570	94,950	101,810	106,390	104,940	107,240	101,450
10	4,290	87,270	89,360	89,830	92,620	91,460	94,720	101,810	105,910	105,190	106,270	102,900
11	6,960	89,360	89,250	89,600	92,620	91,340	93,900	102,900	106,390	103,380	104,340	103,980
12	8,960	86,680	89,940	89,360	91,460	91,690	93,440	99,160	106,510	104,700	102,410	105,310
13	11,520	87,380	89,710	89,360	90,760	90,990	94,720	99,400	106,630	105,430	101,210	105,910
14	14,690	87,030	89,710	89,130	90,760	91,110	96,270	100,970	106,870	106,270	100,730	105,670
15	18,250	90,290	90,530	89,360	91,230	89,480	97,720	100,850	105,310	105,550	101,930	105,790
16	21,980	91,920	89,940	89,130	90,990	90,990	98,320	100,610	105,670	104,940	103,620	105,670
17	24,720	92,390	90,290	89,130	90,990	90,640	99,640	102,050	106,510	101,810	106,870	106,270
18	28,580	92,510	90,180	89,250	91,110	90,990	99,760	102,900	107,240	97,840	109,360	106,390
19	32,490	92,860	89,360	89,130	90,990	90,640	99,520	102,900	107,110	94,950	107,740	107,610
20	36,640	91,570	-------	89,360	91,110	90,760	100,970	102,780	106,150	103,140	106,750	106,270
21	41,020	91,570	-------	89,360	90,760	90,760	100,490	102,050	105,670	103,980	107,110	105,790
22	47,360	90,530	-------	89,360	90,990	90,880	99,280	102,170	107,240	106,150	106,030	105,550
23	53,320	91,690	-------	89,250	90,990	90,640	96,630	103,020	108,490	107,610	103,620	102,780
24	57,620	91,920	-------	89,600	90,990	90,760	96,630	101,930	108,360	107,110	101,570	100,490
25	61,500	90,760	-------	89,830	90,880	90,760	96,630	102,660	107,110	108,240	99,520	99,760
26	66,220	90,880	-------	89,710	90,760	91,690	96,150	101,810	106,990	108,360	96,750	98,200
27	69,410	90,990	-------	89,830	90,990	92,040	95,310	100,490	105,550	107,860	94,370	95,180
28	72,940	90,530	-------	90,410	90,990	91,460	95,070	100,970	105,190	107,490	92,270	95,180
29	75,650	90,530	-------	90,060	-------	91,340	94,600	99,760	107,110	107,860	89,250	93,670
30	76,770	89,940	-------	90,530	-------	89,830	94,840	102,900	107,110	106,750	87,030	95,550
31	83,310	-------	-------	90,530	-------	91,920	-------	102,660	-------	105,310	86,800	-------

SNAKE RIVER NEAR MINIDOKA, IDAHO

LOCATION.—In sec. 2, T. 9 S., R. 25 E., 100 yards below Howells Ferry, 1 mile below United States Bureau of Reclamation dam, 6 miles southeast of Minidoka post office, Minidoka County, nearest railroad point, and 6 miles above Montgomery Ferry gaging station, which was discontinued December 31, 1910. Raft River enters between this station and station at Neeley.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 21, 1910, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank; inspected by employees of United States Bureau of Reclamation.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet below gage.

CHANNEL AND CONTROL.—Bed composed of coarse gravel. One channel at all stages. Control shifts slightly.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 11.73 feet from 9 to 11 a. m. May 25 (discharge, 24,900 second-feet); minimum stage, 4.01 feet from 1 to 7 a. m. October 22 (discharge, 1,370 second-feet).

1910–1925: Maximum stage recorded, 16.02 feet at 1 a. m. June 21, 1918 (discharge, 45,900 second-feet); minimum discharge, 960 second-feet from 11 a. m. to 3 p. m. October 13, 1914.

ICE.—Some shore ice forms near gage and river closes farther down; stage-discharge relation slightly affected at times.

DIVERSIONS.—The North Side and South Side (Minidoka) Canals divert water between the Neeley and Minidoka stations. The nearest diversions below the station are Twin Falls North Side and South Side Canals at Milner.

REGULATION.—Flow partly regulated by storage in Lake Walcott above Minidoka Dam (storage capacity about 67,000 acre-feet above spillway).

ACCURACY.—Stage-discharge relation permanent; affected by ice December 16 to January 30. Rating curves well defined above 2,000 second-feet. Operation of water-stage recorder satisfactory except for period December 17–28 when well was frozen. Daily discharge ascertained by application of mean daily gage height to rating table. Records good except those for December and January which are fair.

COOPERATION.—Gage-height record furnished by United States Bureau of Reclamation.

Discharge measurements of Snake River near Minidoka, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 3	6.47	5,570	Aug. 14	6.62	5,860	Sept. 16	5.25	2,840
Apr. 26	8.67	11,900	Aug. 17	6.55	5,830	Sept. 17	5.43	3,180
May 28	10.67	20,200						

Daily discharge, in second-feet, of Snake River near Minidoka, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,960	3,480	5,060		5,280	5,480	5,950	9,130	18,040	13,400	6,100	4,870
1	1,980	4,460	4,820		5,410	5,410	7,260	9,020	19,050	14,790	6,080	4,750
3	2,270	4,460	5,390		5,580	5,360	7,060	9,480	20,430	17,220	5,950	4,730
4	2,170	4,400	5,390		5,900	5,340	6,710	10,480	18,130	18,520	6,000	4,680
5	2,270	4,010	5,200	3,700	6,160	5,160	6,610	11,580	14,790	17,090	6,130	4,750
6	2,270	3,990	5,390		6,580	5,280	7,200	13,330	13,710	16,790	6,710	4,650
7	2,250	4,290	5,100		6,770	5,660	8,040	14,030	12,920	16,670	6,420	4,610
8	2,340	4,310	5,320		6,880	5,560	8,610	14,630	13,680	16,370	5,870	4,470
9	2,270	4,440	5,060		7,010	5,790	8,610	15,910	13,180	16,880	5,560	4,240
10	2,310	4,580	4,730		6,770	6,210	7,900	17,610	12,060	17,090	5,660	4,170
11	2,060	5,360	4,760		6,230	5,820	7,340	20,120	11,120	13,370	5,790	4,080
12	1,970	5,270	4,920		5,840	5,790	7,760	18,700	10,300	11,250	5,970	4,330
13	2,180	5,200	4,920		5,540	5,510	8,900	15,950	10,420	10,480	5,900	4,400
14	2,110	4,310	5,060		5,510	5,440	10,080	16,880	10,920	8,520	5,710	4,130
15	2,220	3,950	5,320	3,600	5,580	4,940	11,180	17,400	9,720	6,610	5,560	3,580
16	2,310	4,760			5,690	5,340	11,850	16,880	8,780	6,210	5,540	3,000
17	2,380	5,100			5,640	4,970	12,920	17,310	8,380	6,360	5,710	3,000
18	2,360	5,130	4,400		5,540	5,240	14,270	18,700	8,900	6,180	7,400	3,060
19	2,150	5,730			5,540	5,160	14,470	19,450	9,540	4,030	7,590	3,710
20	2,100	5,460			5,510	4,940	16,120	20,120	8,010	5,170	5,360	4,420

Daily discharge, in second-feet, of Snake River near Minidoka, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	1,890	5,480			5,540	4,940	16,330	19,890	6,180	6,390	5,240	4,890
22	1,770	4,870			5,580	4,800	15,080	20,740	6,710	6,610	5,140	6,130
23	2,020	5,480		3,700	5,480	4,940	13,680	22,460	9,900	7,540	4,990	6,850
24	2,220	5,750			5,510	5,090	13,100	23,510	12,800	7,540	4,940	7,150
25	2,180	5,390			5,440	4,850	12,730	24,710	13,290	7,150	4,700	7,120
26	2,090	5,440	3,400		5,540	5,770	12,020	23,650	15,330	8,350	4,520	7,060
27	2,170	5,290			5,360	5,840	11,090	21,240	14,750	7,420	4,580	6,470
28	2,100	5,170		4,300	5,560	5,460	10,450	19,360	12,300	6,550	4,820	6,100
29	2,110	5,200				5,460	9,930	16,370	13,400	6,260	5,040	5,640
30	2,130	5,010				5,440	9,540	17,180	13,870	6,230	4,990	5,360
31	2,150	------	3,500	5,310	------	5,790	------	17,950	------	6,130	4,850	------

NOTE.—Discharge estimated Dec. 16 to Jan. 30 from weather records and flow at Milner Dam. Mean discharge for day used Nov. 1, 14, July 19 and 20.

Monthly discharge of Snake River near Minidoka, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2,380	1,770	2,150	132,000
November	5,750	3,480	4,860	289,000
December	5,390	------	4,390	270,000
January	------	------	3,810	234,000
February	6,880	5,280	5,820	323,000
March	6,210	4,800	5,380	331,000
April	16,330	5,950	10,400	619,000
May	24,710	9,020	17,200	1,060,000
June	20,430	6,180	12,400	738,000
July	18,520	4,030	10,300	633,000
August	7,400	4,520	5,640	347,000
September	7,150	3,000	4,880	290,000
The year	24,710	1,770	7,270	5,270,000

LAKE MILNER AT MILNER, IDAHO

LOCATION.—In sec. 29, T. 10 S., R. 21 E., in backwater of Twin Falls Co.'s dam at Milner, Cassia County.

RECORDS AVAILABLE.—April 10, 1911, to September 30, 1925.

GAGE.—Hook gage supplemented by float gage in same well at dam; float gage installed June 1, 1920, and consists of target which moves directly with large float in well and automatically indicates stage on graduated scale above gage-house floor. A Lietz and a Friez water-stage recorder have also been used for short periods.

ACCURACY.—Gage heights occasionally seriously affected by wind. Gage read to hundredths twice daily.

COOPERATION.—Gage-height record furnished by North Side Canal Co. (Ltd.) and Twin Falls Canal Co.

Daily gage height, in feet, of Lake Milner at Milner, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.53	9.41	7.51	7.22	7.20	7.27	7.76	10.48	10.95	10.97	10.85	10.24
2	8.61	9.30	7.36	7.08	7.24	7.19	8.37	10.52	10.94	10.96	10.84	10.21
3	8.48	9.11	7.58	7.19	7.29	7.20	8.53	10.44	10.93	10.96	10.72	10.20
4	8.68	8.72	7.54	7.23	7.26	7.23	8.53	10.50	10.92	10.97	10.64	10.16
5	8.66	8.88	7.44	7.24	7.28	7.26	8.48	10.68	10.92	10.94	10.68	10.21
6	8.67	8.74	7.63	7.27	7.28	7.26	8.60	10.96	10.94	10.97	10.74	10.23
7	8.62	9.10	7.38	7.16	7.31	7.32	8.90	10.66	10.92	10.97	10.98	10.24
8	8.62	9.27	7.53	7.16	7.20	7.19	9.13	10.94	10.96	10.96	10.98	10.27
9	8.72	8.74	7.48	7.16	7.24	7.35	9.18	10.96	10.91	10.96	10.80	10.28
10	8.72	8.36	7.40	7.08	7.41	7.41	9.14	10.96	10.95	10.94	10.68	10.24
11	8.72	8.34	7.42	7.01	7.28	7.34	9.16	10.93	10.94	10.98	10.54	10.25
12	8.79	8.13	7.48	7.22	7.03	7.42	9.23	10.94	10.92	10.96	10.60	10.29
13	8.78	8.04	7.48	7.30	7.18	7.34	9.24	10.92	10.95	10.96	10.74	10.49
14	8.78	7.88	7.52	7.28	7.20	7.40	9.36	10.92	10.92	10.98	10.78	10.74
15	8.82	6.96	7.50	7.32	7.20	6.99	9.34	10.91	10.90	10.98	10.79	10.76
16	8.88	7.02	7.51	7.25	7.28	7.38	9.31	10.90	10.94	10.89	10.88	10.56
17	8.88	7.20	6.82	7.10	7.24	7.36	9.31	10.92	10.90	10.95	10.96	10.41
18	9.05	7.20	7.29	7.20	7.26	7.86	9.31	10.94	10.95	10.92	10.79	10.64
19	9.19	7.16	7.66	7.23	7.24	7.82	9.33	10.93	10.95	11.05	10.81	11.04
20	9.36	7.22	7.22	7.21	7.28	7.82	9.27	10.93	10.96	10.88	10.84	10.92
21	9.26	6.88	7.06	7.20	7.08	7.86	9.29	10.92	10.91	10.88	10.76	10.88
22	8.78	6.20	6.95	7.12	7.22	7.82	9.38	10.94	10.78	10.99	10.72	10.92
23	8.48	6.87	7.14	7.25	7.18	7.83	9.46	10.92	10.98	11.06	10.64	10.95
24	8.66	7.46	7.21	7.26	7.06	7.95	9.65	10.94	10.96	11.10	10.62	10.96
25	8.86	7.46	7.22	7.20	7.24	7.45	9.72	10.94	10.95	11.08	10.62	10.96
26	8.86	7.44	7.12	7.18	7.20	7.70	9.80	10.94	10.98	11.10	10.44	10.98
27	8.87	7.48	7.21	7.32	6.99	8.02	9.75	10.91	10.96	11.08	10.20	10.94
28	9.00	7.52	7.32	7.28	7.13	7.83	9.88	10.97	10.86	11.08	9.92	10.42
29	9.08	7.52	7.29	7.30	-------	7.79	9.82	10.88	10.96	11.10	9.98	10.79
30	9.48	7.42	7.12	7.26	-------	7.82	10.09	10.94	10.96	11.05	10.12	10.67
31	9.31	-------	7.22	7.20	-------	8.00	-------	10.96	-------	10.98	10.19	-------

SNAKE RIVER AT MILNER, IDAHO

LOCATION.—In sec. 29, T. 10 S., R. 21 E., 500 yards below Milner Dam, at Milner, Twin Falls County. No tributaries enter Snake River between Minidoka station and Milner, and no noteworthy inflow between Milner and station near Twin Falls except seepage and spring water.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 10, 1909, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank below highway bridge; inspected by McConnel and Gilham.

DISCHARGE MEASUREMENTS.—Made from cable 400 yards above gage, from foot planks midway between gage and cable, or by wading.

CHANNEL AND CONTROL.—Bed at gage composed of lava rock, overlain with very slight gravel deposits and occasional loose rock. Left bank high and steep; right bank confines flow in narrow gorge below 15-foot gage datum; full river width above that point. Control practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 18.44 feet at 1 a. m. May 12 (discharge, 19,000 second-feet); minimum stage, 1.5 feet October 23–24 (discharge, 8 second-feet).

1909–1925: Maximum stage recorded, 20.1 feet (original gage) June 12, 1909 (discharge, 44,400 second-feet); minimum stage, 1.5 feet August 22–26 and October 23–24, 1924 (discharge, 8 second-feet).

ICE.—Stage-discharge relation not seriously affected by ice.

DIVERSIONS.—Twin Falls Canals divert water at Milner Dam, just above station. During part of the season practically entire flow of river is diverted by these canals.

REGULATION.—Flow past station during irrigation season is regulated at Milner Dam.

ACCURACY.—Stage-discharge relation practically permanent. Rating curves fairly well defined. Operation of water-stage recorder satisfactory except during extremely low stages, when staff gage was read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table except on days when considerable fluctuation in stage occurred, when mean of hourly discharge was used. Records good.

COOPERATION.—Gage-height record and three discharge measurements furnished by Twin Falls Canal Co.

Discharge measurements of Snake River at Milner, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 4	9.29	5,150	May 30	13.10	9,260	Aug. 15	1.59	13.9
May 25	18.30	17,700	Aug. 1	1.90	24.4	Aug. 16	1.58	13.9
May 29	14.80	11,600	Aug. 11	1.67	16.3			

Daily discharge, in second-feet, of Snake River at Milner, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9	11	4,080	2,600	5,120	4,280	3,180	4,210	11,460	7,530	24	14
2	9	2,790	3,780	2,600	4,810	4,390	4,280	4,460	12,030	7,680	23	13
3	9	2,790	4,080	2,500	4,920	4,180	5,120	4,160	14,170	10,650	22	13
4	9	2,700	4,700	2,790	5,340	4,180	5,020	5,480	13,280	12,640	20	13
5	9	2,880	4,180	2,880	5,440	3,780	4,810	5,030	9,160	11,220	20	13
6	9	2,980	4,500	2,880	5,660	3,680	5,230	6,770	8,300	10,510	19	13
7	9	3,080	4,080	2,980	6,650	4,180	5,660	8,220	6,830	10,330	593	13
8	9	3,880	4,180	2,980	6,210	4,180	6,760	8,010	7,840	10,260	39	13
9	10	4,080	4,180	2,880	5,990	3,880	6,980	9,060	7,620	9,990	20	13
10	10	3,780	3,780	2,880	6,430	4,700	6,650	10,990	6,480	11,330	18	13
11	10	4,080	3,380	2,500	6,100	4,390	5,660	14,490	4,990	8,850	15	13
12	10	4,600	3,580	2,700	5,120	4,500	5,340	15,460	4,080	5,160	14	13
13	10	4,700	3,680	2,700	4,600	4,180	6,100	10,390	4,010	5,120	14	14
14	10	4,810	3,780	2,700	4,390	4,600	6,320	10,060	4,900	2,680	14	15
15	10	3,480	3,980	2,700	4,500	3,680	7,640	12,120	4,110	1,200	14	163
16	10	3,180	3,980	2,700	4,810	3,280	8,540	11,330	3,260	85	14	23
17	10	3,680	3,080	2,500	4,700	2,880	8,660	11,310	2,360	30	583	23
18	10	3,980	2,790	2,320	4,600	3,180	11,020	12,750	2,710	27	1,650	23
19	10	4,080	3,480	2,500	4,500	3,380	11,020	13,630	3,760	58	2,500	1,040
20	10	5,020	3,080	2,700	4,600	3,080	13,190	14,130	2,880	49	524	2,110
21	10	4,700	2,500	2,700	4,390	3,480	13,970	13,930	868	22	17	2,810
22	9	4,280	2,320	2,700	4,600	3,180	13,000	14,290	386	137	13	4,080
23	8	3,180	2,220	2,700	4,500	2,880	9,950	15,880	2,400	978	13	4,730
24	8	4,700	2,410	2,790	4,180	3,980	10,090	17,120	6,520	1,400	13	5,190
25	9	5,230	2,410	2,880	5,340	4,280	9,020	18,200	6,890	472	13	4,990
26	9	3,880	2,360	2,980	5,340	4,700	8,540	17,900	9,240	1,990	14	4,830
27	9	4,080	2,180	3,180	4,080	5,550	7,640	15,630	8,800	1,360	14	3,960
28	9	3,480	2,220	3,480	3,780	4,810	7,090	13,970	6,850	358	13	3,840
29	9	3,780	2,460	3,480	-------	4,390	6,100	10,480	6,470	75	13	2,270
30	11	3,680	2,880	5,550	-------	3,480	4,320	9,910	7,730	53	13	3,750
31	10	-------	3,080	5,120	-------	4,080	--------	11,500	--------	30	14	------

Monthly discharge of Snake River at Milner, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	11	8	9.45	580
November	5,230	11	3,720	221,000
December	4,700	2,180	3,340	205,000
January	5,550	2,320	2,950	181,000
February	6,650	3,780	5,020	279,000
March	5,550	2,880	3,980	245,000
April	14,000	3,180	7,560	450,000
May	18,200	4,160	11,300	695,000
June	14,200	386	6,350	378,000
July	12,600	22	4,270	263,000
August	2,500	13	203	12,500
September	5,190	13	1,470	87,500
The year	18,200	8	4,170	3,020,000

SNAKE RIVER NEAR KIMBERLY, IDAHO

LOCATION.—In SE. ¼ sec. 32, T. 9 S., R. 18 E., above upper outlet of Devil's Corral, half a mile below Twin Falls, 2½ miles above Shoshone Falls, 4 miles north of Kimberly, Twin Falls County, and 6½ miles northeast of the city of Twin Falls.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—July 24, 1923, to September 30, 1925.

GAGE.—Au water-stage recorder on left bank installed December 15, 1923; inspected by Garry Chappell and William Bousman.

DISCHARGE MEASUREMENTS.—Made from cable 300 feet above gage.

CHANNEL AND CONTROL.—Bed composed of lava boulders and solid rock in deep lava canyon; very rough. Control formed by low falls 70 feet below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year from water-stage recorder, 13.3 feet from 4 to 6 a. m. May 12 (discharge, 18,000 second-feet); minimum stage, 1.15 feet October 22–27 (discharge, 428 second-feet).

1923–1925: Maximum stage and discharge recorded May 12, 1915; minimum stage, 0.8 foot May 16–20, 1924 (discharge, 378 second-feet).

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—No water diverted from the river between this station and station at Milner.

REGULATION.—Flow past station is regulated directly by diversions of the North and South Side Canals at Milner, where practically the entire flow of the river is diverted during large part of irrigation season; flow at such times consists of inflow and seepage between this station and the one at Milner.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well-defined below 14,000 second-feet. Operation of water-stage recorder satisfactory except for few short periods. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph, except as indicated in footnote to table of daily discharge. Records good.

COOPERATION.—Gage-height record and two discharge measurements furnished by Idaho Power Co.

Discharge measurements of Snake River near Kimberly, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 3	7.05	3,390	Apr. 30	8.56	5,660	Aug. 22	1.83	554
Nov. 29	7.78	4,410	May 3	7.55	4,080	Aug. 30	1.70	506
Mar. 5	7.67	4,230	May 17	11.02	11,800			
Apr. 5	8.36	5,630	July 15	5.94	2,140			

Daily discharge, in second-feet, of Snake River near Kimberly, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	453	436	4,480	4,160	5,920	4,640	3,860	4,480	12,400	8,720	553	520
2	444	1,530	4,480	4,320	5,530	4,980	4,320	4,980	12,700	9,180	510	520
3	444	3,290	4,320	4,160	5,530	4,640	5,720	4,480	14,100	10,900	500	520
4	444	3,290	5,340		5,920	4,810	5,530	5,920	13,800	13,000	500	526
5	444	3,430	4,640		5,920	4,320	5,340	5,720	10,400	11,900	490	531
6	444	3,570	4,810	4,500	6,120	4,160	5,530	6,740	9,420	11,100	490	531
7	444	3,710	4,640		6,950	4,480	6,120	8,950	8,720	10,900	510	531
8	444	4,160	4,640		6,740	4,640	7,160	8,950	8,950	10,900	1,280	542
9	444	4,810	4,810		6,530	4,320	7,600	9,660	8,490	10,900	638	531
10	453	4,480	4,480		6,950	5,160	7,380	11,100	6,700	11,700	530	531
11	453	4,480	4,010		6,740	4,810	6,320	13,500	6,100	10,400		531
12	436	5,340	4,010		5,920	5,160	5,720	15,800	5,200	5,920		542
13	436	5,340	4,320		5,160	4,480	6,740	11,400	4,810	5,920		542
14	436	5,340	4,320		4,980	5,160	6,740	10,600	5,720	3,430		542
15	436	4,480	4,480		5,160	4,480	8,040	12,400	4,810	2,210	490	553
16	436	3,570	4,640	4,200	5,160	3,710	9,180	11,900	2,660	985		638
17	436	4,160	4,160		5,340	3,430	9,420	11,900	2,900	600		638
18	444	4,480			5,160	3,430	11,100	12,700	3,030	490		576
19	444	4,640			4,980	3,860	11,400	13,500	4,160	471		576
20	444	5,530	4,200		4,980	3,430	13,000	13,800	3,860	480	1,700	2,140
21	436	5,340			4,980	4,010	13,500	13,800	1,760	510		3,030
22	428	4,980			5,160	3,860	13,500	13,800	1,160	490	553	4,480
23	428	3,710		4,480	4,980	3,290	10,900	15,200	1,220	612	531	5,530
24	428	4,980		4,640	4,810	4,160	10,900	16,700	6,740	1,860	510	5,920
25	428	5,920	2,600	4,640	4,810	5,160	9,900	17,400	7,600	1,160	510	5,920
26	428	4,320		4,480	4,810	5,160	9,420	17,400	10,900	1,660	520	5,920
27	428	4,640		4,640	4,640	5,920	8,490	15,500	9,700	2,210	520	4,980
28	436	3,860		4,980	4,320	5,340	7,820	14,100	7,820	1,280	531	4,810
29	453	4,320	3,300	5,340		5,160	6,950	11,700	6,740	805	520	2,660
30	444	4,320	3,710	6,320		4,010	5,160	10,600	9,180	638	520	4,320
31	436		3,860	5,920		4,480		12,200		625	520	

NOTE.—Discharge estimated on account of missing gage-height record Dec. 18–29, Jan. 4–22, June 10–12, 26, 27, and Aug. 10–21, based on flow at Milner and Twin Falls; interpolated Aug. 4. Braced figures show mean discharge for periods indicated.

Monthly discharge of Snake River near Kimberly, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	453	428	440	27,100
November	5,920	436	4,220	251,000
December	5,340		3,950	243,000
January	6,320		4,510	277,000
February	6,950	4,320	5,510	306,000
March	5,920	3,290	4,470	275,000
April	13,500	3,860	8,090	481,000
May	17,400	4,480	11,500	707,000
June	14,100	1,160	7,060	420,000
July	13,000	471	4,900	301,000
August			695	42,700
September	5,920	520	2,000	119,000
The year	17,400	428	4,770	3,500,000

SNAKE RIVER NEAR TWIN FALLS, IDAHO

LOCATION.—In sec. 33, T. 9 S., R. 17 E., at Perrine Bridge, on Blue Lakes ranch, 4 miles north of Twin Falls, Twin Falls County, and 4 miles below Shoshone Falls. Outlet of Blue Lakes enters Snake River 200 feet below gage and Salmon Falls Creek enters 24 miles below.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—September 29, 1911, to June 30, 1917; May 1, 1919, to September 30, 1925.

GAGE.—Combined inclined and vertical staff on left bank, 100 feet above bridge; installed August 18, 1921; read by employees on Blue Lakes ranch.

DISCHARGE MEASUREMENTS.—Made from downstream side of bridge.

CHANNEL AND CONTROL.—Bed at measuring section very rough. Banks high; not subject to overflow. Control composed of lava boulders and solid rock; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 10.5 feet at 7 a. m. May 12 and 6 p. m. May 25 (discharge, 19,600 second-feet); minimum stage, 2.2 feet on several days in October (discharge, 570 second-feet).

1911–1917; 1919–1925: Maximum stage recorded, 13.3 feet at 6 a. m. and 7 p. m. June 10, 1914 (discharge, 32,200 second-feet); minimum discharge, 468 second-feet, several periods in June, July, and August, 1915.

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—No water diverted from river between this station and that at Milner, except by small ranch ditches.

REGULATION.—Flow past station regulated directly by diversions of North Side and South Side Canals at Milner, where practically the entire flow of river is diverted during later part of irrigation season; flow at such times consists of inflow and seepage between this station and the one at Milner.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Gage read to quarter-tenths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table, except September 6–15, for which it was interpolated. Records good.

Discharge measurements of Snake River near Twin Falls, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 6	5.24	4,520	July 16	3.38	1,570
May 20	9.08	14,400	Aug. 20	4.21	2,540

Daily discharge, in second-feet, of Snake River near Twin Falls, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	570	598	4,850	4,420	6,200	4,640	4,420	5,070	12,300	8,600	750	718
2	570	1,420	4,640	4,640	6,200	5,290	4,640	5,290	12,900	8,360	718	718
3	570	3,820	4,850	4,420	5,970	5,070	5,970	4,850	14,500	11,400	685	718
4	598	3,640	5,290	4,640	6,200	5,290	5,970	6,430	14,900	13,900	685	718
5	570	3,640	5,290	4,850	6,200	4,850	6,200	6,660	11,100	12,600	685	750
6	598	4,020	5,520	4,850	6,660	4,640	5,970	7,140	10,200	11,700	625	753
7	570	4,020	5,520	5,070	7,380	4,420	6,430	9,120	7,860	11,700	625	756
8	598	4,220	4,850	4,850	7,380	4,850	7,620	9,120	8,860	11,400	1,220	760
9	598	3,820	5,290	4,850	6,900	5,070	8,100	10,200	8,600	11,400	895	763
10	625	4,020	5,070	4,850	7,380	5,740	7,860	12,000	7,140	12,600	750	766

Daily discharge, in second-feet, of Snake River near Twin Falls, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	598	3,820	4,420	4,420	7,140	5,740	6,660	13,900	6,660	10,800	718	769
12	598	5,740	4,420	4,420	6,900	5,740	6,200	17,600	5,740	6,430	685	772
13	570	5,740	4,640	4,420	5,740	5,290	7,140	12,000	5,290	5,970	685	776
14	570	5,740	4,850	4,420	5,520	5,740	6,900	11,400	5,290	3,640	685	779
15	598	5,740	5,070	4,640	5,520	5,740	8,360	13,300	5,290	2,760	685	782
16	570	5,740	4,850	4,640	5,520	4,220	9,390	13,300	4,420	1,470	685	785
17	598	5,740	4,420	4,420	5,740	3,820	9,940	13,300	3,100	820	685	820
18	625	5,290	3,450	4,220	5,520	3,640	12,000	13,300	3,270	750	1,010	820
19	598	5,740	4,420	4,420	5,520	4,020	12,300	14,500	4,420	655	3,100	820
20	570	5,970	4,850	4,640	5,740	3,640	14,500	14,900	4,220	625	2,600	3,270
21	625	5,970	4,850	4,640	5,520	3,640	15,200	15,200	2,300	685	1,320	4,020
22	598	5,520	3,270	4,640	5,520	3,640	14,500	14,900	1,420	655	858	5,290
23	598	5,740	3,270	4,640	5,520	4,220	11,100	16,500	1,140	685	750	5,970
24	598	5,520	2,920	4,850	5,070	4,850	10,800	18,600	7,380	1,580	685	6,430
25	598	6,660	2,600	4,850	5,290	5,290	10,200	18,900	7,860	1,640	685	6,430
26	570	5,290	2,920	4,850	5,290	5,290	9,660	18,900	11,400	1,420	685	6,430
27	625	5,070	2,760	4,850	5,070	6,430	9,120	16,900	10,200	2,600	750	5,290
28	625	4,850	2,920	5,290	4,850	6,660	8,100	15,200	8,100	1,760	718	5,290
29	625	4,640	3,640	5,520	-------	5,740	7,140	13,300	6,660	1,180	718	3,450
30	598	4,640	3,820	6,200	-------	5,290	5,740	12,000	8,860	895	718	5,070
31	625	-------	4,020	6,430	-------	4,850	--------	12,600	--------	820	718	------

Monthly discharge of Snake River near Twin Falls, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	625	570	595	36,600
November	6,660	598	4,750	283,000
December	5,520	2,600	4,310	265,000
January	6,430	4,220	4,800	295,000
February	7,380	4,850	5,980	332,000
March	6,660	3,640	4,950	304,000
April	15,200	4,420	8,600	512,000
May	18,900	4,850	12,500	769,000
June	14,900	1,140	7,380	439,000
July	13,900	625	5,210	320,000
August	3,100	625	896	55,100
September	6,430	718	2,380	142,000
The year	18,900	570	5,180	3,750,000

SNAKE RIVER NEAR HAGERMAN, IDAHO

LOCATION.—In sec. 2, T. 8 S., R. 13 E., one-eighth mile above Owsley Bridge, just above Upper Salmon Falls, and 4 miles south of Hagerman, Gooding County. Big Wood River enters 11 miles below.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—August 24, 1912, to June 18, 1917; July 25, 1919, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank; installed April 20, 1921; inspected by F. M. Gregg.

DISCHARGE MEASUREMENTS.—Made from cable 100 feet below gage.

CHANNEL AND CONTROL.—Control rocky; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 6.27 feet at 11 a. m. May 12 (discharge, 24,100 second-feet); minimum stage, 3.30 feet at 6 a. m. October 1 (discharge, 5,080 second-feet).

1912–1917; 1919–1925: Maximum stage recorded, 7.75 feet at 6 p. m. June 10, 1914 (discharge, 35,100 second-feet); minimum stage, 3.1 feet July 15 to August 2, 1915 (discharge, 4,030 second-feet). Data insufficient in 1916 and 1917 for determination of maximum and minimum stages.

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—No noteworthy diversions between this station and the one at Milner. Practically entire flow of river is diverted at Milner during part of irrigation season by the Twin Falls Canals, and flow at Owsley Bridge is maintained largely by springs and waste water from irrigation above.

REGULATION.—Flow directly regulated by diversions of the Twin Falls Canals at Milner.

ACCURACY.—Stage-discharge relation changed March 18 to April 28. Standard rating curve well defined. Water-stage recorder operated satisfactorily except for short periods October to February. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspecting recorder graph. Records good.

Discharge measurements of Snake River near Hagerman, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 12	4.06	8,990	May 25	6.08	22,500
Mar. 2	4.24	9,940	July 14	4.11	8,830
Apr. 29	4.60	11,800			

Daily discharge, in second-feet, of Snake River near Hagerman, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,120	5,970		8,750	11,200	9,340	9,040	9,340	16,700	12,900	5,540	5,330
2	5,330	6,420			10,900	9,950	8,460	9,340	17,000	12,600	5,540	5,330
3	5,330	7,910		8,750	10,900	9,640	9,950	9,340	18,800	14,200	5,330	5,330
4	5,330	8,180		9,040	10,900	9,640	9,950	9,950	19,600	16,000	5,330	5,330
5	5,330	8,180		9,040	10,900	9,340	9,950	10,300	16,700	16,700	5,330	5,540
6	5,330	8,460	8,800		11,200	9,040	9,950	10,300	14,600	15,600	5,330	5,540
7	5,330	8,460		9,050	11,600	9,340	10,300	13,200	13,200	15,600	5,330	5,540
8	5,330	8,180			11,600	9,640	11,200	12,900	12,900	15,300	5,330	5,750
9	5,540	8,750			11,200	9,340	11,900	13,900	13,600	15,300	5,750	5,750
10	5,540	9,340		9,040	10,900	9,640	11,900	15,300	12,600	16,000	5,540	5,750
11	5,540	9,040		9,040	11,200	9,950	11,200	16,700	11,600	15,600	5,330	5,750
12	5,540	9,640	8,750	8,750	10,900	9,950	11,200	21,800	10,300	11,900	5,330	5,750
13	5,540	9,640	8,750	8,750		9,340	11,600	17,400	9,340	10,300	5,330	5,750
14	5,540	9,950	9,040	9,040	9,950	9,950	11,200	14,900	9,950	9,340	5,540	5,750
15	5,540	9,950	9,040	9,040	9,640	9,950	12,200	16,300	10,300	7,640	5,540	5,750
16	5,540	8,180	9,040	9,040	9,950	8,750	13,600	16,700	9,340	6,650	5,540	5,540
17	5,540	8,460	9,340	9,040	9,950	8,750	14,200	16,300	8,460	5,750	5,750	5,540
18	5,540	9,040	9,340	8,750	10,300	8,180	15,300	17,000	7,910	5,330	5,750	5,540
19	5,540		9,040	8,750	10,200	8,750	16,700	18,100	8,460	5,120	6,650	5,540
20	5,540		8,460		10,100	8,460	17,400	18,800	9,040	5,120	7,910	5,750
21	5,330		8,460	8,900	9,950	8,460	18,800	18,800	7,910	5,120	6,650	7,380
22	5,330		7,910		9,640	8,750	19,600	18,800	6,650	5,330	5,970	8,460
23	5,120		7,640		9,950	8,180	16,300	20,300	6,420	5,540	5,540	9,340
24	5,220		7,380	9,040	9,640	8,180	15,300	21,800	8,750	5,750	5,540	9,950
25	5,330	8,900	7,380	9,340	9,640	9,640	15,300	22,600	12,200	6,890	5,540	10,300
26	5,330		7,130	9,340	9,340	9,340	14,600	22,600	13,600	6,420	5,330	10,300
27	5,330		7,130	9,340	9,640	9,950	14,200	21,000	14,900	7,130	5,330	10,600
28	5,330		7,130		9,340	9,950	12,900	18,800	13,600	6,890	5,330	9,640
29	5,540		7,380	10,500		9,640	12,200	17,000	11,200	6,420	5,330	9,040
30	5,540		7,910			9,340	11,200	14,900	12,600	5,900	5,330	8,460
31			8,750	11,900		8,750		16,300			5,330	

NOTE.—Discharge estimated Oct. 30–31, Nov. 19–30, Dec. 1–11, Jan. 1–2, 6–9, 20–23, 28–30, Feb. 12–13, and July 30–31; based on flow near Twin Falls. Discharge interpolated Oct. 3, 10, 24, Feb. 19–20, and Sept. 9–11. Braced figures show mean discharge for periods indicated.

Monthly discharge of Snake River near Hagerman, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October		5,120	5,410	333,000
November		5,970	8,680	516,000
December		7,130	8,450	520,000
January			9,220	567,000
February	11,600	9,340	10,400	578,000
March	9,950	8,180	9,260	569,000
April	19,600	8,460	12,900	768,000
May	22,600	9,340	16,200	996,000
June	19,600	6,420	11,900	708,000
July	16,700	5,120	9,690	596,000
August	7,910	5,330	5,620	346,000
September	10,600	5,330	6,840	407,000
The year	22,600	5,120	9,540	6,900,000

SNAKE RIVER AT KING HILL, IDAHO

LOCATION.—In sec. 7, T. 5 S., R. 11 E., 300 feet east of Oregon Short Line Railroad station at King Hill, Elmore County. Big Wood River enters from north 20 miles above station.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 13, 1909, to September 30, 1925.

GAGE.—Inclined staff set in concrete on right bank installed August 24, 1922; read by employee of United States Bureau of Reclamation.

DISCHARGE MEASUREMENTS.—Made from cable 100 feet below gage.

CHANNEL AND CONTROL.—Bed composed largely of gravel. Control is lava reef partly overlain with gravel; shifts slightly.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 11.24 feet at 8 a. m. May 26 (discharge, 25,400 second-feet); minimum discharge, 6,710 second-feet October 1–10, 24–27, and July 19–22.

1909–1925: Maximum stage recorded, 16.3 feet June 22, 1918 (discharge, 47,200 second-feet); minimum stage, 4.5 feet July 7–9 and August 15 and 16, 1910 (discharge, 4,760 second-feet).

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—No important diversions for irrigation are made between this station and the one at Milner.

REGULATION.—Flow regulated by diversions at Milner. During certain parts of irrigation season practically the entire flow of river is appropriated, and flow at King Hill is derived largely from springs and seepage water from the Twin Falls tracts.

ACCURACY.—Stage-discharge relation permanent during the year. Rating curve well defined. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table. Records good.

COOPERATION.—Gage-height record furnished by United States Bureau of Reclamation.

Discharge measurements of Snake River at King Hill, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 12	7.13	10,700	Apr. 15	7.97	13,000	May 26	11.22	25,400
Feb. 28	7.19	10,900	May 15	9.39	18,500	July 17	5.87	7,330

Daily discharge, in second-feet, of Snake River at King Hill, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,710	6,980	10,900	10,600	13,300	11,200	11,800	11,800	18,200	14,300	7,150	7,150
2	6,710	7,150	11,500	10,900	13,300	11,200	11,200	10,900	18,900	14,300	7,150	7,150
3	6,710	7,150	11,200	10,900	13,700	11,800	11,800	11,200	19,300	14,000	7,150	7,150
4	6,710	9,980	11,200	10,600	14,600	11,500	13,000	10,600	21,200	17,500	6,930	7,150
5	6,710	9,980	12,100	10,900	17,100	11,800	12,400	12,400	20,400	17,500	6,930	7,150
6	6,710	9,980	11,500	10,900	15,700	11,500	12,400	13,300	16,400	18,200	6,930	7,380
7	6,710	10,300	11,800	10,900	15,000	11,200	12,700	14,000	14,500	17,500	6,930	7,380
8	6,710	9,980	11,500	11,200	14,300	11,500	13,000	13,300	13,700	17,100	6,930	7,610
9	6,710	10,600	11,200	10,900	13,300	11,500	14,000	13,300	15,000	17,100	7,380	7,610
10	6,710	10,900	11,500	10,900	13,000	11,800	14,300	12,700	15,300	17,100	7,150	7,610
11	6,930	10,900	11,200	10,600	13,300	11,200	14,000	17,500	13,000	18,200	6,930	7,610
12	7,150	11,200	10,600	10,600	13,300	11,800	13,000	22,800	12,100	15,700	6,930	7,610
13	6,930	11,800	10,600	10,600	12,100	11,800	12,700	20,800	11,500	11,500	6,930	7,610
14	6,930	12,100	11,200	10,600	12,100	11,800	13,300	17,100	10,900	12,100	7,150	7,610
15	6,930	12,100	11,200	10,600	11,800	11,800	13,000	17,800	12,400	9,130	7,150	7,610
16	6,930	10,900	11,200	10,600	11,800	10,900	14,000	15,300	11,800	8,600	7,150	7,610
17	6,930	10,300	11,200	10,600	11,800	10,300	15,000	18,600	9,410	7,380	7,380	7,610
18	6,930	10,900	10,300	10,600	12,100	10,300	15,300	18,600	9,690	7,150	7,380	7,610
19	6,930	11,200	9,410	10,600	11,800	10,600	18,600	19,700	9,690	6,710	7,610	7,610
20	6,930	11,200	10,300	10,600	11,800	10,900	18,200	20,400	11,200	6,710	8,600	7,610
21	6,930	12,400	10,300	10,900	12,100	10,600	20,800	21,200	8,600	6,710	8,860	9,130
22	6,930	11,800	9,690	10,900	12,100	11,200	21,200	20,400	8,340	6,710	7,610	10,300
23	6,930	11,800	9,410	10,900	12,100	11,200	19,300	21,600	7,610	6,930	7,380	12,100
24	6,710	12,100	9,130	10,900	12,100	10,600	16,400	23,200	7,380	7,150	7,150	12,400
25	6,710	11,800	9,130	11,200	11,500	11,200	17,100	24,400	13,300	7,850	6,930	12,700
26	6,710	12,700	9,130	11,200	11,500	11,800	16,000	25,300	13,300	7,850	6,930	12,700
27	6,710	11,200	9,130	11,200	11,500	12,100	16,000	24,400	18,600	7,610	6,930	12,700
28	6,930	11,800	8,860	11,500	11,200	12,700	15,000	22,000	15,700	8,860	7,150	12,100
29	7,150	10,600	8,860	12,400	-------	12,100	14,300	20,400	13,700	8,090	7,150	11,800
30	7,150	10,900	9,130	17,500	-------	12,400	13,300	17,500	13,000	7,610	7,150	9,980
31	7,150	-------	10,600	15,700	-------	11,500	-------	17,100	-------	7,150	7,150	-------

NOTE.—Discharge estimated June 7 on basis of flow near Hagerman.

Monthly discharge of Snake River at King Hill, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	7,150	6,710	6,860	422,000
November	12,700	6,930	10,800	643,000
December	12,100	8,860	10,500	646,000
January	17,500	10,600	11,300	695,000
February	17,100	11,200	12,800	711,000
March	12,700	10,300	11,400	701,000
April	21,200	11,200	14,800	881,000
May	25,300	10,600	17,700	1,090,000
June	21,200	7,380	13,500	803,000
July	18,200	6,710	11,300	695,000
August	8,860	6,930	7,230	445,000
September	12,700	7,150	8,840	526,000
The year	25,300	6,710	11,400	8,260,000

SNAKE RIVER NEAR MURPHY, IDAHO

LOCATION.—In NW. ¼ sec. 18, T. 2 S., R. 1 E., Ada County, three-quarters of a mile below Swan Falls power plant, 9 miles northeast of Murphy, Owyhee County, and 38 miles below mouth of Bruneau River.

DRAINAGE AREA.—41,900 square miles (measured on United States Land Office maps).

RECORDS AVAILABLE.—August 29 to October 31, 1912; August 21, 1913, to September 30, 1925.

GAGE.—Au water-stage recorder on right bank a quarter of a mile below house on Glass ranch; installed July 31, 1924; inspected by George Bahler and J. G. Glass.

DISCHARGE MEASUREMENTS.—Made from boat at ferry cable 1¼ miles above gage.

CHANNEL AND CONTROL.—Bed composed of lava rock overlain with deposits of sand, silt, and gravel, where not scoured out by current. Control permanent. Banks not subject to overflow.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 8.94 feet at 8.30 a. m. May 13 (discharge, 27,000 second-feet); minimum mean daily discharge, 6,830 second-feet October 1–3 and August 10; absolute minimum stage and discharge not definitely known because water fell below intake pipe at times of minimum load at power plant above.

1912–1925: Maximum stage recorded, 13.95 feet at 10 p. m. June 22, 1918 (discharge, 47,300 second-feet); minimum stage, about −2.25 feet at 6 a. m. August 6, 1917 (discharge, about 5,000 second-feet). Stage probably fell equally low at times of minimum load at power plant above during low-water periods, 1919 to 1925, inclusive.

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—A number of small pumping plants divert water for irrigation between this station and the one at King Hill.

REGULATION.—Large diurnal fluctuations in stage are caused by operation of gates at dam above and by variation in load at power plant, but because of small relative amount of storage obtained, the changes are of short duration.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operation of water-stage recorder satisfactory except for few short periods. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. Records good.

The following discharge measurements were made:

May 1, 1925: Gage height, 4.62 feet; discharge, 12,300 second-feet.

May 2, 1925: Gage height, 4.38 feet; discharge, 13,600 second-feet.

July 28, 1925: Gage height, 1.41 feet; discharge, 8,660 second-feet.

Daily discharge, in second-feet, of Snake River at Murphy, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,830	7,370	11,000	10,400	16,300	11,600	12,600	14,000	18,700	13,800	7,570	7,270
2	6,830	7,180	11,000	10,800	14,500	11,600	12,400	12,600	19,200	14,800	7,370	7,370
3	6,830	7,370	11,600	11,200	14,300	12,000	11,800	12,000	19,800	14,300	7,370	7,370
4	7,180	8,100	11,200	10,800	15,300		12,600	12,600		15,500	7,000	7,370
5	7,000	10,100	11,400	11,000	17,300	12,000	13,300	12,600		18,100	7,270	7,470
6	7,090	10,100	11,000	11,200	18,400		13,800	13,600		19,000	6,910	7,180
7	7,000	9,770	11,400	11,200	17,300	12,000	13,300	13,300		17,900	7,000	7,570
8	7,180	10,300	11,800	11,200	15,500	11,800	13,800	15,500	17,000	17,300	7,180	7,770
9	7,090	10,300	11,600	11,200	15,000	12,200	14,500	16,300		17,100	7,180	7,670
10	7,090	10,800	11,400	11,000	14,500	12,400	15,300	16,500		17,100	6,830	7,570
11	7,180	11,000	11,600	11,000	13,600	11,600	15,800	17,900		17,100	7,770	7,770
12	7,270	11,200	11,400	11,200	13,600	12,000	15,300	19,500		17,600	6,910	7,880
13	7,270	11,600	11,200	10,800	13,600	11,800	14,800	24,500	13,100	14,500	7,270	8,100
14	7,370	11,800	10,600	10,600	12,900	11,800	14,800	20,400	12,000	11,600	7,270	7,880
15	7,270	12,000	11,400	10,600	12,200	11,600	15,300	17,900	12,200		7,370	8,210
16	7,270	12,000	11,400	10,800	12,200	12,000	15,300	19,000	13,300	9,700	7,180	7,990
17	7,090	11,200	11,400	10,800	12,000	11,200	16,800	20,100	12,400		7,370	7,990
18	7,180	10,300	11,400	10,600	12,200	10,800	17,300	19,500	11,400	8,210	7,670	7,990
19	7,180	11,000	9,620	10,800	12,400	10,400	18,100	20,100	10,800	7,180	7,470	8,100
20	7,180	11,400	9,770	10,400	12,000	10,600	19,500	21,000	10,600	7,000	7,570	7,670

Daily discharge, in second-feet, of Snake River at Murphy, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	7,370	11,600	11,400	10,600	12,200	11,200	19,800	21,600	12,000	7,090	9,620	8,100
22	7,270	12,200	11,000	10,600	12,600	11,000	21,300	22,200	10,800	7,370	8,560	9,330
23	7,180	11,800	11,200	10,800	12,400	11,800	22,200	21,900	9,330	7,180	8,210	10,400
24	7,090	11,600	12,000	11,000	12,600	11,800	19,800	22,900	8,560	7,570	7,370	12,900
25	7,180	10,600	11,000	11,000	12,400	11,400	18,100	24,500	8,800	7,270	7,270	12,600
26	7,090	11,600	9,930	11,400	11,800	12,600	18,100	25,200	13,800	7,670	7,370	13,300
27	7,180	12,200	10,400	11,400	11,600	12,600	17,300	25,500	14,500	8,680	7,270	12,900
28	7,180	11,200	11,400	11,400	11,800	12,600	17,300	24,200	16,800	8,440	7,270	13,300
29	7,180	11,200	11,400	12,200	-------	13,300	15,800	21,900	15,800	9,190	7,370	12,200
30	7,570	10,800	10,800	16,000	-------	13,100	15,000	20,100	13,300	8,320	7,090	12,000
31	7,570	-------	10,600	19,500	-------	13,600	-------	17,900	-------	8,100	7,370	-------

NOTE.—Discharge estimated Mar. 4–6, June 4–12, July 15–17, by comparison with flow at Hagerman, King Hill, and Oxbow. Braced figures show mean discharge for periods indicated.

Monthly discharge of Snake River near Murphy, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	7,570	6,830	7,170	441,000
November	12,200	7,180	10,700	637,000
December	12,000	9,620	11,100	682,000
January	19,500	10,400	11,400	701,000
February	18,400	11,600	13,700	761,000
March	13,600	10,400	11,900	732,000
April	22,200	11,800	16,000	952,000
May	25,500	12,000	18,900	1,160,000
June	----------	8,560	14,300	851,000
July	19,000	7,000	11,700	719,000
August	9,620	6,830	7,430	457,000
September	13,300	7,180	9,010	536,000
The year	25,500	6,830	11,900	8,630,000

SNAKE RIVER AT WEISER, IDAHO

LOCATION.—In sec. 31, T. 11 N., R. 5 W., one-third mile above wagon bridge at Weiser, Washington County. Between this station and station near Murphy, Sucker Creek and Owyhee and Malheur Rivers enter Snake River from left and Boise, Payette, and Weiser Rivers from right.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—October 8, 1910, to September 30, 1925. Fragmentary gage-height record obtained by United States Weather Bureau since 1895.

GAGE.—Inclined concrete gage on right bank; read by J. W. Lapish. Elevation of zero of gage is at 2,087.22 feet above sea level.

DISCHARGE MEASUREMENTS.—Made from cable 200 yards below bridge.

CHANNEL AND CONTROL.—Bed composed of rocks and coarse gravel. One channel at all stages. Control fairly permanent.

EXTREMES OF DISCHARGE.—Maximum discharge recorded during year, 63,100 second-feet February 6; minimum stage, 2.02 feet October 4 (discharge, 7,140 second-feet).

1910–1925: Maximum stage recorded, 13.60 feet May 23, 1921 (discharge, 83,100 second-feet); minimum stage, 1.35 feet August 5, 1924 (discharge, 5,100 second-feet). A stage of 15.7 feet was observed March 3, 1910, on old Weather Bureau gage (discharge, about 100,000 second-feet).

ICE.—Stage-discharge relation affected by occasional ice jams during severe winters.

DIVERSIONS.—Some water is diverted by pumping, between Weiser and the station near Murphy.

REGULATION.—Diurnal fluctuations during periods of low water due to operations at Swan Falls power plant above.

ACCURACY.—Stage-discharge relation changed during ice-affected period December 22 to January 19 and again April 30 to May 19. A well-defined rating curve and two parallel curves used October 1 to December 21, January 20 to April 29, and May 20 to September 30. Daily discharge ascertained by applying daily gage height to rating table; shifting-control method used April 30 to May 19. Records good except for estimated periods for which they are fair.

COOPERATION.—Gage-height record furnished by United States Weather Bureau.

Discharge measurements of Snake River at Weiser, Idaho, during the year ending September 30, 1925.

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 22	4.92	20,700	May 20	9.22	47,800	June 22	5.84	24,800
Mar. 8	6.17	28,700	May 25	9.50	50,800	Aug. 6	2.15	7,390
Apr. 3	5.93	26,000	June 9	6.23	27,600	Sept. 28	4.01	14,400
Apr. 29	6.48	30,200						

Daily discharge, in second-feet, of Snake River at Weiser, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,310	9,470	12,900		34,000	20,700	29,300	27,300	41,100	24,800	8,690	8,160
2	7,310	9,660	12,900		30,600	20,100	28,000	27,300	38,200	23,600	7,980	8,160
3	7,310	9,860	12,500		33,300	20,100	26,700	26,700	38,900	21,200	7,810	8,340
4	7,140	10,000	12,500		39,700	20,700	26,700	26,700	36,800	19,600	7,980	8,340
5	7,480	10,400	12,900		56,100	21,200	28,000	28,600	35,400	20,100	7,640	8,690
6	7,660	13,400	12,900		63,100	21,800	29,900	31,300	35,400	20,700	7,470	8,690
7	7,480	13,800	12,900		53,000	26,100	30,600	35,400	33,300	20,100	7,470	9,060
8	7,660	12,100	12,900		41,800	27,300	32,000	36,800	28,600	20,100	7,470	9,060
9	7,480	12,100	12,900		34,000	24,200	33,300	39,700	27,300	19,600	7,640	9,800
10	7,480	12,500	12,900	12,500	30,600	23,600	35,400	38,900	23,600	19,600	7,640	10,200
11	7,660	12,500	12,900		27,300	22,400	38,200	38,200	24,800	19,000	7,640	9,800
12	7,660	12,900	13,400		24,800	20,700	41,100	38,200	24,800	18,500	7,810	8,870
13	7,480	13,400	13,400		23,000	21,800	45,500	40,400	20,700	18,000	8,160	9,420
14	7,480	13,400	13,400		23,000	21,200	44,800	46,200	21,200	15,500	7,300	10,400
15	7,660	13,400	12,900		21,800	20,700	44,800	42,600	21,200	13,700	7,470	10,800
16	7,660	13,800	12,500		20,700	19,600	45,500	40,400	20,700	12,400	7,980	11,200
17	7,830	13,800	12,900		20,100	19,000	45,500	41,800	23,000	11,200	8,690	10,800
18	7,830	14,300	12,900		19,600	20,100	47,800	45,500	19,600	10,600	8,340	10,600
19	7,830	13,800	12,500		19,600	19,600	48,500	46,200	20,700	9,610	8,510	10,600
20	8,000	13,800	12,900	12,800	19,600	19,000	49,200	48,500	20,700	8,870	8,690	10,600
21	7,830	13,400	13,400	12,800	19,600	19,000	48,500	51,500	20,700	8,160	8,870	10,600
22	7,830	14,700		12,400	20,700	19,000	45,500	53,000	22,400	8,160	9,060	10,400
23	7,830	15,200		12,800	21,800	20,700	46,200	53,000	24,200	8,160	9,240	10,600
24	7,830	16,100		13,300	27,300	22,400	45,500	51,500	22,400	8,160	9,420	10,800
25	7,830	14,300		13,700	25,400	23,600	41,100	50,000	20,100	7,980	8,340	10,800
26	8,000	13,800	12,000	14,100	23,600	25,400	36,100	50,000	21,200	7,980	8,160	10,600
27	8,180	14,300		15,000	22,400	25,400	34,700	50,000	21,800	7,980	7,980	11,200
28	8,540	15,200		15,500	21,200	26,100	32,000	50,000	23,600	10,200	8,160	15,000
29	8,720	13,400		20,100	-------	27,300	30,600	49,200	26,100	9,060	8,160	15,500
30	9,100	12,900		21,200	-------	28,600	28,600	47,000	25,400	8,870	8,160	17,000
31	9,280	-------		34,000	-------	29,300	-------	44,800	-------	8,510	8,160	-------

NOTE.—Braced figures show mean estimated discharge for periods indicated; estimates based on flow at King Hill, Murphy, and Oxbow; stage-discharge relation affected by ice.

Monthly discharge of Snake River at Weiser, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	9,280	7,140	7,820	481,000
November	16,100	9,470	13,100	780,000
December			12,600	775,000
January	34,000		14,000	861,000
February	63,100	19,600	29,200	1,620,000
March	29,300	19,000	22,500	1,380,000
April	49,200	26,700	38,000	2,260,000
May	53,000	26,700	41,800	2,570,000
June	41,100	19,600	26,100	1,550,000
July	24,800	7,980	14,200	873,000
August	9,420	7,300	8,130	500,000
September	17,000	8,160	10,500	625,000
The year	63,100	7,140	19,700	14,300,000

SNAKE RIVER AT OXBOW, OREG.

LOCATION.—In NW. ¼ sec. 16, T. 7 S., R. 48 E. Willamette meridian, at Oxbow station on Homestead branch of Oregon Short Line Railroad, Baker County, five-eighths mile above intake of diversion tunnel for Oxbow power plant, and 1¼ miles southeast of Copperfield post office.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 22, 1923, to September 30, 1925.

GAGE.—Au water-stage recorder on left bank installed December 20, 1923; inspected by Wm. T. Kingsley and L. W. Goodin.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders. Banks high; not subject to overflow. One channel at all stages. Control fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year from water-stage recorder, 19.14 feet at 6 a. m. February 6 (discharge, about 70,600 second-feet); minimum stage, 7.02 feet from 7 to 8 a. m. August 10 (discharge, 6,480 second-feet).

1923–1925: Maximum stage and discharge recorded February 6, 1925; minimum stage, 6.30 feet between 5 and 6 a. m. August 6, 1924 (discharge, 4,890 second-feet).

ICE.—Stage-discharge relation seldom affected by ice.

DIVERSIONS.—A number of small pumping plants divert water for irrigation between this station and the one at Weiser.

REGULATION.—Diurnal fluctuations during periods of low water due to operations of Swan Falls power plant above.

ACCURACY.—Stage-discharge relation assumed to have changed slightly during ice-affected period December 23 to January 16. Rating curve used prior to shift is well defined between 5,000 and 31,000 second-feet; curve used thereafter well defined between 6,500 and 55,000 second-feet. Operation of water-stage recorder satisfactory except for short periods in December and January when float froze in well. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records good except for estimated periods for which they are fair.

Discharge measurements of Snake River at Oxbow, Oreg., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 5	11.47	22,000	Apr. 23	15.86	47,400	June 13	12.14	25,200
Do	11.44	22,500	Do	15.87	47,700	Aug. 10	7.24	7,340
Apr. 22	15.92	48,400	May 29	16.61	52,400	Sept. 27	9.58	14,500

Daily discharge, in second-feet, of Snake River at Oxbow, Oreg., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,210	9,430	13,600		34,300	22,000	27,300	28,800	44,900	24,600	9,040	7,640
2	7,210	10,100	13,200		30,300	21,600	28,300	28,800	40,100	22,000	8,740	7,900
3	7,210	10,100	14,000		30,300	21,100	27,300	28,300	40,100	22,000	8,170	7,640
4	7,210	9,750	14,400		38,100	21,100	27,300	28,300	38,800	21,100	7,900	7,900
5	7,210	10,800	14,400		53,300	22,400	27,800	29,300	36,800	20,300	7,900	7,900
6	7,450	11,400	13,600		67,600	23,300	29,800	31,400	36,800	21,600	7,390	8,170
7	7,450	13,600	14,400		57,600	25,000	32,000	34,900	35,600	22,800	7,390	8,450
8	7,450	13,600	14,800		45,600	26,400	32,600	38,100	31,400	22,400	7,150	8,740
9	7,450	12,500	14,000	16,500	38,800	27,300	33,700	40,100	28,300	20,700	7,150	9,660
10	7,700	12,900	14,400		32,000	24,100	36,200	41,500	26,800	20,300	7,150	9,980
11	7,450	12,500	13,600		28,800	23,300	38,800	40,800	25,400	19,900	7,390	9,660
12	7,700	13,200	13,600		26,400	22,000	41,500	40,100	25,900	19,000	7,150	9,660
13	7,700	13,600	14,000		24,600	21,600	45,600	42,200	25,400	19,500	7,900	9,350
14	7,960	13,600	14,000		23,700	21,600	46,300	47,000	24,100	19,000	8,170	9,660
15	7,960	14,000	13,600		23,300	20,300	47,000	47,700	22,800	15,800	9,040	9,980
16	7,960	14,400	13,200		22,400	19,900	47,000	44,200	22,400	13,500	8,740	9,980
17	7,960	14,400	12,900	16,200	21,600	19,900	48,400	44,900	23,300	13,500	8,740	9,980
18	7,960	14,400	11,800	16,200	21,100	20,300	49,800	48,400	24,100	11,300	8,450	9,980
19	7,960	13,600	11,400	15,800	20,700	20,300	51,200	50,500	23,700	10,300	8,450	9,980
20	7,960	13,200	11,100	15,400	20,700	19,500	52,600	51,900	22,800	9,660	8,450	9,980
21	7,960	14,000	11,100	15,800	21,100	18,600	51,200	56,200	22,800	8,450	8,170	10,300
22	7,960	14,800	11,100	15,400	22,000	19,500	48,400	57,600	23,700	8,170	8,170	9,980
23	7,960	16,000		15,800	23,300	20,700	47,000	58,300	25,400	8,450	9,660	10,300
24	7,960	16,800		16,200	26,800	22,400	46,300	56,900	24,600	8,740	9,350	11,300
25	7,960	16,000		17,000	26,400	24,600	44,200	54,000	22,800	8,740	9,040	12,800
26	7,700	15,200	12,500	17,000	25,400	25,000	38,800	54,000	21,100	8,740	7,900	13,900
27	7,960	13,600		16,600	23,700	25,400	36,200	54,000	20,700	8,450	7,900	14,600
28	7,960	14,800		16,200	22,400	26,400	33,700	53,300	23,700	8,740	7,900	14,600
29	8,510	15,200		18,200	-------	25,900	31,400	52,600	24,600	9,660	7,640	14,600
30	8,510	13,600		19,500	-------	26,800	30,300	51,200	25,400	9,040	7,640	15,000
31	9,110	-------		27,800	-------	29,300	-------	49,100	-------	9,660	7,900	-------

NOTE.—Braced figures show mean estimated discharge for periods included; discharge based on flow at Murphy and Weiser stations.

Monthly discharge of Snake River at Oxbow, Oreg., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	9,110	7,210	7,800	480,000
November	16,800	9,430	13,400	797,000
December	14,800	-------	13,100	806,000
January	27,800	-------	16,900	1,040,000
February	67,600	20,700	30,400	1,690,000
March	29,300	18,600	22,800	1,400,000
April	52,600	27,300	39,300	2,340,000
May	58,300	28,300	44,700	2,750,000
June	44,900	20,700	27,800	1,650,000
July	24,600	8,170	15,000	922,000
August	9,660	7,150	8,120	499,000
September	15,000	7,640	10,300	613,000
The year	67,600	7,150	20,700	15,000,000

TRIBUTARY BASINS

HENRYS FORK NEAR LAKE, IDAHO

LOCATION.—In SW. ¼ sec. 26, T. 15 N., R. 43 E., one-fourth mile below Henrys Lake Reservoir Dam and 4 miles south of Lake post office, Fremont County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—September 21, 1922, to September 30, 1925. May 17, 1920, to September 30, 1922, at a site 3 miles downstream just below mouth of Dry Creek.

GAGE.—Stevens 8-day water-stage recorder on left bank; read by J. M. McGinn.

DISCHARGE MEASUREMENTS.—Made from footbridge just above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of small cobbles and gravel; fairly permanent. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.64 feet from 6 a. m. to 1 p. m. July 16 (discharge, 93 second-feet); minimum stage, 0.54 foot September 24 (discharge, 2 second-feet).

1920–1925: Maximum stage recorded, 4.84 feet at 10 p. m. August 6, 1924 (discharge, 743 second-feet); minimum stage, 1 second-foot July 1–8, 1923, and October 26, 1923, when reservoir gates were closed for storage.

ICE.—Stage-discharge relation seriously affected by ice; records discontinued during winter.

DIVERSIONS.—None between Henrys Lake Reservoir Dam and gaging station and practically none above dam.

REGULATION.—Flow controlled by operation of gates in Henrys Lake Reservoir Dam.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve well defined. Operation of water-stage recorder satisfactory June 1 to August 22. Staff gage readings only after that date. Daily discharge ascertained by applying mean daily gage height obtained from recorder graph or staff gage readings to rating table. Records fair.

COOPERATION.—Gage-height record furnished by North Fork Reservoir Co.

Discharge measurements of Henrys Fork near Lake, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
June 6	0.66	10.9	Aug. 30	1.34	53.6
Aug. 9	1.28	55.3	Sept. 20	1.04	25.0

Daily discharge, in second-feet, of Henrys Fork near Lake, Idaho, for the year ending September 30, 1925

Day	Oct.	June	July	Aug.	Sept.	Day	Oct.	June	July	Aug.	Sept.
1	25	9	16	57	53	16	------	11	62	58	26
2	27	10	17	58	54	17	------	11	63	55	26
3	28	9	17	57	54	18	------	12	57	56	26
4	28	10	17	56	55	19	------	12	58	56	26
5	------	11	17	56	54	20	------	12	59	56	25
6	------	11	19	54	54	21	------	12	56	55	25
7	------	12	18	55	54	22	------	13	56	56	25
8	------	12	19	55	54	23	------	14	56	56	8
9	------	11	18	55	54	24	------	13	56	55	2
10	------	11	17	55	54	25	------	14	56	55	3
11	------	11	17	56	54	26	------	14	56	55	4
12	------	11	17	57	27	27	------	15	56	55	5
13	------	11	17	56	26	28	------	15	59	56	6
14	------	11	17	59	26	29	------	16	61	54	12
15	------	11	17	59	26	30	------	16	59	53	19
						31	------	------	57	53	------

NOTE.—Discharge estimated Sept. 5–11 and 21–23; interpolated Sept. 13–19, 25–27, and 29. No record obtained Oct. 5 to May 31.

Monthly discharge of Henrys Fork near Lake, Idaho, for the year ending September, 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June	16	9	12	714
July	63	16	38.3	2,360
August	59	53	55.8	3,430
September	55	2	31.2	1,860
The period				8,360

HENRYS FORK AT WARM RIVER, IDAHO

LOCATION.—In sec. 12, T. 9 N., R. 43 E., 300 yards above mouth of Warm River, and half a mile above Warm River railroad station, Fremont County; above all main tributaries.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—September 3, 1910, to March 22, 1915; April 3, 1918, to September 30, 1925.

GAGE.—Au water-stage recorder referred to vertical staff on left bank; inspected by Sheppard and Howard.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Bed composed of cobbles, gravel, and sand. Stage-discharge relation at times affected by moss growth; otherwise conditions are fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 6.51 feet at 11 p. m. May 7 (discharge, 2,640 second-feet); minimum stage, 3.50 feet at 1 p. m. December 17, 19, and 20 (discharge, 482 second-feet); even lower discharges may have occurred during winter.

1910–1915; 1918–1925: Maximum discharge, 3,390 second-feet May 16, 1920; minimum discharge, 3.50 feet at 1 p. m. December 17, 19, and 20, 1924 (discharge, 482 second-feet); even lower discharge may have occurred during winter.

ICE.—Stage-discharge relation somewhat affected by ice.

DIVERSIONS.—Practically none above station.

REGULATION.—Flow partly regulated by operation of gates at outlet of Henrys Lake.

ACCURACY.—Stage-discharge relation not permanent; affected by ice December 21 to January 12. Standard rating curve well defined between 700 and 2,200 second-feet. Water-stage recorder operation satisfactory. Daily discharge ascertained by shifting-control method. Records good except for short period in winter for which they are fair.

Discharge measurements of Henrys Fork at Warm River, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 7	4.08	796	June 23	4.90	1,300	Sept. 14	4.41	961
Jan. 22	[a] 3.98	717	July 9	4.61	1,080	Sept. 25	4.38	913
May 2	5.85	2,110	Aug. 1	4.51	984			
June 10	5.13	1,450	Aug. 26	4.42	901			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Henrys Fork at Warm River, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	764	788	689		782	747	806	1,900	1,740	1,190	990	938
2	770	794	689		782	868	806	2,160	1,700	1,170	976	912
3	788	782	747		794	530	806	2,410	1,740	1,140	983	912
4	776	794	747		831	735	806	2,400	1,730	1,130	1,020	905
5	770	806	747		837	724	818	2,380	1,670	1,180	983	931
6	770	800	747	740	837	724	837	2,450	1,670	1,230	970	944
7	759	794	747		831	735	868	2,510	1,580	1,170	964	924
8	759	806	747		806	735	868	2,510	1,580	1,120	957	1,040
9	776	806	634		806	735	899	2,260	1,500	1,080	957	1,020
10	818	806	868		806	718	899	2,080	1,430	1,070	964	983
11	818	806	806		718	689	899	2,020	1,370	1,050	970	964
12	800	747	806		776	718	931	2,260	1,340	1,040	976	957
13	776	747	806	782	776	718	1,040	2,300	1,340	1,050	957	950
14	776	806	806	782	776	718	1,390	2,150	1,370	1,030	983	938
15	782	806	689	724	776	718	1,460	2,150	1,380	1,020	976	938
16	794	747	868	782	776	718	1,540	2,150	1,400	1,000	964	931
17	800	747	482	782	776	718	1,980	2,160	1,380	1,010	950	924
18	861	747	747	782	764	718	1,940	2,180	1,360	1,040	938	938
19	849	747	482	782	764	718	1,820	2,190	1,330	1,030	931	970
20	824	806	482	782	759	724	1,740	2,200	1,290	1,020	924	950
21	806	837		782	759	735	1,700	2,250	1,290	1,040	924	950
22	800	806		724	759	747	1,740	2,260	1,300	1,040	924	938
23	794	806		782	759	747	1,700	2,250	1,290	1,030	918	931
24	788	806	625	782	759	747	1,540	2,120	1,250	1,020	912	924
25	782	806		782	759	718	1,430	2,050	1,220	1,010	905	918
26	776	806		782	759	718	1,430	1,980	1,180	996	912	918
27	776	806		782	759	718	1,460	1,930	1,160	996	924	918
28	782	747		782	747	747	1,460	1,880	1,150	996	950	918
29	837	747	680	782	------	747	1,580	1,820	1,160	1,000	918	944
30	806	868		782	------	776	1,820	1,820	1,170	1,000	912	976
31	812	------		782	------	806	------	1,800	------	996	918	------

NOTE.—Recorder readings used Oct. 1 to Nov. 7 and May 2 to Sept. 30; daily staff gage readings used for other periods except Dec. 21 to Jan. 12 for which discharge was estimated.

Monthly discharge of Henrys Fork at Warm River, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	861	759	793	48,800
November	868	747	791	47,100
December	------	------	691	42,500
January	------	------	762	46,900
February	837	718	780	43,300
March	868	530	729	44,800
April	1,980	806	1,300	77,400
May	2,510	1,800	2,160	133,000
June	1,740	1,150	1,400	83,300
July	1,230	996	1,060	65,200
August	1,020	905	950	58,400
September	1,040	905	943	56,100
The year	2,510	------	1,030	747,000

HENRYS FORK NEAR ASHTON, IDAHO

LOCATION.—In T. 9 N., R. 42 E., one-fourth mile below Ora highway bridge, 3 miles below hydroelectric power plant of Utah Power & Light Co., and 5 miles southwest of Ashton, Fremont County. Station was formerly maintained at Ora highway bridge one-fourth mile upstream; described in some previous reports as "North Fork of Snake River near Ora, Idaho." Records at old and new station are comparable.

DRAINAGE AREA.—1,040 square miles.

RECORDS AVAILABLE.—August 20, 1902, to June 30, 1909; April 20, 1920, to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on right bank; installed April 25, 1921; inspected by R. H. Fuqua.

DISCHARGE MEASUREMENTS.—Made from cable a quarter of a mile above gage.

CHANNEL AND CONTROL.—Bed composed of coarse gravel. Control not well defined; subject to shifts during high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during periods October 1 to November 7 and April 14 to September 30, 3.11 feet at 11 p. m. May 7 (discharge, 6,220 second-feet); minimum stage, 0.37 foot at 5 p. m. October 14 (discharge, 822 second-feet.)

1902–1909; 1920–1925: Maximum stage recorded, 3.11 feet at 11 p. m. May 7, 1925 (discharge, 6,220 second-feet); minimum stage, 0.09 foot at noon August 15, 1924 (discharge, 575 second-feet).

ICE.—Stage-discharge relation not seriously affected by ice. Observations discontinued during winter.

DIVERSIONS.—None above station.

REGULATION.—None except that due to operation of gates at dam of Utah Power & Light Co.'s power plant 3 miles above station.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve well defined. Operation of water-stage recorder satisfactory throughout periods of record except July 30 to August 4, when daily staff readings were used. Daily discharge obtained by applying mean daily gage height to rating table. Discharge interpolated November 3–6. Records good.

Discharge measurements of Henrys Fork near Ashton, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 7	0.50	987	June 8	1.43	2,200	Aug. 27	0.92	1,360
Apr. 14	1.43	2,330	June 27	1.06	1,650	Sept. 5	.92	1,380
May 13	2.14	3,770	July 14	.96	1,470	Sept. 18	.87	1,310
May 22	2.01	3,400	July 29	.95	1,460			

NOTE.—No record obtained Nov. 8 to Apr. 13. No gage-height record Nov. 3–6; discharge interpolated. Staff gage readings used July 30 to Aug. 4.

Daily discharge, in second-feet, of Henrys Fork near Ashton, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	963	1,030		3,100	2,460	1,640	1,430	1,390
2	963	939		3,320	2,420	1,620	1,430	1,410
3	975	946		3,760	2,460	1,570	1,430	1,380
4	1,080	953		3,790	2,440	1,570	1,480	1,390
5	1,030	961		3,760	2,310	1,660	1,430	1,390
6	939	968		4,130	2,400	1,840	1,360	1,430
7	939	975		4,550	2,250	1,670	1,330	1,430
8	1,040			5,340	2,190	1,570	1,300	1,500
9	1,000			4,090	2,090	1,500	1,260	1,580
10	1,040			3,230	2,070	1,460	1,280	1,360
11	1,110			3,120	1,980	1,440	1,310	1,300
12	1,110			3,360	1,920	1,430	1,380	1,230
13	1,030			3,700	1,860	1,440	1,360	1,220
14	975		2,350	3,470	1,820	1,430	1,440	1,220
15	1,000		2,400	3,360	1,820	1,430	1,460	1,280

Daily discharge, in second-feet, of Henrys Fork near Ashton, Idaho, for the year ending, September 30, 1925—Continued

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
16	988		2,420	3,340	1,920	1,380	1,430	1,330
17	988		3,050	3,340	1,940	1,390	1,430	1,330
18	1,030		3,450	3,320	1,820	1,440	1,410	1,330
19	1,170		2,400	3,360	1,820	1,430	1,410	1,360
20	914		2,440	3,360	1,800	1,440	1,310	1,500
21	1,040		2,540	3,450	1,790	1,460	1,310	1,580
22	1,030		2,560	3,450	1,790	1,500	1,300	1,670
23	963		2,600	3,470	1,820	1,500	1,280	1,600
24	1,040		2,440	3,230	1,770	1,480	1,280	1,410
25	1,030		2,030	3,050	1,710	1,460	1,280	1,330
26	1,000		2,070	2,940	1,660	1,440	1,260	1,380
27	939		2,150	2,790	1,620	1,440	1,390	1,340
28	939		2,630	2,710	1,580	1,430	1,430	1,310
29	890		2,350	2,630	1,580	1,440	1,410	1,340
30	1,040		2,710	2,600	1,600	1,440	1,390	1,380
31	1,170			2,540		1,430	1,360	

NOTE—No record obtained Nov. 8 to Apr. 13. No gage-height record Nov. 3-6; discharge interpolated. Staff gage readings used July 30 to Aug. 4.

Monthly discharge of Henrys Fork near Ashton, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,170	890	1,010	62,100
November 1-7	1,030	939	967	13,400
April 14-30	3,450	2,030	2,510	84,600
May	5,340	2,540	3,410	210,000
June	2,460	1,580	1,960	117,000
July	1,840	1,380	1,500	92,200
August	1,480	1,260	1,370	84,200
September	,670	1,220	1,390	82,700

DIVERSIONS FROM HENRYS FORK BETWEEN ASHTON AND ST. ANTHONY GAGING STATIONS, IDAHO

Between Ashton and St. Anthony gaging stations six separate canals divert water from Henrys Fork for irrigation. Gaging stations are maintained at headings of each canal by the United States Geological Survey for the Idaho State Department of Reclamation to facilitate distribution of water. Records are available from June 1, 1919, to September 30, 1925.

Stage-discharge relation on most of the canals affected by growth of aquatic plants or by operation of check gates. Rating curves well defined. Gages read to hundredths daily except during September, when occasional readings were made. Records good.

Combined daily discharge, in second-feet, of canals diverting from Henrys Fork between Ashton and St. Anthony gaging stations, for the irrigation season of 1925

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	1,330	758	834	423	16	907	1,070	554	369
2	1,320	708	775	419	17	921	1,050	491	362
3	1,280	698	758	415	18	927	1,080	495	363
4	1,100	593	755	412	19	980	1,080	490	363
5	1,100	589	740	413	20	1,090	1,080	483	366
6	1,120	714	761	408	21	1,080	1,000	484	369
7	552	631	775	401	22	1,190	961	486	339
8	921	634	773	401	23	1,200	926	485	337
9	997	619	773	399	24	1,160	754	480	334
10	1,040	643	770	395	25	1,110	768	479	325
11	994	665	785	395	26	1,100	753	524	317
12	922	773	799	394	27	936	781	495	310
13	933	773	790	394	28	874	836	450	302
14	853	1,030	586	394	29	860	832	442	300
15	873	1,120	591	374	30	674	835	449	299
					31		838	447	

NOTE.—No record obtained Oct. 1 to May 31. Discharge interpolated for days of no gage-height record during September. One diversion is above entrance of Fall River and five are below.

Combined monthly discharge of canals diverting from Henrys Fork between Ashton and St. Anthony gaging stations, for the irrigation season of 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June	1,330	552	1,010	60,100
July	1,120	589	826	50,800
August	834	442	613	37,700
September	423	299	370	22,000
The period				171,000

HENRYS FORK AT ST. ANTHONY, IDAHO

LOCATION.—In sec. 1, T. 7 N., R. 40 E., half a mile above bridge on main street of St. Anthony, Fremont County, and 9 miles below mouth of Fall River.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 26, 1919, to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on right bank; installed May 8, 1922; inspected by Klingler and Luetjen.

DISCHARGE MEASUREMENTS.—Made from cable 600 feet below gage.

CHANNEL AND CONTROL.—Bed composed of coarse gravel and outcrops of lava. One channel at all stages. Control shifts slightly at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during periods October 1 to November 7 and April 14 to September 30, 6.70 feet at 2 a. m. May 8 (discharge, 9,030 second-feet); minimum stage, 3.18 feet at 4 a. m. October 2 (discharge, 731 second-feet).

1919–1925: Maximum stage recorded, 6.70 feet at 2 a. m. May 8, 1925 (discharge, 9,030 second-feet); minimum stage, 2.87 feet June 28, 1924 (discharge, 476 second-feet).

ICE.—Stage-discharge relation seriously affected by ice and observations discontinued during winter.

DIVERSIONS.—Numerous diversions both above and below station.

REGULATION.—Flow affected by manipulation of canal head gates above station and by operation of Utah Power & Light Co.'s power plant 17 miles upstream.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve fairly well defined. Water-stage recorder operation satisfactory except for a few short intervals for which discharge was interpolated. Daily discharge obtained by applying mean daily gage height to rating table. Records fair.

COOPERATION.—Part of gage-height record supervision furnished by Utah Power & Light Co.

Discharge measurements of Henrys Fork at St. Anthony, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 5	3.50	1,090	June 8	4.82	3,690	Aug. 4	3.50	1,110
Apr. 14	4.83	3,620	June 27	4.35	2,580	Sept. 5	3.74	1,410
May 11	5.45	5,430	July 14	3.62	1,250	Sept. 19	3.83	1,550
May 26	5.51	5,320						

Daily discharge, in second-feet, of Henrys Fork at St. Anthony, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	760	1,230		3,740	4,640	2,850	983	1,430
2	750	1,050		3,580	4,120	2,670	1,010	1,430
3	802	1,170		4,900	4,120	2,520	1,020	1,410
4	924	1,230		5,170	4,100	2,360	1,090	1,410
5	834	1,360		5,310	3,900	2,380	1,060	1,430
6	861	1,530		5,870	4,120	3,190	1,040	1,530
7	888	1,230		6,590	3,840	2,800	983	1,560
8	916			8,250	3,460	2,520	983	1,580
9	943			5,870	2,900	2,280	983	1,930
10	970			4,900	2,960	2,010	996	1,650
11	970			4,900	3,030	1,850	1,050	1,410
12	912			5,310	2,800	1,630	1,110	1,380
13	844			5,730	2,710	1,530	1,130	1,410
14	844		3,700	5,450	2,630	1,260	1,320	1,440
15	844		3,700	5,590	2,740	1,050	1,360	1,530
16	844		3,720	5,870	3,340	970	1,330	1,540
17	834		5,430	6,160	3,800	924	1,350	1,560
18	890		7,190	6,610	3,170	890	1,330	1,540
19	1,130		6,300	6,300	3,010	855	1,300	1,580
20	1,060		5,450	6,300	3,030	890	1,300	1,700
21	970		4,900	6,450	2,960	970	1,330	1,780
22	970		4,640	6,590	2,760	1,020	1,300	1,910
23	924		4,420	6,740	2,870	1,060	1,290	1,850
24	947		4,200	6,010	2,830	1,140	1,270	1,690
25	970		3,980	5,730	2,630	1,060	1,270	1,610
26	970		3,750	5,450	2,540	1,040	1,270	1,600
27	936		3,530	5,170	2,520	970	1,360	1,580
28	924		3,310	5,040	2,560	901	1,440	1,540
29	901		2,900	4,770	2,650	890	1,430	1,580
30	983		3,190	4,770	2,850	936	1,320	1,670
31	1,270			4,900		970	1,360	

NOTE.—No record obtained Nov. 8 to Apr. 13. No gage-height record obtained Oct. 6–9 and Apr. 23–27; discharge interpolated.

Monthly discharge of Henrys Fork at St. Anthony, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,270	750	922	56,700
November 1-7	1,530	1,050	1,260	17,500
April 4-30	7,190	2,900	4,370	147,000
May	8,250	3,580	5,590	344,000
June	4,640	2,520	3,190	190,000
July	3,190	855	1,560	95,900
August	1,440	983	1,210	74,400
September	1,930	1,380	1,580	94,000

DIVERSIONS FROM HENRYS FORK BETWEEN ST. ANTHONY AND REXBURG GAGING STATIONS, IDAHO

Between St. Anthony and Rexburg gaging stations four separate canals divert water from Henrys Fork for irrigation. Gaging stations are maintained at heading of each canal by the United States Geological Survey for the Idaho State Department of Reclamation to facilitiate the distribution of the water. Records are available from June, 1919, to September 30, 1925.

Stage-discharge relation on most of the canals affected by the growth of aquatic plants or by the operation of check gates. Rating curves well defined. Gages read to hundredths daily except during September, when occasional readings were made. Records good.

Combined daily discharge, in second-feet, of canals diverting from Henrys Fork between St. Anthony and Rexburg gaging stations, for the irrigation season of 1925

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	989	782	828	521	16	759	806	478	402
2	1,040	638	813	523	17	758	820	427	396
3	972	583	760	525	18	754	856	546	387
4	929	571	711	515	19	779	835	549	379
5	909	568	680	505	20	842	831	575	370
6	879	608	623	483	21	876	783	549	362
7	876	594	619	464	22	898	767	544	353
8	799	566	643	442	23	915	761	544	345
9	803	578	646	423	24	843	781	547	343
10	792	740	646	401	25	904	800	571	343
11	730	775	686	401	26	877	784	570	343
12	728	768	696	402	27	878	807	578	342
13	715	766	617	402	28	917	790	583	340
14	739	767	498	402	29	585	817	531	341
15	759	758	456	403	30	568	855	519	340
					31		844	520	

NOTE.—No record obtained Oct. 1 to May 31. Discharge interpolated for days of no gage-height record during September.

Combined monthly discharge of canals diverting from Henrys Fork between St. Anthony and Rexburg gaging stations, for the irrigation season of 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June	1,040	568	827	49,200
July	856	566	742	45,600
August	828	427	598	36,800
September	525	340	407	24,200
The period				156,000

HENRYS FORK NEAR REXBURG, IDAHO

LOCATION.—In sec. 30, T. 6 N., R. 39 E., just below highway bridge, 1 mile below mouth of south channel of Teton River, 7 miles below mouth of main channel of Teton River, and 7 miles west of Rexburg, Madison County. Below all tributaries.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 13, 1909, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank 250 feet below bridge; installed April 5, 1913; inspected by Mrs. Irvin Siepert.

DISCHARGE MEASUREMENTS.—Made from cable a quarter of a mile below gage, from highway bridge above, or by wading.

CHANNEL AND CONTROL.—Bed composed of mud, sand, and fine gravel; shifting. Except at bridge, left bank is overflowed at high stages.

EXTREMES OF DISCHARGE.—Maximum discharge recorded during periods October 1 to November 5 and April 1 to September 30, 8,980 second-feet at gage height of 9.8 feet May 23; minimum stage, 2.28 feet from 2 to 9 p. m. October 8 (discharge, 591 second-feet).

1909–1925: Maximum discharge recorded, 8,980 second-feet May 23, 1925; minimum stage, 2.00 feet June 28 and 29, 1919 (discharge, 355 second-feet).

ICE.—Stage-discharge relation seriously affected by ice; observations discontinued during winter.

DIVERSIONS.—A large percentage of normal summer flow diverted above station.

REGULATION.—None except that due to operation of head gates of irrigation canals.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve well defined; several parallel curves used. Water-stage recorder operated satisfactorily. Staff gage read daily June 1 to August 31. Daily discharge obtained by applying mean daily gage height to rating table except as noted in footnote to daily-discharge table. Records probably fair.

Discharge measurements of Henrys Fork near Rexburg, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 1	2.37	628	June 4	8.16	5,310	Aug. 6	3.76	1,290
Nov. 5	3.46	1,240	June 13	6.94	3,780	Aug. 19	4.18	1,700
Apr. 1	5.10	2,520	June 22	6.93	3,890	Sept. 1	4.23	1,790
Apr. 21	7.37	4,310	July 2	7.61	4,530	Sept. 19	4.53	2,020
May 6	8.40	5,720	July 13	5.65	2,760			
May 23	9.75	8,920	July 21	3.56	1,040			

Daily discharge, in second-feet, of Henrys Fork near Rexburg, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	636	1,260	2,430	3,290	6,700	4,440	1,040	1,740
2	618	1,190	2,250	3,840	6,320	4,540	1,040	1,780
3	632	1,120	2,250	4,290	5,840	4,540	1,090	1,740
4	692	1,130	2,520	4,960	5,360	4,440	1,190	1,740
5	730	1,210	2,610	5,440	5,030	4,340	1,290	1,780
6	673	.....	2,610	5,720	4,820	4,540	1,280	1,780
7	627	.....	2,610	6,260	5,030	5,140	1,240	1,860
8	605	.....	2,340	6,910	4,930	4,930	1,130	1,900
9	636	.....	2,250	7,450	4,370	4,720	1,120	2,160
10	682	.....	2,340	6,880	3,940	4,310	1,100	2,250
11	780	.....	2,610	6,540	4,040	3,810	1,120	1,980
12	912	.....	2,990	6,530	4,040	3,310	1,140	1,860
13	884	.....	3,590	6,960	3,740	2,810	1,210	1,860
14	836	.....	3,790	7,280	3,540	2,340	1,560	1,860
15	831	.....	3,990	7,380	3,440	1,900	1,860	1,900

Daily discharge, in second-feet, of Henrys Fork near Rexburg, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
16	836		4,190	7,590	3,670	1,540	1,900	1,980
17	852		4,390	7,800	4,310	1,380	1,940	1,940
18	863		5,120	7,900	4,540	1,280	1,820	1,940
19	951		5,500	8,000	4,140	1,160	1,700	1,980
20	1,120		4,800	8,200	3,740	1,060	1,660	2,160
21	1,080		4,340	8,300	3,740	1,030	1,620	2,340
22	1,070		4,040	8,640	3,840	1,140	1,660	2,430
23	1,050		4,040	8,980	3,840	1,190	1,620	2,520
24	991		3,940	8,820	4,140	1,330	1,560	2,390
25	1,030		3,440	8,300	4,040	1,350	1,500	2,160
26	1,010		3,040	8,040	3,840	1,240	1,470	1,960
27	991		2,940	7,680	3,740	1,160	1,490	1,960
28	974		2,840	7,410	3,740	1,070	1,580	1,960
29	979		3,040	7,040	3,740	1,010	1,820	1,960
30	934		2,840	6,780	4,040	1,020	1,740	1,960
31	1,160			6,730		1,030	1,700	

NOTE.—No record obtained Nov. 6 to Mar. 31. Discharge interpolated Apr. 14 to 16. Discharge estimated Apr. 19 and 20.

Monthly discharge of Henrys Fork near Rexburg, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,160	605	860	52,900
November 1-5	1,260	1,120	1,180	11,700
April	5,500	2,250	3,320	198,000
May	8,980	3,290	6,970	429,000
June	6,700	3,440	4,340	258,000
July	5,140	1,010	2,550	157,000
August	1,940	1,040	1,460	89,800
September	2,520	1,740	1,990	118,000

BIG SPRINGS CREEK AT BIG SPRINGS, IDAHO

LOCATION.—In sec. 32, T. 14 N., R. 44 E., at Big Springs Forest Ranger station and half a mile southeast of Big Springs railroad station on Yellowstone branch of Oregon Short Line Railroad, Fremont County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—June 18, 1924, to June 5, 1925.

GAGE.—Vertical staff on left bank one-fourth mile below wagon bridge; read by Ira Latham.

DISCHARGE MEASUREMENTS.—Made from wagon bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of fine gravel and well-packed sand. Control not well defined; subject to slight shifts.

EXTREMES OF DISCHARGE.—Stream spring fed and variation considered insufficient for publication of maximum and minimum gage heights and discharge.

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—None above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curves fairly well defined. Staff gage read to hundredths once daily. Daily discharge obtained by applying daily gage height to rating table except as noted in footnote to table of daily discharge. Records fair.

COOPERATION.—Gage-height record furnished by United States Forest Service.

The following discharge measurements were made:

June 5, 1925: Gage height, 0.61 foot; discharge, 173 second-feet.

August 30, 1925: Gage height, 0.66 foot; discharge, 177 second-feet.

Daily discharge, in second-feet, of Big Springs Creek at Big Springs, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	168	169	168		172	170	170	171	172
2	168	169	168		172	170	170	171	172
3	168	169	168		172	170	170	171	173
4	168	169	167		172	170	170	171	173
5	169	169	167		172	170	170	171	173
6	169	169	167		172	170	170	171	-------
7	169	169	167		172	170	170	171	-------
8	169	169	167		172	170	170	171	-------
9	169	169	167		172	170	170	171	-------
10	169	169	167		172	170	170	171	-------
11	170	169	166		172	170	170	171	-------
12	170	169	165		172	170	170	171	-------
13	170	169	165		172	170	170	171	-------
14	170	169	165		172	170	170	171	-------
15	170	169	165		172	170	170	172	-------
16	170	169	165	168	172	170	170	172	-------
17	169	169	165		172	170	170	172	-------
18	169	169	164		172	170	170	172	-------
19	169	169			172	170	170	172	-------
20	169	169			172	170	170	172	-------
21	169	169			172	170	170	172	-------
22	169	169			172	170	170	172	-------
23	169	169			171	170	170	172	-------
24	169	169			171	170	170	172	-------
25	169	169	164		171	170	171	172	-------
26	169	169			171	170	171	172	-------
27	169	168			171	170	171	172	-------
28	169	168			171	170	171	172	-------
29	169	168			-------	170	171	172	-------
30	169	168			-------	170	171	172	-------
31	169	-------			-------	170	-------	172	-------

NOTE.—No record obtained June 6 to Sept. 30, except meter measurement Aug. 30. No gage-height record Oct. 1–10, Nov. 27 to Dec. 10, 12–17, Feb. 8–14, Mar. 8–14; discharge interpolated. No gage-height record Dec. 19 to Jan. 31; discharge estimated.

Monthly discharge of Big Springs Creek at Big Springs, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	170	168	169	10,400
November	169	168	169	10,100
December	168	164	165	10,100
January	-------	-------	[a] 168	10,300
February	172	171	172	9,550
March	170	170	170	10,500
April	171	170	170	10,100
May	172	171	172	10,600
June 1–5	173	172	173	1,720
The period	-------	-------	-------	83,400

[a] Estimated.

WARM RIVER AT WARM RIVER, IDAHO

LOCATION.—In sec. 13, T. 9 N., R. 43 E., at highway bridge half a mile above mouth and half a mile northeast of Warm River, Fremont County. Robinson Creek enters a quarter of a mile below station.

DRAINAGE AREA.—144 square miles (measured on Forest Service maps).

RECORDS AVAILABLE.—January 24, 1912, to March 22, 1915; April 3, 1918, to September 30, 1925.

GAGE.—Vertical staff on downstream side of highway bridge bent near right bank, installed October 19, 1922; read by Sheppard and Howard.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge.

CHANNEL AND CONTROL.—Bed composed of large cobbles or boulders in gravel drift. Control subject to slight shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.18 feet May 8 (discharge, 576 second-feet); minimum stage, 1.00 foot at 1 p. m. December 19 (discharge, 123 second-feet).

1912–1915; 1918–1925: Maximum stage recorded, 2.3 feet (original gage) June 2, 1912 (discharge, 900 second-feet); minimum stage and discharge occurred December 19, 1924.

ICE.—Stage-discharge relation not affected by ice; extreme minimum flow, however, attributed to ice jams in tributary streams above.

DIVERSIONS.—None above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve well defined between 170 and 250 second-feet; fairly well defined between 250 and 450 second-feet; extended above. Gage read to hundredths daily. Daily discharge ascertained by applying daily gage height to rating table. Records fair.

Discharge measurements of Warm River at Warm River, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 6	1.18	179	June 10	1.55	277	Sept. 13	1.37	219
Jan. 22	1.17	173	June 23	1.46	244	Sept. 25	1.36	217
May 2	1.82	428	July 9	1.40	240			
May 29	1.65	310	Aug. 1	1.39	225			

Daily discharge, in second-feet, of Warm River at Warm River, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	177	177	171	184	177	171	184	363	311	237	230	226
2	177	177	171	184	184	171	184	417	327	237	230	226
3	177	177	171	184	184	171	184	498	311	230	230	226
4	191	177	171	184	184	171	184	481	304	230	230	226
5	184	184	171	177	184	171	184	498	296	240	230	226
6	184	177	171	177	177	171	184	515	304	244	230	230
7	184	177	171	177	177	171	191	541	281	240	230	230
8	184	177	177	177	177	171	212	576	281	240	230	237
9	184	177	171	184	177	171	219	481	274	240	230	237
10	184	177	171	184	177	171	219	455	274	237	230	230
11	184	177	177	184	177	171	248	498	262	233	230	230
12	184	177	177	177	177	171	255	554	266	237	230	230
13	184	177	177	177	177	171	292	502	262	237	230	222
14	184	177	177	177	177	171	323	519	251	237	237	230
15	177	171	177	177	177	171	339	485	266	237	230	226
16	177	171	177	177	171	171	363	459	281	237	230	222
17	177	171	177	177	171	171	498	451	274	237	230	222
18	177	171	152	177	171	171	429	442	259	237	230	226
19	184	177	123	177	171	177	371	417	259	237	230	230
20	184	177	135	177	171	177	371	417	281	237	230	222
21	184	184	177	177	171	177	355	417	251	233	230	222
22	184	177	177	177	171	177	355	408	251	233	230	222
23	177	177	177	177	171	177	331	400	244	233	230	222
24	177	177	177	177	171	177	308	375	237	233	226	219
25	177	177	177	177	171	177	292	359	237	233	226	219
26	177	177	177	177	171	177	292	335	230	233	226	219
27	177	171	177	177	171	177	300	327	230	233	226	219
28	184	171	177	177	171	177	300	319	237	233	226	215
29	184	171	177	177	-------	184	323	311	230	233	226	222
30	177	171	177	177	-------	184	355	327	237	230	215	219
31	177	-------	184	177	-------	184	-------	335	-------	233	215	------

NOTE.—Discharge interpolated Feb. 23.

Monthly discharge of Warm River at Warm River, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	191	177	181	11,100
November	184	171	176	10,500
December	184	123	172	10,600
January	184	177	179	11,000
February	184	171	175	9,720
March	184	171	174	10,700
April	498	184	288	17,100
May	576	311	435	26,700
June	327	230	267	15,900
July	244	230	236	14,500
August	237	215	228	14,000
September	237	215	225	13,400
The year	576	123	228	165,000

ROBINSON CREEK AT WARM RIVER, IDAHO

LOCATION.—In sec. 13, T. 9 N., R. 43 E., at Oregon Short Line Railroad bridge, 300 yards above mouth of creek and one-third mile northeast of Warm River, Fremont County.

DRAINAGE AREA.—About 41 square miles (measured on Forest Service maps).

RECORDS AVAILABLE.—January 24, 1912, to March 22, 1915; April 4, 1918, to September 30, 1925.

GAGE.—Vertical staff attached to downstream side of pile bent of railroad bridge; read by Sheppard and Howard.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of cobbles in gravel drift. Control is a well-defined cobble riffle 150 feet below gage; subject to occasional shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 3.20 feet May 8 and 12 (discharge, 781 second-feet); minimum estimated discharge, 32 second-feet December 18–20, during ice-affected period. Even lower stages may have occurred for a short time during this period.

1912–1915; 1918–1925: Maximum stage recorded, 4.3 feet May 28, 1912 (discharge, 1,140 second-feet); minimum estimated discharge, 32 second-feet December 18–20, 1925.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—None above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent; affected by ice December 18 to January 29. Standard rating curve fairly well defined. Daily discharge obtained by applying daily gage height to rating table. Records fair.

Discharge measurements of Robinson Creek at Warm River, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 6	0.59	58.7	May 29	2.40	504	Aug. 20	0.86	91.6
Jan. 22	[a].50	40.7	June 23	1.53	224	Sept. 13	.87	98.0
May 9	2.75	638	July 9	1.10	138			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Robinson Creek at Warm River, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	56	56		52	48	100	466	431	160	100	97
2	48	56	56		52	48	100	498	447	153	100	90
3	50	56	56	56	52	48	111	577	447	140	98	89
4	70	56	56		70	48	118	577	428	134	100	89
5	58	58	56		68	48	118	630	415	145	97	94
6	58	58	56		65	48	122	644	473	270	94	111
7	56	58	58		63	48	138	712	396	184	94	97
8	56	58	60		58	48	184	781	396	151	94	134
9	56	56	48		58	48	287	637	347	138	94	142
10	65	58	63		58	48	447	610	341	134	94	114
11	65	58	52		52	46	466	698	317	130	94	97
12	65	56	52		52	46	479	781	290	130	97	94
13	63	56	52		52	46	479	746	278	118	94	94
14	60	56	52	45	52	46	479	753	244	118	100	100
15	56	63	48		52	46	479	746	273	114	97	95
16	54	65	54		50	46	479	739	323	114	94	94
17	56	56	41		50	46	746	732	320	114	94	94
18	56	56			48	46	678	712	273	114	94	97
19	70	56	32		48	46	531	746	261	113	94	111
20	65	65			48	48	511	746	244	113	94	104
21	63	68			48	48	415	753	239	111	94	104
22	63	58		41	48	52	384	760	244	111	90	104
23	60	56			48	56	365	753	239	111	90	97
24	56	56	40		48	58	323	644	206	111	89	94
25	56	56			48	63	293	617	192	107	89	94
26	56	56		45	48	68	264	577	186	84	89	95
27	56	56			48	68	281	531	177	84	89	94
28	56	56			48	68	323	473	167	84	94	90
29	58	56			-------	70	353	511	158	84	95	97
30	60	56	56	52	-------	84	421	508	158	100	92	94
31	58	-------		52	-------	100	-------	447	-------	100	92	-------

NOTE.—Discharge estimated Dec. 18 to Jan. 29; interpolated Feb. 23.

Monthly discharge of Robinson Creek at Warm River, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	70	48	58.7	3,610
November	68	56	57.7	3,430
December	63	32	48.4	2,980
January	-------	-------	47.1	2,900
February	70	48	53.0	2,940
March	100	46	54.1	3,330
April	746	100	349	20,800
May	781	447	649	39,900
June	473	158	297	17,700
July	270	84	125	7,690
August	100	89	94.2	5,790
September	142	89	100	5,950
The year	781	32	162	117,000

DIVERSIONS FROM FALL RIVER ABOVE GAGING STATION NEAR SQUIRREL, IDAHO

Above the gaging station near Squirrel three separate canals divert water from Fall River for irrigation. Gaging stations are maintained at heading of each canal by the United States Geological Survey for the Idaho State Department of Reclamation to facilitate distribution of the water. Records are available from June 1, 1919, to September 30, 1925.

Stage-discharge relation of these canals affected by growth of aquatic plants. Rating curves fairly well defined. Gages read to hundredths daily except during September, when occasional readings were made. Records good.

Combined daily discharge, in second-feet, of canals diverting from Fall River above gaging station near Squirrel, Idaho, for the irrigation season of 1925

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	23	226	198	51	16	99	141	86	51
2	23	190	196	56	17	96	169	78	51
3	51	236	189	56	18	112	169	81	51
4	34	233	188	57	19	131	191	77	51
5	34	241	177	58	20	153	193	74	51
6	61	222	158	59	21	162	17	75	52
7	66	174	160	60	22	171	17	75	51
8	75	163	151	61	23	179	16	71	51
9	73	172	134	61	24	187	100	71	49
10	78	166	133	59	25	197	117	60	49
11	75	163	127	57	26	199	132	61	49
12	65	139	124	54	27	218	146	43	48
13	86	142	125	52	28	207	163	43	48
14	86	128	126	50	29	220	179	50	45
15	97	124	89	51	30	228	181	51	45
					31	------	185	47	------

NOTE.—No record obtained Oct. 1 to May 31. Discharge interpolated for days of no gage-height record during September.

Combined monthly discharge of canals diverting from Fall River above gaging station near Squirrel, Idaho, for the irrigation season of 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June	228	23	116	6,900
July	241	16	156	9,590
August	198	43	107	6,580
September	61	45	52.8	3,140
The period				26,200

FALL RIVER NEAR SQUIRREL, IDAHO

LOCATION.—In sec. 35, T. 9 N., R. 44 E., 9 miles southeast of Marysville and 4 miles northeast of Squirrel post office, Fremont County. Marysville Canal diverts half a mile upstream. This station was formerly known as "Fall River near Fremont."

DRAINAGE AREA.—390 square miles.

RECORDS AVAILABLE.—January 1, 1904, to June 30, 1909; May 2, 1918, to September 30, 1925. At Wilson's sawmill, 3 miles above present site, August 24, 1902, to December 31, 1903.

GAGE.—Vertical staff on left bank installed January 1, 1904; read by T. W. and J. D. Luetjen.

DISCHARGE MEASUREMENTS.—Made from cable 200 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of boulders in gravel drift. Control formed by riffle below gage; fairly permanent. Banks high, clean, and not subject to overflow. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.68 feet at 7.30 p. m. May 23 (discharge, 3,650 second-feet); minimum stage not recorded.

1904–1909, 1918–1925: Maximum stage recorded, 5.6 feet June 14, 15, and 23, 1918 (discharge, 5,380 second-feet); minimum stage, 1.46 feet at 1 p. m. January 19, 1924 (discharge, 124 second-feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Three irrigation canals divert above station.

REGULATION.—None except that due to head-gate changes of canals above station.

ACCURACY.—Stage-discharge relation remained practically permanent after ice-affected period December 15 to February 21. One rating curve parallel to standard shape but slightly lower in discharge used throughout open-water period; fairly well defined by measurements at medium low and high stages. Gage read to hundredths daily. Daily discharge determined by application of daily gage height to rating table. Records good except during ice-affected period for which they are fair.

Discharge measurements of Fall River near Squirrel, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 6	1.94	372	June 12	3.36	1,720	Sept. 14	2.40	741
Jan. 23	[a] 1.98	333	July 15	2.84	1,120	Sept. 27	2.28	621
May 20	4.27	3,020	Aug. 18	2.41	750			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Fall River near Squirrel, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	301	419	412			365	476	1,080	2,920	2,310	762	744
2	301	405	405			352	490	1,270	2,960	2,200	753	744
3	339	405	392			365	490	1,680	2,550	2,170	744	753
4	371	399	392			365	505	1,830	2,320	1,940	736	762
5	365	392	405			365	520	1,940	2,010	1,990	744	762
6	371	385	419			365	550	2,340	2,210	2,140	719	744
7	378	378	378			365	597	2,620	1,880	1,990	710	744
8	378	392	314			352	620	3,120	1,810	1,880	710	905
9	365	405	301			340	628	2,710	1,780	1,830	744	887
10	365	385	308			340	644	2,530	2,090	1,640	744	814
11	378	378	326	318	363	352	677	2,420	2,010	1,420	770	744
12	371	405	339			352	710	2,450	1,740	1,420	797	727
13	365	392	339			365	727	2,480	1,730	1,400	797	727
14	365	392	351			352	744	2,530	1,680	1,180	814	744
15	378	378				365	797	2,650	1,860	1,190	814	753
16	385	385				392	797	2,770	2,410	1,160	797	744
17	385	385				392	814	2,800	2,310	1,140	770	727
18	405	405				365	869	3,070	2,090	1,080	744	744
19	441	405				379	905	3,010	2,310	981	727	797
20	456	434				392	962	2,950	2,530	905	727	805
21	463	434				406	1,060	3,070	2,590	962	727	779
22	463	449			352	406	1,060	3,440	2,370	1,040	727	770
23	449	456	236	333	365	392	1,040	3,650	2,560	1,000	719	744
24	441	449			340	379	1,080	3,330	2,530	905	710	753
25	419	449			352	365	1,120	3,200	2,450	869	710	736
26	419	441			340	365	1,080	3,230	2,450	850	727	727
27	405	426		341	352	379	1,100	3,140	2,450	832	797	661
28	399	405			352	392	1,160	2,960	2,310	814	779	727
29	405	405			-------	433	1,080	2,820	2,340	814	744	753
30	412	419			-------	462	1,040	2,740	2,310	797	727	744
31	419	-------			-------	476	-------	2,800	-------	797	710	------

NOTE.—Discharges estimated Dec. 15 to Jan. 22 and Jan. 24 to Feb. 21. Actual measurement used Jan. 23.

Monthly discharge of Fall River near Squirrel, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	463	301	392	24,100
November	456	378	409	24,300
December	----------	----------	293	18,000
January	----------	----------	324	19,900
February	----------	----------	360	20,000
March	476	340	379	23,300
April	1,160	476	811	48,300
May	3,650	1,080	2,670	164,000
June	2,960	1,680	2,250	134,000
July	2,310	797	1,340	82,400
August	814	710	748	46,000
September	905	661	759	45,200
The year	3,650	----------	897	650,000

DIVERSIONS FROM FALL RIVER BETWEEN SQUIRREL AND CHESTER GAGING STATIONS, IDAHO

Between Squirrel and Chester gaging stations nine separate canals divert water from Fall River for irrigation. Gaging stations are maintained at heading of each canal by the United States Geological Survey for the Idaho State Department of Reclamation to facilitate distribution of water. Records are available from June 1, 1919, to September 30, 1925.

Stage-discharge relation on most of the canals affected by growth of aquatic vegetation or by operation of check gates. Rating curves fairly well defined. Gage read to hundredths daily except during September, when occasional readings are made. Records good.

Combined daily discharge, in second-feet, of canals diverting from Fall River between Squirrel and Chester gaging stations, for the irrigation season of 1925

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	496	841	486	354	16	740	595	477	224
2	622	833	480	379	17	382	606	478	221
3	613	805	484	375	18	688	629	468	221
4	583	758	492	369	19	713	617	469	220
5	296	705	484	375	20	757	556	471	221
6	327	700	483	377	21	800	642	399	220
7	311	687	485	384	22	789	638	356	220
8	225	637	480	383	23	525	643	353	216
9	659	628	475	383	24	865	631	351	214
10	684	621	476	381	25	845	588	327	215
11	680	617	493	377	26	824	583	332	214
12	659	626	456	229	27	828	572	345	214
13	660	651	465	227	28	834	569	341	212
14	657	655	478	226	29	840	597	323	212
15	555	642	479	225	30	836	553	330	212
					31	------	496	330	------

NOTE.—No record obtained Oct. 1 to May 31. Discharge interpolated for days of no gage-height record during September.

Combined monthly discharge of canals diverting from Fall River between Squirrel and Chester gaging stations, for the irrigation season of 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June	865	225	643	38,300
July	841	496	643	39,500
August	493	323	431	26,500
September	384	212	277	16,500
The period				121,000

FALL RIVER NEAR CHESTER, IDAHO

LOCATION.—In sec. 13, T. 8 N., R. 41 E., half a mile above mouth and 2 miles north of Chester post office, Fremont County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 23, 1920, to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on right bank; installed April 29, 1921; inspected by McClelland and Luetjen.

DISCHARGE MEASUREMENTS.—Made from cable 100 feet downstream or by wading.

CHANNEL AND CONTROL.—Bed composed of boulders in gravel drift and lava outcrop. Control is well-defined rock ledge immediately below gage. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during periods October 1–7 and May 2 to September 30, 5.46 feet at 7 p. m. May 21 (discharge, 4,280 second-feet); minimum stage, 1.17 feet at 8 a. m. October 2 (discharge, 43 second-feet).

1920–1925: Maximum stage recorded, 5.46 feet at 7 p. m. May 21, 1925 (discharge, 4,280 second-feet); minimum stage, 1.01 feet at 6 p. m. August 7, 1923 (discharge, 9 second-feet).

ICE.—Stage-discharge relation seriously affected by ice; observations discontinued during winter.

DIVERSIONS.—Several irrigation canals divert above station.

REGULATION.—None except that due to manipulation of canal head gates above station.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve well defined. Operation of water-stage recorder satisfactory. Staff gage read June 1 to August 31. Daily discharge ascertained by applying mean daily gage height to rating table. Records fair.

Discharge measurements of Fall River near Chester, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 14	4.54	2,800	June 25	3.93	2,000	Sept. 11	2.44	453
May 22	5.30	4,120	July 18	2.53	544			
June 9	3.69	1,630	Aug. 19	2.28	350			

Daily discharge, in second-feet, of Fall River near Chester, Idaho, for the year ending September 30, 1925

Day	Oct.	May	June	July	Aug.	Sept.	Day	Oct.	May	June	July	Aug.	Sept.
1	57	------	3,010	1,870	332	477	16	------	3,330	2,160	581	390	565
2	53	1,840	2,750	1,690	320	443	17	------	3,280	2,440	543	378	550
3	67	2,220	2,570	1,550	315	422	18	------	3,160	2,090	491	372	528
4	93	2,380	2,440	1,410	326	416	19	------	3,340	1,990	429	359	605
5	67	2,530	2,340	1,440	326	409	20	------	3,420	2,180	436	384	637
6	57	2,800	2,420	2,030	315	397	21	------	4,070	2,250	463	443	597
7	79	3,020	2,150	1,720	310	409	22	------	4,140	2,100	491	450	613
8	------	3,330	2,070	1,520	310	422	23	------	4,010	2,290	463	450	565
9	------	2,620	1,630	1,400	315	443	24	------	3,630	2,140	397	463	535
10	------	2,600	1,790	1,110	320	429	25	------	3,440	1,980	332	470	528
11	------	2,720	1,830	896	354	443	26	------	3,420	1,930	332	477	513
12	------	2,940	1,620	820	422	521	27	------	3,330	1,850	320	521	506
13	------	2,850	1,540	877	397	558	28	------	3,240	1,800	290	550	498
14	------	2,900	1,480	775	422	581	29	------	3,090	1,850	243	484	528
15	------	3,120	1,720	679	450	565	30	------	3,270	1,890	281	409	573
							31	------	3,310	-------	337	456	------

NOTE.—No record obtained Oct. 8 to May 1.

Monthly discharge of Fall River near Chester, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1-7	93	53	67.6	939
May 2-31	4,140	1,840	3,010	179,000
June	3,010	1,480	2,080	124,000
July	2,030	243	846	52,000
August	550	310	396	24,300
September	637	397	509	30,300

TETON RIVER NEAR ST. ANTHONY, IDAHO

LOCATION.—In sec. 15, T. 7 N., R. 41 E., half a mile above Oregon Short Line Railroad bridge and 4 miles southeast of St. Anthony, Fremont County. Station was formerly maintained at Hog Hollow highway bridge, three-quarters of a mile upstream; records comparable.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 23, 1903, to June 30, 1909; April 19, 1920, to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on right bank; installed May 2, 1921; inspected by Johnson and Homer.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet below gage.

CHANNEL AND CONTROL.—Bed composed of fine, compact gravel drift. Control subject to shifts during high stages and during ice-affected periods.

EXTREMES OF DISCHARGE.—Maximum stage recorded during periods, October 1 to November 8 and April 13 to September 30, 5.55 feet at 8 p. m. May 21 (discharge, 4,230 second-feet); minimum stage recorded, 0.16 foot at 7 p. m. October 1 (discharge, 400 second-feet). Lower stages may have occurred during period of no record.

1903–1909; 1920–1925: Maximum stage recorded, 6.9 feet at 3 p. m. June 5, 1909 (discharge, 7,820 second-feet); minimum stage, 1 foot March 12, 1906 (discharge, 88 second-feet). Both gage heights from Hog Hollow highway bridge gage which was at a slightly different datum.

ICE.—Stage-discharge relation seriously affected by ice; observations discontinued during winter.

DIVERSIONS.—Several irrigation canals divert in Teton River Basin 20 miles above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent after April 13. Rating curve well defined. Operation of water-stage recorder satisfactory. Daily staff gage readings June 1 to August 31. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Teton River near St. Anthony, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 8	0.25	429	June 22	4.21	3,040	Aug. 25	0.80	697
Apr. 13	1.45	1,020	July 8	3.84	2,780	Sept. 8	.97	797
May 21	5.12	3,870	July 18	2.33	1,620	Sept. 26	.86	752
May 27	4.46	3,440	July 29	1.30	959			
June 8	2.82	2,040	Aug. 12	1.14	887			

Daily discharge, in second-feet, of Teton River near St. Anthony, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	409	455	-------	931	3,290	2,980	920	779
2	414	453	-------	1,060	2,780	2,880	909	800
3	436	451	-------	1,300	2,390	2,720	943	768
4	557	449	-------	1,490	2,140	2,610	1,010	747
5	578	447	-------	1,570	1,920	2,560	1,010	747
6	512	445	-------	1,720	2,050	2,790	926	805
7	474	443	-------	1,960	1,930	2,800	882	822
8	464	441	-------	2,230	2,000	2,730	854	800
9	517	-------	-------	2,060	2,050	2,540	838	849
10	552	-------	-------	1,780	2,020	2,360	838	822
11	619	-------	-------	1,870	1,990	2,160	865	779
12	595	-------	-------	2,100	1,810	2,010	882	752
13	571	-------	1,060	2,180	1,730	1,940	892	742
14	546	-------	1,090	2,180	1,720	1,820	926	763
15	522	-------	1,100	2,430	1,740	1,690	915	838
16	498	-------	1,120	2,640	2,220	1,630	860	805
17	474	-------	1,430	2,610	2,320	1,660	822	763
18	498	-------	1,730	2,770	2,110	1,580	795	752
19	578	-------	1,410	3,080	2,220	1,420	784	800
20	552	-------	1,190	3,380	2,570	1,310	768	882
21	517	-------	1,020	3,890	2,880	1,220	758	865
22	507	-------	994	4,100	3,060	1,210	737	943
23	502	-------	1,100	3,870	3,210	1,280	716	898
24	483	-------	994	3,550	3,110	1,250	700	816
25	464	-------	982	3,310	2,940	1,170	695	774
26	459	-------	999	3,280	2,880	1,130	695	747
27	464	-------	931	3,280	2,780	1,050	784	731
28	464	-------	849	3,390	2,630	994	994	731
29	474	-------	811	3,420	2,590	971	994	731
30	493	-------	822	3,610	2,720	959	882	737
31	474	-------	-------	3,630	-------	937	795	-------

NOTE.—No record obtained Nov. 9 to Apr. 12. No gage-height record Oct. 12–16 and Nov. 2–8; discharge interpolated. Staff gage reading used Nov. 8.

Monthly discharge of Teton River near St. Anthony, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	619	409	505	31,100
November 1–8	455	441	448	7,110
April 13–30	1,730	811	1,090	38,900
May	4,100	931	2,600	160,000
June	3,290	1,720	2,390	142,000
July	2,980	937	1,820	112,000
August	1,010	695	851	52,300
September	943	731	793	47,200

DIVERSIONS FROM TETON RIVER BETWEEN GAGING STATION NEAR ST. ANTHONY AND MOUTH OF RIVER, IDAHO

Between St. Anthony gaging station and the mouth of the stream 14 separate canals divert water from Teton River for irrigation. Gaging stations are maintained at heading of each canal by the United States Geological Survey for the Idaho State Department of Reclamation to facilitate distribution of the water. Records are available from June 1, 1919, to September 30, 1925.

The stage-discharge relation on these canals is affected by growth of aquatic plants. Rating curves are only fairly well defined. Gages read to hundredths daily except during September, when occasional readings were made. Records fair.

Combined daily discharge, in second-feet, of canals diverting from Teton River between the St. Anthony gaging station and the mouth of the river, for the irrigation season of 1925

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	919	964	731	613	16	766	958	634	480
2	930	930	716	629	17	793	928	642	466
3	917	781	745	627	18	757	964	634	451
4	918	734	739	625	19	937	939	614	435
5	1,010	786	780	628	20	1,020	914	616	433
6	737	807	752	635	21	1,110	892	592	425
7	895	830	699	634	22	1,190	876	573	414
8	844	776	679	634	23	1,190	959	565	397
9	837	757	655	620	24	1,220	946	556	378
10	741	744	643	607	25	1,190	876	552	365
11	703	733	672	591	26	1,150	798	538	353
12	692	747	692	575	27	1,140	746	667	340
13	684	776	714	542	28	1,140	741	780	330
14	696	907	660	519	29	1,110	750	760	322
15	674	956	660	493	30	1,060	753	683	318
					31		742	589	

NOTE.—No record obtained Oct. 1 to May 31. Discharge interpolated for days of no gage-height record during September.

Combined monthly discharge of canals diverting from Teton River between St. Anthony gaging station and mouth of river, for the irrigation season of 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June	1,220	674	932	55,500
July	964	733	839	51,600
August	780	538	662	40,700
September	635	318	496	29,500
The period				177,000

CANYON CREEK NEAR NEWDALE, IDAHO

LOCATION.—In T. 6 N., R. 42 E., one-fourth mile west of Pincock Warm Springs and 14 miles southeast of Newdale, Madison County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 29, 1920, to September 30, 1925.

GAGE.—Vertical staff on left bank 300 feet below highway bridge; read by A. J. Cheney.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of compact gravel; fairly permanent. Two channels at low and medium stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period May 19 to July 4, 4.70 feet at 4 p. m. May 21 (discharge, 457 second-feet); minimum stage not recorded since it probably occurred during period of no record.

1920–1925: Maximum stage recorded, 4.70 feet at 4 p. m. May 21, 1925 (discharge, 457 second-feet); minimum stage, 0.98 foot at 8 a. m. August 31, 1924 (discharge, 2 second-feet.)

ICE.—Formation of ice prevented by inflow from warm springs above station. No winter observations made.

DIVERSIONS.—Power canal of Pincock sawmill diverts three-eighths mile upstream; water is returned above station.

REGULATION.—None except that caused by operation of power canal.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve fairly well defined. Gage read to hundredths once daily. Daily discharge obtained by applying mean daily gage height to rating table. Records fair.

Discharge measurements of Canyon Creek near Newdale, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 19	4.00	366.0	June 29	1.80	78.4
May 31	3.50	280.0	July 31	1.30	17.6

Daily discharge, in second-feet, of Canyon Creek near Newdale, Idaho, for the year ending September 30, 1925

Day	May	June	July	Day	May	June	July	Day	May	June	July
1	------	222	85	11	------	135	------	21	457	125	------
2	------	204	80	12	------	118	------	22	371	116	------
3	------	199	76	13	------	128	------	23	357	113	------
4	------	183	74	14	------	125	------	24	343	109	------
5	------	159	------	15	------	181	------	25	329	101	------
6	100	154	------	16	------	149	------	26	326	89	------
7	------	135	------	17	------	145	------	27	323	85	------
8	------	111	------	18	------	135	------	28	315	82	------
9	------	117	------	19	357	133	------	29	295	80	------
10	147	123	------	20	450	130	------	30	293	89	------
								31	287	------	18

NOTE.—No record on days for which no discharge is given.

Monthly discharge of Canyon Creek near Newdale, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May 19–31	457	287	346	8,920
June	222	80	132	7,860
July 1–4	85	74	78.8	625

WILLOW CREEK NEAR RIRIE, IDAHO

LOCATION.—In T. 3 N., R. 40 E., at Cutler ranch, 3 miles above mouth of canyon and 6 miles southeast of Ririe, Bonneville County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—December 23, 1916, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank installed July 1, 1921; inspected by Moore and Kremer.

DISCHARGE MEASUREMENTS.—Made from cable 200 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of boulders in gravel drift; fairly permanent. Left bank is overflowed at high stages; both are brush covered.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 8.49 feet at 5 a. m. April 16 (discharge, 1,330 second-feet); minimum stage, 2.48 feet at 6 a. m. October 2 (discharge, 17 second-feet).

1916–1925: Maximum stage recorded, 16.3 feet May 15, 1917 (discharge, 4,200 second-feet); minimum discharge, 10 second-feet August 31 to September 5, 1924.

ICE.—Stage-discharge relation seriously affected by ice; records discontinued during winter.

DIVERSIONS.—During the spring of 1924 a low dam was constructed by the United States Office of Indian Affairs across Grays Lake outlet near Herman, Idaho, 40 miles upstream. This dam used to divert water into Blackfoot-Marsh Reservoir through Meadow Creek.

REGULATION.—United States Office of Indian Affairs dam as above described.

ACCURACY.—Stage-discharge relation practically permanent throughout period. Rating curve fairly well defined. Recorder operation fairly satisfactory. Daily discharge obtained by applying mean daily gage height to rating table. Records fair.

Discharge measurements of Willow Creek near Ririe, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 17	6.89	905	June 4	4.86	434
May 13	6.34	784	June 19	4.19	282
May 21	5.22	515			

Daily discharge, in second-feet, of Willow Creek near Ririe, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Mar.	Apr.	May	June	July
1	19	31		389	598	410	184
2	18	31		378	670	414	182
3	19	31		411	769	418	188
4	23	31		514	794	422	186
5	26	30		610	744	422	188
6	29	30		562	719	492	205
7	32	30		400	719	480	193
8	36	30		321	794	422	171
9	39	30		323	794	378	159
10	42	30		434	694	356	148
11	45	29		598	646	345	136
12	45	29		744	708	323	129
13	39	28		971	769	312	123
14	39	28		1,100	719	310	110
15	38	28		1,200	694	310	104
16	37			1,200	682	356	98
17	35			945	646	334	101
18	34			1,050	634	302	99
19	33			894	574	279	90
20	35			682	526	262	88
21	35			574	514	246	92
22	34		197	550	514	242	119
23	33		319	610	492	240	146
24	33		218	446	457	224	138
25	32		199	480	422	210	117
26	32		195	598	400	201	
27	32		182	682	389	190	
28	32		203	682	393	184	
29	31		312	610	397	178	
30	31		514	598	401	175	
31	31		434		406		

NOTE.—No record obtained Nov. 16 to Mar. 21 and July 26 to Sept. 30. No gage-height record Oct. 5–10, 16–17, 26–31, Nov. 3–7, May 12, May 28 to June 3; discharge interpolated.

Monthly discharge of Willow Creek near Ririe, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	45	18	32.9	2,020
November 1–15	31	28	29.7	884
March 22–31	514	182	277	5,490
April	1,200	321	652	38,800
May	794	389	603	37,100
June	492	175	315	18,700
July 1–25	205	88	140	6,940

WILLOW CREEK NEAR IONA, IDAHO

LOCATION.—In sec. 19, T. 3 N., R. 39 E., at concrete bridge 3 miles northeast of Iona, Bonneville County, and 9 miles on main road northeast from Idaho Falls. Boomer Canal crosses in a flume 600 feet above station.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—December 22, 1916, to September 30, 1925.

GAGE.—Vertical staff attached to downstream face of right abutment of concrete arch bridge; read by C. N. Kemper.

DISCHARGE MEASUREMENTS.—Made from rating bridge 250 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of mud, sand, and gravel; shifting. Banks subject to overflow at very high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 6.40 feet July 26 (discharge, 392 second-feet); minimum stage, 1.04 feet October 24 and 25, 1924 (discharge, 20 second-feet).

1916–1925: Maximum stage recorded, 7.75 feet May 16 and 17, 1917 (discharge, 603 second-feet); minimum discharge, about 1 second-foot occurred December 31, 1918, January 1, 1919, January 1–10, 1920, and December 7–10, 1923.

ICE.—Stage-discharge relation seriously affected by ice; record discontinued during winter.

DIVERSIONS.—Sand Creek and several irrigation canals divert water above station.

REGULATION.—Flow regulated at diversion works above station. Several irrigation canals waste water into creek.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve well defined. Gage read to hundredths once daily. Daily discharge obtained by applying mean daily gage height to rating table. Shifting-control method used for short period. Records fair.

Discharge measurements of Willow Creek near Iona, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 1	1.35	33.1	Apr. 28	3.32	151	June 19	3.40	157
Apr. 9	2.37	91.5	May 25	3.42	157	July 3	3.06	146

Daily discharge, in second-feet, of Willow Creek near Iona, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.
1	59	26	29		106	136	156	153	135
2	57	28	24		87	171	156	145	
3	57	30	24		94	171	156	151	
4	58	30	24		105	165	154	163	
5	57	32	23		111	167	154	164	
6	56	32	23		99	163	153	165	
7	54	34			95	158	153	163	
8	54	36			94	157	153	163	
9	47	38			92	157	151	164	
10	46	40			100	156	151	163	
11	46	40			105	153	150	163	
12	46	40			188	144	137	161	
13	46	40			228	136	136	163	
14	36	40			280	147	133	147	
15	36	42			296	153	129	144	
16	34	42			312	157	136	142	
17	32	42			288	161	146	132	
18	30	40		30	308	164	153	116	
19	26	40		38	332	157	156	118	
20	25	42		40	260	157	158	117	
21	24	42		42	213	94	160	121	
22	22	48		46	199	93	163	118	
23	21	46		54	192	110	164	122	
24	20	46		57	199	154	156	121	
25	20	48		55	206	156	156	122	
26	21	48		46	199	154	153	392	
27	23	46		36	171	156	168	290	
28	24	38		45	154	149	158	135	
29	24	30		67	163	156	151	142	
30	25	42		93	139	153	151	128	
31	26			117		154		125	

NOTE.—No record obtained Dec. 7 to Mar. 17 and Aug. 2 to Sept. 30.

Monthly discharge of Willow Creek near Iona, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	59	20	37.2	2,290
November	48	26	38.9	2,310
December 1–6	29	23	24.5	292
March 18–31	117	30	54.7	1,520
April	332	87	180	10,700
May	171	93	150	9,220
June	168	129	152	9,040
July	392	116	155	9,530

GRAYS LAKE OUTLET NEAR HERMAN, IDAHO

LOCATION.—In sec. 15, T. 3 S., R. 42 E., 3 miles below bridge at outlet of lake and 3¼ miles west of Herman, Bonneville County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 5, 1916, to September 30, 1925, when records were discontinued.

GAGE.—Stevens continuous water-stage recorder on right bank; installed April 20, 1918; inspected by Emory Poulson.

DISCHARGE MEASUREMENTS.—Made from cable near gage or by wading.

CHANNEL AND CONTROL.—Channel composed of gravel and small cobbles; left bank subject to overflow at gage height of about 3.5 feet. Control is rock ledge 25 feet below gage; practically permanent. Point of zero flow determined September 17, 1924, as at gage height 0.45 foot ±0.05 foot.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year from water-stage recorder, 2.96 feet from 1 to 2 p. m. May 30 (discharge, 214 second-feet); minimum stage, 0.83 foot from 5 to 10 p. m. September 12 (discharge, 2.3 second-feet).

1916–1925: Maximum stage recorded, 5.9 feet at 9 a. m. May 15, 1917 (discharge, 1,350 second-feet); minimum stage, 0.63 foot August 30 and 31, 1920 (discharge, 0.5 second-foot).

ICE.—Ice practically stops flow from lake at times, but springs probably keep channel near gage free from ice. Observations discontinued during winter.

DIVERSIONS.—No diversions between outlet of lake and station. Diversions for irrigation are made above lake, but amount of water so diverted is not known. On May 25, 1924, United States Office of Indian Affairs completed a dam at outlet of lake and after that date water has been diverted from south end of lake through Clark Cut into Meadow Creek Basin and thence into Blackfoot-Marsh Reservoir.

REGULATION.—Flow past station is regulated by head gate in dam at outlet of lake.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 250 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph except as indicated in footnote to table of daily discharge. Records good.

Discharge measurements of Grays Lake outlet near Herman, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 3	0.99	6.7	May 28	1.00	7.2	Sept. 24	0.92	4.6
Apr. 26	1.13	13.2	July 7	1.78	57.0			
Do	1.13	13.0	July 29	1.30	21.0			

Daily discharge, in second-feet, of Grays Lake outlet near Herman, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	------	31	166	62	18	4.0	16	13	8.6	97	43	9.0	3.1
2	------	32	154	62	20	4.0	17	16	8.6	96	35	9.0	3.3
3	9.0	24	148	61	17	4.8	18	12	11	93	32	8.6	3.4
4	9.4	12	144	59	16	7.6	19	13	10	88	30	7.6	3.5
5	8.6	11	141	58	15	5.8	20	13	9.4	86	27	7.2	3.7
6	6.8	11	139	55	14	4.8	21	}	10	82	29	7.2	5.1
7	5.4	11	132	54	14	4.0	22	}18	8.6	79	26	6.2	4.0
8	6.5	11	127	54	13	4.0	23	}	8.6	77	25	5.4	3.7
9	8.1	11	120	51	12	3.5	24	12	8.6	73	24	4.8	4.0
10	9.9	11	114	48	13	3.1	25	13	8.1	71	23	4.4	}
11	11	12	109	46	16	2.9	26	14	8.1	69	22	4.4	} 4.2
12	15	13	104	43	13	2.5	27	13	7.6	65	22	5.4	}
13	18	11	101	40	18	2.7	28	15	7.2	63	21	5.1	}
14	18	11	100	38	11	2.8	29	18	6.8	60	21	4.0	}
15	14	9.4	99	36	9.4	2.9	30	20	106	61	20	4.0	4.4
							31	------	183	------	19	4.0	------

NOTE.—Discharge estimated on account of missing gage heights Apr. 21–23 and Sept. 25–29; interpolated Apr. 25 and Sept. 14–18. Braced figures show mean discharge for periods indicated.

Monthly discharge of Grays Lake outlet near Herman, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 3-30	----------	5.4	13.1	728
May	183	6.8	20.4	1,250
June	166	60	102	6,070
July	62	19	38.3	2,360
August	20	4.0	10.2	627
September	7.6	2.5	3.95	235
The period	----------	----------	----------	11,300

BLACKFOOT RIVER ABOVE RESERVOIR, NEAR HENRY, IDAHO

LOCATION.—About sec. 9, T. 7 S., R. 42 E., at Swanson ranch, 1½ miles above flow line of Blackfoot-Marsh Reservoir, 7 miles south of Henry, Caribou County, and 13 miles north of Soda Springs.

DRAINAGE AREA.—360 square miles (measured on Land Office map).

RECORDS AVAILABLE.—March 25, 1914, to September 30, 1925, when station was discontinued.

GAGE.—Vertical staff set in concrete on right bank to rear of Swanson's house and 500 feet below highway bridge; installed June 23, 1921; read by Mrs. A. C. Swanson.

DISCHARGE MEASUREMENTS.—Made from cable at gage or by wading.

CHANNEL AND CONTROL.—Bed rough; composed of loose rocks and boulders with some gravel. Control of loose rock; fairly permanent. One channel at ordinary stages; two or three channels at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.36 feet April 18 and 19 (discharge, 893 second-feet); minimum discharge, 49 second-feet October 1–3. Lower flow may have occurred during winter.

1914–1925: Maximum stage estimated from high-water mark above gage, 6.85 feet May 16, 1917 (discharge, 2,060 second-feet); minimum stage, 0.98 foot August 17, 1919 (discharge, 23 second-feet). Minimum discharge probably occurred during periods of no record.

ICE.—Stage-discharge relation affected by ice; records discontinued during winter.

DIVERSIONS.—A few small ranch diversions are made above gage.

REGULATION.—None. Entire flow passing gage is stored in Blackfoot-Marsh Reservoir 1½ miles below.

ACCURACY.—Stage-discharge relation changed slightly prior to ice period; affected by ice November 12–21 and March 8–16. Rating curve well defined between 35 and 130 second-feet, and parallel curves thereto, used prior to November 12; after March 16, rating curve used was well defined between 35 and 500 second-feet above which it was extended parallel to former curves. Gage read to nearest two-hundredths once daily; read twice daily frequently April 5 to May 21. Daily discharge ascertained by applying daily or mean daily gage height to rating table, using shifting-control method October 1 to November 6. Records good after March 16; others fair except for estimated periods for which they are poor.

COOPERATION.—One discharge measurement furnished by United States Office of Indian Affairs.

Discharge measurements of Blackfoot River above reservoir, near Henry, Idaho during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 10	1.47	63.0	May 30	2.49	261	July 30	1.69	94.3
Apr. 5	3.06	418	July 3	1.96	146	Aug. 25	1.48	67.8
May 1	2.86	357	July 7	2.07	165	Sept. 26	1.54	77.3
May 29	2.52	276	July 8	1.95	137			

Daily discharge, in second-feet, of Blackfoot River above reservoir, near Henry, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Mar.	April	May	June	July	Aug.	Sept.
1	49	62	-------	215	356	277	113	81	76
2	49	64	-------	204	398	277	160	79	76
3	49	62	-------	264	384	290	141	79	74
4	51	64	-------	370	398	290	138	87	76
5	56	62	-------	327	384	316	239	84	87
6	57	62	-------	356	370	343	215	76	76
7	56	59	-------	290	384	316	160	74	76
8	56	56		264	398	264	136	71	84
9	56	56		330	488	239	113	69	84
10	59	56		384	384	239	113	67	81
11	68	56		398	370	227	107	76	76
12	68		100	488	384	215	98	87	74
13	63			587	327	204	98	107	71
14	59			695	384	192	98	98	74
15	59			812	398	252	92	101	81
16	57	55		853	327	290	92	92	76
17	56		71	853	457	252	104	84	71
18	58		92	893	327	215	84	81	90
19	67		84	893	398	192	81	76	90
20	64		67	622	356	181	84	76	101
21	60		104	457	370	181	90	76	104
22	56	-------	101	327	327	160	95	76	116
23	55	-------	104	488	398	160	107	71	90
23	54	-------	113	327	356	141	101	71	90
25	54	-------	123	398	343	130	107	69	84
26	54	-------	138	398	343	120	90	69	78
27	54	-------	138	384	316	120	90	74	74
28	61	-------	141	370	303	110	81	92	74
29	59	-------	239	343	277	110	84	95	76
30	63	-------	303	343	264	110	97	76	79
31	62	-------	215	-------	264	-------	84	74	-------

NOTE.—Discharge estimated on account of ice Nov. 12–21 and Mar. 8–16. Braced figures show mean discharge for periods included. No record obtained Nov. 22 to Mar. 7.

Monthly discharge of Blackfoot River above reservoir, near Henry, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	68	49	57.7	3,550
November 1–21	64	-------	57.6	2,400
March 8–31	303	67	122	5,810
April	893	204	464	27,600
May	488	264	362	22,300
June	343	110	214	12,700
July	239	81	113	6,950
August	107	67	80.3	4,940
September	116	71	82.0	4,880

BLACKFOOT-MARSH RESERVOIR NEAR HENRY, IDAHO

LOCATION.—In sec. 12, T. 5 S., R. 40 E., 12 miles northwest of Henry, Caribou County, and 45 miles southeast of Blackfoot.

RECORDS AVAILABLE.—January 1, 1912, to September 30, 1925.

GAGE.—Vertical staff near spillway at right end of dam; read to hundredths by B. B. Reynolds. Gage datum was raised 51.6 feet on April 23, 1918, but subsequent readings have been reduced to original datum. To reduce published gage heights to elevation above sea level add 6,048.40 feet.

EXTREMES OF STAGE.—Maximum stage recorded, 60.39 feet July 10 and 11; minimum stage, 43.25 feet October 2.

1912–1925: Maximum stage recorded, 68.60 feet June 27–30, 1912; minimum stage, 40.76 feet September 28 and 29, 1919.

COOPERATION.—Gage-height record furnished by United States Office of Indian Affairs.

Stored water from this reservoir is used for irrigation of lands near Pocatello and on Fort Hall Indian Reservation, the area covered by the project being about 50,000 acres. The reservoir is formed by a loose rock and hydraulic-fill dam with a concrete core wall, paved on the reservoir side to prevent erosion. The dam is 120 feet long at base, 250 feet long at crest, and about 40 feet high, the elevation at crest being 6,132.0 feet. The reservoir is 17 miles long and 5½ miles wide at the widest point, and covers about 15,000 acres of land. The spillway, excavated in rock at north end of dam, is 50 feet wide, and the crest elevation is 6,118.5 feet at which elevation the capacity of reservoir is 312,000 acre-feet. Since reconstruction of spillway in 1924 and 1925, provision has been made by means of flashboards to store water to an elevation of 6,124 feet, at which elevation the capacity of reservoir is 409,000 acre-feet. Elevation at lowest point to which water may be drawn is 6,086 feet. The present distribution system comprises 61 miles of main canal, 128 miles of laterals, and 11½ miles of drainage ditch.

Daily gage height, in feet, of Blackfoot-Marsh Reservoir near Henry, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	47.00	47.86	------	-----	51.10	52.14	56.60	59.24	60.27	59.40	58.95
2	43.25	------	47.92	------	------	51.13	52.28	56.70	59.30	60.29	59.35	58.94
3	------	------	47.96	------	------	51.15	52.45	56.77	59.36	60.30	59.28	58.95
4	------	------	48.00	------	------	51.17	52.60	56.86	59.40	60.33	59.25	58.98
5	------	47.30	48.06	------	------	51.20	52.69	56.93	59.44	60.30	59.21	58.97
6	------	47.34	48.12	------	------	51.24	52.85	57.02	59.52	60.33	59.18	58.97
7	------	47.38	48.18	------	50.41	51.28	52.98	57.12	59.60	60.38	59.18	58.97
8	44.40	47.43	48.21	------	50.45	51.30	53.10	57.20	59.67	60.36	59.16	58.99
9	------	47.50	48.23	------	50.48	51.32	------	57.25	59.74	60.38	59.13	59.00
10	------	47.51	48.25	------	50.52	51.35	------	57.35	59.80	60.39	59.10	59.01
11	------	47.52	48.28	------	50.56	------	------	57.48	59.82	60.39	59.05	59.02
12	------	47.53	48.30	49.44	50.58	------	------	57.57	59.86	60.38	59.03	59.03
13	------	47.54	48.33	------	50.60	------	53.70	57.68	59.90	60.37	59.02	59.05
14	------	47.55	48.35	------	------	------	------	57.75	59.94	60.35	59.01	59.05
15	------	47.56	48.37	------	------	------	------	57.90	59.97	60.33	59.00	59.09
16	------	47.57	48.40	------	------	------	------	58.05	60.03	60.30	59.00	59.11
17	45.96	47.58	------	------	------	------	54.50	58.15	60.08	60.22	59.00	59.12
18	------	47.59	------	------	------	------	54.65	58.25	60.12	60.16	59.01	59.13
19	46.30	47.60	------	------	------	------	55.00	58.33	60.17	60.10	59.03	59.14
20	------	47.61	48.65	------	------	------	55.20	58.43	60.19	60.04	59.03	59.15
21	------	47.62	------	------	------	------	55.35	58.50	60.21	59.94	59.04	59.16
22	46.40	47.63	------	------	------	------	55.47	58.60	60.23	59.87	59.02	59.19
23	------	47.64	------	------	------	------	55.54	58.70	60.27	59.84	59.00	59.21
24	------	47.65	------	------	------	51.75	55.65	58.76	60.30	59.82	59.02	59.23
25	------	47.66	------	------	------	------	55.80	58.85	60.32	59.77	58.95	59.25
26	46.60	47.67	------	50.02	------	51.82	56.05	58.90	60.34	59.70	58.93	59.25
27	------	47.68	------	------	------	------	56.15	58.95	60.35	59.63	58.90	59.29
28	------	47.70	------	------	------	------	56.25	59.02	60.37	59.58	58.90	59.30
29	------	47.76	------	------	------	------	56.37	59.08	60.30	59.54	58.90	59.30
30	------	47.80	------	------	------	------	56.47	59.15	60.29	59.50	58.92	59.30
31	------	------	49.00	------	------	52.10	------	59.19	------	59.45	58.92	------

BLACKFOOT RIVER NEAR HENRY, IDAHO

LOCATION.—In sec. 11, T. 5 S., R. 40 E., 200 feet below wagon bridge at Rockyford crossing, 1 mile below Backfoot-Marsh Dam of United States Office of Indian Affairs, and 12 miles northwest of Henry, Caribou County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—July 15, 1908, to September 30, 1925, when station was discontinued.

GAGE.—Friez water-stage recorder on left bank; installed September 18, 1912; inspected by B. B. Reynolds.

DISCHARGE MEASUREMENTS.—Made from cable 600 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of lava rock, boulders, and gravel; fairly permanent. One channel at all stages. Growth of moss at times affects stage-discharge relation.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.56 feet at 9 p. m. July 17 (discharge, 558 second-feet); minimum discharge, 3 second-feet October 8–21.

1908–1925: Maximum stage recorded, 4.15 feet May 14, 1909 (discharge 1,640 second-feet); minimum stage, 0.50 foot May 11 and 12, 1917 (discharge, about 1 second-foot).

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—Few small diversions for irrigation above reservoir.

REGULATION.—Flow entirely regulated by storage in reservoir, which has a capacity of 312,000 acre-feet.

ACCURACY.—Stage-discharge relation affected by growth of moss. Rating curve, well defined below 800 second-feet, and curves parallel thereto used. Staff gage read to hundredths once daily prior to November 23 except for short period. Operation of water-stage recorder fairly satisfactory after May 26. Daily discharge ascertained by applying mean daily gage height to rating table, except as noted in footnote to daily-discharge table. During period water-stage recorder was operated mean daily gage height obtained by inspection of recorder graph. Records good June to September; others fair except for estimated periods, for which they are poor.

COOPERATION.—Gage-height record and two discharge measurements furnished by United States Office of Indian Affairs.

Discharge measurements of Blackfoot River near Henry, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct 8	0.71	* 3.5	July 30	2.16	333	Sept. 25	1.27	76.6
May 27	1.00	28.3	Do	2.16	368	Do	2.44	531
Do	1.20	64.1	Aug. 17	1.45	115	Do	2.01	315
Do	1.28	78.8	Aug 24	1.45	116	Do	1.67	185
July 6	1.54	116						

* Estimated.

Daily discharge, in second-feet, of Blackfoot River near Henry, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	14							21	122	359	86
2	38	14							18	124	359	86
3	38	14							18	122	359	89
4	38	14							18	122	336	89
5	38	14							16	116	317	91
6	38	14							16	116	283	91
7	38	14							16	116	266	86
8	3	14							16	119	270	71
9		14							16	122	270	74
10		14							16	127	270	67
11		14							16	132	229	67
12		14							16	138	219	61
13		14						7	16	150	226	43
14		14							16	259	202	45
15	3	14	6	6	6	7	7		16	415	173	45
16		14							16	452	164	45
17		14							16	490	135	42
18		14							16	552	116	38
19		14							42	552	116	38
20		14							65	552	116	38
21		14							80	552	116	22
22	8	14							80	535	116	6
23	8								80	501	116	6
24	8								78	452	116	9
25	8								80	404	116	150
26	8	6						21	84	379	119	6
27	8							31	108	369	122	5
28	8							22	106	359	122	5
29	14				-------			30	113	359	119	5
30	14				-------			30	122	359	119	5
31	14	-------			-------		-------	27	-------	359	113	-------

NOTE.—Discharge estimated because of missing gage heights Oct. 1, 9–21, Nov. 23 to May 25, Sept. 22–24, and 30, based on observer's notes on gate changes in dam and flow released from reservoir; interpolated July 24. Braced figures show mean discharge for periods indicated.

Monthly discharge of Blackfoot River near Henry, Idaho,[a] for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	38	3	12.9	793
November	14	-------	11.9	708
December	-------	-------	[a] 6	369
January	-------	-------	[a] 6	369
February	-------	-------	[a] 6	333
March	-------	-------	[a] 7	430
April	-------	-------	[a] 7	417
May	31	-------	10.8	664
June	122	16	44.6	2,650
July	552	116	307	18,900
August	359	113	196	12,100
September	91	5	50.4	3,000
The year	552	3	56.2	40,700

[a] Estimated.

BLACKFOOT RIVER NEAR SHELLEY, IDAHO

LOCATION.—In sec. 7, T. 2 S., R. 38 E., 1½ miles above mouth of canyon, 3 miles above N. A. Just ranch, 10 miles southeast of Shelley, Bingham County, and 18 miles northeast of Blackfoot. Below all large tributaries.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—June 26, 1909, to September 30, 1925. March 23, 1903, to December 31, 1909, records were obtained near Presto, 5 miles below present site. No tributaries enter between the two sites, but during the irrigation season several canals divert about 50 second-feet.

GAGE.—Friez water-stage recorder on right bank; inspected by R. E. Reid and M. A. Jensen.

DISCHARGE MEASUREMENTS.—Made by wading or from cable at gage.

CHANNEL AND CONTROL.—Bed rocky and rough. One channel at all stages. Control shifts occasionally.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 5.16 feet at 4 p. m. July 21 (discharge, 1,030 second-feet); minimum stage probably occurred during period when ice affected stage-discharge relation.

1909–1925: Maximum stage recorded, 6.30 feet at 9 p. m. July 23, 1923 (discharge, 1,830 second-feet); minimum stage, 2.83 feet at midnight January 23, 1919 (discharge, about 15 second-feet). Ice jam above station caused temporary drop in stage.

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—No noteworthy diversions are made from river or tributaries above station.

REGULATION.—Flow regulated by storage in Blackfoot-Marsh Reservoir of United States Office of Indian Affairs, about 40 miles upstream.

ACCURACY.—Stage-discharge relation not permanent; affected by ice December 6 to January 23. Standard rating curve well defined. Operation of water-stage recorder fairly satisfactory except during winter, when occasional staff readings were obtained. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph or from staff gage readings. Open-water records, good; from December to February, fair.

Discharge measurements of Blackfoot River near Shelley, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 16	3.14	52.6	May 19	3.61	182	June 27	3.64	181
Do	3.14	46.7	May 28	3.66	178	July 27	4.20	414
Feb. 27	3.15	51.6	Do	3.61	165	Aug. 13	3.90	293
Apr. 18	3.93	299.	June 27	3.64	176			

Daily discharge, in second-feet, of Blackfoot River near Shelley, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	61	55		64	55	229	202	139	210	412	161
2	90	59	57		67	57	217	206	136	210	412	139
3	100	57	52	55	70	59	244	213	130	206	412	139
4	114	57	53		74	68	290	213	133	202	402	142
5	106	57	57		77	71	290	210	139	200	363	142
6	100	57			80	73	232	206	148	197	358	142
7	98	65			83	76	184	206	148	195	316	142
8	83	65			81	86	178	217	142	188	316	152
9	70	68			80	76	181	210	130	184	325	128
10	114	70			78	70	202	202	114	181	334	122
11	90	65	60		77	61	229	217	111	181	325	119
12	79	63			75	68	265	217	103	181	269	116
13	68	72		50	74	70	290	221	103	178	294	111
14	61	72			72	59	269	202	103	178	273	100
15	57	72			71	72	252	210	116	392	236	100
16	50	76			71	65	236	221	130	448	210	100
17	52	74			70	70	248	217	122	492	210	98
18	53	68			70	63	290	195	111	555	178	103
19	55	61			69	65	248	174	103	584	174	130
20	56	76			69	83	232	164	122	590	170	119
21	58	70			68	111	217	164	145	671	167	125
22	59	68	40	55	63	125	213	164	164	646	167	114
23	60	48			68	158	236	158	161	602	167	96
24	62	61		61	74	122	192	155	158	549	164	90
25	63	50		61	90	130	256	145	152	492	164	122
26	63	68		61	71	128	240	142	148	448	170	155
27	61	79		61	52	139	221	142	161	422	188	76
28	61	74		61	55	155	206	161	181	412	198	68
29	61	79	50	61	-------	195	198	145	188	417	174	68
30	61	55		61	-------	252	195	142	206	414	174	65
31	61	-------		61	-------	221	-------	139	-------	412	167	-------

NOTE.—Braced figures show estimated mean discharge for periods indicated. Discharge estimated Dec. 6 to Jan. 23 from study of observer's notes, weather records, and occasional gage readings. No gage-height record Oct. 1–3, Aug. 3, 4; gage height inaccurate Nov. 14; discharge estimated. Discharge interpolated Oct. 20–24, Jan. 25–30, Feb. 1–6, 8–13, 15–20, 26, Mar. 5, 6, July 5, 6, and 30.

Monthly discharge of Blackfoot River near Shelley, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	114	50	72.5	4,460
November	79	50	65.6	3,900
December	-------	-------	50.8	3,120
January	-------	-------	54.1	3,330
February	90	52	71.9	3,990
March	252	55	100	6,150
April	290	178	233	13,900
May	221	139	186	11,400
June	206	103	138	8,210
July	671	178	362	22,300
August	412	164	254	15,600
September	161	65	116	6,900
The year	671	-------	143	103,000

BLACKFOOT RIVER NEAR BLACKFOOT, IDAHO

LOCATION.—In sec. 27, T. 3 S., R. 34 E., 2 miles above junction of Blackfoot River with Snake River and 8 miles southwest of Blackfoot, Bingham County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—July 27, 1913, to September 30, 1925.

GAGE.—Inclined staff on right bank, half a mile south of Kofoed ranch house; read by Eva Davis.

DISCHARGE MEASUREMENTS.—Made by wading or from cable 100 yards below gage.

CHANNEL AND CONTROL.—Bed composed of gravel. Control presumably of same material; fairly permanent. One channel at all stages. Banks covered with heavy growth of brush and willows which may affect stage-discharge relation at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 8.58 feet at 11 a. m. September 23 (discharge, 696 second-feet); minimum stage, 4.08 feet at 12.20 p. m. July 15 (discharge, 2 second-feet).

1913–1925: Maximum stage recorded, 9.6 feet at 12.30 p. m. May 21, 1921 (discharge, 868 second-feet); no flow on numerous days in 1919, 1921, and 1924.

ICE.—No records obtained during winter.

DIVERSIONS.—Principal diversions above gage are the Fort Hall canals near Blackfoot; several smaller diversions also made near Blackfoot.

REGULATION.—Flow regulated by storage in Blackfoot-Marsh Reservoir of the United States Office of Indian Affairs and by manipulation of canal head gates above station.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve well defined below 500 second-feet and fairly well defined above that stage Gage read to hundredths daily; diurnal changes in stage caused by regulation are often source of error. Daily discharge ascertained by applying gage height to rating table; shifting-control method used June 23 to July 14. Records fair.

Discharge measurements of Blackfoot River near Blackfoot, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 5	7.50	525	June 17	5.54	124	Aug. 7	5.32	84.5
May 22	[a] 5.85	168	June 22	4.65	29.0	Aug. 17	6.78	370
June 3	5.93	204	July 15	4.08	2.04	Sept. 4	5.90	186
June 9	6.68	352	July 25	6.02	214	Sept. 24	8.16	616

[a] Gage height probably in error.

Daily discharge, in second-feet, of Blackfoot River near Blackfoot, Idaho, for the year ending September 30, 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	------	373	131	53	388	16	214	66	4	390	229
2	------	242	186	63	407	17	297	123	4	373	209
3	------	204	193	95	388	18	312	137	28	356	186
4	------	219	234	142	193	19	260	102	38	222	209
5	505	226	283	160	186	20	126	20	22	166	283
6	416	267	359	126	186	21	102	26	30	160	390
7	407	451	410	82	229	22	160	27	50	100	624
8	407	419	393	52	175	23	175	56	144	118	696
9	382	371	305	56	239	24	154	39	175	126	626
10	541	462	341	92	260	25	121	65	214	160	419
11	505	390	216	148	339	26	88	47	232	133	388
12	451	283	60	186	370	27	40	18	209	130	388
13	330	193	30	160	373	28	26	87	71	162	390
14	293	100	18	232	321	29	10	95	52	289	326
15	260	90	3	307	239	30	334	116	57	416	247
						31	356	------	56	373	------

NOTE.—No record Oct. 1 to May 4.

Monthly discharge of Blackfoot River near Blackfoot, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May 5–31	541	10	269	14,400
June	462	18	177	10,500
July	410	3	147	9,040
August	416	52	182	11,200
September	696	175	330	19,600
The period				64,700

LITTLE BLACKFOOT RIVER AT HENRY, IDAHO

LOCATION.—In sec. 10, T. 6 S., R. 42 E., at bridge on Kirk ranch at Henry, Caribou County, a short distance above flow line of Blackfoot-Marsh Reservoir, and 20 miles north of Soda Springs.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 24, 1914, to September 30, 1925, when station was discontinued.

GAGE.—Vertical staff attached to upstream side of bridge on left bank; read by Mrs. W. J. Chester. Prior to August 19, 1919, vertical staff at approximately same site but at different datum was used.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of rocks overlain with sand and gravel. Control is rock crest on an 8-foot falls, 20 feet below gage. Stage-discharge relation at times seriously affected by growth of aquatic vegetation.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.68 feet at 5 p. m. April 11 (discharge, 64 second-feet); minimum discharge, 8.3 second-feet October 7, 9, and 13.

1914–1925: Maximum stage recorded, 3.5 feet at 8 p. m. April 19, 1914 (discharge determined from extension of rating curve, about 292 second-feet); minimum discharge, 6.9 second-feet January 8, 1919.

ICE.—Stage-discharge relation not affected by ice because of warm springs.

DIVERSIONS.—One small diversion above station and one below.

REGULATION.—No artificial regulation.

ACCURACY.—Stage-discharge relation affected by growth of aquatic vegetation. Standard rating curve well defined. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records fair for October and May to September; others poor.

COOPERATION.—One discharge measurement furnished by United States Office of Indian Affairs.

Discharge measurements of Little Blackfoot River at Henry, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 10	0.82	8.8	Apr. 28	0.94	18.3	July 30	0.95	11.8
Apr. 5	*1.45	54.4	May 26	.85	14.3	Aug. 25	.96	11.6
Apr. 25	1.38	40.9	May 29	.84	12.9	Sept. 26	.84	11.7
Do	1.30	37.4	July 7	.92	13.2			

* Affected by surge; gage reading not accurate.

Daily discharge, in second-feet, of Little Blackfoot River at Henry, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.3	12	12	12	8.6	8.6	10	14	14	12	12	12
2	9.3	12	12	12	8.6	8.6	11	14	14	11	12	12
3	9.0	12	12	12	8.6	8.6	18	15	15	12	12	12
4	9.0	12	12	12	8.6	8.6	27	14	15	12	12	12
5	9.0	12	13	12	8.6	8.6	44	14	19	13	11	12
6	8.6	13	13	11	8.6	8.6	31	14	22	13	11	12
7	8.3	12	12	11	8.6	8.6	27	15	16	13	11	12
8	8.6	12	12	11	8.6	8.6	40	18	14	13	11	13
9	8.3	13	12	10	9.0	8.6	42	17	14	12	11	12
10	9.0	13	12	10	9.0	8.6	60	16	15	13	11	12
11	9.7	13	12	9.3	9.0	8.6	60	15	13	12	12	12
12	8.6	13	12	9.3	8.6	8.6	45	15	12	12	12	12
13	8.3	12	12	9.3	8.6	8.6	27	14	12	12	13	12
14	9.0	13	12	9.3	8.6	8.6	22	15	15	12	13	11
15	8.6	13	12	9.3	8.6	8.6	14	18	14	12	13	12
16	8.6	12	12	8.6	8.6	8.6	19	23	14	12	12	12
17	9.0	12	13	8.6	8.6	8.6	22	26	14	12	12	12
18	9.7	11	13	8.6	8.6	8.6	26	25	14	12	12	13
19	9.7	12	13	8.6	8.6	8.6	31	22	13	12	12	14
20	10	11	12	8.6	8.6	8.6	32	18	12	12	12	13
21	10	12	12	8.6	8.6	8.6	28	16	12	12	12	14
22	11	11	12	8.6	8.6	8.6	24	16	12	13	12	13
23	11	12	12	8.6	8.6	8.6	26	16	12	12	12	13
24	11	12	12	8.6	8.6	8.6	34	14	12	12	12	12
25	11	12	12	8.6	8.6	8.6	38	14	12	12	14	12
26	11	12	12	8.6	8.6	8.6	25	14	12	12	12	12
27	12	12	12	8.6	8.6	9.0	20	14	12	12	13	12
28	12	12	12	8.6	8.6	10	18	13	11	12	13	12
29	12	12	12	8.6	-------	10	17	13	11	12	12	12
30	12	12	12	8.6	-------	10	15	13	11	12	12	12
31	12	-------	12	8.6	-------	9.3	-------	13	-------	12	12	------

Monthly discharge of Little Blackfoot River at Henry, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	12	8.3	9.83	604
November	13	11	12.1	720
December	13	12	12.2	750
January	12	8.6	9.58	589
February	9.0	8.6	8.64	480
March	10	8.6	8.77	539
April	60	10	28.4	1,690
May	26	13	16.1	990
June	22	11	13.6	809
July	13	11	12.2	750
August	14	11	12.0	738
September	14	11	12.3	732
The year	60	8.3	13.0	9,390

MEADOW CREEK NEAR HENRY, IDAHO

LOCATION.—In sec. 3, T. 6 S., R. 42 E., half a mile above flow line of Blackfoot-Marsh Reservoir, three-fourths mile below Goose Lake or Pelican Slough, and 1½ miles northeast of Henry, Caribou County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 20, 1914, to September 30, 1925.

GAGE.—Stevens continuous water-stage recorder on left bank; installed June 27, 1914; inspected by Mrs. W. J. Chester.

DISCHARGE MEASUREMENTS.—Made from cable at gage or by wading.

CHANNEL AND CONTROL.—Bed composed of rock and gravel. One channel at all stages. Banks very brushy. Control somewhat shifting.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year from water-stage recorder, 4.28 feet at 4 a. m. April 18 (discharge, 321 second-feet); minimum stage, 1.60 feet October 10 (discharge, 8.5 second-feet).

1914–1925: Maximum stage recorded, 4.81 feet May 17, 1917 (discharge, 424 second-feet; minimum discharge probably somewhat less than 0.5 second-foot during July, 1919.

ICE.—Stage-discharge relation seriously affected by ice; observations discontinued during winter.

DIVERSIONS.—Several small irrigation diversions above gage.

REGULATION.—None prior to June, 1924. After that time some water diverted from Grays Lake through Clark Cut into Meadow Creek above station.

ACCURACY.—Stage-discharge relation not permanent owing to accumulation and removal of moss and débris on control. Standard rating curve fairly well defined. Operation of water-stage recorder unsatisfactory at times owing to clock trouble. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph, except as noted in footnote to daily-discharge table. Records fair for low water and interpolated periods; others good.

COOPERATION.—One discharge measurement furnished by United States Office of Indian Affairs.

Discharge measurements of Meadow Creek near Henry, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 10	1.60	8.5	July 3	2.34	35.5	Sept. 27	1.87	16.7
Apr. 6	3.50	167	July 29	1.98	17.9	Do	1.87	13.6
Apr. 24	4.09	271	Aug. 25	1.77	12.1	Do	1.86	16.1
Apr. 28	4.07	281	Sept. 24	1.90	16.8	Do	1.85	13.7
May 26	3.45	163	Sept. 26	1.88	15.1			
May 29	3.35	142	do	1.88	13.6			

Daily discharge, in second-feet, of Meadow Creek near Henry, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	------	257	131	32	17	12	16	300	201	94	25	17	12
2	------	251	130	34	16	12	17	310	201	92	24	16	12
3	------	250	127	35	16	12	18	310	199	89	22	16	12
4	160	244	126	35	16	12	19	310	198	84	21	16	13
5	164	238	126	37	16	12	20	300	192	80	20	15	14
6	168	232	126	38	16	12	21	290	185	73	20	14	15
7	153	226	126	38	16	13	22	279	179	62	19	14	15
8	137	220	123	38	15	13	23	290	172	53	18	13	16
9	122	214	119	36	14	13	24	279	166	45	17	12	16
10	130	208	116	34	14	13	25	269	163	37	17	12	16
11	137	207	110	33	16	13	26	269	160	32	19	12	16
12	155	208	105	31	16	12	27	279	154	30	18	12	15
13	216	207	100	30	17	12	28	269	149	29	18	12	15
14	259	207	95	27	18	12	29	269	144	28	18	12	16
15	290	205	95	26	18	12	30	259	140	30	18	12	16
							31	------	136	------	17	12	------

NOTE.—Discharge interpolated because of missing gage height Apr. 5, 7, 8, 10, May 4–9, 20–23, 25, July 17, 18, 20–22, Aug. 16, 29, 31, Sept. 6, 7, 10–14. Shifting-control method used Apr. 25–27, July 9–23, and Sept. 8–23. Control partly or wholly cleaned on Apr. 28, May 26, Sept. 24, and 27. Daily staff readings used Apr. 9, May 24, July 19, Aug. 30, Sept. 8, 9, when water-stage recorder was not operating.

Monthly discharge of Meadow Creek near Henry, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 4-30	310	122	2.36	12,600
May	257	136	197	12,100
June	131	28	87.1	5,180
July	38	17	26.5	1,620
August	18	12	14.8	910
September	16	12	13.5	803
The period				33,200

MUD LAKE NEAR TERRETON, IDAHO

LOCATION.—In NW. ¼ sec. 3, T. 6 N., R. 35 E., at C. O. Magill ranch, in backwater of Camas Creek, 6 miles northeast of Terreton, Jefferson County, 7 miles southwest of Hamer, and 15 miles northwest of Roberts.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 4, 1921, to September 30, 1925.

GAGE.—Vertical staff installed April 14, 1923, on bridge pier near left bank of Camas Creek; read by C. O. Magill. Elevation of zero of gage is 4,775.33 feet above mean sea level.

EXTREMES OF CONTENTS.—Maximum stage recorded during year, 8.08 feet May 17-19, 21, and 22 (contents, 47,700 acre-feet); minimum contents, 14,300 acre-feet August 31, September 1-7 and 13.

1921-1925: Maximum stage recorded, 9.20 feet May 5, 1923 (contents, 61,660 acre-feet); minimum contents, 14,300 acre-feet September 3, 1924; August 31, September 1-7, and 13, 1925.

ICE.—Complete ice cover during winter.

DIVERSIONS.—Considerable water diverted from tributaries to Mud Lake and from diversions by pumping and gravity from the lake during irrigation season.

REGULATION.—None except as supply in lake is affected by pumping operations.

Daily contents, in acre-feet, of Mud Lake near Terreton, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,500	18,000	22,400	26,400	30,900	35,300	41,100	46,500	46,500	35,200	23,200	14,300
2	14,500	18,100	22,500	26,600	31,100	35,500	41,100	46,700	46,500	34,900	22,700	14,300
3	14,900	18,200	22,500	26,800	31,100	35,500	41,200	46,500	46,000	34,600	22,300	14,300
4	15,000	18,200	22,600	27,000	31,300	35,500	41,300	46,500	45,400	34,200	22,000	14,300
5	15,000	18,300	22,800	27,100	31,500	35,700	41,600	46,500	45,600	34,000	21,400	14,300
6	15,000	18,400	23,100	27,400	31,700	36,000	42,100	46,500	45,800	34,000	21,100	14,300
7	15,100	18,600	23,400	27,500	31,900	36,000	42,900	46,500	46,000	33,600	20,800	14,300
8	15,100	19,100	23,700	27,800	32,100	36,400	42,900	47,100	45,400	33,200	20,300	14,600
9	15,100	19,100	23,900	28,000	32,400	36,900	43,100	46,900	45,100	33,200	19,700	14,600
10	15,200	19,200	23,900	28,200	32,600	37,000	43,400	46,500	44,800	32,800	19,600	14,600
11	15,200	19,300	24,100	28,300	32,800	37,000	43,400	46,500	44,300	32,400	19,400	14,500
12	15,800	19,400	24,200	28,500	32,900	37,000	43,700	46,500	44,300	32,100	19,200	14,400
13	15,900	19,700	24,400	28,600	33,100	37,300	43,700	47,100	43,700	31,900	18,900	14,300
14	16,000	19,800	24,600	28,700	33,200	37,500	43,200	47,100	43,200	31,500	18,900	14,500
15	16,100	20,000	24,700	28,800	33,300	37,800	43,100	47,100	42,900	30,700	18,700	14,900
16	16,200	20,100	25,000	28,900	33,400	37,900	43,200	47,400	42,600	30,400	18,400	14,800
17	16,300	20,200	25,000	29,100	33,500	38,000	43,700	47,700	42,100	30,000	18,100	14,800
18	16,400	20,200	25,100	29,100	33,700	38,100	44,300	47,700	41,600	29,600	17,900	14,800
19	16,500	20,300	25,100	29,200	33,800	38,100	44,300	47,700	41,100	29,200	17,600	15,300
20	16,800	20,500	25,300	29,300	34,000	38,200	43,700	47,600	40,600	28,500	17,200	15,300

Daily contents, in acre-feet, of Mud Lake near Terreton, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	17,000	20,800	25,300	29,400	34,200	38,300	44,300	47,700	40,100	28,100	17,100	15,300
22	17,100	20,900	25,400	29,400	34,400	38,600	44,800	47,700	39,600	27,800	16,600	15,300
23	17,300	21,100	25,400	29,400	34,400	38,700	46,000	47,400	39,100	27,400	16,300	15,400
24	17,400	21,400	25,600	29,500	34,600	39,000	45,700	47,600	38,100	26,400	16,100	15,500
25	17,600	21,500	25,600	29,600	34,600	39,200	45,700	47,600	37,900	25,700	15,600	15,600
26	17,600	21,600	25,800	29,700	34,800	39,200	46,000	47,200	37,200	25,400	15,300	15,600
27	17,600	21,900	25,800	29,800	35,100	39,400	46,200	47,200	36,800	25,100	15,100	15,700
28	17,700	22,100	26,000	30,100	35,100	39,600	46,200	47,100	36,300	24,700	15,100	15,600
29	17,900	22,100	26,000	30,300	-------	40,100	46,300	47,100	35,900	24,100	14,800	15,700
30	17,900	22,200	26,200	30,500	-------	40,600	46,500	47,100	35,800	24,100	14,600	15,800
31	17,900	-------	26,200	30,700	-------	40,900	-------	47,100	-------	23,800	14,300	-------

NOTE.—Error in readings from Magill gage caused by action of ice Dec. 26 to Feb. 18 and by action of wind Oct. 3, 4, and Sept. 6; contents determined from gage-height graph based on readings from gage at Oswley Canal Co's pump house.

CAMAS CREEK NEAR DUBOIS, IDAHO

LOCATION.—In NE. ¼ SE. ¼ sec. 13, T. 11 N., R. 38 E., 2 miles north of Lone Tree Reservoir, 2 miles downstream from 18-mile shearing corral, 5½ miles south of Idmon, and 19 miles northeast of Dubois, Clark County. Station is 26 miles north (upstream) of gage on Camas Creek near Camas.

DRAINAGE AREA.—216 square miles (measured on United States Geological Survey map of Mud Lake Basin).

RECORDS AVAILABLE.—April 11, 1921, to September 30, 1925.

GAGE.—Stevens continuous water-stage recorder on right bank; inspected by Survey engineers.

DISCHARGE MEASUREMENTS.—Made at high stages from wagon bridge 2 miles above gage at which point during extreme high stages water flows in a flood channel to the left of main channel and unites above gage. Measured by wading at low and medium stages 700 feet above gage.

CHANNEL AND CONTROL.—Bed composed of lava boulders and gravel; practically permanent. Banks fairly high and brushy; right bank subject to overflow. Control well defined.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.39 feet at 4 p. m. April 18 (discharge, 848 second-feet); minimum stage, 0.82 foot from noon October 1 to 4 a. m. October 2 (discharge, 15 second-feet).

1921–1925: Maximum stage recorded, 5.75 feet probably on May 21, 1922 (discharge, 1,550 second-feet); minimum stage, 0.65 foot from 4 p. m. June 5 to 9 a. m. June 6, 1924 (discharge, 8.5 second-feet).

ICE.—Stage-discharge relation seriously affected by ice. Records discontinued during winter.

DIVERSIONS.—Two stock-watering ditches of the Wood Live Stock Co. are the principal diversions above station. In addition, a number of small irrigation ditches divert water from tributaries above.

REGULATION.—Some water stored in Frazier Reservoir, which has a capacity of from 2,000 to 3,000 acre-feet, on West Camas Creek, and released during low-water period for use above gaging station.

ACCURACY.—Stage-discharge relation changed during winter. Rating curves well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph except as noted in footnote to table of daily discharge. Records excellent except April to June which are good; estimated periods fair.

Discharge measurements of Camas Creek near Dubois, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 12	2.31	[a] 50	June 3	3.29	[b] 366	July 24	1.28	42.8
May 6	3.20	[b] 342	June 28	1.32	44.4	Aug. 1	1.18	35.5
May 21	3.52	[b] 441	July 11	1.42	54.4	Aug. 21	1.18	34.6

[a] Estimated; stage-discharge relation affected by ice.
[b] Measured from bridge 2 miles above gage, omitting flow in side channel which carries about 10 per cent of total flow at these stages.

Daily discharge, in second-feet, of Camas Creek near Dubois, Idaho, for the year ending September 30, 1925

Day	Oct.	Apr.	May	June	July	Aug.	Sept.
1	15	-------	441	258	80	35	35
2	20	-------	473	296	86	36	37
3	21	-------	490	383	75	40	36
4	19	-------	441	441	68	41	34
5	18	-------	411	383	77	43	34
6	18	-------	397	331	143	39	37
7		-------	411	286	154	37	40
8		-------	507	293	93	35	43
9		-------	473	305	71	35	47
10	20	-------	356	237	60	35	48
11		-------	331	211	54	35	42
12		50	490	186	49	35	39
13		} 150	581	172	48	37	37
14	21		457	152	44	50	37
15	-------	245	411	142	42	65	38
16	-------	298	397	154	40	51	38
17	-------	543	441	172	39	45	39
18	-------	685	441	165	37	43	41
19	-------	562	426	140	36	40	53
20	-------	490	441	115	37	37	
21	-------	581	473	101	40	35	
22	-------	543	543	98	40	34	
23	-------	329	507	102	41	34	
24	-------	289	426	92	42	33	
25	-------	356	411	74	42	32	52
26	-------	331	411	65	40	32	
27	-------	324	370	56	37	35	
28	-------	331	329	47	37	41	
29	-------	344	293	53	37	40	
30	-------	383	264	64	36	37	
31	-------	-------	260	-------	36	35	-------

NOTE.—Discharge estimated because of missing gage heights Oct. 7–13 and Sept. 20–30; estimated on account of ice effect Apr. 12–14. Discharges interpolated June 26 and 27. Braced figures show mean discharge for periods indicated.

Monthly discharge of Camas Creek near Dubois, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1–14	-------	15	19.4	539
April 12–30	685	-------	368	13,900
May	581	260	423	26,000
June	441	47	186	11,100
July	154	36	56.8	3,490
August	65	32	38.8	2,390
September	-------	34	44.2	2,630

CAMAS CREEK NEAR CAMAS, IDAHO

LOCATION.—In NE. ¼ sec. 34, T. 9 N., R. 36 E., Clark County, one-fourth mile south of C. J. Thompson ranch, 1 mile east of Oregon Short Line Railroad, and 5 miles northeast of Camas, Jefferson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 1, 1921, to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on right bank; installed November 30, 1921; inspected by William McCall.

DISCHARGE MEASUREMENTS.—Made from wagon bridge 500 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of lava covered in places by gravel. Control formed by lava boulders; well defined. Banks high; one channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.13 feet at 4 a. m. April 22 (discharge, 150 second-feet); minimum discharge occurred during winter and was not accurately determined.

1921–1925: Maximum stage recorded, 4.82 feet at 9.30 a. m. May 22, 1922 (discharge, 645 second-feet); minimum stage, —0.06 foot from 10 p. m. July 5 to 2 a. m. July 6, 1924 (discharge, 2.6 second-feet).

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—A number of irrigation and stock water diversions above station.

REGULATION.—Flow past station affected to some extent by losses through lava crevices in Lone Tree Reservoir, 24 miles upstream. Gates in dam not regulated during year.

ACCURACY.—Stage-discharge relation changed during ice-affected period. Rating curves well-defined. Operation of water-stage recorder satisfactory during open-channel period except for short periods when observer failed to visit gage regularly. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspecting recorder graph. December to March records poor; others good except for estimated periods for which they are fair.

COOPERATION.—Gage-height record furnished by Camas Mutual Irrigation District.

Discharge measurements of Camas Creek near Camas, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 6	0.51	12.0	May 20	1.59	85.3	July 10	1.35	59.5
Apr. 13	1.44	69.7	June 4	1.57	82.5	July 25	.88	28.0
May 5	1.65	90.2	June 28	.90	28.4	Aug. 20	.86	25.6

Daily discharge, in second-feet, of Camas Creek near Camas, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.7	16						93	78	21	26	
2	5.6	14						95	78	35	25	
3	5.3	14	10				20	94	79	21	26	
4	5.3	16						93	83	40	27	
5	7.6	15						94	87	54	28	
6	7.8	14	11					94	89	54	28	
7	6.8	14						93	88	58	28	
8	6.8	15						93	88	60	24	
9	6.6	14					30	92	87	60	21	
10	7.8	12						93	87	60	21	25
11	8.7	18	10					94	86	56	21	
12	14	12					66	92	84	53	21	
13	11	7.8					69	92	77	45	22	
14	16	7.4					73	94	63	37	23	
15	14	7.2			10		76	95	41	34	25	
16	12	7.0		7		15	78	93	43	33	33	
17	10						84	90	80	30	35	
18	9.7						92	87	75	27	33	
19	9.7						104	85	72	26	30	
20	13						114	86	69	24	26	32
21	12						111	88	70	24	24	34
22	11						142	86	67	26	22	35
23	10						137	84	63	27	21	31
24	10	8	3				102	84	56	26	22	30
25	12						97	86	53	29	21	29
26	11						96	80	47	32	21	28
27	10						96	80	44	30	21	26
28	12						96	80	33	27	23	26
29	11				-------		94	80	26	26		26
30	13				-------		93	80	21	26	25	29
31	17	-------			-------		-------	79	-------	26		-------

NOTE.—Discharge estimated on account of missing gage heights Nov. 17–30, Dec. 1–5, Dec. 7 to Apr. 11, Aug. 29 to Sept. 19; interpolated May 30–31, June 1, July 9, Aug. 19, and Sept. 30. Braced figures show mean discharge for periods indicated.

Monthly discharge of Camas Creek near Camas, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	17	5.3	10.1	621
November	----------	----------	10.5	625
December	----------	----------	6.6	406
January	----------	----------	[a] 7	430
February	----------	----------	[a] 10	555
March	----------	----------	[a] 15	922
April	142	----------	70	4,170
May	95	79	88.7	5,450
June	89	21	67.1	3,990
July	60	21	36.4	2,240
August	35	----------	24.9	1,530
September	35	----------	26.7	1,590
The year	142	----------	31.1	22,500

[a] Estimated.

CAMAS CREEK AT CAMAS, IDAHO

LOCATION.—In E. ½ SE. ¼ sec. 21, T. 8 N., R. 36 E., half a mile above mouth of Beaver Creek, 350 feet above bridge of Oregon Short Line Railroad at Camas, Jefferson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 13 to September 30, 1925.

GAGE.—Vertical staff on right bank; read by William McCall. Prior to August 21 gage was located 800 feet downstream on left bank and at different datum from present site.

DISCHARGE MEASUREMENTS.—Made from wagon bridge 300 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of fine gravel and sand. Control not well defined; subject to growth of aquatic plants. Banks low; several channels at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 1.53 feet April 23 (discharge, 134 second-feet); minimum discharge, 11 second-feet July 2.

DIVERSIONS.—A number of irrigation and stock water diversions above station.

REGULATION.—Flow past station affected to some extent by losses through lava crevices in Lone Tree Reservoir, 29 miles upstream. Gates in dam not changed during year.

ACCURACY.—Stage-discharge relation changed frequently owing to moss growth below present gage and to stock trampling on control below gage in use prior to August 21. Shifting-control method used, based on actual discharge measurements referred to two standard rating curves; the first applicable April 13 to August 20 for original gage and the second applicable August 21 to September 30 for gage at present site. Gage read to hundredths once daily. Daily discharge obtained by applying daily gage height to rating table except as indicated in footnote to table of daily discharge. Records fair.

COOPERATION.—Gage-height record furnished by Camas Mutual Irrigation District.

Discharge measurements of Camas Creek at Camas, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 13	1.11	53.1	June 5	1.24	73.6	July 25	0.87	20.5
May 5	1.23	76.9	June 19	1.08	51.0	Aug. 2	.87	20.2
May 20	1.22	70.6	June 29	.82	18.3	Aug. 7	.91	22.0
June 4	1.23	69.5	July 10	1.14	43.9	Aug. 20	.84	18.0

Daily discharge, in second-feet, of Camas Creek at Camas, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	------	74	55	12	22		16	58	74	15	22	24	19
2	------	78	62	11	21		17	62	72	63	21	27	19
3	------	80	68		20	16	18	65	74	52	18	25	21
4	------	76	72	20	20		19	80	70	50	16	23	18
5	------	76	74		21		20	93	68	45	16	18	17
6	------	76	83	29	22	17	21	101	72	47	16	17	18
7	------	76	76	29	22	17	22	130	67	45	16	15	25
8	------	78	76	28	18	18	23	134	70	47	15	15	20
9	------	78	76	34	16	18	24	93	67	42	14	14	19
10	------	78	76	45	14	18	25	87	68	43	21	15	18
11	------	80	65	43	14	20	26	83	67	39	24	15	18
12	------	81	67	39	15	21	27	81	65	37	27	14	19
13	53	74	63	32	16	19	28	81	65	28	24	14	20
14	53	74	58	26	18	21	29	78	65	18	22	14	21
15	56	76	39	22	21	19	30	76	65	15	20	15	22
							31	------	62	------	21		------

NOTE.—Discharge estimated July 3–5, Aug. 30–31, and Sept. 1–5, based on flow near Camas and near Dubois; interpolated June 9, 28, July 13, 16, 18, 21, 23, 26, 29, 31, Aug. 4, 6, 9, 12, 14–15, 18, 26–27, 30–31, Sept. 9, 11, 16, 27. Braced figures show mean discharge for periods indicated.

Monthly discharge of Camas Creek at Camas, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 13–30	134	53	81.3	2,900
May	81	62	72.5	4,460
June	83	15	53.2	3,170
July	45	11	23.3	1,430
August	27	----------	18.1	1,110
September	25	----------	18.7	1,110
The period	----------	----------	----------	14,200

BEAVER CREEK AT DUBOIS, IDAHO

LOCATION.—In NW. ¼ sec. 21, T. 10 N., R. 36 E., at Ed F. Palmer ranch, half a mile north of Dubois, Clark County. This stream is locally known as Dry Creek.

DRAINAGE AREA.—220 square miles (measured on United States Geological Survey map of Mud Lake drainage basin).

RECORDS AVAILABLE.—April 15, 1921, to September 30, 1925.

GAGE.—Vertical staff attached to cottonwood tree on left bank, 25 feet below wagon bridge; read by W. L. Miller.

DISCHARGE MEASUREMENTS.—Made from wagon bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of lava rock and gravel. Control fairly well defined but occasionally fouled by drift. Banks steep and brushy; one channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.50 feet at 10.30 a. m. April 12 (discharge, about 463 second-feet); channel probably dry October and November with very little flow thereafter prior to March 16.

1921–1925: Maximum stage recorded, 4.9 feet May 20, 1922 (discharge, 637 second-feet); stream reported dry August 3 to about November 30, 1924.

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—A few small diversions several miles upstream. After high water practically the entire flow is diverted below gage for irrigation.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 250 second-feet used April 2 to July 10; shifting-control method used thereafter. Gage read to hundredths twice daily April 12 to June 15; once daily at other times. Daily discharge ascertained by applying daily gage height or mean daily gage height to rating table. Records fair except for estimated periods for which they are poor.

Discharge measurements of Beaver Creek at Dubois, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 16	[a] 2.13	1.7	May 21	3.08	259	July 10	1.01	29.2
Apr. 12	3.98	384	June 5	2.55	186	July 25	1.00	23.7
May 6	2.25	145	June 18	1.62	72.1	Aug. 1	.82	14.7
May 7	2.36	159	June 29	1.01	30.4	Aug. 20	.70	11.8

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Beaver Creek at Dubois, Idaho, for the year ending September 30, 1925

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		125	102	126	72	14	13
2		132	114	132	48	14	28
3		139	114	152	47	15	22
4		178	126	178	48	22	16
5		206	139	178	48	16	24
6		234	152	172	63	16	22
7		132	165	146	47	16	25
8		192	206	146	37	14	27
9		262	192	132	33	13	40
10		332	178	120	30	13	27
11		360	206	102	28	17	22
12		418	276	96	28	15	20
13		388	248	91	23	22	20
14		290	248	86	18	68	20
15		206	220	72	17	30	22
16	2	192	248	96	14	23	22
17		220	234	91	16	19	22
18		220	220	72	14	16	21
19		152	234	55	13	14	49
20	5	132	220	48	17	12	45
21		114	248	47	17	14	31
22		152	248	102	28	14	33
23		120	234	72	36	14	26
24		126	206	57	30	13	23
25	25	139	220	41	24	12	21
26		132	192	35	18	11	17
27		152	172	29	18	19	16
28		126	146	26	18	20	15
29		91	132	29	26	15	25
30	75	86	126	63	18	13	39
31			126		16	12	

NOTE.—Discharge estimated on account of ice March 17 to April 1 and on account of discredited gage heights May 10 and 11. Result of actual discharge measurement used March 16. Braced figures show mean discharge for periods indicated.

Monthly discharge of Beaver Creek at Dubois, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March 16-31			29.8	946
April	418	86	192	11,400
May	276	102	190	11,700
June	178	26	93.1	5,540
July	72	13	29.4	1,810
August	68	11	17.6	1,080
September	49	13	25.1	1,490
The period				34,000

BEAVER CREEK AT CAMAS, IDAHO

LOCATION.—In NE. ¼ sec. 21, T. 8 N., R. 36 E., three-eighths mile above confluence with Camas Creek and one-fourth mile northwest of Oregon Short Line Railroad depot at Camas, Jefferson County. Locally this stream is known as Dry Creek.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 25, 1921, to September 30, 1925.

GAGE.—Vertical staff attached to highway bridge on right bank; read by William McCall.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel. Control is a fairly well defined gravel riffle 250 feet below gage; fairly permanent. Banks may be overflowed at extremely high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.66 feet at 7 p. m. April 13 (discharge, 150 second-feet). Stream reported dry except during April, May, and June.

1921–1925: Maximum stage recorded, 2.94 feet June 1, 1921 (discharge, 153 second-feet). No flow past station except during April, May, and sometimes June of each year.

ICE.—Channel dry during winter.

DIVERSIONS.—After high water, entire flow is diverted near Dubois, 14 miles above, for irrigation.

REGULATION.—None, except as flow is affected by irrigation diversions above.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 150 second-feet. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table. Records good.

COOPERATION.—Gage-height record furnished by Camas Mutual Irrigation District.

Discharge measurements of Beaver Creek at Camas, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 16		0	June 4	1.82	60.8	June 29		0
Apr. 13	2.59	136	June 5	1.90	67.5	July 10		0
May 6	1.53	37.8	June 18	1.05	8.5			
May 20	2.13	91.8	June 19	.90	3.4			

Daily discharge, in second-feet, of Beaver Creek at Camas, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	Day	Apr.	May	June	Day	Apr.	May	June
1	0	23	38	11	122	55	49	21	66	87	0
2		23	43	12	139	66	45	22	64	102	
3	5	18	56	13	139	87	40	23	77	102	
4	31	29	68	14	139	73	35	24	61	97	
5	54	32	68	15	112	75	18	25	49	87	
6	73	35	64	16	112	87	17	26	49	87	
7	74	34	72	17	102	92	18	27	43	92	
8	75	54	68	18	122	87	9	28	42	65	
9	82	59	64	19	107	87	4	29	31	57	
10	102	61	49	20	92	87	0	30	27	43	
								31	------	40	------

NOTE.—Discharge estimated Apr. 3; interpolated June 8.

Monthly discharge of Beaver Creek at Camas, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	139	0	73.0	4,340
May	102	18	65.3	4,020
June	72	0	27.5	1,640
The year	----------	----------	----------	10,000

LITTLE LOST RIVER NEAR HOWE, IDAHO

LOCATION.—In SE. ¼ sec. 11, T. 6 N., R. 28 E., a quarter of a mile above diversion dam of Blaine County Investment Co., 7 miles from Berenice, and 8 miles northwest of Howe, Butte County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 27, 1921, to September 30, 1925.

GAGE.—Vertical staff on left bank; read by N. W. Hansen.

DISCHARGE MEASUREMENTS.—Made by wading below gage.

CHANNEL AND CONTROL.—Bed composed of cobbles and gravel; subject to cutting by swift velocity. No well-defined control. One channel at all stages. Banks fairly high.

EXTREMES OF DISCHARGE.—Maximum discharge recorded, 148 second-feet June 4, July 1 and 5; minimum discharge, 51 second-feet September 14.

1921–1925: Maximum stage recorded, 1.64 feet June 14, 1923 (discharge, 176 second-feet); minimum stage, 0.23 foot April 15 and 20, 1923 (discharge, 13 second-feet).

ICE.—Observations discontinued during winter.

DIVERSIONS.—Numerous irrigation diversions above and below station.

REGULATION.—Water is stored in small reservoir of Blaine County Investment Co. on Dry Creek, about 40 miles upstream, and during irrigation season water is released and carried through Corral and Wet Creeks to Little Lost River and diverted into the company's main canal one-fourth mile below gage.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined between 40 and 150 second-feet, and two curves parallel thereto were used; applicable October 1–31, March 29 to May 18, and June 6 to September 30, respectively; shifting-control method used May 19 to June 5. Gage read to hundredths once daily. Daily discharge determined by applying daily gage height to rating table except as indicated in footnote to table of daily discharge. Records good.

COOPERATION.—Gage-height record furnished by water master for Little Lost River.

Discharge measurements of Little Lost River near Howe, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 29	1.10	94.7	June 6	1.40	131	Aug. 3	1.27	117
May 8	1.14	103	June 17	1.44	133			
May 18	1.27	119	July 13	.90	67.8			

Daily discharge, in second-feet, of Little Lost River near Howe, Idaho, for the year ending September 30, 1925

Day	Oct.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52		95	83	141	148	108	55
2	52		83	83	141	141	108	54
3	63		89	83	141	141	114	54
4	60		83	89	148	144	114	53
5	59		102	83	134	148	114	52
6	59		96	83	134	141	108	53
7	59		89	89	121	134	102	53
8	59		89	102	108	128	102	57
9	58		89	95	108	102	89	64
10	60		95	95	102	89	89	62
11	62		102	104	108	108	64	58
12	59		83	114	108	108	63	57
13	58		83	102	114	69	64	58
14	57		108	102	118	79	66	51
15	63		102	108	121	102	63	54
16	62		102	108	134	108	67	56
17	62		108	121	134	108	63	54
18	63		102	121	134	108	64	55
19	64		95	121	128	108	62	61
20	63		89	121	134	108	61	61
21	62		83	128	128	108	59	63
22	62		83	134	141	114	58	70
23	63		89	134	141	114	56	70
24	64		89	141	134	114	56	70
25	66		83	141	134	108	58	71
26	64		83	141	128	102	58	73
27	66		81	134	128	108	58	75
28	68		78	141	128	108	58	73
29	71	95	79	141	108	108	57	75
30	69	95	81	141	141	108	55	73
31	67	95		141		108	55	

NOTE.—Discharge interpolated because of missing gage heights Oct. 13, 20, 22, 27, 30, Mar. 30, 31, Apr. 6, 20, May 11, 25, 29, June 14, July 4, and Sept. 23.

Monthly discharge of Little Lost River near Howe, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	71	52	61.8	3,800
March 29-31	95	95	95.0	565
April	108	78	90.4	5,380
May	141	83	114	7,010
June	148	102	127	7,560
July	148	69	114	7,010
August	114	55	74.6	4,590
September	75	51	61.2	3,640

BLAINE COUNTY INVESTMENT CO.'S CANAL NEAR HOWE, IDAHO

LOCATION.—In sec. 11, T. 6 N., R. 28 E., 65 feet below head gates, 5 miles northwest of Berenice, and 7 miles northwest of Howe, Butte County.

RECORDS AVAILABLE.—April 11, 1924, to September 30, 1925.

GAGE.—Vertical staff on left bank; read by N. W. Hansen.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of gravel, silt, and fine sand; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.60 feet July 5 (discharge, 85 second-feet). Canal dry at times during nonirrigation periods.

1924–1925: Maximum stage and discharge July 5, 1925; no flow at times during nonirrigation period.

DIVERSIONS.—None above gage.

ICE.—Observations discontinued during winter.

REGULATION.—Flow regulated by gates in diversion dam above.

ACCURACY.—Stage-discharge relation changed during winter. Rating curve well defined below 40 second-feet, used October 1–31, and curve well defined below 80 second-feet used after March 29. Gage read to hundredths once daily. Daily discharge determined by applying daily gage height to rating table. Records good.

COOPERATION.—Gage-height record furnished by water master for Little Lost River.

Blaine County Investment Co.'s canal diverts water from right bank of Little Lost River in sec. 11, T. 6 N., R. 28 E. and is used for irrigation on lands in project of the Blaine County Investment Co.

Discharge measurements of Blaine County Investment Co.'s canal near Howe, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 29	1.27	51.8	May 9	1.06	30.6	June 17	1.50	77.0
May 8	1.21	46.5	May 18	1.31	55.4	July 13	.67	5.8
May 9	1.35	59.5	June 6	1.45	67.6	Aug. 3	1.21	46.6

Daily discharge, in second-feet, of Blaine County Investment Co.'s canal near Howe, Idaho, for the year ending September 30, 1925

Day	Oct.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2		56	42	81	74	45	4.6
2	7.4		64	39	81	72	45	4.6
3	11		56	37	81	72	46	4.6
4	11		54	43	82	78	45	4.6
5	11		64	37	72	85	45	4.6
6	12		64	34	70	70	45	4.6
7	12		64	42	54	66	45	8.4
8	15		64	46	43	66	45	8.4
9	15		70	38	38	34	36	21
10	15		70	31	37	24	22	19
11	19		72	40	36	51	8.8	14
12	19		68	48	39	46	8.8	9.6
13	19		68	43	47	5.4	6.7	12
14	14		72	43	49	7.9	6.7	7.5
15	19		72	48	51	43	6.7	9.6
16	19		72	49	68	45	6.7	12
17	20		72	60	74	45	6.7	12
18	20		72	60	70	45	4.6	10
19	23		72	60	62	45	4.6	10
20	22		72	64	62	45	4.3	10
21	20		72	70	62	45	4.0	18
22	21		70	74	70	45	4.8	26
23	22		68	74	81	45	4.6	26
24	22		62	74	72	45	4.0	25
25	23		56	77	68	45	4.0	25
26	23		56	78	60	45	4.0	25
27	23		45	77	62	45	4.6	27
28	23		38	78	62	45	4.6	40
29	29	52	38	78	34	45	4.6	40
30	29	53	41	79	74	45	4.6	40
31	29	55		81		45	4.6	

NOTE.—Discharge interpolated Oct. 20, 22, 27, 30, Mar. 30, 31, Apr. 6, 20, May 11, 29, June 14, July 4, and Sept. 23.

Monthly discharge of Blaine County Investment Co.'s canal near Howe, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	29	4.2	18.4	1,130
March 29–31	55	52	53.3	317
April	72	38	62.8	3,740
May	81	31	56.3	3,460
June	82	34	61.4	3,650
July	85	5.4	48.9	3,010
August	46	4.0	17.2	1,060
September	40	4.6	16.1	958

BIG LOST RIVER AT HOWELL RANCH, NEAR CHILLY, IDAHO

LOCATION.—In sec. 30, T. 8 N., R. 21 E., at Howell ranch, 9 miles southwest of Chilly, Custer County, and 22 miles northwest of Mackay, the nearest railroad point.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 25, 1904, to August 31, 1906; July 1, 1907, to November 14, 1914; May 11, 1920, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank; installed June 17, 1920; inspected by Mrs. John Howell.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of sand, gravel, and cobbles. Channel straight. Banks covered with brush and subject to overflow at high stages. Control composed of gravel and cobbles; may shift at high stages.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 4.50 feet at 11 a. m. June 22 (discharge, 2,240 second-feet); minimum measured discharge, 58 second-feet December 11 (lower discharge no doubt occurred during period of no record in winter).

1904–1914; 1920–1925: Maximum stage recorded, 5.94 feet from 4 to 8 a. m. June 12, 1921 (discharge, 3,500 second-feet); minimum discharge, 35 second-feet April 2, 1909.

ICE.—Stage-discharge relation seriously affected by ice. Records discontinued during winter.

DIVERSIONS.—Several small diversions above. Hammerly ditch, capacity about 20 second-feet, diverts one-fourth mile below gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed during winter and slightly, owing to moss growth, after August 15. Rating curves well defined. Operation of water-stage recorder satisfactory except for short periods for which staff gage was read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. During periods water-stage recorder was operated, mean daily gage height determined by inspection of recorder graph. Records good.

COOPERATION.—Water commissioner for Big Lost River furnished result of one discharge measurement made by him.

Discharge measurements of Big Lost River at Howell ranch, near Chilly, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 11	[a] 2.60	58.4	May 16	3.26	1,020	July 15	2.61	578
Mar. 28	1.34	79.1	June 8	2.78	669	Aug. 5	2.05	284
May 11	3.43	1,160	June 15	2.95	770			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Big Lost River at Howell ranch, near Chilly, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	89			80	347	1,260	1,200	313	151
2	72	87			103	440	1,070	1,100	313	157
3	74	89			122	467	970	1,080	326	151
4	74	89			122	560	895	1,070	296	151
5	72	87			110	672	828	1,080	273	157
6	72				101	813	737	1,010	261	167
7	88	80			99	850	685	918	254	177
8	80				120	730	672	842	247	187
9	78				140	835	704	764	247	177
10	84				174	842	778	730	243	165
11	84		58		216	1,140	757	692	254	154
12	84				258	978	764	718	269	148
13	82				258	910	785	652	281	151
14	89				288	925	764	596	375	174
15	91				330	970	813	590	317	199
16	91				385	994	820	584	269	174
17	89				414	1,070	785	572	240	162
18	91				330	1,200	888	566	226	154
19	91				292	1,450	1,170	494	212	154
20	89				265	1,600	1,500	450	212	157

Daily discharge, in second-feet, of Big Lost River at Howell ranch, near Chilly, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	87				261	1,800	1,800	440	203	154
22	87				243	1,450	2,130	596	193	149
23	84				226	1,400	1,910	518	180	145
24	84				203	1,360	1,800	472	180	140
25	84				203	1,400	1,750	385	174	137
26	82				203	1,360	1,650	361	165	132
27	84				206	1,450	1,400	343	162	132
28	89			90	209	1,600	1,400	330	159	130
29	84			92	229	1,800	1,450	334	154	134
30	76			80	277	2,020	1,450	338	148	140
31	89			73		1,600		330	145	

NOTE.—Discharge estimated on account of ice Nov. 6–8; interpolated on account of missing gage heights Sept. 6–7 and 22–23. Result of actual discharge measurement used Dec. 11. Braced figures show mean discharge for periods indicated.

Monthly discharge of Big Lost River at Howell ranch, near Chilly, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	91	70	83.1	5,110
November 1–8	89		85.1	1,350
March 28–31	92	73	83.8	665
April	414	80	216	12,900
May	2,020	347	1,130	69,500
June	2,130	672	1,150	68,400
July	1,200	330	650	40,000
August	375	145	235	14,400
September	199	130	155	9,220

BIG LOST RIVER (EAST CHANNEL) ABOVE MACKAY RESERVOIR, NEAR MACKAY, IDAHO

LOCATION.—In sec. 32, T. 8 N., R. 23 E., 3 miles above Mackay Dam, above flow line of reservoir, and 7½ miles above Mackay, Custer County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 9, 1919, to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on right bank; inspected by employees of Utah Construction Co.

DISCHARGE MEASUREMENTS.—Made from suspension footbridge 20 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel; shifts occasionally. One channel at low and medium stages; right bank is overflowed at high stages. Control fairly well defined.

EXTREMES OF DISCHARGE.—Maximum mean daily stage recorded during year, 3.14 feet June 23 (discharge, 775 second-feet); channel reported dry November 1 to May 7.

1919–1925: Maximum stage recorded, 3.37 feet June 16, 1922 (discharge, 999 second-feet); no flow April 27 to May 16, 1920, in winter of 1923, for long periods in 1924, and January 1 to May 7, 1925.

ICE.—Stage-discharge relation affected by ice; no flow during winter 1924–25.

DIVERSIONS.—None between gage and reservoir. Several canals divert water in vicinity of Chilly above "dry beds" which extend from a few miles above gage to a point about 15 miles above.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed slightly during period of no flow. Rating curves well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. Records good except for estimated periods, which are fair.

COOPERATION.—Gage-height record and two discharge measurements furnished by water commissioner for Big Lost River.

The record at this station represents part of the natural flow of Big Lost River and, taken in conjunction with the record for west channel of Big Lost River and with the record for east and west channels of Warm Spring Creek, will show the entire flow of Big Lost River at this point. The combined flow of Big Lost River and Warm Spring Creek represents practically the entire surface flow at this point into Mackay Reservoir situated a short distance below. For record at station on west channel of river and on east and west channels of Warm Spring Creek see pages 103, 110, and 112, respectively. For combined flow of both channels of Big Lost River and both channels of Warm Spring Creek see page 105.

Discharge measurements of Big Lost River (east channel) above Mackay Reservoir, near Mackay, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	------	[a] 1.0	May 17	1.69	[b] 252	June 24	2.97	690
Mar. 18	------	Dry.	June 7	1.60	280	July 15	1.20	191
May 10	0.69	93.4	June 16	1.87	338	Aug. 4	.24	33.0

[a] Estimated. [b] Does not include overflow.

Daily discharge, in second-feet, of Big Lost River (east channel) above Mackay Reservoir, near Mackay, Idaho, for the year ending September 30, 1925

Day	Oct.	May	June	July	Aug.	Sept.	Day	Oct.	May	June	July	Aug.	Sept.
1	1.8	------	539	506	60	7.6	16		260	336	193	16	12
2	1.5	------	443	428	44	7.6	17		294	312	190	15	12
3	2.7	------	386	414	35	7.6	18	1.0	343	296	185	13	12
4	1.5	------	370	414	32	7.2	19		428	368	175	14	13
5	1.5	------	341	400	26	8.0	20		539	458	166	14	13
6	1.5	------	303	400	25	8.0	21		591	574	158	14	13
7	2.1	------	274	350	24	8.4	22		539	728	204	13	12
8	2.1	64	260	312	23	8.4	23		489	775	210	11	10
9	2.1	87	247	287	19	8.4	24		489	646	164	11	10
10		92	265	265	17	8.8	25		489	646	132	10	9.6
11		112	271	247	16	8.4	26	.5	489	627	116	10	9.6
12	1.0	166	263	252	15	8.4	27		506	556	102	10	9.2
13		150	276	245	16	8.4	28		539	522	89	9.2	9.6
14		162	296	221	16	9.2	29		591	539	84	8.8	12
15		197	303	199	16	12	30		665	591	78	8.4	12
							31		665	------	67	8.0	------

NOTE.—No flow Nov. 1 to May 7. Discharge estimated Oct. 10–31 and July 17–19, based on data furnished by water commissioner for Big Lost River. Braced figures show mean discharge for periods indicated.

Monthly discharge of Big Lost River (east channel) above Mackay Reservoir, near Mackay, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2.7		1.07	65.8
May	665	0	289	17,800
June	775	247	427	25,400
July	506	67	234	14,400
August	60	8.0	18.4	1,130
September	13	7.2	9.85	586
The year	775	0	81.9	59,400

NOTE.—No flow November to April.

BIG LOST RIVER (WEST CHANNEL) ABOVE MACKAY RESERVOIR, NEAR MACKAY, IDAHO

LOCATION.—In sec. 5, T. 7 N., R. 23 E., 3 miles above Mackay Dam, above flow line of reservoir, and 7½ miles above Mackay, Custer County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 9, 1919, to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on left bank; installed May 4, 1920; inspected by employees of Utah Construction Co.

DISCHARGE MEASUREMENTS.—Made from suspension footbridge just above gage or by wading.

CHANNEL AND CONTROL.—Bed composed chiefly of gravel. Channel winding. Banks subject to overflow at extremely high stages. Control of gravel; fairly well defined, but subject to change.

EXTREMES OF DISCHARGE.—Maximum mean daily stage recorded during year, 2.97 feet June 23 (discharge, 498 second-feet); minimum stage, 0.84 foot May 3–6 (discharge, 13 second-feet).

1919–1925: Maximum discharge estimated, 1,200 second-feet from high-water mark on gage (4.45 feet) during period June 5–16, 1921, when water-stage recorder was not operating; minimum stage and discharge May 3–6, 1925.

ICE.—Formation of ice negligible on account of spring inflow above.

DIVERSIONS.—None between station and reservoir. Several canals divert water above the "dry beds" which extend from a point a few miles above station to a point about 15 miles above near Chilly. No surface flow passes the "dry beds" except during fairly high stages.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed slightly October to February and July 22–31. Rating curve well defined below 200 second-feet and fairly well defined between 200 and 500 second-feet used March 1 to July 21; curves parallel to standard rating used for remainder of year. Operation of water-stage recorder satisfactory except for few short periods. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. Records good after February 28; others fair.

COOPERATION.—Gage-height record and three discharge measurements furnished by water commissioner for Big Lost River.

The record at this station represents a part of the natural flow of Big Lost River and taken in conjunction with record for east channel of Big Lost River and with the record for east and west channels of Warm Spring Creek will show

the entire surface flow of Big Lost River at this point. The combined flow of Big Lost River and Warm Spring Creek represents practically the entire flow at this point into Mackay Reservoir located a short distance below. For record at station on east channel of river and on east and west channels of Warm Spring Creek see pages 101, 110, and 112, respectively. For combined flow of both channels of Big Lost River and Warm Spring Creek see page 105.

Discharge measurements of Big Lost River (west channel) above Mackay Reservoir, near Mackay, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	1.09	34.3	May 17	1.70	145	July 15	1.58	121
Dec. 26	.89	20.1	June 7	1.59	118	Aug. 4	1.34	64.8
Mar. 18	.86	14.3	June 16	1.71	145			
May 10	1.25	54.7	June 24	2.80	449			

Daily discharge, in second-feet, of Big Lost River (west channel) above Mackay Reservoir, near Mackay, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	31	25	20	19	16	15	14	297	326	76	52
2	35	31	25	20	19	16	14	14	237	283	72	52
3	35	31	25	20	19	16	14	13	196	258	68	51
4	36	30	25	20	19	16	14	13	177	258	67	52
5	39	30	25	20	20	16	14	13	167	253	63	54
6	36	30	25	20	20	17	15	13	146	247	57	54
7	36	30	25	20	19	16	15	14	124	224	54	54
8	35	30	24	20	19	16	15	38	112	201	52	56
9	35	31	23	20	19	16	14	50	103	181	52	54
10	35	30	23	20	19	16	14	54	103	165	56	52
11	36	29	23	20	19	16	14	60	107	153	56	52
12	36	29		20	19	16	14	74	107	149	54	54
13	35	28		20	19	16	14	73	107	144	57	54
14	35	28		20	19	16	14	72	116	124	56	54
15	34	28		20	18	16	14	87	131	118	57	55
16	34	28		19	18	15	14	112	149	118	56	56
17	34	27		19	18	15	14	140	137	114	52	56
18	33	27		19	18	14	14	172	135	118	50	56
19	33	27	20	19	18	14	14	224	167	116	51	56
20	33	26		19	18	15	14	269	224	109	51	57
21	33	26		18	18	16	14	306	332	107	51	58
22	33	27		18	18	16	14	294	465	118	56	62
23	33	27		18	17	16	15	253	498	133	52	60
24	33	26		18	16	15	15	245	433	129	51	57
25	33	26		18	16	15	14	245	417	116	51	57
26	33	25	20	18	16	15	14	239	402	107	51	57
27	34	25	20	18	16	15	14	247	356	99	51	57
28	33	25	20	19	16	15	14	275	338	93	51	57
29	32	25	20	19	------	15	14	329	350	89	51	63
30	32	25	20	19	------	15	14	386	386	85	51	62
31	32	------	21	19	------	15	------	386	------	81	51	------

NOTE.—Discharge estimated because of ice in gage well Dec. 12–25; interpolated May 13 and Sept. 14–16. Braced figure shows mean discharge for period indicated.

Monthly discharge of Big Lost River (west channel) above Mackay Reservoir, near Mackay, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	39	32	34.2	2,100
November	31	25	27.9	1,660
December	25	----------	21.6	1,330
January	20	18	19.3	1,190
February	20	16	18.2	1,010
March	17	14	15.5	953
April	15	14	14.2	845
May	386	13	152	9,350
June	498	103	234	13,900
July	326	81	155	9,530
August	76	50	55.6	3,420
September	63	51	55.7	3,310
The year	498	13	67.2	48,600

Daily 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, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	131	135	128	125	121	120	105	1,110	1,120	302	188
2	134	131	135	128	126	122	119	101	944	978	278	187
3	135	130	135	128	126	122	119	97	818	932	259	184
4	134	129	136	128	127	123	119	95	771	931	247	186
5	138	129	136	127	130	125	119	91	727	910	232	189
6	136	128	136	126	128	128	121	90	654	903	221	189
7	136	128	136	127	126	126	120	88	588	817	215	190
8	133	129	133	127	127	125	120	199	555	742	210	192
9	133	134	132	127	125	123	120	249	525	690	205	190
10	133	134	132	127	125	122	120	267	545	641	207	187
11	135	135	132	127	126	122	119	304	557	605	205	186
12	135	135	128	127	126	122	117	378	552	601	201	188
13	135	135	128	127	126	122	117	360	565	587	205	189
14	135	139	128	127	126	122	120	374	598	528	207	190
15	134	139	128	127	125	122	119	438	634	496	209	197
16	134	138	128	126	124	121	116	545	703	490	209	199
17	134	137	126	126	124	120	115	631	658	481	203	199
18	133	137	124	126	124	119	112	731	634	484	197	198
19	133	135	126	127	124	116	112	887	772	482	197	199
20	133	134	126	127	124	121	113	1,070	935	463	196	200
21	132	137	125	126	124	122	113	1,180	1,230	454	194	203
22	132	138	124	126	124	122	113	1,110	1,560	517	198	206
23	132	138	125	126	123	121	121	996	1,670	547	189	202
24	132	137	127	126	122	119	122	985	1,440	494	188	199
25	132	137	128	126	121	119	120	981	1,400	441	184	201
26	134	135	122	125	121	119	117	976	1,360	414	186	201
27	138	133	124	125	121	119	116	1,000	1,220	389	186	201
28	138	133	125	125	121	119	112	1,080	1,170	364	185	202
29	138	133	129	125	-------	119	111	1,210	1,190	350	185	224
30	136	133	130	125	-------	120	109	1,360	1,290	337	184	221
31	134	-------	129	125	-------	120	-------	1,360	-------	318	185	------

Monthly combined discharge of Big Lost River (east and west channels) and Warm Spring Creek (east and west channels) above Mackay Reservoir, near Mackay, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	138	132	134	8,240
November	139	128	134	7,970
December	136	122	129	7,930
January	128	125	126	7,750
February	130	121	125	6,940
March	128	116	121	7,440
April	122	109	117	6,960
May	1,360	88	624	38,400
June	1,670	525	912	54,300
July	1,120	318	597	36,700
August	302	184	209	12,900
September	224	184	196	11,700
The year	1,670	88	286	207,000

MACKAY RESERVOIR NEAR MACKAY, IDAHO

LOCATION.—In sec. 12, T. 7 N., R. 23 E., 4 miles northwest of Mackay, Custer County.

RECORDS AVAILABLE.—January 1, 1919, to September 30, 1925.

GAGE.—Vertical staff on head-gate tower near right end of dam; read to hundredths once daily by employees of Utah Construction Co. Datum of gage 6,000 feet above sea level.

EXTREMES OF CONTENTS.—Maximum stage recorded during year, 55.40 feet July 9 (contents, 30,470 acre-feet); minimum stage, 7.40 feet October 20–30 (contents, 67 acre-feet).

1919–1925: Maximum stage recorded, 63.62 feet June 26, 1922 (contents, 40,500 acre-feet); minimum contents, water surface below bottom of outlet tunnel August 1 to October 19, 1919, August 5, 17–27, 31, September 1–5, 12–14, and 18, 1920, and August 5, 1924 (minimum stage during these periods, 6.6 feet August 24 to September 2, 1919).

COOPERATION.—Gage-height record furnished by Utah Construction Co. through water commissioner for Big Lost River.

Stored water from this reservoir is used for irrigation of land near Arco, under Utah Construction Co.'s Carey Act project. About 5,100 acres is under cultivation at present, but this area is subject to change from year to year. The reservoir is formed by a gravity earth dam 750 feet in length at crest. The crest is 75 feet above bottom of concrete core wall below which there is 15 feet of sheet piling to prevent excessive seepage. Crest of spillway is 10 feet below crest of dam and 55 feet above bottom of outlet tunnel. Elevation of bottom of outlet tunnel corresponds to 7.0 feet on gage, at which stage the usable storage is zero, although there is about 125 acre-feet of water in reservoir, which is not available for use. Elevation of crest of spillway corresponds to 62.0 feet on gage, at which stage capacity of reservoir is 38,400 acre-feet, about 2,400 acres of land being submerged. As foundation of dam is located on very porous material and core wall does not penetrate to bedrock, heavy seepage loss occurs, and at times during low water the inflow is not sufficient to counteract this loss plus the loss sustained by evaporation. Thus the stage of water in reservoir occasionally falls below bottom of the outlet tunnel. A study of stream-flow records at this point indicates that most of the seepage from the reservoir reappears in river channel above gaging station at the "Narrows" 1½ miles downstream, where favorable rock structure forces underground water to the surface. Additional water also appears, part of which is probably side drainage and part evidently flows

underground at places where the surface flow into the reservoir is measured and thence through reservoir. Seepage loss will probably diminish as silting takes place, although the amount of water thus lost has not varied appreciably in the last few years.

Daily contents, in acre-feet, of Mackay Reservoir near Mackay, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	507	7,082	11,970	15,480	17,670	19,650	21,010	21,100	26,370	21,450	8,468
2	103	778	7,190	12,110	15,600	17,760	19,730	20,990	20,880	27,000	20,950	8,396
3	108	1,026	7,376	12,260	15,720	17,840	19,820	20,990	20,680	27,470	20,420	7,476
4	108	1,265	7,520	12,400	15,810	17,920	19,910	20,970	20,580	27,920	19,870	6,220
5	108	1,497	7,632	12,540	15,890	18,010	20,000	20,960	20,540	28,560	19,360	5,504
6	108	1,743	7,745	12,670	15,970	18,090	20,050	20,950	20,310	29,340	18,970	4,787
7	114	1,918	7,859	12,780	16,050	18,180	20,120	20,930	20,040	29,950	18,520	3,993
8	117	2,114	8,207	12,880	16,130	18,260	20,160	21,080	19,730	30,350	17,950	3,280
9	117	2,364	8,486	12,990	16,210	18,350	20,220	21,260	19,520	30,470	17,340	2,612
10	117	2,570	8,666	13,120	16,280	18,430	20,260	21,420	19,410	30,440	16,720	2,028
11	114	2,747	8,849	13,270	16,360	18,480	20,300	21,530	19,420	30,410	16,160	1,575
12	103	2,981	9,034	13,420	16,440	18,520	20,370	21,540	19,190	30,420	15,570	1,125
13	100	3,248	9,220	13,520	16,520	18,570	20,400	21,480	19,080	30,320	15,020	795
14	92	3,469	9,408	13,600	16,610	18,610	20,440	21,470	18,660	30,090	14,430	721
15	83	3,713	9,580	13,690	16,690	18,690	20,490	21,440	18,270	29,600	13,860	802
16	83	3,930	9,740	13,800	16,770	18,740	20,560	21,390	17,920	29,080	13,310	917
17	83	4,164	9,900	13,920	16,850	18,780	20,600	21,420	17,460	28,530	12,780	1,052
18	83	4,423	10,060	14,030	16,930	18,830	20,640	21,370	17,000	28,050	12,220	1,179
19	75	4,630	10,250	14,120	16,980	18,870	20,680	21,110	16,740	27,510	11,750	1,312
20	67	4,868	10,400	14,190	17,020	18,910	20,730	21,000	16,690	27,110	11,340	1,429
21	67	5,081	10,530	14,240	17,090	18,950	20,780	20,820	17,040	26,510	11,010	1,534
22	67	5,265	10,660	14,310	17,180	19,030	20,840	20,420	18,020	26,270	10,620	1,636
23	67	5,452	10,800	14,350	17,260	19,120	20,900	20,020	19,310	25,960	10,060	1,728
24	67	5,669	10,910	14,420	17,310	19,170	20,960	19,800	20,690	25,490	9,676	1,818
25	67	5,881	11,020	14,500	17,350	19,220	21,000	19,700	21,890	25,010	9,408	1,922
26	67	6,091	11,120	14,620	17,420	19,260	21,050	19,620	22,780	24,470	9,139	2,031
27	67	6,315	11,220	14,770	17,510	19,340	21,050	19,570	23,330	23,970	8,922	2,143
28	67	6,527	11,340	14,920	17,590	19,390	21,030	19,690	23,660	23,570	8,776	2,244
29	67	6,733	11,480	15,080	-------	19,470	21,020	19,990	24,300	23,060	8,618	2,381
30	67	6,943	11,650	15,230	-------	19,520	21,020	20,530	25,500	22,480	8,438	2,521
31	229	-------	11,800	15,360	-------	19,570	-------	21,060	-------	21,940	8,426	-------

BIG LOST RIVER BELOW MACKAY RESERVOIR, NEAR MACKAY, IDAHO

LOCATION.—In sec. 18, T. 7 N., R. 24 E., 450 feet below Oleson suspension bridge, half a mile above heading of Streeter ditch, 1½ miles below Mackay Dam, and 2½ miles above Mackay, Custer County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—December 1, 1903, to August 31, 1906; May 12, 1912, to March 15, 1915; January 1, 1919, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank; installed May 4, 1920; inspected by employees of Utah Construction Co. From April 29, 1913, to March 15, 1915, records were obtained at what is commonly known as the Streeter gage, a vertical staff located 1 mile below present site. Streeter ditch diverts water between these two points.

DISCHARGE MEASUREMENTS.—Made from cable just below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel; shifts occasionally. Moss growth at times affects stage-discharge relation.

EXTREMES OF DISCHARGE.—Maximum mean daily stage recorded during year, 3.97 feet May 22 (discharge, 1,380 second-feet); minimum stage, 1.22 feet November 2 (discharge, 38 second-feet).

1903–1906; 1912–1915; 1919–1925: Maximum stage recorded, 5.79 feet June 10, 1921 (discharge, 2,990 second-feet); minimum discharge, November 2, 1924.

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—Numerous diversions above Mackay Reservoir but Sharp ditch is only diversion between gage and reservoir.

REGULATION.—Flow past gage regulated by operation of gates in Mackay Dam. Prior to 1917 regulation from storage above was practically negligible.

ACCURACY.—Stage-discharge relation changed very slightly during October and during high water in June. Standard rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspecting recorder graph. Records excellent.

COOPERATION.—Gage-height record and two discharge measurements furnished by water commissioner for Big Lost River.

Discharge measurements of Big Lost River below Mackay Reservoir, near Mackay, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 3	1.22	36.5	May 9	1.64	145	June 16	3.23	915
Dec. 26	1.40	81.1	May 16	2.60	562	July 14	2.77	665
Mar. 19	1.53	113	June 8	2.85	696	Aug. 4	2.56	552

Daily discharge, in second-feet, of Big Lost River below Mackay Reservoir, near Mackay, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	157	61	66	85	101	109	109	109	1,190	735	594	244
2	157	38	68	85	101	109	109	106	1,160	741	567	248
3	157	40	68	85	101	109	106	103	998	746	546	622
4	157	51	70	88	103	109	106	101	876	746	546	906
5	161	56	70	90	103	112	106	98	816	672	515	515
6	164	58	70	90	103	112	106	98	781	546	470	666
7	164	63	73	90	103	112	106	96	746	546	465	644
8	174	58	73	90	103	112	106	96	700	567	515	594
9	167	49	73	90	106	112	106	126	644	650	546	567
10	170	51	73	93	106	112	106	167	589	638	536	546
11	174	51	75	93	106	112	106	244	541	611	520	465
12	174	54	75	93	106	112	106	353	594	589	520	485
13	174	51	75	93	106	112	106	375	678	611	520	394
14	174	51	75	93	106	112	106	375	846	650	520	248
15	174	56	78	93	106	112	106	407	906	723	515	154
16	178	51	78	93	106	112	106	562	906	770	500	174
17	178	51	78	93	106	112	106	605	936	770	505	170
18	178	51	78	96	106	112	106	678	936	752	490	178
19	178	54	80	96	106	112	106	1,090	936	723	460	170
20	178	54	80	96	106	112	101	1,160	1,030	735	426	167
21	178	54	80	96	106	112	98	1,320	1,160	729	384	170
22	178	56	80	96	106	112	93	1,380	1,160	723	407	174
23	178	61	80	96	106	112	103	1,280	1,060	723	490	178
24	178	61	80	98	106	112	106	1,320	816	735	417	174
25	178	63	80	98	109	112	106	1,090	846	718	344	164
26	178	63	80	98	109	112	103	1,090	967	706	348	161
27	178	66	83	98	109	112	112	1,090	1,030	661	326	164
28	184	66	83	98	109	112	120	1,090	1,060	622	288	167
29	192	66	83	101	------	109	115	1,120	998	644	293	170
30	170	66	85	101	------	109	112	1,190	775	655	301	174
31	109	------	85	101	------	109	------	1,190	------	622	272	------

Monthly discharge of Big Lost River below Mackay Reservoir, near Mackay, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	192	109	171.0	10,500
November	66	38	55.7	3,310
December	85	66	76.6	4,710
January	101	85	93.7	5,760
February	109	101	105	5,830
March	112	109	111	6,820
April	120	93	106	6,310
May	1,380	96	649	39,900
June	1,190	541	889	52,900
July	770	546	679	41,800
August	594	272	456	28,000
September	906	154	328	19,500
The year	1,380	38	311	225,000

BIG LOST RIVER NEAR MOORE, IDAHO

LOCATION.—In sec. 4, T. 5 N., R. 26 E., at Grant Walburn ranch, 1 mile above Moore Canal diversion, 4 miles north of Moore, Butte County, and 11 miles north of Arco.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—November 18, 1919, to September 30, 1925.

GAGE.—Vertical staff on right bank; read by L. G. Walburn.

DISCHARGE MEASUREMENTS.—Made from cable 20 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of clean gravel. Banks low and likely to be overflowed at high stages. Channel winding. Control formed by well-defined gravel bar; shifting.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.34 feet June 23 (discharge, 557 second-feet); minimum stage, 0.16 foot December 27–29 (discharge, 12 second-feet).

1920–1925: Maximum discharge, estimated about 2,330 second-feet June 14, 1921, based on high-water marks on gage; minimum stage December 27–29, 1924.

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—Numerous canal diversions above station. Moore Canal diverts 1 mile below.

REGULATION.—Flow regulated by operation of head gates at Mackay Dam and by canal diversions above station.

ACCURACY.—Stage-discharge relation changed slightly October 1 to November 21 and September 6–30. Rating curve well defined below 750 second-feet used November 22 to September 5; curves parallel thereto used during periods stage-discharge relation changed. Daily discharge determined by applying daily gage height to rating table. Records excellent after February 12; others good.

COOPERATION.—Gage-height record from October to May furnished by water commissioner for Big Lost River.

Discharge measurements of Big Lost River near Moore, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 1	0.31	26.6	May 18	1.37	254	July 13	1.50	288
Mar. 18	.47	48.1	June 6	1.98	439	Aug. 3	1.06	168
May 9	.53	57.9	June 17	1.84	393			

Daily discharge, in second-feet, of Big Lost River near Moore, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	44	26	13	15	44	53	35	493	352	141	127
2	46	38	29	14	15	41	53	44	525	477	129	146
3	46	38	28	14	14	42	50	41	541	414	168	125
4	46	37	29	14	15	44	52	44	493	430	153	337
5	47	35	26	14	19	50	50	47	461	477	139	368
6	47	37	30	15	22	63	55	50	445	430	125	307
7	46	35	29	15	25	56	53	56	414	352	111	307
8	47	37	25	14	29	50	55	53	398	337	134	292
9	46	37	23	14	32	47	59	59	368	352	163	262
10	48	35	24	13	} 25	46	61	56	292	352	153	248
11	50	40	21	14	}	46	63	59	219	322	151	248
12	50	47	21	14		46	67	95	192	322	153	248
13	50	37	20	14	34	44	69	99	262	307	160	233
14	48	37	20	15	37	47	71	107	292	292	148	192
15	47	37	21	14	37	46	71	120	337	292	139	153
16	48	37	22	14	40	44	69	173	368	307	134	168
17	48	38	23	14	44	47	73	219	398	248	125	163
18	48	34	20	14	41	47	76	248	368	205	111	143
19	50	34	17	14	41	48	73	277	368	178	103	153
20	50	34	15	14	41	50	71	307	383	192	87	143
21	50	34	15	13	41	56	67	368	493	219	82	151
22	50	34	15	14	41	73	69	430	541	192	76	136
23	52	40	14	15	41	83	69	461	557	192	122	136
24	52	42	13	15	41	73	67	461	477	205	116	136
25	52	42	13	15	42	59	61	414	398	192	93	129
26	35	29	13	15	41	66	59	383	430	173	95	127
27	34	34	12	15	41	66	55	383	445	168	97	118
28	33	33	12	15	41	59	44	398	461	148	97	114
29	34	33	12	14	------	74	35	414	477	143	95	122
30	34	30	13	15	------	89	30	461	445	168	95	120
31	34	------	13	15	------	69	------	477	------	166	101	------

NOTE.—Discharge estimated Feb. 10–12; interpolated Oct. 10, Feb. 5–7, and Mar. 7. Braced figure shows mean discharge for period indicated.

Monthly discharge of Big Lost River near Moore, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	52	33	45.6	2,800
November	47	29	36.6	2,180
December	30	12	19.8	1,220
January	15	13	14.3	879
Feburary	44	14	32.3	1,790
March	89	41	55.3	3,400
April	76	30	60.0	3,570
May	477	35	221	13,600
June	557	192	411	24,500
July	477	143	278	17,100
August	168	76	122	7,500
September	368	114	188	11,200
The year	557	12	124	89,700

WARM SPRING CREEK (EAST CHANNEL) NEAR MACKAY, IDAHO

LOCATION.—In NE. ¼ sec. 5, T. 7 N., R. 23 E., 500 feet above junction with west channel of Warm Spring Creek, 3½ miles above Mackay Dam, and 7½ miles northwest of Mackay, Custer County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 1, 1919, to September 30, 1925.

GAGE.—Vertical staff on right bank; read by employees of Utah Construction Co.

DISCHARGE MEASUREMENTS.—Made from suspension bridge 125 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel. One channel at all stages. Banks steep and covered with brush. Channel congested by growth of moss during summer.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.56 feet June 23 (discharge, 148 second-feet); minimum stage, 1.30 feet May 7 (discharge, 13 second-feet).

1919–1925: Maximum discharge recorded, 225 second-feet June 15, 1922; minimum discharge, 9 second-feet May 8, 9, 13, and 14, 1919, and May 18–21, 1920.

ICE.—Stage-discharge relation seldom affected by ice.

DIVERSIONS.—Natural flow practically all diverted during irrigation season. Flow during summer represents return flow from irrigation above. Entire flow stored in Mackay Reservoir 3½ miles below.

REGULATION.—None.

ACCURACY.—Stage-discharge relation affected by growth of moss and by brush along banks; probably affected by ice December 12–25. Well-defined rating curve used April 2 to July 16; shifting-control method used during remainder of year. Gage read to hundredths once or twice a week. Daily discharge ascertained by applying gage height to rating table for days when gage was read and by estimating or interpolating the intervening days. Records fair chiefly because of infrequent gage readings.

COOPERATION.—Gage-height record and three discharge measurements furnished by water commissioner for Big Lost River.

The record at this station represents a part of the natural flow of Big Lost River and taken in conjunction with records for west channel of Warm Spring Creek and east and west channels of Big Lost River will show the entire surface flow of Big Lost River which enters Mackay Reservoir a short distance below. For record from station on west channel of Warm Spring Creek and east and west channels of Big Lost River see pages 112, 101, and 103, respectively. For record of combined flow of both channels of Big Lost River and Warm Spring Creek see page 105.

Discharge measurements of Warm Spring Creek (east channel) near Mackay, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	1.48	18.5	May 17	1.82	56.4	July 15	1.75	48.6
Dec. 26	1.44	17.4	June 7	1.78	52.7	Aug. 4	1.64	34.7
Mar. 18	1.41	19.0	June 16	1.88	62.6			
May 10	1.54	29.4	June 24	2.42	129			

Daily discharge, in second-feet, of Warm Spring Creek (east channel) near Mackay, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	20	20	20	19	18	19	17	85	95	40	25
2	20	20	20	20	20	19	19	17		88	39	24
3	20	19	20	20	20	19	19	16	72	87	37	24
4	20	19	20	20	20	19	19	15	67	86	35	24
5	20	19	20	19	20	19	19	14	62	84	33	24
6	19	19	20	19	20	19	19	14	57	83	31	24
7	19	19	20	19	20	19	19	13	52	77	31	25
8	19	19	19	19	20	19	19	18	50	71	30	25
9	19	19	19	19	19	19	19	24	47	65	30	25
10	19	20	19	19	19	19	19	29		62	30	25
11	19	20	19	19	19	19	19	32	46	60	30	25
12	19	20		19	19	19	19	33	48	58	29	25
13	19	20		19	19	19	19	33		56	29	26
14	19	20		19	19	19	19	34		52	30	26
15	19	20		19	19	19	19	41	54	49	31	27
16	19	20		19	18	19	19	49	63	49	32	27
17	19	20		19	18	19	19	56	60	49	31	27
18	19	20		19	18	19	19	63	57	50	30	27
19	19	20	18	20	18	18	19	71	80	51	29	27
20	19	20		20	18	18	20	80		51	28	27
21	19	20		20	18	18	20	88	125	51	28	28
22	19	20		20	18	18	20	84		51	28	28
23	19	20		20	18	18	20	81	148	51	27	28
24	19	20		20	18	18	20	78	130	51	27	28
25	19	20		20	18	18	20	74	119	51	26	
26	19	20	18	19	18	18	19	75	110	51	26	30
27	20	20	18	19	18	18	19			51	25	
28	20	20	18	19	18	18	18	83		48	25	
29	20	20	19	19	------	18	18		101	46	25	
30	20	20	20	19	------	19	18	95	105	44	25	
31	20	------	20	19	------	19	------		------	42	25	------

Monthly discharge of Warm Spring Creek (east channel) near Mackay, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	20	19	19.3	1,190
November	20	19	19.8	1,180
December	20	------	18.7	1,150
January	20	19	19.4	1,190
February	20	18	18.8	1,040
March	19	18	18.6	1,140
April	20	18	19.1	1,140
May	------	13	51.4	3,160
June	148	------	79.7	4,740
July	------	42	60.0	3,690
August	40	25	29.7	1,830
September	------	24	26.7	1,590
The year	148	13	31.8	23,000

WARM SPRING CREEK (WEST CHANNEL) NEAR MACKAY, IDAHO

LOCATION.—In NE. ¼ sec. 5, T. 7 N., R. 23 E., 500 feet above junction with east channel of Warm Spring Creek, 3½ miles above Mackay Dam, above flow line of reservoir, and 7½ miles above Mackay, Custer County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 8, 1919, to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on right bank; inspected by employees of Utah Construction Co.

DISCHARGE MEASUREMENTS.—Made from suspension footbridge just below gage or by wading.

CHANNEL AND CONTROL.—Bed composed chiefly of gravel. One channel at all stages. Control formed by well-defined gravel riffle; fairly permanent

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.24 feet June 23 (discharge, 251 second-feet); minimum stage, 0.69 foot May 7 (discharge, 61 second-feet).

1919–1925: Maximum stage recorded, 3.38 feet June 12, 1921 (discharge, 411 second-feet); minimum stage and discharge, May 7, 1925.

ICE.—Stage-discharge relation occasionally affected by ice.

DIVERSIONS.—Practically entire flow diverted during irrigation season. Flow during summer represents return flow from irrigation above. Entire flow impounded in Mackay Reservoir below.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed January 14 to February 21 and July 1–30. Rating curve well defined between 70 and 170 second-feet and fairly well defined above, and curves parallel thereto, used February 22 to June 30, October 1 to January 13, and July 31 to September 30, respectively; shifting-control method used at other times. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. May to July, records fair; others good.

COOPERATION.—Gage-height record and three discharge measurements furnished by water commissioner for Big Lost River.

The record at this station represents a part of the natural flow of Big Lost River, and taken in conjunction with the record for east channel of Warm Spring Creek and the records for east and west channels of Big Lost River, will show practically the entire surface flow of Big Lost River which enters Mackay Reservoir a short distance below. For records from stations on east channel of Warm Spring Creek and on east and west channels of Big Lost River see pages 110, 101, and 103, respectively. For record of combined flow of both channels of Big Lost River and Warm Spring Creek see page 105.

Discharge measurements of Warm Spring Creek (west channel) near Mackay, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	0.88	81.6	May 17	1.32	142	July 15	1.18	129
Dec. 26	.91	83.8	June 7	1.27	138	Aug. 4	1.03	111
Mar. 18	.89	86.8	June 16	1.41	155			
May 10	.96	94.8	June 24	2.03	222			

Daily discharge, in second-feet, of Warm Spring Creek (west channel) near Mackay, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	80	90	88	87	87	86	74	191	191	126	103
2	77	80	90	88	87	87	86	70	179	179	123	103
3	77	80	90	88	87	87	86	68	164	173	119	101
4	77	80	91	88	88	88	86	67	157	173	113	103
5	78	80	91	88	90	90	86	64	157	173	110	103
6	79	79	91	87	88	92	87	63	148	173	108	103
7	79	79	91	88	87	91	86	61	138	166	106	103
8	77	80	90	88	88	90	86	79	133	158	105	103
9	77	84	90	88	87	88	87	88	128	157	104	103
10	78	84	90	88	87	87	87	92	130	149	104	101

Daily discharge, in second-feet, of Warm Spring Creek (west channel) near Mackay, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	79	86	90	88	88	87	86	100	133	145	103	101
12	79	86	90	88	88	87	84	105	134	142	103	101
13	80	87	90	88	88	87	84	104	134	142	103	101
14	80	91	90	88	88	87	87	106	138	131	105	101
15	80	91	90	88	88	87	86	113	146	130	105	103
16	80	90	90	88	88	87	83	124	155	130	105	104
17	80	90	88	88	88	86	82	141	149	128	105	104
18	80	90	86	88	88	86	79	153	146	131	104	103
19	80	88	88	88	88	84	79	164	157	140	103	103
20	80	88	88	88	88	88	79	179	173	137	103	103
21	80	91	87	88	88	88	79	191	196	138	101	104
22	80	91	86	88	88	88	79	191	239	144	101	104
23	80	91	87	88	88	87	86	173	251	153	99	104
24	80	91	89	88	88	86	87	173	228	150	99	104
25	80	91	90	88	87	86	86	173	217	142	97	104
26	82	90	84	88	87	86	84	173	217	140	99	104
27	83	88	86	88	87	86	83	173	202	137	100	105
28	84	88	87	87	87	86	80	179	196	134	100	105
29	86	88	90	87	-------	86	79	196	202	131	100	119
30	83	88	90	87	-------	86	77	212	212	130	100	117
31	82	-------	88	87	-------	86	-------	212	-------	128	101	------

NOTE.—Discharge interpolated Dec. 23, 24, and Sept. 26, 27.

Monthly discharge of Warm Spring Creek (west channel) near Mackay, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	86	77	79.8	4,910
November	91	79	86.3	5,140
December	91	84	89.0	5,470
January	88	87	87.8	5,400
February	90	87	87.7	4,870
March	92	84	87.2	5,360
April	87	77	83.7	4,980
May	212	61	131	8,060
June	251	128	172	10,200
July	191	128	148	9,100
August	126	97	105	6,460
September	119	101	104	6,190
The year	251	61	105	76,100

SHARP DITCH NEAR MACKAY, IDAHO

LOCATION.—In sec. 12, T. 7 N., R. 23 E., 250 feet below head of ditch, half a mile below Mackay Reservoir, and 3½ miles northwest of Mackay, Custer County.

RECORDS AVAILABLE.—June 6, 1912, to October 24, 1914, March 24, 1919, to September 30, 1925.

GAGE.—Vertical staff on right bank; installed April 20, 1920; read by water master or employees of Utah Construction Co.

DISCHARGE MEASUREMENTS.—Made from footbridge or by wading.

CHANNEL AND CONTROL.—Control composed of gravel and sand; poorly defined. Channel congested at times by moss, weeds, and silt deposits.

EXTREMES OF DISCHARGE.—Maximum discharge recorded during year, 32 second-feet May 10; ditch probably dry except for leakage through head gates during period of no record.

1912–1914; 1919–1925: Maximum stage recorded, 2.50 feet June 23, 1921, (discharge, 42 second-feet); ditch reported dry during winter and on other days when water is shut off.

ICE.—None. Winter flow is probably limited to leakage through head gates.
DIVERSIONS.—Station above all diversions.
REGULATION.—Flow controlled by head gate and by a small wasteway above gage.
ACCURACY.—Stage-discharge relation affected by growth of moss and silt deposits. Standard rating curve well defined. Gage read to hundredths once daily; record fragmentary prior to May 1. Daily discharge ascertained by applying gage height to rating table except as indicated in footnote to table of daily discharge. Shifting-control method used during greater part of year. Records fair, except for estimated periods for which they are poor.
COOPERATION.—Gage-height record and three discharge measurements furnished by water commissioner for Big Lost River.

Sharp ditch diverts from east side of Big Lost River in sec. 12, T. 7 N., R. 23 E. 1 mile above heading of Streeter ditch and half a mile below Mackay Reservoir. The water is used for irrigation on land northwest of Mackay and above Streeter ditch.

Discharge measurements of Sharp ditch near Mackay, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 27	0.90	16.3	May 25	1.37	27.2	July 11	1.32	27.2
May 10	1.49	31.2	June 8	1.27	27.8	July 14	1.35	28.8
May 17	1.22	25.6	June 15	1.21	26.4	Aug. 4	1.17	23.5

Daily discharge, in second-feet, of Sharp ditch near Mackay, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1				15	28	27	25	22
2				15	28	27	24	22
3	14		2.5	14	28	27	24	25
4				14	28	28	24	26
5				14	28	28	23	23
6	13			14	28	26	21	22
7				14	28	27	21	23
8		3.0		19	28	27	21	23
9				26	29	28	20	23
10				32	29	28	24	23
11	12		5.0	29	27	28	24	23
12				25	27	27	24	23
13				25	29	29	24	23
14				24	28	29	24	20
15	8.5			25	27	27	24	14
16				25	27	26	24	
17				25	27	26	23	
18	5.0			27	27	26	23	
19				27	28	26	21	
20		-------	10	26	28	26	19	
21		-------	15	26	28	26	24	
22		-------		26	30	26	24	14
23		-------	11	26	28	26	24	
24		-------	7.0	26	28	26	21	
25		-------		26	28	26	21	
26	4.0	-------	12	28	28	26	23	
27		-------	16	28	28	26	23	
28		-------	16	28	28	26	20	
29		-------	15	28	28	26	24	
30		-------	15	28	28	26	24	
31		-------	-------	28	-------	25	24	-------

NOTE.—On basis of data furnished by water commissioner for Big Lost River, discharge estimated Oct. 1-5, 7-31, Nov. 1-15, Apr. 3-26, Sept. 16-30; interpolated Apr. 28-30 and May 9 and 20. No flow reported Nov. 16 to Apr. 2, except possibly for small leakage through head gates. Braced figures show mean discharge for periods indicated.

Monthly discharge of Sharp ditch near Mackay, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October			8.27	508
November 1–15			3.00	89.3
April 3–30	16		7.91	439
May	32	14	23.6	1,450
June	30	27	28.0	1,670
July	29	25	26.7	1,640
August	25	19	22.9	1,410
September	26		18.2	1,080

PORTNEUF RIVER AT TOPAZ, IDAHO

LOCATION.—In sec. 23, T. 9 S., R. 37 E., at Oregon Short Line Railroad bridge one-fourth mile west of Topaz flag station, Bannock County, 1¼ miles above diversion dam of Portneuf-Marsh Valley Canal Co., and 6 miles southeast of McCammon.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—January 12, 1913, to September 30, 1915; July 20, 1919, to September 30, 1925.

GAGE.—Enamel-faced vertical staff fastened to abandoned bridge pile on left bank at upstream side of railroad bridge; installed September 30, 1915; read by Mrs. Selma Hendricks. Gage prior to this time was at a datum 1 foot lower than present gage.

DISCHARGE MEASUREMENTS.—Made from cable 500 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel. Hardpan and conglomerate formation 700 feet below gage forms control; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 3.40 feet July 5 (discharge, 680 second-feet); minimum stage, 0.96 foot October 1 (discharge, 121 second-feet).

1913–1915; 1919–1925: Maximum stage recorded (on old gage) 6.1 feet April 3, 1913 (discharge, 902 second-feet); minimum stage, 0.92 foot August 17 and 30, 1919 (discharge, 116 second-feet).

ICE.—Stage-discharge relation seldom affected by ice on account of warm springs.

DIVERSIONS.—Numerous ranch diversions above. Stored water from Portneuf-Marsh Valley Canal Co.'s reservoir is diverted for irrigation 1¼ miles below.

REGULATION.—Water is stored during winter and spring in Portneuf-Marsh Valley Canal Co.'s reservoir near Chesterfield and released during irrigation season.

ACCURACY.—Stage-discharge relation not permanent; affected by ice December 18–25 and by moss and débris July 6 to September 25. Standard rating curve well defined below 350 second-feet. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table; shifting-control method used August 10 to September 25. Records good.

Discharge measurements of Portneuf River at Topaz, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 9	1.13	158	May 24	1.93	319	July 27	1.62	250
Mar. 12	1.45	222	May 31	1.70	273	Sept. 22	1.26	178
Apr. 8	1.48	236	July 2	1.41	215	Sept. 28	1.18	167
May 2	1.66	273	July 8	1.69	260			

Daily discharge, in second-feet, of Portneuf River at Topaz, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	121	161	161	161	161	171	234	255	255	202	131	286
2	131	161	161	151	171	171	224	266	276	213	131	330
3	131	161	161	151	171	182	224	266	286	213	141	297
4	141	161	161	161	286	224	224	276	276	213	131	286
5	141	161	171	161	276	234	234	297	255	680	131	255
6	141	161	171	151	481	286	234	319	255	341	131	244
7	141	161	171	151	276	330	224	341	244	266	131	244
8	141	161	171	161	255	364	234	387	244	266	131	234
9	141	161	161	161	224	297	224	433	234	234	131	213
10	151	161	161	161	192	244	234	410	234	244	131	234
11	141	161	161	151	192	213	244	410	234	213	131	224
12	141	161	161	161	192	213	266	410	234	202	151	213
13	141	161	161	161	192	202	266	410	213	192	171	213
14	141	161	171	161	182	202	276	387	224	182	213	213
15	141	161	171	161	182	202	276	410	244	182	224	171
16	141	161	192	161	182	202	276	457	234	202	234	161
17	141	161	171	151	182	213	341	457	255	213	234	161
18	141	161		151	182	202	433	410	255	213	244	182
19	141	161		151	182	224	387	387	244	213	255	171
20	141	171		151	182	276	341	387	234	224	266	171
21	141	171	150	151	182	330	319	387	234	234	266	176
22	141	171		151	182	330	286	341	308	234	266	182
23	141	171		151	182	308	286	319	286	255	255	182
24	141	161		161	171	276	297	330	266	244	244	171
25	141	161		161	171	255	286	319	234	244	244	171
26	141	161	151	161	171	234	276	297	224	244	244	171
27	141	161	151	161	171	224	276	286	213	244	234	171
28	141	161	161	161	161	224	244	276	213	161	244	171
29	171	161	151	161	-------	224	244	266	202	151	255	171
30	161	161	161	161	-------	255	244	255	202	141	266	161
31	161	-------	161	161	-------	244	-------	276	-------	141	286	-------

NOTE.—Discharge estimated on account of ice Dec. 18–25; interpolated Sept. 21. Braced figure shows mean discharge for period indicated.

Monthly discharge of Portneuf River at Topaz, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	171	121	142	8,730
November	171	161	162	9,640
December	192	----------	160	9,840
January	161	151	157	9,650
February	481	161	205	11,400
March	364	171	244	15,000
April	433	224	272	16,200
May	457	255	346	21,300
June	308	202	244	14,500
July	680	141	232	14,300
August	286	131	202	12,400
September	330	161	208	12,400
The year	680	121	214	155,000

PORTNEUF RIVER AT POCATELLO, IDAHO

LOCATION.—In sec. 27, T. 6 S., R. 34 E., at highway bridge at foot of Carson Street, in west end of Pocatello, Bannock County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—August 31, 1911, to September 30, 1925. At site 1 mile upstream, May 18, 1897, to October 14, 1899.

GAGE.—Vertical staff attached to pile of highway bridge near left bank; installed September 8, 1919; read by W. S. Hutson.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of rocks and boulders; very rough. One channel except at extremely high stages when left bank is overflowed. Control shifts within well-defined limits.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 5.45 feet April 21 (discharge, 737 second-feet). Minimum discharge, 97 second-feet October 1–3 and July 20–22.

1911–1925: Maximum stage recorded, 7.8 feet May 30, 1917 (discharge, in excess of 2,000 second-feet during period May 13 to June 14, 1917, when left bank was overflowed); minimum stage, 1.92 feet June 24 and 28, 1919 (discharge, 44 second-feet).

1897–1899: Maximum stage recorded, 12.80 feet May 18, 1897 (discharge, 1,880 second-feet); minimum stage, 6.10 feet July 4–11, 13, 17, and 18, 1898 (discharge, 14 second-feet).

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—Numerous ranch diversions above gage. The largest single diversion is canal of Portneuf-Marsh Valley Canal Co., which irrigates land near Downey.

REGULATION.—None below head of Portneuf-Marsh Valley Canal Co.'s canal. Storage reservoir of company near Chesterfield has capacity of about 28,000 acre-feet.

ACCURACY.—Stage-discharge relation changed several times during year. Standard rating curve fairly well defined below 600 second-feet. Gage read to half-tenths several times a week. Daily discharge ascertained by applying daily gage height to rating table, using shifting-control method October 11 to December 4, April 20–23, May 7–9, and July 27 to September 18. Records fair.

Discharge measurements of Portneuf River at Pocatello, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 8	3.46	256	May 23	3.89	369	July 9	3.44	252
Mar. 11	4.22	402	June 1	3.07	206	July 26	2.60	116
Mar. 13	4.15	357	July 1	3.00	170	Sept. 22	3.31	195
Apr. 9	4.31	435	July 2	2.85	156	Sept. 29	3.44	224
May 3	4.64	534						

Daily discharge, in second-feet, of Portneuf River, at Pocatello, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	97	209	257		374	301	420	497	209	182	156	132
2	97	209	257		386	315	420	523	200	156	140	148
3	97	209	257		397	329	420	523	209	148	140	166
4	100	209	257		408	336	408	523	228	156	140	182
5	102	212	257		420	344	396	549	242	173	125	176
				350								
6	104	215	257		432	351	404	549	257	256	118	170
7	118	218	257		445	381	412	575	257	351	111	164
8	132	218	257		409	411	420	575	257	304	104	164
9	145	218	257		373	441	420	575	242	257	114	164
10	159	218	257		330	471	420	549	228	242	125	164
11	173	220	257		287	396	445	549	218	228	125	156
12	168	222	257		294	384	471	523	209	209	125	173
13	164	224	257		301	373	497	523	200	173	140	173
14	167	226	257		308	373	523	514	200	156	156	173
15	170	228	257		301	373	523	506	209	140	173	173
				250								
16	173	233			294	373	523	497	218	125	152	173
17	168	238			287	358	549	497	218	125	132	182
18	164	240			287	344	575	497	218	125	118	191
19	164	242			287	329	601	445	209	111	118	203
20	164	245			287	346	628	445	203	97	118	215
21	168	247			287	363	737	409	197	97	122	228
22	171	247			287	380	575	373	191	97	125	200
23	175	247			287	396	575	373	200	125	118	228
24	178	247	225		287	404	549	351	329	125	111	257
25	182	247			287	412	536	329	329	118	111	247
				300								
26	186	247			287	420	523	308	242	111	114	238
27	191	247			287	420	523	287	156	111	118	228
28	196	247			287	420	523	257	156	228	120	218
29	200	250			-------	420	523	257	140	209	123	218
30	204	254		351	-------	420	510	241	161	191	125	228
31	209	-------		362	-------	420	-------	225	-------	173	128	-------

NOTE.—Discharge estimated on account of ice Dec. 16 to Jan. 29 based on observer's notes, weather records, and flow past station at Topaz; discharge for other periods of missing gage height interpolated. Braced figures show mean discharge for periods indicated.

Monthly discharge of Portneuf River at Pocatello, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	209	97	158	9,720
November	254	209	231	13,700
December	-------	-------	240	14,800
January	-------	-------	304	18,700
February	445	287	329	18,300
March	471	301	381	23,400
April	737	396	502	29,900
May	575	225	447	27,500
June	329	140	218	13,000
July	351	97	171	10,500
August	173	104	127	7,810
September	257	132	191	11,400
The year	737	97	274	199,000

NORTH SIDE MINIDOKA CANAL NEAR MINIDOKA, IDAHO

LOCATION.—In sec. 1, T. 9 S., R. 25 E., 650 feet below Minidoka Dam and 6 miles south of Minidoka, Minidoka County.

RECORDS AVAILABLE.—May 1, 1909, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank; installed October 31, 1914; inspected by employees of United States Bureau of Reclamation.

DISCHARGE MEASUREMENTS.—Made from suspension footbridge at gage.

CHANNEL AND CONTROL.—Rock cut; practically permanent, but rough.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 9.48 feet at 2.30 p. m. July 19 (discharge, 1,510 second-feet); no flow at various times when head gates were closed.

1909–1925: Maximum stage recorded, 9.50 feet at 7 p. m. May 22, 1924; maximum flow occurred at gage height 9.44 feet May 20, 1914 (discharge, 1,520 second-feet); no flow at various times when head gates were closed.

ICE.—Observations discontinued during winter.

DIVERSIONS.—None either above or below station near enough to affect stage-discharge relation.

REGULATION.—Flow controlled by head gates at Minidoka Dam.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Shifting-control methods used October 10 and 11. Records excellent.

COOPERATION.—Gage-height record and one discharge measurement furnished by United States Bureau of Reclamation and Minidoka Irrigation District.

North Side Minidoka Canal diverts water from right side of Snake River in sec. 1, T. 9 S., R. 25 E., for irrigation of land in North Side Minidoka project of United States Bureau of Reclamation. Project comprises about 20 miles of main canal and about 260 miles of laterals.

Discharge measurements of North Side Minidoka Canal near Minidoka, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 3	2.25	126	May 9	9.38	1,480	Aug. 17	8.31	1,200
Apr. 9	5.82	652	May 28	9.36	1,470	Sept. 16	7.26	967
Apr. 26	7.70	1,070	Aug. 14	9.02	1,420			

Daily discharge, in second-feet, of North Side Minidoka Canal near Minidoka, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	347	224			573	1,400	1,490	1,490	1,400	1,300
2	352	223			601	1,470	1,490	1,490	1,370	1,280
3	346	223	124		618	1,490	1,460	1,490	1,370	1,280
4	352	222			646	1,440	1,390	1,480	1,360	1,290
5	348	222			669	1,420	1,380	1,490	1,350	1,300
6	346	220			671	1,470	1,320	1,490	1,380	1,290
7	344	219			675	1,470	1,270	1,490	1,440	1,220
8	348	194			677	1,490	1,280	1,490	1,430	1,110
9	344	163			679	1,490	1,270	1,490	1,430	1,100
10	296	164			713	1,490	1,260	1,490	1,420	1,050
11	249	164			759	1,440	1,270	1,490	1,420	993
12	227	164		69	775	1,300	1,270	1,490	1,430	967
13	232	166		152	781	1,300	1,270	1,490	1,420	971
14	273	166		152	868	1,310	1,270	1,490	1,330	969
15	293	62		152	973	1,300	1,180	1,490	1,230	971
16	290			185	1,060	1,270	1,070	1,490	1,240	971
17	287			206	1,150	1,200	1,090	1,490	1,240	973
18	294			206	1,190	1,210	1,120	1,490	1,190	947
19	288			206	1,190	1,210	1,120	1,490	1,190	876
20	245			236	1,200	1,210	1,170	1,490	1,260	868

Daily discharge, in second-feet, of North Side Minidoka Canal near Minidoka, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	223			286	1,200	1,200	1,310	1,490	1,330	695
22	224			306	1,190	1,200	1,400	1,490	1,340	574
23	232			329	1,150	1,200	1,410	1,460	1,340	569
24	231			365	1,080	1,200	1,460	1,350	1,330	567
25	229			461	1,080	1,230	1,490	1,290	1,340	565
26	231			521	1,080	1,370	1,480	1,290	1,360	569
27	232			522	1,080	1,480	1,480	1,290	1,370	565
28	246			522	1,080	1,480	1,490	1,340	1,370	564
29	274			522	1,150	1,490	1,490	1,340	1,350	562
30	277			553	1,290	1,490	1,490	1,360	1,330	565
31	255			574		1,480		1,420	1,330	

NOTE.—No record Nov. 16 to Dec. 2 and Dec. 4 to Mar. 11.

Monthly discharge of North Side Minidoka Canal near Minidoka, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	352	223	282	17,300
November 1–15	224	62	186	5,530
March 12–31	574	69	326	12,900
April	1,290	573	928	55,200
May	1,490	1,200	1,360	83,600
June	1,490	1,070	1,330	79,100
July	1,490	1,290	1,450	89,200
August	1,440	1,190	1,340	82,400
September	1,300	562	917	54,600

SOUTH SIDE MINIDOKA CANAL NEAR MINIDOKA, IDAHO

LOCATION.—In sec. 12, T. 9 S., R. 25 E., Cassia County, 300 yards below head gates at Minidoka Dam and 6 miles south of Minidoka, Minidoka County.

RECORDS AVAILABLE.—April 21, 1909, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank; inspected by employees of United States Bureau of Reclamation.

DISCHARGE MEASUREMENTS.—Made from suspension footbridge at gage.

CHANNEL AND CONTROL.—Canal section in earth; may shift. Stage-discharge relation affected by growth of aquatic plants.

EXTREMES OF DISCHARGE.—Maximum discharge, 1,090 second-feet at 10 a. m. July 2; probably no flow during period of no record.

1909–1925: Maximum discharge, 1,100 second-feet July 16 and 18, 1921; probably no flow during periods of no record each year.

ICE.—No record obtained during winter.

DIVERSIONS.—None above gage.

REGULATION.—Flow controlled by head gates at Minidoka Dam.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curves well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying mean gage height obtained from recorder graph to rating table or by shifting-control method. Records good.

COOPERATION.—Gage-height record and six discharge measurements furnished by United States Bureau of Reclamation.

South Side Minidoka Canal diverts water from the left bank of Snake River in sec. 1, T. 9 S., R. 25 E., for irrigation of land in South Side Minidoka project of United States Bureau of Reclamation. Project comprises about 13 miles of main canal and about 297 miles of laterals.

Discharge measurements of South Side Minidoka Canal near Minidoka, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 9	2.90	390	May 27	5.27	957	July 23	5.71	1,060
Apr. 25	3.43	487	June 1	5.59	1,050	Aug. 14	5.18	900
May 9	5.25	959	July 2	5.70	1,090	Aug. 18	4.83	794
May 21	4.29	683	July 10	5.66	1,030	Sept. 16	3.69	528

Daily discharge, in second-feet, of South Side Minidoka Canal near Minidoka, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	142	262		190	684	1,050	1,070	1,030	890
2	150	262		240	684	1,050	1,080	1,040	882
3	151	262		240	692	950	1,080	1,030	882
4	145	196		240	735	851	1,070	1,020	859
5	137	0		277	782	890	1,070	997	840
6	138	108		304	843	916	1,070	980	840
7	150	164		302	893	899	1,070	959	812
8	153	165		311	930	879	1,050	939	746
9	165	167		365	950	871	1,040	939	677
10	177	170		387	950	871	1,040	945	643
11	167	169		408	901	871	1,040	953	624
12	165	167		435	815	873	1,050	959	612
13	234	89		445	818	873	1,050	959	575
14	136			482	782	873	1,050	916	542
15	159			544	714	871	1,040	882	525
16	170			582	667	834	1,050	857	525
17	164			624	631	796	1,050	837	525
18	167			624	631	796	676	799	525
19	154			601	636	823	1,020	810	525
20	160			551	692	865	1,030	837	511
21	163			551	692	910	1,050	873	410
22	178			551	694	968	1,050	896	349
23	200			533	707	1,020	1,050	904	308
24	211			516	727	1,040	1,040	916	304
25	233			501	785	1,020	1,030	933	302
26	251			488	859	1,000	1,020	939	301
27	251			492	945	1,020	1,020	953	297
28	253			538	974	1,040	1,020	959	340
29	262		161	589	997	1,070	1,030	939	338
30	261		163	653	1,020	1,060	1,030	899	281
31	262		163		1,040		1,030	904	

NOTE.—No record obtained Nov. 14 to Mar. 28.

Monthly discharge of South Side Minidoka Canal near Minidoka, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	262	136	184	11,300
November 1-13	262	0	168	4,330
March 29-31	163	161	162	964
April	653	190	452	26,900
May	1,040	631	802	49,300
June	1,070	796	928	55,200
July	1,080	676	1,030	63,300
August	1,040	799	929	57,100
September	890	281	560	33,300

GOOSE CREEK ABOVE TRAPPER CREEK, NEAR OAKLEY, IDAHO

LOCATION.—In sec. 13, T. 15 S., R. 21 E., 5 miles above Trapper Creek and 10 miles south of Oakley, Cassia County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 29, 1911, to September 30, 1916; March 27, 1919, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank; inspected by employees of Oakley Canal Co.

DISCHARGE MEASUREMENTS.—Made from cable 250 feet above gage or by wading. Since summer of 1921 flow has been slightly augmented by flow of artesian water from well of West Pearl Oil & Gas Co., 2 miles above station.

CHANNEL AND CONTROL.—Bed composed of rock overlain with gravel and silt. Control fairly well defined; shifts occasionally. Banks high and not likely to be overflowed.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 3.58 feet at 1 p. m. July 1 (discharge, 247 second-feet); minimum stage, 1.66 feet from 10 a. m. to 2 p. m. August 25 (discharge, 10.8 second-feet).

1911–1916; 1919–1925; Maximum stage recorded, 5.23 feet at 9 a. m. May 18, 1921 (discharge, 670 second-feet); minimum stage, 1.19 feet at 9 a. m. August 13, 1915 (discharge, 1.1 second-feet).

ICE.—Stage-discharge relation seriously affected by ice. Observations discontinued during winter.

DIVERSIONS.—Several small canals and ditches divert above station for irrigation chiefly of lands belonging to Utah Construction Co.

REGULATION.—None except that due to diversions.

ACCURACY.—Stage-discharge relation changed July 2 to August 13 and September 22–30. Standard rating curve well defined below 250 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. Records good.

COOPERATION.—Gage-height record furnished by Oakley Canal Co.

Discharge measurements of Goose Creek above Trapper Creek, near Oakley, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 8	2.71	106	May 18	3.11	169	July 13	1.86	23.1
May 1	2.83	137	July 6	2.34	57.5	Aug. 23	1.70	12.4

Daily discharge, in second-feet, of Goose Creek above Trapper Creek, near Oakley, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	27	-------	109	137	98	35	16	13
2	16	27	-------	105	146	106		16	12
3	17	27	-------	101	160	113		16	12
4	17	27	-------	100	170	124	50	16	12
5	18	27		107	188	112		15	13
6	19	27		113	198	103	56	13	15
7	19	25		113	210	94	42	14	14
8	21	27	50	106	210	82	35	13	33
9	21	28		105	210	77	31	13	27
10	22	25		114	200	74	30	14	19
11	23			136	201	68	26	14	17
12	23		53	157	198	61	23	18	16
13	23		53	175	188	54	23	25	16
14	23		53	193	176	54	22	37	16
15	22	24	54	203	165	57	20	22	17
16	22		53	213	162	62	19	20	16
17	22		52	222	167	66	18	18	15
18	23		51	226	165	59	16	17	15
19	25	-------	49	240	154	55	14	16	17
20	25	-------	53	242	146	51	13	14	20
21	24	-------	59	226	146	48	12	14	64
22	24	-------	67	212	144	48	17	13	45
23	24	-------	76	198	140	50	25	12	33
24	25	-------	79	176	138	48	23	12	33
25	24	-------	82	159	138	44	21	11	30
26	24	-------	81	143	130	40	19	11	27
27	25	-------	82	134	116	36	19	12	25
28	25	-------	83	130	105	33	18	13	24
29	28	-------	89	127	93	30	19	13	25
30	28	-------	98	133	85	29	18	12	25
31	28	-------	107	-------	93	-------	17	12	-------

NOTE.—Discharge estimated Nov. 11–18 and Mar. 5–11, on account of ice, and July 2–5 when water-stage recorder failed to operate properly. Braced figures show mean discharge for periods included. No record Nov. 19 to Mar. 4.

Monthly discharge of Goose Creek above Trapper Creek, near Oakley, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	28	16	22.5	1,380
November 1–18	----------	----------	25.5	910
March 5–31	107	----------	63.9	3,420
April	242	100	157	9,340
May	210	85	157	9,650
June	124	29	65.9	3,920
July	----------	12	26.8	1,650
August	37	11	15.5	953
September	64	12	22.2	1,320

TRAPPER CREEK NEAR OAKLEY, IDAHO

LOCATION.—In sec. 33, T. 14 S., R. 21 E., 1½ miles above Nelson ranch, 1 mile from east boundary of Minidoka National Forest, 5 miles above Oakley Dam, and 9 miles southwest of Oakley, Cassia County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 1, 1911, to September 30, 1916; March 28, 1919, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank; installed April 8, 1913; inspected by employees of Oakley Canal Co.

DISCHARGE MEASUREMENTS.—Made by wading. Since summer of 1921, flow past station has been augmented slightly by flow from two artesian wells 1 mile above gage.

CHANNEL AND CONTROL.—Bed composed of small boulders and coarse gravel. Control shifting. Banks brushy; not likely to be overflowed.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 2.86 feet at 8 p. m. August 12 (discharge, 47 second-feet); minimum discharge, 9.9 second-feet 10 p. m. to midnight August 7.

1911–1916; 1919–1925: Maximum stage recorded, 3.44 feet May 28 and June 8, 1921 (discharge, 98 second-feet); minimum discharge probably occurs during winter when records are discontinued.

ICE.—Stage-discharge relation seriously affected by ice. Observations discontinued during winter.

DIVERSIONS.—No sizable diversions above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curves well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph; shifting-control method used April 19–30. Records good.

COOPERATION.—Gage-height record furnished by Oakley Canal Co.

Discharge measurements of Trapper Creek near Oakley, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 7	2.37	20.0	May 18	2.68	33.4	July 13	2.15	11.6
May 1	2.55	25.0	July 6	2.24	12.0	Aug. 23	2.11	10.2

Daily discharge, in second-feet, of Trapper Creek near Oakley, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	12	12	13	20	26		12	10	10
2	12	12	12	13	19	27		12	10	10
3	12	12	12	13	20	30	30	12	10	10
4	12	12	12	13	22	32		12	10	10
5	12	12	12	14	23	34	22	12	10	10
6	12	12	12	15	22	35	21	12	10	10
7	12	12	12	15	21	36	20	11	10	10
8	12	12	12	14	20	37	19	11	10	10
9	12	12	12	13	22	37	18	11	10	10
10	12	12	-------	13	24	36	17	11	10	10
11	12	12	-------	13	27	38	17	11	10	10
12	12	12	-------	13	29	36	16	11	11	10
13	12		-------	13	32	34	16	10	11	10
14	12		-------	13	33	34	16	10	11	10
15	12		-------	13	35	33	16	10	10	10
16	12	12	-------	13	36	34	16	10	10	10
17	12		-------	13	40	36	16	10	10	10
18	12		-------	13	40	33	15	10	10	10
19	12	12	-------	13	38	32	15	10	10	10
20	12	12	-------	14	36	33	14	10	10	11

Daily discharge, in second-feet, of Trapper Creek near Oakley, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	12	12		16	34	34	14	10	10	11
22	12	12		17	32	32	14	10	10	11
23	12	12		19	29	31	13	11	10	10
24	12	12		17	26	31	13	10	10	10
25	12	12		17	25	28	12	10	10	10
26	12	12		18	24	27	12	10	10	10
27	12	12		18	24	26	12	10	10	10
28	12	12		18	24	24	12	10	10	10
29	12	12		21	24	24	12	10	10	10
30	12	12		22	24	24	12	10	10	10
31	12			21		28		10	10	

NOTE.—Discharge estimated Nov. 13–18, May 31, and June 1–4; interpolated Oct. 28–29, Apr. 22, 27–29, and Aug. 25–26. Braced figures show mean discharge for periods indicated.

Monthly discharge of Trapper Creek near Oakley, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	12	11	12.0	738
November			12.0	714
December 1–9	12	12	12.0	214
March	22	13	15.2	935
April	40	19	27.5	1,640
May	38	24	31.7	1,950
June		12	17.3	1,030
July	12	10	10.6	652
August	11	10	10.1	621
September	11	10	10.1	601

P. A. LATERAL NEAR MILNER, IDAHO

LOCATION.—In sec. 22, T. 10 S., R. 21 E., Jerome County, 200 yards below pumping station and 2½ miles northeast of Milner, Twin Falls County.

RECORDS AVAILABLE.—April 29, 1919, to September 30, 1925.

GAGE.—Vertical staff near left bank; read by employees of North Side Canal Co. (Ltd.).

DISCHARGE MEASUREMENTS.—Made from foot plank at rating flume just below gage.

CHANNEL AND CONTROL.—Canal section in earth; often obstructed by growth of moss. Concrete rating flume below gage contracts section forming permanent control.

EXTREMES OF DISCHARGE.—Maximum discharge, 55 second-feet May 1, 2, 5, and 6; canal dry on numerous occasions.

1919–1925: Maximum discharge, 64 second-feet May 11–13, 1920; canal dry on numerous occasions.

ICE.—No records obtained during winter.

DIVERSIONS.—One small diversion between pumping station and gage furnishes water for pumpman's garden.

REGULATION.—Flow regulated by pumps at head of canal.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curve well defined. Gage read to hundredths twice daily, account being taken of all periods when pumps were not operated. Daily discharge obtained by applying mean daily gage height to rating table. Records good.

COOPERATION.—Gage-height record and five discharge measurements furnished by North Side Canal Co. (Ltd.).

P. A. lateral diverts water pumped from right bank of Snake River above Milner Dam, in sec. 22, T. 10 S., R. 21 E. Water is used for irrigating part of the North Side Twin Falls project.

Discharge measurements of P. A. lateral near Milner, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 29	1.91	52.7	May 29	1.93	52.0	July 22	1.95	51.7
Do	1.70	42.0	June 16	1.98	54.5	Aug. 10	2.04	53.5
May 9	1.93	51.5	Do	1.98	53.0	Aug. 15	2.03	50.8
May 27	1.92	53.0	July 3	1.98	51.2	Aug. 23	2.02	52.5
May 28	1.92	50.8	July 15	1.97	50.6			

Daily discharge, in second-feet, of P. A. lateral near Milner, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	28		13	55	53	53	50	48
2	28	28		4	55	53	53	51	48
3	28	28			54	53	52	51	48
4	28	28			54	53	52	51	48
5	28	28			55	54	52	51	48
6	28	28			55	54	52	51	48
7	28	25			54	54	52	51	48
8	28	6			54	54	52	51	48
9	29				53	53	52	51	48
10	14			0	52	53	52	51	36
11	0				53	53	52	51	32
12	28				53	49	54	29	32
13	28				52	53	53	42	32
14	28				52	53	53	51	32
15	28				52	54	52	52	32
16	28				52	54	51	52	32
17	28			8	52	53	52	52	27
18	28		12	13	52	53	52	52	0
19	28		13	13	53	53	52	52	0
20	28		13	22	52	53	51	52	0
21	28		13	28	52	49	51	52	0
22	28		3	28	52	53	51	52	0
23	28			36	52	53	51	52	0
24	28			41	52	53	51	51	0
25	28		0	41	52	52	51	50	0
26	28			40	52	53	51	50	0
27	28		6	40	52	53	51	49	0
28	28		13	40	44	53	51	49	0
29	28		13	51	52	53	51	49	0
30	28		13	54	52	53	50	49	0
31	28		12		53		50	48	

NOTE.—No record obtained Nov. 9 to Mar. 17; pumps closed down. Mean of hourly discharge used Oct. 1, 10, Nov. 8, Mar. 22, 27, Apr. 2, 17, May 28, June 12, 21, Aug. 12, 13, and Sept. 17, when pumps operated part time.

Monthly discharge of P. A. lateral near Milner, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	29	0	26.4	1,620
November 1–8	28	6	24.9	395
March 18–31	13	0	7.93	220
April	54	0	15.7	934
May	55	44	52.5	3,230
June	54	49	52.9	3,150
July	54	50	51.7	3,180
August	52	29	49.8	3,060
September	48	0	22.9	1,360

MILNER LOW LIFT CANAL NEAR MILNER, IDAHO

LOCATION.—In sec. 32, T. 10 S., R. 21 E., one-eighth mile below pumping station at head of canal and 1½ miles southeast of Milner post office, Cassia County.

RECORDS AVAILABLE.—June 1, 1921, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank; inspected by Gilham and McConnel.

DISCHARGE MEASUREMENTS.—Made from foot plank at gage.

CHANNEL AND CONTROL.—Canal section in earth. Banks clean. Control poorly defined and shifting.

EXTREMES OF DISCHARGE.—Maximum stage recorded, 3.09 feet at 8 a. m. July 31 (discharge, 108 second-feet); canal dry on numerous occasions.

1921–1925: Maximum discharge, that of 1925; canal dry on numerous occasions.

ICE.—No records obtained during winter; pumps not operated.

DIVERSIONS.—None above station.

REGULATION.—Flow regulated by pumps at head of canal.

ACCURACY.—Stage-discharge relation not permanent. Standard rating curves fairly well defined below and well defined above 30 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying mean daily gage height from recorder graph to rating table or for days of large fluctuation in stage by averaging the discharge for intervals of the day. Records good.

Milner Low Lift Canal diverts water by pumping from south side of Snake River in backwater above Milner Dam and furnishes water for irrigation of lands within Milner Low Lift Irrigation District.

Discharge measurements of Milner Low Lift Canal near Milner, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 9	1.88	50.6	July 18	3.05	101	Aug. 27	2.62	88.3
May 29	2.58	85.2	July 29	3.08	107	Sept. 8	1.92	53.8
June 8	2.67	89.4	July 30	3.06	107	Sept. 19	1.88	50.8
June 18	2.67	90.5	Aug. 10	2.85	101			
June 30	2.95	103	Aug. 16	2.61	88.4			

Daily discharge, in second-feet, of Milner Low Lift Canal near Milner, Idaho, for the year ending September 30, 1925

Day	Oct.	May	June	July	Aug.	Sept.	Day	Oct.	May	June	July	Aug.	Sept.
1	0	------	88	97	85	86	16	20	67	90	101	90	54
2	0	------	88	104	0	88	17	0	80	90	95	85	54
3	0	------	89	76	0	84	18	0	82	89	100	82	54
4	0	------	88	104	67	88	19	0	82	80	98	86	52
5	0	23	88	105	103	88	20	0	82	70	98	82	52
6	0	50	88	104	90	64	21	0	84	78	85	86	51
7	0	52	90	105	99	54	22	0	84	95	96	86	49
8	0	50	90	104	100	54	23	0	88	100	99	86	46
9	0	51	89	105	100	54	24	0	90	92	102	86	46
10	0	51	89	106	101	54	25	0	84	100	104	86	43
11	0	52	88	101	90	54	26	39	88	102	104	86	42
12	0	58	76	106	46	54	27	36	89	102	104	70	44
13	0	42	88	106	16	54	28	0	67	95	104	86	43
14	0	42	84	103	0	54	29	0	81	103	104	84	43
15	17	80	90	100	71	54	30	0	86	100	106	85	43
							31	33	87	------	100	86	------

NOTE.—No record Nov. 1 to May 4; canal probably dry during entire period.

Monthly discharge of Milner Low Lift Canal near Milner, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	39	0	4.68	278
May 5–31	90	23	69.3	3,710
June	103	70	90.0	5,360
July	106	76	101	6,210
August	103	0	74.8	4,600
September	88	42	56.7	3,370

NORTH SIDE TWIN FALLS CANAL AT MILNER, IDAHO

LOCATION.—In sec. 20, T. 10 S., R. 21 E., Jerome County, half a mile north of Milner post office, Twin Falls County, and three-fourths mile below head gates at Milner Dam.

RECORDS AVAILABLE.—May 10, 1909, to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on right bank; installed April 1, 1918; inspected by McConnel and Gilham.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Channel is permanent concrete-lined section. Growth of moss heavy during summer and stage-discharge relation is seriously affected. Control apparently indeterminate.

EXTREMES OF DISCHARGE.—Maximum stage recorded, 8.82 feet at 7 p. m. July 24 (discharge, 3,140 second-feet); canal dry March 25 and 26.

1909–1925: Maximum discharge occurred at gage height 8.68 feet July 5–7 and 29–31, 1921 (discharge, 3,200 second-feet); canal dry many times when head gates were closed.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—None between gage and head gates and none for some distance below. Surplus water may be discharged into river through waste gates about 200 feet below head of canal.

REGULATION.—Flow regulated by head and waste gates.

ACCURACY.—Stage-discharge relation not permanent; affected by growth of aquatic plants in summer and by ice December 18–31 and January 6–24. Three standard rating curves well defined. Operation of water-stage recorder satisfactory except for periods during December and January when well was frozen; staff gage read to hundredths once daily November 1 to March 31 and twice daily for remainder of year. Daily discharge obtained by applying to rating table mean daily gage height obtained from staff reading or by inspecting recorder graph, averaging discharges on days of considerable fluctuation. Records good.

COOPERATION.—Gage-height record and 44 discharge measurements furnished by North Side Canal Co. (Ltd.).

North Side Twin Falls Canal diverts water from north side of Snake River at Milner Dam and furnishes water for stock and irrigation on about 240,000 acres of land in Jerome, Lincoln, and Gooding Counties. The distribution system comprises about 100 miles of main canal and 625 miles of laterals.

Discharge measurements of North Side Twin Falls Canal at Milner, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 16	6.29	1,670	May 28	8.78	3,100	Aug. 10	8.08	2,770
Nov. 26	3.63	691	May 30	8.70	3,040	Aug. 12	8.12	2,760
Dec. 4	3.67	710	June 8	8.73	3,030	Aug. 13	7.87	2,660
Jan. 3	3.11	533	June 16	8.69	3,000	Aug. 15	7.63	2,600
Feb. 3	2.72	442	Do	8.73	3,000	Aug. 16	7.61	2,570
Feb. 16	3.11	540	June 25	8.72	2,990	Aug. 17	7.64	2,530
Mar. 18	4.43	995	June 29	8.77	3,030	Aug. 18	7.59	2,540
Apr. 2	5.14	1,330	July 3	8.69	2,910	Aug. 21	7.58	2,480
Apr. 13	5.82	1,590	July 4	8.74	2,980	Do	7.34	2,390
Apr. 14	6.52	1,870	July 15	8.64	2,880	Aug. 26	7.08	2,240
Apr. 30	7.76	2,410	July 21	8.50	2,940	Sept. 2	7.09	2,260
May 2	8.32	2,690	July 22	8.63	3,020	Sept. 8	7.01	2,240
May 6	8.78	2,940	July 27	8.79	3,140	Sept. 18	3.98	914
May 9	8.80	2,940	July 28	8.74	3,100	Sept. 24	4.13	950
May 26	8.77	3,020	Aug. 1	8.46	2,950	Sept. 27	8.51	2,940
May 28	8.72	2,920	Aug. 5	8.29	2,840	Sept. 28	4.08	944
						Sept. 29	8.62	3,140

Daily discharge, in second-feet, of North Side Twin Falls Canal at Milner, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	312	1,230	703	529	474	540	1,260	2,670	3,030	2,990	2,960	2,270
2	312	1,220	686	549	449	532	1,330	2,680	3,030	2,970	2,950	2,270
3	480	1,110	703	540	413	532	1,330	2,680	3,020	2,950	2,930	2,260
4	624	932	700	502	390	636	1,330	2,690	3,010	2,950	2,890	2,260
5	621	890	697	500	390	982	1,320	2,790	3,010	2,940	2,870	2,220
6	655	586	714		390	1,070	1,240	2,950	3,020	2,930	2,900	2,230
7	718	314	690		420	1,090	1,200	2,870	3,020	2,920	2,930	2,220
8	767	355	707		444	1,070	1,190	2,940	3,020	2,910	2,890	2,240
9	870	673	700		469	1,090	1,250	2,950	3,020	2,910	2,770	2,230
10	1,040	670	697		495	1,110	1,350	2,950	3,010	2,890	2,740	2,230
11	1,340	736	693		497	1,090	1,490	2,940	3,020	2,890	2,730	2,220
12	1,570	742	686		487	1,100	1,590	2,950	3,010	2,900	2,730	2,240
13	1,560	700	670		497	847	1,600	2,960	3,010	2,900	2,690	2,240
14	1,570	680	670		516	680	1,750	2,960	3,010	2,900	2,670	2,210
15	1,580	592	676	500	529	738	1,820	2,960	3,000	2,900	2,580	2,190
16	1,670	644	673		535	871	1,810	2,970	3,000	2,870	2,560	2,120
17	1,420	748	625		532	934	1,940	2,980	3,000	2,890	2,550	1,390
18	1,530	777			535	1,000	2,000	3,000	3,010	2,880	2,540	898
19	1,720	738			535	991	2,080	3,000	3,010	1,840	2,540	882
20	1,730	724			538	991	2,140	3,000	3,010	848	2,530	882
21	1,490	703	600		532	996	2,140	3,000	2,980	2,980	2,530	879
22	1,300	663			540	983	2,170	3,010	2,940	3,030	2,440	875
23	1,240	717			535	975	2,230	3,020	3,030	3,080	2,370	875
24	1,240	738			532	672	2,300	3,030	3,020	3,100	2,380	930
25	1,260	717		500	546	0	2,360	3,030	3,010	3,110	2,300	938
26	1,250	686		500	538	0	2,400	3,030	3,010	3,120	2,270	942
27	1,250	690		500	532	506	2,400	3,030	3,020	3,120	2,270	1,620
28	1,260	700	530	500	535	1,120	2,430	3,040	3,000	3,110	2,260	983
29	1,260	700		500	-------	1,100	2,400	3,020	3,040	3,110	2,270	1,650
30	1,250	693		495	-------	1,230	2,500	3,040	3,020	3,070	2,280	855
31	1,220	-------		484	-------	1,300	-------	3,040	-------	3,010	2,270	------

NOTE.—Discharge estimated Dec. 18–31 and Jan. 6–24 from observer's notes, measurements, and climatologic data.

Monthly discharge of North Side Twin Falls Canal at Milner, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,730	312	1,160	71,300
November	1,230	314	736	43,800
December	714		632	38,900
January	549	484	503	30,900
February	546	390	494	27,400
March	1,300	0	864	53,100
April	2,500	1,190	1,810	108,000
May	3,040	2,670	2,940	181,000
June	3,040	2,940	3,010	179,000
July	3,120	848	2,870	176,000
August	2,960	2,260	2,600	160,000
September	2,270	855	1,670	99,400
The year	3,120	0	1,620	1,170,000

SOUTH SIDE TWIN FALLS CANAL AT MILNER, IDAHO

LOCATION.—In sec. 29, T. 10 S., R. 21 E., at wagon bridge one-eighth mile below head gates at Milner, Twin Falls County.

RECORDS AVAILABLE.—May 10, 1909, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank, at site and datum of vertical staff gage installed early in summer of 1912; staff gage has been used since that time for stages above 5.3 feet. Inspected by McConnel and Gilham.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet above gage or by wading.

CHANNEL AND CONTROL.—Channel at gage blasted out of rock; practically permanent. Occasional slight changes in control are due to deposition of silt.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 10.61 feet at 8 p. m. June 11 (discharge, 3,710 second-feet); minimum stage probably occurred at stage lower than water-stage recorder could register.

1909–1925: Maximum discharge, 4,600 second-feet August 12, 1918; canal dry September 20, 1920.

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—None above gage and no sizable ones for several miles below.

REGULATION.—Flow regulated by head gates.

ACCURACY.—Stage-discharge relation not permanent; affected by ice December 17 to January 1, January 3 to February 2, and February 4. Standard rating curve well defined. Operation of water-stage recorder satisfactory except for short periods in January and March when stage was lower than recorder could register. Staff gage read twice daily to hundredths during these periods. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph or from staff gage readings. Discharges were averaged on days of large fluctuation. Shifting-control method used during several periods. Records good.

COOPERATION.—Gage-height record and 20 discharge measurements furnished by Twin Falls Canal Co.

South Side Twin Falls Canal diverts water from south side of Snake River at Milner Dam and furnishes water for stock and irrigation on about 200,000 acres of land near Twin Falls. The distribution system comprises about 110 miles of main canal and 590 miles of laterals.

Discharge measurements of South Side Twin Falls Canal at Milner, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	4.93	845	May 6	9.34	2,880	Aug. 11	9.98	3,310
Nov. 27	5.04	930	May 16	9.78	3,130	Aug. 16	10.01	3,430
Dec. 3	3.84	511	May 26	9.78	3,180	Aug. 17	9.95	3,260
Jan. 2	*4.87	567	May 28	9.94	3,280	Aug. 24	9.48	2,920
Feb. 3	*3.92	439	May 30	10.01	3,320	Aug. 27	9.45	2,980
Feb. 14	4.15	630	June 11	10.60	3,750	Sept. 3	9.44	2,900
Mar. 18	5.22	1,000	June 17	9.53	2,950	Sept. 19	7.77	2,070
Apr. 29	7.42	1,860	July 2	10.04	3,320	Sept. 24	6.59	1,490
May 2	8.28	2,270	July 25	10.17	3.390			

* Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of South Side Twin Falls Canal at Milner, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,950	928	600	570	170	1,030	896	2,090	3,340	3,310	3,380	2,940
2	1,900	886	571	567		736	1,240	2,230	3,300	3,300	3,390	2,930
3	1,860	879	557		439	717	1,000	2,300	3,280	3,290	3,400	2,930
4	1,830	848	580		400	698	730	2,400	3,230	3,300	3,380	2,940
5	1,810	566	554		370	648	727	2,770	3,210	3,300	3,400	2,950
6	1,760	398	531		329	615	752	2,880	3,220	3,290	3,410	2,930
7	1,720	487	528		370	571	788	2,840	3,220	3,320	2,950	2,940
8	1,660	548	597		383	540	808	3,020	3,220	3,320	3,410	2,900
9	1,580	531	698		388	531	698	3,160	3,080	3,330	3,370	2,850
10	1,420	537	664		383	520	528	3,190	3,000	3,320	3,300	2,820
11	1,070	540	667	560	460	406	473	2,310	3,480	3,370	3,320	2,770
12	859	540	673		476	281	526	2,010	3,430	3,380	3,320	2,640
13	931	516	673		554	652	954	2,980	3,140	3,390	3,320	2,590
14	886	351	673		621	642	1,760	3,170	3,130	3,400	3,320	2,550
15	772	540	673		554	633	1,650	3,120	3,070	3,380	3,320	2,380
16	714	551	682		478	642	1,670	3,130	3,030	3,240	3,320	2,250
17	965	560			528	766	1,610	3,140	2,950	3,390	3,280	2,200
18	888	554			568	966	1,680	3,140	2,870	3,160	3,200	2,110
19	492	551			600	973	1,560	3,140	2,860	3,350	3,190	2,050
20	396	557	625		624	806	1,560	3,150	2,860	3,410	3,120	2,050
21	959	548			630	708	1,340	3,160	2,870	3,360	3,070	1,960
22	1,450	542			624	708	897	3,170	2,860	3,350	2,990	1,500
23	727	554			645	711	1,470	3,180	3,070	3,350	2,930	1,510
24	845	243			673	704	1,560	3,190	3,120	3,370	2,960	1,520
25	879	229		620	679	698	1,750	3,190	3,100	3,370	2,940	1,520
26	882	1,060	565		679	582	1,770	3,190	2,600	3,360	2,930	1,590
27	882	928			821	201	1,770	3,230	3,490	3,360	2,930	1,770
28	886	1,160			1,140	40	1,770	3,280	3,370	3,350	2,940	1,840
29	418	1,300		410	-------	120	1,870	3,320	3,370	3,370	2,950	1,790
30	757	884		75	-------	597	2,020	3,340	3,340	3,380	2,940	1,730
31	1,310	-------			-------	701	-------	3,340	-------	3,370	2,940	-------

NOTE.—Mean discharge estimated for periods of ice effect as shown above on basis of two measurements, study of weather records, and observer's notes on head gate changes. Braced figures show mean discharge for periods indicated.

Monthly discharge of South Side Twin Falls Canal at Milner, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,950	396	1,140	70,100
November	1,300	229	644	38,300
December			603	37,100
January			540	33,200
February	1,140	170	527	29,300
March	1,030	40	618	38,000
April	2,020	473	1,260	75,000
May	3,340	2,010	2,960	182,000
June	3,490	2,600	3,140	187,000
July	3,410	3,160	3,340	205,000
August	3,410	2,930	3,180	196,000
September	2,950	1,500	2,320	138,000
The year	3,490		1,700	1,230,000

ROCK CREEK NEAR TWIN FALLS, IDAHO

LOCATION.—On south line of sec. 36, T. 9 S., R. 16 E., at highway bridge, 3 miles above confluence with Snake River and 3½ miles northwest of Twin Falls, Twin Falls County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 27, 1922, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank; installed July 31, 1922; inspected by T. T. Rutledge.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of lava rock covered with boulders, gravel, and silt. One channel at all stages. Banks high; covered with brush. Control formed by lava reef covered in part by boulders and brush growth; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 4.70 feet at 5 p. m. January 29 (discharge, 939 second-feet); minimum discharge, 112 second-feet November 28.

1922–1925: Maximum stage and discharge recorded occurred January 29, 1925; minimum stage, 1.01 feet from 3 p. m. to midnight August 3, 1924 (discharge, 94 second-feet).

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—After spring floods the normal flow is entirely diverted for irrigation several miles upstream. Flow past gage derived largely from waste and seepage water from the South Side Twin Falls tract.

REGULATION.—At times waste water from South Side Twin Falls Canal which crosses Rock Creek 10 miles above causes appreciable changes in stage.

ACCURACY.—Stage-discharge relation not permanent. Rating curves well defined below 375 second-feet and extended above. Operation of water-stage recorder satisfactory except for short periods. Daily discharge ascertained by applying to rating table mean daily gage height determined from inspection of recorder graph except as indicated in footnote to table of daily discharge. Shifting-control method used January 29, 30, and June 16–18. Records good except for stages above 375 second-feet for which they are fair, and for estimated periods for which they are poor.

COOPERATION.—Gage-height record furnished by Murtaugh Irrigation District.

Discharge measurements of Rock Creek near Twin Falls, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 11	1.54	173	Apr. 3	1.77	239	July 5	1.54	208
Jan. 17	2.22	286	May 3	1.67	216	July 15	1.36	172
Mar. 2	1.15	131	May 16	1.69	226	Aug. 19	2.14	333

Daily discharge, in second-feet, of Rock Creek near Twin Falls, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	146	344	179	332	334	128	172	217	197	203	216	232
2	143	350	177	299	334	139	163	205	203	199	205	228
3	148	355	167	299	323	151	188	217	215	193	195	226
4	149	378	179	288	323	151	126	234	288	197	201	223
5	150	310	187	288	242	151	146	244	292	201	205	228
6	150	235	175	299	226	157	165	312	299	203	203	232
7	150		167	310	240	179	132	251	297	191	201	257
8	146	167	167			199	346	226	299	186	188	281
9	149		163		215	195	312	240	299	188	197	346
10	214		166	315		199	127	244	312	188	203	417
11	278		167		188	201	119	246	286	186	203	488
12	299	150	169	321	199	188	121	369	294	182	209	488
13	378		177	299	209	188	124	270	286	181	221	416
14	366		182	321	205	251	127	238	334	181	257	301
15	321		187	310	207	217	135	228	358	172	279	238
16	288		187	299	203	177	144	228	380	172	261	228
17	228	132	160	299	232	156	150	279	416	167	288	219
18	167	172	215	299	240	211	346	232	392	163	311	217
19	169	133		299	244	221	323	211	281	174	334	215
20	169	129		288	249	221	286	209	232	182		215
21	164	129		299	277	215	283	205	230	270		219
22	142	125		299	290	223	240	199	223	288		203
23	146	121		321	281	242	174	195	215	305	260	195
24	149	121		378	242	275	228	195	215	323		201
25	174	143	180	366	188	257	281	188	253	323		201
26	198	122		355	174	150	369	179	279	334		203
27	214	113		402	134	126	358	177	234	323		199
28	278	112		450	127	121	301	174	292	301	207	199
29	321	158		652	-------	152	301	171	236	266	215	197
30	332	190		665	-------	172	277	168	209	261	219	195
31	299	-------	366	369	-------	175	-------	179	-------	226	221	------

NOTE.—Discharge estimated because of missing gage heights Nov. 6–7, 9–16, Dec. 19–30, Jan. 8–11, Feb. 8–10, Aug. 20–27; interpolated Oct. 10, Nov. 2, Dec. 14, Apr. 24, May 29, July 22–23, Aug. 1–2, 18, and Sept. 10. Braced figures show mean discharge for periods indicated.

Monthly discharge of Rock Creek near Twin Falls, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	378	142	214	13,200
November	378	112	182	10,800
December	366	----------	184	11,300
January	665	288	344	21,200
February	334	127	234	13,000
March	275	121	187	11,500
April	369	119	219	13,000
May	369	168	224	13,800
June	416	197	278	16,500
July	334	163	224	13,800
August	----------	188	236	14,500
September	488	195	257	15,300
The year	665	112	232	168,000

SALMON FALLS CREEK NEAR SAN JACINTO, NEV.

LOCATION.—In sec. 23, T. 47 N., R. 64 E., in canyon 200 yards below county highway bridge, 250 yards below mouth of Shoshone Creek, and 5 miles north of San Jacinto, Elko County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—September 17, 1909, to September 30, 1916; October 1, 1918, to September 30, 1925.

GAGE.—Au water-stage recorder on right bank; installed September 25, 1924; inspected by employees of Salmon River Canal Co. (Ltd.).

DISCHARGE MEASUREMENTS.—Made from cable 20 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel. Control shifts slightly. Left bank subject to overflow at high stages. Stage of zero flow determined September 25, 1924, gage height 1.65 feet ±0.05 foot.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 5.62 feet at 2 p. m. April 19 (discharge, 731 second-feet); minimum stage, 2.42 feet at 6 p. m. September 4 (discharge, 23 second-feet).

1909–1916; 1919–1925: Maximum stage recorded, 7.5 feet May 22, 1912 (discharge, 1,280 second-feet); minimum stage, 2.23 feet July 25, 1919 (discharge, 10 second-feet).

ICE.—Stage-discharge relation not seriously affected by ice.

DIVERSIONS.—A large number of diversions on ranches of Utah Construction Co. above station appropriate a large part of low-water flow of Salmon Falls and Shoshone Creeks.

REGULATION.—None except that due to diversions. The Salmon Dam of Salmon River Canal Co., 15 miles below station, forms a reservoir having a capacity of about 180,000 acre-feet.

ACCURACY.—Stage-discharge relation permanent after December 10. Rating curve well defined between 20 and 475 second-feet. Operation of water-stage recorder satisfactory except December 18–29 and January 17 to February 19; record sheet lost May 3–15. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph, except as indicated in footnote to table of daily discharge. Shifting-control method used October 1 to December 10. Records good except for estimated periods for which they are poor.

COOPERATION.—Gage-height record furnished by Salmon River Canal Co. (Ltd.).

Discharge measurements of Salmon Falls Creek near San Jacinto, Nev., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 11	2.75	51.8	May 2	4.30	359	July 13	2.84	61.0
Mar. 4	3.05	94.2	May 16	4.63	447	Aug. 21	2.48	26.8
Apr. 4	4.13	322	May 19	4.63	446			

Daily discharge, in second-feet, of Salmon Falls Creek near San Jacinto, Nev., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	56	51	64		80	374	348	348	122	32	25
2	32	56	66	62		82	336	361	336	120	34	25
3	32	56	59	58		85	312		399	113	33	24
4	34	56	56	56		94	324		361	109	32	24
5	33	54	56	62		137	361		336	113	32	24
6	32	54	50	62		130	399		300	109	29	24
7	33	54	60	55		120	399		263	102	26	24
8	34	52	61	57		115	374		232	94	26	27
9	34	52	41	57		111	336	500	210	88	26	26
10	36	57	61	55	100	109	361		190	84	26	25
11	37	50	62	48		106	425		177	76	27	24
12	34	50	62	48		100	479		167	69	27	26
13	34	35	66	53		99	550		163	62	27	27
14	31	47	65	55		97	609		151	57	27	27
15	31	55	66	58		102	639		155	60	27	27
16	32	52	66	58		104	669	452	157	55	28	27
17	33	50	50			102	684	452	167	49	28	27
18	34	56				102	700	465	161	44	27	30
19	35	59				107	716	452	145	43	27	34
20	36	64			88	120	700	438	133	38	27	39
21	38	65			92	147	654	465	126	32	27	41
22	37	67			92	159	624	493	130	30	27	42
23	39	66			92	232	564	507	126	30	27	44
24	40	64	50	80	85	270	479	493	120	32	27	47
25	43	62			84	312	412	438	111	32	27	49
26	51	59			85	300	374	425	104	30	26	50
27	51	56			85	300	361	386	100	31	27	52
28	53	53			82	300	348	361	95	31	27	53
29	59	53			-------	361	336	348	99	31	26	54
30	56	52	60		-------	438	348	348	107	32	26	55
31	56	-------	62		-------	425	-------	348	-------	32	26	-------

NOTE.—Braced figures show estimated mean discharge for periods indicated; flow based on action of Salmon Falls Creek Reservoir below.

Monthly discharge of Salmon Falls Creek near San Jacinto, Nev., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	59	31	38.5	2,370
November	67	35	55.4	3,300
December	66	-------	55.5	3,410
January	-------	-------	68.0	4,180
February	-------	-------	95.9	5,330
March	438	80	172	10,600
April	716	312	475	28,300
May	-------	348	454	27,900
June	399	95	189	11,200
July	122	30	62.9	3,870
August	34	26	27.8	1,710
September	55	24	34.1	2,030
The year	716	24	144	104,000

BIG WOOD RIVER AT HAILEY, IDAHO

LOCATION.—In sec. 9, T. 2 N., R. 18 E., at steel highway bridge a quarter of a mile southwest of Hailey, Blaine County.

DRAINAGE AREA.—640 square miles (measured on topographic maps).

RECORDS AVAILABLE.—June 11, 1915, to September 30, 1925.

GAGE.—Vertical staff on right bank; installed October 2, 1922; read by R. F. Bowman and C. J. Bradley.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of coarse gravel and sand; clean. Banks low; covered with light brush. Log cribbing along left bank constructed in April, 1922, prevents overflow and confines flood discharge in one channel. Control subject to change at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 5.45 feet at 7.15 a. m. May 21 (discharge, 2,710 second-feet); minimum discharge, 0.1 second-foot October 2–9.

1915–1925: Maximum stage recorded, 5.70 feet June 12, 1921 (discharge, 3,560 second-feet); minimum discharge, 0.1 second-foot September 10–20 and October 2–9, 1924.

ICE.—Stage-discharge relation slightly affected by ice.

DIVERSIONS.—A number of small diversions for irrigation, principally from tributaries, are made above station. Hailey power plant, half a mile upstream, utilizes as a tailrace a natural channel on east side of river known as Big Wood Slough. A large amount of water is diverted from main stream in this manner and is returned to river below station. A record of flow of Big Wood Slough is being obtained (see p. 150), and the total flow of Big Wood River is represented by amount of water passing both stations.

REGULATION.—Variation in the amount of water used at Hailey power plant causes some diurnal fluctuation at gage, but as observations on the river and on Big Wood Slough are practically simultaneous each day, the effect of such regulation is probably eliminated.

ACCURACY.—Stage-discharge relation changed very slightly during winter and twice during spring flow. Rating curves well defined. Gage read to hundredths twice daily April 8 to August 30 and once daily at other times except during winter. Daily discharge ascertained by applying daily and mean daily gage height to rating table except as indicated in footnote to table of daily discharge. Records on the whole are good; poor for estimated periods when flow was practically negligible.

COOPERATION.—Four discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Tables of combined discharge of Big Wood River and Big Wood Slough are published herein.

Discharge measurements of Big Wood River at Hailey, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 30	0.18	[a] 1.0	May 22	5.04	2,340	Aug. 6	1.94	198
Apr. 10	3.06	636	June 11	3.48	816	Aug. 10	1.65	136
Apr. 13	3.42	904	June 25	4.68	1,860	Aug. 27	1.42	92.5
May 5	4.17	1,510	July 5	3.90	1,200			

[a] Estimated.

Daily discharge, in second-feet, of Big Wood River at Hailey, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	1.5					157	960	1,880	1,460	244	89
2	.1	1.5					177	1,110	1,610	1,300	228	89
3	.1	1.5					199	1,270	1,430	1,220	244	88
4	.1	1.5				2.0	244	1,440	1,340	1,220	222	89
5	.1	1.5					244	1,520	1,170	1,220	214	89
6	.1	1.5					292	1,700	1,090	1,070	208	92
7	.1	1.5				2.9	292	1,980	1,010	1,070	202	103
8	.1	1.5				2.9	403	1,880	942	935	199	110
9	.1	1.5				3.8	585	1,700	907	870	157	106
0	.4	1.5				5.3	695	1,620	938	870	147	106
11	.8	1.5				2.5	880	1,880	935	810	134	106
12	.8					2.5	880	1,700	935	840	143	106
13	.4					2.5	925	1,700	1,000	750	150	106
14	.4					2.5	960	1,800	1,000	695	205	117
15	.4				1.5	2.5	1,040	1,880	1,070	640	172	121
16	.4		1.0	1.5		63	1,040	1,980	1,070	612	162	121
17	.8					66	1,190	2,080	1,070	585	154	121
18	.8					60	1,110	2,170	1,070	535	129	121
19	.8					60	1,040	2,460	1,300	466	117	121
20	.8					68	820	2,660	1,630	444	121	121
21	.8	1.2				71	755	2,660	1,900	424	106	121
22	.8					77	695	2,360	2,180	444	103	114
23	.8					101	640	2,260	2,080	403	99	110
24	.8					110	585	2,260	1,980	384	96	103
25	.8					125	560	2,170	1,900	346	94	103
26	.8					58	560	2,080	1,900	327	94	103
27	1.1					60	585	2,080	1,630	310	92	103
28	1.5					77	612	2,260	1,630	292	91	103
29	2.4				-------	147	695	2,560	1,540	259	91	103
30	1.5	1.0			-------	147	820	2,460	1,720	259	89	101
31	1.5	-------			-------	152	-------	2,260	-------	244	89	------

NOTE.—Discharge estimated Nov. 12 to Mar. 6, based on observer's notes, weather records, and engineer's discharge estimate on Nov. 30. Shifting-control method used Apr. 11–12 and June 2–10. Braced figures show mean discharge for periods indicated.

Monthly discharge of Big Wood River at Hailey, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2.4	0.1	0.67	41.2
November	----------	----------	1.30	77.4
December	----------	----------	1.00	61.5
January	----------	----------	1.50	92.2
February	----------	----------	1.50	83.3
March	152	----------	47.8	2,940
April	1,190	157	656	39,000
May	2,660	960	1,960	121,000
June	2,180	907	1,400	83,300
July	1,460	244	687	42,200
August	244	89	148	9,100
September	121	88	106	6,310
The year	2,660	.1	420	304,000

Combined daily discharge, in second-feet, of Big Wood River and Big Wood Slough at Hailey, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	160	130	116	124	124	279	1,090	2,010	1,600	420	244
2	110	160	130	116	124	131	299	1,270	1,720	1,460	413	252
3	116	154	130	116	124	139	321	1,390	1,580	1,380	437	251
4	116	154	130	116	130	139	392	1,560	1,500	1,380	390	252
5	116	154	130	116	138	139	392	1,650	1,310	1,380	366	261
6	116	154	130	116	130	146	418	1,840	1,220	1,210	348	264
7	122	154	130	116	130	147	411	2,110	1,130	1,230	339	266
8	122	154	130	116	130	143	558	2,000	1,070	1,100	343	282
9	122	194	130	116	130	137	711	1,810	1,060	1,020	329	269
10	137	130	138	106	124	124	828	1,730	1,100	1,020	319	246
11	130	130	138	106	118	118	1,010	2,010	1,120	954	310	232
12	130	117	138	106	118	122	1,020	1,830	1,120	999	345	232
13	129	98	130	106	118	122	1,070	1,830	1,170	902	372	232
14	122	117	130	106	118	128	1,090	1,940	1,140	843	431	246
15	122	111	130	106	118	128	1,190	2,040	1,220	799	361	250
16	129	111	123	106	118	122	1,200	2,110	1,240	749	330	250
17	130	111	117	106	118	125	1,340	2,200	1,240	725	326	250
18	130	104	101	106	118	128	1,220	2,290	1,280	679	309	250
19	130	111	101	124	118	133	1,130	2,600	1,510	625	293	250
20	130	117	101	124	118	141	903	2,800	1,780	588	297	250
21	130	123	101	130	124	139	865	2,790	2,050	572	286	250
22	130	130	101	130	124	145	789	2,480	2,340	620	279	243
23	138	138	101	138	124	174	726	2,380	2,210	596	271	239
24	145	123	86	130	124	183	673	2,380	2,100	552	272	232
25	145	117	86	124	124	193	660	2,290	2,030	535	266	232
26	145	123	86	124	124	180	657	2,200	2,030	499	266	232
27	153	123	111	124	124	182	688	2,220	1,780	465	264	232
28	160	123	111	130	124	214	722	2,400	1,820	444	259	232
29	195	123	111	130	------	250	808	2,720	1,740	427	250	232
30	170	127	111	130	------	269	930	2,610	1,860	444	244	230
31	170	------	111	124	------	274	------	2,390	------	429	244	------

NOTE.—For estimated periods refer to tables for Big Wood River at Hailey and Big Wood Slough at Hailey.

Combined monthly discharge of Big Wood River and Big Wood Slough at Hailey, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	195	110	134	8,240
November	194	98	132	7,860
December	138	----------	117	7,190
January	138	106	118	7,260
February	138	118	123	6,830
March	274	118	156	9,590
April	1,340	279	777	46,200
May	2,800	1,090	2,100	129,000
June	2,340	1,060	1,550	92,200
July	1,600	427	846	52,000
August	437	244	322	19,800
September	282	230	246	14,600
The year	2,800	----------	553	401,000

BIG WOOD RIVER NEAR BELLEVUE, IDAHO

LOCATION.—In sec. 20, T. 1 S., R. 18 E., just below Blair ranch house, 1¼ miles above flow line of Magic Reservoir, and 10 miles southwest of Bellevue, Blaine County. Camas Creek enters reservoir 3 miles below station.

DRAINAGE AREA.—823 square miles (measured on topographic and Land Office maps).

RECORDS AVAILABLE.—July 6, 1911, to September 30, 1925.

GAGE.—Gurley water-stage recorder on right bank; inspected by S. H. Chapman and James Devaney.

DISCHARGE MEASUREMENTS.—Made from cable 150 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of coarse gravel. Control of same material; shifts occasionally. Banks clean; may be overflowed at extremely high stages.

EXTREMES OF DISCHARGE.—Maximum stage during period from water-stage recorder, 3.74 feet at 2 p. m. May 21 (discharge, 2,170 second-feet); minimum stage, 1.42 feet from 10 p. m. August 10 to 3 p. m. August 11 (discharge, 98 second-feet).

1911–1925: Maximum stage recorded, 6.07 feet at 7 p. m. June 16, 1921 (discharge, 3,660 second-feet); minimum discharge, 25 second-feet, April 22–24, 1920; lower flow may have occurred on a day of no record.

ICE.—Stage-discharge relation seldom affected by ice. Records discontinued during winter.

DIVERSIONS.—Numerous diversions for irrigation above station. Flood waters stored in Magic Reservoir.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined between 100 and 2,000 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph except as indicated in footnote to table of daily discharge. Records good above 1,200 second-feet; others fair, owing to variable intake action.

COOPERATION.—Gage-height record and five discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Discharge measurements of Big Wood River near Bellevue, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 18	2.90	1,060	June 12	2.47	670	July 17	2.00	310
May 5	3.12	1,310	July 6	2.78	883	July 28	1.49	119
May 22	3.58	1,930	July 10	2.46	638	Aug. 25	1.56	140

Daily discharge, in second-feet, of Big Wood River near Bellevue, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	161	808	1,410	1,250	134	141	16	945	1,490	662	337	138	154
2	161	925	1,170	1,040	131	134	17	1,020	1,540	636	301	141	158
3	131	1,040	1,090	1,020	161	128	18	1,040	1,620	636	287	134	154
4	168	1,140	997	945	151	121	19	976	1,780	770	264	124	154
5	204	1,280	935	966	141	124	20	875	2,030	966	239	128	158
6	243	1,440	905	895	134	124	21	788	2,100	1,240	219	131	158
7	264	1,580	751	798	121	131	22	760	1,890	1,650	212	134	154
8	315	1,640	706	733	118	141	23	678	1,740	1,720	200	144	151
9	442	1,460	679	653	112	138	24	596	1,600	1,580	188	141	141
10	561	1,330	670	602	106	124	25	513	1,550	1,530	175	138	141
11	697	1,440	644	561	101	121	26	521	1,440	1,460	144	144	141
12	770	1,490	644	537	109	118	27	521	1,460	1,270	124	144	131
13	798	1,340	636	477	109	115	28	545	1,610	1,180	121	138	128
14	846	1,340	594	416	134	121	29	602	1,890	1,220	124	138	131
15	915	1,400	619	376	147	141	30	653	1,890	1,580	128	141	134
							31	------	1,740	------	131	141	----

NOTE.—Discharge interpolated on account of missing gage heights Apr. 23, 24, and July 24.

Monthly discharge of Big Wood River near Bellevue, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March 31	151	151	151	300
April	1,040	131	590	35,100
May	2,100	808	1,520	93,500
June	1,720	594	1,020	60,700
July	1,250	121	467	28,700
August	161	101	133	8,180
September	158	115	137	8,150
The period				235,000

MAGIC RESERVOIR NEAR RICHFIELD, IDAHO

LOCATION.—In NE. ¼ SE. ¼ sec. 18, T. 2 S., R. 18 E., Blaine County, 18 miles northwest of Richfield, Lincoln County.

DRAINAGE AREA.—1,500 square miles (furnished by Idaho Irrigation Co.).

RECORDS AVAILABLE.—February 3, 1909, to September 30, 1925. Prior to April 4, 1909, gage-height record only is available. Practically no storage prior to July 14, 1909, when first stop logs were placed in tunnel entrance.

GAGE.—All readings made by measuring with a weighted steel tape from tower on east side of dam. Below elevation, 4,855 feet readings obtained by measuring from a well-defined offset in walls of tower; when stages are above that elevation measurements are made in a 5⅝-inch well casing which serves as a stilling well, bolted to face of tower. Readings made by attendants at dam. Observations are referred to an assumed datum which is about 137 feet lower than sea level. (To change readings to sea-level datum about 137 feet should be subtracted.)

EXTREMES OF CONTENTS.—Maximum stage recorded during year, 4,935.07 feet May 20, 21, and 31 (contents, 191,778 acre-feet); minimum stage, 4,824.10 feet October 10 (contents, 207 acre-feet). Lower stage may have occurred October 1–6 when gage was not read.

1909–1925: Maximum stage recorded, 4,935.08 feet June 18, 1922 (contents, 191,818 acre-feet); reservoir drained December 24–26 and 29, 1909, August 25, September 11–16, 19, 21, 22, December 14–18 and 21–31, 1919, January 1–6, August 9, 10, and 20–23, 1920, August 29 to September 30, 1924.

COOPERATION.—Gage-height record furnished by water master for Big Wood and Little Wood Rivers.

Stored water from this reservoir is used for irrigation on about 69,000 acres of land, under Carey Act project of the Big Wood Canal Co. (Ltd.), operated prior to 1921 by Idaho Irrigation Co. The reservoir is formed by a gravity earth and rock fill dam several hundred feet long at crest and 127 feet above bottom of outlet gates. Concrete lip spillway 400 feet long is provided, crest of which is 15 feet below top of dam. Elevation of bottom of outlet gates corresponds to 4,818.5 feet on gage which is about 3 feet lower than the actual stage of zero storage. At times, however, the stage may fall below 4,821.5 feet, depending upon the amount of normal flow passing through reservoir. Elevation of concrete lip spillway crest corresponds to 4,930 feet on gage. Use of a system of flashboards extends the actual elevation of spillway crest to 4,935 feet with respect to gage datum, at which stage the capacity of the reservoir is about 191,000 acre-feet, as determined by latest capacity table, based upon inflow and outflow records, about 4,000 acres being submerged at this stage.

Daily contents, in acre-feet, of Magic Reservoir near Richfield, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	2,635	5,032	3,888	6,823	11,074	32,872	178,114	191,619	168,762	104,021	50,104
2	-------	2,727	5,116	3,984	6,914	11,232	37,763	179,416	191,109	168,656	101,682	49,169
3	-------	2,811	4,398	4,085	7,091	11,365	44,233	180,730	190,327	167,774	99,738	48,150
4	-------	2,874	2,784	4,192	7,222	11,514	52,099	182,015	189,741	166,714	97,694	47,124
5	-------	2,952	2,119	4,295	7,427	11,667	64,013	183,263	189,078	165,726	95,918	45,996
6	-------	3,033	1,684	4,398	7,679	11,865	76,318	184,215	188,766	164,369	93,916	44,884
7	1,471	3,096	1,706	4,467	7,932	12,071	85,729	185,597	188,298	162,635	91,827	43,762
8	1,559	3,169	1,862	4,553	8,129	12,289	94,639	186,634	187,404	160,989	89,767	42,722
9	255	3,242	1,942	4,654	8,279	12,491	102,295	187,986	186,135	159,220	87,733	41,576
10	207	3,339	2,037	4,755	8,394	12,698	109,046	188,961	185,060	156,936	85,840	40,458
11	350	3,429	2,132	4,829	8,497	12,878	115,257	189,663	183,831	154,676	83,928	39,473
12	507	3,051	2,219	4,935	8,604	13,058	121,122	191,109	182,242	152,576	82,041	38,139
13	663	3,586	2,292	5,013	8,732	13,256	126,320	191,619	180,654	150,216	80,114	36,924
14	853	3,668	2,387	5,116	8,876	13,430	131,499	191,619	179,156	147,981	78,361	35,773
15	1,029	3,738	2,465	5,226	8,999	13,588	135,369	191,619	177,593	145,680	76,628	34,884
16	1,124	3,793	2,566	5,286	9,121	13,739	139,800	191,579	176,073	142,897	74,972	34,915
17	1,210	3,876	2,670	5,321	9,253	13,964	144,380	191,659	174,719	140,405	73,331	35,274
18	1,380	3,968	2,730	5,426	9,373	14,209	148,932	191,698	173,331	137,716	71,847	35,586
19	1,493	4,036	2,772	5,632	9,493	14,410	152,806	191,738	171,882	134,934	70,391	35,836
20	1,592	4,119	2,838	5,717	9,636	14,702	156,602	191,778	170,804	132,351	68,743	36,156
21	1,660	4,226	2,934	5,791	9,795	14,984	159,628	191,778	170,266	129,834	66,727	36,428
22	1,754	4,312	3,020	5,878	9,939	15,390	162,358	191,698	170,266	127,428	65,041	36,780
23	1,838	4,394	3,093	5,959	10,121	15,784	165,132	191,619	170,624	124,938	63,599	37,084
24	1,912	4,489	3,152	6,055	10,295	16,353	168,303	191,461	171,163	122,502	62,086	37,388
25	1,992	4,576	3,202	6,157	10,453	17,191	170,445	191,383	171,450	119,907	60,641	37,697
26	2,067	4,650	3,255	6,277	10,618	18,162	171,990	191,422	171,414	117,502	59,009	37,893
27	2,145	4,728	3,339	6,351	10,786	19,108	173,404	191,461	170,984	115,152	57,449	38,172
28	2,214	4,806	3,451	6,442	10,926	20,019	174,609	191,461	170,373	112,907	55,861	37,942
29	2,354	4,884	3,556	6,534	-------	21,431	175,890	191,619	169,548	110,633	54,307	38,188
30	2,451	4,959	3,668	6,647	-------	23,713	176,812	191,738	168,832	180,538	52,843	38,319
31	2,549	-------	3,785	6,749	-------	28,651	-------	191,778	-------	106,267	51,411	-------

BIG WOOD RIVER BELOW MAGIC DAM, NEAR RICHFIELD, IDAHO

LOCATION.—In sec. 18, T. 2 S., R. 18 E., Blaine County, half a mile below Magic Dam and 18 miles northwest of Richfield, Lincoln County. No tributaries between dam and station.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 19, 1911, to September 30, 1925.

GAGE.—Gurley water-stage recorder on right bank; installed April 20, 1916; inspected by Ed. Dayton.

DISCHARGE MEASUREMENTS.—Made from cable at gage or by wading.

CHANNEL AND CONTROL.—Bed and control composed of clean coarse gravel and small boulders; somewhat shifting. Banks high and brushy.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 6.81 feet at 8 p. m. May 20 (discharge, 2,510 second-feet); minimum discharge, 4.1 second-feet (by measurement) November 30.

1911–1925: Maximum stage recorded, 9.2 feet May 18, 1911 (discharge, 5,070 second-feet); no flow reported February 3, 1915.

ICE.—Stage-discharge relation seldom affected by ice.

DIVERSIONS.—No diversions are made by Big Wood Canal Co. above this station, but numerous ranch diversions are made in the upper drainage area, the largest quantity of water probably being used in the district below Hailey. Flood waters are stored in Magic Reservoir just above station and the first diversion by the company is Richfield Canal, 2 miles below.

REGULATION.—Flow past station completely regulated by gates in outlet tunnel at Magic Dam.

ACCURACY.—Stage-discharge relation changed during high water June 20 to August 4. Standard rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph or for days of considerable fluctuation in stage by averaging discharge for intervals of the day. Shifting-control method used June 20 to August 4. Records excellent except for estimated periods, for which they are good.

COOPERATION.—Gage-height record and several discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Discharge measurements of Big Wood River below Magic Dam, near Richfield, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 30	1.38	4.1	July 6	5.50	1,610	Aug. 10	4.44	1,140
May 4	4.10	890	July 7	5.50	1,630	Aug. 15	4.26	1,000
May 8	4.81	1,320	July 11	5.57	1,690	Aug. 18	4.08	884
May 14	5.58	1,760	July 15	5.46	1,650	Aug. 25	4.14	908
May 22	6.60	2,460	July 25	4.85	1,300	Sept. 8	3.73	671
June 16	5.04	1,490	Aug. 4	4.58	1,200	Sept. 12	3.75	685

Daily discharge, in second-feet, of Big Wood River below Magic Dam, near Richfield, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		5.0	4.4				11	556	1,820	1,440	1,190	624
2		5.0	216		6.8		11	724	1,700	1,440	1,190	612
3		5.0	832	6.0			12	820	1,580	1,470	1,190	641
4		5.0	523				12	893	1,530	1,470	1,090	659
5	5.4	5.0	316				13	1,090	1,410	1,640	1,090	665
6		5.0	96	6.1	6.9	7.1	14	1,220	1,340	1,640	1,150	659
7		5.0	12				14	1,280	1,380	1,640	1,120	665
8	362	5.0	12		7.0		15	1,340	1,440	1,640	1,120	677
9	377	5.0	12				16	1,380	1,410	1,640	1,120	682
10	133	5.0	12	6.2	7.1		16	1,440	1,380	1,640	1,120	682
11	4.6	5.0	12				17	1,440	1,410	1,700	1,090	682
12	4.4	4.8	12		7.1	7.2	18	1,530	1,440	1,700	1,090	682
13	4.4	4.7	8.8			7.3	18	1,760	1,470	1,640	1,090	682
14	4.6	4.5	5.6			7.4	280	1,820	1,470	1,640	1,050	601
15	4.6	4.4	5.6	6.3		7.4	336	1,820	1,470	1,640	956	243
16	4.8	4.4	5.6			7.4	36	1,820	1,470	1,640	956	35
17	5.0	4.4	5.6			7.4	43	1,880	1,470	1,640	924	33
18	4.8	4.4	5.6			7.4	44	1,940	1,470	1,640	893	33
19	4.8	4.4	5.6	5.4		7.4	45	2,050	1,530	1,580	956	33
20	4.8	4.4	5.6			7.4	228	2,340	1,470	1,530	1,120	33
21	4.8	4.4			7.1	7.7	372	2,450	1,470	1,440	988	33
22	4.8	4.4	5.7			8.0	316	2,400	1,470	1,440	893	33
23	4.8	4.4		6.5		8.0	316	2,170	1,530	1,440	893	33
24	5.0	4.4				8.0	368	1,990	1,530	1,410	808	33
25	5.0	4.4				8.4	429	1,820	1,580	1,340	924	33
26	5.0	4.2	5.8	6.6		8.4	429	1,700	1,640	1,310	924	33
27	5.0	4.4				8.8	424	1,700	1,700	1,280	924	203
28	5.3	4.4				9.2	377	1,700	1,700	1,250	893	44
29	5.0	4.4	5.9			9.6	359	1,820	1,640	1,220	862	33
30	5.0	4.4		6.7	-------	9.6	396	1,990	1,580	1,190	862	31
31	5.0	-------			-------	10	-------	2,050	-------	1,190	742	------

NOTE.—Owing largely to lack of gage-height record discharge estimated Oct. 1–8, 10, Dec. 6–7, Dec. 21 to Feb. 11, Feb. 13 to Mar. 13, and Sept. 15 based on gate changes, records and information furnished by water master for Big Wood and Little Wood Rivers; winter flow consists only of leakage through gates at Magic Dam. Discharge interpolated Nov. 13–14 and Dec. 18–19. Braced figures show mean discharge for periods indicated.

Monthly discharge of Big Wood River below Magic Dam, near Richfield, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	377	4.4	32.6	2,000
November	5.0	4.2	4.64	276
December	832	4.4	70.0	4,300
January	----------	----------	6.34	390
February	----------	----------	7.04	391
March	10	----------	7.75	477
April	429	11	166	9,880
May	2,450	556	1,640	101,000
June	1,820	1,340	1,520	90,400
July	1,700	1,190	1,500	92,200
August	1,190	742	1,010	62,100
September	682	31	338	20,100
The year	2,450	4.2	529	384,000

BIG WOOD RIVER ABOVE NORTH GOODING CANAL, NEAR SHOSHONE, IDAHO

LOCATION.—In sec. 10, T. 4 S., R. 18 E., 1 mile above heading of North Gooding Canal, 13 miles below Magic Dam, and 14 miles northeast of Shoshone, Lincoln County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 21, 1921, to August 22, 1925, when station was temporarily discontinued, because Lincoln Canal will carry flow of river around gage. Records will be resumed during future irrigation seasons if water passes this point.

GAGE.—Vertical staff on right bank; read by J. H. Gilmore. Datum raised 5.0 feet April 16, 1923.

DISCHARGE MEASUREMENTS.—Made from cable 300 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of lava rock partly covered with gravel. Control formed by lava rock riffle 100 feet below gage; fairly permanent. One channel at all stages. Point of zero flow occurs at a gage height of approximately −0.5 foot.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.78 feet at 6 a. m. May 22 (discharge, 1,510 second-feet); channel reported dry most of nonirrigation season.

1921–1925: Maximum stage recorded, 12.79 feet (old datum) June 13, 1921 (discharge, 3,330 second-feet); channel practically dry except during irrigation seasons each year.

ICE.—Channel practically dry during winter.

DIVERSIONS.—Numerous diversions for irrigation made above and below station. Richfield and Lincoln Canals are main diversions between station and Magic Dam. Lincoln Canal, completed in spring of 1925, diverts water around station on right bank to conserve channel losses in the natural stream bed throughout an 8-mile stretch of river.

REGULATION.—Flow regulated by operation of head gates at Magic Dam 13 miles above.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined between 100 and 1,500 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table, except as indicated in footnote to table of daily discharge. Records good.

COOPERATION.—Gage-height record and two discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Discharge measurements of Big Wood River above North Gooding Canal, near Shoshone, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 29	1.31	213	June 1	3.50	928
May 21	4.72	1,460	July 8	1.50	251

Daily discharge, in second-feet, of Big Wood River above North Gooding Canal, near Shoshone, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Day	Apr.	May	June	July	Aug.
1		336	918	178		16	39	918	540	430	
2		393	713	168		17		961	451	189	0
3		510	713	246		18	0	1,000	364	148	
4		510	639	336		19		1,090	322	104	
5		604	571	309		20		1,270	283	81	316
6		571	510	322		21	165	1,460	270		226
7		571	540	296		22	148	1,460	270		------
8		639	571	258	0	23	148	1,320	270		------
9		639	540	246		24	181	1,140	258		------
10		675	540	234		25	267	1,000	283		------
11		675	540	211		26	309	875	283	0	------
12		639	540	200		27	283	833	270		------
13		875	571	158		28	246	792	246		------
14		918	571	118		29	211	833	234		------
15	209	918	540	354		30	222	1,050	211		------
						31	------	1,050	------		------

NOTE.—Discharge estimated for Apr. 15–16, July 15–16, and Aug. 20–21, based on gage heights and information furnished by water master. Channel probably dry during periods for which no discharge is shown.

Monthly discharge of Big Wood River above North Gooding Canal, near Shoshone, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 15–30	309	0	162	4,820
May	1,460	336	856	52,600
June	918	211	452	26,900
July	430	0	148	9,100
August 1–21	316	0	25.8	1,070

BIG WOOD RIVER BELOW NORTH GOODING CANAL, NEAR SHOSHONE, IDAHO

LOCATION.—In sec. 15, T. 4 S., R. 18 E., 300 yards below heading of North Gooding Canal, 13 miles northeast of Shoshone, Lincoln County, and 14 miles below Magic Dam.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—January 1, 1911, to September 30, 1925.

GAGE.—Gurley 7-day water-stage recorder on right bank; installed July 5, 1920; inspected by water master for Big Wood and Little Wood Rivers and his assistants. Prior to July 8, 1918, datum was about 6 feet lower than present datum.

DISCHARGE MEASUREMENTS.—Made from cable 100 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of lava rock; practically permanent, rough. At extremely high stages water overflowed above North Gooding diversion dam into secondary channel to left of gage. Control fairly well defined.

EXTREMES OF DISCHARGE.—Maximum measured discharge, 1,020 second-feet May 21; channel reported dry except during period of recorded flow.

1911–1925: Maximum stage recorded, 15.0 feet (old datum) May 18, 1911 (discharge, 3,180 second-feet); no flow occurred during several different periods since establishment of station.

ICE.—Channel reported dry during winter.

DIVERSIONS.—Station is below all diversions of Big Wood Canal Co. North Gooding and Richfield Canals divert between station and Magic Dam. Lincoln Canal (designed to carry about 700 second-feet), construction of which was completed in spring of 1925, heads 7 miles below Magic Dam and enters North Gooding Canal one-fourth mile above station. It diverts water on right bank of Big Wood River for purpose of conserving loss in natural channel throughout this stretch of river.

REGULATION.—Flow past station is regulated by gates at Magic Dam and head gates of North Gooding and Richfield Canals.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined. Water-stage recorder operated satisfactorily except for short periods when clock caused trouble. Staff readings made twice daily were used May 3–4, 25–31, June 1–7, July 28–31, and August 1–2. Daily discharge obtained by applying mean daily gage height to rating table. During periods water-stage recorder was operated, mean daily gage height determined by inspection of recorder graph except for days of considerable fluctuation when mean discharges were obtained for intervals of the day. Records good.

COOPERATION.—Gage-height record and five discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Discharge measurements of Big Wood River below North Gooding Canal, near Shoshone, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 29	3.07	185	July 22	2.99	177	Aug. 22	2.34	97.4
May 21	6.03	1,020	Aug. 15	2.73	142			
July 7	3.61	269	Aug. 18	2.44	108			

Daily discharge, in second-feet, of Big Wood River below North Gooding Canal, near Shoshone, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	------	214	448	276	122	125	16	6.5	571	228	193	104	16
2	------	222	285	276	127	89	17	------	601	231	229	113	------
3	------	345	304	267	126	100	18	------	650	237	234	110	------
4	------	345	304	276	126	103	19	------	701	247	214	79	------
5	------	356	223	276	111	93	20	------	851	236	206	52	------
6	------	345	190	276	110	94	21	115	996	232	178	116	------
7	------	334	208	276	113	99	22	117	996	229	175	104	------
8	------	356	226	276	113	111	23	118	871	223	176	100	------
9	------	345	231	276	113	108	24	133	701	221	179	85	------
10	------	356	206	276	115	106	25	247	586	247	168	101	------
11	------	356	209	267	107	106	26	294	461	267	161	116	------
12	------	356	214	248	84	107	27	248	400	285	171	127	------
13	------	542	228	223	131	104	28	228	345	285	163	126	------
14	------	601	244	218	117	100	29	188	378	276	136	113	------
15	162	586	234	193	135	81	30	200	571	276	141	111	------
							31	------	601	------	137	106	------

NOTE.—Channel reported dry during periods for which no discharge is given.

Monthly discharge of Big Wood River below North Gooding Canal, near Shoshone, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	294	0	68.6	4,080
May	996	214	514	31,600
June	448	190	249	14,800
July	276	136	218	13,400
August	135	52	110	6,760
September	125	0	51.4	3,060
The year				73,700

NOTE.—River reported dry for periods for which no discharge is given.

BIG WOOD RIVER AT GOODING, IDAHO

LOCATION.—In sec. 29, T. 5 S., R. 15 E., Gooding County, 30 feet below highway bridge and half a mile north of Gooding station on Oregon Short Line Railroad.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 1, 1921, to September 30, 1925. From June 2, 1896, to October 31, 1899, at approximately same site but known as "Malad River at Toponis."

GAGE.—Gurley water-stage recorder on left bank; inspected by James Devaney.

DISCHARGE MEASUREMENTS.—Made from cable 600 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of lava rock overlain with gravel. Control formed by lava-rock riffle 300 feet below gage; growth of willows and weeds affects stage-discharge relation occasionally. One channel at all stages. Zero flow would occur at gage height of 0.80 foot ±0.10 foot, as determined April 27, 1923.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 3.63 feet at 4 p. m. May 22 (discharge, 735 second-feet); channel reported dry April 8 to noon April 26, 8 a. m. August 22 to 5.30 a. m. August 24, September 18–30, and at other times during period of no record.

1921–1925: Maximum stage recorded, 5.80 feet May 7, 1922 (discharge, 2,340 second-feet); channel dry for long periods each year.

ICE.—Channel generally dry during winter.

DIVERSIONS.—Numerous diversions for irrigation above and below station.

REGULATION.—Flow regulated by operation of head gates at Magic Dam and by diversions above gage.

ACCURACY.—Stage-discharge relation changed May 8–17 and May 26 to August 16, owing to fouled condition of control. Standard rating curve well defined. Operation of water-stage recorder satisfactory. Daily dischage ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph or for days of considerable fluctuation by averaging discharges for intervals of a day. Shifting-control method used May 8–17 and May 26 to August 16. Record fair.

COOPERATION.—Gage-height record and several discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Discharge measurements of Big Wood River at Gooding, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 7	1.91	85.4	June 6	1.70	47.8	Aug. 17	1.40	15.1
Do	1.88	75.4	July 11	1.90	71.0	Aug. 19	1.37	11.1
May 18	2.77	309	July 14	1.84	51.8			
May 25	2.81	331	July 27	1.76	42.9			

Daily discharge, in second-feet, of Big Wood River at Gooding, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	40	18	321	80	29	13	16		242	61	35	28	3
2	50	42	142	80	23	13	17		260	51	40	12	1
3	42	32	120	80	27	7	18		288	51	56	6	0
4	20	124	142	78	24	1	19		338	58	56	11	
5	16	100	87	84	16	6	20	0	414	65	45	10	
6	2	104	44	80	33	6	21		638	63	70	4	
7	2	80	16	67	23	3	22		713	59	51	1	
8	0	80	22	67	20	4	23	0	633	56	51	0	
9		95	51	69	20	8	24	0	480	45	42	7	
10		82	53	70	20	11	25	0	329	44	47	6	0
11		89	26	70	22	9	26	64	230	65	38	3	
12	0	72	30	56	24	12	27	104	144	80	42	11	
13		107	25	47	13	10	28	74	107	91	47	25	
14		249	45	50	25	6	29	53	100	87	37	19	
15		256	67	40	20	4	30	20	182	84	31	9	
							31		329		30	17	

Monthly discharge of Big Wood River at Gooding, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	104	0	16.2	964
May	713	18	224	13,800
June	321	16	71.7	4,270
July	84	30	56.0	3,440
August	33	0	16.4	1,010
September	13	0	3.9	232
The period				23,700

NOTE.—No record October to March.

BIG WOOD RIVER NEAR GOODING, IDAHO

LOCATION.—In sec. 21, T. 6 S., R. 14 E., at Cleek ranch, 3½ miles above bridge on upper road between Bliss and Hagerman, 5 miles above diversion dam for King Hill project, and 6 miles southwest of Gooding, Gooding County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 26, 1916, to September 30, 1925.

GAGE.—Gurley 7-day water-stage recorder on right bank; inspected by R. Ambrose and James Devaney.

DISCHARGE MEASUREMENTS.—Made from cable a short distance above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of lava rock, boulders, and coarse gravel. Banks overflowed at high stages. One channel at gage; several channels above gage during high water. Control practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 4.20 feet 2 to 11 p. m. May 22 (discharge, 606 second-feet); channel reported dry May 1–2, August 23 to September 1, and at times during period of no record.

1916–1925: Maximum stage recorded, 9.00 feet March 17, 1922 (discharge, 3,680 second-feet); channel reported dry several times each year.

ICE.—Stage-discharge relation affected by ice at times. Record discontinued during winter.

DIVERSIONS.—Below all diversions of North Side Canal Co. (Ltd.), and above Big Malad Springs. Justice and Croco ditches (combined capacity, about 15 second-feet) divert 3 miles below gage. A few second-feet are occasionally wasted into river 2 miles below gage.

REGULATION.—Flow regulated by dams and diversions above station.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined between 10 and 1,800 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records good.

COOPERATION.—Gage-height record and three discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Discharge measurements of Big Wood River near Gooding, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 13	2.09	135	July 11	1.18	27.0	Aug. 19	0.90	9.6
May 18	2.62	225	Aug. 17	1.14	21.1			

Daily discharge, in second-feet, of Big Wood River near Gooding, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	233	0	208	24	16	0	16	83	192	51	14	24	1
2	255	0	141	24	18		17	70	211	51	14	24	-------
3	269	1	83	26	13		18	53	236	37	29	14	-------
4	231	66	118	24	7		19	39	240	32	37	11	-------
5	242	44	95	31	5		20	51	281	27	26	9	-------
6	233	38	51	29	11		21	40	468	26	14	6	-------
7	226	25	29	28	10		22	42	592	24	28	5	-------
8	204	33	9	23	6	1	23	118	563	15	35		
9	180	53	29	23	6		24	55	430	8	23		
10	135	46	41	30	6		25	46	279	5	18		
11	107	51	14	29	5		26	47	184	6	19		
12	123	60	12	26	7		27	107	94	26	8	0	-------
13	134	34	7	19	12		28	63	28	36	12		
14	129	162	12	19	24		29	23	19	34	7		
15	117	204	40	25	37		30	5	52	32	17		
							31	------	178	------	15		

NOTE.—No record Oct. 1 to Mar. 31 and Sept. 17–30. Discharge estimated Sept. 2–16. Braced figures show mean discharge for periods indicated.

Monthly discharge of Big Wood River near Gooding, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	269	5	122	7,260
May	592	0	157	9,650
June	208	5	43.3	2,580
July	37	7	22.5	1,380
August	37	0	8.9	547
September 1–16		0	.9	29

BIG WOOD SLOUGH AT HAILEY, IDAHO

LOCATION.—In sec. 9, T. 2 N., R. 18 E., at highway bridge, one-eighth mile northeast of steel highway bridge across Big Wood River, and one-eighth mile southwest of Hailey, Blaine County.

RECORDS AVAILABLE.—June 11, 1915, to September 30, 1925.

GAGE.—Vertical staff in concrete stilling well on left bank 3 feet below highway bridge; installed August 3, 1923; read by R. F. Bowman.

DISCHARGE MEASUREMENTS.—Made from footbridge or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel. Banks covered with brush and may be overflowed. One channel at all stages. Control formed by a wood stave water pipe, laid in bed of stream about 15 feet below gage; changes slightly.

EXTREMES OF DISCHARGE.—Maximum discharge during year, 262 second-feet occurred at 5.50 p. m. August 14 (gage height, 1.90 feet); minimum stage, 1.36 feet March 16 and 17 (discharge, 59 second-feet).

1915–1925: Maximum stage recorded, 3.00 feet June 6, 1921 (discharge, 419 second-feet; minimum discharge, 0.9 second-foot March 21–24, 1919.

ICE.—Stage-discharge relation seldom affected by ice.

DIVERSIONS.—None.

REGULATION.—The amount of water passing gage is affected by load at power plant half a mile upstream, and there is considerable fluctuation. The main river station is affected inversely by any such regulation, so that the accuracy of the summation of the two records is presumably affected only slightly by this factor.

ACCURACY.—Stage-discharge relation changed frequently during year by accumulation on and removal of drift from control. Standard rating curve fairly well defined. Gage read to hundredths once daily October to March and twice daily April to August. Daily discharge ascertained by applying daily gage height or mean daily gage height to rating table. Discharge estimated on account of ice effect December 18 to January 18. Records fair.

COOPERATION.—Five discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Big Wood Slough is a natural channel of Big Wood River that is utilized also as a tailrace for Hailey power plant. Record from this station represents a part of the natural flow of Big Wood River and taken in conjunction with the record at the near-by station on the main river (see p. 136), will show the entire flow of the river at this point. For record of combined flow of Big Wood River and Big Wood Slough see page 139.

Discharge measurements of Big Wood Slough at Hailey, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 30	1.61	124	May 23	1.58	118	Aug. 6	1.66	145
Mar. 8	[a] 1.64	142	June 11	1.78	179	Aug. 12	1.78	202
Apr. 10	1.68	145	July 2	[a] 1.63	145	Aug. 20	1.74	184
Apr. 13	1.62	133	July 5	1.66	166	Aug. 27	1.70	173
May 5	1.58	123						

[a] After clearing control.

Daily discharge, in second-feet, of Big Wood Slough at Hailey, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	159	129		122	122	122	133	129	140	176	155
2	110	159	129		122	129	122	163	113	155	185	163
3	116	152	129		122	137	122	122	148	159	193	163
4	116	152	129		129	137	148	122	155	163	168	163
5	116	152	129	115	137	137	148	133	144	163	152	172
6	116	152	129		129	144	126	114	126	140	150	172
7	122	152	129		129	144	119	129	116	159	137	163
8	122	152	129		129	140	155	119	129	168	144	172
9	122	193	129		129	133	126	113	155	155	172	163
10	137	129	137		122	119	133	110	163	148	172	140
11	129	129	137		116	116	129	129	185	144	176	126
12	129	116	137		116	119	140	126	189	159	202	126
13	129	97	129		116	119	148	129	172	152	222	126
14	122	116	129	105	116	126	129	144	144	148	226	129
15	122	110	129		116	126	148	159	148	159	189	129
16	129	110	122		116	59	155	126	172	137	168	129
17	129	110	116		116	59	155	116	172	140	172	129
18	129	103			116	68	113	116	207	144	180	129
19	129	110		122	116	73	91	140	212	159	176	129
20	129	116		122	116	73	83	140	152	144	176	129
21	129	122	100	129	122	68	110	126	148	148	180	129
22	129	129		129	122	68	94	119	163	176	176	129
23	137	137		137	122	73	86	119	126	193	172	129
24	144	122		129	122	73	88	119	116	168	176	129
25	144	116	85	122	122	68	100	116	126	189	172	129
26	144	122		122	122	122	97	119	129	172	172	129
27	152	122		122	122	122	103	137	155	155	172	129
28	159	122		129	122	137	110	144	189	152	168	129
29	193	122	110	129	------	103	113	155	198	168	159	129
30	168	126		129	------	122	110	152	140	185	155	129
31	168	------		122	------	122	------	133	------	185	155	------

NOTE.—Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Big Wood Slough at Hailey, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	193	110	133	8,180
November	193	97	130	7,740
December	137	----------	116	7,130
January	137	----------	117	7,190
February	137	116	122	6,780
March	144	59	108	6,640
April	155	83	121	7,200
May	163	110	131	8,060
June	212	113	154	9,160
July	193	137	159	9,780
August	226	137	174	10,700
September	172	126	140	8,330
The year	226	59	134	96,900

CAMAS CREEK NEAR BLAINE, IDAHO

LOCATION.—In sec. 15, T. 1 S., R. 16 E., 500 feet below sheep bridge, a quarter of a mile north of Macon siding on Hill City branch of Oregon Short Line Railroad, 1½ miles below railroad bridge, 2¼ miles above backwater of Magic Reservoir, and 4 miles southeast of Blaine, Camas County. No tributaries or diversions between station and Magic Reservoir.

DRAINAGE AREA.—618 square miles (measured on base map of Idaho).

RECORDS AVAILABLE.—May 9, 1912, to September 30, 1925. Results of discharge measurements made in 1911 by Idaho Irrigation Co. are also available. Discharge measurements only are available for 1922.

GAGE.—Gurley water-stage recorder on left bank; inspected by deputy water masters.

DISCHARGE MEASUREMENTS.—Made from sheep bridge or by wading.

CHANNEL AND CONTROL.—Bed rocky. Control somewhat shifting. One channel at all stages. Point of zero flow determined July 30, 1924, as at gage height 0.55 foot ±0.05 foot.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 12.35 feet on or about April 5 as determined April 6 from watermarks on bank (discharge about 5,070 second-feet); minimum stage from water-stage recorder, 1.07 feet from 8 p. m. August 8 to 1 a. m. August 9 (discharge, 4.4 second-feet).

1911–1925: Maximum discharge, 5,240 second-feet April 12, 1916 (gage height, 10.76 feet). Minimum discharge, 2.3 second-feet from 4 to 6 p. m. August 17, 1920, and 6 to 8 p. m. July 31, 1924, probably not actual extremes.

ICE.—Observations discontinued during winter.

DIVERSIONS.—Many small diversions are made above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 600 second-feet and extended above, based on inflow and outflow records for Magic Reservoir and on information furnished by water master for Big Wood River. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph except June 24 for which it was interpolated and March 31 to April 8 which was partly estimated. Records good except for high-water period for which they are poor.

COOPERATION.—Gage-height record and four discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Discharge measurements of Camas Creek near Blaine, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 22	3.53	379	June 25	2.06	66.6
June 12	2.18	81.4	July 9	1.57	23.8

Daily discharge, in second-feet, of Camas Creek near Blaine, Idaho, for the year ending September 30, 1925

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		1,940		192	48	5.2	5.2
2		2,440		183	41	5.2	4.9
3		3,280		176	36	5.2	4.9
4		4,540		188	34	5.2	4.9
5		4,930		181	33	5.2	4.9
6		4,790		181	35	4.9	5.2
7		4,060		174	35	4.9	5.2
8		4,060		158	28	4.7	5.2
9				138	24	4.7	5.2
10				120	22	5.2	5.2
11				99	20	6.4	4.9
12				87	17	8.2	5.2
13				84	15	8.2	5.2
14				78	13	11	5.2
15			367	76	12	11	5.5
16			359	94	11	9.5	5.5
17			375	109	11	8.2	5.5
18			375	106	10	7.0	5.5
19			375	101	9.8	6.1	5.5
20			362	83	8.8	5.5	5.8
21			375	80	7.9	5.2	6.1
22			375	79	8.8	4.9	6.1
23			359	74	10	4.9	6.1
24			333	70	10	4.9	6.1
25			310	66	8.2	4.9	6.1
26			294	57	7.9	5.2	6.1
27			274	50	7.3	5.2	6.1
28			250	45	7.3	5.2	6.1
29			223	38	6.7	4.9	6.7
30			209	58	5.8	4.9	7.0
31	1,740		201		5.5	4.9	

Monthly discharge of Camas Creek near Blaine, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 1–8	4,930	1,940	3,760	59,700
May 15–31	375	201	319	10,800
June	192	38	108	6,430
July	48	5.5	17.7	1,090
August	11	4.7	6.02	370
September	7.0	4.9	5.57	331

LINCOLN CANAL NEAR RICHFIELD, IDAHO

LOCATION.—In sec. 9, T. 3 S., R. 18 E., at head of canal, 100 yards east from Shoshone-Hailey highway, 5½ miles below Magic Dam, and 12 miles northeast of Richfield, Lincoln County.

RECORDS AVAILABLE.—April 15 to September 30, 1925.

GAGE.—Gurley 7-day water-stage recorder on right bank 400 feet below head gates; inspected by S. H. Chapman and James Devaney.

DISCHARGE MEASUREMENTS.—Made from cable 400 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of lava covered by gravel. One channel at all stages. Control not definitely defined.

EXTREMES OF DISCHARGE.—Maximum stage during period from water-stage recorder, 3.71 feet at 6 p. m. August 4 (discharge, 574 second-feet); no flow prior to April 15 and after September 16.

ICE.—No flow during winter.

REGULATION.—Flow regulated by gates at head of canal.

ACCURACY.—Stage-discharge relation changed July 3–5. Rating curve well defined between 15 and 550 second-feet used May 6 to July 2, and a curve parallel thereto used July 6 to September 16; shifting-control method used July 3–5. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph or, for days having considerable fluctuation in stage, by averaging discharge for intervals of the day. Records good after May 5; others fair.

COOPERATION.—Gage-height record and several discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Lincoln Canal diverts water from right bank of Big Wood River in sec. 9, T. 3 S., R. 18 E., from which point water is carried 10 miles, approximately parallel to river, to head of North Gooding Canal in sec. 15, T. 4 S., R. 18 E. Construction of Lincoln Canal was completed in spring of 1925, and used thereafter for the purpose of conserving large channel losses in the natural stream bed of this stretch of river during irrigation season.

Discharge measurements of Lincoln Canal near Richfield, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 29	0.15	[a] 1.5	June 26	2.88	392	Aug. 18	2.87	383
May 6	.48	21.4	July 1	3.25	489	Aug. 25	2.80	364
May 21	.92	63.8	July 6	2.52	322	Aug. 29	2.86	387
June 16	1.00	70.1	July 11	3.07	428	Sept. 12	2.54	321
June 17	2.02	242	July 22	3.47	523			
June 20	2.55	335	Aug. 4	3.31	490			

[a] Estimated.

Daily discharge, in second-feet, of Lincoln Canal near Richfield, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	------		15	470	472	317	16		14	76	187	388	10
2	------		16	483	481	287	17		15	186	413	396	------
3	------	1.5	15	357	474	297	18		16	249	461	390	------
4	------		15	315	492	305	19		24	301	472	180	------
5	------		18	315	470	313	20		34	339	492	2	
6	------	4.5	21	317	467	309	21		64	341	512	114	------
7	------	7.5	21	357	454	315	22	1.5	64	343	512	382	------
8	------	7.5	21	392	450	319	23		62	343	519	367	------
9	------	7.0	20	403	452	317	24		62	345	521	283	------
10	------	6.0	22	417	452	317	25		30	365	503	380	------
11	------	14	23	430	439	317	26		16	396	496	392	------
12	------	21	21	430	437	317	27		16	420	503	405	------
13	------	21	20	443	456	317	28		16	430	496	401	------
14	------	19	21	437	443	305	29	1.5	16	441	478	386	------
15	1.5	16	46	78	417	192	30	1.5	16	450	476	378	------
							31	------	16	------	476	369	------

NOTE.—Discharge estimated Apr. 15 to May 5 and Aug. 20, based on records and information furnished by water master for Big Wood and Little Wood Rivers. Braced figures give mean discharge for periods indicated.

Monthly discharge of Lincoln Canal near Richfield, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 15–30			1.5	48
May	64		19.7	1,210
June	450	15	178	10,600
July	521	78	425	26,100
August	492	2	389	23,900
September 1–16	319	10	285	9,040

LINCOLN CANAL NEAR SHOSHONE, IDAHO

LOCATION.—In sec. 15, T. 4 S., R. 18 E., one-fourth mile above mouth of canal, 7 miles northwest of Richfield, 11 miles northeast of Shoshone, and 12½ miles below Magic Dam.

RECORDS AVAILABLE.—May 21 to September 30, 1925.

GAGE.—Vertical staff bolted to left end of concrete check of canal in timber stilling well; read by J. H. Gilmore.

DISCHARGE MEASUREMENTS.—Made from cable half a mile above gage or by wading.

CHANNEL AND CONTROL.—One channel at all stages. Bed composed of lava rock overlain with gravel. Control is concrete check.

EXTREMES OF DISCHARGE.—Maximum stage recorded, 2.28 feet at 6.30 a. m. May 22, 6 p. m. May 23, 12.40 p. m. and 6.40 p. m. July 20 (discharge, 501 second-feet); canal probably dry except during periods of recorded flow.

ICE.—No flow during winter.

REGULATION.—Flow regulated by gates at head of canal.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Gage read to hundredths twice daily. Daily discharge ascertained by applying to rating table mean daily gage height. Records good.

COOPERATION.—Gage-height record and several discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Lincoln Canal diverts water from right bank of Big Wood River in sec. 9, T. 3 S., R. 18 E., from which point water is carried 10 miles, approximately parallel to river, to head of North Gooding Canal in sec. 15, T. 4 S., R. 18 E. Construction of Lincoln Canal was completed in spring of 1925 and used thereafter for the purpose of conserving large channel losses in the natural stream bed of this stretch of river during irrigation seasons.

Discharge measurements of Lincoln Canal near Shoshone, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 21	0.24	13.7	July 8	1.79	354	Aug. 15	1.92	389
June 16	.49	41.8	July 21	2.28	463	Aug. 22	1.80	346
June 17	1.22	191	July 22	2.26	469	Aug. 25	1.79	337
June 20	1.63	286	July 24	2.25	496	Aug. 29	1.84	353
June 26	1.82	354	Aug. 4	2.14	451	Sept. 12	1.62	294
July 1	2.08	428	Aug. 13	2.60	424			

Daily discharge, in second-feet, of Lincoln Canal near Shoshone, Idaho, for the year ending September 30, 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1			419	442	296	16		43	100	345	7
2			442	452	255	17		108	371	358	
3			358	455	261	18		200	393	348	
4			284	455	272	19		247	416	219	
5			284	449	281	20		290	442	0	
6			284	435	281	21	8	287	495	39	
7			314	419	284	22	18	290	495	358	
8		0	361	409	287	23	19	293	495	342	
9			377	412	284	24	19	296	495	250	
10			383	419	284	25	10	311	478	351	
11			393	390	284	26		339	475	361	
12			393	358	284	27		364	482	371	
13			390	419	287	28		377	472	364	
14			396	409	287	29	0	390	449	358	
15		10	130	383	240	30		403	449	351	
						31			449	358	

NOTE.—Discharge estimated May 21, 25, June 15, 17, July 15, 16, Aug. 19, 21, 24, Sept. 15 and 16, based on gage heights and known changes in flow as furnished by water master.

Monthly discharge of Lincoln Canal near Shoshone, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May 21–31	19	0	6.73	147
June	403	0	142	8,450
July	495	100	392	24,100
August	455	0	357	22,000
September 1–16	296	7	261	8,280

LITTLE WOOD RIVER NEAR CAREY, IDAHO

LOCATION.—In SW. ¼ NW. ¼ sec. 35, T. 2 N., R. 20 E., at Campbell ranch, three-fourths mile below dam site of proposed Little Wood Reservoir: on Carey-Muldoon road; 1½ miles below mouth of High Five Creek, 2½ miles below mouth of Muldoon Creek, 11 miles due east of Bellevue, and 12 miles northwest of Carey, Blaine County.

DRAINAGE AREA.—328 square miles (measured on topographic map and base map of Idaho).

RECORDS AVAILABLE.—February 22, 1920, to September 30, 1925. April 28, 1904, to May 31, 1905, at a station 7 miles downstream.

GAGE.—Friez water-stage recorder on left bank; inspected by employees at Campbell ranch.

DISCHARGE MEASUREMENTS.—Made from cable 100 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel. One channel at all stages. Control formed by well-defined gravel and boulder riffle 25 feet below gage; subject to change.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 3.59 feet at 11 p. m. May 11 (discharge, 871 second-feet); minimum discharge, estimated at 15 second-feet December 11; lower discharge probably occurred during winter.

1920–1925: Maximum discharge recorded, 1,030 second-feet June 12, 1921, and May 26, 1922; minimum stage recorded, 0.48 foot from 11 p. m. August 29 to 2 a. m. August 30 (discharge, 14 second-feet).

ICE.—Stage-discharge relation seriously affected by ice; record discontinued during winter.

DIVERSIONS.—Practically no diversions above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curves well defined. Several breaks in gage-height record due to lack of attendant. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records fair except for estimated periods, for which they are poor.

COOPERATION.—Gage-height record furnished by Little Wood Reservoir Association.

Discharge measurements of Little Wood River near Carey, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 1	[a] 1.01	[b] 15	Apr. 14	3.20	664	May 23	2.89	521
Mar. 9	1.06	63.0	May 6	2.98	585	July 9	1.78	196

[a] Stage-discharge relation affected by ice.
[b] Estimated.

NOTE.—All gage heights referred to outside staff gage.

Daily discharge, in second-feet, of Little Wood River near Carey, Idaho, for the year ending September 30, 1925

Day	Oct.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24			368	412	310	76	
2	24			431	353	272	75	
3	24			483	322	246	78	
4	36			520	301	232	73	
5				539	295	232	69	65
6				581	280	232	65	
7				624	254	246	64	
8				645	240	213	62	
9		65		560	243	179	64	67
10				501	254	171	66	67
11		70		734	251	164	76	65
12				734	254	164	87	62
13		75		624	254	150	86	62
14		74	659	624	257	139	94	
15		75	659	624	251	137	88	
16		72	659	645	292	122	81	
17		66	721	712	286	117	78	
18		72	618	689	283	109	74	
19		76	558	734		104		
20		80	465	734		101		
21		97	431	712	380	106		65
22		139	448	602		119		
23		198	390	552				
24		206	335	520				
25		201	318	540	353	90	65	
26		206	309	520	376			
27		206	309	516	344			
28		238	309	501	307			
29			309	581	301	78		
30			335	602	307	79		69
31				501		78		

NOTE.—Discharge estimated based on flow of Big Wood River at Hailey Mar. 10–12, June 19–24, July 23–28, Aug. 19–31, Sept. 1–8, 14–29. Discharge interpolated Apr. 27 and 28. Braced figures show mean discharge for periods indicated.

Monthly discharge of Little Wood River near Carey, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1–4	36	24	27.0	214
March 9–28	238	----------	118	4,680
April 14–30	721	309	461	15,500
May	734	368	589	36,200
June	----------	240	312	18,600
July	310	78	150	9,220
August	94	----------	71.0	4,370
September	----------	----------	65.1	3,870

LITTLE WOOD RIVER NEAR RICHFIELD, IDAHO

LOCATION.—In sec. 30, T. 4 S., R. 20 E., half a mile above heading of Dietrich Canal and 1 mile east of railroad station at Richfield, Lincoln County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—January 1, 1911, to September 30, 1925.

GAGE.—Gurley water-stage recorder on right bank; installed April 14, 1920; inspected by B. E. Powell and F. L. Manwill.

DISCHARGE MEASUREMENTS.—Made from suspension footbridge just below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of coarse gravel and small rocks; rough Control changes slightly. Stage-discharge relation often affected during summer by light growth of aquatic plants.

EXTREMES OF DISCHARGE.—Maximum stage from water-stage recorder, 2.80 feet at 6 a. m. April 14 (discharge, 396 second-feet); minimum stage, 1.19 feet, June 14 (discharge, 48 second-feet).

1911–1925: Maximum stage recorded, 4.5 feet May 17 and 18, 1911 (discharge, 722 second-feet); minimum stage, 0.52 foot June 24 and 25, 1920 (discharge, 7.6 second-feet).

ICE.—Stage-discharge relation affected by ice; observations discontinued during winter.

DIVERSIONS.—Small ranch diversions are made above station. Dietrich Canal diverts a short distance below.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Well-defined rating curve used April 1 to May 29, and several parallel curves used during remainder of record when stage-discharge relation was affected by aquatic growth and brush along banks. Operation of water-stage recorder satisfactory except May 31, June 6–15, and July 29–31, when daily staff readings were used. Daily discharge ascertained by applying to rating table mean daily gage height. Discharge interpolated April 27. Records good.

COOPERATION.—Gage-height record and six discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Discharge measurements of Little Wood River near Richfield, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 13	2.69	360	June 18	1.42	75.4	July 12	1.50	82.0
Apr. 29	2.21	233	June 27	1.31	60.1	Aug. 5	1.59	95.7
May 23	2.36	265	July 10	1.47	79.0	Aug. 13	1.61	92.1

Daily discharge, in second-feet, of Little Wood River near Richfield, Idaho, for the year ending September 30, 1925

Day	Oct.	Apr.	May	June	July	Aug.	Sept.
1	59	324	227	139	64	85	130
2	60	316	237	120	70	88	130
3	60	304	247	91	70	89	137
4	59	307	255	78	73	95	137
5	59	313	242	75	77	94	139
6	60	330	232	63	82	88	141
7	65	342	227	63	85	86	141
8	65	307	213	63	85	88	141
9	------	299	216	60	82	89	141
10	------	342	202	60	79	89	143
11	------	342	182	60	81	88	147
12	------	336	191	54	85	91	145
13	------	372	220	52	81	92	145
14	------	390	220	48	79	95	147
15	------	342	213	53	77	92	147
16	------	330	206	70	74	96	149
17	------	327	218	73	69	100	149
18	------	330	242	77	73	102	149
19	------	339	247	78	70	107	149
20	------	330	250	73	70	107	153
21	------	307	263	66	70	110	149
22	------	293	279	64	73	109	149
23	------	290	263	61	74	112	149
24	------	301	244	66	79	118	147
25	------	279	230	64	82	118	147
26	------	260	222	64	86	121	151
27	------	247	189	60	88	123	151
28	------	234	141	59	96	125	151
29	------	230	130	65	96	127	149
30	------	232	132	64	95	127	151
31	------	------	139	------	85	127	------

Monthly discharge of Little Wood River near Richfield, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1–8	65	59	60.9	966
April	390	230	310	18,400
May	279	130	217	13,300
June	139	48	69.4	4,130
July	96	64	79.0	4,860
August	127	85	103	6,330
September	153	130	145	8,630

LITTLE WOOD RIVER AT SHOSHONE, IDAHO

LOCATION.—In sec. 35, T. 5 S., R. 17 E., 400 feet above highway bridge on Shoshone-Richfield road in Shoshone, Lincoln County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 1, 1922, to September 30, 1925.

GAGE.—Gurley water-stage recorder on left bank; inspected by B. E. Powell.

DISCHARGE MEASUREMENTS.—Made from cable a quarter of a mile above gage.

CHANNEL AND CONTROL.—Bed composed of lava rock partly overlain with sand and gravel. Banks steep. One channel at all stages. Control for low and medium stages formed by crest of concrete diversion dam. No well-defined control for high stages.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 1.91 feet from 8 a. m. to 2 p. m. May 23 (discharge, 485 second-feet); minimum stage during period, 0.60 foot October 4 (discharge, 14 second-feet).

1922–1925: Maximum stage recorded, 2.26 feet June 18, 1922 (discharge, 664 second-feet); minimum stage, 0.34 foot at 10 a. m. September 3, 1924 (discharge, 0.4 second-foot).

ICE.—No record.

DIVERSIONS.—Numerous irrigation diversions above and below. A small ditch for the Shoshone water-supply diverts from left bank directly below gage.

REGULATION.—None except that due to diversions.

ACCURACY.—Stage-discharge relation changed after October 4 by removal of plank on control and several times after March 23 by collection and removal of moss and débris on control. Standard rating curves well defined. Operation of water-stage recorder satisfactory except April 10–12, 18–19, 27, June 18–21, 24, August 10–12, 15–16, 18, and September 12 when daily staff gage readings were used. Daily discharge ascertained by applying to rating table daily or mean daily gage height. Shifting-control method used June 12–25 and August 7–18. Records good.

COOPERATION.—Gage-height record and nine discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Discharge measurements of Little Wood River at Shoshone, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 23	1.17	141	June 4	1.68	387	Aug. 3	1.48	283
Apr. 7	1.63	287	June 6	1.60	336	Aug. 14	1.55	306
Apr. 13	1.61	283	June 17	1.56	307	Aug. 24	1.37	233
May 23	1.91	484	July 7	1.60	340	Sept. 12	1.23	177
June 4	1.68	385						

Daily discharge, in second-feet, of Little Wood River at Shoshone, Idaho, for the year ending September 30, 1925

Day	Oct.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39		286	144	425	326	263	191
2	37		286	138	425	351	277	135
3	30		253	138	383	336	282	144
4	14		253	198	388	341	286	160
5			258	272	357	351	240	177
6			282	291	336	357	145	166
7			291	377	263	346	286	163
8			277	388	286	346	291	166
9			258	393	311	341	286	173
10			249	393	296	331	286	177
11			258	398	277	331	291	177
12			268	411	282	346	296	177
13			286	434	291	351	296	180
14			286	447	301	351	301	180
15			272	434	306	346	291	150
16			263	434	311	341	263	138
17			263	434	306	336	263	119
18			249	439	291	326	249	113
19			263	447	306	311	219	108
20			244	456	311	306	215	108

Daily discharge, in second-feet, of Little Wood River at Shoshone, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Mar.	Apr.	May	June	July	Aug.	Sept.
21			236	473	316	316	219	111
22			215	477	316	336	227	108
23		141	206	481	301	331	227	108
24			223	473	326	331	231	101
25			210	468	326	341	244	98
26			188	443	326	321	236	96
27			177	425	326	316	240	96
28			157	407	331	311	236	98
29			150	398	331	306	223	98
30			147	402	336	282	215	96
31		253		416		258	215	

NOTE.—Discharge estimated Aug. 6; based on gage-height record for part of day. Result of discharge measurement used Mar. 23.

Monthly discharge of Little Wood River at Shoshone, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1-4	39	14	30.0	238
April	291	147	242	14,400
May	481	138	385	23,700
June	425	263	323	19,200
July	357	258	330	20,300
August	301	145	253	15,600
September	191	96	137	8,150

MULDOON CREEK NEAR MULDOON, IDAHO

LOCATION.—In SE. ¼ sec. 15, T. 2 N., R. 20 E., one-eighth mile above mouth. 9 miles southwest of Muldoon post office, Blaine County, and 14 miles northwest of Carey.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—June 28 to August 31, 1925.

GAGE.—Vertical staff on left bank; read by R. W. Larkin.

DISCHARGE MEASUREMENTS.—Made by wading at gage.

CHANNEL AND CONTROL.—Bed composed of gravel. One channel at all stages. Control formed by gravel riffle; subject to change.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 1.54 feet June 29 (discharge, 82 second-feet); minimum stage, 0.61 foot at 8 a. m. August 29 (discharge, 12 second-feet).

ICE.—Stage-discharge relation probably affected by ice.

DIVERSIONS.—A few ranch diversions above gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Staff gage read to hundredths once daily June 28 to July 26, after which two readings daily were obtained. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

COOPERATION.—Gage-height record and five discharge measurements furnished by George A. Lewis, water master for upper Little Wood River.

Discharge measurements of Muldoon Creek near Muldoon, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
June 28	1.39	70.2	July 13	1.01	42.3	Aug. 26	0.64	14.1
July 5	1.41	71.7	Aug. 2	.80	24.9	Aug. 29	.65	14.2

Daily discharge, in second-feet, of Muldoon Creek near Muldoon, Idaho, for the year ending September 30, 1925

Day	June	July	Aug.	Day	June	July	Aug.	Day	June	July	Aug.
1		30	28	11		58	46	21		28	20
2		25	26	12		49	28	22		27	19
3		28	25	13		40	30	23		30	19
4		32	24	14		40	71	24		32	19
5		72	22	15		40	38	25		35	19
6		69	24	16		38	38	26		27	18
7		65	18	17		36	36	27		26	21
8		61	22	18		33	33	28	71	24	17
9		62	25	19		31	18	29	82	26	18
10		61	26	20		30	15	30	80	25	21
								31		26	22

Monthly discharge of Muldoon Creek near Muldoon, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 28–30	82	71	77.7	462
July	72	24	38.9	2,390
August	71	15	26.0	1,600
The period				4,450

FISH CREEK ABOVE DAM, NEAR CAREY, IDAHO

LOCATION.—In sec. 2, T. 1 N., R. 22 E., 1¾ miles above entrance of West Fork of Fish Creek, 2 miles above dam of Carey Valley Reservoir Co., and 14 miles northeast of Carey, Blaine County.

DRAINAGE AREA.—About 56 square miles (measured on base map of Idaho).

RECORDS AVAILABLE.—May 3, 1920, to September 30, 1925.

GAGE.—Vertical staff in gage well on right bank; read by A. Gilliam.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of coarse sand and gravel. Left bank may be overflowed at high stages. Control formed by 18-foot Cippoletti weir set in concrete, 8 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 0.86 foot May 8, 12, and 13 (discharge, 49 second-feet); minimum stage, 0.06 foot August 23 and 24 (discharge, 0.9 second-foot).

1920–1925: Maximum stage recorded, 1.78 feet 9 a. m. to 1 p. m. May 6, 1922 (discharge, 158 second-feet); minimum stage and discharge occurred August 23 and 24, 1925.

ICE.—Stage-discharge relation affected by ice; records discontinued during winter.

DIVERSIONS.—Several small diversions above gage.

REGULATION.—None except as affected by diversions above.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Gage read to hundredths once daily. Daily discharge determined by applying daily gage height to rating table. Records good.

COOPERATION.—Gage-height record furnished by water master for Fish Creek.

Discharge measurements of Fish Creek above dam, near Carey, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 24	0.72	37.7	Aug. 11	0.10	1.8
July 10	.37	13.6	Aug. 27	.15	3.6

Daily discharge, in second-feet, of Fish Creek above dam, near Carey, Idaho, for the year ending September 30, 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	------	26	13	2.6	5.0	16	46	24	8.6	2.9	7.2
2	------	25	9.0	1.9	5.0	17	47	20	8.1	2.9	7.2
3	------	26	9.5	1.4	5.0	18	48	18	8.6	2.6	7.2
4	------	26	17	1.4	5.0	19	46	18	8.6	2.6	6.3
5	------	26	17	1.9	5.0	20	42	20	9.8	2.6	6.3
6	------	26	17	1.9	5.0	21	42	20	11	2.2	6.3
7	48	24	14	1.9	6.3	22	42	26	9.0	2.2	6.3
8	49	23	16	1.9	6.3	23	36	26	9.0	.9	6.3
9	44	22	14	1.2	6.3	24	38	20	9.0	.9	6.7
10	41	22	14	1.2	6.3	25	38	18	7.6	1.0	6.7
11	45	21	14	1.9	6.3	26	29	17	5.4	1.2	6.7
12	49	19	13	1.9	6.3	27	32	17	3.9	3.9	5.4
13	49	19	12	2.2	6.3	28	31	16	1.9	3.2	5.4
14	46	19	10	2.6	7.2	29	29	15	1.9	3.5	5.4
15	46	22	9.0	2.6	7.2	30	26	14	1.9	4.3	6.3
						31	29	------	1.9	4.3	------

NOTE.—Discharge interpolated May 11, 17, 21, June 5, 7, 15, July 20, Aug. 25, and Sept. 15.

Monthly discharge of Fish Creek above dam, near Carey, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May 7-31	49	26	40.7	2,020
June	26	14	21.2	1,260
July	17	1.9	9.83	604
August	4.3	.9	2.25	138
September	7.2	5.0	6.14	365
The period				4,390

FISH CREEK NEAR CAREY, IDAHO

LOCATION.—In sec. 22, T. 1 N., R. 22 E., 1½ miles below dam of Carey Valley Reservoir Co. and 11 miles northeast of Carey, Blaine County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 10, 1919, to September 30, 1920; May 12, 1923, to September 30, 1925. Several discharge measurements obtained in 1921 and 1922.

GAGE.—Vertical staff on left bank, attached to concrete stilling well; read by A. Gilliam.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of lava rock covered by gravel, sand, and silt. One channel at all stages. Control formed by Cippoletti weir set in concrete, located immediately below gage; weir crest is 17.64 feet in length. Zero of gage set to agree with average elevation of weir crest.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 1.35 feet July 19 and 20 (discharge, 96 second-feet); reported dry May 21 and practically dry during nonirrigation season.

1919–1920; 1923–1925: Maximum stage recorded, 1.46 feet August 3–5, 1923 (discharge, 108 second-feet); practically no flow during nonirrigation seasons since completion of reservoir above gage in 1920.

ICE.—Stage-discharge relation probably affected by ice; practically no flow in winter.

DIVERSIONS.—None between station and dam.

REGULATION.—Flow completely regulated by operation of gates in dam above.

ACCURACY.—Stage-discharge relation changed slightly August 14, caused by leakage under weir. Standard rating curve well defined; parallel curve used May 7 to September 30. Gage read to hundredths once daily. Daily discharge determined by applying daily gage height to rating table. Discharge interpolated June 5. Records good.

COOPERATION.—Gage-height record furnished by water master for Fish Creek.

The following discharge measurements were made:
July 10, 1925: Gage height, 0.58 foot; discharge, 26.8 second-feet.
August 27, 1925: Gage height, 0.63 foot; discharge, 31.8 second-feet.

Daily discharge, in second-feet, of Fish Creek near Carey, Idaho, for the year ending September 30, 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	------	37	33	67	17	16	48	32	61	30	24
2	------	37	37	67	17	17	47	30	74	33	17
3	------	37	39	56	11	18	45	25	84	37	17
4	------	37	28	47	8.2	19	43	19	96	35	17
5	------	36	28	47	6.4	20	45	22	96	34	17
6	------	34	28	47	11	21	0	26	86	33	16
7	49	37	30	47	11	22	42	30	84	30	13
8	39	37	30	42	11	23	43	31	72	28	13
9	42	30	26	36	9.7	24	35	31	72	45	8.2
10	47	27	27	45	9.7	25	36	29	76	41	8.2
11	50	30	29	47	9.7	26	45	30	80	37	10
12	50	26	31	48	9.7	27	42	27	65	32	8.2
13	50	30	32	34	9.7	28	43	23	72	28	13
14	52	28	32	30	11	29	43	34	64	28	15
15	54	32	47	30	11	30	47	35	67	26	15
						31	37	------	76	26	------

Monthly discharge of Fish Creek near Carey, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May 7–31	54	0	43.0	2,130
June	37	19	30.6	1,820
July	96	26	54.9	3,380
August	67	26	39.1	2,400
September	24	6.4	12.5	744
The period				10,500

WEST FORK OF FISH CREEK NEAR CAREY, IDAHO

LOCATION.—In sec. 3, T 1 N., R. 22 E., 1¾ miles above confluence with Fish Creek, 2 miles above dam of Carey Valley Reservoir Co., and 14 miles northeast of Carey, Blaine County.

DRAINAGE AREA.—About 12.5 square miles (measured on base map of Idaho).

RECORDS AVAILABLE.—May 11, 1920, to September 30, 1925. Discharge measurements only available in 1923.

GAGE.—Depth of water over crest on 12-foot Cippoletti weir measured by A. Gilliam.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of coarse sand and gravel. One channel at all stages. Control formed by 12-foot Cippoletti weir set in concrete. Zero of gage corresponds to average elevation of weir crest.

EXTREMES OF DISCHARGE.—Maximum stage occurred during period of estimated discharge, May 8–23; minimum discharge, 0.3 second-foot several days after July 16. Probably not actual extremes.

1920–1925: Maximum stage recorded, 0.93 foot at 9 p. m. April 22, 1922 (discharge, 42.8 second-feet); minimum discharge, 0.1 second-foot at 8.30 p. m. August 8, 1920, and several days in 1924 after June 26. Probably not actual extremes.

ICE.—Stage-discharge relation affected by ice; records discontinued during winter.

DIVERSIONS.—One small diversion above gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve used based on standard weir formula for 12-foot Cippoletti weir which has been fairly well substantiated by several discharge measurements made 1923–1925. Depth of water over weir crest measured to hundredths about twice a week. Daily discharge determined by applying daily gage height to rating table and interpolating for days when gage was not read. Records poor May 8–23; otherwise fair.

COOPERATION.—Gage-height record furnished by water master for Fish Creek.

The following discharge measurements were made:

May 24, 1925: Gage height, 0.16 foot; discharge, 2.2 second-feet.

July 10, 1925: Gage height, 0.05 foot; discharge, 0.4 second-foot.

Daily discharge, in second-feet, of West Fork of Fish Creek near Carey, Idaho, for the year ending September 30, 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	------	2.3	0.7	0.3	0.5	16		1.5	0.4	0.3	0.5
2	------	2.2	.7	.3	.5	17		1.4	.3	.3	.5
3	------	2.1	.7	.3	.5	18		1.3	.3	.3	.4
4	------	2.1	.7	.3	.5	19		1.3	.3	.3	.4
5	------	2.1	.6	.3	.5	20	3.3	1.3	.4	.3	.3
6	------	2.2	.6	.3	.4	21		1.3	.4	.3	.3
7	------	2.3	.6	.3	.4	22		1.3	.5	.3	.3
8		2.3	.6	.3	.3	23		1.3	.4	.3	.3
9		2.1	.5	.3	.3	24	2.6	1.3	.4	.3	.3
10		1.9	.5	.3	.3	25	2.6	1.2	.3	.3	.3
11	3.3	1.8	.5	.3	.3	26	2.6	1.2	.3	.3	.4
12		1.7	.5	.3	.3	27	2.6	1.1	.3	.3	.4
13		1.7	.5	.3	.3	28	2.4	.7	.3	.3	.5
14		1.7	.5	.3	.4	29	2.3	.7	.3	.3	.5
15		1.6	.4	.3	.5	30	2.1	.7	.3	.4	.5
						31	2.3	------	.3	.5	------

NOTE.—Braced figure shows mean discharge for period indicated.

Monthly discharge of West Fork of Fish Creek near Carey, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May 8–31			3.01	143
June	2.3	0.7	1.59	94.6
July	.7	.3	.45	27.7
August	.5	.3	.31	19.1
September	.5	.3	.40	23.8
The period				308

SILVER CREEK NEAR PICABO, IDAHO

LOCATION.—In sec. 1, T. 2 S., R. 20 E., at Brett ranch, 1½ miles below mouth of drain ditch of Blaine County Drainage District No. 1 and 3 miles south of Picabo, Blaine County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 25, 1920, to September 30, 1925.

GAGE.—Gurley water-stage recorder on left bank 450 feet below Brett ranch house; installed July 29, 1922; inspected by B. E. Powell and E. F. McDowell.

DISCHARGE MEASUREMENTS.—Made from footbridge 150 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of rock overlain with gravel; subject to slight changes due to aquatic growth.

EXTREMES OF DISCHARGE.—Maximum stage during period from water-stage recorder, 2.64 feet at 1.10 p. m. April 1 (discharge, 239 second-feet); minimum stage, 0.83 foot at 2 p. m. June 1 (discharge, 56 second-feet).

1920–1925: Maximum discharge, 312 second-feet at 4 p. m. April 3, 1923; minimum stage, 0.48 foot at 7 p. m. June 2, 1920 (discharge, 26 second-feet).

ICE.—Stage-discharge relation slightly affected by ice at times. Observations discontinued during winter.

DIVERSIONS.—Numerous irrigation diversions above gage. During part of year some water diverted around gage on right bank through small slough which heads 300 feet above gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed June 14, 19, 28–30, July 13, and August 16–26, owing to light aquatic growth below gage. Standard rating curve, well defined between 20 and 200 second-feet, used July 14 to August 15; and curves parallel thereto used April 1 to June 13, June 14–18, 19–27, July 1–12, and August 27 to September 30; shifting-control method used for intervening periods. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph except April 9 and 10, for which it was interpolated. Records good.

COOPERATION.—Gage-height record and several discharge measurements furnished by water master for Big Wood and Little Wood Rivers.

Discharge measurements of Silver Creek near Picabo, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 14	1.68	134	June 24	1.38	98.6	July 15	1.50	113
Do	1.69	136	June 27	1.36	101	July 26	1.75	135
May 6	1.41	109	July 1	1.46	106	Aug. 11	1.78	142
May 16	1.14	83.0	July 8	1.73	134	Sept. 1	2.28	180
June 8	1.26	93.3	July 11	1.73	129	Sept. 5	2.34	186

Daily discharge, in second-feet, of Silver Creek near Picabo, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	237	125	57	106	136	184	16	141	83	108	111	163	180
2	228	125	57	110	139	188	17	139	93	112	113	164	179
3	222	125	58	117	139	192	18	137	92	114	116	168	180
4	209	122	58	121	138	192	19	140	87	106	112	167	182
5	198	106	66	129	138	189	20	141	90	102	109	167	184
6	197	106	87	136	138	187	21	142	99	103	113	166	184
7	201	87	90	144	141	189	22	145	97	106	120	163	185
8	185	88	93	136	145	190	23	152	97	104	133	163	186
9	174	86	97	131	149	192	24	145	97	103	136	160	185
10	162	80	96	131	146	189	25	138	95	100	136	157	184
11	151	83	96	133	142	187	26	134	84	99	139	152	184
12	151	88	91	131	143	185	27	130	72	102	140	156	184
13	145	80	91	129	158	183	28	128	70	101	142	162	184
14	137	81	96	124	152	183	29	125	64	101	139	165	184
15	136	81	108	119	158	184	30	125	58	102	133	166	186
							31	------	57	------	132	175	------

Monthly discharge of Silver Creek near Picabo, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	237	125	160	9,520
May	125	57	90.3	5,550
June	114	57	93.5	5,560
July	144	106	126	7,750
August	175	136	154	9,470
September	192	179	186	11,100
The period				49,000

NOTE.—Flow, in acre-feet, in by-pass around gage estimated as follows: April, 146; May, 49; June, 24; July, 17; August, 77; September, 418.

LONG TOM RESERVOIR NEAR BENNETT, IDAHO

LOCATION.—In sec. 35, T. 1 S., R. 7 E., 8 miles southwest of Bennett, Elmore County, and 17 miles northeast of Mountain Home.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 3, 1924, to August 12, 1925.

GAGE.—Readings obtained by measuring with steel tape from top of upstream corner of masonry gate tower on southeast end of dam; read by J. N. Goset. Elevations referred to datum of Mountain Home Cooperative Irrigation Co.

EXTREMES OF STAGE.—Maximum stage during year from high-water marks in spillway, 4,455.30 feet about April 20; reservoir practically empty after August 12.

1924–1925: Maximum stage recorded, about April 20, 1925; reservoir empty in fall of each year.

COOPERATION.—Occasional readings furnished by Mountain Home Cooperative Irrigation Co.

This reservoir is used partly as a storage unit and partly as an equalizing basin for natural flow of Long Tom Creek and for storage water released from Little Camas Reservoir which is carried several miles through an open canal and series of tunnels into Long Tom Basin. From Long Tom Reservoir water is released and flows through Long Tom and Canyon Creeks to the head of Mountain Home feeder canal and is used for irrigation on about 5,000 acres of land near Mountain Home.

The reservoir is formed by a gravity earth dam with a crest of 400 feet. Crest is 56 feet above bottom of outlet tunnel and 6 feet above crest of spillway. Elevation of bottom of outlet tunnel corresponds to 4,404.15 feet referred to recorded reservoir stages, at which stage the available storage is practically zero. Elevation of crest of spillway corresponds to 4,453.87 feet, at which stage the capacity of the reservoir is about 4,040 acre-feet, about 153 acres of land being submerged

Daily gage height, in feet, of Long Tom Reservoir near Bennett, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Day	Apr.	May	June	July	Aug.
1						16					
2						17			4,476.66		
3						18		4,450.36		4,431.76	
4						19					
5				4,441.06		20					
6						21					
7						22					
8		4,452.92				23					
9						24			4,447.42		
10						25				4,423.86	
11						26			4,447.16		
12		4,452.06			4,413.76	27	4,454.39	4,448.66			
13						28				4,421.76	
14						29		4,448.56			
15						30	4,453.16				
						31					

LONG TOM CREEK BELOW LONG TOM RESERVOIR, NEAR BENNETT, IDAHO

LOCATION.—In sec. 35, T. 1 S., R. 7 E. (formerly given as sec. 2, T. 2 S., R. 7 E.), 500 feet below Long Tom Reservoir, 8 miles southwest of Bennett, Elmore County, and 17 miles northeast of Mountain Home.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 31 to December 6, 1917; April 12, 1924, to September 30, 1925.

GAGE.—Au water-stage recorder on left bank installed May 10, 1924; inspected by Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made from footbridge or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and fine gravel. Left bank brushy below gage and may overflow at high stages. Control formed by well-defined riffle 40 feet below gage; subject to change.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 2.73 feet July 15 (discharge, 127 second-feet); channel practically dry October to March.

1917; 1924–25: Maximum stage and discharge occurred July 15, 1925; practically no flow except during irrigation seasons.

DIVERSIONS.—None between reservoir and gage. A small amount of leakage from dam above flows to left of gage and enters creek some distance below.

REGULATION.—Flow regulated by gates at Long Tom Reservoir.

ACCURACY.—Stage-discharge relation affected by aquatic growth May 20 to August 7. Rating curve well defined below 110 second-feet used April 27 to May 19 and August 8 to September 30; shifting-control method used during intervening period. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records good.

Discharge measurements of Long Tom Creek below Long Tom Reservoir, near Bennett, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 27	1.73	47.4	June 24	2.09	64.4	Aug. 28	1.90	60.5
May 8	1.78	50.2	July 18	2.62	116	Sept. 11	1.90	59.7
May 27	1.96	62.0	Aug. 12	2.14	79.8			

Daily discharge, in second-feet, of Long Tom Creek below Long Tom Reservoir, near Bennett, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1		44	70	90	82	64	16		60	66	124	68	2.3
2			70	88	80	63	17		60	65	121	67	2.1
3			70	86	79	63	18		68	65	116	66	2.1
4			69	86	79	63	19		77	65	112	66	2.7
5		48	68	90	77	63	20		61	65	109	65	2.5
6			69	101	77	62	21		61	66	107	62	2.3
7			69	100	76	61	22		60	65	105	46	2.1
8		51	68	99	75	61	23		59	65	102	43	1.9
9		51	67	99	78	61	24		59	69	84	50	1.7
10		50	66	98	86	60	25		58	77	74	54	1.7
11		50	67	98	82	61	26		60	80	74	57	1.7
12		54	67	97	80	41	27	47	62	91	44	58	1.7
13		56	66	96	79	4.0	28	46	62	91	39	70	1.7
14		56	66	98	74	2.9	29	44	68	91	65	86	2.1
15		59	66	127	70	2.5	30	44	72	91	85	72	1.9
							31		70		83	66	

NOTE.—Braced figure shows estimated mean discharge for period indicated.

Monthly discharge of Long Tom Creek below Long Tom Reservoir, near Bennett, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 27–30	47	44	45.2	359
May	77		57.3	3,520
June	91	65	71.0	4,220
July	127	39	93.5	5,750
August	86	43	70.0	4,300
September	64	1.7	25.4	1,510
The period				19,700

NOTE.—Leakage below dam not included in flow past gage; estimate based on occasional measurements as follows: April 27–30, 19.2 acre-feet; May, 127 acre-feet; June, 78 acre-feet; July, 36.9 acre-feet; August 2.5 acre-feet; September, 1.2 acre-feet.

MOUNTAIN HOME FEEDER CANAL NEAR MOUNTAIN HOME, IDAHO

LOCATION.—In sec. 36, T. 2 S., R. 6 E., 75 feet below point of diversion in Canyon Creek and 5 miles north of Mountain Home, Elmore County.

RECORDS AVAILABLE.—April 15, 1924, to September 12, 1925, when station was temporarily discontinued.

GAGE.—Friez water-stage recorder on right bank installed March 31, 1925; inspected by W. S. Langfitt.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of silt, sand, and fine gravel; shifts somewhat. Control not well defined.

EXTREMES OF DISCHARGE.—Maximum stage recorded, 2.24 feet at 2.30 p. m. July 16 (discharge, 135 second-feet); canal reported dry after September 12 and prior to early spring flow from Canyon Creek.

1924–25: Maximum stage and discharge occurred July 16, 1925; canal dry for long periods each year.

DIVERSIONS.—None from canal above gage; between gage and head gates of Mountain Home Cooperative Canal half a mile below, three small laterals divert water for irrigation use on the Ake farms.

REGULATION.—Flow regulated by head gate in Canyon Creek and by storage in Long Tom Reservoir.

ACCURACY.—Stage-discharge relation changed July 7–17. Standard rating curve well defined between 50 and 125 second-feet. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Shifting-control method used July 7–17. Records good.

COOPERATION.—Gage-height record furnished by Mountain Home Cooperative Irrigation Co.

Water is diverted from Canyon Creek in sec. 36, T. 2 S., R. 6 E., and used for irrigation on about 5,000 acres included in the project of the Mountain Home Cooperative Irrigation Co. for which water is delivered by Mountain Home Cooperative Canal which heads in the feeder canal half a mile below gage. At times when there is a surplus of water for irrigation, the canal feeds water directly into Mountain Home Reservoir beyond head gate of Mountain Home Cooperative Canal.

Discharge measurements of Mountain Home feeder canal near Mountain Home, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 1	1.81	79.7	May 28	1.70	69.6	Aug. 13	1.86	76.4
Apr. 15	1.80	83.6	June 24	1.70	70.0	Aug. 29	1.90	85.6
Apr. 28	1.74	71.9	July 18	2.14	117.0	Sept. 10	1.72	58.2

Daily discharge, in second-feet, of Mountain Home feeder canal near Mountain Home, Idaho, for the year ending September 30, 1925

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		84	69	80	97	82	62
2		31	70	82	101	83	62
3		10	66	80	103	80	61
4		13	66	80	103	79	61
5		18	65	79	103	79	62
6		18	61	80	117	76	62
7		17	60	80	114	75	60
8			72	80	112	75	60
9			70	79	110	73	60
10		30	66	79	107	83	59
11			66	79	105	82	59
12		87	68	79	104	79	33
13		87	72	77	101	79	
14		84	72	77	98	77	
15		83	72	79	118	70	
16		91	75	80	129	68	
17		97	75	77	120	68	
18		94	72	76	116	66	
19		93	89	76	112	64	
20		94	75	73	111	62	
21		93	72	73	112	62	
22		91	70	73	110	44	
23		93	69	73	105	38	
24		90	69	72	103	44	
25		83	68	79	89	51	
26		83	66	79	82	52	
27		82	68	89	64	57	
28		76	66	93	37	56	
29		75	69	93	62	82	
30		73	77	96	83	76	
31	84		80		84	66	

NOTE.—Discharge estimated Sept. 12, when water was cut out of canal. Braced figure shows mean discharge for period indicated.

Monthly discharge of Mountain Home feeder canal near Mountain Home, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	97	10	65.3	3,890
May	89	60	70.2	4,320
June	96	72	79.7	4,740
July	129	37	100	6,150
August	83	38	68.6	4,220
September 1–12	62		58.4	1,390

MOUNTAIN HOME COOPERATIVE CANAL NEAR MOUNTAIN HOME, IDAHO

LOCATION.—In sec. 36, T. 2 S., R. 6 E., at Lamberton weir, 250 feet below point of diversion in Mountain Home feeder canal and 4½ miles north of Mountain Home, Elmore County.

RECORDS AVAILABLE.—April 17, 1924, to September 30, 1925.

GAGE.—Vertical staff on right bank attached to shelter house; read by W. S. Langfitt.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of silt, sand, and fine gravel. Control formed by 12-foot wooden sharp-crested weir 5 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded, 1.69 feet July 16 (discharge, 109 second-feet); canal reported dry prior to April 16 and after September 12. 1924–25: Maximum stage and discharge occurred July 16, 1925; no flow except during irrigation seasons.

DIVERSIONS.—None between gage and head of canal.

REGULATION.—Flow regulated by head gate in Mountain Home feeder canal and by operation of gates in Long Tom Reservoir.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined between 30 and 80 second-feet. Gage read to hundredths several times a week. Daily discharge ascertained by applying to rating table daily gage height; estimated or interpolated for days of missing gage height. Records fair.

COOPERATION.—Gage-height record furnished by Mountain Home Cooperative Irrigation Co.

Water is diverted from Canyon Creek in sec. 36, T. 2 S., R. 6 E., through the Mountain Home feeder canal for about half a mile and rediverted through the Mountain Home Cooperative Canal for irrigation of about 5,000 acres of the Mountain Home Cooperative Irrigation Co.

Discharge measurements of Mountain Home Cooperative Canal near Mountain Home, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 1		0	June 24	1.14	65.0	Aug. 29	0.86	40.1
Apr. 28	0.90	44.0	July 18	1.58	93.1	Sept. 10	1.02	54.8
May 28	1.14	62.2	Aug. 13	1.24	73.5			

Daily discharge, in second-feet, of Mountain Home Cooperative Canal near Mountain Home, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1		48	72	81	74	60	16	20	65	63	109	50	
2		50	73	78	72	58	17			54	101	50	
3		50	70	78	70	58	18	27	65	48	99	58	
4		50	66	78	68	58	19		79	43	98		
5		50	62	80	68	58	20	29	66	46	92	55	
6		50	57	87	67	57	21	30	65	50	86		
7		50	49	87	67	56	22	31	64	54	82	48	
8		66	48	86	66	56	23	31	63	62	71	40	
9		61	48	86	65	55	24	36	63	63	60	42	
10		60	58	85	73	54	25	36	63	70	54	49	
11		58	54	84	72	45	26	41	63	70	54	50	
12		60	50	84	72		27	42	63	79	55	54	
13		61	62	84	71		28	43	63	80	38		
14		61	65	83	70		29	44	64	81	50	58	
15		61	64	100	51		30	45	70	82	71	59	
							31		70		65	59	

NOTE.—Gage not read Apr. 16–19, 21, 23, 27, 29, May 1, 3–6, 10, 12, 14, 17, 18, 21, 22, 24–26, June 1, 3, 4, 8, 11, 15, 18, 21, 26, 28, 29, July 5, 8–10, 12, 15, 20, Aug. 2, 3, 6, 7, 9, 11, 12, 19–21, 23, 25, 27, 28, 30, 31, Sept. 3, 4, 6–9, 11, 12: discharge estimated or interpolated.

Monthly discharge of Mountain Home Cooperative Canal near Mountain Home, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 16–30	45	----------	33.5	997
May	79	48	60.9	3,740
June	82	43	61.4	3,650
July	109	38	78.9	4,850
August	74	40	60.1	3,700
September 1–12	60	----------	55.0	1,310

OWYHEE RIVER NEAR GOLD CREEK, NEV.

LOCATION.—In W. ½ sec. 24, T. 44 N., R. 54 E., one-eighth mile below Wild Horse dam site, 9 miles west of Gold Creek, Elko County, and 65 miles north of Elko.

DRAINAGE AREA.—209 square miles (measured on map compiled by irrigation service of United States Office of Indian Affairs).

RECORDS AVAILABLE.—March 26, 1916, to September 30, 1925.

GAGE.—Stevens continuous water-stage recorder on left bank; inspected by Emery Johnson.

DISCHARGE MEASUREMENTS.—Made from cable at gage or by wading.

CHANNEL AND CONTROL.—Bed composed of rocks and loose sand. Left bank high and rocky; right bank is overflowed at extremely high stages. One channel at all stages. Dense growth of willows along banks. Control is gravel riffle in each of two channels where stream is divided by small island 500 feet below gage; subject to change by work of beavers.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 6.73 feet at 5 a. m. April 12 (discharge, 860 second-feet); minimum discharge, about 1 second-foot August 20–23 (stage affected by backwater from beaver dam).

1916–1925: Maximum stage 10.11 feet at 2 a. m. May 5, 1922 (discharge by extending rating curve, 1,810 second-feet); minimum discharge probably less than 1 second-foot in August, 1918.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Wild hay meadows above station practically only land irrigated.

ACCURACY.—Stage-discharge relation changed during winter; affected by ice greater part of winter and by beaver dam July 16 to September 30. Rating curves fairly well defined below 250 second-feet and extended above. Operation of water-stage recorder satisfactory October 1 to November 9, April 1 to June 21, July 8 to August 28, and September 15–30. Discharge during winter, for periods when affected by beaver dam, and for periods when no gage heights were taken, interpolated or estimated from observer's notes and by comparison with flow of Owyhee River at station near Owyhee. Records good, April to June; fair, October and November; and probably poor for remainder of year.

The following discharge measurements were made:

May 6, 1925: Gage height, 3.52 feet; discharge, 211 second-feet.

May 25, 1925: Gage height, 2.50 feet; discharge, 67.5 second-feet.

June 18, 1925: Gage height, 1.85 feet; discharge, 19.7 second-feet.

Daily discharge, in second-feet, of Owyhee River near Gold Creek, Nev., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3	12					208	220	42	15	5	2
2	3	12					227	211	53	11	7	2
3	3	12					348	210	66	10	7	2
4	4	14					417	210	71	9	6	2
5	4	15	14				338	202	51	17	5	3
6	4	15					264	200	66	14	5	4
7	4	15					344	195	44	12	4	4
8	4	17					469	174	36	10	2	5
9	4	18					564	156	32	9	2	6
10	5						584	136	28	8	1	6
11	5					50	668	132	24	7	5	5
12	5						690	133	21	7	10	5
13	5	15					637	116	19	6	11	5
14	5		11				595	114	20	6	12	4
15	6				45		564	107	20	6	10	3
16	7			8			542	121	20	5	7	3
17	8						553	154	20	4	7	4
18	10	14					352	102	19	4	4	5
19	12						352	84	18	3	3	5
20	12						329	90	16	4	1	6
21	14						268	138	15	5	1	7
22	14					84	274	99	15	12	1	7
23	14		6				284	79	14	9	1	8
24	14	14					354	82	12	8	2	8
25	14						367	68	10	7	2	8
26	14						264	58	9	6	2	8
27	14					140	230	53	8	5	4	8
28	15		6				211	44	8	5	3	8
29	16				-------		205	37	14	5	3	9
30	15		8		-------		202	32	25	5	2	10
31	14	-------			-------	-------	-------	34	-------	4	2	-------

NOTE.—Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Owyhee River near Gold Creek, Nev., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	16	3	8.7	535
November	----------	12	14.4	857
December	----------	----------	9.9	609
January	----------	----------	8	492
February	----------	----------	45	2,500
March	----------	----------	77.2	4,750
April	690	202	390	23,200
May	220	32	122	7,500
June	71	8	27.2	1,620
July	17	3	7.7	474
August	12	1	4.4	270
September	10	2	5.4	321
The year	690	1	59.6	43,100

OWYHEE RIVER NEAR OWYHEE, NEV.

LOCATION.—In sec. 21, T. 46 N., R. 53 E., 40 feet above mouth of Jones Brook, half a mile above J. P. Jones ranch, 4 miles below Mountain City, and 8 miles southeast of Owyhee, Elko County.

DRAINAGE AREA.—380 square miles (measured on Forest Service map).

RECORDS AVAILABLE.—November 29, 1913, to September 30, 1925.

GAGE.—Stevens continuous water-stage recorder on right bank; inspected by P. W. Davidson.

DISCHARGE MEASUREMENTS.—Made from cable 125 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed consists of ledge rock and boulders filled in with sand and gravel; permanent, except for slight changes at very low stages One channel at all stages. Banks covered with willows and brush; subject to overflow. At low stages a riffle just below gage forms control; shifts occasionally. At high stages a secondary control becomes effective; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 8.97 feet at 9.30 p. m. April 12 (discharge, 1,230 second-feet). Minimum discharge, 3 second-feet August 21–23.

1914–1925: Maximum discharge, 2,600 second-feet May 5, 1922; minimum discharge less than 1 second-foot August 5 and 16, 1924.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—A number of ranches above station divert water from main stream and tributaries for irrigation—mainly of hay meadows.

REGULATION.—None.

ACCURACY.—Stage-discharge relation for low water changed during period of ice effect December 19 to January 31. Rating curves well defined. Operation of water-stage recorder satisfactory except April 21–26. Daily discharge ascertained by applying mean daily gage height to rating table. Discharge estimated for periods when no gage heights were obtained and during ice-affected period, by comparison with Gold Creek record and observer's notes at Mountain City. Records good.

The following discharge measurements were made:

May 7, 1925: Gage height, 5.77 feet; discharge, 598 second-feet.[2]

May 26, 1925: Gage height, 3.65 feet; discharge, 214 second-feet.

June 19, 1925: Gage height, 2.52 feet; discharge, 62.7 second-feet.

Daily discharge, in second-feet, of Owyhee River near Owyhee, Nev., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	17	24		74	54	638	556	162	54	9	5
2	6	17	27		72	64	674	593	183	46	12	4
3	6	17	23		110	75	596	606	180	42	12	5
4	7	18	22		174	88	638	615	203	39	10	6
5	8	18	27		304	126	619	615	172	46	9	6
6	8	18	23		241	131	571	614	152	43	8	7
7	9	18	30		192	112	623	613	142	34	7	8
8	9	18	32		151	104	700	580	126	29	6	9
9	9	18	29		104	88	810	519	113	23	5	10
10	10	23	26		113	75	906	445	103	17	5	10
11	11	20	26		135	75	1,010	408	97	15	14	9
12	11	23	20		94	73	1,120	386	88	13	15	9
13	11	29	16		72	74	1,090	343	81	11	16	9
14	11	22	32		66	67	1,020	336	81	10	17	9
15	11	23	29		61	75	972	317	84	9	14	8
16	13	23	32	20	63	75	949	332	79	8	12	7
17	13	23	28		67	72	968	400	78	7	11	7
18	14	23	24		68	68	802	336	70	7	9	7
19	14	22			60	83	714	291	64	7	7	7
20	14	24			57	118	700	280	62	7	5	8
21	13	27			56	177	570	334	57	21	3	9
22	13	27			51	253	585	322	56	32	3	9
23	14	24	15		51	412	600	260	53	20	3	9
24	13	22			51	384	710	250	50	16	5	9
25	12	22			50	394	725	230	46	12	5	9
26	14	27			56	347	600	208	43	11	5	8
27	15	25			56	380	517	194	38	10	7	9
28	16	22			56	386	495	182	37	9	6	9
29	18	23			-------	506	492	168	45	9	5	11
30	18	23	20		-------	370	508	162	71	9	5	12
31	17	-------			-------	552	-------	156	-------	7	5	------

NOTE.—Braced figures show estimated mean discharge for periods indicated.

[2] Measured at Mountain City, 4 miles above gage.

Monthly discharge of Owyhee River near Owyhee, Nev., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	18	5	11.7	719
November	29	17	21.9	1,300
December	----------	----------	21.9	1,350
January	----------	----------	20	1,230
February	304	50	96.6	5,360
March	552	54	189	11,600
April	1,120	492	731	43,500
May	615	156	376	23,100
June	203	37	93.9	5,590
July	54	7	20.1	1,240
August	17	3	8.2	504
September	12	4	8.1	482
The year	1,120	3	133	96,000

OWYHEE RIVER NEAR OWYHEE, OREG.

LOCATION.—In sec. 2, T. 21 S., R. 46 E., at county bridge, 1½ miles southwest of Owyhee, Malheur County, 3 miles above mouth of river, and 10 miles southwest of Nyssa.

DRAINAGE AREA.—About 11,100 square miles. Watershed poorly defined on available maps.

RECORDS AVAILABLE.—March 26, 1890, to December 31, 1893; January 1, 1895, to October 3, 1896; August 28, 1903, to September 30, 1916; May 17 to October 9, 1920; March 8, 1921, to September 30, 1925.

GAGE.—Chain gage on upstream side of highway bridge; read by Walter Pinkston or Mrs. S. J. Watson.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel; may shift during high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.5 feet February 7 (discharge, 7,100 second-feet); minimum stage, 1.60 feet July 31, August 1 and 4–11 (discharge, 2 second-feet).

1890–1893; 1895–96; 1903–1916; 1920–1925: Maximum stage recorded, 12.9 feet March 2, 1910 (discharge, 23,200 second-feet). No flow July 7, 19, and August 14–16, 1924.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Owyee Canal, the principal diversion immediately above the station, heads about 6 miles above gage. This canal diverts practically entire natural low-water flow of river. (See p. 179.)

REGULATION.—Variation in the flow may be caused by manipulation of gates at head of Owyee Canal.

ACCURACY.—Stage-discharge relation changed below 8 feet February 8; affected by ice December 17 to January 28. Rating curve used before change well defined; rating curve used after change well defined above 100 second-feet and poorly defined below. Chain gage read to hundredths once a day. Daily discharge ascertained by applying daily gage height to rating table except as indicated in footnote to daily-discharge table. Records good except for discharges below 100 second-feet for which they are fair.

The following discharge measurements were made:

March 20, 1925: Gage height, 4.35 feet; discharge, 1,260 second-feet.

April 23, 1925: Gage height, 5.34 feet; discharge, 2,410 second-feet.

June 17, 1925: Gage height, 2.79 feet; discharge, 198 second-feet.

Daily discharge, in second-feet, of Owyhee River near Owyhee, Oreg., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	97	157		3,080	1,070	4,300	1,160	648	12	2	19
2	50	97	157		2,150	980	3,500	1,120	582	12	3	19
3	50	97	157		4,640	900	2,980	1,070	518	12	3	19
4	50	97	157		3,420	900	2,660	1,020	485	9	2	19
5	50	97	157		3,240		2,520	1,120	455	8	2	19
6	50	97	157		4,000		2,380	1,350	550	8	2	74
7	50	97	157		7,100		2,130	1,250	550	6	2	36
8	50	97	157		6,220	1,200	2,320	1,160	582	6	2	23
9	50	97	157		4,100		2,520	1,250	518	6	2	23
10	50	97	157		2,820		2,660	1,160	455	6	2	23
11	61	97	157		2,250		2,660	1,350	335	5	2	19
12	61	97	157		1,770	1,550	2,820	1,250	278	6	3	19
13	61	97	157		1,450	1,360	2,820	1,160	250	6	3	15
14	61	97	157		1,350	1,160	2,820	1,120	226	5	240	15
15	72	97	157	347	1,250	980	3,150	1,070	202	5	182	19
16	72	97	157		1,160	980	3,150	1,070	202	5	23	19
17	84	97			1,160	980	2,980	1,020	182	5	23	23
18	97	97			1,070	1,250	2,980	1,020	144	5	19	23
19	97	84			825	1,250	2,820	980	114	5	19	30
20	97	84			788	1,350	2,820	980	100	3	15	30
21	97	84			750	1,350	2,660	980	87	5	12	44
22	97	84			750	2,010	2,520	980	87	5	12	44
23	97	97	155		900	3,700	2,520	980	44	5	12	52
24	97	97			1,250	4,300	2,250	940	23	5	12	52
25	97	97			1,250	5,200	2,130	900	23	5	15	52
26	97	97			1,350	4,300	1,890	862	19	5	15	52
27	97	125			1,250	3,900	1,550	862	19	4	15	52
28	97	125			1,160	3,700	1,550	825	19	4	15	63
29	97	195		2,660	-------	3,320	1,350	788	19	3	19	63
30	97	157		2,820	-------	3,500	1,350	750	15	3	19	63
31	97	-------		4,420	-------	2,520	-------	700	-------	2	19	------

NOTE.—Discharge estimated Dec. 17 to Jan. 23. Gage not read Feb. 20, Mar. 1, 2, 5-11, and 13; discharge interpolated. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Owyhee River near Owyhee, Oreg., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	97	50	75.2	4,620
November	195	84	102	6,070
December	----------	----------	156	9,590
January	4,420	----------	633	38,900
February	7,100	750	2,230	124,000
March	5,200	980	1,960	121,000
April	4,300	1,350	2,560	152,000
May	1,350	700	1,040	64,000
June	648	15	258	15,400
July	12	2	5.8	357
August	240	2	23.1	1,420
September	63	15	34.1	2,030
The year	7,100	2	745	539,000

JACK CREEK NEAR TUSCARORA, NEV.

LOCATION.—In sec. 35, T. 42 N., R. 52 E., at R. M. Woodward ranch on Elko-Mountain City stage road, 8 miles above confluence with South Fork of Owyhee River 12 miles northeast of Tuscarora, Elko County.

DRAINAGE AREA.—31 square miles (measured on Forest Service map).

RECORDS AVAILABLE.—May 15, 1913, to June 30, 1925.

GAGE.—Vertical staff on right bank 500 feet below Woodward house; read by R. M. Woodward.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of coarse gravel and small boulders; shifting. Banks low and lined with willows; subject to overflow at extremely high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.84 feet May 6 (discharge, 170 second-feet); minimum stage not determined.

1913–1925: Maximum stage recorded, 3.6 feet at 6 p. m. May 14, 1917 (discharge, 465 second-feet); minimum stage, 0.18 foot September 2 and 3, 1918 (discharge, 0.6 second-foot).

ICE.—Stage-discharge relation usually affected by ice.

DIVERSIONS.—Small ditches on Woodward ranch practically only diversions above station; have little effect on flow except during August and September.

REGULATIONS.—None.

ACCURACY.—Stage-discharge relation permanent; affected by ice January 1. Gage read to hundredths three or four times weekly. Daily discharge determined by applying daily gage height to rating table. Discharge, for days when gage was not read, interpolated. Records fair.

COOPERATION.—Gage-height record furnished by R. M. Woodward.

The following discharge measurements were made:

May 8, 1925: Gage height, 1.60 feet; discharge, 132 second-feet.
May 26, 1925: Gage height, 1.43 feet; discharge, 105 second-feet.
June 22, 1925: Gage height, 1.24 feet; discharge, 74.7 second-feet.

Daily discharge, in second-feet, of Jack Creek near Tuscarora, Nev., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	2	4	6	5	6	13	45	87	148
2	2	5	6	5	6	13	50	119	84
3	2	5	6	5	7	14	55	151	87
4	2	5	5	5	9	14	55	145	68
5	2	5	5	5	11	13	55	158	48
6	3	5	5	5	13	13	69	170	45
7	3	5	6	5	15	13	100	159	43
8	3	5	5	5	17	13	108	148	40
9	3	5	5	5	19	13	116	140	37
10	3	5	5	5	20	13	122	116	38
11	3	5	5	5	18	13	135	108	39
12	3	5	5	5	12	13	148	100	41
13	3	5	5	5	8	13	147	104	43
14	3	5	5	5	8	14	146	108	45
15	3	5	5	5	9	14	154	114	48
16	3	5	5	5	10	14	167	120	44
17	3	5	5	5	10	14	129	126	41
18	3	5	5	5	11	14	87	132	55
19	3	5	5	5	11	26	78	129	52
20	3	5	5	5	11	39	66	122	48
21	4	5	5	5	11	43	55	114	64
22	4	5	5	5	11	55	53	107	81
23	4	5	5	5	12	116	53	100	81
24	4	5	5	5	12	55	53	100	81
25	4	5	5	5	12	52	52	102	80
26	4	5	5	6	12	50	51	105	78
27	4	5	5	6	12	50	50	114	78
28	4	5	5	6	12	49	56	123	78
29	4	5	5	6	-------	48	61	132	78
30	4	5	5	6	-------	46	74	132	78
31	4	-------	5	6	-------	45	-------	140	-------

Monthly discharge of Jack Creek near Tuscarora, Nev., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	4	2	3.2	197
November	5	4	5.0	298
December	6	5	5.1	314
January	6	5	5.2	320
February	20	6	11.6	644
March	116	13	29.5	1,810
April	167	45	86.3	5,140
May	170	87	123	7,560
June	148	37	62.4	3,710
The period				20,000

OWYHEE CANAL NEAR OWYHEE, OREG.

LOCATION.—In NE. ¼ sec. 12, T. 21 S., R. 45 E., 1 mile below head of canal, 6 miles southwest of Owyhee, Malheur County, and 15 miles southwest of Nyssa.

RECORDS AVAILABLE.—October 5, 1911, to September 30, 1916; and irrigation seasons 1904, 1905, and 1920–1925.

GAGE.—Stevens 8-day water-stage recorder at right end of bridge; read by W. H. Beam.

DISCHARGE MEASUREMENTS.—Made from footbridge at gage.

CHANNEL AND CONTROL.—Bed clean and smooth. Control not well defined but fairly permanent except as affected by check 1 mile downstream.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.24 feet at noon May 12 and 17 (discharge, 326 second-feet); canal dry at times.

1904–5; 1911–1916; 1920–1925: Maximum stage recorded, 4.3 feet May 17, 1921, and May 10–11, 1922 (discharge, 333 second-feet); canal dry at various times each year.

ICE.—No record during winter.

DIVERSIONS.—Station above all diversions from canal; surplus water is returned to Owyhee River through two wasteways between gage and station on river near Owyhee.

REGULATION.—Abrupt changes of stage due to manipulation of head gates not to be expected, as water is kept at nearly constant stage.

ACCURACY.—Stage-discharge relation permanent except as affected by varying number of flashboards on check 1 mile below gage June 11 to August 31. Standard rating curve well defined. Correction applied for backwater effect somewhat uncertain. Water-stage recorder operated satisfactorily April 1 to August 2, except as indicated in footnote to daily-discharge table; staff gage read to hundredths once a day August 2–29. Daily discharge ascertained by applying daily gage height to rating table. Records good April 1 to June 30 and fair July 1 to August 31.

COOPERATION.—Record furnished by State engineer of Oregon.

Owyhee Canal diverts water from Owyhee River in sec. 18, T. 21 S., R. 46 E. In 1920 it supplied water for irrigation to 13,397 acres of land near Owyhee, Nyssa, and Ontario.

The following discharge measurements were made:

April 23, 1925: Gage height, 2.95 feet; discharge, 191 second-feet.

June 11, 1925: Gage height, 3.70 feet;[3] discharge, 245 second-feet.

[3] One section of flashboards on check 1 mile downstream.

Daily discharge, in second-feet, of Owyhee Canal near Owyhee, Oreg., for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Day	Apr.	May	June	July	Aug.
1	187	250		187	167	16	172	321	250	140	126
2	187	250		167	144	17	172	321	255	140	126
3	192	272		153	135	18	192	321	244	135	122
4	187	277		148	130	19	197	310	233	126	117
5	105	277	260	148	135	20	192	310		126	126
6	105	278		144	135	21	192	310		130	126
7	182	280		140	153	22	187	299	220	153	122
8	187	282		135	130	23	187	299		130	117
9	192	277		135	117	24	202			130	101
10	197	299		135	117	25	202			130	105
11	202	321	244	135	122	26	147		212	126	105
12	217	321	233	140	117	27	192	285	202	130	109
13	228	321	244	140	162	28	207		222	126	109
14	238	321	255	130	122	29	217		192	135	105
15	250	310	244	130	126	30	233		207	140	105
						31	------		------	140	105

NOTE.—No gage-height record and discharge interpolated or computed from an interpolated gage-height graph Apr. 8, 11–14, 28–30, May 1, 6, 7, May 24 to June 10, 20–25, and Aug. 30–31. Braced figures give mean discharge for periods indicated.

Monthly discharge of Owyhee Canal near Owyhee, Oreg., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	250	105	192	11,400
May	321	250	294	18,100
June	----------	192	239	14,200
July	187	126	139	8,550
August	167	105	124	7,620
September	----------	----------	[a] 100	5,950
The period	----------	----------	----------	65,800

[a] Estimated.

NOTE.—All water diverted Apr. 1–20, amounting to 7,500 acre-feet, was wasted back into Owyhee River above gaging station near Owyhee, Oreg.

BOISE RIVER NEAR TWIN SPRINGS, IDAHO

LOCATION.—In sec. 27, T. 4 N., R. 6 E., a quarter of a mile above Birch Creek, 1½ miles above flow line of Arrowrock Reservoir, 4 miles below Twin Springs, Boise County, and 13 miles above Arrowrock.

DRAINAGE AREA.—830 square miles (measured on topographic maps).

RECORDS AVAILABLE.—March 22, 1911, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank; installed April 4, 1915; inspected by John Pfoser.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders. Control practically permanent, except under unusually severe ice or flood conditions. Banks not overflowed.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 6.69 feet from 3 to 5 a. m. May 20 (discharge, 7,060 second-feet); minimum discharge occurred during period of ice effect and not accurately determined.

1911–1925: Maximum stage recorded, 7.82 feet at 3 a. m. May 15, 1917 (discharge, 9,430 second-feet); minimum stage, 1.73 feet at 10.30 p. m. November 13, 1916 (discharge, about 142 second-feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—No important diversions above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent; affected by ice December 19 to January 24 and February 5. Rating curve well defined below 6,000 second-feet. Operation of water-stage recorder satisfactory except for short periods. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. Records excellent except for estimated periods for which they are fair.

Discharge measurements of Boise River near Twin Springs, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 4	3.26	1,430	May. 5	5.48	4,610	July 27	2.55	676
Apr. 6	4.16	2,610	June 1	5.00	3,720	Sept. 4	2.09	367
Apr. 7	4.15	2,570	June 30	4.62	3,230	Sept. 24	2.09	360

Daily discharge, in second-feet, of Boise River near Twin Springs, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	252	383	378		372	493	1,730	3,160	3,860		568	378
2	256	388	468		474	526	1,590	3,770	3,420	2,350	568	378
3	293	388	420		880	552	1,730	4,130	3,080		575	367
4	338	409	372		1,440	560	1,970	4,310	2,780		532	367
5	293	462	372		2,150	762	2,420	4,760	2,560	1,970	519	394
6	284	409	367		1,850	952	2,560	5,130	2,360	1,910	500	409
7	279	372	360		1,310	1,050	2,490	5,700	2,220	1,790	486	420
8	279	357	353		1,070	994	3,000	5,320	2,160	1,660	480	438
9	275		301		870	880	3,500	4,760	2,220	1,530	474	415
10	284		343		605	762	4,200	4,580	2,490	1,450	462	394
11	319	355	394		605	714	4,670	4,760	2,420	1,380	486	383
12	310		372		598	671	4,940	4,760	2,490	1,380	512	378
13	297		357	325	568	620	4,760	4,940	2,560	1,280	545	372
14	293		362		532	598	4,400	5,320	2,560	1,180	628	383
15	293	353	333		526	575	4,130	5,510	2,560	1,120	590	399
16	293	329	372		493	575	4,490	5,700	2,700	1,060	519	394
17	288	310	324		468	598	4,940	5,890	2,560	1,020	486	378
18	284	324	222		480	575	4,310	6,080	2,850	974	468	367
19	284	362			526	628	3,770	6,660	3,420	910	450	383
20	284	568			582	705	3,160	6,860	4,040	860	450	420
21	275	734			612	880	2,700	6,660	4,130	860	450	394
22	275	734			575	1,220	2,560	5,890		942	426	378
23	271	646			590	1,640	2,420	5,510		932	415	367
24	271	526	225		605	1,670	2,160	5,130		810	420	362
25	267	456		324	560	1,670	2,100	4,940		762	415	353
26	267	432		310	538	1,520	2,040	4,760	3,500	705	404	348
27	284	378		315	519	1,460	2,100	4,940		671	409	
28	388	357		319	500	1,590	2,160	5,510		646	394	360
29	582	378		338	-------	2,100	2,360	5,890		628	394	
30	404	367	300	338	-------	2,160	2,700	5,320	3,160	605	388	
31	383	-------		338	-------	1,910	-------	4,580	-------	590	378	------

NOTE.—Discharge estimated because of missing gage height or ice effect Nov. 9–14, Dec. 19 to Jan. 24, Feb. 5, Apr. 10, June 22–29, July 1–4, and Sept. 27–30. Braced figures show mean discharge for periods indicated.

Monthly discharge of Boise River near Twin Springs, Idaho, for the year ending September 30, 1925

[Drainage area, 830 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	582	252	305	0.367	0.42	18,800
November	734	310	418	.504	.56	24,900
December	468	----------	310	.373	.43	19,100
January	----------	----------	325	.392	.45	20,000
February	----------	372	746	.899	.94	41,400
March	2,160	493	1,020	1.23	1.42	62,700
April	4,940	1,590	3,070	3.70	4.13	183,000
May	6,860	3,160	5,200	6.27	7.23	320,000
June	----------	2,160	3,020	3.64	4.06	180,000
July	----------	590	1,260	1.52	1.75	77,500
August	628	378	477	.575	.66	29,300
September	438	----------	382	.460	.51	22,700
The year	6,860	----------	1,380	1.66	22.55	999,000

ARROWROCK RESERVOIR AT ARROWROCK, IDAHO

LOCATION.—In E. ½ sec. 13, T. 3 N., R. 4 E., at Arrowrock, Boise County, 22 miles by road east of Boise.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—October 1, 1917, to September 30, 1925.

GAGE.—Graduations painted on center of upstream vertical face of concrete dam, in September, 1917; read usually to tenths once daily by E. L. Ballard, superintendent of Arrowrock Dam. Gage set to read sea-level datum.

EXTREMES OF CONTENTS.—Maximum stage recorded, 3,214.2 feet May 19–20 (contents, 286,100 acre-feet); natural flow passing through reservoir October 1–15.

1918–1925: Maximum stage recorded, 3,214.2 feet May 19–20, 1925 (contents, 286,100 acre-feet); natural flow passing through reservoir, September 13–17, September 20 to October 1, 1919, September 13 to October 10, 1920, September 19 to October 22, 1922, and August 19 to October 15, 1924.

COOPERATION.—Gage-height record and table of storage capacity furnished by United States Bureau of Reclamation.

Stored water from this reservoir is used for irrigation of land in Boise Valley. The reservoir is formed by a concrete dam, gravity section, 348.5 feet high and 1,100 feet long at crest. Base of dam is 223 feet thick and thinnest point near top is 15.5 feet thick. A 16-foot roadway is carried across on top of dam. A lip spillway at north end of dam has a carrying capacity of 40,000 second-feet. Elevation of spillway crest referred to gage datum is 3,205 feet, the capacity of reservoir at that stage being 259,000 acre-feet. A movable crest is provided for the spillway, top of which has an elevation of 3,211 feet. Capacity of reservoir at that stage is 276,500 acre-feet, and about 2,900 acres of land is submerged. Elevation of center line of sluice gates is 2,967 feet, and the capacity of reservoir at that stage is 131 acre-feet.

Daily contents, in acre-feet, of Arrowrock Reservoir near Arrowrock, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July.	Aug.	Sept.
1	------	6,570	15,140	28,700	54,960	90,540	179,900	257,000	283,400	280,700	196,200	73,140
2	------	8,750	15,020	30,100	55,800	89,580	186,000	260,400	282,800	280,000	192,400	69,750
3	------	10,460	15,100	30,400	58,080	89,100	192,200	266,500	282,200	279,500	188,500	66,240
4	------	12,090	15,100	32,800	61,820	88,780	197,900	272,300	281,800	279,300	184,800	62,580
5	------	13,840	14,830	34,180	70,010	88,780	208,000	275,900	281,200	278,900	180,600	58,920
6	------	15,620	14,600	35,610	78,600	90,220	218,200	278,000	280,700	278,300	176,400	55,680
7	------	17,060	14,360	36,980	86,450	92,940	226,800	279,500	280,200	277,100	172,000	52,790
8	------	18,560	14,060	38,190	91,340	96,350	234,300	280,200	280,100	275,000	167,600	51,360
9	------	19,920	13,880	39,000	94,700	98,730	242,400	279,400	280,000	273,200	163,200	49,160
10	------	21,200	13,500	39,900	95,500	100,400	252,300	278,000	280,100	270,600	158,600	46,900
11	------	22,820	13,140	40,800	95,500	100,600	262,800	278,600	280,200	267,700	153,900	44,500
12	------	23,100	12,960	41,520	95,500	100,600	272,000	279,200	280,200	265,100	149,400	42,420
13	------	23,040	12,960	42,420	95,500	100,600	278,300	279,000	280,400	261,900	145,400	40,440
14	------	22,540	12,960	43,050	95,500	100,300	279,500	280,200	280,600	258,400	141,400	38,510
15	------	22,050	12,960	43,800	95,500	99,920	278,800	281,600	280,700	254,800	137,500	36,810
16	560	21,460	12,750	44,500	95,180	99,750	279,000	282,800	280,800	251,200	133,600	35,210
17	599	20,680	12,680	45,300	94,220	99,750	279,400	284,000	280,800	247,200	129,900	33,560
18	675	19,570	13,770	46,100	93,420	99,750	279,600	285,200	280,700	243,400	125,700	31,760
19	705	18,320	14,500	47,200	92,620	99,750	278,800	286,100	281,200	239,500	121,900	30,100
20	784	17,540	15,200	47,800	91,980	99,750	277,200	286,100	281,900	235,600	118,300	28,760
21	784	18,000	15,940	48,300	91,500	100,600	275,600	285,200	282,600	231,500	114,500	27,430
22	784	18,230	16,690	48,720	91,500	103,300	272,900	284,600	282,900	227,800	110,600	26,250
23	764	18,560	17,440	49,160	91,180	109,100	270,000	283,700	283,000	225,200	106,400	24,890
24	757	18,460	18,190	49,600	91,660	116,800	265,400	283,100	282,500	222,100	102,600	23,610
25	770	18,140	19,180	50,370	91,820	124,500	260,700	282,500	282,000	218,800	98,570	22,380
26	770	17,540	20,120	50,920	91,820	132,200	257,600	282,200	281,800	215,500	94,540	21,200
27	770	16,880	21,040	51,250	91,500	139,800	256,200	282,200	281,300	212,500	90,700	19,820
28	963	16,370	22,270	51,800	91,180	146,600	255,100	284,000	281,000	209,800	86,750	18,560
29	2,170	15,950	23,660	51,800	-------	155,200	254,800	284,000	280,800	206,500	83,300	17,190
30	3,495	15,540	25,440	52,460	-------	164,400	255,100	283,800	281,000	203,400	79,860	15,700
31	4,960	-------	27,030	54,000	-------	173,100	---------	283,000	---------	200,000	76,500	-------

NOTE.—Natural flow passing through reservoir Oct. 1-15. Contents estimated Nov. 19, 23-24, Dec. 18-24, Jan. 1-2, 4, and 7, based on inflow and outflow records as furnished by United States Bureau of Reclamation; interpolated because of missing gage heights Aug. 15, 25, Sept. 4 and 20.

BOISE RIVER AT DOWLING RANCH, NEAR ARROWROCK, IDAHO

LOCATION.—In sec. 15, T. 3 N., R. 4 E., at Dowling ranch, Elmore County, three-fourths mile above Moore Creek, 2 miles below Highland power dam, and 4 miles below Arrowrock.

DRAINAGE AREA.—2,230 square miles (measured on topographic maps).

RECORDS AVAILABLE.—March 12, 1911, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank; installed March 19, 1915; inspected by J. N. Davis.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders. One channel at all stages. Control shifts slightly. Stage of zero flow as determined March 28, 1924, at gage height 0.30 foot ± 0.2 foot.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 8.72 feet at 10 a. m. May 20 (discharge, 14,300 second-feet); minimum discharge estimated at 5 second-feet November 2–10, December 21 to January 6, and March 26–29.

1911–1925: Maximum stage recorded, 9.27 feet from noon to 4 p. m. June 12, 1921 (discharge, 16,500 second-feet); minimum discharge, estimated at 5 second-feet November 2–10, December 21 to January 6, and March 26–29, 1925.

ICE.—Stage-discharge relation affected by ice during severe winters.

DIVERSIONS.—No important diversions above station. New York Canal of Boise project, United States Bureau of Reclamation, diverts 10 miles below and has a maximum capacity of 2,500 second-feet. Several smaller canals, total capacity of about 2,900 second-feet, divert below New York Canal.

REGULATION.—Since February 21, 1915, flow has been regulated at Arrowrock Dam, 4 miles upstream, which has storage capacity of about 280,000 acre-feet. Water is stored during winter and spring and released during irrigation season.

ACCURACY.—Stage-discharge relation changed slightly November 11, 21, February 26 to March 8 and April 4–20; affected by ice January 7–22. Two standard rating curves used; the first, applicable October 1–31, well defined below 3,500 second-feet; second, applicable March 9 to April 3 and April 21 to May 29, well defined below 13,000 second-feet; curves parallel to second curve used November 12–20, November 22 to February 25, May 30 to September 30. Operation of water-stage recorder satisfactory except for short period when water was below intake pipe of well. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records good except for estimated periods for which they are fair.

COOPERATION.—Several discharge measurements furnished by United States Bureau of Reclamation and water master for Boise River.

Discharge measurements of Boise River at Dowling ranch, near Arrowrock, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 20	3.20	1,180	Apr. 21	6.68	7,560	July 16	5.15	3,870
Do	3.19	1,150	May 4	6.53	7,240	July 20	5.08	3,620
Nov. 22	3.23	1,150	May 13	7.16	9,080	July 24	4.82	3,160
Nov. 24	3.24	1,150	May 22	8.20	12,500	July 27	4.57	2,770
Feb. 3	2.84	780	June 3	6.31	6,470	Aug. 5	4.77	3,110
Feb. 25	3.64	1,590	June 5	5.86	5,290	Aug. 12	4.80	3,180
Mar. 9	3.36	1,200	June 12	5.57	4,640	Aug. 22	4.60	2,760
Mar. 24		a 25	June 24	6.66	7,350	Aug. 28	4.46	2,570
Apr. 3	3.34	1,190	July 10	5.20	3,900	Sept. 11	4.03	1,960
Apr. 10	5.08	3,980	July 14	5.17	3,760	Sept. 26	3.56	1,400
Apr. 14	7.38	10,100						

a Estimated.

Daily discharge, in second-feet, of Boise River at Dowling ranch, near Arrowrock, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	470	75	818		500	1,640	1,040	4,860	7,930	5,330	2,980	2,370
2	470		809		680	1,580	1,160	4,970	7,340	4,630	2,980	2,370
3	500		843		628	1,520	1,120	5,580	6,490	4,200	2,980	2,440
4	594		852	5	441	1,460	1,080	6,770	5,960	3,990	3,060	2,440
5	544		843		285	1,360	1,120	8,550	5,450	3,880	3,060	2,300
6	511	5	818		177	1,250	1,520	9,840	4,860	3,780	3,140	2,230
7	506		818		470	905	2,230	11,200	4,520	3,780	3,230	1,820
8	506		818		751	960	2,660	11,500	4,200	3,880	3,230	1,820
9	511		800		1,120	1,180	3,140	10,500	4,090	3,880	3,140	2,020
10	516		784		1,410	1,410	3,780	9,510	4,300	3,880	3,140	1,960
11	568	430	784		1,330	1,640	4,970	9,190	4,520	3,880	3,230	1,890
12	574	751	784		1,320	1,580	6,490	9,840	4,630	3,880	3,140	1,760
13	550	834	792		1,410	1,580	9,190	9,190	4,740	3,880	3,140	1,760
14	544	932	784		1,460	1,580	9,840	9,190	4,740	3,780	3,060	1,700
15	516	1,020	775	230	1,460	1,580	9,840	9,840	4,970	3,780	3,060	1,580
16	485	1,080	775		1,520	1,580	9,510	10,500	5,090	3,780	2,980	1,580
17	516	1,160	426		1,580	1,580	10,200	10,800	4,970	3,780	2,900	1,640
18	522	1,190	213		1,580	1,580	10,500	11,500	4,970	3,680	2,820	1,580
19	522	1,170	138		1,580	1,580	8,870	12,900	5,580	3,680	2,740	1,520
20	528	1,140	111		1,580	1,580	7,930	13,600	6,360	3,680	2,740	1,460
21	528	1,160			1,580	1,460	7,340	13,600	7,340	3,500	2,740	1,460
22	522	1,140			1,580	500	7,050	12,500	8,240	3,230	2,740	1,410
23	516	1,140		495	1,580	150	7,050	11,500	8,240	3,230	2,740	1,410
24	511	1,160		495	1,640	25	7,050	10,800	7,340	3,140	2,740	1,360
25	516	1,120		516	1,580		6,360	10,500	6,910	2,980	2,740	1,360
26	511	1,060	5	600	1,580		5,330	9,510	6,490	2,900	2,660	1,410
27	516	960		594	1,640	5	4,860	9,190	6,090	2,740	2,590	1,360
28	506	869		628	1,640		4,860	10,500	5,700	2,740	2,520	1,410
29	538	869		680	-------		4,860	11,200	5,580	2,820	2,440	1,410
30	306	843		403	-------	332	4,860	10,800	5,700	2,900	2,370	1,340
31	194	-------		261	-------	809	-------	9,190	-------	2,900	2,370	------

NOTE.—Discharge estimated on account of ice Jan. 7–22; estimates based on observer's notes, weather records, and gate openings at Arrowrock Dam. Discharge estimated Nov. 1–11, Dec. 21 to Jan. 6, and Mar. 23–29, on account of water being below intake pipe when gates in Arrowrock Dam were closed. Braced figures show mean discharge for periods indicated.

Monthly discharge of Boise River at Dowling ranch, near Arrowrock, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	594	194	504	31,000
November	1,190	----------	672	40,000
December	852	----------	446	27,400
January	680	----------	270	16,600
February	1,640	177	1,220	67,800
March	1,640	----------	1,050	64,600
April	10,500	1,040	5,530	329,000
May	13,600	4,860	9,970	613,000
June	8,240	4,090	5,780	344,000
July	5,330	2,740	3,620	223,000
August	3,230	2,370	2,880	177,000
September	2,440	1,340	1,740	104,000
The year	13,600	----------	2,810	2,040,000

DIVERSIONS FROM BOISE RIVER, IDAHO

Below mouth of Moore Creek and between gaging stations at Dowling ranch and Notus 27 principal canals and a number of small farm laterals divert water from Boise River for use in irrigation.

Daily gage-height records were obtained, frequent discharge measurements made, and records summarized under direction of W. E. Welsh, water master for Boise River.

Records are available from 1919 to 1925. Record of daily diversions subsequent to 1915 is on file in office of Idaho commissioner of reclamation.

Total amount of water, in acre-feet, diverted from Boise River by canals during irrigation season of 1925

Main canal of United States Bureau of Reclamation	666,000	Phyllis	125,000
Penitentiary	2,100	Eureka No. 1	5,900
Ridenbaugh	135,000	Pioneer	9,340
Bubb	3,180	Canyon County	19,500
Cruzen	12,500	Caldwell High Line	14,500
Boise City No. 1	9,500	Farmers Cooperative	88,300
Settlers	52,400	Canyon	4,440
Thurmans mill	8,900	Seibenberg	3,080
Farmers Union (includes Boise Valley diversion)	63,000	Riverside No. 2	47,100
Little Union	3,820	Pioneer Dixie	8,640
Dry Creek	18,300	Eureka No. 2	11,700
Ballantine	2,560	Upper Center Point	2,450
7 Eagle Island canals	13,600	Lower Center Point	2,520
Middleton Water Co	34,400	Miscellaneous	8,700
Middleton Mill ditch	27,800		1,400,000

Combined monthly discharge of canals diverting from Boise River, Idaho, during irrigation season of 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	4,550	1,130	2,800	167,000
May	5,090	4,440	4,880	300,000
June	5,270	4,270	4,880	290,000
July	5,240	3,540	4,430	272,000
August	3,970	3,170	3,690	227,000
September	3,150	1,960	2,460	146,000
The period				1,400,000

BOISE RIVER AT NOTUS, IDAHO

LOCATION.—In sec. 34, T. 5 N., R. 4 W., at steel highway bridge a quarter of a mile south of Notus, Canyon County, and 7 miles northwest of Caldwell.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 1, 1920, to September 30, 1925.

GAGE.—Vertical staff bolted to center tubular steel pier on upstream side of highway bridge reinstalled March 16, 1925; read by Mrs. Ida B. Mansell. Temporary staff on right bank and on downstream side of bridge used February 27 to March 15, 1925; readings corrected to datum of original gage.

DISCHARGE MEASUREMENTS.—Made from highway bridge at gage or by wading.

CHANNEL AND CONTROL.—Bed composed of clean gravel and cobbles. One channel at gage during all but extremely high stages. Control formed by well-defined gravel bar; subject to change at high water.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 6.50 feet May 21 (discharge, 10,200 second-feet); minimum stage, 0.38 foot October 1–2 (discharge, 17 second-feet).

1920–1925: Maximum stage recorded, 7.0 feet May 19 and 20, 1921 (discharge, 14,500 second-feet); minimum discharge, 10 second-feet August 18, 1920.

ICE.—Stage-discharge relation affected by ice for short periods during severe winters.

DIVERSIONS.—Below practically all diversions for irrigation in Boise Valley. Records during irrigation season show amount of water wasted into Snake River.

REGULATION.—Flow regulated by head gates at Arrowrock Reservoir and by numerous diversions between station and reservoir.

ACCURACY.—Stage-discharge relation changed slightly after January 26; affected by ice December 17–31. Rating curve applicable October 1 to January 26 well defined; curve applicable after March 15 well defined below 9,000 second-feet. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table. Records good.

Discharge measurements of Boise River at Notus, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 17	2.85	1,060	Apr. 4	2.92	1,210	June 23	4.48	4,150
Mar. 3	2.70	974	Apr. 20	5.93	8,320	Aug. 4	.56	27.6
Mar. 23	3.39	1,810	June 8	3.16	1,590	Sept. 28	1.20	147

NOTE.—Discharge estimated on account of ice Dec. 17–31; because of uncertain gage heights obtained from temporary staff Jan. 27 to Feb. 15; flow based on record at Dowling and flow past Barber Dam. Braced figures show mean discharge for periods indicated.

Daily discharge, in second-feet, of Boise River at Notus, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	261	435	520		775	1,060	1,650	5,510	1,290	30	48
2	17	261	435	435		690	1,010	1,890	4,970	960	27	45
3	18	244	410	386		865	1,060	2,240	3,950	615	25	42
4	18	227	435	410		865	1,170	3,040	3,480	386	28	40
5	18	212	435	435		865	1,290	3,950	3,040	248	22	48
6	18	215	410	435		912	1,290	6,070	2,240	201	26	67
7	19	215	386	410		865	1,570	6,950	2,060	169	28	156
8	20	218	386	435	1,790	912	2,060	8,190	1,500	93	19	341
9	21	224	363	435		865	2,430	6,950	1,060	41	19	248
10	22	224	363	490		820	2,830	6,650	960	57	20	265
11	20	221	363	551		865	4,200	6,070	912	36	22	301
12	22	218	386	618		960	6,650	6,070	912	33	26	301
13	22	221	386	656		1,010	8,190	6,070	1,010	25	28	283
14	22	227	386	693		1,010	9,490	6,070	1,060	23	60	248
15	21	244	386	693		960	9,490	6,070	1,290	25	67	232

Daily discharge, in second-feet, of Boise River at Notus, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	20	298	363	656	865	960	9,160	6,650	1,420	25	70	226
17	21	298		618	1,010	1,010	9,490	7,250	1,570	30	54	226
18	22	340		656	960	960	9,820	7,870	1,890	36	60	226
19	24	386		618	960	960	9,160	8,510	2,340	42	57	226
20	27	386		618	1,010	960	8,510	9,820	2,530	57	37	220
21	70	435		656	1,010	1,010	6,950	10,200	2,730	60	26	220
22	56	435		656	1,010	1,290	6,650	9,820	3,260	145	28	220
23	45	435		656	1,060	1,810	6,070	8,830	4,200	132	60	213
24	42	435	390	693	1,060	1,570	5,790	7,870	3,260	132	63	207
25	65	435		736	1,010	1,420	4,970	6,950	2,830	125	67	201
26	71	435		780	960	1,420	3,950	6,650	2,430	97	81	195
27	76	435			912	1,290	2,830	6,070	2,060	60	77	178
28	86	435			865	1,290	2,340	6,070	2,060	52	70	150
29	298	435		2,440	-------	1,060	2,060	6,950	1,980	38	70	207
30	280	462			-------	1,170	1,570	7,250	1,420	33	70	272
31	280	-------			-------	1,060	-------	6,070	-------	33	57	------

Monthly discharge of Boise River at Notus, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	298	17	57.4	3,530
November	462	212	317	18,900
December	----------	----------	393	24,200
January	----------	386	876	53,900
February	----------	865	1,410	78,300
March	1,810	690	1,050	64,600
April	9,820	1,010	4,770	284,000
May	10,200	1,650	6,480	398,000
June	5,510	912	2,330	139,000
July	1,290	23	171	10,500
August	81	19	45.0	2,770
September	341	40	195	11,600
The year	10,200	17	1,500	1,090,000

SOUTH FORK OF BOISE RIVER NEAR LENOX, IDAHO[1]

LOCATION.—In sec. 24, T. 2 N., R. 6 E., in canyon at R. S. Sandlin ranch, 1 mile above mouth of Smith Creek, 4 miles above flow line of Arrowrock Reservoir, and 4 miles southwest of discontinued Lenox post office, Elmore County.

DRAINAGE AREA.—1,090 square miles (measured on topographic maps).

RECORDS AVAILABLE.—March 24, 1911, to September 30, 1925.

GAGE.—Au continuous water-stage recorder on right bank installed August 14, 1925, replacing Friez water-stage recorder installed April 11, 1915, at same datum but about 25 feet below original inclined gage; inspected by R. S. Sandlin and M. E. Reinbold.

DISCHARGE MEASUREMENTS.—Made from cable 100 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of mud and gravel. Control of coarse gravel and rock; practically permanent. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 8.25 feet from 8 to 9 a. m. May 21 (discharge, 6,660 second-feet); minimum discharge probably somewhat less than 200 second-feet during period of severe ice effect in December.

1911–1925: Maximum stage recorded, 9.53 feet at 11 a. m. May 15, 1917 (discharge, 9,200 second-feet); minimum stage, 1.87 feet from 5 p. m. September 1 to 10 p. m. September 2, 1924 (discharge, 144 second-feet).

[1] Designated in previous reports as "South Fork of Boise River near Prairie, Idaho."

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—No important diversions above or below gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed slightly following high water. Standard rating curve well defined. Operation of water-stage recorder satisfactory except for a few short periods. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph; shifting-control method used July 11–16. Records good except for estimated periods, for which they are fair.

Discharge measurements of South Fork of Boise River near Lenox, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 1	2.12	202	Apr. 9	6.60	3,810	July 1	5.29	2,200
Do	2.12	207	Do	6.54	3,780	July 23	3.38	732
Feb. 7	3.56	849	May 7	7.76	5,630	Aug. 15	3.10	568
Apr. 9	6.60	3,920	June 2	6.23	3,220	Sept. 22	2.60	361

Daily discharge, in second-feet, of South Fork of Boise River near Lenox, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	205	317	238		336	442	1,810	3,120	3,660	2,150	486	310
2	205	314	284		396	434	1,900	3,660	3,260	1,900	478	310
3	216	314	340		486	416	2,150	4,100	2,940	1,720	478	310
4	238	314	270		684	416	2,590	4,420	2,700	1,640	464	310
5	234	328	264		925	1,110	2,940	4,740	2,480	1,550	442	
6	225	317	284		1,020	632	2,940	5,080	2,260	1,470	425	330
7	219	299	299		867	668	2,820	5,620	2,050	1,350	416	
8	216	295	310		732	674	3,190	5,620	1,950	1,240	408	
9	219	295		275	642	632	3,800	4,910	1,950	1,180	396	
10	228	348			491	576	4,420	4,580	2,050	1,080	396	355
11	247	310			455	538	4,910	4,740	2,100	1,050	408	348
12	250	284			473	533	5,080	4,740	2,150	1,050	473	348
13	247	247	300			528	5,080	4,420	2,150	955	505	348
14	244	254				528	4,910	4,580	2,150	896	606	344
15	238	302				538	4,740	4,910	2,200	838	572	359
16	234	267			450	557	4,740	5,080	2,260	799	491	363
17	234	244		284		591	5,080	5,440		760	464	352
18	234	247		299		586	4,580	5,620	2,300	732	438	348
19	239	292		314		616	4,100	5,990		705	416	340
20	244	359		278		663	3,320	6,370	2,940	679	396	355
21	244	464		292	468	867	2,880	6,560	3,190	689	387	371
22	238	416		288	464	1,050	2,590	5,800	3,590	867	379	363
23	231	416	200	314	478	1,390	2,360	5,260	3,380	738	363	344
24	238	332		317	478	1,510	2,100	5,080	3,060	689	359	321
25	234	288		317	451	1,550	2,000	4,740	2,880	652	359	317
26	234	278		310	434	1,470	1,950	4,580	2,700	622	355	314
27	241	267		270	473	1,430	2,000	4,580	2,480	591	348	310
28	288	234		284	455	1,550	2,100	4,740	2,360	567	348	306
29	400	228		317	------	2,000	2,310	5,080	2,310	542	340	302
30	355	231	250	336	------	2,260	2,640	4,740	2,530	519	328	314
31	332	------		336	------	2,000	------	4,260	------	505	321	------

NOTE.—Discharge estimated on account of ice and missing gage heights Dec. 9 to Jan. 16, Feb. 13–20, June 17–19, and Sept. 5–9; based on reservoir action, observer's notes, weather records, and comparison with flow at Twin Springs and Dowling. Discharge interpolated Oct. 19. Braced figures give mean discharge for periods indicated.

Monthly discharge of South Fork of Boise River near Lenox, Idaho, for the year ending September 30, 1925

[Drainage area, 1,090 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	400	205	247	0.227	0.26	15,200
November	464	228	303	.278	.31	18,000
December	----------	----------	256	.235	.27	15,700
January	----------	----------	289	.265	.31	17,800
February	1,020	336	529	.485	.50	29,400
March	2,260	416	928	.851	.98	57,100
April	5,080	1,810	3,270	3.00	3.35	195,000
May	6,560	3,120	4,940	4.53	5.22	304,000
June	3,660	1,950	2,550	2.34	2.61	152,000
July	2,150	505	991	.909	1.05	60,900
August	606	321	421	.386	.44	25,900
September	----------	302	334	.306	.34	19,900
The year	6,560	----------	1,260	1.16	15.64	911,000

LITTLE CAMAS RESERVOIR NEAR BENNETT, IDAHO

LOCATION.—In sec. 9, T. 1 S., R. 9 E., 4 miles northeast of Bennett, Elmore County, and 22 miles northeast of Mountain Home.

DRAINAGE AREA.—31.8 square miles (measured on map of Mountain Home Cooperative Irrigation Co.)

RECORDS AVAILABLE.—March 20, 1924, to September 30, 1925.

GAGE.—Readings obtained by measuring with steel tape from reference point located on top of northeast corner of concrete outlet structure or by leveling to water surface from bench mark; read by J. B. Langfitt. Elevations referred to datum of Mountain Home Cooperative Irrigation Co.

EXTREMES OF STAGE.—Maximum stage recorded, 4,961.67 feet May 27; minimum stage, 4,944.45 feet September 11.

1924–25: Maximum stage recorded May 27, 1925; minimum stage, 4,928.85 feet May 29, 1924 (reservoir practically empty).

COOPERATION.—Gage-height record furnished by Mountain Home Cooperative Irrigation Co.

Water is stored in Little Camas Reservoir for irrigation use on about 5,000 acres of land near Mountain Home. (See description of Long Tom Reservoir.) The reservoir is formed by a gravity earth dam about 1,500 feet in length. The crest is 46 feet above bottom of outlet tunnel, which is 8 feet above spillway crest. The bottom of tunnel outlet corresponds to an elevation of 4,926.50 feet referred to recorded reservoir stages, which is about 4.5 feet below stage to which the present usable storage can be drawn.

Elevation of crest of spillway corresponds to 4,965.00 feet at which stage the reservoir capacity is about 22,300 acre-feet, about 1,250 acres of land being submerged.

Daily gage height, in feet, of Little Camas Reservoir near Bennett, Idaho, for the year ending September 30, 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1			4,958.74		4,947.09	16				4,950.80	
2			4,958.74	4,953.78		17			4,956.60		
3						18			4,956.22	4,950.51	
4			4,958.68	4,953.38	4,946.55	19			4,955.98	4,950.31	
5			4,958.45		4,946.12	20			4,955.55		
6			4,958.44	4,952.94		21					
7					4,945.86	22			4,955.38		
8	4,961.48		4,958.07	4,952.51		23				4,949.84	
9					4,945.46	24		4,958.66	4,955.20		
10			4,957.84	4,952.21		25				4,949.12	
11					4,944.45	26		4,959.07	4,954.96		
12				4,951.66		27	4,961.67		4,954.52		
13			4,957.25			28		4,958.95	4,954.26	4,948.33	
14				4,951.28		29					
15			4,957.06			30			4,954.11	4,947.51	

NOTE.—Gates in dam opened May 11 for release of water through Little Camas Canal, prior to which time gates were closed since preceding irrigation season. Except for release of about 5 second-feet after Sept. 11, gates were practically closed on that day and entirely closed on Sept. 23.

LITTLE CAMAS CANAL AT HEADING, NEAR BENNETT, IDAHO

LOCATION.—In sec. 9, T. 1 S., R. 9 E., 400 feet below Little Camas Reservoir, 4 miles northeast of Bennett, Elmore County, and 22 miles northeast of Mountain Home.

RECORDS AVAILABLE.—June 1 to November 28, 1917; April 16, 1924, to September 30, 1925.

GAGE.—Au water-stage recorder installed May 12, 1924, on right bank; inspected by Chas. J. McGrath.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of cemented sand and fine gravel. Control formed by head of McGinnis flume 1,200 feet below gage; growth of moss in earth canal section above flume may affect the stage-discharge relation at times.

EXTREMES OF DISCHARGE.—Maximum stage from water-stage recorder, 2.37 feet 5 p. m. to midnight July 6 (discharge, 70 second-feet); canal reported dry prior to May 11 and after September 23.

1917; 1924–25: Maximum discharge recorded, 77 second-feet April 27–30, May 1, 3, and 9, 1924; no flow August 7, November 1, 1917; during 1924, except April 16 to May 31; and during 1925, except between May 11 and September 23.

DIVERSIONS.—None.

REGULATION.—Flow regulated by head gates at Little Camas Reservoir.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined above 35 second-feet. Operation of water-stage recorder satisfactory but inlet action was sluggish. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records fair.

COOPERATION.—Gage-height record furnished by Mountain Home Cooperative Irrigation Co.

Water released from Little Camas Reservoir in sec. 9, T. 1 S., R. 9 E., is carried 13 miles through Little Camas Canal into Long Tom Basin and collected in Long Tom Reservoir for release for irrigation use on about 5,000 acres of land near Mountain Home.

Discharge measurements of Little Camas Canal at heading, near Bennett, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 27	1.64	40.2	July 18	2.29	64.8	Sept. 11	2.16	58.6
June 17	2.18	61.9	Aug. 12	2.22	64.0			
June 24	2.21	61.6	Aug. 28	2.26	64.6			

Daily discharge, in second-feet, of Little Camas Canal at heading, near Bennett, Idaho, for the year ending September 30, 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	------	54	20	66	65	16	18	61	66	65	
2	------	54	26	64	67	17	19	61	66	64	
3	------	58	35	65	66	18	26	62	66	65	
4	------	62	55	66	65	19	34	62	66	62	
5	------	62	62	66	64	20	31	62	66	50	5
6	------	61	66	66	64	21	35	63	66	8.6	
7	------	62	68	65	63	22	36	64	66	39	
8	------	62	67	65	62	23	35	63	66	59	
9	------	62	66	64	62	24	35	62	66	66	------
10	------	61	67	63	62	25	38	64	66	65	------
11	3.8	62	68	63	43	26	40	66	66	65	------
12	6.8	62	67	63	8.0	27	40	66	67	65	------
13	10	62	66	64	7.4	28	44	65	66	65	------
14	14	62	66	64	5	29	46	50	66	65	------
15	14	61	66	65		30	49	9.8	66	64	------
						31	51	------	66	64	------

NOTE.—Discharge estimated May 11 when flow for only part of day was recorded and for Sept. 14–23 on account of missing gage heights. Discharge interpolated June 21 and 23. Braced figure shows mean discharge for period indicated.

Monthly discharge of Little Camas Canal at heading, near Bennett, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May 11–31	51	------	29.8	1,240
June	66	9.8	59.6	3,550
July	68	20	62.0	3,810
August	66	8.6	61.3	3,770
September 1–23	67	------	32.5	1,480

LITTLE CAMAS CANAL BELOW TUNNEL NO. 9, NEAR BENNETT, IDAHO

LOCATION.—In sec. 22, T. 1 S., R. 8 E., 300 feet below outlet of tunnel No. 9, 3 miles west of Bennett, Elmore County, and 22 miles northeast of Mountain Home.

RECORDS AVAILABLE.—April 2, 1924, to September 30, 1925. From June 1 to November 29, 1917, records obtained at station above tunnel No. 9, half a mile above present gage.

GAGE.—Au water-stage recorder installed May 12, 1924, on left bank, referred to vertical staff set to read actual head over Cippoletti weir located 3 feet below; inspected by Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of silt, sand, and fine gravel. Banks high and clean. Control formed by 10-foot Cippoletti weir set in concrete.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.45 feet from 4 to 6 p. m. June 29 (discharge, 64 second-feet); canal practically dry prior to April 28 and after September 26.

1924–25: Maximum discharge recorded, 66 second-feet May 8–11, 13, and 14, 1924; canal practically dry except during irrigation seasons.

DIVERSIONS.—None.

REGULATION.—Flow regulated by gates at Little Camas Reservoir. During early spring canal picks up a small flow from side drainage.

ACCURACY.—Stage-discharge relation changed June 18–21, caused by silt deposits above weir. Rating curve applicable April 28 to June 17 well defined, and curve applicable June 22 to September 26 well defined below 30 second-feet and fairly well defined above; shifting-control method used June 18–21. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records fair.

Canal heads in Little Camas Reservoir in sec. 9, T. 1 S., R. 9 E., 13 miles above (distance by canal route) where water is released for irrigation on about 5,000 acres of land near Mountain Home.

Discharge measurements of Little Camas Canal below tunnel No. 9, near Bennett, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 28	0.18	2.6	June 24	1.29	57.6	Aug. 28	1.39	60.4
May 27	.99	29.6	July 18	1.34	60.9	Sept. 11	1.32	59.3
June 17	1.34	55.0	Aug. 12	1.32	51.8			

Daily discharge, in second-feet, of Little Camas Canal below tunnel No.9, near Bennett, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	------	3.0	42	19	55	57	16	------	17	55	55	55	8.2
2	------	3.0	44	25	55	57	17	------	24	55	56	56	7.6
3	------	3.0	47	28	55	58	18	------	24	55	57	56	7.0
4	------	2.6	50	36	54	58	19	------	27	55	57	56	6.1
5	------	2.4	51	44	55	57	20	------	30	55	56	56	5.8
6	------	2.6	51	50	55	57	21	------	31	53	58	22	5.0
7	------	2.6	53	55	55	56	22	------	31	52	59	17	4.2
8	------	2.6	54	55	55	56	23	------	31	53	58	45	2.8
9	------	3.0	54	54	55	57	24	------	32	53	58	58	1.7
10	------	3.2	54	54	55	55	25	------	34	53	57	59	1.0
11	------	5.0	54	55	55	55	26	------	35	54	57	59	.6
12	------	8.5	54	55	55	18	27	------	34	56	57	60	------
13	------	10	54	55	55	11	28	2.6	36	57	56	60	------
14	------	15	55	55	50	9.9	29	2.8	39	55	57	60	------
15	------	16	55	55	56	8.8	30	2.8	40	18	56	59	------
							31	------	41	------	55	58	------

Monthly discharge of Little Camas Canal below tunnel No. 9, near Bennett, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 28-30	2.8	2.6	2.73	16.2
May	41	2.4	19.0	1,170
June	57	18	51.7	3,080
July	59	19	51.7	3,180
August	60	17	53.4	3,280
September 1-26	58	.6	27.7	1,430

MOORE CREEK NEAR ARROWROCK, IDAHO

LOCATION.—In sec. 21, T. 3 N., R. 4 E., at highway bridge on Boise-Arrowrock road, a quarter of a mile above mouth, and 3 miles southwest of Arrowrock, Boise County.

DRAINAGE AREA.—426 square miles (measured on topographic maps).

RECORDS AVAILABLE.—October 1, 1914, to September 30, 1925 (discharge measurements only prior to December 1, 1915).

GAGE.—Vertical staff on right bank, 15 feet above highway bridge; read by Oliver Call.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of boulders, cobbles, and sand. Control shifts frequently owing to deposition of sand at low stages and scouring out at high stages. Stream usually carries much sand and silt as a result of placer operations in Boise Basin. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 3.50 feet April 12 (discharge, 2,280 second-feet); minimum discharge, 24 second-feet October 2.

1915–1925: Maximum stage recorded, 6.3 feet April 11, 1916 (discharge, 3,140 second-feet); minimum stage, 0.09 foot August 13–15, 17, and 18, 1924 (discharge, 7.9 second-feet).

ICE.—Stage-discharge relation not seriously affected by ice.

DIVERSIONS.—No important diversions above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent; affected by ice December 18–29. Two standard well-defined rating curves. Gage read to hundredths once daily; rough water at high stages makes it difficult to read gage with refinement. Daily discharge determined by applying gage height to rating table. Records of daily discharge subject to error; records of monthly discharge, good.

COOPERATION.—Several discharge measurements made by employees of United States Bureau of Reclamation and water master for Boise River; gage-height record furnished by the former.

Discharge measurements of Moore Creek near Arrowrock, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 3	0.76	73.3	Apr. 21	2.72	1,080	July 20	0.51	49.5
Nov. 20	1.10	137	May 4	2.66	925	July 24	.61	61.4
Nov. 24	1.02	116	May 13	2.55	831	July 27	.53	50.8
Feb. 3	1.73	358	May 22	2.53	820	Aug. 5	.33	33.6
Feb. 5	2.93	1,410	June 3	1.99	480	Aug. 12	.37	37.9
Feb. 11	1.73	302	June 5	1.85	426	Aug. 22	.38	32.0
Feb. 25	1.92	422	June 12	1.60	309	Aug. 28	.38	33.1
Mar. 9	2.28	572	June 24	1.37	231	Sept. 11	.41	37.2
Mar. 24	2.87	1,060	July 10	.78	91.7	Sept. 26	.43	44.3
Apr. 3	3.01	1,220	July 14	.65	62.3			
Apr. 10	3.22	1,810	July 16	.62	66.1			

Daily discharge, in second-feet, of Moore Creek near Arrowrock, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	91	74	91	210	328	1,200	920	547	178	50	37
2	24	81	89	88	348	328	1,140	920	547	119	50	35
3	30	74	92	88	369	348	1,200	970	488	115	46	34
4	39	73	74	88	775	348	1,400	970	436	103	34	32
5	37	134	78	91	1,200	436	1,700	1,020	413	99	34	35
6	30	92	74	86	1,330	580	1,620	1,020	390	115	33	40
7	32	81	74	76	970	775	1,620	1,080	369	99	32	46
8	31	81	74	76	690	732	1,700	970	348	103	33	51
9	34	78	56	77	462	580	1,940	920	348	99	33	46
10	35	141	44	77	309	462	1,940	870	328	91	33	42
11	40	98	74	77	309	413	2,110	870	309	84	32	41
12	39	89	71	81	309	413	2,280	870	309	77	38	40
13	38	76	73	70	291	390	2,020	870	309	74	37	39
14	38	91	74	74	260	348	1,860	870	309	70	48	39
15	38	76	71	62	256	348	1,620	870	348	70	71	40
16	35	74	74	62	256	348	1,540	870	413	64	57	39
17	34	66	58	62	243	390	1,470	870	348	62	50	38
18	32	63		65	228	390	1,470	870	309	60	48	38
19	30	74		76	228	390	1,470	870	309	55	48	37
20	31	119		77	260	436	1,330	920	291	58	44	42
21	31	174		68	291	652	1,200	870	270	50	40	44
22	31	179		74	309	870	1,200	822	263	77	38	42
23	31	169		77	348	1,080	1,080	775	263	77	38	40
24	30	127	50	84	413	1,080	1,020	732	234	64	38	46
25	30	130		91	390	1,080	920	732	216	60	40	46
26	30	112		91	369	970	920	690	194	57	39	44
27	52	92		77	348	1,080	870	652	194	54	39	45
28	30	91		84	328	1,020	822	690	183	50	38	46
29	35	91		84	-------	1,330	822	652	178	50	39	52
30	92	78	95	176	-------	1,260	870	652	183	52	39	55
31	83	-------	93	194	-------	1,200	-------	580	-------	50	38	------

NOTE.—Braced figure shows mean discharge for period indicated.

Monthly discharge of Moore Creek near Arrowrock, Idaho, for the year ending September 30, 1925

[Drainage area, 426 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	92	24	37.0	0.087	0.10	2,280
November	179	63	99.8	.234	.26	5,940
December	95	----------	64.9	.152	.18	3,990
January	194	62	85.3	.200	.23	5,240
February	1,330	210	432	1.01	1.05	24,000
March	1,330	328	658	1.54	1.78	40,500
April	2,280	822	1,410	3.31	3.69	83,900
May	1,080	580	847	1.99	2.29	52,100
June	547	178	322	.756	.84	19,200
July	178	50	78.6	.185	.21	4,830
August	71	32	41.2	.097	.11	2,530
September	55	32	41.7	.098	.11	2,480
The year	2,280	24	341	.800	10.85	247,000

WARMSPRINGS RESERVOIR NEAR RIVERSIDE, OREG.

LOCATION.—In SE. ¼ sec. 8, T. 23 S., R. 37 E., on Malheur River 4 miles above junction with South Fork and 4 miles above Riverside, Malheur County.

RECORDS AVAILABLE.—January 24, 1920, to September 30, 1925.

GAGE.—Tape gage with float set to read depth of water above bottom of outlet tunnel; read by U. S. Yost. Elevation of bottom of tunnel, 3,327.00 feet above mean sea level.

EXTREMES OF STAGE.—Maximum stage recorded during year, 74.56 feet May 17–22 (contents, 172,500 acre-feet); minimum stage, 22.92 feet October 1–4 (contents, 16,900 acre-feet).

Warmsprings Reservoir stores water for Warmsprings Irrigation District which embraces 31,618 acres of irrigable land on either side of Malheur River, extending from mouth of canyon above Vale to Ontario. Capacity of reservoir at spillway level, 74.0 feet, is 170,000 acre-feet.

Monthly stage and contents of Warmsprings Reservoir near Riverside, Oreg., for the year ending September 30, 1925

Date	Gage height	Contents	Loss or gain during month	Date	Gage height	Contents	Loss or gain during month
	Feet	*Acre-feet*	*Acre-feet*		*Feet*	*Acre-feet*	*Acre-feet*
Oct. 31		[a] 18,200	+1,300	May 31	74.18	170,800	+3,600
Nov. 30	25.88	21,400	+3,200	June 30	69.91	152,600	−18,200
Dec. 31	27.60	24,300	+2,900	July 31	64.10	129,400	−23,200
Jan. 31	37.31	45,300	+21,000	Aug. 31	57.60	103,800	−25,600
Feb. 28	55.56	97,700	+52,400	Sept. 30	53.30	90,900	−12,900
Mar. 31	62.98	124,900	+27,200				
Apr. 30	73.38	167,200	+42,300	The year			+74,000

[a] Interpolated.

MALHEUR RIVER BELOW WARMSPRINGS RESERVOIR, NEAR RIVERSIDE, OREG.

LOCATION.—In SW. ¼ sec. 17, T. 23 S., R. 37 E., 1 mile below Warmsprings Dam, 3 miles above mouth of South Fork, and 4 miles northwest of Riverside, Malheur County.

DRAINAGE AREA.—About 1,100 square miles.

RECORDS AVAILABLE.—December 9, 1914, to July 4, 1917; March 18, 1919, to September 30, 1925. From January 3, 1906, to March 31, 1907, and December 15, 1908, to May 25, 1910, records were obtained at a station at Riverside 4 miles below.

GAGE.—Vertical staff on left bank used since April 28, 1920; read by U. S. Yost.

DISCHARGE MEASUREMENTS.—Made from highway bridge one-fourth mile below dam or by wading.

CHANNEL AND CONTROL.—Concrete control 200 feet below gage. There is some disintegration of concrete during winter because of poor quality. Above a medium stage concrete control is submerged and contraction and riffle 200 feet farther downstream acts as control for gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 5.72 feet at time of measurement on April 27 (discharge, 900 second-feet); seepage amounted to 1 second-foot when gates to reservoir were closed October 1 to April 23 and May 6–8.

1906–1925: Maximum discharge recorded, 5,490 second-feet March 2, 1910; minimum discharge recorded prior to construction of dam, practically no flow during August, 1910; determined by subtracting discharge of South Fork from discharge of main river below South Fork. Minimum discharge since construction of dam somewhat less than 1 second-foot when gates are closed; stream dry August 1 to September 16, 1919, while dam was being constructed.

ICE.—No water released from dam during winter.

DIVERSIONS.—A large area of bottom land is irrigated with flood water above station.

REGULATION.—Flow past station entirely controlled by operation of gates in Warmsprings Dam beginning November, 1919.

ACCURACY.—Stage-discharge relation changed during winter. Rating curves fairly well defined. Staff gage read to hundredths once a day and time noted when change was made in gate openings at dam. Daily discharge ascertained by applying daily gage height or mean daily gage height to rating table. Records good.

Discharge measurements of Malheur River below Warmsprings Reservoir, near Riverside, Oreg., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 27	4.67	412	Apr. 27	5.72	897
Do	5.23	658	Apr. 28	3.91	135

Daily discharge, in second-feet, of Malheur River below Warmsprings Reservoir, near Riverside, Oreg., for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	1	425	365	163	365	333	16	1	395	325	425	365	265
2	1	425	365	163	365	325	17	1	325	325	425	365	240
3	1	425	365	163	365	325	18	1	329	325	425	361	230
4	1	425	365	163	365	325	19	1	329	325	425	345	212
5	1	192	365	163	365	325	20	1	325	325	425	345	163
6	1	1	365	195	365	325	21	1	329	325	425	345	163
7	1	1	365	265	365	325	22	1	345	325	425	345	163
8	1	1	365	265	365	325	23	1	393	325	409	345	163
9	1	5	353	265	365	325	24	86	345	325	365	345	163
10	1	62	325	305	365	313	25	405	317	369	365	345	163
11	1	145	325	353	365	265	26	413	285	425	365	345	163
12	1	216	325	385	365	265	27	414	262	425	365	345	163
13	1	262	325	405	365	265	28	174	230	413	365	345	163
14	1	289	325	425	365	265	29	425	216	405	365	345	163
15	1	293	325	425	365	265	30	425	281	304	365	345	163
							31	------	365	------	365	345	------

NOTE.—Gates to reservoir closed Oct. 1 to Apr. 23 and May 6–8; discharge estimated, 1 second-foot.

Monthly discharge of Malheur River below Warmsprings Reservoir, near Riverside, Oreg., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October			[a] 1	61
November			[a] 1	60
December			[a] 1	61
January			[a] 1	61
February			[a] 1	56
March			[a] 1	61
April	425	[a] 1	78.8	4,690
May	425	[a] 1	263	16,200
June	425	304	350	20,800
July	425	163	336	20,700
August	365	345	356	21,900
September	333	163	244	14,500
The year	425	[a] 1	137	99,100

[a] Estimated; see footnote to daily-discharge table.

MALHEUR RIVER NEAR HOPE, OREG.

LOCATION.—In SW. ¼ sec. 5, T. 19 S., R. 43 E., half a mile above intake of Vines Canal and railroad bridge, 15 miles west of Vale, and 6½ miles west of Hope, Malheur County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 30 to October 26, 1919; May 5 to September 30, 1920; fragmentary record during 1921 and 1922; October 1, 1922, to September 30, 1925. Station maintained half a mile below Vines Canal, March 22 to September 30, 1914.

GAGE.—Stevens continuous water-stage recorder on left bank; inspected by C. L. Bachelder and H. G. Kennard.

DISCHARGE MEASUREMENTS.—Made from cable at gage or by wading.

CHANNEL AND CONTROL.—Bed composed of sand, gravel, and boulders; subject to shift at high stages. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum discharge from water-stage recorder, about 8,100 second-feet from 1 to 2 p. m. February 5; minimum discharge, estimated 50 second-feet December 26 and January 23.

1919–1925: Maximum discharge recorded, that of 1925; minimum stage, 0.02 foot from 5 to 9 p. m. September 2, 1919 (discharge, 3.5 second-feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Several small canals divert water above station.

REGULATION.—Flow controlled to a large extent by Warmsprings Dam 60 miles above.

ACCURACY.—Stage-discharge relation practically permanent; affected by ice probably December 18 to January 29. Rating curve fairly well defined below 4,000 second-feet. Operation of water-stage recorder satisfactory except for periods indicated in footnote to daily-discharge table; recorded gage heights unreliable and not used after June 30, because of poor connection between well and river. Daily discharge ascertained by applying to rating table mean daily gage height determined from recorder graph by inspection. Discharge estimated for periods of no record. Records good except for estimated periods for which they are fair.

The following discharge measurements were made:

January 23, 1925: Gage height, 2.80 feet;[5] discharge, 50 second-feet.

April 7, 1925: Gage height, 2.08 feet; discharge, 389 second-feet.

April 26, 1925: Gage height, 2.72 feet; discharge, 809 second-feet.

[5] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Malheur River near Hope, Oreg., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Sept.
1	131	94		1,500	1,570	265	332	670	420	
2	95	94			1,190	249	318	670	460	
3	79	94			2,650	265	314	664	450	
4	70	90			3,660	297	341	664	450	
5	65	89			5,140	385	350	658	440	
6	64	86	140		1,880	522	380	610	440	
7	63	84			950	533	390	410	430	
8	65	83			622	430	430	346	430	
9	60	84			500	390	460	350	430	
10	62	84			400	341	480	332	425	
11	62				305	301	500	310	390	
12	60			80	273	273	538	350	360	
13	60		190		257	257	555	410	345	
14	64		169		241	249	533	445		
15	69		160		229	237	610	500		
16	69	105	225		249	257	566	490		
17	69		70		261	261	566	500		
18	70				249	273	555	544		285
19	70				241	269	544	555		
20	70				249	281	555	550		
21	70				350	314	544	544	330	
22	70	125	60		538	400	582	544		
23	70	115		50	445	415	640	516		
24	70				490	415	528	516		
25	71				400	390	475	495		
26	71	90		400	328	375	740	490		
27	75				289	345	747	460		
28	83				285	350	747	430		
29	87		100			360	555	410	427	
30	79			5,140		370	684	380	610	
31	96			3,100		355		360		

NOTE.—Discharge estimated Nov. 11–21, 24–30, Dec. 1–12, 18–31, Jan. 1–29, May 28–31, June 1–7, and 14–28. Water-stage recorder graph records unreliable and mean monthly flow estimated from records at station below Warmsprings Reservoir for July, August, and September.

Monthly discharge of Malheur River near Hope, Oreg., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	131	60	72.9	4,480
November	125		96.9	5,770
December			114	7,010
January	5,140	50	447	27,500
February	5,140	229	866	48,100
March	533	237	336	20,700
April	747	314	519	30,900
May	670	310	489	30,100
June	610		382	22,700
July			* 336	20,700
August			* 360	22,100
September			* 254	15,100
The year	5,140	50	352	255,000

* Estimated from record of run-off of Malheur River below Warmsprings Reservoir, near Riverside.

WILLOW CREEK NEAR MALHEUR, OREG.

LOCATION.—In sec. 6, T. 14 S., R. 41 E., at Stanfield ranch, half a mile above flow line of reservoir No. 3, of Willow River Land & Irrigation Co., 2½ miles south of Malheur, Malheur County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—November 20, 1904, to August 14, 1906; March 19, 1910 to August 2, 1911; March 27, 1912, to September 30, 1915; March 1, 1921 to September 30, 1925.

GAGE.—Stevens 8-day water-stage recorder on left bank inspected by James Minougham.

DISCHARGE MEASUREMENTS.—Made from bridge 200 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed of sand and loose gravel. Just below gage is an artificial control of concrete. The crest is 2 feet above stream bed, 8 inches wide, inclined toward right where there is a low-water section 3 feet long and 6 inches lower than high-water crest. The cut-off walls at ends conform to slope of banks. Control was reconstructed in November, 1922, extending cut-off wall deeper into bed and banks and adding a concrete apron 6 feet long.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 2.63 feet from 10 to 11 a. m. February 23 (discharge, 169 second-feet). No flow August 1 to September 30.

1904–1906; 1910–1915; 1921–1925: Maximum discharge (computed from cross section and estimated velocities) 1,400 second-feet March 20, 1910. No flow at times.

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—Several small diversions above station irrigating a large area of meadowland; reservoir No. 3 just below. Eldorado ditch diverted no water into Willow Creek, 25 miles above gaging station, in 1925.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operation of water-stage recorder satisfactory February 5 to August 2 except for a few scattered days; staff gage read to hundredths once every other day except October 1 to February 4 and August 1 to September 30 when there was little or no flow. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection. Records good.

The following discharge measurements were made:

March 19, 1925: Gage height, 1.20 feet; discharge, 21.2 second-feet.

March 22, 1925: Gage height, 1.02 feet; discharge, 12.7 second-feet.

April 25, 1925: Gage height, 1.35 feet; discharge, 29.6 second-feet.

Daily discharge, in second-feet, of Willow Creek near Malheur, Oreg., for the year ending September 30, 1925

Day	Feb	Mar.	Apr.	May	June	July	Day	Feb.	Mar.	Apr.	May	June	July
1	2	40	21	21	1.7	1.7	16	13	26	14	11	1.1	0.2
2	2	44	13	18	1.7	1.2	17	12	29	12	11	1.1	.2
3	3	52	7.1	16	1.8	.8	18	15	25	13	12	1.7	.2
4	4	57	4.0	14	2.1	.7	19	18	22	21	11	1.8	.2
5	82	72	3.5	14	1.9	.6	20	15	18	36	9.8	1.7	.2
6	83	76	2.6	14	1.4	.3	21	44	16	49	10	2.0	.2
7	43	61	2.4	17	1.2	.3	22	62	14	44	9.2	2.1	.2
8	43	50	2.7	24	1.7	.3	23	132	13	37	7.5	1.6	.2
9	26	42	2.9	26	1.8	.3	24	106	16	30	7.3	1.1	.2
10	22	35	1.7	28	1.7	.3	25	64	18	28	7.1	.9	.2
11	18	30	2.0	22	1.6	.3	26	41	22	29	5.7	.8	.2
12	17	29	9.8	18	1.4	.3	27	44	25	29	4.7	.7	.2
13	13	28	6.9	16	1.3	.3	28	37	26	26	3.1	.6	.2
14	15	25	4.2	12	1.5	.3	29	------	25	25	2.6	1.0	.2
15	12	27	3.9	10	1.9	.3	30	------	25	23	2.8	1.6	.2
							31	------	24	------	1.6	------	.1

NOTE.—No gage-height record and daily discharge estimated Feb. 1–4. Discharge interpolated Feb. 10, Mar. 1, 21, 22, 24, 26, July 7, 9, 11, 12, 14, 16, 18, 19, 21, 23, 25, 26, 28, and 30.

Monthly discharge of Willow Creek near Malheur, Oreg., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October			*1	61
November			*1	60
December			*1	61
January			*1	61
February	132	2	35.3	1,960
March	76	13	32.6	2,000
April	49	1.7	16.8	1,000
May	28	1.6	12.4	762
June	2.1	.6	1.48	88
July	1.7	.1	.36	22
The year	132	0	8.41	6,080

* Estimated.

NOTE.—No flow Aug. 1 to Sept. 30.

WILLOW CREEK RESERVOIR NEAR MALHEUR, OREG.

LOCATION.—In NE. ¼ sec. 15, T. 14 S., R. 41 E., 5 miles southeast of Malheur, Malheur County.

RECORDS AVAILABLE.—October 1, 1922, to September 30, 1925.

GAGE.—Vertical staff gage in well in dam; read by James Minougham.

EXTREMES OF STAGE.—1923–1925: Maximum stage recorded, 71.53 feet April 14–16, 1923 (contents, 15,670 acre-feet); minimum stage, 2.72 feet on morning of September 13, 1924 (practically no storage).

This reservoir is constructed with a capacity of 50,000 acre-feet which is in excess of flow of Willow Creek for any except a year of abnormally high run-off. Water is released during irrigation season to irrigate land near Brogan, 20 miles downstream.

Monthly stage and contents of Willow Creek Reservoir near Malheur, Oreg., for the years ending September 30, 1923–1925

Date	Gage height	Contents	Loss or gain during month	Date	Gage height	Contents	Loss or gain during month
1922–23	*Feet*	*Acre-feet*	*Acre-feet*	1923–24	*Feet*	*Acre-feet*	*Acre-feet*
Oct. 1	66.43	12,360		May 31	48.36	4,360	−1,800
Oct. 31	66.19	12,150	−210	June 30	42.40	2,750	−1,610
Nov. 30	66.50	12,400	+250	July 31	29.11	870	−1,880
Dec. 31	66.90	12,640	+240	Aug. 31	7.73	100	−770
Jan. 31	67.62	13,170	+530	Sept. 30	9.91	120	+20
Feb. 28	68.70	13,720	+550	The year			−3,860
Mar. 31	71.77	15,420	+1,700	1924–2			
Apr. 30	71.12	15,380	−40	Oct. 31	15.15	234	+114
May 31	67.55	13,030	−2,350	Nov. 30	18.60	344	+110
June 30	65.91	12,050	−980	Dec. 31	21.16	446	+102
July 31	59.86	8,830	−3,220	Jan. 31	23.40	543	+97
Aug. 31	50.71	5,130	−3,700	Feb. 28	44.70	3,294	+2,751
Sept. 30	47.12	3,980	−1,150	Mar. 31	52.41	5,709	+2,415
The year			−8,380	Apr. 30	55.20	6,744	+1,035
1923–24				May 31	54.20	6,360	−384
Oct. 31	47.63	4,130	+150	June 30	48.05	4,261	−2,099
Nov. 30	47.96	4,230	+100	July 31	35.28	1,503	−2,758
Dec. 31	48.56	4,420	+190	Aug. 31	26.59	710	−793
Jan. 31	49.47	4,720	+300	Sept. 30	21.28	451	−259
Feb. 29	53.85	6,230	+1,510	The year			+331
Mar. 31	54.14	6,340	+110				
Apr. 30	53.65	6,160	−180				

WILLOW CREEK BELOW RESERVOIR, NEAR MALHEUR, OREG.

LOCATION.—In NE. ¼ sec. 15, T. 14 S., R. 41 E., 300 feet below outlet tunnel from reservoir and 5 miles southeast of Malheur, Malheur County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—October 1, 1920, to September 30, 1925.

GAGE.—Vertical staff on right bank at weir 300 feet below outlet tunnel from reservoir; read by James Minougham.

DISCHARGE MEASUREMENTS.—Made by wading 300 feet below gage.

CHANNEL AND CONTROL.—Bed of small gravel. Control is 10-foot rectangular timber weir having a sharp metal crest.

EXTREMES OF DISCHARGE.—1921–1925: Maximum stage recorded, 1.73 feet July 13–26, 1922 (discharge, 83 second-feet). No flow at times.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Staff gage read to hundredths once a day and also after making change in opening of gate in dam. Daily discharge ascertained by applying daily gage reading to rating table or, for days when gate changes were made, by averaging discharges for intervals of the day. Records good.

Discharge measurements of Willow Creek below reservoir, near Malheur, Oreg., during the years ending September 30, 1918–1923

Date	Gage height	Discharge	Date	Gage height	Discharge
1918	*Feet*	*Sec.-ft.*	1923	*Feet*	*Sec.-ft.*
Aug. 18	1.05	38.1	Apr. 16	0.39	9.1
			Apr. 21	.44	9.8
1922			May 21	1.08	40.1
May 23	1.16	48.3			
June 5	1.66	76			

Daily discharge, in second-feet, of Willow Creek below reservoir, near Malheur, Oreg., for the years ending September 30, 1921–1925

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Day	Mar.	Apr.	May	June	July	Aug.	Sept.
	1921								1921						
1	------	------	33	30	34	60	42	26	------	------	22	44	70	42	------
2	------	------	33	30	34	60	42	27	------	------	22	44	70	42	------
3	------	------	35	30	34	60	42	28	------	19	22	43	68	42	------
4	------	------	46	30	34	60	42	29	------	33	22	34	64	42	------
5	------	------	46	30	34	60	42	30	------	33	28	34	64	42	------
								31	------	------	30	------	60	42	------
6	------	------	46	30	36	60	42		1922						
7	------	------	46	28	49	60	42	1	------	------	------	78	61	68	54
8	------	------	46	23	54	58	42	2	------	------	------	78	48	63	54
9	------	------	46	23	59	53	40	3	------	------	------	78	22	58	54
10	------	------	46	32	52	52	32	4	------	------	------	78	22	58	54
								5	------	------	------	78	22	58	54
11	------	------	46	34	64	50	19								
12	------	------	59	40	70	50	12	6	------	------	------	78	36	58	59
13	------	------	63	40	70	49	12	7	------	------	------	78	50	58	59
14	------	------	63	41	70	45	12	8	------	------	------	78	56	51	50
15	------	------	63	52	75	44	12	9	------	------	------	78	57	------	50
								10	------	------	11	78	66	------	40
16	------	------	55	56	75	27	8.8	11	------	------	17	78	75	------	11
17	------	------	47	56	75	27	7.3	12	------	------	24	78	79	------	5.3
18	------	------	44	56	75	27	5.3	13	------	------	27	78	83	2.3	5.3
19	------	------	44	56	75	27	2.5	14	------	------	27	78	83	3.3	5.3
20	------	------	44	56	74	28	2.5	15	------	------	34	78	83	3.3	5.3
21	------	------	36	56	74	37	1.9	16	------	------	37	78	83	3.3	5.3
22	------	------	33	55	74	38	------	17	------	------	50	78	83	3.1	2.8
23	------	------	33	50	74	42	------	18	------	------	57	78	83	4.2	------
24	------	------	24	50	74	42	------	19	------	------	66	78	83	30	------
25	------	------	22	48	73	42	------	20	------	------	63	78	83	40	------

Daily discharge, in second-feet, of Willow Creek below reservoir, near Malheur, Oreg., for the years ending September 30, 1921–1925—Continued

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
	1922						
21	------	------	46	76	83	42	------
22	------	------	46	69	83	54	------
23	------	------	47	61	83	54	------
24	------	------	73	58	83	54	------
25	------	------	73	58	83	54	------
26	------	------	73	54	83	54	------
27	------	------	73	52	82	54	------
28	------	------	68	53	79	54	------
29	------	------	67	61	75	54	------
30	------	------	67	61	75	54	------
31	------	------	73	------	74	54	------
	1923						
1	------	------	28	20	13	58	28
2	------	------	35	14	13	58	28
3	------	------	35	14	13	58	28
4	------	------	35	13	13	58	24
5	------	------	35	6.7	13	58	39
6	------	------	35	8.7	13	58	39
7	------	------	40	9.5	23	58	39
8	------	------	41	9.5	27	58	39
9	------	------	45	9.5	32	58	39
10	------	------	47	16	35	58	39
11	------	------	47	18	40	58	39
12	------	------	47	24	43	60	39
13	------	------	47	27	43	68	39
14	------	------	47	27	57	68	38
15	------	2.7	47	27	62	68	38
16	------	8.2	47	27	62	68	25
17	------	8.2	47	27	62	67	------
18	------	8.2	43	27	71	58	------
19	------	13	41	27	74	58	------
20	------	15	41	27	74	58	------
21	------	12	41	27	74	58	------
22	------	10	37	27	74	58	------
23	------	10	34	25	74	58	------
24	------	10	34	14	74	57	------
25	------	10	38	0	74	50	------
26	------	10	40	9.2	74	50	------
27	------	12	40	13	74	50	------
28	------	13	37	13	64	44	------
29	------	13	33	13	59	41	------
30	------	13	26	13	59	41	------
31	------	------	23	------	59	39	------
	1924						
1	------	2.9	12	56	34	20	4.8
2	------	2.9	12	56	34	20	4.8
3	------	2.9	12	56	34	20	4.8
4	------	2.9	12	49	34	20	5.7
5	------	2.9	7.4	19	39	19	9.5
6	------	2.9	5.0	19	46	19	8.8
7	------	2.9	5.0	19	46	19	5.0
8	------	2.9	5.3	19	46	19	3.9
9	------	2.9	5.0	19	46	18	2.9
10	------	2.6	5.0	19	46	18	2.9

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
	1924						
11	3.7	1.8	5.0	19	46	17	2.9
12	9.1	1.8	5.8	19	44	17	2.7
13	8.8	1.8	15	19	44	17	1.9
14	6.4	5.7	15	19	44	16	------
15	6.4	7.3	15	19	44	16	------
16	6.4	4.4	16	19	33	15	------
17	6.4	.8	22	17	22	13	------
18	6.4	.8	25	5.8	22	9.8	------
19	6.4	1.1	30	19	22	9.5	------
20	6.4	1.3	37	23	21	9.1	------
21	5.4	1.3	42	23	21	9.1	------
22	4.1	1.3	42	23	21	8.8	------
23	2.9	1.3	50	23	21	8.8	------
24	2.9	1.2	56	23	21	8.5	------
25	2.9	1.1	56	23	21	8.2	------
26	2.9	1.0	56	23	21	8.2	------
27	2.9	.3	56	23	21	7.9	------
28	2.9	9.1	56	23	21	7.9	------
29	2.9	12	56	27	20	7.6	------
30	2.9	12	56	34	20	5.7	------
31	2.9	------	56	------	20	5.0	------
	1925						
1	------	------	7.0	38	24	1.3	9.5
2	------	------	7.0	44	24	1.3	9.5
3	------	------	7.0	49	24	1.3	9.6
4	------	------	7.0	49	24	1.3	15
5	------	------	8.2	49	24	1.3	14
6	------	------	10	49	24	1.3	14
7	------	------	10	49	24	1.3	14
8	------	------	10	49	24	1.3	13
9	------	------	10	49	24	1.3	13
10	------	------	11	49	23	1.7	10
11	------	------	17	31	23	9.6	5.8
12	------	------	17	25	29	18	24
13	------	------	17	25	39	18	------
14	------	------	17	25	39	18	------
15	------	------	17	25	39	18	------
16	------	1.2	17	25	39	18	------
17	------	3.6	17	25	39	18	------
18	------	3.6	17	25	49	18	------
19	------	3.6	17	25	52	18	------
20	------	5.8	17	25	52	18	------
21	------	6.0	17	25	52	18	------
22	------	------	17	25	52	18	------
23	------	.6	17	25	52	18	------
24	------	------	17	25	52	15	------
25	------	------	17	25	50	10	------
26	------	4.1	28	25	50	10	------
27	------	7.0	15	25	49	10	------
28	------	7.0	24	25	49	9.8	------
29	------	7.0	38	25	48	9.8	------
30	------	7.0	38	25	29	9.8	------
31	------	------	38	------	19	9.8	------

NOTE.—No water released on days for which no record is given.

Monthly discharge of Willow Creek below reservoir, near Malheur, Oreg., for the years ending September 30, 1921–1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1921				
April	33	0	2.83	168
May	63	22	40.2	2,470
June	56	23	41.0	2,440
July	75	34	61.6	3,790
August	60	27	45.5	2,800
September	42	0	16.8	1,000
The year				12,700
1922				
May	73	0	36.1	2,220
June	78	52	72.1	4,290
July	83	22	69.1	4,250
August	68	0	36.9	2,270
September	59	0	18.9	1,120
The year				14,20
1923				
April	15	0	5.61	334
May	47	23	39.1	2,400
June	27	0	17.8	1,060
July	74	13	49.7	3,060
August	68	39	56.7	3,490
September	39	0	18.7	1,110
The year				11,500
1924				
March	9.1	0	3.29	202
April	7.3	.8	3.20	190
May	56	5.0	27.4	1,680
June	56	5.8	25.2	1,500
July	46	20	31.5	1,940
August	20	5.0	13.5	830
September	9.5	0	2.02	120
The year				6,460
1925				
April	7.0	0	1.89	112
May	38	7.0	16.9	1,040
June	49	25	32.7	1,950
July	52	19	36.8	2,260
August	18	1.3	10.4	640
September	15	0	4.33	258
The year				6,260

NOTE.—No flow for months for which no discharge is given.

PAYETTE RIVER AT BANKS, IDAHO

LOCATION.—In SE. ¼ sec. 29, T. 9 N., R. 3 E., three-eighths mile below confluence of North and South Forks of Payette River and one-fifth mile above railroad depot at Banks, Boise County.

DRAINAGE AREA.—2,120 square miles (measured on topographic maps).

RECORDS AVAILABLE.—May 31, 1922, to September 30, 1925.

GAGE.—Vertical staff in two sections on right bank; low-water section 60 feet upstream from high-water section; read by H. B. Redington.

DISCHARGE MEASUREMENTS.—Made from cable 125 feet below high-water gage.

CHANNEL AND CONTROL.—Bed composed of sand, gravel, and boulders. One channel at all stages. Control composed of large boulders; well defined and practically permanent prior to December 22, 1924, after which time several changes occurred by filling in and washing out of material on control caused by highway excavation on left bank on side hill above.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 12.40 feet May 21 (discharge, 16,400 second-feet); minimum stage, 1.11 feet December 18 (discharge, 455 second-feet).

1922–1925: Maximum stage recorded, 12.54 feet June 6 and 8, 1922 (discharge, 18,900 second-feet); minimum discharge occurred December 18, 1924.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Several diversions for irrigation from tributaries above.

REGULATION.—During spring and summer flow past station slightly affected by regulation at outlet of Payette Lake, 58 miles above.

ACCURACY.—Stage-discharge relation changed June 2–6 by erosion of loose material on left end of control; affected by ice December 21 to January 25. Rating curve applicable October 1 to June 1 well defined between 610 and 12,500 second-feet; the curve applicable after June 6 well defined between 900 and 8,000 second-feet and extended above. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table. Shifting-control method used June 2–6. Records good except for estimated periods for which they are fair.

Discharge measurements of Payette River at Banks, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 30	2.60	773	May 10	10.33	11,300	July 23	3.88	1,750
Dec. 4	2.92	933	June 1	10.68	12,200	Aug. 19	3.10	1,180
Feb. 6	7.35	5,210	June 7	8.04	7,360	Sept. 12	2.74	976
Feb. 11	4.94	2,290	June 17	8.02	7,560			
Apr. 17	10.60	11,800	June 28	7.60	6,590			

Daily discharge, in second-feet, of Payette River at Banks, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	610	1,150	895		895	1,660	4,720	6,689	11,900	5,890	1,280	982
2	622	1,150	1,150		1,180	1,660	4,720	7,650	11,200	5,060	1,250	955
3	675	1,030	1,000		1,660	1,660	5,310	8,480	10,200	4,600	1,250	905
4	690	1,120	920		3,660	1,720	5,800	8,910	9,080	4,370	1,180	930
5	660	1,210	848		6,320	2,090	6,870	9,570	8,430	4,130	1,160	955
6	648	1,060	848		5,010	2,640	7,450	11,000	7,600	3,900	1,120	1,010
7	635	920	825		3,910	2,640	7,650	11,900	7,390	3,280	1,100	1,120
8	648	848	825		3,180	2,640	8,480	12,200	7,190	3,060	1,060	1,120
9	635	1,120	675		2,740	2,440	9,130	11,900	7,190	2,950	1,040	1,060
10	648	1,330	768		2,440	2,090	9,570	11,200	7,390	2,840	1,040	1,040
11	660	1,030	948		2,340	2,170	10,500	11,400	7,190	2,620	1,060	1,010
12	648	870	895		2,340	2,010	11,200	11,000	7,190	2,520	1,180	982
13	635	690	870	730	2,170	1,860	11,000	11,400	7,000	2,420	1,250	1,010
14	635	920	870		2,010	1,940	10,500	12,400	7,000	2,320	1,600	1,040
15	635	920	785		2,010	1,860	10,300	12,900	7,000	2,220	1,450	1,040
16	635	848	870		1,860	1,860	11,400	13,400	7,390	1,940	1,350	982
17	622	750	622		1,790	1,790	11,900	14,100	7,390	2,030	1,280	982
18	622	750	455		1,720	1,790	11,200	14,400	7,590	1,940	1,220	955
19	635	870	518		1,720	1,860	11,000	15,400	8,190	1,850	1,180	955
20	622	1,590	495		1,720	1,940	9,570	16,100	8,820	1,760	1,060	955
21	622	2,010			1,790	2,170	8,480	16,400	9,450	1,760	1,120	982
22	622	2,170			1,720	2,640	7,650	16,100	9,890	1,810	1,100	955
23	622	1,860			2,010	3,070	7,060	15,900	9,240	1,760	1,120	930
24	622	1,560			2,010	3,180	6,320	15,400	8,610	1,680	1,120	905
25	622	1,240	610		1,940	3,420	5,800	14,600	8,190	1,600	1,100	905
26	622	1,090		750	1,860	3,420	5,630	14,100	7,390	1,520	1,060	882
27	690	848		735	1,790	3,420	5,470	14,100	7,000	1,450	1,100	905
28	975	825		750	1,720	3,780	5,470	14,100	6,620	1,420	1,060	905
29	1,120	825		768	-------	5,310	5,630	14,100	6,430	1,380	1,040	905
30	948	825	700	825	-------	4,860	5,970	13,900	6,250	1,350	1,040	930
31	1,000	-------		895	-------	4,580	--------	12,900	--------	1,320	1,010	------

NOTE.—Discharge estimated Dec. 21 to Jan. 25; interpolated, May 3 and July 4–5 account of missing gage height. Braced figures show mean discharge for periods included.

Monthly discharge of Payette River at Banks, Idaho, for the year ending September 30, 1925

[Drainage area, 2,120 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	1,120	610	687	0.324	0.37	42,200
November	2,170	690	1,110	.524	.58	66,000
December	1,150	455	744	.351	.40	45,700
January			741	.350	.40	45,600
February	6,320	895	2,340	1.10	1.14	130,000
March	5,310	1,660	2,590	1.22	1.41	159,000
April	11,900	4,720	8,060	3.80	4.24	480,000
May	16,400	6,680	12,700	5.99	6.89	781,000
June	11,900	6,250	8,050	3.80	4.24	479,000
July	5,890	1,320	2,540	1.20	1.38	156,000
August	1,600	1,010	1,160	.547	.63	71,300
September	1,120	882	973	.459	.51	57,900
The year	16,400	455	3,470	1.64	22.19	2,510,000

PAYETTE RIVER NEAR HORSESHOE BEND, IDAHO

LOCATION.—In 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 northeast of Horseshoe Bend, Boise County.

DRAINAGE AREA.—2,230 square miles (measured on topographic and Land Office maps).

RECORDS AVAILABLE.—November 23, 1912, to September 30, 1916; July 27, 1919, to September 30, 1925. February 13, 1906, to November 22, 1912, at site in section 2, 2 miles upstream. Two small creeks enter between the two sites.

GAGE.—Au water-stage recorder on right bank 200 feet above railroad crossin g inspected by J. W. Anthony and L. W. Goodin.

DISCHARGE MEASUREMENTS.—Made from cable 200 feet below gage.

CHANNEL AND CONTROL.—Bed composed of cobbles and coarse gravel with a few large rocks. Control practically permanent. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 8.05 feet from 5 to 7 a. m. May 22 (discharge, 16,300 second-feet); minimum stage, 0.30 foot at 10 p. m. December 18 (discharge, 365 second-feet).

1906–1916; 1919–1925: Maximum stage recorded, 9.57 feet at 1 p. m. June 9, 1921 (discharge, 22,100 second-feet); minimum stage and discharge, that of December 18, 1924.

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—Several diversions for irrigation from tributaries above; none between this station and one at Banks.

REGULATION.—During irrigation season, flow past station slightly affected by regulation at outlet of Payette Lake 70 miles above.

ACCURACY.—Stage-discharge relation permanent; affected by ice December 21 to January 31. Rating curve well defined. Operation of water-stage recorder satisfactory except during winter when intake froze. Staff gage read to hundredths October 1 and every few days during fore part of February when water-stage recorder was not operating. Daily discharge ascertained by applying to rating table mean daily gage height. Records excellent after February 24 and fair for estimated periods during winter; others good.

COOPERATION.—Gage-height record furnished by Idaho Power Co.

Between the stations at Banks and Horseshoe Bend the river leaves the granite and enters the lava, and a loss in flow occurs which ranges from 2 to nearly 4 per cent of the mean annual flow.

Discharge measurements of Payette River near Horseshoe Bend, Idaho, during the year ending September 30, 1925.

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 29	1.08	768	Apr. 13	6.14	10,400	July 24	1.88	1,600
Feb. 11	2.38	2,250	May 8	6.50	11,300	Aug. 19	1.48	1,130
Feb. 25	2.11	1,900	June 1	6.82	12,200	Sept. 12	1.26	946
Feb. 26	2.08	1,830	June 28	4.65	6,400			

Daily discharge, in second-feet, of Payette River near Horseshoe Bend, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	619	1,080	834		880	1,630	4,650	6,580	12,200	5,900	1,220	948
2		1,060	1,080		1,160	1,630	4,650	7,300	11,600	5,260	1,210	930
3		1,010	1,010		1,380	1,630	5,160	7,800	10,800	4,750	1,210	894
4		994	930		3,600	1,660	5,680	8,310	9,640	4,460	1,160	851
5		1,210	851		6,350	1,870	6,580	9,100	8,570	4,180	1,120	885
6	640	1,030	876		5,000	2,280	7,060	9,920	7,800	3,900	1,080	957
7		930	826		4,080	2,570	7,550	11,100		3,460	1,070	1,040
8		876	792		3,200	2,640	8,050	11,400		3,040	1,040	1,080
9		930	704		2,700	2,420	8,570	11,100		2,800	1,020	1,050
10		1,210	613		2,400	2,140	9,100	11,100	7,250	2,640	1,000	994
11	631	1,040	885		2,280	2,070	9,920	11,100		2,500	1,010	966
12	625	868	912		2,300	1,940	10,500	10,800		2,420	1,100	948
13	619	732	885	720	2,100	1,810	10,500	11,100	6,820	2,350	1,190	948
14	607	800	885		1,680	1,810	9,920	11,600	6,820	2,200	1,370	939
15	607	842	842			1,810	9,640	12,200	6,820	2,140	1,500	957
16	595	808	868			1,740	10,500	12,800	7,060	1,940	1,310	948
17	601	778	704			1,810	11,400	13,500	7,060	1,870	1,250	939
18	595	748	468			1,730	10,800	14,100	7,300	1,870	1,180	921
19	595	834	432			1,740	10,500	15,100	7,800	1,810	1,150	921
20	601	1,370	418		1,800	1,810	9,640	15,800	8,310	1,710	1,080	975
21	595	1,870				1,940	8,830	16,100	8,830	1,660	1,050	957
22	595	1,940				2,350	7,800	16,100	9,100	1,700	1,060	921
23	590	1,700				2,800	7,300	15,800	9,100	1,700	1,060	903
24	590	1,360				3,040	6,820	15,400	8,310	1,620	1,060	885
25	590	1,140	600		1,870	3,280	6,120	14,800	8,050	1,560	1,060	860
26	590	1,040			1,810	3,370	5,790	14,400	7,300	1,490	1,040	851
27	613	800			1,740	3,370	5,580	14,100	6,820	1,410	1,040	842
28	792	785			1,680	3,640	5,470	14,400	6,350	1,350	1,020	834
29	1,080	817		780		4,350	5,580	14,800	6,350	1,330	994	885
30	912	817	690			4,950	5,900	14,100	6,350	1,300	975	903
31	996					4,760		13,200		1,260	957	

NOTE.—Discharge estimated Oct. 2–10, Dec. 21 to Jan. 31, Feb. 1–2, 4, 6, 8–10, 12–13, 15–24, and June 7–12 based on flow at banks. Braced figures show mean discharge for periods indicated.

Monthly discharge of Payette River near Horseshoe Bend, Idaho, for the year ending September 30, 1925

[Drainage area, 2,230 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	1,080	590	658	0.295	0.34	40,500
November	1,940	732	1,050	.471	.53	62,500
December	1,080	418	732	.328	.38	45,000
January			732	.328	.38	45,000
February	6,350		2,290	1.03	1.07	127,000
March	4,950	1,630	2,480	1.11	1.28	152,000
April	11,400	4,650	7,850	3.52	3.93	467,000
May	16,100	6,580	12,400	5.56	6.41	762,000
June	12,200	6,350	7,960	3.57	3.98	474,000
July	5,900	1,260	2,500	1.12	1.29	154,000
August	1,500	957	1,120	.502	.58	68,900
September	1,080	834	931	.417	.47	55,400
The year	16,100	418	3,390	1.52	20.64	2,450,000

PAYETTE RIVER NEAR EMMETT, IDAHO

LOCATION.—In sec. 22, T. 7 N., R. 1 W., three-eighths mile below Black Canyon Dam and 5 miles northeast of Emmett, Gem County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—June 11 to September 30, 1925.

GAGE.—Au water-stage recorder on right bank installed June 11, 1925; inspected by C. A. Harris.

DISCHARGE MEASUREMENTS.—Made from cable 800 feet above gage.

CHANNEL AND CONTROL.—Bed composed of rock and coarse gravel. One channel at all stages. Control formed by well-defined rock and gravel riffle; may shift occasionally.

EXTREMES OF DISCHARGE.—Maximum stage during period from water-stage recorder, 7.95 feet at 3 p. m. June 21 (discharge, 10,600 second-feet); minimum stage, 2.10 feet at 4 a. m. August 8 (discharge, 482 second-feet).

DIVERSIONS.—Numerous canals divert water for irrigation above and below station.

REGULATION.—Flow past gage slightly affected by operation of gates in Black Canyon Dam and by storage of water in Payette Lake.

ACCURACY.—Stage-discharge relation permanent. Standard rating curve well defined below 7,000 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records excellent below 7,000 second-feet; others good.

COOPERATION.—Gage-height record furnished by United States Bureau of Reclamation.

The following discharge measurement was made September 17, 1925: Gage height, 2.31 feet; discharge, 640 second-feet.

Daily discharge, in second-feet, of Payette River near Emmett, Idaho, for the year ending September 30, 1925

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1		5,830	799	602	16	7,160	1,680	1,010	648
2		5,030	832	566	17	7,400	1,420	892	640
3		4,400	824	566	18	7,400	1,470	858	625
4		4,220	783	552	19	8,140	1,400	775	632
5		3,900	735	545	20	8,650	1,310	767	687
6		3,580	751	580	21	9,450	1,240	687	711
7		3,210	719	727	22	9,730	1,240	687	679
8		2,700	618	972	23	9,730	1,260	640	695
9		2,490	610	743	24	8,910	1,180	679	687
10		2,160	602	695	25	8,140	1,180	687	679
11	7,400	2,100	595	671	26	7,400	1,100	679	663
12	7,160	2,040	648	640	27	6,700	1,000	663	648
13	6,930	1,910	743	625	28	6,480	945	679	648
14	6,930	1,790	1,000	625	29	6,040	936	648	671
15	7,400	1,730	1,200	632	30	6,040	874	625	695
					31		858	618	

Monthly discharge of Payette River near Emmett, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 11–30	9,730	6,040	7,660	304,000
July	5,830	858	2,130	131,000
August	1,200	595	744	45,700
September	972	545	658	39,200
The period				520,000

PAYETTE LAKE AT LARDO, IDAHO

LOCATION.—In sec. 8, T. 18 N., R. 3 E., at outlet of Lake at Lardo, Valley County.

DRAINAGE AREA.—131 square miles (measured on topographic and Land Office maps).

RECORDS AVAILABLE.—Fragmentary records August 1, 1921, to September 30, 1925.

GAGE.—Vertical staff near right bank on tubular pier of highway bridge; read by F. L. Williams. Gage datum is 4,984.17 feet above mean sea level.

DIVERSIONS.—None.

REGULATION.—Some storage is used for irrigation in the lower Payette Valley. From 1919 to 1923, a small amount of regulation effected during July, August, and September, by installation and later gradual removal of temporary dam above highway bridge. In the fall of 1923, a more permanent dam was installed 250 feet below highway bridge; thereafter regulation effected by operation of flashboards in dam. No storage effective prior to 1919.

COOPERATION.—Gage-height record furnished by United States Forest Service.

Daily gage height, in feet, of Payette Lake at Lardo, Idaho, for the year ending September 30, 1925

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										
2	0.80					3.00				
3								2.00		
4			2.48							
5										
6					2.15		3.50			
7			2.70							1.93
8									3.25	
9				1.96						
10		1.64								
11					2.70	3.85		3.10		
12										
13	1.00						3.50			
14			2.30							
15					3.19					
16				1.96		4.85				
17		1.70								
18					3.60			3.23		
19										
20	1.07						3.75		2.57	1.65
21			2.05	1.94			3.85			
22								3.28		1.58
23						5.45				
24		1.87							2.36	
25					2.80			3.35		
26										
27	1.14						3.35			
28			2.00	1.94						
29							3.16		2.12	
30						4.91				
31		2.18								

NOTE.—No storage prior to Jan. 10, on which date a few flashboards in dam were installed which washed out on Feb. 7. No further regulation until July 6 when flashboards were reinstalled. Release of stored water for irrigation began on Aug. 8; thereafter, flow from lake regulated by operation of flashboards.

NORTH FORK OF PAYETTE RIVER AT LARDO, IDAHO

LOCATION.—In sec. 8, T. 18 N., R. 3 E., a quarter of a mile below Lardo, Valley County, and outlet of Payette Lake. No tributaries enter between lake and gage.

DRAINAGE AREA.—131 square miles (measured on topographic and Land Office maps).

RECORDS AVAILABLE.—September 1, 1908, to June 30, 1917; May 24, 1919, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank; installed December 19, 1923; inspected by F. L. Williams. Datum unchanged since October 14, 1908.

DISCHARGE MEASUREMENTS.—Made from cable half a mile below gage or by wading.

CHANNEL AND CONTROL.—Bed and control composed of boulders, cobbles, and gravel; slightly shifting. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 6.42 feet at 9 p. m. May 21 (discharge, 3,020 second-feet); minimum stage, 0.98 foot November 7 and 8 (discharge, 3.0 second-feet).

1908–1917; 1919–1925: Maximum stage recorded, 7.5 feet June 5, 1909 (discharge, 4,250 second-feet); minimum discharge, 3 second-feet October 21 and 22, 1911, November 10–26, 1919, and November 7 and 8, 1924.

ICE.—Stage-discharge relation very seldom affected by ice, presumably because of proximity of station to Payette Lake.

DIVERSIONS.—None above station.

REGULATION.—Flow during irrigation season partly regulated by changing flashboards in dam installed in October and November, 1923, at outlet of Payette Lake a quarter of a mile above.

ACCURACY.—Stage-discharge relation permanent except May 6–18, when tree on right end of control caused slight backwater effect; affected by ice December 17 to January 10 and during early part of February. Rating curve well defined below 2,700 second-feet. Ice formation in gage well and lack of regular visits to gage caused frequent gaps in record; otherwise water-stage recorder operated satisfactorily. Daily discharge ascertained by applying to rating table daily gage height determined by inspection of recorder graph. Records good except for estimated periods for which they are fair.

COOPERATION.—Gage-height record furnished by United States Forest Service.

Discharge measurements of North Fork of Payette River at Lardo, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 2	1.32	10.0	Apr. 15	4.18	951	June 29	4.16	952
Do	1.32	10.0	May 11	4.98	1,520	July 22	1.10	4.4
Feb. 4	* 1.83	36.2	May 30	5.94	2,550	Aug. 20	2.46	124
Apr. 15	4.18	957	June 21	4.85	1,500	Sept. 22	1.95	53.7

* Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of North Fork of Payette River at Lardo, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		6.5	3.8					680	2,140	796	4.3	38
2	38	4.8	9.0		25			835	1,900	728		42
3		3.2	11				160	935	1,720	662		80
4	35	3.2	11		36			1,040	1,500	600		78
5	13	3.2	11			120		1,240	1,320		20	78
6	4.8	3.1	11		38		209	1,410	1,200			78
7	4.4	3.0	11		150		274	1,680	1,160	60		78
8	4.2	3.0	11		407		337	1,860	1,160		163	78
9	3.8	3.4	11	5	375	123	407	1,760	1,160		186	77
10	4.0	3.8	11		337		500	1,650	1,240		183	77
11	6.8	4.2	11		312		628	1,540	1,200	36	180	67
12	6.5	4.6	11		289	116	764	1,580	1,200	38	174	62
13	6.2	4.6	11		270		868	1,760	1,200	37	171	59
14	6.2	4.6	4.9		256		935	1,950	1,200	22	169	59
15	6.2	4.6	3.1		235		970	2,140	1,160	5.3	166	58
16	6.2	5.5	3.2		216	110	1,120	2,340	1,160	5.1	161	57
17	6.5	6.4		6.0	200		1,240	2,490	1,200	4.0	156	56
18	6.8	7.3			194	109	1,240	2,690	1,240	3.9	150	55
19	6.7	7.6			191		1,200	2,900	1,320	3.9	145	54
20	6.5	7.6			170		1,080	3,000	1,410	4.0	140	53
21	6.3	7.6		6.6	150	108	970	3,000	1,500	4.0	135	50
22	6.2	7.9					900	3,000	1,500	4.2	130	49
23	6.2	5.5					796	2,900	1,450	4.2	128	38
24	6.2	3.2	35	7.3	140	107	710	2,790	1,360	4.2	123	23
25	6.2	4.9					650	2,790	1,280	4.2	123	22
26	6.0	9.0					612	2,590	1,160	4.2	121	22
27	6.0	9.0		10			573	2,490	1,080	4.2	110	21
28	6.2	6.5			128	106	556	2,490	1,010	4.2	108	
29	6.5	3.2					556	2,540	935	4.2	89	19
30	6.5	3.4				110	590	2,540	868	4.3	39	
31	6.5			12				2,390		4.3	38	

NOTE.—Owing to formation of ice Dec. 17 to Jan. 10 and fore part of February and because of missing gage-height record, discharge estimated Oct. 1–3, Dec. 17–31, Jan. 1–16, 18–23, 25–30, Feb. 1–3, 5–7, 22–27, Mar. 1–8, 10–15, 17–20, 22–27, 29–31, Apr. 1–5, July 5–10, Aug. 2–7, and Sept. 28–30; interpolated Oct. 19–21, Nov. 9–11, 16–17, Feb. 20, May 10, Aug. 16–19, Sept. 6 and 15–19. Result of discharge measurement used Feb. 4. Braced figures show mean discharge for periods indicated.

Monthly discharge of North Fork of Payette River at Lardo, Idaho, for the year ending September 30, 1925

[Drainage area, 131 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October		3.8	10.2	0.078	0.09	627
November	9.0	3.0	5.15	.039	.04	306
December	11	3.1	6.37	.049	.06	392
January			6.61	.050	.06	406
February	407		175	1.34	1.40	9,720
March			115	.878	1.01	7,070
April	1,240		650	4.96	5.53	38,700
May	3,000	680	2,100	16.0	18.4	129,000
June	2,140	868	1,300	9.92	11.1	77,400
July	796	3.9	108	.824	.95	6,640
August	186		110	.840	.97	6,760
September	80		52.2	.398	.44	3,110
The year	3,000	3.0	387	2.95	40.05	280,000

SOUTH FORK OF PAYETTE RIVER NEAR GARDEN VALLEY, IDAHO

LOCATION.—In sec. 1, T. 8 N., R. 4 E., at Garden Valley ranger station, 300 feet above mouth of Station Creek, 4¾ miles above mouth of Middle Fork of Payette River, and 5 miles southeast of Garden Valley, Boise County.

DRAINAGE AREA.—779 square miles (measured on topographic maps).

RECORDS AVAILABLE.—May 15, 1921, to September 30, 1925.

GAGE.—Vertical staff on right bank directly to rear of ranger station; read by Forest Service rangers.

DISCHARGE MEASUREMENTS.—Made from cable 30 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of rock overlain with cobbles and gravel. Control formed by well-defined riffle. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 5.50 feet May 20 (discharge, 6,930 second-feet); minimum discharge estimated somewhat less than 300 second-feet probably occurred December 18, following an unusual drop in temperature when stage-discharge relation was affected by ice.

1921–1925: Maximum stage recorded, 6.87 feet June 9, 1921 (discharge, 9,330 second-feet); minimum discharge probably occurred December 18, 1924.

Ice.—Stage-discharge relation affected by ice.

DIVERSIONS.—Practically none above.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent; affected by ice December 18 to January 3. Standard rating curve well defined between 320 and 6,000 second-feet. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table except as indicated in footnote to table of daily discharge. Records good except for estimated periods, for which they are fair.

COOPERATION.—Gage-height record furnished by United States Forest Service.

Discharge measurements of South Fork of Payette River near Garden Valley, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 1	0.68	438	May 31	4.72	5,560	July 24	1.65	1,170
Feb. 7	1.52	1,050	June 7	3.26	3,090	Sept. 13	.92	566
Apr. 16	3.42	3,310	June 16	3.46	3,460			
May 9	3.88	4,040	July 1	3.46	3,360			

Daily discharge, in second-feet, of South Fork of Payette River near Garden Valley, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	385	525	438		385	465	1,140	2,600	4,800	3,330	875	590
2	385	525	438	400	525	525	1,140	3,030	4,290	2,740	875	590
3	385	465	465		655	495	1,340	3,330	3,970	2,600	835	590
4	385	558	445	410	1,050	525	1,530	3,490	3,650	2,460	835	590
5	385	539	425	410	1,100	690	1,730	3,970	3,330	2,330	795	590
6	385	521	405	410	1,340	760	1,840	4,460	3,030	2,200	795	622
7	385	502	385	410	1,050	760	1,840	4,970	3,030	2,070	760	655
8	385	484	438	385	835	760	2,200	4,630	2,880	1,950	760	690
9	385	465	320	385	725	690	2,460	3,970	3,030	1,840	725	622
10	385	438	438	385	655	655	2,740	3,810	3,330	1,840	725	622
11	385	410	465	385	655	590	3,330	3,970	3,030	1,730	725	590
12	385	410	438	385	622	622	3,330	4,130	3,030	1,730	725	558
13	385	438	438	385	590	558	3,330	4,460	3,030	1,630	760	590
14	385	465	438	385	525	558	3,330	4,800	3,180	1,530	1,100	558
15	385	438	410	360	495	558	3,030	5,140	3,030	1,530	918	590

Daily discharge, in second-feet, of South Fork of Payette River near Garden Valley, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	385	410	438	360	495	558	3,330	5,310	3,330	1,430	760	590
17	385	385	345	410	495	558	3,810	5,490	3,180	1,340	760	558
18	385	385		410	495	558	3,340	6,030	3,490	1,340	725	590
19	385	410		410	495	558	2,880	6,570	3,970	1,240	690	558
20	385	410		410	525	590	2,460	6,930	4,460	1,240	690	590
21	385	655		410	558	655	2,330	6,750	4,630	1,240	690	558
22	410	795		385	525	760	2,200	6,210	4,970	1,240	690	558
23	410	690	300	410	590	960	1,840	6,030	4,630	1,240	655	558
24	410	590		410	590	1,000	1,840	5,850	4,290	1,140	655	525
25	410	495		385	558	1,050	1,730	5,670	4,130	1,100	655	525
26	465	438		385	525	960	1,730	5,490	3,810	1,050	622	525
27	558	431		410	525	1,000	1,840	5,310	3,650	1,000	558	525
28	590	424		385	495	1,100	1,840	6,390	3,490	960	622	558
29	622	417		385	-------	1,340	2,020	6,570	3,490	918	590	558
30	622	410	390	410	-------	1,340	2,200	6,030	3,650	918	622	570
31	590	-------		438	-------	1,240	-------	5,490	-------	875	590	------

NOTE.—Discharge estimated Dec. 18 to Jan 3, Apr. 20, Aug. 13, and Sept 30, based upon comparison with computed flow at station near Banks; interpolated Nov. 5–8, 27–29, Dec. 4–6, Apr. 18 and 29. Braced figures show mean discharge for periods indicated.

Monthly discharge of South Fork of Payette River near Garden Valley, Idaho, for the year ending September 30, 1925

[Drainage area, 779 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	622	385	425	0.546	0.63	26,100
November	795	385	484	.621	.69	28,800
December	465	----------	375	.481	.55	23,100
January	438	360	397	.510	.59	24,400
February	1,340	385	646	.829	.86	35,900
March	1,340	465	756	.970	1.12	46,500
April	3,810	1,140	2,320	2.98	3.32	138,000
May	6,930	2,600	5,060	6.50	7.49	311,000
June	4,970	2,880	3,660	4.70	5.24	218,000
July	3,330	875	1,610	2.07	2.39	99,000
August	1,100	558	735	.944	1.09	45,200
September	690	525	580	.745	.83	34,500
The year	6,930	----------	1,420	1.82	24.80	1,030,000

SOUTH FORK OF PAYETTE RIVER NEAR BANKS, IDAHO

LOCATION.—In sec. 28, T. 9 N., R. 3 E., 1 mile above junction with North Fork of Payette River and 1½ miles northeast of Banks, Boise County.

DRAINAGE AREA.—1,200 square miles (measured on topographic maps).

RECORDS AVAILABLE.—August 19, 1921, to September 30, 1925.

GAGE.—Au continuous water-stage recorder on right bank, installed September 12, 1922; inspected by H. B. Redington.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Bed composed of rock, boulders, and sand. Banks steep, one channel at all stages. Control formed by well-defined rock and boulder riffle, 250 feet below gage; changes infrequently.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 7.97 feet from 6 to 8 a. m. May 20 (discharge, 9,450 second-feet); minimum stage recorded 0.20 foot at 5 a. m. December 18 (discharge, 350 second-feet). Actual minimum discharge probably occurred after ice formed December 18.

1921–1925: Maximum stage recorded, 8.70 feet June 7, 1922 (discharge, 9,900 second-feet); minimum stage recorded, 0.19 foot at 8.30 p. m. December 12, 1922 (discharge, about 330 second-feet). Lower discharge may have occurred after ice formed in channel December 18, 1924.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—None except a few small ranch diversions from tributaries in drainage area above.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed during high water May 6–8; affected by ice November 29, 30, December 1, 19–31, and January 1–25. Rating curves well defined below 8,000 second-feet. Operation of water-stage recorder satisfactory except during ice period. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records excellent except during estimated periods for which they are fair.

Discharge measurements of South Fork of Payette River near Banks, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 30	* 0.97	557	May 11	5.58	5,780	June 28	4.27	3,930
Dec. 3	.80	634	May 31	6.44	7,040	July 23	1.86	1,410
Feb. 10	1.28	954	June 7	4.18	3,740	Aug. 19	1.07	814
Apr. 14	5.42	5,380	June 16	4.33	4,040	Sept. 12	.86	687
May 9	5.64	5,930						

* Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of South Fork of Payette River near Banks, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	408	682	560		602	846	2,160	3,980	6,200	3,620	1,010	686
2	417	652	706		676	867	2,160	4,460	5,600	3,140	1,010	680
3	458	624	646		1,040	867	2,360	4,820	5,180	2,970	1,010	674
4	515	652	590		1,960	881	2,630	4,940	4,630	2,860	975	662
5	462	812	574		3,030	1,080	3,140	5,460	4,240	2,680	940	704
6	448	640	568		2,410	1,350	3,380	6,040	3,980	2,520	905	746
7	440	585	541		1,860	1,470	3,620	6,790	3,860	2,360	905	796
8	448	563	541		1,520	1,430	4,100	6,580	3,740	2,200	877	783
9	435	634	435		1,270	1,350	4,580	5,750	3,740	2,110	856	758
10	440	773	448		1,000	1,190	4,940	5,600	3,980	2,010	842	716
11	453	629	602		930	1,120	5,460	5,600	3,860	1,920	828	692
12	453	563	580		965	1,040	5,590	5,750	3,860	1,880	828	686
13	448	495	541	485	895	1,000	5,590	6,200	3,860	1,830	863	674
14	444	563	546		832	965	5,200	6,650	3,860	1,700	1,090	680
15	444	574	525		818	965	4,940	6,800	3,740	1,650	1,120	698
16	440	536	530		780	930	5,460	7,100	3,980	1,610	940	692
17	435	505	435		736	1,000	5,720	7,400	3,980	1,570	877	674
18	435	495	362		736	965	5,200	7,850	4,110	1,520	842	662
19	435	563			766	1,000	4,700	8,490	4,500	1,480	816	662
20	435	853			806	1,040	4,100	9,130	4,900	1,400	796	716
21	435	1,080			867	1,150	3,740	8,970	5,320	1,360	802	680
22	430	1,120			867	1,390	3,620	8,490	5,600	1,440	770	650
23	430	1,040			1,000	1,730	3,380	8,170	5,320	1,400	752	638
24	426	792	380		1,150	1,820	3,140	7,700	4,900	1,320	770	620
25	417	682			1,040	1,860	2,970	7,550	4,630	1,280	752	614
26	417	640		495	965	1,820	2,920	7,250	4,370	1,200	734	608
27	444	510		480	930	1,780	2,920	7,400	4,110	1,160	740	602
28	624	495		505	881	1,860	2,970	7,850	3,860	1,120	728	614
29	818	525		520	-------	2,410	3,140	8,330	3,860	1,090	710	650
30	602	557	450	552	-------	2,460	3,500	7,850	3,980	1,050	698	680
31	607	-------		585	-------	2,310	-------	7,100	-------	1,050	692	-------

NOTE.—Discharge estimated because of ice Nov. 29 to Dec. 1, Dec. 19–31, and Jan. 1–25, based on observer's notes, weather records, and flow of Payette River at Banks. Result of discharge measurement used Nov. 30. Braced figures show mean discharge for periods indicated.

Monthly discharge of South Fork of Payette River near Banks, Idaho, for the year ending September 30, 1925

[Drainage area, 1,200 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	818	408	469	0.391	0.45	28,800
November	1,120	495	661	.551	.61	39,300
December	706		480	.400	.46	29,500
January			492	.410	.47	30,300
February	3,030	602	1,120	.933	.97	62,200
March	2,460	846	1,350	1.12	1.29	83,000
April	5,720	2,160	3,910	3.26	3.64	233,000
May	9,130	3,980	6,840	5.70	6.57	421,000
June	6,200	3,740	4,390	3.66	4.08	261,000
July	3,620	1,050	1,820	1.52	1.75	112,000
August	1,120	692	854	.712	.82	52,500
September	796	602	680	.567	.63	40,500
The year	9,130		1,920	1.60	21.74	1,390,000

DEADWOOD RIVER NEAR LOWMAN, IDAHO

LOCATION.—In sec. 29, T. 9 N., R. 7 E., 600 feet above bridge on Garden Valley-Lowman highway, 700 feet above confluence with South Fork of Payette River, and 2½ miles west of Lowman, Boise County.

DRAINAGE AREA.—217 square miles (measured on topographic maps).

RECORDS AVAILABLE.—August 11, 1921, to September 30, 1925.

GAGE.—Stevens continuous water-stage recorder on left bank; inspected by W. C. Taylor.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders; rough. Banks fairly low but not subject to overflow; gradient steep. Control fairly well defined, wide, and not sensitive; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 4.14 feet at 1 a. m. May 20 (discharge, 2,500 second-feet); minimum stage, 1.14 feet October 20–23 (discharge, 78 second-feet). Actual minimum discharge probably occurred December 18 during ice-affected period immediately following unusual drop in temperature.

1921–1925: Maximum stage recorded, 4.53 feet at 3 a. m. May 26, 1922 (discharge, 3,080 second-feet); minimum stage, 1.12 feet August 29, 1924 (discharge, 75 second-feet). Lower discharge may have occurred about December 18, 1924, during extremely cold period.

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed during ice-affected period November 28 to January 31. Rating curves well defined. Operation of water-stage recorder satisfactory except during winter when its operation was discontinued on account of severe ice conditions. Staff gage read to hundredths about once a week during winter. Daily discharge ascertained by applying to rating table mean daily gage height determined from inspection of recorder graph or from staff gage readings. Records good except from December to March, for which they are poor.

Discharge measurements of Deadwood River near Lowman, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 8	1.94	314	May 10	3.48	1,570	July 24	1.93	275
Apr. 17	3.38	1,380	July 1	2.66	612	Sept. 13	1.45	119

Daily discharge, in second-feet, of Deadwood River near Lowman, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	133			94		366	1,020	1,690	633	187	123
2	83	120					384	1,200	1,550	593	193	119
3	101	114					454	1,300	1,420	563	190	116
4	102	139				125	501	1,400	1,250	534	181	112
5	92	150			220		569	1,590	1,180	512	175	119
6	88	114					612	1,770	1,100	485	172	123
7	88	106				160	683	1,910	1,090	454	169	139
8	88	93	110		276		809	1,840	1,070	433	166	134
9	86	118					945	1,590	1,100	414	163	121
10	88	116				145	1,070	1,550	1,160	394	160	119
11	88	104					1,190	1,590	1,080	375	160	116
12	86	85				137	1,240	1,650	1,070	357	160	121
13	86	82					1,280	1,840	1,060	348	234	123
14	85	108					1,210	1,910	1,040	371	280	130
15	83	102			120		1,140	1,980	1,080	296	203	132
16	82	99		100		150	1,310	1,980	1,150	280	187	132
17	80	90					1,400	2,050	1,160	276	178	130
18	80	85					1,210	2,200	1,120	268	169	130
19	80	92					1,030	2,340	1,160	260	166	134
20	78	188					865	2,420	1,210	249	160	150
21	78	199			112	190	773	2,270	1,240	256	157	137
22	78	214	80			220	739	2,200	1,210	296	152	132
23	78	160				276	675	2,200	1,120	288	150	130
24	80	130				292	619	2,120	1,020	272	152	127
25	80	124			110	309	587	2,050	935	264	150	127
26	80	106				296	593	2,050	845	256	144	127
27	92	92				300	612	2,050	782	238	144	125
28	139				105	334	633	2,120	707	223	139	127
29	116	95				423	707	2,120	691	213	134	137
30	106		90			414	818	2,050	661	203	132	142
31	116					371		1,840		197	125	

NOTE.—Discharge estimated Nov. 28 to Jan. 31, Feb. 2-7, 9-20, 22-27, Mar. 1-6, 8-11, and 13-20, based largely on flow of South Fork of Payette River near Garden Valley. Braced figures show mean discharge for periods indicated.

Monthly discharge of Deadwood River near Lowman, Idaho, for the year ending September 30, 1925

[Drainage area, 217 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	139	78	89.3	0.412	0.48	5,490
November	214	82	118	.544	.61	7,020
December			96.5	.445	.51	5,930
January			100	.461	.53	6,150
February			143	.659	.69	7,940
March	423		202	.931	1.07	12,400
April	1,400	366	834	3.84	4.28	49,600
May	2,420	1,020	1,880	8.66	9.98	116,000
June	1,690	661	1,100	5.07	5.66	65,500
July	633	197	348	1.60	1.84	21,400
August	280	125	169	.779	.90	10,400
September	150	112	128	.590	.66	7,620
The year	2,420		435	2.00	27.21	315,000

SQUAW CREEK NEAR GROSS, IDAHO

LOCATION.—In sec. 19, T. 13 N., R. 2 E., at mouth of Cold Spring Creek, 2 miles southeast of Mill Creek ranger station, 10 miles north of Gross, Gem County, and 19 miles north of Ola. Record includes flow of Cold Spring Creek.

DRAINAGE AREA.—21 square miles (measured on topographic maps).

RECORDS AVAILABLE.—May 26 to September 30, 1925.

GAGE.—Au continuous water-stage recorder on left bank; inspected by Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made from footbridge 15 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders. One channel at all stages. Gradient steep. Control fairly well defined; subject to change at high stages.

EXTREMES OF DISCHARGE.—Maximum stage during period from water-stage recorder, 3.55 feet at 9 p. m. May 27 (discharge, 413 second-feet); minimum stage, 0.87 foot September 26 and 27 (discharge, 3.4 second-feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—None above gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 250 second-feet and extended above. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records good.

Discharge measurements of Squaw Creek near Gross, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 27	2.93	237	July 21	1.17	12.2	Sept. 1	0.90	3.9
June 11	2.31	109	Aug. 7	.99	6.0	Sept. 25	.88	3.2
June 21	2.43	120						

Daily discharge, in second-feet, of Squaw Creek near Gross, Idaho, for the year ending September 30, 1925

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	------	157	60	7.5	3.8	16	------	141	15	6.0	3.7
2	------	155	48	7.5	3.7	17	------	153	14	5.7	3.7
3	------	130	34	6.9	3.5	18	------	159	14	5.0	3.7
4	------	116	30	6.2	3.5	19	------	164	13	4.5	4.3
5	------	117	26	6.0	5.0	20	------	159	12	4.3	5.2
6	------	121	24	5.7	4.8	21	------	153	13	4.0	4.3
7	------	123	22	5.7	6.0	22	------	135	12	3.8	3.8
8	------	130	21	5.2	7.2	23	------	116	12	4.8	3.7
9	------	155	20	5.0	5.2	24	------	100	12	7.8	3.7
10	------	133	19	5.2	4.5	25	------	92	11	6.0	3.5
11	------	119	18	5.0	4.3	26	365	85	9.9	5.0	3.4
12	------	128	18	4.8	4.0	27	305	80	9.2	5.0	3.4
13	------	132	18	6.2	3.8	28	305	73	8.5	5.0	4.3
14	------	124	17	7.8	3.7	29	264	70	8.2	4.5	7.8
15	------	121	16	6.5	3.7	30	259	66	7.8	4.3	6.9
						31	184	------	7.5	4.0	------

Monthly discharge of Squaw Creek near Gross, Idaho, for the year ending September 30, 1925

[Drainage area, 21 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
May 26-31	365	184	280	13.3	2.97	3,330
June	164	66	124	5.90	6.58	7,380
July	60	7.5	18.4	.876	1.01	1,130
August	7.8	3.8	5.51	.262	.30	339
September	7.8	3.4	4.40	.210	.23	262
The period						12,400

WEISER RIVER ABOVE CRANE CREEK, NEAR WEISER, IDAHO

LOCATION.—In sec. 10, T. 11 N., R. 4 W., on Purcell ranch, 1 mile above mouth of Crane Creek and 9 miles northeast of Weiser, Washington County.

DRAINAGE AREA.—1,160 square miles (measured on Forest Service map, topographic maps, and base map of Idaho).

RECORDS AVAILABLE.—July 15, 1920, to September 30, 1925.

GAGE.—Friez water-stage recorder on left bank a quarter of a mile from ranch house on Purcell ranch; inspected by O. A. Purcell.

DISCHARGE MEASUREMENTS.—Made from cable 200 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel. Control formed by well-defined gravel and boulder riffle 200 feet below gage; changes at times. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage during year from well-defined high-water marks, 10.65 feet about February 4 (discharge, about 13,500 second-feet); minimum discharge, 15 second-feet October 1–3.

1920–1925: Maximum stage and discharge occurred about February 4, 1925; minimum discharge recorded, 10 second-feet July 31, August 1 and 6–18, 1924.

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—Numerous diversions for irrigation above.

REGULATION.—None except that due to diversions.

ACCURACY.—Stage-discharge relation changed during February and March. Rating curve applicable October 1 to December 15 well defined; rating curve applicable March 7 to September 30 well defined between 25 and 5,000 second-feet; curve parallel thereto used February 8–24; shifting-control method used February 25 to March 6. Operation of water-stage recorder satisfactory except during winter and for a few short periods at other times. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. Records good except from December to February, for which they are poor.

Discharge measurements of Weiser River above Crane Creek, near Weiser, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 23	2.40	569	Apr. 3	4.00	2,100	June 23	2.40	603
Feb. 21	3.48	1,570	Apr. 21	5.26	3,890	July 19	.96	29.8
Mar. 7	5.88	4,870	May 17	4.78	3,090	Aug. 5	.98	34.7
Mar. 24	3.70	1,750	June 10	3.01	1,040	Sept. 26	1.20	76.3

Daily discharge, in second-feet, of Weiser River above Crane Creek, near Weiser, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	149	220			2,420	2,360	2,050	1,640	312	38	23
2	15	182	228			2,620	2,170	2,230	1,500		38	18
3	15	155	254			2,420	2,170	2,360	1,390		35	22
4	16	143	236			2,750	2,360	2,360	1,240		33	22
5	16	179	244		5,500	4,080	2,820	2,420	1,120		32	22
6	16	224	244			5,870	3,170	2,680	1,050		25	22
7	19	193	232			4,720	3,400	2,960	1,050	160	21	26
8	20	179	200	250	3,470	4,720	3,540	2,960	1,020		19	33
9	21	176			3,030	4,240	3,540	2,620	1,000		18	45
10	22	267			2,170	2,680	3,620	2,420	1,030		18	56
11	23	276	190		1,990	2,230	3,840	2,360	979		18	56
12	25	232			1,990	4,400	2,420	922		96	18	56
13	25	179			1,500	1,750	3,400	2,420	898	58	19	56
14	25	172	200		1,690	3,840	2,560	851		43	20	54
15	26	186	208		1,190	1,750	3,470	2,680	844	28	22	58
16	26	182				1,810	3,920	2,960	836	25	61	61
17	28	168				2,050	4,080	3,030	828	28	50	65
18	28	159			1,100	1,750	4,080	3,100	798	30	40	67
19	28	165				1,580	4,720	3,030	750	32	38	72
20	29	315		300		1,640	4,720	3,170		30	32	78
21	29	680			1,580	1,580	3,920	3,100	698	33	23	78
22	29	617			2,300	1,690	3,540	3,100	637	45	20	81
23	32	589			5,040	1,750	3,240	2,750	591	49	19	81
24	33	480	150		6,380	1,750	2,890	2,560	523	65	19	78
25	33	408			4,720	1,750	2,560	2,490	460	69	21	76
26	33	362			2,960	1,690	2,360	2,420	400	67	28	74
27	35	276			2,820	1,690	2,170	2,230	359	65	32	67
28	44	232		700	2,820	1,750	1,990	2,170	331	61	32	65
29	101	224			-------	2,170	1,930	2,110	321	56	29	69
30	179	216			-------	2,620	1,930	1,990	390	50	25	84
31	146	-------			-------	2,560	-------	1,810	-------	45	22	-------

NOTE.—Discharge estimated because of ice Dec. 9–13, 16–31, Jan. 1–31, Feb. 1–2 on account of missing or faulty gage height record Feb. 3–7, 12–14, 16–20, June 19–20, and July 2–11, based upon weather records and flow at other stations in Weiser River Basin. Braced figures show mean discharge for periods indicated.

Monthly discharge of Weiser River above Crane Creek, near Weiser, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	179	15	36.5	2,240
November	680	143	266	15,800
December	254	----------	181	11,100
January	----------	----------	366	22,500
February	----------	----------	3,180	177,000
March	5,870	1,580	2,440	150,000
April	4,720	1,930	3,240	193,000
May	3,170	1,810	2,570	158,000
June	1,640	321	840	50,000
July	312	25	93.1	5,720
August	61	18	27.9	1,720
September	84	18	55.5	3,300
The year	----------	15	1,090	790,000

WEST FORK OF WEISER RIVER NEAR FRUITVALE, IDAHO

LOCATION.—In NW. ¼ sec. 9, T. 17 N., R. 1 W., at Caseman ranch, 1¼ miles northwest of Fruitvale post office, Adams County, and 1½ miles above junction with Weiser River.

DRAINAGE AREA.—65 square miles (measured on Forest Service map).

RECORDS AVAILABLE.—October 5, 1910, to January 31, 1913; October 1, 1919, to September 30, 1925, when station was discontinued.

GAGE.—Vertical staff on left bank temporarily installed April 8, 1925, at same site and datum as Stevens water-stage recorder in use June 17, 1924, to April 7, 1925; read by J. A. Finn. Datum of gage raised about 2.00 feet August 8, 1920; all gage readings prior to October 1, 1920, are based on former datum.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge half a mile below gage.

CHANNEL AND CONTROL.—Bed composed of sand and coarse gravel. Banks covered with brush; left bank not likely to be overflowed; right bank may be overflowed at extremely high stages. Control formed by poorly defined gravel riffle and by log embedded in stream bed below gage; affected at times by débris.

EXTREMES OF DISCHARGE.—Maximum discharge recorded during year, 688 second-feet April 19; minimum stage, 0.02 foot at 8.45 p. m. July 8 (discharge, 0.8 second-foot).

1910–1913; 1919–1925: Maximum discharge recorded, 688 second-feet April 19, 1925; minimum discharge, 0.5 second-foot July 23–27, 1911.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Several small ditches divert above and below station.

REGULATION.—Flow regulated by head gates at Lost Valley Reservoir 12 miles above. Gates in dam changed only at infrequent intervals.

ACCURACY.—Stage-discharge relation changed slightly several times during year; affected by ice December 15 to February 12. Well defined rating curves parallel to standard curve used prior to April 5; rating curve well defined between 10 and 300 second-feet used after April 22; shifting-control method used for intervening period. Operation of water-stage recorder fairly satisfactory October 1 to April 7; thereafter gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table. For period water-stage recorder was operated, mean daily gage height determined by inspection of recorder graph. Records good except from December to February for which they are fair.

Discharge measurements of West Fork of Weiser River near Fruitvale, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 25	1.23	53.8	May 19	1.91	197	July 21	0.96	64.7
Feb. 19	1.60	102	May 30	1.36	108	Aug. 8	.65	34.4
Mar. 25	2.10	162	June 14	.86	52.2	Aug. 25	.59	27.9
Apr. 26	2.36	290	June 19	.41	13.2	Sept. 23	.52	22.8

Daily discharge, in second-feet, of West Fork of Weiser River near Fruitvale, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.6	16	23		20	89	238	276	102	2.5	51	26
2	8.2	14	28			90	224	299	74	2.5	49	25
3	8.6	14	23			90	249	299	68	2.1	36	
4	9.0	75	20			106	314	311	66	1.8	35	25
5	9.0	71	18			168	430	311	64	1.5	34	
6	9.5	68	18			258	469	323	61	1.3	34	26
7	10	64	17		250	220	494	348	61	1.2	34	24
8	9.5	63	17			205	451	323	59	1.0	34	26
9	10	72	16			173	398	288	57	1.0	34	26
10	10	66	16			142	421	265	57	3.2	33	25
11	11	62	16			120	469	265	56	3.0	34	24
12	10	63	17			112	481	244	53	3.0	34	24
13	10	61	17	10	102	96	445	233	53	3.2	27	25
14	10	57	18		104	86	456	223	53	2.8	55	24
15	10	52			113	84	509	223	53	59	29	24
16	10	51	13		110	84	581	213	51	56	27	24
17	10	45			110	81	622	204	49	53	27	24
18	10	27			112	77	594	194	14	53	26	24
19	11	18			109	75	688	194	13	53	26	26
20	12	40			109	78	530	175	9.2	53	26	25
21	12	60			119	86	473	175	8.1	64	26	24
22	12	66			122	113	447	166	8.1	61	26	24
23	12	64			168	137	401	157	8.1	59	33	23
24	13	61	5		150	157	348	141	5.6		29	24
25	12	54			123	162	311	141	5.6	56	27	24
26	12	40			105	155	288	130	4.9		27	22
27	14	33			100	150	254	120	4.6		26	22
28	23	28		15	91	182	254	114	3.5	53	26	26
29	21	26			-------	247	254	108	3.2	53	26	25
30	14	23	7		-------	286	254	108	2.5	53	26	24
31	16	-------			-------	260	-------	102	-------	52	26	-------

NOTE.—Discharge estimated Dec. 15 to Feb. 12, based on weather records and flow at Indian Valley and river station above Crane Creek; July 24–27, Sept. 3–5, based largely on Lost Creek flow; interpolated Dec. 9, 11–12, May 26, June 4, July 7, 16, Aug. 18, Sept. 15, 20, and 29. Braced figures show mean discharge for periods indicated.

Monthly discharge of West Fork of Weiser River near Fruitvale, Idaho, for the year ending September 30, 1925

[Drainage area, 65 square miles]

Month	Discharge in second-feet				Inches	Run-off in acre-feet
	Maximum	Minimum	Mean	Per square mile		
October	23	6.6	11.5	0.177	0.20	707
November	75	14	48.5	.746	.83	2,890
December	28	----------	12.2	.188	.22	750
January	----------	----------	11.0	.169	.19	676
February	----------	----------	165	2.54	2.64	9,160
March	286	75	141	2.17	2.50	8,670
April	688	224	412	6.34	7.07	24,500
May	348	102	215	3.31	3.82	13,200
June	102	2.5	37.6	.578	.64	2,240
July	64	1.0	31.5	.485	.56	1,940
August	55	26	31.7	.488	.56	1,950
September	26	22	24.5	.377	.42	1,460
The year	688	1.0	94.1	1.45	19.65	68,100

LOST CREEK NEAR TAMARACK, IDAHO

LOCATION.—In sec. 28, T. 19 N., R. 1 W., a quarter of a mile below dam of Lost Valley Reservoir, 6 miles southwest of Tamarack, Adams County, and 16 miles north of Council.

DRAINAGE AREA.—30 square miles (furnished by Weiser Valley Land & Water Co.).

RECORDS AVAILABLE.—January 1, 1910, to August 21, 1914; May 21, 1920, to September 30, 1921; May 22, 1924, to September 30, 1925.

GAGE.—Stevens continuous water-stage recorder on right bank; installed May 21, 1920; inspected by O. V. Karr, E. G. Van Hoesen, and O. C. Mink.

DISCHARGE MEASUREMENTS.—Made from footbridge near gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel, cobbles, and boulders; very rough. One channel at all stages. Control formed by well-defined rock riffle 20 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, about 3.60 feet about April 16, determined by W. G. Sloan from marks on banks (discharge, 472 second-feet); minimum stage from water-stage recorder, 0.57 foot from noon to 1 p. m. September 5 (discharge, 0.5 second-foot).

1910–1914; 1920–21; 1924–25: Maximum stage recorded, 4.29 feet from 9 p. m. May 17 to 8 a. m. May 18, 1921 (discharge, 688 second-feet); practically no flow at various times gates in dam were closed.

ICE.—Records discontinued during winter.

DIVERSIONS.—None between gage and reservoir; practically entire flow diverted below during irrigation season.

REGULATION.—Flow entirely regulated by head gates at dam above.

ACCURACY.—Stage-discharge relation changed slightly September 20. Rating curve well defined between 20 and 140 second-feet, above which it is fairly well defined, and curve parallel thereto used, respectively, April 18 to September 19 and September 20–30. Operation of water-stage recorder satisfactory, except for short periods owing to lack of attention. Daily discharge ascertained by applying to rating table daily gage height determined by inspection of recorder graph. Records good, except for estimated periods for which they are fair.

COOPERATION.—Gage-height record furnished in part by Mesa Orchards Co.

Discharge measurements of Lost Creek near Tamarack, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 27	2.35	135	Aug. 9	1.70	36.8
June 15	1.78	42.5	Sept. 23	1.52	21.2
July 22	1.90	58.4			

Daily discharge, in second-feet, of Lost Creek near Tamarack, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	------	138		3	51	26	16	------	132	44	61	27	22
2	------	150		2	43	26	17	------	134	15	61	27	22
3	------	157		2	36	26	18	329	134	9	61	27	22
4	------	161		2	36	26	19		134	6	59	27	23
5	------	167		2	36	19	20		134	3	59	27	22
6	------	178		1	36	26	21		132	3	59	27	22
7	------	185	45	1	36	27	22	225		3	58	27	22
8	------	192		2	36	27	23			3	58	27	22
9	------	187		7	36	27	24			3	57	27	21
10	------	174		7	35	25	25			3	56	27	21
11	------	148		7	32	25	26		75	3	56	27	21
12	------	144		7	28	24	27	134		3	54	27	21
13	------	140	43	7	28	24	28	132		3	53	27	21
14	------	134	43	17	28	24	29	130		3	52	27	21
15	------	132	44	61	28	24	30	132		3	52	27	20
							31	------		------	52	26	------

NOTE.—Discharge estimated on account of missing gage heights Apr. 19–26 and May 22 to June 12, based on comparison with flow of West Fork of Weiser River. Braced figures show mean discharge for periods indicated.

Monthly discharge of Lost Creek near Tamarack, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 18–31	----------	130	204	5,260
May	192	----------	127	7,810
June	----------	3	25.9	1,540
July	61	1	33.4	2,050
August	51	26	30.8	1,890
September	27	19	23.3	1,390
The period	----------	----------	----------	19,900

LITTLE WEISER RIVER NEAR INDIAN VALLEY, IDAHO

LOCATION.—In sec. 36, T. 14 N., R. 1 W., half a mile below Richardson ranch house and 5 miles southeast of Indian Valley, Adams County.

DRAINAGE AREA.—81 square miles (measured on topographic maps).

RECORDS AVAILABLE.—June 26, 1920, to February 28, 1921; March 24 to June 29, 1923; February 25, 1924, to September 30, 1925. From February 25 to April 22, 1924, records were collected at the Burger ranch 1 mile downstream.

GAGE.—Au water-stage recorder on left bank installed March 30, 1925. From April 23, 1924, to February 4, 1925, Au water-stage recorder on right bank opposite present gage. Temporary staff at this site and datum used February 18 to March 29, 1925. Gages read by G. L. Burger.

DISCHARGE MEASUREMENTS.—Made from footbridge 10 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of lava rock overlain with gravel. One channel at all stages. Banks fairly high. Control well defined; not permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, about 4.19 feet about 10 p. m. February 4 (discharge, about 1,840 second-feet); minimum discharge, 4.4 second-feet October 1 and 2.

1920–21; 1923–25: Maximum stage and discharge recorded February 4, 1925; minimum discharge, 3.6 second-feet August 28–30 and September 4 and 5, 1924.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Few small ranch diversions upstream. After high-water period entire flow is diverted for irrigation below gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed following flood February 4; affected by ice December 17 to January 31. Rating curve well defined below 220 second-feet and extended above parallel to subsequent curve used October 1 to February 4; curve well defined between 10 and 200 second-feet and fairly well defined below 500 second-feet used March 30 to September 30; shifting-control method used February 18 to March 29. Operation of water-stage recorder satisfactory except during ice periods and for short period after February 4 when gage was washed out; daily staff readings from temporary gage used February 18 to March 29. Daily discharge ascertained by applying to rating table mean daily gage height. Records good except for period December 16 to February 4, for which they are poor, and for February 18 to May 18, for which they are fair.

COOPERATION.—Gage-height record furnished by Southern Idaho Land & Power Co.

Discharge measurements of Little Weiser River near Indian Valley, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 24	1.01	27.1	May 18	2.21	473	July 20	0.70	24.3
Feb. 18	.74	68.4	May 28	1.96	411	Aug. 8	.60	16.5
Mar. 31	1.40	161	June 12	1.46	176	Aug. 25	.56	14.2
Apr. 25	1.66	231	June 20	1.35	138	Sept. 24	.50	10.3

Daily discharge, in second-feet, of Little Weiser River near Indian Valley, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	26	21		117	65	153	281	302	81	16	11
2	4.4	23	25		381	62	150	310	277	68	17	10
3	6.4	19	22		674	63	186	324	252	62	17	9.6
4	7.2	16	20	20	938	56	264	324	225	60	16	9.6
5	6.0	26	22		950	94	310	324	218	58	16	12
6	6.0	19	19			133	328	393	214	54	16	13
7	5.6	15	18			112	346	461	214	47	16	15
8	5.6	13	20			139	393	461	203	45	16	16
9	5.6	12	28			117	436	403	214	40	16	14
10	6.4	20	27			65	490	346	207	36	16	12
11	6.8	17	22		225	54	535	360	186	32	16	12
12	6.8	19	22			47	550	379	182	32	15	12
13	7.2	18	22			48	470	398	176	31	16	11
14	7.2	17	24			44	422	446	166	28	28	10
15	7.2	16	22			40	480	461	166	27	20	10
16	7.6	18	22	16	50	42	535	570	163	26	16	10
17	8.1	19				38	515	461	153	23	15	10
18	8.1	26			68	40	461	515	153	23	15	10
19	8.7	96			70	40	432	500	144	25	13	10
20	8.7	89			72	34	398	480	144	24	13	12
21	9.2	89			87	35	360	490	142	27	13	10
22	9.2	60			96	70	351	475	130	27	12	10
23	9.2	46			241	74	320	466	120	25	14	10
24	9.8	31	13		159	83	289	451	110	22	18	10
25	9.8	31			133	94	248	446	100	22	15	9.6
26	9.8	23			114	89	237	427	94	22	13	8.8
27	12	24			89	89	229	432	87	20	13	8.8
28	22	25		100	130	218	403	85	18	13	10	
29	28	26			-------	166	229	384	81	18	13	16
30	17	24			-------	193	252	356	85	17	12	13
31	16	-------		180	-------	169	-------	324	-------	17	12	------

NOTE.—Discharge estimated Dec. 17 to Jan. 31, based on occasional gage readings and weather records; estimated Feb. 5–17, based largely on flow of Weiser River and from precipitation records; interpolated Nov. 23. Braced figures show mean discharge for periods indicated.

Monthly discharge of Little Weiser River near Indian Valley, Idaho, for the year ending September 30, 1925

[Drainage area, 81 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	28	4.4	9.23	0.114	0.13	568
November	96	12	30.1	.372	.42	1,790
December	28		17.8	.220	.25	1,090
January			35.6	.440	.51	2,190
February			256	3.16	3.29	14,200
March	193	34	81.5	1.01	1.16	5,010
April	550	150	353	4.36	4.86	21,000
May	570	281	415	5.12	5.90	25,500
June	302	81	166	2.05	2.29	9,880
July	81	17	34.1	.421	.49	2,100
August	28	12	15.4	.190	.22	947
September	16	8.8	11.2	.138	.15	666
The year		4.4	117	1.44	19.67	84,900

LITTLE WEISER RIVER NEAR CAMBRIDGE, IDAHO

LOCATION.—Near line between secs. 8 and 9, T. 14 N., R. 2 W., on Gladhart Lane, half a mile south of State highway, 4½ miles east of Cambridge, Washington County, 5 miles above mouth, and 7 miles below entrance of Grays Creek.

DRAINAGE AREA.—187 square miles (measured on topographic maps and base map of Idaho.

RECORDS AVAILABLE.—May 22, 1920, to August 8, 1925, when station was temporarily discontinued.

GAGE.—Vertical staff on right abutment of highway bridge; read by P. M. Gladhart, Mrs. W. J. Martin, and Vera Cable. From September 1 to November 1, 1923, during construction of new highway bridge, a temporary staff 500 feet upstream was used.

DISCHARGE MEASUREMENTS.—Made from highway bridge at gage or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel. Channel winding above and below gage. Banks may be overflowed at high stages. Control formed by well-defined gravel riffle 75 feet below gage; subject to change during high water.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 5.40 feet on afternoon of February 23 (discharge, 1,380 second-feet); no flow for several weeks after August 2.

1920–1925: Maximum discharge estimated, based on well-defined water mark on gage, about 2,400 second-feet, February 8, 1924; no flow August 2 to September 14 and September 17–25, 1920, July 20 to September 30, 1924, and for several weeks after August 2, 1925.

ICE.—Stage-discharge relation affected by ice; records discontinued during winter.

DIVERSIONS.—Numerous ditch and canal diversions above, chiefly for irrigation of land in Indian Valley.

REGULATION.—None except that due to diversions.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 600 second-feet and extended above. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Little Weiser River near Cambridge, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 19	2.50	160	May 18	3.57	519	June 20	2.40	136
Mar. 24	2.71	216	May 28	3.50	504	July 20	1.30	a.9
Apr. 25	3.02	320	June 12	2.64	193	Sept. 24	1.31	.3

a Estimated.

Daily discharge, in second-feet, of Little Weiser River near Cambridge, Idaho, for the year ending September 30, 1925

Day	Feb.	Mar.	Apr.	May	June	July	Aug.
1		332	277	277	350	83	0.2
2		332	243	295	313	71	.1
3		332	243	332	277	65	
4		465	296	350	243	62	
5		625	350	369	228	60	0
6		1,070	332	426	243	62	
7		584	332	484	212	44	
8		709	369	465	212	35	
9		584	388	446	212	36	
10	313	277	426	388	212	28	
11	277	277	465	388	184	25	
12	243	243	625	388	184	13	
13	198	228	544	426	184	9.8	
14	159	212	465	465	159	6.8	
15	159	243	544	465	159	5.0	
16	159	243	625	544	159	4.6	
17	148	332	625	504	154	4.2	
18	136	228	544	544	150	3.4	
19	148	198	544	544	145	2.5	
20	157	243	544	584	136	.9	
21	260	212	465	584	126	.9	
22	313	212	465	625	116	2.5	
23	1,070	212	446	584	116	4.2	
24	1,020	212	350	544	108	3.8	
25	667	212	313	504	93	2.5	
26	465	198	295	504	83	3.4	
27	446	198	277	465	83	.7	
28	350	212	277	465	71	.2	
29		277	243	426	71	.2	
30		369	260	407	80	.2	
31		277		350		.2	

Monthly discharge of Little Weiser River near Cambridge, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
February 10-28	1,070	136	352	13,300
March	1,070	198	334	20,500
April	625	243	406	24,200
May	625	277	456	28,000
June	350	71	169	10,100
July	83	.2	20.6	1,270

CRANE CREEK RESERVOIR NEAR MIDVALE, IDAHO

LOCATION.—In SE. ¼ sec. 19, T. 12 N., R. 2 W., 12 miles southeast of Midvale, Washington County.

DRAINAGE AREA.—269 square miles (measured on topographic maps).

RECORDS AVAILABLE.—November 25, 1923, to September 30, 1925.

GAGE.—Sloping staff consisting of painted chisel marks on gate-control pipe at southeast end of dam above tunnel outlet; read by Jesse W. Bain and Kenneth A. Hodge.

EXTREMES OF STAGE.—Maximum stage recorded during year, 44.7 feet February 7; minimum stage, 15.9 feet October 1 to November 5.

1924–25: Maximum stage recorded February 7, 1925; minimum stage, 9.4 feet November 25, 1923.

COOPERATION.—Gage-height record furnished by Crane Creek Reservoir Administration Board.

Stored water from this reservoir is used for irrigation in the lower Weiser Valley. The reservoir is formed by a gravity earth dam, 65 feet high and 350 feet long at crest. Elevation of spillway crest referred to gage datum is 55 feet, at which stage the capacity of reservoir is reported to be about 60,000 acre-feet, about 3,300 acres being submerged. Elevation at bottom of outlet gates corresponds to approximately 8.0 feet on gage, at which stage the usable storage is zero.

Daily gage height, in feet, of Crane Creek Reservoir near Midvale, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15.9	15.9	------	------	24.2	42.22	42.15	42.00	40.60	38.52	34.75	27.60
2	15.9	15.9	------	------	26.5	42.20	42.10	42.00	40.48	38.42	34.42	27.22
3	15.9	------	16.8	17.5	30.4	42.12	42.10	41.95	40.38	38.33	34.20	26.98
4	15.9	------	------	17.5	37.5	42.06	42.10	41.90	40.32	38.25	34.00	26.85
5	15.9	15.9	------	------	42.3	42.05	42.10	41.90	40.28	38.18	33.62	26.75
6	------	------	16.9	------	44.35	42.09	42.05	41.90	40.18	38.08	33.38	26.55
7	------	------	17.0	17.5	44.7	42.10	42.05	41.88	40.15	37.98	------	26.38
8	15.9	16.0	17.1	------	44.6	42.10	42.00	41.85	40.10	37.90	32.88	26.25
9	------	16.0	------	------	44.6	42.10	42.00	41.80	40.05	37.83	32.50	26.10
10	------	------	------	17.5	44.18	42.00	42.00	41.80	40.00	37.78	32.28	25.80
11	15.9	------	17.2	17.5	43.62	41.75	42.00	41.72	39.95	37.70	31.98	25.45
12	15.9	16.0	------	------	42.95	41.62	42.00	41.62	39.90	37.62	31.72	------
13	------	------	17.3	------	42.3	41.60	41.90	41.52	39.83	37.52	31.45	25.05
14	------	------	17.3	17.5	41.65	41.65	41.90	41.42	39.75	37.42	31.25	24.92
15	15.9	16.1	17.4	------	40.95	41.70	41.90	41.32	39.68	37.28	31.10	24.78
16	------	16.2	------	------	40.26	41.80	41.92	41.25	39.63	37.18	30.82	24.62
17	------	------	17.5	17.5	39.6	41.90	41.95	41.25	39.58	37.00	30.55	24.50
18	15.9	------	------	17.5	39.12	42.00	41.95	41.20	39.53	36.80	30.22	24.38
19	15.9	16.3	------	------	39.12	42.00	41.95	41.15	39.43	36.45	29.98	24.25
20	------	------	17.5	------	39.38	42.00	41.98	41.15	39.40	36.32	29.85	24.15
21	------	------	17.5	17.5	39.7	42.00	42.00	41.10	39.30	36.15	29.62	24.02
22	15.9	16.5	------	------	40.32	42.00	42.08	41.05	39.23	36.05	29.40	23.85
23	------	16.5	------	------	41.34	42.00	42.10	41.05	39.18	35.98	29.20	23.70
24	------	------	17.5	17.5	42.25	42.02	42.10	41.05	39.15	35.80	28.95	23.60
25	15.9	------	------	17.5	42.5	42.02	42.10	41.00	39.05	35.70	28.80	23.45
26	15.9	16.6	------	------	42.48	42.05	42.10	41.00	38.98	35.52	28.62	23.35
27	------	------	17.5	------	42.42	42.05	42.10	40.95	38.95	35.42	28.45	23.25
28	------	------	17.5	17.5	42.32	42.05	42.08	40.95	38.88	35.32	28.30	23.20
29	15.9	16.6	------	18.0	------	------	42.02	40.90	38.78	35.22	------	------
30	------	16.7	------	20.0	------	------	42.00	40.85	38.66	35.08	27.95	------
31	------	------	17.5	22.0	------	------	------	40.80	------	34.92	27.80	------

NOTE.—Observer reported reservoir frozen over Dec. 9 to Jan. 24.

CRANE CREEK NEAR MIDVALE, IDAHO

LOCATION.—In SE. ¼ sec. 19, T. 12 N., R. 2 W., 400 feet below Crane Creek Dam and 12 miles southeast of Midvale, Washington County. No tributaries between dam and station; Last Chance Creek enters three-fourths mile below.

DRAINAGE AREA.—269 square miles (measured on topographic maps).

RECORDS AVAILABLE.—October 30, 1910, to April 8, 1916; May 1, 1924, to September 30, 1925.

GAGE.—Au water-stage recorder on right bank, installed May 2, 1924; inspected by Jesse W. Bain and Kenneth A. Hodge.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—Bed composed of lava rocks and coarse gravel; very rough. One channel at all stages. Control formed by Cippoletti weir, crest of which is 20 feet long, installed in concrete, 25 feet below gage. Average elevation of weir crest corresponds to 0.02 foot on gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 3.42 feet February 7 to 7.30 a. m. February 13 (discharge, 674 second-feet); channel reported dry October 1 to noon February 4, 9 a. m. February 19 to 5 p. m. February 23, and 1 p. m. March 13 to noon March 16.

1910–1916; 1924–25: Maximum stage recorded, 8.9 feet December 3, 1910 (discharge, 4,240 second-feet); no flow reported at various times when gates in dam are closed.

DIVERSIONS.—No large diversions above gage. Flood waters are impounded in Crane Creek Reservoir and flow past gage therefore shows only the amount of water released through the dam and does not necessarily represent the actual flow of Crane Creek.

REGULATION.—Flow completely regulated by gates at dam.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 300 second-feet. Gage read to hundredths twice daily February 4 to March 8, after which time water-stage recorder was satisfactorily operated. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

COOPERATION.—Gage-height record furnished in part by Crane Creek Reservoir Administration Board.

Discharge measurements of Crane Creek near Midvale, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 10	2.18	275	Apr. 28	0.77	47.1	Sept. 24	0.71	38.3
Do	2.18	276	June 22	.80	46.0			
Apr. 1	1.12	88.8	Aug. 6	1.70	163			

Daily discharge, in second-feet, of Crane Creek near Midvale, Idaho, for the year ending September 30, 1925

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	300	92	45	48	58	142	85
2	-------	274	92	45	48	58	160	85
3	-------	274	92	47	48	60	173	84
4	325	274	92	36	48	63	195	84
5	667	274	92	26	48	59	165	83
6	667	274	66	43	48	45	165	83
7	674	274	47	45	48	46	163	81
8	674	274	46	45	48	64	163	76
9	674	274	45	45	48	65	162	.72
10	674	274	45	45	48	67	162	72
11	674	274	45	46	48	44	160	71
12	674	160	45	48	47	44	155	71
13	671	50	45	49	48	61	150	59
14	667	-------	45	49	48	81	149	48
15	660	-------	45	49	48	110	150	47
16	653	19	45	48	48	128	137	44
17	575	37	45	48	48	152	130	41
18	326	37	45	48	48	166	131	41
19	80	36	45	48	48	148	131	42
20	-------	35	45	48	48	109	130	42
21	-------	35	45	48	48	109	131	41
22	-------	35	45	48	47	92	105	41
23	41	34	45	48	47	79	90	40
24	300	34	45	48	49	78	89	40
25	326	34	45	48	57	76	89	33
26	326		45	48	57	76	88	21
27	326		45	48	58	76	89	21
28	326	34	45	48	58	76	88	21
29	-------		45	48	59	76	88	21
30	-------	78	45	48	58	87	88	21
31	-------	92	-------	48	-------	141	87	-------

NOTE.—Discharge estimated Feb. 4, 19, 23, Mar. 13, 16, 26–31, based on gage heights for part days and observer's notes. No flow on days for which no discharge is given.

Monthly discharge of Crane Creek near Midvale, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
January	0	0	0	0
February	674	0	392	21,800
March	300	0	126	7,750
April	92	45	53.6	3,190
May	49	26	46.2	2,840
June	59	47	49.9	2,970
July	166	44	83.7	5,150
August	195	87	132	8,120
September	85	21	53.7	3,200
The year	674	0	75.9	55,000

CRANE CREEK AT MOUTH, NEAR WEISER, IDAHO

LOCATION.—In sec. 14, T. 11 N., R. 4 W., just below steel highway bridge at Harris ranch, a quarter of a mile above mouth, and 12 miles northeast of Weiser, Washington County.

DRAINAGE AREA.—312 square miles (measured on topographic maps).

RECORDS AVAILABLE.—July 14, 1920, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank installed July 21, 1920; inspected by O. A. Purcell.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of cobbles and boulders; very rough. Concrete control constructed August 21, 1920, 100 feet below gage. Above stage of about 4.0 feet stream flows in two channels. Stage of zero flow at gage height 1.25 feet ±0.05 foot as determined May 20, 1922.

EXTREMES OF DISCHARGE.—Maximum stage during year from well-defined marks on gage, 6.80 feet on or about February 7 (discharge, about 2,350 second-feet); minimum stage recorded, 1.48 feet at 6 p. m. October 12 discharge, 0.9 second-foot).

1920–1925: Maximum stage and discharge recorded on or about February 7, 1925; minimum stage, 1.30 feet January 21, 1922 (discharge, 0.4 second-foot).

ICE.—Stage-discharge relation often slightly affected by ice.

DIVERSION.—Canal of Washington County Irrigation District, which diverts about 4 miles above gage, is principal diversion. Several small ranch diversions a short distance above gage.

REGULATION.—Flow is regulated by head gates at Crane Creek Reservoir and by diversions above.

ACCURACY.—Stage-discharge relation changed February 2–7 by forming of gravel bar above concrete control. Three rating curves used; the first applicable October 1 to February 1 well defined below 100 second-feet, the second applicable February 8 to June 10 well defined between 5 and 325 second-feet, and the third applicable June 11 to September 30 well defined. Operation of water-stage recorder satisfactory except for short periods December to February. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph except as noted in footnote to daily-discharge table. Records good except for estimated periods for which they are fair.

Discharge measurements of Crane Creek at mouth, near Weiser, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 21	3.46	172	Apr. 21	2.46	34.7	Aug. 5	3.17	115
Mar. 7	3.98	309	May 17	1.94	6.9	Aug. 26	2.49	42.8
Mar. 23	2.32	23.3	June 23	1.90	10.3	Sept. 26	1.88	10.8
Apr. 2	2.83	66.4	July 19	3.17	110			

Daily discharge, in second-feet, of Crane Creek at mouth, near Weiser, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.8	4.2	3.8		36	366	68	21	8.0	7.5	84	39
2	3.4	4.0	4.2	4		330	68	15	8.6	7.8	98	39
3	2.7	3.8	4.2			330	67	10	8.0	8.1	117	39
4	2.7	4.0	4.5	4.2		334	67	8.9	7.4	9.9	144	39
5	2.7	4.0	4.5		525	330	68	4.0	7.4	10	113	40
6	2.7	4.0	5.0			330	57	2.9	8.0	9.0	107	38
7	2.7	3.8	6.0	4		312	31	3.8	8.3	7.2	108	42
8	2.7	3.6	4.7		1,000	337	29	4.8	8.0	7.5	107	38
9	2.7	4.0	4.0		940	337	28	4.0	8.0	15	108	31
10	2.7	3.8	4.2		903	315	27	3.9	9.1	55	108	30
11	2.5	3.8	4.5	4.2	881	306	28	4.4	9.9	36	107	30
12	2.2	3.6	4.2		873	226	28	5.4	10	35	104	29
13	2.2	3.6	4.5		866	91	27	6.2	10	39	99	28
14	2.0	3.6	4.5		866	23	26	6.4	10	46	99	15
15	1.5	3.6	4.5	4	918	18	28	6.4	12	66	99	13
16	1.5	3.6	4.7		888	16	28	6.6	11	81	91	13
17	1.5	3.6	3.4		845	50	31	6.8	11	86	79	10
18	1.6	3.6	3.4	4.2	435	46	33	6.4	10	115	78	9.6
19	1.6	4.5			177	40	172	6.6	10	108	78	9.6
20	1.6	6.5			68	33	55	6.8	10	84	78	10
21	1.6	5.8		4	210	26	35	7.2	11	75	77	9.3
22	1.6	4.7			179	26	35	7.2	10	50	62	9.0
23	1.8	4.5			478	23	29	6.8	10	34	43	11
24	1.9	4.5		4.7	363	23	28	17	17	33	43	18
25	2.0	4.2	2	5.8	407	22	28	7.4	14	29	43	18
26	2.3	4.2		5.5	384	21	28	7.2	13	27	42	10
27	2.9	4.0		5.5	384	21	27	7.6	10	27	41	7.5
28	4.0	4.0		5.5	377	20	26	6.8	10	26	41	7.5
29	4.5	4.0		11	-------	20	26	6.6	9.0	25	40	8.1
30	4.2	4.0		20	-------	33	26	6.8	8.4	26	40	8.1
31	4.2	-------		26	-------	68	-------	7.6	-------	77	40	-------

NOTE.—Discharge estimated on account of missing gage heights Dec. 19–31, Jan. 1–3, 5–10, 12–17, 19–23, and Feb. 2–7, based on flow from Crane Creek Reservoir and weather records. Discharge based on staff readings Jan. 4, 11, and 18. Braced figures show mean discharge for periods indicated.

Monthly discharge of Crane Creek at mouth, near Weiser, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	5.8	1.5	2.58	159
November	6.5	3.6	4.19	244
December	6.0	----------	3.38	208
January	26	----------	5.70	350
February	----------	----------	558	31,000
March	366	16	144	8,850
April	172	26	41.8	2,490
May	21	2.9	7.37	453
June	17	7.4	9.90	589
July	115	7.2	40.7	2,500
August	144	40	81.2	4,990
September	42	7.5	21.6	1,290
The year	----------	----------	73.4	53,100

CRANE CREEK IRRIGATION DISTRICT CANAL NEAR WEISER, IDAHO

LOCATION.—In sec. 7, T. 11 N., R. 3 W., 3½ miles below diversion dam of Washington County Irrigation District[6] and 12 miles northeast of Weiser, Washington County.

RECORDS AVAILABLE.—June 23, 1920, to September 30, 1925.

[6] Washington County Irrigation District formed by reorganization of Crane Creek and Sunnyside Irrigation Districts in fall of 1923.

GAGE.—Friez water-stage recorder on right bank, 125 feet above end of flume; installed May 5, 1923; inspected by G. E. Hilt, P. D. Williamson, and C. C. Herner.

DISCHARGE MEASUREMENTS.—Made from plank across canal.

CHANNEL AND CONTROL.—Section of wooden flume and earth canal below gage forms control.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.07 feet from 8 a. m. to 1 p. m. July 4 (discharge, 49 second-feet); canal dry October 1 to March 31 and July 10–14.

1920–1925: Maximum stage recorded, 2.83 feet (upper location) from 4 to 8 a. m. July 15, 1920 (discharge, 79 second-feet); canal usually dry during nonirrigation periods.

DIVERSIONS.—None between gage and point of diversion.

REGULATION.—Flow controlled by head gates at diversion dam.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operation of water-stage recorder satisfactory except for two short periods. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records excellent except for estimated period in July, for which they are fair.

COOPERATION.—Gage-height record furnished by Washington County Irrigation District.

Crane Creek Irrigation District Canal diverts water from south side of Crane Creek in sec. 3, T. 11 N., R. 3 W., 5½ miles below Crane Creek Reservoir where water is released and transported through canal for irrigation of lands in Washington County irrigation district, aggregating 10,000 acres of which less than 1,200 acres was irrigated in 1925. The district operates about 100 miles of canal and irrigation structures under one management.

Discharge measurements of Crane Creek Irrigation District Canal near Weiser, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 2	1.37	22.3	June 23	1.69	34.2	Aug. 26	1.86	39.4
Apr. 21	1.40	22.8	July 19	[a] 1.93	36.7	Sept. 26	1.17	15.8
May 17	1.78	38.2	Aug. 5	1.83	37.9			
June 10	1.75	36.0	Aug. 11	1.87	40.4			

[a] Stage-discharge relation affected by opening waste gate 85 feet below gage.

Daily discharge, in second-feet, of Crane Creek Irrigation District Canal near Weiser, Idaho, for the year ending September 30, 1925

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	22	26	36	45	40	40	16	23	38	36		41	38
2	22	31	36	45	40	41	17	23	37	36		41	37
3	22	37	36	45	40	41	18	23	37	36	25	41	37
4	23	37	36	47	38	41	19	25	37	35		41	38
5	23	21	36	47	39	41	20	23	37	35		40	38
6	23	36	36	35	41	41	21	23	37	35	40	40	38
7	22	38	36	34	41	40	22	23	37	34	40	41	38
8	22	38	36	45	41	39	23	22	36	34	38	41	29
9	22	38	36	40	41	39	24	22	28	26	38	40	18
10	22	38	36		41	39	25	22	35	36	39	40	18
11	22	38	36		41	39	26	22	35	39	41	41	16
12	23	38	35	0	40	39	27	22	36	39	41	41	16
13	23	38	35		39	38	28	23	36	41	41	40	16
14	23	38	35		40	37	29	23	36	45	41	40	16
15	23	38	35	25	41	37	30	23	36	45	40	40	14
							31	------	36	------	40	40	------

NOTE.—Discharge estimated Apr. 1, July 9, and 15–20, based on comparison with stations on Crane Creek below reservoir and at mouth. July 10–14, while break in canal below was being repaired, flow past gage was wasted into Crane Creek through gate 85 feet below gage. Discharge interpolated June 14–17. Braced figures show mean discharge for periods indicated.

Monthly discharge of Crane Creek Irrigation District Canal near Weiser, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	25	22	22.6	1,340
May	38	21	35.6	2,190
June	45	26	36.3	2,160
July	47	0	31.4	1,930
August	41	38	40.4	2,480
September	41	14	33.3	1,980
The year	47	0	16.7	12,100

NOTE.—No flow October to March.

WEISER IRRIGATION DISTRICT CANAL NEAR WEISER, IDAHO

LOCATION.—In sec. 32, T. 11 N., R. 4 W., at Durbin ranch, 1½ miles below headworks of canal and 7 miles above Weiser, Washington County.

RECORDS AVAILABLE.—April 29, 1920, to September 30, 1925.

GAGE.—Friez water-stage recorder adjacent to left side of concrete rating flume; inspected by Fred Hemenway, jr., and D. E. Robison. Zero of gage is at bottom of rating flume.

DISCHARGE MEASUREMENTS.—Made from foot walk across concrete rating flume

CHANNEL AND CONTROL.—Canal above and below gage is about 20 feet wide. Bed composed of hard clay and gravel; fairly permanent. Banks clean and not subject to appreciable growth of moss or weeds.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 3.45 feet from 10 p. m. June 26 to 3 a. m. June 27 (discharge, 208 second-feet). Canal reported practically dry from December to March.

1920–1925: Maximum discharge recorded June 27, 1925; canal usually dry except during irrigation season.

DIVERSIONS.—One farm lateral a quarter of a mile above gage.

REGULATION.—Flow regulated at Luck waste gate, half a mile above, which in practice forms head of canal, although actual diversion from Weiser River is located about 1½ miles above gage. Water from waste gate returns to Weiser River through a slough which formerly was main channel of river.

ACCURACY.—Stage-discharge relation not permanent. Rating curves well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. Records good.

COOPERATION.—Gage-height record furnished by Weiser Irrigation District.

Weiser Irrigation District Canal diverts water from the north side of Weiser River in sec. 3, T. 10 N., R. 4 W., 1½ miles above gage and furnishes water for irrigation of about 9,600 acres, included in projects of the Weiser Irrigation District and Weiser Bench Irrigation Co. near Weiser. The district maintains about 20 miles of main canal.

Discharge measurements of Weiser Irrigation District Canal near Weiser, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 2	0.18	[a] 2.0	June 9	3.02	178	Aug. 11	2.22	122
Apr. 30	2.80	161	June 23	2.94	173	Aug. 26	1.46	76.2
May 17	3.08	182	July 19	2.64	151	Sept. 3	1.25	62.7
May 25	3.12	187	Aug. 5	2.64	151	Sept. 26	1.40	74.0

[a] Estimated leakage through head gate.

Daily discharge, in second-feet, of Weiser Irrigation District Canal near Weiser, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	21	27	------	178	177	186	132	67
2	17	------	2	185	178	184	138	65
3	16	------	------	163	177	180	157	63
4	16	------	------	167	170	183	165	64
5	16	------	------	169	183	179	156	64
6	17	------	------	177	177	168	141	62
7	19	------	------	177	178	152	134	62
8	22	------	------	176	180	138	128	64
9	22	------	------	172	178	143	125	62
10	24	------	------	169	181	147	124	64
11	24	------	56	169	176	118	123	64
12	26	------	67	170	168	121	127	63
13	27	------	77	183	163	99	124	66
14	30	------	79	187	158	81	127	71
15	29	------	89	190	157	82	129	74
16	30	------	101	193	160	103	149	65
17	30	------	112	188	161	108	136	65
18	30	------	120	186	157	136	119	65
19	30	------	141	188	150	154	115	68
20	30	------	110	199	141	127	109	70
21	32	------	12	197	137	120	101	71
22	33	------	10	198	156	112	89	75
23	36	32	10	190	171	85	61	73
24	36	------	46	186	184	86	66	76
25	34	------	85	183	193	94	72	76
26	36	------	94	188	202	90	77	72
27	40	------	124	191	204	102	79	63
28	47	------	152	194	198	113	77	62
29	68	------	161	193	197	89	71	66
30	80	------	166	190	197	78	66	71
31	59	------	------	184	------	111	67	------

Monthly discharge of Weiser Irrigation District Canal near Weiser, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	80	16	31.5	1,940
April 11-30	166	10	90.6	3,590
May	199	163	183	11,300
June	204	137	174	10,400
July	186	78	125	7,690
August	165	61	112	6,890
September	76	62	67.1	3,990

POWDER RIVER NEAR NORTH POWDER, OREG.

LOCATION.—In NE. ¼ sec. 12, T. 6 S., R. 39 E., at entrance to short canyon below North Powder Valley, 3 miles northeast of North Powder, Union County; below all tributaries and return water from irrigation in North Powder Valley and near backwater of proposed Thief Valley Reservoir.

DRAINAGE AREA.—775 square miles; at lower end of Thief Valley, 826 square miles.

RECORDS AVAILABLE.—May 20, 1913, to September 30, 1915; March 10 to July 31, 1916; February 1 to July 31, 1920; November 21, 1920, to July 26, 1924; and March 8 to July 18, 1925, when station was discontinued. Records at this station almost directly comparable with those at station below Thief Valley, March 9, 1909, to June 30, 1912, as the inflow between the two points constitutes only a negligible percentage of total flow.

GAGE.—Inclined staff on left bank; inspected by Mrs. H. C. Bidwell.

DISCHARGE MEASUREMENTS.—Made from cable at gage or by wading.

CHANNEL AND CONTROL.—Bed composed of rocks with some sand; occasionally shifts slightly.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 5.3 feet May 21 (discharge, 1,430 second-feet); minimum stage, 0.64 foot July 18 (discharge, 7 second-feet).

1909–1916; 1920–1925: Maximum stage recorded, 8.1 feet May 20, 21, 24, and 25, 1921 (discharge, 3,010 second-feet); stream dry in August and September, 1910.

ICE.—Stage-discharge relation often affected by ice.

DIVERSIONS.—Water is diverted from Powder River and its tributaries for irrigating 72,000 acres of land above this station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent during period. Rating curve fairly well defined above 30 second-feet. Staff gage read to half-tenths once a day. Daily discharge ascertained by applying daily gage reading to rating table. Records good except July 10–18, for which they are poor.

The following discharge measurements were made:

April 30, 1925: Gage height, 2.85 feet; discharge, 387 second-feet.

June 22, 1925: Gage height, 1.42 feet; discharge, 68 second-feet.

Daily discharge, in second-feet, of Powder River near North Powder, Oreg., for the year ending September 30, 1925

Day	Mar.	Apr.	May	June	July	Day	Mar.	Apr.	May	June	July
1	------	248	388	422	41	16	223	995	860	82	12
2	------	236	405	422	41	17	236	1,040	905	98	10
3	------	236	440	370	45	18	236	995	950	105	7
4	------	223	475	275	45	19	223	995	1,080	112	------
5	------	275	510	200	41	20	223	905	1,180	112	------
6	------	305	580	200	36	21	223	580	1,430	105	------
7	------	370	695	156	41	22	212	655	1,230	98	------
8	90	440	775	128	32	23	212	695	1,230	98	------
9	90	510	815	89	32	24	212	655	1,180	90	------
10	98	655	860	112	25	25	212	510	1,130	70	------
11	120	735	815	65	28	26	223	458	860	65	------
12	128	860	775	50	18	27	212	458	815	55	------
13	137	860	735	50	18	28	223	458	735	60	------
14	177	905	735	60	18	29	223	440	655	55	------
15	223	950	815	65	15	30	236	388	510	41	------
						31	248	--------	458	------	------

Monthly discharge of Powder River near North Powder, Oreg., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March 8–31	248	90	193	9,190
April	1,040	223	601	35,800
May	1,430	388	807	49,600
June	422	41	130	7,740
July 1–18	45	7	28.1	1,000

SALMON RIVER AT STANLEY, IDAHO

LOCATION.—In sec. 3, T. 10 N., R. 13 E., a quarter of a mile above mouth of Valley Creek, half a mile northeast of Stanley, Custer County.

DRAINAGE AREA.—355 square miles (measured on topographic maps).

RECORDS AVAILABLE.—May 2, 1921, to October 14, 1925, when station was discontinued.

GAGE.—Vertical staff on left bank; read by W. L. Rose and R. E. Allan.

DISCHARGE MEASUREMENTS.—Made by wading at low and medium stages. High-water measurements made from wagon bridge at old Stanley, 1 mile below; Valley Creek discharge deducted to determine flow past gage.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders; practically permanent. Control well defined but not sensitive owing to width of channel

SALMON RIVER BELOW VALLEY CREEK, NEAR STANLEY, IDAHO

LOCATION.—In S. ½ SE. ¼ SE. ¼ sec. 34, T. 11 N., R. 13 E., three-fourths mile below mouth of Valley Creek, 500 feet below wagon bridge at old Stanley post office, and 1¼ miles northeast of new Stanley, Custer County.

DRAINAGE AREA.—535 square miles (measured on topographic maps).

RECORDS AVAILABLE.—July 17 to September 30, 1925.

GAGE.—Vertical staff in timber gage well on left bank; read by W. L. Rose.

DISCHARGE MEASUREMENTS.—Made from wagon bridge 500 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of coarse gravel, cobbles, and boulders; practically permanent. Control fairly well defined. Banks low. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 1.88 feet July 18 (discharge, 1,140 second-feet); minimum stage, 1.02 feet September 26 and 30 (discharge, 346 second-feet).

DIVERSIONS.—Few small ranch diversions above gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Gage read to hundredths two to four times daily August 6–18; once daily at other times. Daily discharge determined by applying daily or mean daily gage height to rating table. Records good.

Discharge measurements of Salmon River below Valley Creek, near Stanley, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
July 18	1.88	1,120	Aug. 16	1.27	508
Aug. 4	1.38	[a] 603	Aug. 17	1.25	[a] 504
Aug. 6	1.32	[a] 539			

[a] Measured above Valley Creek and flow of Valley Creek added to obtain flow at station.

Daily discharge, in second-feet, of Salmon River below Valley Creek, near Stanley, Idaho, for the year ending September 30, 1925

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1		615	374	11		465	388	21	1,020	465	374
2		660	374	12		500	374	22	910	434	374
3		615	374	13		500	374	23	910	434	3 4
4		615	374	14							

Monthly discharge of Salmon River below Valley Creek, near Stanley, Idaho, for the year ending September 30, 1925

[Drainage area, 535 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
July 17–31	1,140	615	866	1.62	0.90	25,800
August	660	374	495	.925	1.07	30,400
September	434	346	385	.720	.80	22,900
The period						79,100

SALMON RIVER BELOW YANKEE FORK, NEAR CLAYTON, IDAHO

LOCATION.—In sec. 20, T. 11 N., R. 15 E., a quarter of a mile below Sunbeam Dam and mouth of Yankee Fork, 3 miles above Robinson Bar, 7 miles south of Bonanza, 11 miles below Stanley and mouth of Valley Creek, and 18 miles above Clayton, Custer County.

DRAINAGE AREA.—841 square miles (measured on topographic maps).

RECORDS AVAILABLE.—October 28, 1921, to September 30, 1925.

GAGE.—Vertical staff on left bank; read by Herman Meissner and Ferris Clark.

DISCHARGE MEASUREMENTS.—Made from cable three-tenths mile below gage.

CHANNEL AND CONTROL.—Bed composed of boulders and gravel. Control formed by well-defined boulder and rock riffle; practically permanent. Banks high; one channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 6.6 feet at 7.30 p. m. May 29 (discharge, 5,620 second-feet); minimum discharge probably less than 340 second-feet during ice period in December.

1922–1925: Maximum stage recorded, 7.6 feet June 7, 15, and 17, 1922 (discharge, 6,760 second-feet); minimum discharge, 281 second-feet August 22–27 and September 2, 1924.

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—None of importance above station.

REGULATION.—None. Future operation of power plant at Sunbeam Dam may affect flow somewhat during low stages owing to probable changes in gate opening. Power plant not in operation at present.

ACCURACY.—Stage-discharge relation permanent during period of record. Rating curve well defined. Gage read to half-tenths usually twice daily May 24 to July 30; once daily at other times. Daily discharge ascertained by applying daily gage height or mean daily gage height to rating table. Records good except for estimated periods for which they are fair.

COOPERATION.—Gage-height record furnished by Love & von Brecht.

Discharge measurements of Salmon River below Yankee Fork, near Clayton, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 3	0.20	358	June 11	3.50	2,360	July 16	2.50	1,500
Mar. 22	.25	386	June 14	3.50	2,380	Aug. 4	1.25	812
Mar. 24	.28	391	July 3	4.03	2,810	Aug. 7	1.18	778

Daily discharge, in second-feet, of Salmon River below Yankee Fork, near Clayton, Idaho, for the year ending September 30, 1925

Day	Dec.	Mar.	May	June	July	Aug.	Sept.
1				4,260	3,620	889	
2				3,830	3,220	889	
3	363			3,520	2,820	889	
4	363			3,120	2,820	786	
5	363			3,020	2,640	786	
6	363			2,820	2,450	786	
7	347			2,450	2,270	786	
8	347			2,270	2,180	786	575
9	347			2,270	2,010	736	
10	347			2,450	1,920	736	
11	363			2,360	1,920	736	
12	363			2,360	1,840	736	
13	363		3,120	2,270	1,680	736	
14	363		3,480	2,360	1,610	942	
15	363		3,830	2,540	1,540	889	
16	363			2,820	1,540	837	
17				2,640	1,470	786	
18				3,120	1,400	736	
19				3,220	1,400	687	
20	340		4,300	3,620	1,400	687	
21				4,150	1,400	664	
22		380		4,810	1,400	664	
23		415	5,160	4,810	1,280	640	550
24		397	5,160	4,700	1,280	640	
25		397	4,920	4,480	1,220	640	
26		380	4,700	4,260	1,160	640	
27			4,920	3,940	1,100		
28			5,270	3,720	1,050		
29			5,620	3,720	995	625	
30			5,380	3,830	942		
31			4,920		889		

NOTE.—Discharge estimated on account of ice Dec. 17–22 and because of missing gage heights May 16–22 and Aug. 27 to Sept. 30; based on flow at Stanley and at Salmon. Discharge interpolated May 14 and Aug. 5. Braced figures show mean discharge for periods indicated.

Monthly discharge of Salmon River below Yankee Fork, near Clayton, Idaho, for the year ending September 30, 1925

[Drainage area, 841 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
December 3–22	363		353	0.420	0.31	14,000
March 22–26	415	380	394	.468	.09	3,910
May 13–31	5,620	3,120	4,560	5.42	3.83	172,000
June	4,810	2,270	3,320	3.95	4.41	198,000
July	3,620	889	1,760	2.09	2.41	108,000
August	889		737	.876	1.01	45,300
September			562	.668	.75	33,400

SALMON RIVER AT SALMON, IDAHO

LOCATION.—In sec. 6, T. 21 N., R. 22 E., at rear of Rose ranch buildings, 300 feet below island, just above Lemhi River, and a quarter of a mile below highway bridge at Salmon, Lemhi County.

DRAINAGE AREA.—3,600 square miles (Forest Service records).

RECORDS AVAILABLE.—April 25, 1912, to September 30, 1916; July 6, 1919, to September 30, 1925.

GAGE.—Vertical and inclined staff on left bank; read by Parker Wickham.

DISCHARGE MEASUREMENTS.—Made from cable 700 feet below gage, except during ice-affected period when measurements are sometimes made from highway bridge a quarter of a mile above gage.

CHANNEL AND CONTROL.—One channel at all stages. Bed composed of rock overlain with sand and gravel. Control subject to change.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.12 feet May 30 (discharge, 9,380 second-feet); minimum stage, 1.82 feet December 18 (discharge, 595 second-feet).

1912–1916; 1919–1925: Maximum stage recorded, 9.35 feet June 12, 1921 (discharge, 16,400 second-feet); minimum discharge, 595 second-feet, August 17–19, 25–31, September 1–5, and December 18, 1924.

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—A small ditch diverts from left bank between bridge and gage, but its total capacity is less than 1 per cent of low-water flow. Numerous diversions, principally on tributaries above.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed slightly during ice-affected period December 19 to February 9 and also June 1–9. Standard rating curve well defined. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table; shifting-control method used June 1–5. Records good except for estimated periods for which they are poor.

COOPERATION.—Gage-height record January to September furnished by United States Forest Service.

Discharge measurements of Salmon River at Salmon, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 4	2.45	1,050	June 9	4.90	3,960	Aug. 8	3.04	1,490
Mar. 20	2.29	940	June 10	4.91	4,020			
May 12	5.27	4,910	July 19	3.93	2,650			

Daily discharge, in second-feet, of Salmon River at Salmon, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	742	985	875			1,020	1,150	2,460	7,810	6,600	1,750	1,200
2	742	1,020	910		950	985	1,150	2,930	6,830	5,920	1,750	1,150
3	775	1,060	948			1,020	1,150	2,930	6,370	5,490	1,750	1,200
4	808	1,060	1,020			1,110	1,200	3,390	5,920	5,290	1,750	1,200
5	840	1,060	985			1,200	1,290	3,710	5,290	5,090	1,640	1,240
6	808	1,060	985		1,150	1,240	1,340	4,370	4,900	4,720	1,540	1,340
7	808	985	910			1,150	1,340	4,900	4,540	4,370	1,480	1,340
8	808	1,020	948			1,110	1,340	5,290	4,370	4,200	1,480	1,440
9	840	1,020	840			1,020	1,540	4,900	4,030	3,870	1,440	1,440
10	840	1,060	742		985	948	1,750	4,370	4,200	3,550	1,440	1,380
11	875	1,020	910		875	948	1,980	4,540	4,200	3,390	1,440	1,340
12	875	1,060	1,020		948	910	2,230	4,900	4,200	3,390	1,440	1,290
13	875	985	1,060		1,060	910	2,500	4,900	4,030	3,230	1,440	1,290
14	910	985	1,060		1,200	910	2,640	5,490	4,030	3,080	1,640	1,290
15	875	1,020	1,020		1,110	948	2,640	5,920	4,200	2,780	1,750	1,340
16	875	985	910	850	1,020	910	2,640	6,370	4,370	2,780	1,640	1,380
17	875	985	840		948	910	2,930	6,370	4,720	2,780	1,540	1,380
18	875	985	595		875	910	3,230	7,070	4,540	2,640	1,480	1,380
19	875	948			910	875	2,780	7,810	5,090	2,500	1,440	1,380
20	875	1,020			948	910	2,500	8,840	5,490	2,500	1,380	1,380
21	875	1,060			985	948	2,230	9,110	6,140	2,360	1,380	1,340
22	875	1,150			1,060	985	2,100	9,110	7,810	2,360	1,380	1,340
23	875	1,150	750		985	1,060	2,230	8,580	8,840	2,360	1,340	1,290
24	875	1,150			985	1,060	1,980	8,320	8,840	2,360	1,290	1,290
25	875	985			1,020	1,060	1,860	8,060	7,810	2,230	1,290	1,290
26	875	985			985	1,060	1,750	7,810	7,560	2,230	1,290	1,290
27	875	985			985	985	1,750	7,810	7,070	1,980	1,290	1,240
28	910	875			985	1,020	1,750	8,320	6,830	1,980	1,240	1,240
29	985	840	900		-------	1,150	1,860	9,110	6,830	1,860	1,240	1,290
30	985	875			-------	1,340	1,980	9,380	7,070	1,860	1,240	1,340
31	985	-------			-------	1,240	-------	9,110	-------	1,860	1,200	-------

NOTE.—Discharge estimated Dec. 19 to Feb. 9 on account of ice; based on weather records, observer's notes, and comparison with flow at other stations in Salmon River Basin. Discharge interpolated May 1. Braced figures show mean discharge for periods indicated.

Monthly discharge of Salmon River at Salmon, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	985	742	864	53,100
November	1,150	840	1,010	60,100
December	1,060	595	869	53,400
January	-------	-------	850	52,300
February	-------	875	1,020	56,600
March	1,340	875	1,030	63,300
April	3,230	1,150	1,960	117,000
May	9,380	2,460	6,330	389,000
June	8,840	4,030	5,800	345,000
July	6,600	1,860	3,280	202,000
August	1,750	1,200	1,460	89,800
September	1,440	1,150	1,310	78,000
The year	9,380	595	2,150	1,560,000

SALMON RIVER AT WHITEBIRD, IDAHO

LOCATION.—In sec. 22, T. 28 N., R. 1 E., at highway bridge near Whitebird, Idaho County, just above Whitebird Creek and below all sizable tributaries.

DRAINAGE AREA.—13,600 square miles (measured on Land Office map, edition of 1909).

RECORDS AVAILABLE.—August 18, 1910, to September 30, 1917; October 1, 1919, to September 30, 1925.

GAGE.—Chain gage on handrail of highway bridge since September 14, 1920; read by R. E. Shuck and L. E. Shuck.

DISCHARGE MEASUREMENTS.—Made from cable 900 feet below gage. Discharge measurements include flow of Whitebird Creek which enters Salmon River between gage and cable.

CHANNEL AND CONTROL.—Channel straight for several hundred feet above and below gage; one channel at all stages. Banks not subject to overflow. Control composed of section of river channel and large boulder riffle three-eighths mile below; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 16.4 feet May 20–21 (discharge, 58,600 second-feet); minimum stage, 1.70 feet October 1 (discharge, 3,020 second-feet). Lower flow may have occurred during severe cold period December 18–27, when stage-discharge relation was affected by ice.

1910–1917; 1919–1925: Maximum stage recorded, 21.2 feet June 9, 1921 (discharge, 88,800 second-feet); minimum stage on November 15, 1916, when water was below gage (estimated discharge, 2,500 second-feet).

Maximum stage determined from high-water marks, 27.5 feet June, 1894 (discharge, 120,000 second-feet); estimated by extending rating curve.

ICE.—Stage-discharge relation affected by ice during severe winters.

DIVERSIONS.—Amount of water diverted for irrigation above station negligible.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent; affected by ice December 18–27. Rating curve well defined. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table. Records good except for estimated period for which they are fair.

The following discharge measurements were made:

September 21, 1925: Gage height, 3.01 feet; discharge, 5,060 second-feet.

September 21, 1925: Gage height, 3.02 feet; discharge, 5,070 second-feet.

Daily discharge, in second-feet, of Salmon River at Whitebird, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,020	3,840	3,140	4,000	3,700	4,320	7,580	17,400	45,600	26,200	6,100	4,160
2	3,140	3,840	3,280	3,840	3,840	4,000	7,360	20,800	42,600	23,600	5,900	4,000
3	3,140	4,000	3,700	3,840	4,160	4,000	7,580	22,800	38,700	22,000	5,700	4,160
4	3,420	4,160	3,840	3,700	5,340	4,000	8,540	24,900	34,800	19,600	5,700	4,160
5	3,420	4,160	4,000	3,560	7,820	4,800	9,300	28,400	32,900	18,800	5,520	4,160
6	3,280	4,160	4,160	3,420	7,820	5,340	10,400	32,000	30,200	17,400	5,340	4,160
7	3,280	4,000	4,000	3,280	7,360	5,700	11,500	38,200	29,700	16,300	5,160	4,480
8	3,140	3,700	3,560	3,280	6,920	5,340	12,700	40,100	27,500	14,900	5,160	4,640
9	3,280	3,700	3,420	3,280	5,900	5,340	15,300	36,300	27,500	13,900	4,980	4,980
10	3,280	3,700	3,140	3,280	5,340	4,980	17,000	35,300	27,500	13,300	4,980	4,890
11	3,280	3,840	3,420	3,280	4,480	4,640	18,800	33,400	27,000	12,700	4,980	4,800
12	3,280	3,700	3,560	3,280	4,000	4,480	20,400	35,300	26,600	11,800	4,800	4,480
13	3,280	3,560	3,840	3,280	4,160	4,320	22,400	38,200	26,200	11,200	4,640	4,480
14	3,280	3,420	3,840	3,140	4,160	4,320	21,600	40,600	25,700	10,900	4,640	4,640
15	3,280	3,420	3,840	3,280	4,160	4,160	21,600	44,100	25,300	10,400	4,980	4,640

Daily discharge, in second-feet, of Salmon River at Whitebird, Idaho, for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	3,280	3,700	3,840	3,140	4,160	4,160	24,400	46,600	26,600	9,820	5,520	4,640
17	3,280	3,700	3,560	3,140	4,160	4,160	27,000	49,200	30,200	9,300	5,520	4,640
18	3,280	3,560		3,280	4,000	4,160	26,200	51,300	30,600	9,300	5,340	4,640
19	3,280	3,560		3,280	3,840	4,000	22,400	55,500	31,600	8,780	4,980	4,640
20	3,280	3,700		3,280	3,840	4,000	18,800	58,600	34,300	8,300	4,980	4,800
21	3,280	4,480		3,280	4,000	4,160	17,000	58,600	37,700	8,060	4,800	4,980
22	3,280	5,340		3,280	4,000	4,320	16,600	58,100	38,700	7,820	4,800	4,800
23	3,140	5,520	3,200	3,280	4,160	4,640	16,300	55,500	38,700	7,820	4,640	4,640
24	3,140	5,520		3,420	4,640	4,800	15,300	52,900	36,300	8,300	4,640	4,480
25	3,140	4,320		3,420	4,640	5,520	14,300	51,800	33,900	8,060	4,640	4,320
26	3,140	4,000		3,560	4,480	5,520	13,300	50,300	31,600	7,580	4,480	4,640
27	3,140	3,840		3,420	4,480	5,520	13,000	49,200	29,700	7,360	4,480	4,480
28	3,280	3,560	3,420	3,420	4,320	5,520	12,700	48,700	27,900	6,920	4,480	4,320
29	3,420	3,420	3,420	3,420	-------	5,900	13,000	50,300	27,000	6,700	4,480	4,480
30	3,700	3,140	3,700	3,420	-------	7,140	14,300	50,800	26,200	6,500	4,320	4,640
31	3,700	-------	3,840	3,560	-------	7,580	-------	48,200	-------	6,300	4,320	------

NOTE.—Discharge estimated Dec. 18–27; interpolated Sept. 10. Braced figures show mean discharge for period indicated.

Monthly discharge of Salmon River at Whitebird, Idaho, for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,700	3,020	3,280	202,000
November	5,520	3,140	3,950	235,000
December	4,160	----------	3,500	215,000
January	4,000	3,140	3,400	209,000
February	7,820	3,700	4,780	265,000
March	7,580	4,000	4,870	299,000
April	27,000	7,360	15,900	946,000
May	58,600	17,400	42,700	2,630,000
June	45,600	25,300	31,600	1,880,000
July	26,200	6,300	11,900	732,000
August	6,100	4,320	5,000	307,000
September	4,980	4,000	4,530	270,000
The year	58,600	----------	11,300	8,190,000

VALLEY CREEK AT STANLEY, IDAHO

LOCATION.—In sec. 3, T. 10 N., R. 13 E., one-eighth mile above Valley Creek ranger station, one-fourth mile above confluence with Salmon River, three-eighths mile below Stanley, Custer County.

DRAINAGE AREA.—176 square miles (measured on topographic maps).

RECORDS AVAILABLE.—December 21, 1910, to October 31, 1913; May 2, 1921, to September 30, 1925.

GAGE.—Vertical staff on left bank installed May 2, 1921; read by W. L. Rose and R. E. Allan.

DISCHARGE MEASUREMENTS.—Made from log bridge 300 feet upstream or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel. Control well defined; practically permanent. Banks fairly low; left bank may be overflowed at extremely high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.96 feet at 7 p. m. May 21 (discharge, 939 second-feet); minimum discharge estimated, 55 second-feet December 18–27 during severe cold weather when stage-discharge relation was affected by ice.

1910–1913; 1921–1925: Maximum stage recorded, 4.4 feet May 29, 1921 (discharge, 1,850 second-feet); minimum stage, 0.84 foot September 7, 1924 (discharge, 41 second-feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—A few ranch diversions for irrigation above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed slightly during year. Two well-defined rating curves were used, the first applicable December 2–15 and the second applicable April 13 to September 30; curve parallel to latter used December 31 to April 6; shifting-control method used April 8–12. Gage read to hundredths twice daily April 20 to June 30, somewhat irregularly at other times. Daily discharge determined by applying daily or mean daily gage height to rating table or by interpolation for days when gage was not read. Records fair.

Discharge measurements of Valley Creek at Stanley, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 2	1.08	78.3	June 11	2.12	429	Aug. 4	1.43	143
Mar. 25	1.14	78.2	June 13	2.11	417	Aug. 6	1.39	138
May 13	2.43	632	July 3	2.30	544	Aug. 17	1.38	134
May 14	2.57	682	July 16	1.76	270	Sept. 20	1.24	105

Daily discharge, in second-feet, of Valley Creek at Stanley, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			76	62	65	79	96	536	745	715	151	101
2			76	63	79	74	98	595	685	595	150	100
3			77	63	93	69	101	655	595	536	149	98
4			74	63	107	71	133	655	595	536	148	97
5			70	63	108	74	138	625	566	536	143	97
6			70	63	109	76	143	595	507	536	138	113
7			69	63	98	72	185	715	478	478	138	117
8			69	62	87	69	227	625	422	450	131	117
9			70	60	77	65	267	595	396	359	126	113
10			72	60	66	60	292	566	340	320	122	109
11			80	60	72	56	316	625	396	302	128	105
12			87	61	77	70	450	595	422	349	128	105
13			87	62	83	85	566	595	422	326	140	90
14			87	63	78	99	536	685	436	304	198	
15			87	63	74	91	526	745	450	282	151	
		80										
16	65		82	63	69	84	517	745	536	259	135	105
17			76	63	77	76	507	775	450	259	135	
18				63	84	80	396	835	478	259	129	
19				64	92	83	330	868	536		123	
20				65	86	78	284	900	655		117	105
21				66	81	74	262	932	715	225	131	
22				66	76	79	263	900	868		131	
23			55	66	70	85	230	868	838		117	
24				63	64	90	179	835	745		122	
25				59	59	81	195	805	715		113	
										175		100
26				56	67	74	220	775	655		109	
27				62	76	82	250	835	655		109	
28				68	84	90	288	900	655	156	105	
29			65	68	-------	91	369	900	655	155	105	
30				68	-------	92	450	900	745	154	105	
31		-------	60	66	-------	93	-------	835	-------	153	105	

NOTE.—Discharge estimated on basis of flow at other stations in Salmon River Basin Oct. 1 to Nov. 30, Dec. 1, 18–30, July 19–27, Sept. 14–19, 21–30. Braced figures show mean discharge for periods indicated.

Monthly discharge of Valley Creek at Stanley, Idaho, for the year ending September 30, 1925

[Drainage area, 176 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October			65.0	0.369	0.43	4,000
November			80.0	.455	.51	4,760
December	87		68.2	.388	.45	4,190
January	68	56	63.1	.358	.41	3,880
February	109	59	80.6	.458	.48	4,480
March	99	56	78.8	.448	.52	4,850
April	566	96	294	1.67	1.86	17,500
May	932	536	742	4.22	4.86	45,600
June	868	340	579	3.29	3.67	34,500
July	715	153	318	1.81	2.09	19,600
August	198	105	130	.739	.85	7,990
September	117		103	.585	.65	6,130
The year	932		217	1.23	16.78	157,000

YANKEE FORK OF SALMON RIVER NEAR CLAYTON, IDAHO

LOCATION.—In sec. 20, T. 11 N., R. 15 E., at Sunbeam Dam, 350 feet above confluence with Salmon River, 3 miles west of Robinson Bar, 7 miles south of Bonanza, and 18 miles west of Clayton, Custer County.

DRAINAGE AREA.—195 square miles (measured on topographic maps).

RECORDS AVAILABLE.—May 3, 1921, to September 30, 1925.

GAGE.—Vertical staff on right bank; read by Herman Meissner and Ferris Clark. Datum of gage lowered 0.40 foot June 26, 1924; lowered 0.65 foot September 17, 1922. All gage heights prior to October 1, 1922, referred to original datum; all gage readings from October 1, 1922, to September 30, 1924, reduced to datum established September 17, 1922; thereafter, all gage heights referred to datum established June 26, 1924.

DISCHARGE MEASUREMENTS.—Made from highway bridge 250 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of rock, boulders, and gravel. Control formed by rock and gravel riffle 50 feet below gage; well defined at low and medium stages. Although gradient is steep, control not well defined at high stages, due possibly to a slight backwater effect from Salmon River when in flood. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.75 feet May 29 (discharge, 1,760 second-feet); minimum discharge probably less than 25 second-feet during frozen period in December.

1921–1925: Maximum stage recorded, 5.24 feet at 8 p. m. June 12, 1921 (discharge, 3,360 second-feet); minimum stage, 0.10 foot at 8 a. m. April 5, 1924 (discharge, 22 second-feet). Lower flow may have occurred during ice-affected periods.

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent after ice period. Rating curve well defined below 800 second-feet and extended above parallel to former curve. Gage read to half-tenths twice daily May 23 to July 23; once daily usually at other times. Daily discharge ascertained by applying daily or mean daily gage height to rating table. Records March to August good except those for estimated periods, which are fair; record poor for December and September.

COOPERATION.—Gage-height record furnished by Lowe & von Brecht.

Discharge measurements of Yankee Fork of Salmon River near Clayton, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 3	[a] 1.97	44.6	June 11	3.20	595	July 16	1.92	188
Mar. 23	[a] 1.05	75.9	June 14	3.20	607	Aug. 4	1.42	113
Mar. 24	.80	50.2	July 4	2.80	442	Aug. 7	1.37	108

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Yankee Fork of Salmon River near Clayton, Idaho, for the year ending September 30, 1925

Day	Dec.	Mar.	May	June	July	Aug.	Day	Dec.	Mar.	May	June	July	Aug.
1	45	------	------	1,080	516	123	16	40	------	1,380	649	186	110
2		------	------	939	476	123	17		------		699	168	104
3		------	------	873	438	123	18		------		753	168	98
4		------	------	753	438	110	19		------		873	168	92
5		------	------	699	402	110	20	30	------		1,010	168	92
6	40	------	------	602	368	110	21		------	1,580	1,160	168	92
7		------	------	602	336	104	22		------	1,580	1,400	168	92
8		------	------	558	306	104	23		67	1,580	1,080	160	92
9		------	------	602	278	104	24		62	1,490	1,010	152	92
10		------	------	602	265	104	25		87	1,400	873	144	92
11		------	------	602	265	104	26		72	1,400	753	137	92
12		------	------	602	252	104	27		------	1,400	753	137	85
13		------	873	602	228.	104	28		------	1,580	699	123	
14		------	1,060	602	206	144	29		------	1,760	649	123	
15		------	1,240	602	186	168	30		------	1,580	602	123	
							31		------	1,240	-------	123	

NOTE.—Discharge estimated on account of ice Dec. 3-22 and based on one discharge measurement, observer's notes, weather records, and by comparison with flow at near-by stations; estimated May 16-20 and Aug. 27-31 and based on comparative flow of Salmon River and Valley Creek at Stanley; interpolated May 14 and Aug. 5. Braced figures show mean discharge for periods indicated.

Monthly discharge of Yankee Fork of Salmon River near Clayton, Idaho, for the year ending September 30, 1925

[Drainage area, 195 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
December 3-22	----------	----------	37.8	0.194	0.14	1,500
March 23-26	87	62	72.0	.369	.05	571
May 13-31	1,760	873	1,400	7.18	5.07	52,800
June	1,400	558	776	3.98	4.44	46,200
July	516	123	238	1.22	1.41	14,600
August	168	----------	104	.533	.61	6,400
September	----------	----------	[a] 75.0	.385	.43	4,460

[a] Estimated.

BEAR VALLEY CREEK NEAR CAPE HORN, IDAHO

LOCATION.—About sec. 31, T. 13 N., R. 10 E. (unsurveyed), Valley County, 250 feet below mouth of Fir Creek, 5 miles above confluence with Middle Fork of Salmon River, 7 miles northwest of Cape Horn, Custer County, and 27 miles northwest of Stanley.

DRAINAGE AREA.—180 square miles (measured on Forest Service maps).

RECORDS AVAILABLE.—September 6, 1921, to September 30, 1925.

GAGE.—Stevens continuous water-stage recorder on right bank; inspected by A. L. Bunch and L. N. Wellman.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders. Banks high. One channel at all stages. Control not well defined; subject to slight moss growth.

EXTREMES OF DISCHARGE.—Maximum stage during year, 5.0 feet occurred just prior to June 12 as determined on that day from fresh-water marks on gage house (discharge, about 2,800 second-feet); minimum stage recorded, 1.20 feet October 10 and 11 (discharge, 72 second-feet). Lower discharge may have occurred during period of no record.

1921–1925: Maximum stage recorded during 1925; minimum stage, 1.08 feet at 1.00 p. m. November 13, 1922 (discharge, about 55 second-feet). Lower discharge probably occurred during period of no record.

ICE.—Stage-discharge relation affected by ice. Observations discontinued during winter.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well-defined. Operation of water-stage recorder satisfactory except for two short periods; July record lost after removal from recorder. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph. Records good, except for estimated periods for which they are poor.

COOPERATION.—Gage-height record furnished by United States Forest Service.

Discharge measurements of Bear Valley Creek near Cape Horn, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
June 12	2.86	802	Aug. 3	1.53	149
July 2	2.35	514	Aug. 25	1.41	130
July 17	1.72	203			

Daily discharge, in second-feet, of Bear Valley Creek near Cape Horn, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	June	July	Aug.	Sept.	Day	Oct.	Nov.	June	July	Aug.	Sept.
1		84		585	150	106	16	76		1,060	250	156	120
2		97		510		106	17	76		917	206	141	115
3		90			144	104	18	76		889		136	113
4		99			141	101	19	76		910	200	131	118
5	75	99		430	136	108	20	84		954		128	138
6		110			133	120	21	110		990		123	123
7		118			131	138	22	97		990	230	118	120
8		104			128	136	23	99		954		115	
9					125	125	24	94		867		118	
10	72			340	123	115	25	101		798		115	112
11	72				123	113	26	106		730	180	113	
12	74		812	280	128	108	27	108		672		115	104
13	74		805		153	108	28	120		634		115	99
14	76		798	250	212	118	29	113		616		110	101
15	76		805		199	133	30	101		603	150	108	108
							31	101				106	

NOTE.—Discharge estimated on account of missing gage heights Oct. 1–9, July 3–11, 13–16, 18–31, Aug. 1, 2, and Sept. 23–26; based on comparison with flow of Deadwood River. Braced figures show mean discharge for periods indicated.

Monthly discharge of Bear Valley Creek near Cape Horn, Idaho, for the year ending September 30, 1925

[Drainage area, 180 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	120	72	85.7	0.476	0.55	5,270
November 1–8	118	84	100	.556	.17	1,590
June 12–30	1,060	603	832	4.62	3.26	31,400
July	585		281	1.56	1.80	17,300
August	212	106	133	.739	.85	8,180
September	138	99	115	.639	.71	6,840

EAST FORK OF WALLOWA RIVER NEAR JOSEPH, OREG.

LOCATION.—In SE. ¼ sec. 29, T. 3 S., R. 45 E., one-fourth mile above mouth, 1 mile below diversion dam of Enterprise Electric Co., 1 mile above Wallowa Lake, and 6 miles south of Joseph, Wallowa County.

DISCHARGE AREA.—Not measured.

RECORDS AVAILABLE.—July 27, 1924, to September 30, 1925.

GAGE.—Vertical staff on right bank, 100 yards above bridge on road to power house; read by W. K. Wagner. Also auxiliary inclined gage at diversion dam 1 mile above.

DISCHARGE MEASUREMENTS.—Made from bridge 100 yards below gage, from plank across stream, or by wading.

CHANNEL AND CONTROL.—Channel curved above and below gage. Bed of coarse gravel and boulders; practically permanent. Steep gradient. Banks are not overflowed except in extremely high water. Control 10 feet below gage, well defined.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period July 27, 1924, to September 30, 1925, 1.92 feet June 29 (discharge, 111 second-feet); minimum open-water stage, 0.72 foot March 31 and April 2 (discharge, 3.3 second-feet). During the cold periods in December and January, flow was estimated to have reached a minimum of 3.0 second-feet.

ICE.—Stage-discharge relation seriously affected by ice.

DIVERSIONS.—The penstock to power house of Enterprise Electric Co. diverts at dam 1 mile upstream.

REGULATION.—Operation of power plants affects flow, maximum effect being during low-water period; during extremely low-water periods in winter practically all flow at dam is diverted.

ACCURACY.—Stage-discharge relation changed April 15; affected by leaves on control October 21–31 and by ice during winter. Rating curves fairly well defined. Staff gage read to hundredths twice daily except during winter when it was read once a day. Daily discharge ascertained by applying daily or mean daily gage height to rating table. Records good for open channel and fair during ice period.

Discharge over dam, length of crest of spillway being 21.6 feet, has been computed from weir tables for rectangular contracted weir, the application of which was checked by one discharge measurement, for the few days gage at dam was read. They indicate that inflow between dam and gaging station is 2 to 3 second-feet at low water and averages 17 per cent of flow at gaging station when flow at station is more than 15 second-feet.

Discharge measurements of East Fork of Wallowa River near Joseph, Oreg., during the years ending September 30, 1924 and 1925

Date	Gage height	Discharge
	Feet	*Sec.-feet*
1924		
July 27	0.97	10
1925		
Mar. 20	[a].84	4.9
May 1	1.02	13.7
July 1	1.75	81

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of East Fork of Wallowa River near Joseph, Oreg., for the years ending September 30, 1924 and 1925

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1924				1924				1924			
1		10	8.2	11		9.3	7.5	21		10	8.9
2		9.7	8.2	12		9.3	7.5	22		8.2	6.4
3		10	7.2	13		8.5	7.2	23		8.2	6.1
4		10	7.8	14		9.7	8.2	24		9.3	5.3
5		8.2	6.9	15		9.3	7.5	25		8.5	7.8
6		10	7.8	16		9.3	6.4	26		8.5	6.9
7		10	10	17		10	7.5	27	9.7	7.5	6.9
8		9.7	7.8	18		11	6.4	28	11	7.8	8.2
9		9.7	7.2	19		12	7.5	29	10	9.3	6.9
10		10	7.5	20		10	7.5	30	9.7	9.7	6.4
								31	10	8.9	

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1924-25												
1	6.4	15	10		7.2	5.3	4.0	12	65	90	18	13
2	6.1	16	9.7		8.9	4.8	3.3	8.9	65	76	18	9.2
3	6.1	13	9.7		12	5.0	3.6	12	60	75	18	11
4	6.4	12	8.5		15	5.4	5.3	16	56	65	17	12
5	8.2	12	7.8		11	5.8	8.2	18	50	65	17	14
6	6.9	12	7.5		10	5.8	6.9	26	43	63	17	14
7	7.5	11	7.5		8.2	5.8	7.5	27	42	59	17	12
8	6.4	13	7.5		10		8.9	24	35	63	16	11
9	5.8	12	7.5		8.9		10	23	34	56	16	11
10	7.2	12	7.5		8.2		9.3	22	39	49	14	10
11	7.8	11	8.9		7.5		16	25	44	49	14	10
12	6.9	10	9.7		7.5		21	24	41	50	14	11
13	6.7	10	11		7.5		18	26	42	49	14	11
14	6.9	9	10		5.8		18	31	42	46	18	8.9
15	7.8	8.2	9.3		4.8		19	34	43	43	17	10
16	8.5	8.9			4.8	4.4	17	43	43	44	17	11
17	7.8	8.2			5.8		18	44	43	43	16	10
18	8.2	8.2			6.9		16	50	53	41	16	9.6
19	8.2	14			5.8		16	57	57	38	14	12
20	6.7	14			5.8		14	59	73	34	13	12
21	7.2	21			4.8		12	67	73	33	13	11
22	6.4	19			7.5		12	60	75	31	12	10
23	7.8	16			6.9		11	60	107	31	15	10
24	7.8	12	4.0		5.8		11	63	107	30	14	9.6
25	8.2	12			5.3		8.9	62	95	30	12	8.9
26	9.7	11			6.4	5.0	8.6	60	103	29	12	8.9
27	10	10			5.6	5.0	8.9	62	100	27	12	10
28	7.5	10			4.8	4.4	8.3	62	103	25	11	9.6
29	11	8.2				5.5	8.3	65	109	24	11	10
30	12	11				6.1	9.6	63	100	23	11	10
31	11					4.0		70		20	12	

NOTE.—Stage-discharge relation affected by ice Nov. 11–14, 26–27, Dec. 6–10, Dec. 16 to Feb. 1, Feb. 10, and Mar. 8–25; discharge estimated from one discharge measurement and from climatic records. Discharge interpolated Feb. 27, Mar. 2 and 3. Braced figures represent estimated mean discharge for periods indicated.

Monthly discharge of East Fork of Wallowa River near Joseph, Oreg., for the years ending September 30, 1924 and 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1924				
August	12	7.5	9.41	579
September	• 10	5.3	7.39	440
1924–25				
October	12	5.8	7.78	478
November	21	8.2	12.0	714
December	11	----	6.33	389
January	----	----	• 4.0	246
February	15	4.8	7.45	414
March	6.1	4.0	4.75	292
April	21	3.3	11.3	672
May	70	8.9	41.2	2,530
June	109	34	64.7	3,850
July	90	20	45.2	2,780
August	18	11	14.7	904
September	14	8.9	10.7	637
The year	109	3.3	19.2	13,900

• Estimated.

Combined monthly discharge of East Fork of Wallowa River and Enterprise Electric Co.'s tailrace near Joseph, Oreg., for the years ending September 30, 1924 and 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1924				
August	----	----	14.6	898
September	14	12	12.8	762
1924–25				
October	18	12	13.6	836
November	26	14	17.4	1,040
December	16	----	11.7	719
January	----	----	9.61	591
February	21	11	12.9	716
March	12	----	10.4	640
April	27	9.9	17.3	1,030
May	74	14	46.3	2,850
June	114	40	69.8	4,150
July	95	25	50.3	3,090
August	24	16	20.0	1,230
September	19	14	16.4	976
The year	114	----	24.7	17,900

NOTE.—Aug. 1–26, 1924, mean discharge of tailrace estimated at 5.2 second-feet.

ENTERPRISE ELECTRIC CO.'S TAILRACE NEAR JOSEPH, OREG.

LOCATION.—In SE. ¼ sec. 29, T. 3 S., R. 45 E., 150 feet below power house of Enterprise Electric Co., one-fourth mile above point where channel discharges into West Fork of Wallowa River, and 6 miles above Joseph, Wallowa County.

RECORDS AVAILABLE.—August 27, 1924, to September 30, 1925.

GAGE.—Vertical staff on right wing wall of weir 150 feet below power house; read by Wayne K. Wagner.

DISCHARGE MEASUREMENTS.—Made by wading or from plank placed across stream.

CHANNEL AND CONTROL.—Control is a 5-foot Cippoletti weir made from 2-inch plank, beveled at top and set in concrete.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period of record, 0.62 foot at 12.15 p. m. April 10 (discharge, 9.4 second-feet); minimum stage, 0.34 foot August 31 and September 1, 1924 (discharge, 3.5 second-feet).

ICE.—Stage-discharge relation not affected by ice.

REGULATION.—Flow regulated by discharge through nozzle for impulse wheel in power house, but opening in nozzle is changed only about twice a day, minor variations in load being taken care of by deflection of nozzle.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Staff gage read to hundredths twice daily except December 17 to March 22 and April 1–12, when only one daily reading was obtained. Daily discharge ascertained by applying to rating table daily or mean daily gage height. Records good.

Water is diverted at dam on East Fork of Wallowa River into a conduit, 16 to 18 inches in diameter, and carried 1 mile to power house. After leaving power house the water follows a tortuous channel for a quarter of a mile and discharges into West Fork. Elevation of crest of dam above nozzle at power house is 1,160 feet.

Discharge measurements of Enterprise Electric Co.'s tailrace near Joseph, Oreg., during the years ending September 30, 1924 and 1925

Date	Gage height	Discharge
1924	*Feet*	*Sec.-feet*
Sept. 28	0.40	5.6
1925		
Mar. 20	.45	5.6
Do	.45	5.7
May 1	.57	8.2
Do	.41	4.6

Daily discharge, in second-feet, of Enterprise Electric Co.'s tailrace near Joseph, Oreg., for the years ending September 30, 1924 and 1925

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1924			1924			1924		
1		4.0	11		5.1	21		4.2
2		4.2	12		5.8	22		5.8
3		5.3	13		5.3	23		6.4
4		4.5	14		4.3	24		8.0
5		5.1	15		5.3	25		5.8
6		4.9	16		5.1	26		6.0
7		4.2	17		5.1	27	6.6	6.0
8		5.6	18		6.2	28	4.9	4.5
9		5.8	19		5.6	29	4.2	5.8
10		5.3	20		5.8	30	5.6	6.0
						31	4.0	

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1924-25												
1	6.2	5.1	5.8	4.9	5.3	6.2	6.0	5.1	5.3	5.3	5.6	5.8
2	6.6	4.3	6.0	4.9	4.2	6.2	6.6	4.9	5.3	5.3	5.1	4.9
3	6.6	5.3	5.8	5.3	4.2	6.2	6.6	4.5	5.1	5.3	5.3	5.3
4	7.3	6.2	6.0	4.5	6.2	6.2	6.6	5.3	5.6	4.9	5.6	5.3
5	5.1	6.0	6.4	4.9	6.2	6.2	5.8	5.6	5.1	4.5	6.2	5.3
6	6.6	5.8	5.8	5.8	5.8	4.9	6.2	4.5	5.6	5.3	5.1	4.7
7	5.6	5.6	4.5	5.8	5.3	5.1	5.8	5.3	4.7	5.1	4.5	5.3
8	6.4	5.3	6.0	6.2	4.9	4.7	5.8	5.3	5.1	3.9	5.3	5.8
9	6.6	4.9	6.4	6.2	4.9	5.6	6.2	5.8	5.8	4.9	4.3	6.0
10	5.8	6.0	6.2	5.8	4.5	5.8	9.4	4.7	5.1	4.9	5.8	5.8

Daily discharge, in second-feet, of Enterprise Electric Co.'s tailrace near Joseph, Oreg., for the years ending September 30, 1924 and 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	6.2	5.1	5.6	4.9	4.5	5.8	7.1	5.3	5.1	4.9	5.8	5.8
12	4.5	5.8	5.8	5.3	4.5	5.8	5.8	5.8	4.9	4.5	5.3	5.8
13	6.0	5.6	5.3	5.8	4.9	5.8	6.6	5.3	5.1	5.3	5.8	4.5
14	5.6	5.8	5.3	5.8	4.9	5.8	5.6	5.3	4.5	5.3	4.9	6.2
15	6.0	6.0	6.0	5.8	6.2	5.8	5.6	5.1	4.7	6.0	4.7	6.2
16	5.6	5.1	4.9	5.3	6.2	5.3	5.6	5.1	5.3	5.1	4.7	6.2
17	6.0	5.6	4.9	5.8	4.9	5.8	5.6	4.5	5.1	5.1	5.3	6.2
18	6.0	5.3	4.9	4.9	4.5	5.3	5.8	5.1	4.3	5.3	5.3	6.2
19	5.3	5.3	5.8	6.2	6.2	5.8	4.7	5.1	5.3	4.5	5.3	6.2
20	5.6	5.1	5.8	5.8	6.2	5.6	5.6	5.3	5.1	5.3	5.8	5.3
21	5.6	5.3	4.9	5.8	6.2	5.8	5.8	5.3	5.8	5.3	5.3	5.8
22	5.3	5.1	5.3	6.2	5.3	4.9	6.4	5.3	4.7	5.3	5.3	6.0
23	5.6	4.7	4.9	5.8	6.2	5.6	5.6	5.6	4.5	5.3	4.7	6.0
24	6.2	5.8	4.9	6.2	5.3	5.3	5.3	4.5	4.9	6.2	5.3	6.0
25	5.6	5.8	4.9	4.9	5.8	5.6	5.6	4.9	4.7	5.3	5.6	6.2
26	4.9	5.6	4.9	5.8	5.3	5.8	5.1	5.3	5.1	4.5	5.8	6.2
27	5.6	5.3	4.9	6.2	6.0	5.8	5.3	5.1	4.9	5.3	4.9	4.7
28	5.3	5.3	4.9	5.8	6.6	6.2	6.0	5.3	4.7	5.3	5.6	6.2
29	5.3	5.3	4.9	5.8	-------	5.3	5.8	4.7	5.3	5.3	5.3	6.2
30	5.6	4.9	4.9	5.6	-------	5.8	5.8	4.9	4.9	5.3	4.9	6.2
31	5.3	-------	4.9	5.8	-------	6.4	-------	4.3	-------	5.3	5.3	------

Monthly discharge of Enterprise Electric Co.'s tailrace near Joseph, Oreg., for the years ending September 30, 1924 and 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1924				
August 27-31	6.6	4.0	5.06	50
September	8.0	4.0	5.37	320
1924-25				
October	7.3	4.5	5.80	357
November	6.2	4.3	5.41	322
December	6.4	4.5	5.40	332
January	6.2	4.5	5.61	345
February	6.6	4.2	5.40	300
March	6.4	4.7	5.69	350
April	9.4	5.1	5.99	356
May	5.8	4.3	5.10	314
June	5.8	4.3	5.05	300
July	6.2	3.9	5.13	315
August	6.2	4.3	5.28	325
September	6.2	4.5	5.74	342
The year	9.4	3.9	5.48	3,960

CLEARWATER RIVER AT KAMIAH, IDAHO

LOCATION.—In sec. 1, T. 33 N., R. 3 E., at former toll bridge in town of Kamiah, Lewis County, 6 miles below mouth of South Fork of Clearwater River.

DRAINAGE AREA.—4,850 square miles (measured on General Land Office map, edition of 1909).

RECORDS AVAILABLE.—August 20, 1910, to September 30, 1925.

GAGE.—Chain gage attached to downstream handrail of bridge; installed May 30, 1911; read by Mrs. Elsie McCarty and Mrs. Lillian Nickel.

DISCHARGE MEASUREMENTS.—Made from downstream side of bridge.

CHANNEL AND CONTROL.—Bed and control consists of heavy boulders and gravel; control practically permanent. One channel at low water; two channels between gage heights about 5 and 8 feet, and one channel above gage height 8 feet.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 14.1 feet May 20 (discharge, 59,800 second-feet); minimum stage, 2.3 feet October 21, 24–27 (discharge, 1,220 second-feet).

1910–1925: Maximum stage recorded, 16.1 feet May 26, 1913 (discharge, 76,600 second-feet); minimum stage occurred in December, 1919, when stage-discharge relation was affected by ice (discharge probably less than 500 second-feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Several small ditches divert water for irrigation above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent; affected by ice December 20 to January 27. Rating curve fairly well defined below 50,000 second-feet. Gage read to tenths once daily. Daily discharge ascertained by applying daily gage height to rating table. Records fair.

COOPERATION.—Gage-height record furnished by United States Weather Bureau.

Discharge measurements of Clearwater River at Kamiah, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
June 17	8.24	17,700	Aug. 22	2.67	1,620
Do	8.26	18,500	Sept. 14	2.48	1,320

Daily discharge, in second-feet, of Clearwater River at Kamiah, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,320	2,050	2,190		7,160	4,300	12,700	25,000	25,600	12,300	2,330	1,540
2	1,430	2,920	2,470		6,550	4,510	13,500	27,000	25,000	9,540	2,190	1,540
3	1,910	2,920	3,080		16,600	4,300	15,300	28,900	23,800	9,540	2,330	1,540
4	2,770	2,920	3,080	2,500	13,500	4,100	18,500	31,000	20,600	8,140	2,470	1,660
5	2,190	3,730	2,770		12,700	5,200	22,200	33,800	20,000	6,850	2,330	1,430
6	1,910	3,240	2,620		10,300	6,850	22,700	39,500	17,600	6,850	2,050	1,540
7	1,660	2,770	2,470		7,480	6,850	23,800	44,800	17,100	6,260	2,050	1,910
8	1,540	2,470	2,330		6,550	6,550	25,000	41,800	15,700	5,710	1,910	2,050
9	1,540	2,470	2,050		5,450	6,260	28,900	34,500	15,700	5,450	2,050	2,050
10	1,430	2,620	2,050		4,960	5,710	32,400	33,100	18,500	5,200	1,910	1,780
11	1,540	2,330	2,470		4,300	4,960	35,200	33,100	18,500	4,960	1,780	1,660
12	1,540	2,190	4,300		4,300	4,960	39,500	35,200	15,700	4,510	1,780	1,660
13	1,430	2,050	4,510		3,910	4,510	41,000	39,500	16,200	4,300	1,660	1,540
14	1,320	1,780	9,540		3,560	4,300	38,800	45,600	15,700	3,910	2,050	1,430
15	1,320	1,910	7,810	2,300	3,730	4,100	35,200	44,800	16,200	4,100	3,730	1,660
16	1,320	2,190	6,550		3,730	3,910	40,200	48,000	18,100	3,910	2,920	1,780
17	1,320	2,050	4,100		3,400	4,300	41,800	49,600	18,100	3,560	2,330	2,620
18	1,320	1,780	2,470		3,400	3,910	38,000	51,200	17,600	3,400	2,050	2,330
19	1,320	1,780	2,470		3,240	4,100	32,400	52,100	18,100	3,240	1,910	2,050
20	2,320	2,470			3,400	4,510	29,600	59,800	20,600	3,240	1,910	2,330
21	1,220	4,100			3,560	5,710	25,000	55,500	20,000	3,080	1,660	2,330
22	1,320	6,550			4,100	6,550	22,700	52,100	18,100	2,920	1,660	2,050
23	1,320	6,550	1,700		4,100	6,850	23,800	47,200	17,600	3,080	1,660	1,910
24	1,220	4,960			4,730	6,850	21,600	43,200	15,300	3,080	1,910	1,910
25	1,220	4,100		3,800	4,960	7,160	20,000	40,200	14,000	3,240	2,050	1,660
26	1,220	3,560			5,200	7,810	18,500	35,200	13,100	3,240	1,910	1,660
27	1,220	2,920			4,730	7,480	18,100	33,800	11,500	2,920	1,660	1,540
28	1,320	2,470		3,730	4,510	8,480	17,600	34,500	11,100	2,620	1,660	1,660
29	1,540	2,330	2,500	3,910	-------	11,100	19,000	35,900	10,700	2,620	1,660	1,660
30	1,910	2,330		4,730	-------	11,900	21,600	35,200	11,900	2,620	1,660	2,330
31	1,780	-------		6,260	-------	12,300	-------	28,900	-------	2,620	1,540	------

NOTE.—Discharge estimated Dec. 20 to Jan. 27 and Apr. 15, based on weather records and flow in South Fork of Clearwater River near Grangeville. Braced figures show mean discharge for periods indicated.

Monthly discharge of Clearwater River at Kamiah, Idaho, for the year ending September 30, 1925

[Drainage area, 4,850 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	2,770	1,220	1,510	0.311	0.36	92,800
November	6,550	1,780	2,950	.608	.68	176,000
December	9,540	----------	3,020	.623	.72	186,000
January	6,260	----------	2,880	.594	.68	177,000
February	16,600	3,240	5,860	1.21	1.26	325,000
March	12,300	3,910	6,140	1.27	1.46	378,000
April	41,800	12,700	26,500	5.46	6.09	1,580,000
May	59,800	25,000	40,000	8.25	9.51	2,460,000
June	25,600	10,700	17,300	3.57	3.98	1,030,000
July	12,300	2,620	4,740	.977	1.13	291,000
August	3,730	1,540	2,020	.416	.48	124,000
September	2,620	1,430	1,830	.377	.42	109,000
The year	59,800	1,220	9,560	1.97	26.77	6,930,000

CLEARWATER RIVER NEAR LEWISTON, IDAHO

LOCATION.—In NE. ¼ sec. 28, T. 36 N., R. 5 W., three-eighths mile below dam site of Inland Power & Light Co., 3 miles east of the Eighteenth Street highway bridge at Lewiston, Nez Perce County, and 4 miles above mouth of river.

RECORDS AVAILABLE.—August 23, 1910, to October 31, 1913; October 2, 1924, to September 30, 1925.

DRAINAGE AREA.—9,640 square miles.

GAGE.—Stevens continuous water-stage recorder on right bank at former Central Ferry site; reinstalled October 2, 1924; inspected by J. C. Stevens and employees of Inland Power & Light Co. From 1910 to 1913, gage was at datum about 1.3 feet higher than present gage. Zero of present gage at elevation 732.00 feet when referred to city of Lewiston datum; 733.33 feet when referred to United States Geological Survey bench marks at Lewiston as described in Bulletin 567; and 730.23 feet when referred to United States Coast and Geodetic Survey datum.

DISCHARGE MEASUREMENTS.—Made from highway bridge at Lewiston and Spalding.

CHANNEL AND CONTROL.—Bed composed of boulders and gravel. Two channels at extremely high stages. Control formed by well-defined gravel and boulder riffle; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 16.1 feet from 3 to 6 p. m. May 20 (discharge, 87,900 second-feet); minimum stage, 2.45 feet October 25 and 26 (discharge, 2,100 second-feet).

1910–1913; 1925: Maximum stage recorded, 16.0 feet (17.3 feet present datum) May 28, 1913 (discharge, 98,800 second-feet); minimum stage and discharge recorded on October 25, 26, 1924. Actual maximum stage and discharge on May 28, 1913, was probably somewhat higher than was recorded as indicated by comparison with gage heights obtained at city of Lewiston pumping plant.

Crest elevation during flood of June, 1894, was 20.8 feet, present gage datum (discharge, about 136,000 second-feet), as determined by J. C. Stevens, who referred the high-water mark to the Central Ferry gage during investigations made in 1924.

ICE.—Stage-discharge relation affected by ice only for short periods during severe winters.

DIVERSIONS.—Practically none.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent; affected by ice December 20–26. Rating curve well defined below 50,000 second-feet and extended above. Operation of water-stage recorder unsatisfactory after May 30. At other times staff gage was read to tenths at irregular intervals. Daily discharge ascertained by applying to rating table daily or mean daily gage height. For periods water-stage recorder was in operation mean daily gage height determined by inspection of recorder graph. Records fair.

COOPERATION.—Gage-height record furnished by J. C. Stevens and Inland Power & Light Co.

Discharge measurements of Clearwater River near Lewiston, Idaho, during the years ending September 30, 1924 and 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
1924	*Feet*	*Sec.-ft.*	1924	*Feet*	*Sec.-ft.*
Aug. 19	[a] 2.91	2,830	Sept. 13	[a] 2.59	2,180
Aug. 21	[a] 3.47	4,040	Oct. 4	3.47	[b] 4,230

[a] Determined from curve of gage-height relation between gage at Central Ferry site and the Eighteenth Street highway bridge at Lewiston, to which these measurements were referred when made.
[b] Made from boat at city pumping station.

Daily discharge, in second-feet, of Clearwater River near Lewiston, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Apr.	May	June	July	Aug.	Sept.
1		4,780	7,500			46,600	43,000	19,000		2,670
2	2,580	6,900	7,500			50,900		16,000	4,300	2,670
3	3,560	6,900	8,110			52,600	40,700	15,000		2,580
4	4,260	7,200	8,260			54,400				2,670
5	4,520	8,260	8,110			57,900	34,000	13,000	4,300	2,500
6	3,450	8,110	7,960			64,200				2,580
7	3,040	6,460	7,650			71,700				3,100
8	2,760	5,470	7,200			70,800	25,000			
9	2,670	5,190	6,900			63,300		10,000	3,800	3,800
10	2,580	5,190	6,760		66,000	58,800	27,800			
11	2,500	4,920	6,760			69,800	58,800		3,500	3,800
12	2,420	4,650	8,260			75,500	60,600	26,000		3,040
13	2,420	4,140	10,000			78,400	65,100	8,000	3,430	
14	2,340	3,780	17,200	4,920		72,600	70,800			2,700
15	2,340	3,670	17,200			67,000	72,600	6,900	6,000	
16	2,260	4,140	14,200			69,800	75,500	25,000		
17	2,180	4,140	10,400			75,500	77,400		4,920	4,100
18	2,180	3,670	6,460			73,600	77,400	6,000	4,440	
19	2,180	3,450	5,190			65,100	78,400		3,950	3,450
20	2,180	5,470				58,800	84,000		3,470	
21	2,180	10,400				51,700	30,000		2,980	3,700
22	2,180	12,000				47,400	84,000	4,750	2,500	
23	2,180	16,800	4,000			47,400	75,500		2,770	
24	2,180	12,000				44,900	68,800	25,200	3,040	3,000
25	2,100	10,700				39,900	64,200	5,500	3,090	
26	2,100	9,690				37,500	58,800	21,000	3,140	2,670
27	2,180	9,050	4,780			36,700	54,400		3,040	
28	2,340	8,420	5,470			36,900	54,400	5,200	2,940	2,450
29	3,040	8,110	6,460			36,700	56,100	17,000	2,850	
30	3,900	8,110	6,900			39,900	55,200	4,650	2,850	3,300
31	4,140						48,000	4,600	2,850	

NOTE.—Discharge estimated or interpolated, based on comparative flow at Kamiah, Dec. 20–26, May 31, June 1, 2, 4–9, 11–23, 25–30, July 1, 2, 4–14, 16–29, 31, Aug. 1–12, 14–16, 18–21, 23, 25, 28, Sept. 7–11, 13–18, 20–25, and 27–30. Braced figures show mean discharge for periods indicated.

Monthly discharge of Clearwater River near Lewiston, Idaho, for the year ending September 30, 1925

[Drainage area, 9,640 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 2-31	4,520	2,100	2,700	0.280	0.31	161,000
November	16,800	3,450	7,060	.732	.82	420,000
December 1-30	17,200	----------	7,440	.772	.86	443,000
April 10-30	78,400	36,000	56,700	5.88	4.59	2,360,000
May	84,000	46,600	65,000	6.74	7.77	4,000,000
June	----------	----------	27,600	2.86	3.19	1,640,000
July	----------	----------	8,230	.854	.98	506,000
August	----------	2,500	3,830	.397	.46	236,000
September	----------	----------	3,150	.327	.36	187,000

SOUTH FORK OF CLEARWATER RIVER NEAR GRANGEVILLE, IDAHO

LOCATION.—In SE. ¼ NW. ¼ sec. 30, T. 30 N., R. 4 E. Boise meridian, below power house of Grangeville Electric Light & Power Co., 3 miles east of Mount Idaho, 6 miles southeast of Grangeville, Idaho County, and 19 miles above mouth.

DRAINAGE AREA.—940 square miles.

RECORDS AVAILABLE.—November 14, 1910, to July 31, 1911; October 9 to November 18, 1911; January 4, 1912, to September 30, 1916; and April 1, 1923, to September 30, 1925.

GAGE.—Vertical and inclined staff on right bank 150 feet below power house; installed January 8, 1924; read by power-plant operators.

DISCHARGE MEASUREMENTS.—Made from cable one-fourth mile below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of large boulders; shifts only at high stages; gradient steep; channel curved at gage. Left bank subject to overflow during extremely high water.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.4 feet at 7 a. m. April 17 (discharge, 4,010 second-feet); minimum stage, 2.60 feet at noon December 25 (discharge, 58 second-feet).

1910–1916; 1923–1925: Maximum stage recorded, 9.7 feet (9.48 feet present datum) May 30, 1912 (discharge, 9,830 second-feet); minimum stage, 2.50 feet at 7 a. m. September 24, 1924 (discharge, 40 second-feet).

ICE.—Stage-discharge relation affected by ice during severe winters.

DIVERSIONS.—Low-water flow diverted through power plant. All water diverted for power purposes returned to river above gage.

REGULATION.—Operation of power plant causes fluctuation in stage.

ACCURACY.—Stage-discharge relation permanent; affected by ice December 17, 18, 21–24, and 26. Rating curve well defined above 130 second-feet. Gage read twice daily; to half-tenths prior to August 22, to hundredths after that date. Two readings daily may not be sufficient from which to determine daily mean stage during periods of considerable diurnal fluctuation. Daily discharge ascertained by applying mean daily gage height to rating table. Record good.

COOPERATION.—Gage-height record furnished by Grangeville Electric Light & Power Co.

Discharge measurements of South Fork of Clearwater River near Grangeville, Idaho, during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 8	3.86	558	Aug. 21	2.94	157
June 18	5.04	1,310	Sept. 15	3.10	195

Daily discharge, in second-feet, of South Fork of Clearwater River near Grangeville, Idaho, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	289	157	247	280	260	1,260	2,650	1,790	1,110	200	144
2	171	370	272	239	316	280	1,340	2,650	1,790	970	239	128
3	200	280	272	200	420	302	1,600	2,780	1,790	850	231	117
4	260	260	247	231	520	325	1,990	2,910	1,600	730	208	106
5	239	316	239	239	570	520	2,780	3,040	1,600	620	193	114
6	182	239	208	208	520	595	2,530	3,170	1,420	520	171	196
7	171	216	182	208	470	570	2,650	3,730	1,600	570	164	227
8	131	193	189	193	370	545	2,780	3,730	1,420	570	164	235
9	138	193	128	200	370	520	2,910	3,310	1,420	520	148	243
10	148	208	178	200	325	470	3,170	3,170	1,600	470	164	208
11	148	193	239	182	302	420	3,170	3,170	1,600	445	138	175
12	148	171	370	171	302	420	3,730	3,170	1,420	420	148	175
13	157	120	470	164	280	370	3,450	3,310	1,420	370	148	154
14	148	164	495	164	272	370	3,310	3,450	1,260	370	370	151
15	138	204	420	164	280	325	3,170	3,730	1,260	370	420	204
16	148	200	325	171	260	325	3,590	3,590	1,510	348	280	227
17	131	148	120	182	231	325	4,010	3,730	1,420	325	193	247
18	131	106		200	239	325	3,590	3,590	1,260	325	171	200
19	125	178	117	182	231	348	3,170	3,590	1,260	316	164	231
20	131	348	131	171	239	395	2,910	3,590	1,260	280	148	260
21	131	370	150	171	272	520	2,650	3,450	1,340	272	138	243
22	131	790		164	260	620	2,780	3,170	1,260	280	138	214
23	131	570		208	272	675	2,780	2,910	1,110	370	154	168
24	103	370		220	302	675	2,410	2,650	1,040	325	243	161
25	106	289	103	208	280	702	2,190	2,530	970	420	220	148
26	109	239	160	200	280	675	2,190	2,190	910	370	171	148
27	117	138	171	200	280	702	2,190	2,190	850	272	148	141
28	120	103	231	200	260	850	2,090	2,090	850	247	157	148
29	171	128	260	200	-------	1,180	2,090	2,190	910	239	154	370
30	171	131	302	231	-------	1,110	2,190	2,190	1,040	239	161	298
31	157	-------	280	247	-------	1,110	-------	1,890	-------	200	151	------

NOTE.—Discharge estimated Dec. 17–18, 21–24, and 26 based on observer's notes and weather records. Braced figures show mean discharge for periods indicated.

Monthly discharge of South Fork of Clearwater River near Grangeville, Idaho, for the year ending September 30, 1925

[Drainage area, 940 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	260	103	149	0.159	0.18	9,160
November	790	103	251	.267	.30	14,900
December	495	----------	225	.239	.27	13,800
January	247	164	199	.212	.24	12,200
February	570	231	322	.343	.36	17,900
March	1,180	260	543	.578	.67	33,400
April	4,010	1,260	2,690	2.86	3.19	160,000
May	3,730	1,890	3,020	3.21	3.70	186,000
June	1,790	850	1,330	1.41	1.57	79,100
July	1,110	200	446	.474	.55	27,400
August	420	138	190	.202	.23	11,700
September	370	106	193	.205	.23	11,500
The year	4,010	----------	797	.848	11.49	577,000

TUCANNON RIVER NEAR POMEROY, WASH.

LOCATION.—In sec. 13, T. 11 N., R. 40 E., at highway bridge at abandoned post office of Marengo, 9 miles southwest of Pomeroy, Columbia County, 14 miles above Petaha Creek and 17½ miles north of Dayton.

DRAINAGE AREA.—109 square miles (measured on Umatilla National Forest map, edition of 1922).

RECORDS AVAILABLE.—August 31, 1913, to June 30, 1915; March 1, 1924, to September 30, 1925.

GAGE.—Vertical staff on downstream corner of left abutment; used since October 24, 1923; read by I. O. Hovrud.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Bed composed of gravel. Control formed by riffle 75 feet below gage; shifting at high water. Banks not subject to overflow. Stage of zero flow determined September 8, 1924, gage height 2.97 feet ± 0.1 foot.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 5.35 feet at 8.30 a. m. February 5 (discharge, 642 second-feet); minimum stage, 4.10 feet August 22 (discharge, 51 second-feet).

1913–1915; 1924–25: Maximum stage recorded February 5, 1925; minimum stage, 1.20 feet at 7.30 a. m. December 24, 1914 (discharge, 25 second-feet).

ICE.—Stage-discharge relation seriously affected by ice for short periods during severe winters.

DIVERSION.—Several small diversions for irrigation above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed during period February 6–15; affected by ice December 17–28. Rating curve used prior to February 5 well defined; curve used after February 16 fairly well defined. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table. Shifting-control method used February 6–15. Records good.

Discharge measurements of Tucannon River near Pomeroy, Wash., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 5	5.31	609	July 14	4.17	68.4
Mar. 6	4.62	192	Sept. 25	4.13	55.0
Apr. 27	4.62	178			

Daily discharge, in second-feet, of Tucannon River near Pomeroy, Wash., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	87	105	148	292	147	172	212	202	84	55	55
2	58	83	101	148	292	147	178	230	195	84	57	57
3	60	81	98	135	315	150	195	237	188	77	55	59
4	60	81	98	148	510	153	205	241	178	74	53	59
5	60	81	103	162	624	166	230	279	168	72	53	62
6	60	81	98	148	544	181	248	292	162	72	53	66
7	58	77	98	148	465	178	270	332	153	70	55	64
8	58	77	94	148	390	169	292	342	162	72	55	68
9	58	87	87	148	332	162	317	292	162	72	55	66
10	60	79	96	143	277	153	372	292	156	70	53	66

Daily discharge, in second-feet, of Tucannon River near Pomeroy, Wash., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	60	77	98	128	236	147	402	283	147	68	53	62
12	60	77	110	122	214	139	437	292	147	68	53	59
13	60	77	135	115	196	134	402	302	142	66	59	62
14	60	73	148	110	177	134	372	317	134	66	59	62
15	58	75	151	110	162	131	342	317	128	64	59	59
16	58	75	146	105	153	125	342	327	125	64	59	59
17	58	75		101	147	134	372	342	120	64	57	62
18	58	75		98	142	120	342	342	120	59	57	62
19	58	87		130	134	120	317	342	118	57	55	62
20	58	192		122	134	134	292	317	112	57	55	64
21	58	177		148	147	142	270	317	112	59	53	64
22	58	292		148	142	162	248	307	110	59	51	62
23	58	248	70	183	156	178	230	279	108	62	62	62
24	58	206		206	178	178	212	257	95	105	74	62
25	56	180		210	178	195	195	248	86	84	66	59
26	56	151		192	172	195	195	230	86	72	62	59
27	58	140		186	162	192	185	219	84	68	59	59
28	58	125		180	159	205	178	212	84	66	59	62
29	67	115	192	192	-------	195	185	230	88	62	62	64
30	71	110	162	210	-------	185	202	241	86	59	59	66
31	77	-------	148	260	-------	178	-------	212	-------	57	57	------

Monthly discharge of Tucannon River near Pomeroy, Wash., for the year ending September 30, 1925

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	77	56	59.8	3,680
November	292	73	115	6,840
December	192	----------	100	6,150
January	260	98	153	9,410
February	624	134	251	13,900
March	205	120	159	9,780
April	437	172	273	16,200
May	342	212	280	17,200
June	202	84	132	7,860
July	105	57	68.8	4,230
August	74	51	57.2	3,520
September	68	55	61.8	3,680
The year	624	----------	142	102,000

MISCELLANEOUS MEASUREMENTS

Discharge measurements of streams in the Snake River Basin at points other than regular gaging station, made during the year ending September 30, 1925, are listed in the following table:

Miscellaneous discharge measurements in Snake River drainage basin during the year ending September 30, 1925

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Aug. 19	Snake River	Columbia River	Thompson ranch near Pinegree, Idaho.	3.24	6,330
30	do	do	NE. ¼ sec. 6, T. 11 S., R. 20 E., 100 feet above confluence with Dry Creek, 1 mile northeast of Murtaugh, Idaho.	-------	[a] 48.0
6	Two Ocean Creek	Pacific Creek	Midway between Two Ocean Lake and mouth, Wyo.	2.70	29.5

[a] Furnished by Idaho Power Co.

Miscellaneous discharge measurements in Snake River drainage basin during the year ending September 30, 1925—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
May 23	Lowder Slough Creek	Snake River	Three-fourths mile below head near Ririe, Idaho.	3.22	348
June 3	do	do	do	2.73	206
7	do	do	do	2.29	115
13	do	do	do	2.17	97.6
July 6	do	do	do	2.91	250
12	do	do	do	2.57	170
22	do	do	do	2.66	193
Aug. 3	do	do	do	2.54	162
10	do	do	do	2.22	97.6
15	do	do	do	2.28	113
22	do	do	do	1.90	51.3
Sept. 8	do	do	do	1.68	26.6
14	do	do	do	1.26	4.88
June 7	Bannock Jim Slough Creek.	do	1 mile below head near Thornton, Idaho.	2.43	48.4
10	do	do	do	2.10	10.8
13	do	do	do	2.11	11.0
22	do	do	do	3.36	291
27	do	do	do	3.40	296
July 6	do	do	do	3.10	202
10	do	do	do	2.67	96.5
14	do	do	do	2.43	55.4
18	do	do	do	2.82	128
28	do	do	do	2.58	76.5
Aug. 10	do	do	do	2.26	28.4
14	do	do	do	2.25	29.0
19	do	do	do	2.06	9.39
June 5	Moose Creek	Henrys Fork	At bridge, three-fourths mile above mouth near Big Springs, Idaho.	2.20	47.8
Aug. 30	do	do	do	2.04	39.9
6	Squirrel Creek Canal	Squirrel Creek	At head, near Squirrel, Idaho.		5.10
Sept. 27	do	do	do		2.75
Aug. 6	Conant Creek Canal	Conant Creek	do		28.9
Sept. 27	do	do	do		17.2
May 19	Warm Springs Creek	Canyon Creek	At mouth, near Pincock Hot Springs, Idaho.		13.8
31	do	do	do		12.2
June 29	do	do	do		7.62
July 31	do	do	do		6.35
20	Market Lake Springs	Snake River	100 feet west of railroad, 2 miles north of Roberts, Idaho.		3.99
29	do	do	do		3.76
Aug. 21	do	do	One-fourth mile west of railroad, 2 miles north of Roberts, Idaho.		2.85
July 29	Edwards pump canal	do	At head, 1 mile south of Idaho Falls, Idaho.		.74
Aug. 28	Aggregate surface inflow.	do	Between Shelley and Lower Blackfoot Bridge gaging stations.		175
28	Aggregate surface inflow except Blackfoot River.	do	Between Lower Blackfoot Bridge and Clough gaging stations.		91
Oct. 10	Spring Creek	Blackfoot River	Sec. 17, T. 6 S., R. 42 E., 1½ miles southwest of Henry, Idaho.		10.7
9	Little Blackfoot River	do	Sec. 15, T. 6 S., R. 42 E., ¾ mile southeast of Henry, Idaho.		3.9
10	do	do	NE. ¼ sec. 9, T. 6 S., R. 42 E., 800 yards below post office of Henry, Idaho.		42.8
Apr. 29	Clark Cut	Meadow Creek	About sec. 12, T. 5 S., R. 42 E., 7½ miles northeast of Henry, Idaho.	4.90	236
May 26	do	do	do	3.92	120
July 7	do	do	do	2.60	33.2
29	do	do	do	1.70	3.5
Sept. 24	do	do	do	1.55	b1.2
Oct. 9	Lone Tree Springs	Little Blackfoot River	Sec. 5, T. 6 S., R. 42 E., 2 miles northwest of Henry, Idaho.		b3.5
9	Wilson Lake outlet	Blackfoot River	NW. ¼ sec. 5, T. 5 S., R. 41 E., 11 miles northwest of Henry, Idaho.		1.2

b Estimated.

Miscellaneous discharge measurements in Snake River drainage basin during the year ending September 30, 1925—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Oct. 9	Spring Creek	Blackfoot River	About sec. 6, T. 5 S., R. 41 E., 12 miles northwest of Henry, Idaho.		4.8
9	Poison Creek	do	do		[b].8
9	Spring Creek	do	NE. ¼ sec. 1, T. 5 S., R. 40 E., 1 mile north of Blackfoot Dam and 12 miles northwest of Henry, Idaho.		3.2
July 11	Camas Creek	Mud Lake	Sec. 19, T. 10 N., R. 38 E., at Jacoby ranch, 11 miles east of Dubois, Idaho.		64.2
Aug. 1	do	do	do		29.1
21	do	do	do		27.8
Dec. 6	do	do	NW. ¼ sec. 36, T. 7 N., R. 35 E., at highway bridge, 5 miles southwest of Hamer, Idaho.		80.5
Mar. 15	do	do	do		73.7
Apr. 10	do	do	do		158
May 8	do	do	do		104
20	do	do	do		161
June 2	do	do	do		108
30	do	do	do		41.3
July 12	do	do	do		44.7
Aug. 20	do	do	do		[b]50.0
June 3	Woods Hump ditch	Diverts from Camas Creek.	Sec. 21, T. 12 N., R. 38 E., 4 miles below head, 10 miles east of Spencer, Idaho.		11.2
27	do	do	do		7.1
July 11	do	do	do		Dry.
June 3	Woods Lucky Strike ditch.	do	Sec. 36, T. 12 N., R 38 E., 3 miles below head, 5 miles south of Kilgore, Idaho.		26.3
28	do	do	do		4.2
July 11	do	do	do		Dry.
Aug. 1	do	do	do		Dry.
July 11	Jacoby ditch	do	Sec. 17, T. 10 N., R. 38 E., 300 feet below head. 11 miles east of Dubois, Idaho		2.9
Aug. 1	do	do	do		4.0
21	do	do	do		3.8
May 5	Hoffman ditch	do	Sec. 34, T. 9 N., R. 36 E., 4 miles north of Camas, Idaho.		[b].2
June 29	do	do	do		5.9
July 10	do	do	do		3.3
10	do	do	do		3.5
Aug. 2	do	do	do		2.5
20	do	do	do		3.6
June 30	Holly Water Users Canal.	do	NW. ¼ sec. 36, T. 7 N., R. 35 E., ¾ mile below Ray's Lake and 5 miles southwest of Hamer, Idaho.		18.0
Dec. 6	Spring Creek	Mud Lake	Sec. 28, T. 7 N., R. 35 E., at Jackett ranch, 8 miles west of Hamer, Idaho.		9.3
Mar. 15	do	do	do		10.3
Apr. 10	do	do	do		[b]8.2
May 7	do	do	do		9.6
19	do	do	do		6.5
June 2	do	do	do		6.5
30	do	do	do		7.0
July 11	do	do	do		7.8
Sept. 30	do	do	do		15.3
Dec. 6	do	do	Sec. 26, T. 7 N., R. 35 E., below Deadline Lake, 6 miles west of Hamer, Idaho.		7.4
Mar. 15	do	do	do		7.2
Apr. 10	do	do	do		[b]5.5
May 7	do	do	do		[b]6.0
19	do	do	do		[b]3.2
June 2	do	do	do		[b].5
30	do	do	do		1.1
July 11	do	do	do		[b].5
Aug. 1	Lidy Hot Springs	Snake River	Sec. 2, T. 9 N., R. 33 E., 15 miles southwest of Dubois, Idaho.		.1

[b] Estimated.

Miscellaneous discharge measurements in Snake River drainage basin during the year ending September 30, 1925—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Mar. 12	Portneuf River	Snake River	SW. ¼ SW. ¼ sec. 3, T. 8 S., R. 38 E., seven-tenths mile north of Pebble, Idaho.	0.89	135
Apr. 1	do	do	do	1.00	126
8	do	do	do	1.03	122
May 2	do	do	do	1.40	115
25	do	do	do	2.06	132
31	do	do	do	2.14	88.1
July 2	do	do	do	2.89	108
8	do	do	do	2.44	128
27	do	do	do	1.29	152
Sept. 23	do	do	do	1.03	103
Aug. 30	Dry Creek	do	NE. ¼ sec. 6, T. 11 S., R. 20 E., at mouth, 1 mile northeast of Murtaugh, Idaho.		[a] 20.1
Nov. 2	Blue Lakes outlet	do	SW. ¼ SW. ¼ sec. 28, T. 9 S., R. 17 E., 200 feet below highway bridge at Blue Lakes ranch, 4 miles north of Twin Falls, Idaho.	.95	[a]211
Mar. 6	do	do	do	.84	184
July 16	do	do	do	.91	201
Aug. 20	do	do	do	.95	196
30	do	do	do	.96	[a] 225
Nov. 1	Crystal Springs	do	Sec. 7, T. 9 S., R. 16 E., and sec. 12, T. 9 S., R. 15 E., 6 miles northwest of Filer, Idaho.		[a] 479
Aug. 29	do	do	do		[a] 603
Nov. 1	Niagara Springs	do	Sec. 4, T. 9 S., R. 15 E., 6 miles northeast of Buhl, Idaho.		[a] 230
1	Niagara Springs diversions.	Divert from Niagara Springs.	do		[a] 18.7
Oct. 31	Briggs Springs	Snake River	Sec. 3, T. 9 S., R. 14 E., at ford above ranch house, 5½ miles northwest of Buhl, Idaho.		[a] 125
June 6	do	do	do		[a] 117
Aug. 29	do	do	do		[a] 119
Oct. 31	Banbury Springs	do	Sec. 33, T. 8 S., R. 14 E., at mouth 7 miles northwest of Buhl, Idaho.		[a] 101
Aug. 28	do	do	do		[a] 114
Oct. 31	Box Canyon Creek	do	Sec. 28, T. 8 S., R. 14 E., below falls ¾ mile from Snake River, 8½ miles northwest of Buhl, Idaho.		[a] 277
May 31	do	do	do		[a] 282
July 14	Main canal, Salmon River Canal Co.	Salmon River Reservoir.	Sec. 7, T. 14 S., R. 15 E., 1 mile below head, 7¼ miles west of Rogerson, Idaho.	8.66	685
14	do	do	Sec. 32, T. 13 S., R. 15 E., below head of lateral A, 6½ miles west and 2 miles north of Rogerson, Idaho.	2.70	526
July 14	Lateral A, Salmon River Canal Co.	do	Sec. 5, T. 14 S., R 15 E., at head, 6½ miles west and 2 miles north of Rogerson, Idaho.	3.36	164
Oct. 30	Sand Springs	Snake River	Sec. 17, T. 8 S., R. 14 E., 6 miles southeast of Hagerman, Idaho.		[a] [c] 98.9
June 4	do	do	do		[a] [d] 91.3
Aug. 27	do	do	do		[a] [e] 100
27	Tailrace from Thousand Springs power plant.	Thousand Springs, east and west channels.	Sec. 8, T. 8 S., R. 14 E., 5 miles southeast of Hagerman, Idaho.		[a] 542
Oct. 30	Thousand Springs (east channel).	Snake River	On line between secs. 8 and 17, T. 8 S., R. 14 E., 5 miles southeast of Hagerman, Idaho.	1.57	[a] 550
Aug. 27	do	do	do		[a] 579

[a] Furnished by Idado Power Co.
[c] Includes 6.97 sec.-ft. diversions.
[d] Includes 15.5 sec.-ft. diversions.
[e] Includes 19.6 sec.-ft. diversions.

Miscellaneous discharge measurements in Snake River drainage basin during the year ending September 30, 1925—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Oct. 30	Thousand Springs (west channel).	Snake River	Sec. 8, T. 8 S., R. 14 E., 5 miles southeast of Hagerman, Idaho.		[a] 254
Aug. 27	do	do	do		[a] 268
Oct. 29	Inflow into Thousand Springs (west channel).	Thousand Springs (west channel).	do		[a] 46.8
Aug. 28	do	do	do		[a] [f] 48.2
28	Springs	Snake River	Sec. 7, T. 8 S., R. 14 E., 1,300 feet northwest of Thousand Springs (west channel) and 4½ miles southeast of Hagerman, Idaho.		[a] 120
June 1	do	do	Sec. 6, T. 8 S., R. 14 E., 1,000 feet southeast of Bickel's house and 4 miles southeast of Hagerman, Idaho.		[a] 41.9
Aug. 28	do	do	do		[a] 45.3
June 1	do	do	Sec. 6, T. 8 S., R. 14 E., 500 feet north of Bickel's house and 4 miles southeast of Hagerman, Idaho.		[a] [f] 18.2
Aug. 27, 28.	do	do	do		[a] 18.8
May 29	Riley Creek	do	Sec. 6, T. 8 S., R. 14 E., 2,100 feet northwest of Bickel's house and 4 miles southeast of Hagerman, Idaho.		[a] 53.9
Aug. 27	do	do	do		[a] 57.0
Oct. 29	do	do	Sec. 1, T. 8 S., R. 13 E., below diversions, 3 miles southeast of Hagerman, Idaho.		[a] 128
May 29	do	do	do		[a] 105
Aug. 26	do	do	do		[a] 130
Oct. 29	Buckeye ditch and other diversions.	Riley Creek and Tucker Springs.	Sec. 31, T. 7 S., R. 14 E., and sec. 36, T. 7 S., R. 13 E., 3 miles southeast of Hagerman, Idaho.		[a] 25.1
May 29	do	do	do		[a] 48.2
Aug. 26	do	do	do		[a] 41.7
Oct. 29	Billingsley Creek	Snake River	Sec. 12, T. 7 S., R. 13 E., below diversions at State highway bridge, 2 miles northeast of Hagerman, Idaho.		[a] 160
May 28	do	do	do		[a] 63.1
Aug. 26	do	do	do		[a] 106
Oct. 29	Diversions	Billingsley Creek	Sec. 12, T. 7 S., R. 13 E., 2 miles northeast of Hagerman, Idaho.		Dry.
May 28	do	do	do		[a] 47.0
Aug. 26	do	do	do		[a] 42.8
Oct. 28	Big Wood River	Snake River	Sec. 36, T. 6 S., R. 13 E., above upper dam, 4½ miles north of Hagerman, Idaho.	2.81	[a] 638
Aug. 26	do	do	do	2.32	[a] 688
25	do	do	Sec. 34, T. 6 S., R. 13 E., 4 miles north of Hagerman, Idaho.	1.70	[a] 293
Apr. 2	Little Wood River	Big Wood River	NW. ¼ NW. ¼ sec. 5, T. 6 S., R. 15 E., at Gooding-Wendall highway bridge, ¼ mile south of Gooding, Idaho.	1.06	35.6
4	do	do	do	2.04	147
13	do	do	do	1.81	118
May 18	do	do	do	1.62	91.1
July 9	West Canal	Little Wood River	About sec. 31, T. 1 N., R. 21 E., 6 miles north of Carey, Idaho.	1.04	76.7
Oct. 28	Malad flume	Big Wood River	NW. ¼ NE. ¼ sec. 34, T. 6 S., R. 13 E., above King Hill ditch, 4 miles north of Hagerman, Idaho.		[a] 780
Aug. 25	do	do	do		[a] 929
May 28	King Hill ditch	Malad flume	SE. ¼ sec. 28, T. 6 S., R. 13 E., 4½ miles north of Hagerman, Idaho.	2.78	[a] 244
Aug. 25	do	do	do	2.80	[a] 245

[a] Furnished by Idaho Power Co.

[f] Does not include one channel.

Miscellaneous discharge measurements in Snake River drainage basin during the year ending September 30, 1925—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
May 8	Bull Run Creek	South Fork of Owyhee River.	Sec. 15, T. 43 N., R. 52 E., 300 feet below county highway bridge, 5 miles north of Deep Creek, Nev.		179
June 22	do	do	do		31.3
May 8	Deep Creek	do	Sec. 4, T. 42 N., R. 52 E., 300 feet above county highway bridge at Deep Creek, Nev.		19.9
Nov. 22	Boise River	Snake River	NE. ¼ sec. 4, T. 2 N., R 3 E., 2½ miles southeast of Barber, Idaho.		93.0
24	do	do	do		78.5
24	New York Canal	Boise River	NE. ¼ sec. 32, T. 3 N., R. 3 E., 1 mile south of Barber, Idaho.	5.42	1,180
Aug. 28	North Fork of Payette River.	Payette River	About sec. 36, T. 21 N., R. 3 E., 14 miles north of McCall, Idaho.		8.2
31	do	do	SW. ¼ sec. 31, T. 13 N., R. 4 E., one-half mile south of Cabarton, Idaho.		218
Dec. 3	do	do	Sec. 29, T. 10 N., R. 3 E., 6½ miles north of Banks, Idaho.	1.92	308
Aug. 28	Lake Fork of Payette River.	North Fork of Payette River.	NW. ¼ sec. 13, T. 18 N., R. 3 E., 3 miles east of McCall, Idaho.		30.6
28	Gold Fork of Payette River.	do	Sec. 33, T. 16 N., R. 4 E., above mouth of Flat Creek, 5 miles southeast of Roseberry, Idaho.		65.4
June 30	Center Irrigation District Canal.	Gold Fork of Payette River.	Sec. 32, T. 16 N., R. 4 E., 175 feet below diversion head gate and 5 miles southeast of Roseberry, Idaho.		79.2
Aug. 28	Big Creek	North Fork of Payette River.	SE. ¼ sec. 3, T. 13 N., R. 4 E., below diversion dam, 5 miles southeast of Cascade, Idaho.		14.0
28	Diversion canal	Big Creek	SE. ¼ sec. 3, T. 13 N., R. 4 E., 5 miles southeast of Cascade, Idaho.		3.5
17	South Fork of Payette River.	Payette River	Sec. 20, T. 8 N., R. 12 E., below outlet of Elk Lake, 26 miles east of Lowman, Idaho.		58.1
16	do	do	Sec. 31, T. 10 N., R. 11 E., at Grandjean ranger station, 22 miles northeast of Lowman, Idaho.		211
16	Canyon Creek (Roaring Fork).	South Fork of Payette River.	Sec. 27, T. 10 N., R. 10 E., at mouth, 20 miles northeast of Lowman, Idaho.		58.2
14	Warm Spring Creek	do	Sec. 9, T. 11 N., R. 10 E., above Bull Trout Lake, 23 miles northeast of Lowman, Idaho.		11.1
14	do	do	Sec. 9, T. 11 N., R. 10 E., below Bull Trout Lake, 23 miles northeast of Lowman, Idaho.		10.4
13	do	do	Sec. 5, T. 9 N., R. 10 E., at mouth, 16 miles east of Lowman, Idaho.		100
15	do	do	do		106
12	Tenmile Creek	do	About sec. 15, T. 9 N., R. 9 E., at mouth, 12 miles east of Lowman, Idaho.		32.2
22	Clear Creek	do	Sec. 27, T. 9 N., R. 7 E., at mouth, at Lowman, Idaho.		43.4
July 20	Deadwood River	do	SW. ¼ sec. 8, T. 11 N., R. 7 E., 15 miles north of Lowman, Idaho.		156
23	do	do	do		175
Aug 3	Deer Creek	Deadwood River	Sec. 1, T. 12 N., R. 7 E., 22 miles north of Lowman, Idaho.		10.8

Miscellaneous discharge measurements in Snake River drainage basin during the year ending September 30, 1925—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Sept. 3	Middle Fork of Payette River.	South Fork of Payette River.	Sec. 22, T. 12 N., R. 5 E., at Boiling Springs, 10 miles southeast of Cabarton, Idaho.	-------	63.9
4	----do----	----do----	Sec. 21, T. 9 N., R. 4 E., at mouth, 1½ miles southwest of Garden Valley, Idaho.	-------	99.9
3	Silver Creek----	Middle Fork of Payette River.	Sec. 30, T. 12 N., R. 6 E., 13 miles southeast of Cabarton, Idaho.	-------	14.2
17	North Side Canal of Emmett Irrigation District.	Payette River----	Sec. 22, T. 7 N., R. 1 W., at Black Canyon Dam, 5½ miles northeast of Emmett, Idaho.	21.90	236
17	South Side Canal of Emmett Irrigation District.	----do----	----do----	7.63	53.1
Aug. 9	Lost Creek----	West Fork of Weiser River.	About sec. 17, T. 19 N., R. 1 W., 5 miles northwest of Tamarack, Idaho.	-------	7.1
June 12	Mesa Orchards Canal..	Middle Fork of Weiser River.	Sec. 14, T. 15 N., R. 1 W., 900 feet above end of flume and 1¼ miles northeast of Mesa, Idaho.	.68	6.2
20	----do----	----do----	----do----	.99	20.2
July 20	----do----	----do----	----do----	1.35	34.5
Aug. 8	----do----	----do----	----do----	1.02	27.0
25	----do----	----do----	----do----	1.03	26.9
Sept. 4	----do----	----do----	----do----	.80	19.1
24	----do----	----do----	----do----	.59	2.8
Apr. 29	Weiser Irrigation District Canal.	Weiser River----	SW ¼ sec. 29, T. 11 N., R. 5 W., at pumping station at Weiser, Idaho.	2.86	115
May 19	----do----	----do----	----do----	3.28	140
June 9	----do----	----do----	----do----	3.20	138
23	----do----	----do----	----do----	2.88	118
July 20	----do----	----do----	----do----	3.04	123
Aug. 6	----do----	----do----	----do----	3.38	111
25	----do----	----do----	----do----	2.83	64.1
Sept. 25	----do----	----do----	----do----	2.74	52.3
20	Lake Creek----	Salmon River----	E. ½ sec. 26, T. 10 N., R. 13 E., ¼ mile below Little Red Fish Lake and 4½ miles southeast of Stanley, Idaho.	-------	61.8
20	Marsh Creek----	Middle Fork of Salmon River.	Above mouth of Cape Horn Creek; about sec. 9, T. 12 N., R. 11 E., 1¼ miles southwest of Cape Horn, Idaho.	-------	34.5
20	Cape Horn Creek----	Marsh Creek----	At mouth; about sec. 9, T. 12 N., R. 11 E., 1¼ miles southwest of Cape Horn, Idaho.	-------	27.1
20	Beaver Creek----	Middle Fork of Salmon River.	About sec. 35, T. 13 N., R. 11 E., 1 mile north of Cape Horn, Idaho.	.92	43.6
Aug. 8	Bear Valley Creek----	----do----	Above Elk Creek, about sec. 3, T. 12 N., R. 9 E., 9 miles west of Cape Horn, Idaho.	-------	44.1
3	Elk Creek----	Bear Valley Creek----	About sec. 35, T. 13 N., R. 8 E., 14 miles west of Cape Horn, Idaho.	-------	65.7
8	----do----	----do----	----do----	-------	52.7
8	----do----	----do----	At mouth, about sec. 3, T. 12 N., R. 9 E., 9 miles west of Cape Horn, Idaho.	-------	64.1
8	Fir Creek----	----do----	At mouth, about sec. 32, T. 13 N., R. 10 E., 6 miles northwest of Cape Horn, Idaho.	-------	14.9

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