UNITED STATES DEPARTMENT OF THE INTERIOR
RAY LYMAN WILBUR, Secretary
GEOLOGICAL SURVEY
GEORGE OTIS SMITH, Director

Water-Supply Paper 634

SURFACE WATER SUPPLY *of the* UNITED STATES

1926

PART XII
NORTH PACIFIC SLOPE BASINS
C. PACIFIC SLOPE BASINS IN OREGON AND LOWER COLUMBIA RIVER BASIN

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SURFACE WATER SUPPLY OF PACIFIC SLOPE BASINS IN OREGON AND LOWER COLUMBIA RIVER BASIN, 1926

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, 1926.

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. 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, 1895–1927

1895	$12,500.00	1911–1917	$150,000.00
1896	24,500.00	1918	175,000.00
1897–1899	50,000.00	1919	148,244.10
1900	70,000.00	1920	175,000.00
1901–2	100,000.00	1921–1923	180,000.00
1903–1906	200,000.00	1924–25	170,000.00
1907	150,000.00	1926	165,000.00
1908–1910	100,000.00	1927	151,000.00

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 5,250 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July, 1926, 1,730 gaging stations were being

maintained by the Geological 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 ending September 30, 1926. At the beginning of January in most parts of the United States much of the precipitation in the preceding three months is stored in the form of snow or ice, or in ponds, lakes, and swamps, or as ground water, 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

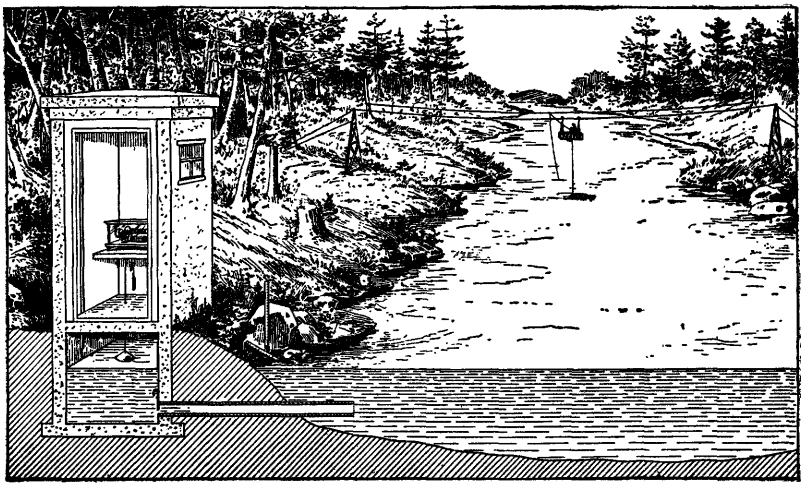

FIGURE 1.—Typical gaging station

supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from direct readings of 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 measurements 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 permanence 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 of the Geological Survey should be used with caution because of possible inherent but unknown sources of error.

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 monographs, bulletins, professional papers, and annual reports.

The results of stream-flow measurements are now published annually in 12 parts, each part covering an area whose boundaries coincide with natural-drainage features 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. The 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 list giving prices.

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

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

Augusta, Me., Statehouse.
Boston, Mass., 2500 Customhouse.
Hartford, Conn., 64 State Capitol.
Albany, N. Y., 904 Home Savings Bank Building.
Trenton, N. J., 423 Statehouse Annex.
Charlottesville, Va., Brooks Museum, University of Virginia.
South Charleston, W. Va., Naval Ordnance Plant.
Asheville, N. C., 608 City Hall.
Chattanooga, Tenn., 630 Power Building.
Tuscaloosa, Ala., Post Office Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Chicago, Ill., 1510 Consumers Building.
Madison, Wis., 337–N State Capitol.
Thief River Falls, Minn., 618 Knight Avenue north.
Topeka, Kans., 23 Federal Building.
Rolla, Mo., Rolla Building, School of Mines and Metallurgy.
Fort Smith, Ark., Post Office Building.
Austin, Tex., State Capitol.
Tucson, Ariz., 104 Agricultural Building, University of Arizona.
Denver, Colo., 403 Post Office Building.

Salt Lake City, Utah, 313 Federal Building.
Idaho Falls, Idaho, 228 Federal Building.
Boise, Idaho, Federal Building.
Helena, Mont., 45–46 Federal Building.
Tacoma, Wash., 406 Federal Building.
Portland, Oreg., 606 Post Office Building.
San Francisco, Calif., 303 Customhouse.
Los Angeles, Calif., 600 Federal Building.
Honolulu, Hawaii, Territorial Office Building.

A list of 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 5,250 points in the United States, and the data obtained have been published in the reports tabulated as follows:

Stream-flow data 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 Sept., 1890.
2th 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. 4	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.
W 621 to 634	do	1926.

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 following table gives, by years and drainage basins, the numbers of the papers on surface-water supply published from 1899 to 1926. The data for any particular station will be found in the reports covering the years during which the station was maintained. For example, data for Machias River at Whitneyville, Me., 1903 to 1921, are published in Water-Supply Papers 97, 124, 165, 201, 241, 261, 281, 301, 321, 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, 1899–1926

[For basins included see p. 6]

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII-A	XII-B	XII-C
1899 [a]	35	[b] 35, 36	36	36	36	[c] 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, [j] 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, 84	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
1926	621	622	623	624	625	626	627	628	629	630	631	632	633	634

[a] Rating tables and index to Water-Supply Papers 35–39 contained in Water-Supply Paper 39. Tables of 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 of 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] Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

The work in Oregon and Washington was carried on under cooperative agreements between the United States Geological Survey and the respective States.

Cooperation with the States is effected under contracts which are made between the Director of the United States Geological Survey and the State engineers or other officials and are authorized by legislative acts appropriating money.

The work in Washington was carried on in cooperation with the Department of Conservation and Development, Erle J. Barnes, director. Cooperative relations were administered by R. K. Tiffany, supervisor of hydraulics.

Acknowledgments are due to Rhea Luper, State engineer of Oregon, for the efficient manner in which he represented his State in the cooperative investigations.

Acknowledgments are also due to the United States Bureau of Reclamation and the United States Indian Service for assistance, suggestions, and the use of data gathered exclusively for them and paid for by them, and to the United States Weather Bureau for hydrographic and climatic data.

Special acknowledgments are due for financial assistance rendered by municipalities, corporations, and individuals, as follows: Watermasters for Umatilla, Crook, Deschutes, Jackson, and Hood River Counties; water bureau of city of Portland; Eugene Water Board; Central Oregon Irrigation District; Deschutes County Municipal Improvement District; Eagle Point Irrigation District; Horse Heaven Irrigation District; Medford Irrigation District; Talent Irrigation District; Arnold Irrigation Co.; California-Oregon Power Co.; Columbia Valley Power Co.; Deschutes Falls Power Co.; Northwestern Electric Co.; Oregon-California Hydroelectric Co.; Pacific Power & Light Co.; Portland Electric Power Co.; Puget Sound Power & Light Co.; Rogue River Valley Canal Co.; Walla Walla Chamber of Commerce; and Backus-Brooks Co.

DIVISION OF WORK

Data for stations in Oregon and Washington, except those in the Walla Walla and Cowlitz River Basins in Washington, were collected and prepared for publication under direction of F. F. Henshaw, district engineer, assisted by G. H. Canfield, Kenneth N. Phillips, Wendell Dawson, E. O. Hokanson, and Belle Irwin.

The data for stations in the Walla Walla and Cowlitz River Basins in Washington 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, L. E. Rydell, and J. M. Rogers.

The manuscript was assembled and reviewed by Otto Lauterhahn.

GAGING-STATION RECORDS

MAIN COLUMBIA RIVER

COLUMBIA RIVER AT THE DALLES, OREG.

LOCATION.—In NW. ¼ sec. 3, T. 1 N., R. 13 E., at foot of Court Street at The Dalles, Wasco County, 18 miles below Deschutes River and above Hood and Klickitat Rivers.

DRAINAGE AREA.—237,000 square miles.

RECORDS AVAILABLE.—June 1, 1878, to September 30, 1926. Maximum stages 1858 to 1877.

GAGE.—Vertical staff in several sections, belonging to United States Weather Bureau, attached to row of dolphins, with upper section on a warehouse. United States Engineers' gage at Cascade Locks, about 40 miles below The Dalles, attached to side of wooden fender of upper locks chamber between upper guard and lock gates. Elevation of datum of The Dalles gage, 46.55 feet (adjustment of primary level net, 1926).

DISCHARGE MEASUREMENTS.—In 1903, made by United States Engineer Corps with rod floats and meter from a steamer, in 1907, 1923, and 1924 by United States Geological Survey engineers with meter from a launch; in 1908 flood measurements by United States Geological Survey engineers, 2,000 feet below gage at The Dalles; in 1910 and 1913 measurements by United States Geological Survey engineers on Columbia River above Snake River and on Snake River referred to The Dalles gage, allowance being made for intervening tributaries.

CHANNEL AND CONTROL.—Rocky and permanent at the rapids at Cascade Locks, the control for both gages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 17.1 feet May 8 and 9 (discharge, 269,000 second-feet); minimum stage, −0.8 foot January 27 (discharge, 63,200 second-feet).

1857–1926: Maximum stage recorded, 59.6 feet June 6, 1894 (discharge, 1,170,000 second-feet); minimum stage, −4.0 feet on gage at Cascade Locks December 17, 1919 (discharge, 47,000 second-feet).

ICE.—Stage-discharge relation unaffected by ice.

DIVERSIONS.—Quantity of water diverted for irrigation is large in the aggregate but constitutes only a small proportion of the total flow; the low-water flow, which comes in the winter, is little affected.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined. Gage read to tenths once a day. Readings at Cascade Locks used October 1–15 and January 7–26, as sand around gage interfered with readings at The Dalles. Daily discharge ascertained by applying daily gage reading to rating table. Records excellent.

COOPERATION.—Gage readings furnished by United States Weather Bureau. No discharge measurements made during the year.

Daily discharge, in second-feet, of Columbia River at The Dalles, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94,100	75,400	68,000	72,800	63,800	86,800	99,000	222,000	216,000	162,000	126,000	96,000
2	94,100	78,200	70,400	71,600	64,400	86,800	97,000	236,000	213,000	162,000	125,000	95,000
3	94,100	76,100	70,400	70,400	65,600	88,600	100,000	249,000	205,000	162,000	125,000	95,000
4	94,100	74,000	69,800	68,600	68,600	88,600	100,000	254,000	202,000	164,000	123,000	98,000
5	93,000	74,000	69,800	67,400	72,200	88,600	100,000	254,000	199,000	168,000	118,000	100,000
6	93,000	74,000	70,400	69,200	81,000	88,600	100,000	254,000	197,000	173,000	117,000	101,000
7	90,800	73,400	71,600	67,600	95,000	87,700	99,000	264,000	192,000	174,000	117,000	102,000
8	89,700	72,800	70,400	66,800	103,000	88,600	99,000	269,000	191,000	173,000	116,000	100,000
9	89,700	71,600	71,000	65,300	115,000	89,500	99,000	269,000	190,000	169,000	115,000	100,000
10	89,700	71,600	71,600	65,300	123,000	88,600	99,000	263,000	188,000	169,000	110,000	100,000
11	89,700	71,600	72,200	65,300	122,000	86,800	101,000	255,000	185,000	174,000	108,000	100,000
12	88,600	71,600	72,800	65,300	114,000	86,800	104,000	248,000	184,000	174,000	108,000	100,000
13	88,600	71,000	72,200	65,300	109,000	86,800	105,000	245,000	183,000	181,000	107,000	100,000
14	87,500	71,000	71,000	65,300	104,000	86,800	110,000	242,000	183,000	180,000	107,000	100,000
15	85,500	71,600	72,800	65,300	100,000	86,800	118,000	236,000	183,000	178,000	107,000	98,000
16	82,600	73,400	73,400	65,300	96,000	96,000	125,000	233,000	180,000	177,000	105,000	96,000
17	81,800	73,400	72,800	66,000	92,200	104,000	131,000	232,000	178,000	177,000	102,000	102,000
18	81,000	72,800	72,200	66,000	90,400	109,000	143,000	233,000	177,000	176,000	101,000	90,400
19	81,000	71,600	72,200	66,800	88,600	111,000	162,000	236,000	172,000	174,000	101,000	89,500
20	78,900	71,600	72,200	67,600	86,800	114,000	177,000	239,000	168,000	172,000	101,000	88,500
21	78,900	71,000	72,200	69,200	85,000	112,000	191,000	242,000	164,000	168,000	101,000	87,700
22	78,900	70,400	74,000	69,200	85,000	109,000	199,000	248,000	162,000	168,000	101,000	87,700
23	78,200	69,200	76,100	69,200	85,900	108,000	198,000	266,000	164,000	162,000	103,000	85,900
24	76,800	69,200	76,800	68,400	86,800	106,000	195,000	263,000	165,000	156,000	105,000	82,600
25	76,800	69,800	78,900	67,600	87,700	106,000	192,000	254,000	165,000	153,000	104,000	80,300
26	76,800	68,600	81,000	66,000	87,700	105,000	190,000	248,000	164,000	149,000	103,000	79,600
27	76,100	68,000	83,400	63,200	87,700	105,000	185,000	242,000	163,000	143,000	102,000	81,800
28	75,400	68,000	81,800	63,800	87,700	105,000	187,000	236,000	162,000	137,000	100,000	80,300
29	74,700	68,000	78,900	64,400	-------	105,000	195,000	230,000	162,000	138,000	99,000	79,600
30	74,000	68,000	75,400	65,000	-------	103,000	202,000	225,000	162,000	136,000	98,000	78,200
31	73,400	-------	74,000	65,000	-------	102,000	-------	219,000	-------	129,000	97,000	-------

Monthly discharge of Columbia River at The Dalles, Oreg., for the year ending September 30, 1926

[Drainage area, 237,000 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	94,100	73,400	84,100	0.355	0.41	5,170,000
November	78,200	68,000	71,700	.303	.34	4,270,000
December	83,400	68,000	73,500	.310	.36	4,520,000
January	72,800	63,200	66,900	.282	.33	4,110,000
February	123,000	63,800	91,000	.384	.40	5,050,000
March	114,000	86,800	97,300	.411	.47	5,980,000
April	202,000	97,000	140,000	.591	.66	8,330,000
May	269,000	219,000	245,000	1.03	1.19	15,100,000
June	216,000	162,000	181,000	.764	.85	10,800,000
July	181,000	129,000	164,000	.692	.80	10,100,000
August	126,000	97,000	108,000	.456	.53	6,640,000
September	102,000	78,200	91,800	.387	.43	5,460,000
The year	269,000	63,200	118,000	.498	6.77	85,500,000

TRIBUTARIES OF COLUMBIA RIVER BELOW MOUTH OF SNAKE RIVER

WALLA WALLA RIVER BASIN

WALLA WALLA RIVER NEAR MILTON, OREG.

LOCATION.—In sec. 21, T. 5 N., R. 36 E., half a mile below junction of North and South Forks of Walla Walla River and 4 miles above Milton, Umatilla County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—February 13, 1903, to May 29, 1906; March 17, 1918, to September 30, 1921; and irrigation seasons 1922 to 1926.

GAGE.—Water-stage recorder on left bank; inspected by W. C. Mason.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Channel straight at cable; current makes considerable angle with cable at low water but not at high water; left bank is overflowed during high water. Control composed of gravel and small boulders; shifts at high stages.

EXTREMES OF DISCHARGE.—Maximum stage during period of record from water-stage recorder, 1.68 feet at 1 a. m. April 19 (discharge, about 556 second-feet); minimum stage, from recorder, 0.21 foot at 8 p. m. July 29 (discharge, 69 second-feet).

1903–1906, 1918–1926: Highest flood ever known occurred May 30, 1906, discharge, 8,130 second-feet estimated from observation of cross sections and slope, after flood had subsided. Minimum discharge recorded, that of July 29, 1926.

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

DIVERSIONS.—A few small canals divert water above station. Total area irrigated, only a few hundred acres. Some small diversions between sites of present and former stations.

REGULATION.—Pacific Power & Light Co.'s power plant about 5 miles above this station affects flow somewhat, especially at low water. Some water is ponded in forebay.

ACCURACY.—Stage-discharge relation changed during high water April 19. Rating curve used before change fairly well defined by one discharge measurement made on April 9 and form of previous curve; rating curve used after change, fairly well defined by three discharge measurements. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records good.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of Walla Walla River near Milton, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 9	1.35	400	June 3	0.43	104
Apr. 29	1.15	270	Aug. 9	.28	78

Daily discharge, in second-feet, of Walla Walla River near Milton, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	397	296	113	93	74	117	16	477	156	111	82	74	10
2	388	273	111	93	75	111	17	515	174	104	82	78	10
3	393	255	106	88	75	106	18	530	174	98	75	92	10
4	491	270	102	85	76	102	19	464	167	117	81	90	10
5	535	273	100	82	78	102	20	441	199	170	84	88	9
6	505	258	98	81	78	102	21	396	184	132	84	90	9
7	458	237	98	82	79	111	22	359	174	113	82	90	11
8	440	212	98	82	78	113	23	317	177	100	82	87	11
9	418	196	95	82	78	111	24	293	160	95	79	85	10
10	422	184	93	82	79	108	25	285	151	90	72	82	10
11	440	172	92	78	79	104	26	285	145	95	76	84	10
12	440	167	95	81	78	102	27	285	138	92	76	84	10
13	436	158	95	79	76	100	28	293	134	93	76	85	10
14	449	156	95	81	79	98	29	299	130	93	72	85	10
15	463	156	106	82	78	98	30	317	121	92	72	102	10
							31	------	117	------	74	128	------

Monthly discharge of Walla Walla River near Milton, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	535	285	408	24,30
May	296	117	186	11,40
June	170	90	103	6,13
July	93	72	80.6	4,96
August	128	74	83.4	5,13
September	117	98	105	6,25
The period				58,20

TOUCHET RIVER AT BOLLES, WASH.

LOCATION.—In sec. 8, T. 9 N., R. 37 E., half a mile above highway bridge, three-fourths mile southeast of Bolles, Walla Walla County, and 3 miles west of Waitsburg.

DRAINAGE AREA.—284 square miles (measured on topographic and Forest Service maps).

RECORDS AVAILABLE.—February 1, 1924, to September 30, 1926.

GAGE.—Gurley 8-day water-stage recorder on left bank, half a mile above highway bridge; inspected by O. E. Harkins.

DISCHARGE MEASUREMENTS.—Made by wading near gage or from highway bridge below.

CHANNEL AND CONTROL.—Bed composed of gravel. Banks fairly high; right bank is overflowed at extremely high stage. Control is formed by riffle over gravel and small boulders and moves downstream as stage rises.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 5.40 feet at 3.15 p. m. February 7 (discharge, 2,850 second-feet); minimum stage, 0.42 foot from 8 to 12 p. m. July 30 (discharge, 1.4 second-feet).

1924–1926: Maximum discharge, 2,910 second-feet at 10 p. m. February 4, 1925; minimum stage occurred July 30, 1926.

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

DIVERSIONS.—Numerous small ditches divert water above gage for irrigation.

REGULATION.—Considerable fluctuation in stage at extremely low water caused by operation of flour mill at Waitsburg.

ACCURACY.—Stage-discharge relation changed October 31, January 18, February 7, August 19, and gradually September 22–30. Not affected by ice during year. Rating curves fairly well defined. Operation of water-stage recorder satisfactory exept as noted in footnote to table of daily discharge. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection. Shifting-control method used September 22–30. Records fair.

Discharge measurements of Touchet River at Bolles, Wash., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 2	1.46	140	May 28	1.12	49.3	Sept. 20	1.14	40.3
Apr. 5	1.78	203	July 15	.57	5.1	Sept. 21	1.14	40.1
May 26	(a)	61.0	July 21	.90	24.1			

a Intake to well clogged; correct gage height not known.

Daily discharge, in second-feet, of Touchet River at Bolles, Wash., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	76	67	68	184	261	176	105	42	18	3.0	36
2	44	72	77	62	155	239	168		35	21	4.5	34
3	44	76	74	60	150	227	163		26	19	6.0	31
4	45	77	67	58	301	216	187		22	19	4.2	30
5	45	76	65	57	384	201	190		21	18	6.0	25
6	46	76	74	101	1,090	193	201	100	18	15	6.4	23
7	46	77	65	81	1,320	182	196		17	13	11	31
8	47	77	63	63	820	171	196		16	13	15	38
9	47	77	62	58	580	173	196		15	11	14	33
10	48	77	60	56	512	166	206		12	8.0	14	33
11	50	83	62	54	526	155	248		10	7.2	14	33
12	55	92	81	50	407	155	233		11	8.8	15	35
13	55	92	117	47	353	179	224	80	9.2	7.6	14	34
14	51	88	99	45	309	193	213		18	5.4	14	36
15	48	81	79	44	278	198	210		36	4.8	13	35
16	48	79	68	44	271	201	218		36	4.5	13	42
17	48	79	63	269	264	204	221		34	2.8	12	44
18	52	77	57	171	255	198	216		33	9.0	20	45
19	51	76	58	160	248	190	213		47	22	40	44
20	52	72	56	140	288	179	204		77	25	18	40
21	52	70	94	176	291	176	187	70	63	24	18	40
22	51	70	155	168	364	171	171		52	24	18	64
23	55	68	201	145	305	160	155		44	25	19	104
24	64	67	193	136	309	155	145		38	19	21	74
25	73	67	163	121	309	150	136		28	9.6	17	70
26	74	68	140	119	291	148	128	61	24	6.4	15	70
27	80	67	131	117	274	140	124	56	21	5.1	21	65
28	87	68	121	114	271	140	112	51	20	5.4	22	63
29	86	70	99	145	-------	138	101	51	18	3.0	19	57
30	85	67	83	153	-------	131	101	50	20	3.3	31	60
31	83	-------	76	166	-------	145	-------	47	-------	2.6	42	------

NOTE.—Intake clogged May 2–27; discharge May 26 is result of current-meter measurement; otherwise discharge for period is result of interpolation.

Monthly discharge of Touchet River at Bolles, Wash., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	87	44	56.7	3,490
November	92	67	75.4	4,490
December	201	56	92.6	5,690
January	269	44	105	6,460
February	1,320	150	397	22,000
March	261	131	179	11,000
April	248	101	181	10,800
May		47	78.1	4,800
June	77	9.2	28.8	1,710
July	25	2.6	12.2	750
August	42	3.0	16.1	990
September	104	23	45.6	2,710
The year	1,320	2.6	103	74,900

UMATILLA RIVER BASIN

UMATILLA RIVER ABOVE McKAY CREEK, NEAR PENDLETON, OREG.

LOCATION.—In NW. ¼ sec. 8, T. 2 N., R. 32 E., near track of main line of Oregon-Washington Railroad & Navigation Co., a quarter of a mile above mouth of McKay Creek, and 2 miles west of Pendleton, Umatilla County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 1, 1921, to September 30, 1926. Records at Pendleton, February, 1891, to July, 1892, and May 22, 1903, to March 21, 1906, are directly comparable with those at this station.

GAGE.—Stevens continuous water-stage recorder on right bank; inspected by A. E. Perry.

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

CHANNEL AND CONTROL.—Channel straight 100 yards above and below gage. Banks high and are not overflowed. Control is gravel riffle 200 feet downstream from gage. At low stages stream is confined to narrow channel along left bank.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 7.60 feet at 11 p. m. February 6 (discharge, 4,400 second-feet); minimum discharge recorded, 14 second-feet at 7 p. m. August 16 (gage height, 2.55 feet).

1921–1926: Maximum discharge, 5,400 second-feet April 22, 1922 (gage height, from water-stage recorder, 6.6 feet); minimum discharge, 7 second-feet August 14, 1924 (gage height, 1.87 feet).

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

DIVERSIONS.—Water diverted for power at Pendleton is returned to river above this station. Some small diversions are made for irrigation above station.

REGULATION.—At low stages there is considerable diurnal fluctuation due to impounding and releasing of water in the power canals of the two flour mills at Pendleton.

ACCURACY.—Stage-discharge relation permanent October 1 to February 6, shifting February 7 to March 14, and permanent March 15 to September 30. Rating curve used October 1 to February 6 fairly well defined between 25 and 3,000 second-feet and checked by a measurement on December 13 of 102 second-feet. This curve was used indirectly February 7 to March 14. Rating curve used March 15 to September 30 well defined below 3,000

second-feet by 10 measurements, part of them made during 1927. Water-stage recorder operated satisfactorily October 1 to November 6, November 25 to May 31, July 13 to August 20, and September 12–24. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph and, for periods of missing record, by comparison with records at stations on river below. Records good except for periods of missing record, for which they are fair.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of Umatilla River above McKay Creek, near Pendleton, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 13	2.82	102	Apr. 30	3.80	398
Feb. 26	4.78	1,180	July 16	2.68	29.2

Daily discharge, in second-feet, of Umatilla River above McKay Creek, near Pendleton, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	July	Aug.	Sept.
1	56	50	71	184	224	1,190	737	338		23	
2	56	52	71	165	250	1,110	723	304		25	
3	56	52	78	152	254	1,070	709	271		25	
4	52	56	74	142	578	1,070	849	267		24	
5	52	56	74	132	969	990	1,050	294		25	
6	56	56	76	132	2,220	892	1,130	280	28	26	50
7	56		78	135	3,320	794	1,090	271		25	
8	56		78	132	2,440	717	975	254		24	
9	56		86	126	1,900	745	975	237		25	
10	56		90	123	1,850	686	940	218		25	
11	52		93	118	1,850	656	940	206		28	
12	52		100	115	1,440	686	905	191		28	49
13	56		112	109	1,070	1,190	905	188	18	28	48
14	56		109	103	857	1,900	891	188	19	28	49
15	56	80	103	106	752	1,600	891	177	19	26	49
16	56		100	109	680	1,600	905	163	22	22	55
17	56		98	109	644	1,420	898	170	18	24	62
18	56		96	109	626	1,130	891	163	18	36	66
19	56		98	109	596	975	856	154	22	41	62
20	56		98	109	560	884	765	160	22	41	58
21	56		132	132	560	835	676	163	24		57
22	56		184	158	584	744	610	148	23		57
23	52		885	158	620	744	532	138	22		62
24	52		976	162	752	800	462	132	23		60
25	50	69	710	155	1,110	737	420	126	23		
26	52	74	530	148	1,190	662	403	124	23	40	
27	52	71	410	132	1,190	591	380	112	23		60
28	52	71	339	132	1,230	532	370	104	25		
29	52	71	286	129	-------	481	354	102	24		
30	52	71	245	155	-------	456	370	93	23		
31	52	-------	203	184	-------	584	-------	89	22		------

NOTE.—June 1 to July 12 pencil could not be moved by float because pin had slipped out of cycloid. Recorder not operating Nov. 7–24, Aug. 21 to Sept. 11, and Sept. 25–30. Records for missing periods obtained by comparing with flow of Umatilla River above Furnish Reservoir and deducting the flow of Birch and McKay Creeks.

Monthly discharge of Umatilla River above McKay Creek, near Pendleton, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	56	50	54.3	3,340
November	----------	50	73.0	4,340
December	976	71	216	13,300
January	184	103	134	8,240
February	3,320	224	1,080	60,000
March	1,900	456	918	56,400
April	1,130	354	753	44,800
May	338	89	188	11,600
June	----------	----------	*50	2,980
July	----------	18	24.2	1,490
August	----------	22	31.9	1,960
September	66	48	54.8	3,260
The year	3,320	18	293	212,000

* Estimated.

UMATILLA RIVER ABOVE FURNISH RESERVOIR, NEAR YOAKUM, OREG.

LOCATION.—In NW. ¼ sec. 17, T. 2 N., R. 31 E., at Oregon-Washington Railroad & Navigation Co.'s bridge a quarter of a mile above Campbell flag station, 5 miles by river above Yoakum and old gaging station, and 10 miles west of Pendleton, Umatilla County; just above backwater from Furnish Reservoir.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—June 18 to August 28, 1915; July 5, 1916, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on right bank of main channel at downstream end of bridge pier; inspected by A. E. Perry, watermaster.

DISCHARGE MEASUREMENTS.—Made from cable 20 feet above gage or by wading.

CHANNEL AND CONTROL.—Channel straight at bridge, with overflow channel under west span of bridge. Control about 250 feet below gage at sharp turn below deep pool is composed of gravel and subject to slight shifts.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 7.84 feet at 4 a. m. February 7 (discharge, 5,710 second-feet); minimum stage from recorder, 1.17 feet 8 to 9 a. m. August 17 (discharge, 14 second-feet).

1916–1926: Maximum stage, from water-stage recorder, 9.9 feet, January 3, 1921 (discharge, 10,000 second-feet); minimum discharge, that of August 17, 1926.

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

DIVERSIONS.—150 acres irrigated on Umatilla River above gaging station and below mouth of McKay Creek, and 600 acres above mouth of McKay Creek. 1,750 acres are irrigated on Birch Creek and 1,300 acres on McKay Creek, the principal tributaries.

REGULATION.—At low stages water is ponded in the power canals of two flouring mills at Pendleton and released at intervals to obtain sufficient power for operating the mills, causing considerable fluctuation. Backwater from the Furnish Reservoir extends to within a few hundred yards of the control. Records obtained on Umatilla River below the reservoir in connection with those at this station indicate that 3,170 acre-feet of stored water was released between May 11 and 31.

ACCURACY.—Stage-discharge relation changed February 7 and affected by an obstruction on control June 14 to September 30. Rating curve used October 1 to February 6 well defined by eight discharge measurements made in 1925. Rating curve used February 7 to June 15, well defined above and fairly well defined below 80 second-feet by six discharge measurements. Rating curve used June 16 to September 30, fairly well defined by two discharge measurements and point of zero flow. Operation of water-stage recorder satisfactory except as stated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection; shifting-control method used June 14, 15, and August 18 to September 30. Records good.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of Umatilla River above Furnish Reservoir, near Yoakum, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 8	6.49	3,620	May 5	2.46	327	July 16	1.22	15.8
Feb. 26	4.43	1,430	May 24	2.03	181			
Apr. 27	2.78	454	June 22	1.58	55			

Daily discharge, in second-feet, of Umatilla River above Furnish Reservoir, near Yoakum, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	72	88	220	397	1,400	1,050	385	112	31	16	55
2	62	77	88	204	440	1,320	1,120	351	106	30	18	51
3	56	79	92	179	450	1,260	1,020	324	95	29	18	48
4	54	77	92	174	634	1,260	1,180	312	84	29	17	45
5	59	80	94	168	1,530	1,220	1,500	331	75	28	17	43
6	54	74	95	168	2,480	1,080	1,700	335	68	25	18	41
7	54	74	99	168	5,040	955	1,660	331	62	22	19	45
8	54	74	100	165	3,770	894	1,540	312	55	22	17	49
9	54	82	102	159	2,840	924	1,500	290	46	21	17	48
10	54	80	99	152	2,680	835	1,430	275	39	18	16	48
11	54	83	97	139	2,730	806	1,400	247	38	17	17	46
12	62	88	104	144	2,150	835	1,320	223	38	15	17	46
13	58	90	113	139	1,660	1,400	1,220	216	39	15	17	46
14	56	88	121	132	1,360	2,250	1,180	210	42	15	18	44
15	59		119	134	1,180	2,200	1,150	210	48	16	17	45
16	60		124	139	1,050	2,200	1,150	203	49	17	16	49
17	59			134	986	1,920	1,120	200	48	17	15	54
18	58			136	924	1,660	1,080	200	46	16	28	61
19	64	86		134	865	1,400	1,020	194	50	16	31	60
20	59			139	806	1,290	924	207	62	18	32	57
21	58			174	806	1,260	806	210	62	18	33	54
22	62		440	276	806	1,150	723	194	55	18	33	54
23	59			312	835	1,120	649	179	49	18	33	54
24	62			308	924	1,180	573	179	43	18	31	
25	60	83		287	1,360	1,080	519	167	40	17	30	
26	65	83		264	1,460	955	491	158	37	17	28	58
27	65	86		238	1,430	924	455	155	35	17	32	
28	70	86	360	227	1,430	778	428	140	35	18	32	
29	71	80	329	224	-------	723	419	140	34	18	30	
30	72	86	283	283	-------	696	402	134	30	18	37	
31	74	-------	249	329	-------	750	-------	126	-------	17	51	------

NOTE.—Because of unsatisfactory operation of water-stage recorder mean discharge interpolated Nov. 15–24 and Sept. 24–30; discharge Dec. 17–27 estimated to be sum of that for Umatilla River above McKay Creek, and Birch Creek.

Monthly discharge of Umatilla River above Furnish Reservoir, near Yoakum, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	74	54	60.4	3,710
November	90	72	82.7	4,920
December		88	248	15,200
January	329	132	195	12,000
February	5,040	397	1,540	85,500
March	2,250	696	1,220	75,000
April	1,700	402	1,020	60,700
May	385	126	230	14,100
June	112	30	54.1	3,220
July	31	15	19.7	1,210
August	51	15	24.2	1,490
September	61	41	51.6	3,070
The year	5,040	15	387	281,000

UMATILLA RIVER NEAR UMATILLA, OREG.

LOCATION.—In NW. ¼ sec. 21, T. 5 N., R. 28 E., near main line of Oregon-Washington Railroad & Navigation Co., 1½ miles below diversion point of West Division Main Canal of Umatilla project and 1½ miles above Umatilla, Umatilla County, and mouth of river.

DRAINAGE AREA.—2,130 square miles.

RECORDS AVAILABLE.—October 21, 1903, to September 30, 1926.

GAGE.—Inclined staff gage in two sections; lower section 2.0 to 3.5 feet, upper 3.5 to 10.8 feet. Gage read by employees of United States Bureau of Reclamation from October 1 to June 30, and by employees of West Extension Irrigation District from July 1 to September 30.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—Solid rock overlain with coarse gravel or sand. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 6.00 feet at 5 p. m. February 7 (discharge, 4,910 second-feet); minimum discharge, 2 second-feet October 8 and July 31 to August 3.

1903–1926: Maximum stage recorded, 11.0 feet May 31, 1906 (discharge 19,600 second-feet); no flow July 25 and August 1–9, 1906, September 1–15, 1922, and June 2–6, 1924.

DIVERSIONS.—Large part of total flow of river diverted for irrigation above station. Umatilla project feed canal also diverts water during winter for storage in Cold Springs Reservoir. West Division Main Canal of Umatilla project of United States Bureau of Reclamation diverts 1½ miles above station. The low-water flow is return water from irrigated tracts. (See p. 25.)

REGULATION.—Discharge is occasionally affected by pondage above diversion dam. During low stages flow in river passing gage, except for small inflow below diversion dam, is that released through wasteway in West Division Main Canal for use of Brownell Canal, which diverts below gage.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Staff gage read to hundredths once a day. Daily discharge ascertained by applying daily gage height to rating table. Records good.

COOPERATION.—Records furnished by State engineer of Oregon. No discharge measurements made during 1926.

Daily discharge, in second-feet, of Umatilla River near Umatilla, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	16	150	183	125	1,230	239	11	12	11	2	13
2	11	16	150	164	129	1,090	375	11	12	11	2	14
3	11	17	145	140	140	1,090	535	10	12	11	2	14
4	103	18	145	122	173	1,020	715	11	12	205	9	14
5	103	19	140	103	205	950	950	10	12	205	12	14
6	103	19	140	98	1,230	950	1,090	10	11	12	12	14
7	103	20	140	89	4,460	820	1,090	10	11	12	12	27
8	2	22	155	84	3,860	715	1,020	10	11	12	12	57
9	14	24	168	75	2,960	670	950	10	11	12	12	73
10	15	21	174	86	2,790	535	950	10	11	12	12	53
11	15	21	174	92	2,790	463	885	10	11	12	12	18
12	15	22	178	97	2,050	479	820	10	11	12	12	15
13	15	22	103	97	1,740	503	765	10	11	12	12	14
14	15	23	103	97	1,370	479	765	10	11	12	12	14
15	15	23	100	97	950	1,890	715	10	11	12	13	13
16	15	24	97	107	820	1,810	535	10	11	12	13	13
17	15	24	97	95	715	1,810	415	10	11	12	13	13
18	15	50	97	83	625	1,660	383	10	11	12	13	14
19	15	55	97	75	580	1,230	307	10	11	12	13	14
20	14	62	97	75	535	950	295	10	11	12	13	15
21	14	75	97	89	535	885	245	11	11	12	13	15
22	14	50	97	83	580	715	140	11	11	11	12	14
23	14	75	97	75	625	715	18	11	11	11	12	14
24	14	103	97	86	625	670	17	11	11	12	12	15
25	14	111	194	100	885	625	14	11	11	12	12	14
26	14	121	194	114	1,090	535	13	11	11	12	13	14
27	14	133	288	114	1,370	455	13	12	11	12	13	13
28	14	140	270	110	1,230	375	11	12	11	12	12	13
29	14	145	245	110	-------	188	11	12	11	12	13	13
30	16	145	216	110	-------	97	11	12	11	2	13	13
31	16	-------	205	122	-------	97	-------	12	-------	2	13	------

NOTE.—Gage not read July 31 to Aug. 3 when wasteway, for Brownell Canal, in West Division Main Canal was closed, and no water was passing over diversion dam; return flow passing gage estimated at 2 second-feet.

Monthly discharge of Umatilla River near Umatilla, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	103	2	25.3	1,560
November	145	16	53.9	3,210
December	288	97	150	9,220
January	183	75	102	6,270
February	4,460	125	1,260	70,000
March	1,890	97	829	51,000
April	1,090	11	476	28,300
May	12	10	10.6	652
June	12	11	11.2	666
July	205	2	23.6	1,450
August	13	2	11.3	695
September	73	13	19.1	1,140
The year	4,460	2	240	174,000

McKAY CREEK NEAR PENDLETON, OREG.

LOCATION.—In sec. 34, T. 2 N., R. 32 E., at irrigation diversion dam a quarter of a mile below former gaging station, at which point the McKay Dam is being built by the United States Bureau of Reclamation, and 5 miles south of Pendleton, Umatilla County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—November 1, 1918, to September 30, 1923, and October 1, 1924, to September 30, 1926. Practically comparable records obtained at station near mouth of creek May 23, 1903, to July 6, 1904, and April 19, 1922, to September 30, 1924.

GAGE.—Vertical staff on right wing wall of concrete diversion dam; read by employees of Bureau of Reclamation.

DISCHARGE MEASUREMENTS.—Made from bridge 500 feet upstream or by wading 200 feet upstream.

CHANNEL AND CONTROL.—Channel is nearly straight between gage and bridge. Left bank, high; right bank, low and overflowed at extremely high stages. Concrete irrigation dam is control for gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.15 feet at 9.30 a. m. February 7 (discharge, 895 second-feet); no flow at times.

1903–4, 1919–1926: Maximum discharge recorded, 3,250 second-feet February 10, 1921; no flow at times.

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

DIVERSIONS.—Numerous small irrigation ditches divert above station, using all the summer flow. The flow diverted through irrigation canal 5 feet upstream from gage is included in daily and monthly discharge, this making the records at the present site comparable with the records for the former station at the site of McKay Dam.

REGULATION.—Natural flow was allowed to run through the reservoir except for a few hundred acre-feet stored for construction use in the summer.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined, and, for all except low stages, it includes the discharge of the canal which diverts just above gage. Staff gage read to hundredths once a day except during high stages when it was read twice a day. Daily discharge ascertained by applying daily or mean daily gage height to rating table, except December 1–11 and April 30 to May 15 when it was determined by adding flow in the canal and estimated flow of 0.5 second-foot over diversion dam. Records good.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of McKay Creek near Pendleton, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 13	0.12	9.8	Apr. 4	1.01	198
Feb. 8	2.00	761	Apr. 28	.30	30.7

Daily discharge, in second-feet, of McKay Creek near Pendleton, Oreg., for the year ending September 30, 1926

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1		27	100	240	196	4	27
2		24	119	214	310	4	18
3		20	119	209	249	3	17
4		18	189	192	196	4	16
5		19	390	189	390	4	8
6	8	19	480	158	450	5	-------
7		19	860	125	420	7	-------
8		18	755	125	390	5	-------
9		17	615	169	330	3	-------
10		17	510	125	285	3	-------
11		16	615	125	262	3	-------

Daily discharge, in second-feet, of McKay Creek near Pendleton, Oreg., for the year ending September 30, 1926—Continued

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
12	8	15	450	138	240	3	-------
13	10	14	335	330	185	3	-------
14	10	14	267	450	169	3	-------
15	10	15	222	420	158	3	-------
16	11	14	196	420	141	17	-------
17	10	16	192	335	122	17	-------
18	9	17	176	310	111	17	-------
19	9	17	158	262	97	17	-------
20	17	19	145	240	74	17	-------
21	34	37	128	204	69	17	-------
22	50	119	125	196	63	17	-------
23	70	125	119	196	56	17	-------
24	117	100	125	196	41	17	-------
25	88	83	236	158	38	27	-------
26	65	70	262	95	34	25	-------
27	53	56	258	158	25	21	-------
28	44	52	249	70	28	29	-------
29	40	52	-------	70	8	33	-------
30	36	90	-------	70	6	34	-------
31	31	97	-------	83	-------	34	-------

NOTE.—No flow June 6 to Sept. 30.

Monthly discharge of McKay Creek near Pendleton, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	-------	-------	1.7	105
November	-------	-------	5.0	298
December	117	8	26.1	1,600
January	125	14	39.9	2,450
February	860	100	300	16,700
March	450	70	202	12,400
April	450	6	171	10,200
May	34	3	13.3	818
June	27	0	2.9	173
The year	-------	-------	-------	44,700

NOTE.—Mean monthly discharge for October was discharge in canal diverting just above gage; for November it was discharge in canal plus small estimated flow over diversion dam. No flow during months for which no record is given.

BIRCH CREEK NEAR PILOT ROCK, OREG.

LOCATION.—In SE. ¼ sec. 15, T. 1 N., R. 32 E., at Guderian ranch, 6 miles downstream from Pilot Rock and 8 miles south of Pendleton, Umatilla County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—October 1, 1919, to September 30, 1926.

GAGE.—Vertical staff gage on right bank 50 feet below bridge, 400 feet west of Guderian ranch house; former gage 50 feet above bridge, used to October 22; read by T. F. Guderian.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel and small boulders; fairly permanent. Banks high and not subject to overflow.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.92 feet at time of morning reading on February 7 (discharge, 344 second-feet); no flow August 12 to September 30.

1920–1926: Maximum stage recorded, 3.80 feet at old gage April 13, 1920 (discharge, 1,270 second-feet); no flow at times.

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

DIVERSIONS.—Several small ditches divert water above station, using practically all the summer flow.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent but not the same for both gages. Rating curve for upper gage used October 1–22 fairly well defined; rating curve for lower gage used October 23 to September 30, well defined by four discharge measurements made during year. Gage read to hundredths once a day, except during times of rapid changes in stage when it was read twice a day. Daily discharge ascertained by applying daily or mean daily gage height to rating table. Records good.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of Birch Creek near Pilot Rock, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 13	0.73	7.6	Apr. 4	1.89	128
Feb. 8	2.68	290	Apr. 26	1.11	26.6

Daily discharge, in second-feet, of Birch Creek near Pilot Rock, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	8	3	6	18	44	59	114	4	7	2	2
2	16	3	6	18	42	62	90	4	6	2	2
3	3	3	6	18	42	67	90	3	4	2	2
4	3	3	6	18	62	72	132	3	4	2	2
5	2	3	6	18	141	72	159	3	3	2	2
6	2	3	6	18	218	67	188	3	3	2	2
7	2	3	6	18	339	61	188	10	3	2	2
8	2	3	6	16	294	61	208	10	3	2	2
9	2	3	6	14	261	67	228	10	3	2	1
10	2	3	6	12	272	61	228	8	3	2	------
11	2	4	6	11	228	55	208	7	2	2	------
12	2	4	6	10	188	63	198	6	2	2	------
13	2	5	6	10	168	159	168	6	2	2	------
14	2	5	6	10	114	250	150	8	2	2	------
15	2	5	7	12	106	250	150	12	2	2	------
16	2	5	7	13	94	239	141	12	2	2	------
17	2	5	8	13	88	228	141	12	2	2	------
18	2	5	8	13	82	188	132	11	2	2	------
19	2	5	8	13	76	168	106	12	2	2	------
20	2	5	8	13	67	150	82	16	2	2	------
21	2	5	13	25	62	141	72	14	2	2	------
22	2	5	13	35	57	141	57	13	2	2	------
23	2	5	14	46	54	132	50	12	2	2	------
24	2	5	15	35	54	141	35	11	2	2	------
25	2	5	15	33	55	132	30	10	2	2	------
26	2	5	15	33	55	123	26	10	2	2	------
27	2	5	15	30	56	106	26	9	2	2	------
28	2	5	16	26	57	97	20	8	2	2	------
29	2	6	17	28	------	76	10	8	2	2	------
30	2	6	17	55	------	72	8	8	2	2	------
31	3	------	18	50	------	106	------	8	------	2	------

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

Monthly discharge of Birch Creek near Pilot Rock, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	16	2	2.7	166
November	6	3	4.3	256
December	18	6	9.6	590
January	55	10	22.0	1,350
February	339	42	121	6,720
March	250	55	118	7,260
April	228	8	114	6,780
May	16	3	8.7	535
June	7	2	2.6	155
July	2	2	2.0	123
August	2	0	.6	37
The year	339	0	33.2	24,000

DIVERSIONS FROM UMATILLA RIVER BETWEEN FURNISH RESERVOIR AND UMATILLA, OREG.

Monthly diversions, in acre-feet, from Umatilla River between Furnish Reservoir and Umatilla, Oreg., for the irrigation season, 1926

Month	Furnish Canal	Crayne-Lisle Canal	Umatilla project feed canal	Western Land & Irrigation Co.'s canal	Allen Canal	Dillon Canal	Maxwell Canal	West division, main canal	Total
March	3,110	646	17,500	4,700	953	(a)	1,460	4,220	32,600
April	6,370	1,010	15,300	10,200	1,080	309	5,060	7,380	46,700
May	6,400	497	1,410	7,260	719	676	3,040	6,400	26,400
June	0	5	0	1,560	1,170	561	1,680	6,660	11,600
July	0	0	0	0	307	124	1,290	5,480	7,200
August	0	0	0	0	(a)	0	480	6,010	6,490
September	0	0	0	0	(a)	0	411	4,500	4,910
The period	15,900	2,160	34,200	23,700	4,230	1,670	13,400	40,600	136,000

a No record; some water may have been diverted.

UMATILLA PROJECT FEED CANAL NEAR ECHO, OREG.

LOCATION.—In SW. ¼ sec. 22, T. 3 N., R. 29 E., a quarter of a mile below head gate at United States Bureau of Reclamation diversion dam on Umatilla River and 2 miles above Echo, Umatilla County.

RECORDS AVAILABLE.—October 1, 1920, to September 30, 1926.

GAGE.—Vertical staff on right bank 60 feet above concrete dam just below first waste gate in canal. Gage read by M. C. Wolverton, employee of United States Bureau of Reclamation.

DISCHARGE MEASUREMENTS.—Made at footbridge across concrete-lined section of canal half a mile below gage.

CHANNEL AND CONTROL.—Gage is at earth section of canal just above concrete dam having five piers. At middle of dam is a gate, 2 feet wide, of removable 2-inch planks, the top of which is 0.33 foot below crest of dam. Just above at left bank is a gate used to flush sand out of canal, but its operation does not affect stage-discharge relation because gate is below crest of dam.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.91 feet on several days in March and April (discharge, 290 second-feet); canal dry at times.

1920–1926: Maximum stage recorded, 2.0 feet on several days in March and April, 1922, and January, March, and April, 1923 (discharge, 315 second-feet). Canal dry at times.

ACCURACY.—Stage-discharge relation changed during fall of 1925 when no water was in canal; permanent during period of record. Rating curve well defined between 80 and 300 second-feet by three discharge measurements made in 1926 and five in 1927. Gage read to hundredths once a day and also after making changes at head gate. Daily discharge ascertained by applying daily or weighted mean daily gage height to rating table or, for days when large changes were made, by taking weighted mean of discharge figures obtained by applying to rating table gage heights for various periods. Records excellent.

COOPERATION.—Records furnished by State engineer of Oregon.

Umatilla project feed canal diverts from right bank of Umatilla River at diversion dam. The water is carried to Cold Springs Reservoir, from which it is released during irrigation season. Some water was formerly returned to river through Echo tailrace at Echo, but none was used during 1926.

The following discharge measurements were made:

January 6, 1926: Gage height, 1.34 feet; discharge, 153 second-feet.

March 30, 1926: Gage height, 1.91 feet; discharge, 282 second-feet.

April 29, 1926: Gage height, 0.96 foot; discharge, 95 second-feet.

Daily discharge, in second-feet, of Umatilla project feed canal near Echo, Oreg., for the year ending September 30, 1926

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May
1	------	258	258	274	290	92	16	92	136	274	290	290	------
2	------	258	258	274	290	113	17	86	136	274	290	290	------
3	------	258	258	274	290	120	18	85	136	274	290	290	------
4	------	182	258	274	290	120	19	92	136	274	290	290	------
5	------	162	258	274	290	86	20	99	128	274	290	290	------
6	------	153	258	274	290	23	21	120	144	274	290	290	------
7	------	153	258	274	290	61	22	136	193	274	290	290	------
8	------	153	258	290	290	59	23	144	217	274	290	290	------
9	28	144	258	290	290	38	24	193	244	274	290	274	------
10	72	136	258	290	290	------	25	217	244	274	290	230	------
11	72	136	258	290	290	------	26	244	244	274	290	153	------
12	72	128	258	290	290	------	27	244	244	274	274	99	------
13	77	144	258	290	290	------	28	244	217	274	290	99	------
14	86	136	274	290	290	------	29	244	217	------	290	92	------
15	92	136	274	290	290	------	30	258	217	------	274	92	------
							31	258	244	------	274	------	------

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

Monthly discharge of Umatilla project feed canal near Echo, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
December	258	0	105	6,460
January	258	128	182	11,200
February	274	258	267	14,800
March	290	274	285	17,500
April	290	92	257	15,300
May	120	0	23	1,410
The year	290	0	92.4	66,700

NOTE.—No flow during months for which no record is given.

JOHN DAY RIVER BASIN

JOHN DAY RIVER AT PRAIRIE CITY, OREG.

LOCATION.—In NE. ¼ sec. 10, T. 13 S., R. 33 E., at power plant three-fourths of a mile southwest of Prairie City, Grant County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 16, 1925, to September 30, 1926. October 30, 1916, to September 30, 1917, at lower site (see "Gage").

GAGE.—March 16, 1925, to March 29, 1926, staff gage on left bank, below power plant tailrace; March 30 to September 30, 1926, staff gage on left bank, above power-plant tailrace, but below a small wasteway through which water may be wasted from Prairie power canal above penstock to power house.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Bed of coarse gravel, high banks covered with willows; may shift during floods or after periods of ice effect.

EXTREMES OF DISCHARGE.—Maximum stage recorded March 16 to September 30, 1925, 2.62 feet on May 21 (discharge, 384 second-feet); minimum stage, 0.69 foot on August 21 (discharge, 18 second-feet).

Maximum stage recorded during year ending September 30, 1926, 2.28 feet on April 19 (discharge, including canal and deducting wasteway, 313 second-feet); minimum combined discharge, 27 second-feet, on June 11, 12, 29, and July 1–3.

DIVERSIONS.—Numerous diversions above station for irrigation.

REGULATION.—Practically no regulation; power plant at gage has no pondage capacity at forebay.

ACCURACY.—Stage-discharge relation changed March 30, 1926, when gage was relocated. Rating curve used March 16, 1925, to March 29, 1926, well defined between 30 and 300 second-feet; curve used March 30 to September 30, 1926, well defined between 12 and 250 second-feet. Staff gage read once a day to hundredths. Daily discharge ascertained by applying daily gage reading to rating table. After March 30 daily discharge is flow past gage plus discharge of Prairie power canal (see p. 34) minus flow of Prairie power canal wasteway. Flow over wasteway is spilled from canal below canal gage and enters river above river gage. Records good.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of John Day River at Prairie City, Oreg., during the years ending September 30, 1925 and 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*
Mar. 16	1.49	105	June 11	1.42	107	July 29	1.08	57
Apr. 25	2.15	259	July 1	1.08	59			
May 23	2.20	271	July 13	.85	33.8	1926		
						Mar. 30	1.53	82

Daily discharge, in second-feet, of John Day River at Prairie City, Oreg., for the years ending September 30, 1925 and 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1925							
1	-------	153	234	209	56	52	21
2	-------	164	234	209	50	52	21
3	-------	153	234	197	46	52	20
4	-------	174	234	186	41	50	25
5	-------	209	246	164	49	51	35
6	-------	209	258	153	42	49	35
7	-------	234	298	143	36	49	46
8	-------	246	312	133	31	40	51
9	-------	258	258	133	31	33	52
10	-------	298	234	112	29	26	52
11	-------	340	234	104	29	25	50
12	-------	355	209	93	27	25	47
13	-------	355	209	85	30	23	41
14	-------	326	221	96	33	23	48
15	-------	340	234	104	31	22	48
16	113	340	246	99	33	27	56
17	115	355	271	101	33	22	56
18	115	340	284	82	34	26	58
19	115	355	284	80	32	23	67
20	115	326	312	72	37	20	59
21	124	298	384	84	48	18	59
22	153	298	312	78	47	21	59
23	153	284	284	73	56	27	59
24	153	271	271	66	59	31	57
25	164	258	246	65	65	31	60
26	164	258	221	53	64	35	60
27	164	246	209	52	59	25	60
28	186	246	209	52	59	23	60
29	174	234	209	54	58	24	61
30	164	234	234	56	53	28	64
31	153	-------	209	-------	50	23	-------

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925-26												
1	68	65	72	45	88	124	152	151	48	27	43	68
2	64	70	75	43	85	124	128	146	39	27	41	69
3	65	67	77	62	91	124	133	156	35	27	40	68
4	64	65	75	67	164	124	132	156	36	30	38	66
5	65	65	75	85	133	124	132	193	35	28	40	65
6	102	67	72	77	221	112	139	189	34	32	40	62
7	82	67	72	62	174	112	142	197	32	42	39	55
8	75	70	72	58	153	112	157	197	27	40	39	55
9	71	67	70	58	153	115	166	189	28	39	38	54
10	71	70	70	56	143	115	164	158	28	42	36	52
11	73	72	70	56	133	112	192	137	27	42	36	53
12	71	75	70	53	124	133	197	123	27	40	33	53
13	68	72	70	53	112	133	202	120	31	41	31	52
14	67	72	70	56	109	164	202	118	35	43	30	52
15	70	72	70	60	105	174	214	120	48	41	30	53
16	68	72	70	65	105	197	255	115	37	48	31	51
17	70	72	70	67	99	186	283	122	37	48	31	54
18	67	72	70	67	96	174	299	120	37	47	50	52
19	66	72	70	70	91	174	313	122	34	46	56	53
20	66	70	75	70	91	174	284	131	56	49	53	52
21	67	70	75	72	93	153	260	134	54	49	52	52
22	65	70	77	75	99	153	248	127	40	50	51	52
23	64	70	82	65	96	153	237	163	39	51	50	54
24	70	70	85	62	99	153	202	114	34	52	49	53
25	66	70	80	56	133	143	179	101	32	46	49	55
26	64	70	77	60	133	133	181	92	35	44	50	55
27	66	70	75	60	133	133	168	85	30	43	47	55
28	70	72	70	75	133	124	160	81	28	42	47	55
29	70	72	67	77	-------	115	156	72	27	43	41	58
30	64	72	49	85	-------	126	158	65	29	41	68	58
31	61	-------	45	80	-------	136	-------	56	-------	42	81	-------

Monthly discharge of John Day River at Prairie City, Oreg., for the years ending September 30, 1925 and 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
March 16-31	186	113	145	4,600
April	355	153	272	16,200
May	384	209	253	15,600
June	209	52	106	6,310
July	65	27	43.5	2,670
August	52	18	31.5	1,940
September	64	20	49.6	2,950
The period				50,300
1925-26				
October	102	61	69	4,240
November	75	65	70	4,170
December	85	45	71.5	4,400
January	85	43	64.4	3,960
February	221	85	121	6,720
March	197	112	140	8,610
April	313	128	194	11,500
May	197	56	131	8,060
June	56	27	35.3	2,100
July	52	27	41.4	2,550
August	81	30	43.9	2,700
September	69	51	56.2	3,340
The year	313	27	86.1	62,350

JOHN DAY RIVER AT PICTURE GORGE, NEAR DAYVILLE, OREG.

LOCATION.—In sec. 20, T. 12 S., R. 26 E., on John Day highway seven-tenths mile above Rock Creek Bridge and 7 miles northwest of Dayville, Grant County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 5 to September 30, 1926.

GAGE.—Staff gage on left bank; read by Walter Weatherford.

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

CHANNEL AND CONTROL.—Bed of gravel and sand, with some large boulders. High banks, not subject to overflow; practically permanent.

EXTREMES OF DISCHARGE.—Maximum discharge recorded during period, 685 second-feet on April 9 (gage height, 4.22 feet); minimum stage, 0.26 foot on July 26 (discharge, 6.6 second-feet).

DIVERSIONS.—Numerous diversions for irrigation above the station, mostly between Prairie City and Dayville.

REGULATION.—Some regulation due to irrigation diversions.

ACCURACY.—Stage-discharge relation changed April 12. Rating curve used April 5–9 fairly well defined between 500 and 700 second-feet; curve used April 12 to September 30 well defined between 10 and 2,600 second-feet. Staff gage read to hundredths about three times a week. Daily discharge ascertained by applying daily gage reading to rating table. Records fair.

COOPERATION.—Records furnished by State engineer of Oregon.

The following discharge measurements were made:

April 6, 1926: Gage height, 3.83 feet; discharge, 561 second-feet.

June 11, 1926: Gage height, 0.90 foot; discharge, 20 second-feet.

June 30, 1926: Gage height, 0.68 foot; discharge, 12.3 second-feet.

Daily discharge, in second-feet, of John Day River at Picture Gorge, near Dayville, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	------	321	72	10	7.8	8.0	16	610	224	13	8.4	7.6	35
2	------	305	58	9.0	7.4	8.0	17	633	218	12	8.2	7.7	38
3	------	290	58	8.9	7.4	8.1	18	657	204	12	8.1	7.8	39
4	------	302	58	8.7	7.3	9.4	19	680	190	14	7.9	7.6	39
5	550	313		8.6	7.4	11	20	628	194	15	7.8	7.5	40
6	550	350		8.7	7.4	13	21	575	199	17	7.8	7.5	45
7	550	386	39	8.8	7.4	13	22	546	199	14	7.9	7.4	50
8	620	377		8.4	7.5	13	23	516	199	12	8.0	7.4	56
9	685	369		8.0	7.5	14	24	473	199	17	7.5	7.6	62
10	683	360		8.0	7.4	16	25	429	182	22	7.1	7.7	62
11	682	325	20	8.0	7.4	19	26	386	165	19	6.6	7.7	62
12	680	290	18	8.0	7.4	21	27	350	182	15	7.2	7.7	62
13	645	264	15	8.0	7.3	24	28	313	199	12	7.9	7.8	66
14	610	237	13	8.0	7.4	28	29	324	161	12	8.2	7.9	7[illegible]
15	610	231	13	8.2	7.5	32	30	336	123	13	8.6	8.0	76
							31	------	85	------	8.2	8.0	------

NOTE.—Discharge interpolated on days for which gage was not read.

Monthly discharge of John Day River at Picture Gorge, near Dayville, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 5-30	685	313	551	28,400
May	386	85	247	15,20[illegible]
June	72	12	25.9	1,54[illegible]
July	10	6.6	8.15	501
August	8.0	7.3	7.56	465
September	76	8.0	34.7	2,060
The period				48,20[illegible]

JOHN DAY RIVER AT McDONALD, OREG.

LOCATION.—In NW. ¼ sec. 11, T. 1 N., R. 19 E., at ferry at McDonald post office, Sherman County, half a mile below mouth of Rock Creek, 16 miles above junction with Columbia River, and 18 miles southwest of Arlington.

DRAINAGE AREA.—7,800 square miles.

RECORDS AVAILABLE.—December 16, 1904, to September 30, 1926.

GAGE.—Inclined staff in two sections on left bank, 183 feet above ferry cable; read by M. F. Duncan.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—Bed composed of clean gravel and sand; shifts slightly. Banks high. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 5.9 feet at 7 a. m. February 8 (discharge, 8,180 second-feet); minimum stage, 0.83 foot at 8 a. m. August 14 (discharge, 23 second-feet).

1905–1926: Maximum stage recorded, 10.38 feet February 6, 1907 (discharge, 22,800 second-feet); minimum stage recorded, that of August 14, 1926.

A flood, probably in 1894, is said to have reached a stage of 12.8 feet (discharge estimated from extension of rating curve, 33,000 second-feet).

ICE.—Stage-discharge relation apparently unaffected by ice.

DIVERSIONS.—Large part of natural low-water flow of stream diverted in upper John Day Valley for irrigation.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent during year. Rating curve well defined between 60 and 10,000 second-feet. Gage read twice a day, generally to half-tenths. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

Discharge measurements of John Day River at McDonald, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 21	1.64	310	June 4	2.10	663
Mar. 23	4.06	3,270	Sept. 15	1.10	78

Daily discharge, in second-feet, of John Day River at McDonald, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	246	303	500	500	1,440	2,150	2,460	2,460	802	151	32	66
2	246	303	425	500	1,000	2,300	2,800	2,800	802	140	32	61
3	246	303	425	411	950	2,300	2,800	2,460	755	140	32	61
4	246	342	425	303	1,050	2,460	2,460	2,150	665	140	32	61
5	279	342	500	279	2,000	2,630	2,460	2,000	622	122	32	71
6	279	342	500	279	5,500	2,800	2,460	2,150	580	105	32	81
7	279	303	500	303	4,000	2,460	2,800	2,150	540	105	32	122
8	279	303	500	425	7,560	2,150	3,160	2,150	500	90	32	122
9	279	303	500	500	5,500	2,150	3,160	1,860	425	105	32	105
10	290	342	500	425	3,780	2,300	3,560	1,860	425	90	32	90
11	342	303	425	425	3,560	2,150	4,000	1,730	369	90	42	90
12	342	342	369	500	3,780	2,150	4,460	1,610	342	90	32	87
13	342	369	425	500	2,980	2,150	4,460	1,490	342	81	24	81
14	342	369	462	411	2,300	3,160	4,460	1,490	303	112	24	76
15	342	411	425	411	1,860	5,500	4,460	1,380	290	105	29	78
16	342	411	500	342	1,860	5,220	4,460	1,380	279	90	29	90
17	342	411	425	342	1,730	6,060	4,700	1,380	246	90	32	90
18	342	411	411	425	1,610	6,060	4,960	1,270	235	81	32	76
19	342	411	411	411	1,550	4,460	4,960	1,270	246	76	40	87
20	342	411	411	425	1,380	4,000	4,960	1,270	262	76	40	90
21	322	411	500	462	1,380	3,780	4,700	1,220	246	76	44	90
22	303	411	500	462	1,490	3,780	4,000	1,220	246	76	54	90
23	303	411	500	500	1,380	3,360	3,780	1,270	235	76	52	105
24	303	369	580	500	1,380	3,360	3,560	1,270	279	76	52	105
25	303	369	665	500	1,380	3,560	2,980	1,160	246	52	52	105
26	303	355	850	500	1,440	3,360	2,630	1,100	246	52	122	122
27	303	303	665	500	2,150	2,980	2,460	1,050	225	52	108	122
28	303	322	500	500	2,150	2,800	2,460	950	195	52	90	122
29	303	425	500	425	------	2,460	2,460	850	177	52	90	122
30	303	500	500	411	------	2,460	2,460	850	164	42	76	140
31	303	------	580	500	------	2,300	------	850	------	42	66	------

Monthly discharge of John Day River at McDonald, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	342	246	305	18,800
November	500	303	364	21,700
December	850	369	496	30,500
January	500	279	432	26,600
February	7,560	950	2,430	135,000
March	6,060	2,150	3,190	196,000
April	4,960	2,460	3,520	209,000
May	2,800	850	1,550	95,300
June	802	164	376	22,400
July	151	42	88.0	5,410
August	122	24	46.8	2,880
September	140	61	93.6	5,570
The year	7,560	24	1,060	769,000

STRAWBERRY CREEK NEAR PRAIRIE CITY, OREG.

LOCATION.—In S. ½ sec. 8, T. 14 S., R. 34 E., at traffic bridge on Nelson ranch, about 6 miles south of Prairie City, Grant County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—November 5, 1916, to September 30, 1917 (gage heights only), and April 28, 1925, to September 30, 1926.

GAGE.—Vertical staff on left hand log abutment of bridge; read by W. G. Nelson.

DISCHARGE MEASUREMENTS.—Made by wading or, at extremely high stage, from bridge; measuring conditions fair.

CHANNEL AND CONTROL.—Bed composed of heavy gravel and boulders; shifts in extremely high water.

EXTREMES OF DISCHARGE.—Maximum stage during period April 28 to September 30, 1925, 1.35 feet on May 18 (discharge, 169 second-feet); minimum stage, 0.48 foot several times in September (discharge, 4.6 second-feet).

Maximum stage recorded during year ending September 30, 1926, 1.18 feet May 1 and 5 (discharge, 84 second-feet); minimum stage, 0.41 foot September 11–30 (discharge, 3.2 second-feet).

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

DIVERSIONS.—Two small irrigation ditches divert above station. The record from May 22 to September 30, 1925, showed a total diversion of 675 acre-feet.

ACCURACY.—Stage-discharge relation changed May 26, 1925. Fairly well defined rating curves used. Gage read to hundredths once a day. Daily discharge ascertained by applying daily gage reading to rating table except for periods of ice effect, as indicated in footnote to daily-discharge table. Records good.

COOPERATION.—Records furnished by the State engineer of Oregon.

Discharge measurements of Strawberry Creek near Prairie City, Oreg., for the years ending September 30, 1925 and 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
Apr. 28	0.88	33.1	July 28	0.63	9.6	Mar. 29	0.59	7.9
May 21	1.30	147	Sept. 10	.49	4.9	June 15	.82	18.5
July 8	.89	23.2						

Daily discharge, in second-feet, of Strawberry Creek near Prairie City, Oreg., for the years ending September 30, 1925 and 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1925							1925						
1	------	41	90	42	11	4.8	16	------	133	52	14	6.5	5.9
2	------	47	84	40	10	4.8	17	------	156	56	14	6.5	5.3
3	------	52	81	37	8.8	4.6	18	------	169	60	14	6.2	5.0
4	------	57	69	33	8.4	4.6	19	------	160	69	14	6.2	5.3
5	------	64	60	32	8.4	4.6	20	------	156	75	13	5.9	5.9
6	------	75	56	29	8.4	4.8	21	------	151	78	12	5.3	5.6
7	------	102	52	26	8.0	4.6	22	------	151	81	12	5.3	5.6
8	------	108	48	26	8.0	4.8	23	------	143	78	11	5.0	5.0
9	------	102	46	24	8.0	4.6	24	------	140	78	11	5.3	5.0
10	------	96	50	23	7.7	4.8	25	------	133	72	11	5.0	5.3
11	------	99	48	22	7.7	4.8	26	------	133	66	10	5.0	5.0
12	------	99	46	20	7.7	4.6	27	------	118	60	9.2	5.0	5.3
13	------	96	52	18	7.7	4.6	28	34	122	50	8.4	5.0	5.3
14	------	102	52	16	7.4	4.6	29	34	118	48	8.8	5.0	5.6
15	------	126	52	16	7.1	4.6	30	36	111	44	8.8	4.8	5.6
							31	------	97	------	11	4.8	------

Daily discharge, in second-feet, of Strawberry Creek near Prairie City, Oreg., for the years ending September 30, 1925 and 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925-26												
1	5.6	5.0	4.2	4.0	4.2	4.2	7.4	84	27	8.8	5.6	3.6
2	5.3	4.6	4.8	4.0	4.0	4.2	7.4	81	26	8.8	5.3	3.6
3	5.3	4.6	5.0	4.0	4.0	4.2	7.4	73	26	8.8	5.0	3.6
4	5.3	4.6	4.8	3.8	5.0	4.2	7.4	78	27	8.8	5.0	3.6
5	5.3	4.6	4.4	4.2	4.6	4.4	7.7	84	26	8.4	4.8	3.6
6	7.4	4.6	4.4	4.6	5.0	4.4	7.7	78	25	8.0	4.6	3.6
7	6.8	4.6	4.4	4.2	5.0	4.2	8.0	69	24	8.4	4.4	3.4
8	6.2	4.6	4.2	4.0	5.0	4.2	8.8	60	24	8.0	4.4	3.4
9	5.9	4.6	4.0	4.0	4.8	4.2	10	50	24	7.4	4.4	3.4
10	5.6	4.4	4.2	4.0	4.8	4.2	10	46	24	6.8	4.0	3.4
11	5.9	4.4	4.2	4.2	4.6	4.2	14	42	23	6.5	4.0	3.2
12	5.6	4.4	4.2	4.2	4.4	4.2	14	40	22	6.5	4.2	3.2
13	5.0	4.4	4.2	4.2	4.4	4.4	14	40	21	6.2	4.0	3.2
14	5.3	4.2	4.3	4.2	4.4	4.6	16	42	20	6.2	4.0	3.2
15	5.0	4.2	4.4	4.2	4.4	5.9	20	44	18	5.9	4.2	3.2
16	5.0	4.4	4.6	4.2	4.4	6.5	29	46	17	5.6	4.2	3.2
17	4.8	4.4	4.8	4.2	4.4	7.4	39	44	16	5.6	4.0	3.2
18	5.0	4.2	4.8	4.4	4.4	7.4	50	46	14	5.6	4.4	3.2
19	5.0	4.2	4.4	4.2	4.2	7.1	50	46	14	5.3	4.8	3.2
20	4.8	4.2	4.6	4.2	4.2	7.1	52	63	14	5.3	4.4	3.2
21	5.0	4.2	4.6	4.0	4.2	6.8	44	69	13	5.3	4.2	3.2
22	5.0	4.2	4.8	4.0	4.2	6.8	40	75	13	5.0	4.0	3.2
23	4.8	4.2	4.8	4.0	4.2	7.1	39	66	12	5.0	4.0	3.2
24	5.0	4.2	4.6	4.2	4.2	7.1	33	60	12	5.0	3.8	3.2
25	5.0	4.2	4.8	4.2	4.2	7.7	39	52	12	5.0	3.8	3.2
26	5.0	4.2	4.8	4.2	4.2	8.0	42	46	12	5.0	3.8	3.2
27	5.0	4.2	4.6	4.2	4.2	8.0	50	42	11	5.3	3.6	3.2
28	5.0	4.2	4.2	4.2	4.2	7.7	60	40	11	5.3	3.6	3.2
29	5.0	4.2	4.0	4.2	-------	7.7	75	37	11	5.6	3.4	3.2
30	5.0	4.2	4.0	4.2	-------	7.7	81	34	9.2	5.6	5.0	3.2
31	5.0	-------	4.0	4.2	-------	7.1	-------	32	-------	5.6	4.0	-------

NOTE.—Stage-discharge relation affected by ice Dec. 14, 29–31, Jan. 1–3, 12–14, 26, and 27; discharge interpolated.

Monthly discharge of Strawberry Creek near Prairie City, Oreg., for the years ending September 30, 1925 and 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
May	169	41	112	6,890
June	90	44	61.8	3,680
July	42	8.4	18.9	1,160
August	11	4.8	6.81	419
September	5.9	4.6	5.03	299
The period				12,400
1925-26				
October	7.4	4.8	5.32	327
November	5.0	4.2	4.37	260
December	5.0	4.0	4.46	274
January	4.6	3.8	4.15	255
February	5.0	4.0	4.42	245
March	8.0	4.2	5.90	363
April	81	7.4	29.4	1,750
May	84	32	55.3	3,400
June	27	9.2	18.3	1,090
July	8.8	5.0	6.41	394
August	5.6	3.4	4.29	264
September	3.6	3.2	3.31	197
The year	84	3.2	12.2	8,820

PRAIRIE POWER CANAL AT PRAIRIE CITY, OREG.

LOCATION.—In sec. 11, T. 13 S., R. 33 E., 40 feet above county road bridge over canal and 1 mile south of Prairie City, Grand County.

RECORDS AVAILABLE.—May 23, 1925, to September 30, 1926.

GAGE.—Staff gage on right side of flume; read by S. D. Shough and R. R. Nelson.

DISCHARGE MEASUREMENTS.—Made from footbridge at gage.

CHANNEL AND CONTROL.—Rectangular wooden flume, 6 feet wide, at gage; transition to earth section 10 feet downstream. Control is earth channel; moss in summer may cause control to shift.

EXTREMES OF DISCHARGE.—Maximum stage recorded May 23 to September 30, 1925, 3.24 feet on May 23 (discharge, 64 second-feet); minimum stage, 2.24 feet on August 21, 22, 26–28 (discharge, 20 second-feet).

Maximum stage recorded during year ending September 30, 1926, 3.22 feet on May 20 (discharge, 70 second-feet); minimum stage, 2.00 feet on June 11, 12, 29, July 1, and 3 (discharge, 18 second-feet).

ICE.—Ice forms in canal during winter; stage-discharge relation not affected during 1925 and 1926.

ACCURACY.—Stage-discharge relation changed February 6. Rating curve used May 23, 1925, to February 5, 1926, well defined between 22 and 70 second-feet; curve used February 6 to September 30, 1926, well defined between 30 and 65 second-feet. Staff gage read once a day to hundredths. Daily discharge ascertained by applying daily gage readings to rating table, using shifting-control method August 1 to September 30. Records fair.

Prairie power canal diverts water from John Day River in SE. ¼ sec. 7, T. 13 S., R. 34 E., and extends westward 2½ miles to penstock leading to power house at Prairie City. Wasteway just above entrance to penstock returns a small quantity of water to river just above gaging station on John Day River at Prairie City. (See p. 27.)

Discharge measurements of Prairie power canal at Prairie City, Oreg., during the years ending September 30, 1925 and 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
May 23	3.24	63	July 8	2.41	22.0	Mar. 27	3.04	54.8
June 11	3.00	42.2	July 29	2.96	44.0	June 15	2.75	37.6
July 1	2.82	34.4						

Daily discharge, in second-feet, of Prairie power canal at Prairie City, Oreg., for the years ending September 30, 1925 and 1926

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	------	60	42	40	25	16	------	47	31	27	46
2	------	51	42	40	24	17	------	47	31	25	37
3	------	47	42	40	24	18	------	47	32	20	37
4	------	47	42	40	24	19	------	47	40	20	37
5	------	44	23	40	26	20	------	47	40	38	35
6	------	47	22	40	27	21	------	47	40	20	37
7	------	48	22	40	41	22	------	47	40	20	37
8	------	47	22	32	46	23	64	50	40	20	36
9	------	47	22	35	46	24	60	38	40	20	36
10	------	47	22	24	40	25	60	38	40	20	36
11	------	44	22	25	39	26	60	39	44	20	36
12	------	44	31	24	36	27	60	40	44	20	36
13	------	47	31	24	37	28	51	39	44	20	37
14	------	47	31	44	35	29	60	39	44	20	37
15	------	47	31	39	44	30	60	42	44	23	39
						31	60	------	44	24	------

Daily discharge, in second-feet, of Prairie power canal at Prairie City, Oreg., for the years ending September 30, 1925 and 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925-26												
1	41	38	44	40	47	52	58	61	32	18	29	57
2	41	38	46	37	48	52	52	63	28	18	28	56
3	40	39	46	38	48	51	52	63	24	18	27	57
4	39	40	46	44	48	51	53	63	26	21	27	54
5	39	42	46	46	47	49	53	64	25	19	29	53
6	41	41	46	48	61	48	55	64	24	23	28	51
7	36	41	44	50	59	48	55	68	22	32	28	44
8	36	41	44	47	56	49	55	68	18	27	28	44
9	38	41	44	46	55	51	56	64	19	25	27	44
10	36	41	44	46	55	53	56	61	19	28	27	44
11	39	42	44	44	55	53	56	61	18	27	27	44
12	40	42	46	48	55	53	56	59	18	27	24	42
13	39	41	44	50	53	53	56	59	22	28	22	44
14	39	41	46	50	53	55	56	59	25	28	21	42
15	39	41	46	48	53	56	56	61	38	28	21	44
16	39	42	46	50	52	56	58	61	26	32	22	44
17	39	43	46	48	53	58	58	61	26	35	22	44
18	38	43	47	46	52	56	59	61	26	34	41	44
19	39	43	47	46	52	56	59	66	42	33	36	44
20	39	43	47	47	52	55	59	70	38	35	35	44
21	39	43	48	47	52	55	59	64	40	35	35	44
22	39	42	48	47	52	55	59	60	28	35	34	45
23	39	43	48	47	52	55	59	55	27	37	33	44
24	39	43	48	47	58	55	61	55	22	36	33	45
25	39	43	47	47	59	52	59	52	20	32	33	45
26	39	44	47	48	53	52	59	49	22	29	34	45
27	38	44	48	48	53	52	58	45	19	30	34	46
28	40	44	48	50	52	52	59	49	18	29	34	46
29	39	44	42	49	-------	52	59	45	18	30	34	48
30	39	44	44	47	-------	52	61	45	19	28	54	48
31	39	-------	44	46	-------	52	-------	37	-------	29	54	-------

Monthly discharge of Prairie power canal at Prairie City, Oreg., for the years ending September 30, 1925 and 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
May 23-31	64	51	59.4	1,060
June	60	38	45.6	2,710
July	44	22	35.0	2,150
August	44	20	28.5	1,750
September	46	24	35.8	2,130
The period				9,800
1925-26				
October	41	36	38.9	2,390
November	44	38	41.9	2,490
December	48	42	45.8	2,820
January	50	37	46.5	2,860
February	61	47	53.0	2,940
March	58	48	52.9	3,250
April	61	52	57.0	3,390
May	70	37	58.5	3,600
June	42	18	25.0	1,490
July	37	18	28.6	1,760
August	54	21	31.0	1,910
September	57	42	46.5	2,770
The year	70	18	43.7	31,700

NORTH FORK OF JOHN DAY RIVER AT MONUMENT, OREG.

LOCATION.—In E. ½ sec. 1, T. 9 S., R. 27 E., just below entrance to canyon, three-fourths of a mile west of Monument, Grant County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 19, 1925, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on right bank referred to staff gage used March 19 to November 23, 1925; staff gage read and recorder inspected by Howard V. Gollyhorn.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—One channel at all stages. Banks high and free of vegetation. Bed composed of rock ledge and gravel; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period March 19 to September 30, 1925, 6.85 feet April 11 (discharge, 6,400 second-feet); minimum stage, 0.23 foot August 13 and 15 (discharge, 71 second-feet).

Maximum stage during year ending September 30, 1926, from water-stage recorder, 5.80 feet at 6 a. m. March 16 (discharge, 4,910 second-feet); minimum stage recorded, 0.16 foot at 11 a. m. August 26 (discharge, 62 second-feet).

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

DIVERSIONS.—Numerous small irrigation ditches divert above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent except as affected by ice January 25-28. Rating curve well defined above and poorly defined below 120 second-feet. Staff gage read to hundredths once on alternate days from March 19 to November 23, 1925, and occasionally thereafter; operation of water-stage recorder satisfactory except as stated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table daily gage reading or mean daily height obtained from recorder graph by inspection. Records good except for periods recorder was not operating or discharge was less than 120 second-feet, for which they are poor.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of North Fork of John Day River at Monument, Oreg., during the years ending September 30, 1925 and 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
Mar. 20	3.04	1,460	July 17	0.77	175	Mar. 25	3.54	2,140
Apr. 4	4.58	3,460	Sept. 12	.49	99	June 9	1.06	294
May 27	3.78	2,300	Nov. 4	.65	149	July 5	.48	122
July 3	1.36	428						

Daily discharge, in second-feet, of North Fork of John Day River at Monument, Oreg., for the years ending September 30, 1925 and 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1925							
1		2,100	3,300	2,000	470	147	100
2		2,100	3,360	2,050	455	152	102
3		2,100	3,430	1,820	425	157	102
4		3,300	4,100	1,600	385	145	102
5		4,770	4,770	1,490	352	133	108
6		4,770	4,770	1,380	318	123	113
7		4,770	4,770	1,220	297	113	123
8		4,840	4,770	1,070	276	113	133
9		4,910	4,770	1,040	260	113	129
10		5,660	4,040	1,000	244	110	125

Daily discharge, in second-feet, of North Fork of John Day River at Monument, Oreg., for the years ending September 30, 1925 and 1926—Continued.

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1925							
11	-------	6,400	3,300	1,070	232	106	119
12	-------	6,400	3,300	1,140	221	88	113
13	-------	6,400	3,300	1,090	204	71	113
14	-------	6,400	3,300	1,040	187	71	113
15	-------	6,400	3,300	1,020	187	71	117
16	-------	6,400	4,040	1,000	187	92	121
17	-------	6,400	4,770	965	179	113	127
18	-------	6,400	4,770	930	197	110	133
19	1,300	6,400	4,770	965	177	106	145
20	1,560	6,400	5,580	1,000	157	106	157
21	1,830	6,400	6,400	2,100	162	106	145
22	2,100	5,660	4,850	1,070	167	106	133
23	2,100	4,910	3,300	1,000	162	106	129
14	2,100	4,240	3,060	930	157	112	125
25	2,100	3,560	2,820	738	154	117	129
26	2,100	3,430	2,600	545	152	115	133
27	2,100	3,300	2,370	515	144	113	129
28	2,100	3,300	2,370	485	137	112	129
29	2,100	3,300	2,370	485	140	110	129
30	2,100	3,300	2,160	485	142	104	133
31	2,100	-------	1,950	-------	144	99	-------

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925-26												
1	127	157	229	111	500	1,470	2,050	2,000	605	123	87	170
2	121	151	276	117	500	1,520	1,800	1,650	563	123	84	140
3	123	145	221	127	600	1,750	1,700	1,470	515	129	81	115
4	125	147	201	145	900	1,950	1,750	1,380	475	125	80	110
5	111	145	204	197	1,470	1,800	1,900	1,470	425	121	77	99
6	133	142	197	292	2,420	1,470	2,200	1,560	400	111	76	94
7	129	140	154		3,560	1,380	2,260	1,420	365	111	74	91
8	125	138	152		2,820	1,470	2,320	1,300	318	145	73	91
9	131	135	165		2,260	1,380	2,480	1,260	292	159	74	87
10	137	140	260		2,370	1,260	2,540	1,140	292	135	73	99
11	133	145	309		2,370	1,300	2,820	1,070	268	121	73	91
12	129	163	300			1,750	3,000	1,000	256	115	73	89
13	127	181	276			2,820	2,940	1,000	240	111	73	91
14	125	176	252			3,820	2,940	1,000	221	113	75	94
15	129	170	235			3,950	3,000	1,000	221	115	77	95
16	133	173	218	240		4,490	3,300	965	237	113	77	101
17	133	176	201			3,690	3,560	1,000	225	106	77	102
18	133	173	193		1,400	3,000	3,560	1,040	204	102	84	106
19	148	170	184			2,590	3,690	1,000	211	101	106	108
20	162	152	176			2,640	3,180	1,000	260	101	125	110
21	142	135	250			2,370	2,760	1,140	309	101	119	110
22	121	111	323			2,260	2,370	1,000	260	101	84	108
23	123	87	396			2,420	2,100	930	204	102	67	113
24	125	97	470		795	2,420	1,850	895	187	99	66	115
25	127	187	425	200	1,180	2,150	1,700	795	173	97	64	123
26	129	240	345	190	1,220	2,000	1,650	750	157	97	63	125
27	131	159	260	180	1,260	1,800	1,700	717	147	95	67	123
28	133	147	221	180	1,420	1,650	1,700	678	137	94	68	123
29	150	135	207	605	-------	1,520	1,750	665	129	92	73	121
30	167	182	165	600	-------	1,520	1,900	665	127	91	94	119
31	162	-------	111	500	-------	1,900	-------	665	-------	89	106	-------

NOTE.—Daily discharge interpolated on alternate days gage was not read prior to installation of water-stage recorder on Nov. 24, 1925, and when recorder was not operating Nov. 28, 30, Dec. 1, 12, 15, 16, 18, 19, 21–23, 1925, May 30, July 20, 21, Aug. 6, 7, 14, 24, and 25, 1926. Daily discharge Jan. 25 to Feb. 4 and mean discharge for periods included in braces estimated by comparison with record for John Day River at Prairie City.

Monthly discharge of North Fork of John Day River at Monument, Oreg., for the years ending September 30, 1925 and 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
March 19–31	2,100	1,300	1,980	51,100
April	6,400	2,100	4,820	287,000
May	6,400	1,950	3,770	232,000
June	2,100	485	1,110	66,000
July	470	137	228	14,000
August	157	71	111	6,820
September	157	100	124	7,380
The period				664,000
1925–26				
October	167	111	133	8,180
November	240	87	153	9,100
December	470	111	244	15,000
January	605	111	250	15,400
February	3,560	500	1,520	84,400
March	4,490	1,260	2,180	134,000
April	3,690	1,650	2,420	144,000
May	2,000	665	1,080	66,400
June	605	127	281	16,700
July	159	89	111	6,820
August	125	63	80.3	4,940
September	170	87	109	6,490
The year	4,490	63	706	511,000

COTTONWOOD CREEK NEAR MONUMENT, OREG.

LOCATION.—In SW. ¼ NW. ¼ sec. 30, T. 9 S., R. 28 E., 300 feet above a private irrigation diversion dam and 4 miles south of Monument, Grant County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 20 to September 30, 1925, and June 10 to September 30, 1926.

GAGE.—Staff gage on left bank; read by Donald Boyer.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Bed composed of coarse gravel. Banks high, overgrown with brush; may shift in floods or owing to scouring by ice.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, March 20 to September 30, 1925, 2.45 feet on May 25 (discharge, 258 second-feet); minimum stage, 0.62 foot August 13–15, 27, and 28 (discharge, 0.2 second-foot).

Maximum stage recorded June 10 to September 30, 1926, 1.10 feet on August 30 (discharge, 60 second-feet); minimum stage, 0.48 foot June 29, 30, July 1–7, 11–17, and 19 (discharge, 2.6 second-feet).

DIVERSIONS.—Several small irrigation diversions above station, near Fox post-office.

ACCURACY.—Stage-discharge relation permanent March 20 to September 30, 1925; changed during winter of 1925–26; permanent June 10 to September 30, 1926. Rating curve used in 1925 well defined between 5 and 150 second-feet and poorly defined below 5 second-feet; curve used in 1926 fairly well defined between 2 and 200 second-feet. Staff gage read to hundredths once a day March 20 to September 30, 1925, except for occasional days and June 10–30, 1926; read about four times a week July 1 to September 30, 1926. Daily discharge ascertained by applying daily gage reading to rating table. Records fair, except for days in 1925 when discharge was less than 5 second-feet and August 29–31, 1926, for which they are poor.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of Cottonwood Creek near Monument, Oreg., during the years ending September 30, 1925 and 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
Mar. 20	1.52	58	June 10	0.54	5.2
Apr. 4	1.84	110	July 5	.49	3.2
May 27	1.44	48.9	July 18	.49	2.7
July 3	.81	3.3			

Daily discharge, in second-feet, of Cottonwood Creek near Monument, Oreg., for the years ending September 30, 1925 and 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1925							
1	-------	69	106	54	5	5	2
2	-------	69	102	66	5	5	2
3	-------	64	98	61	2	5	2
4	-------	97	91	51	1	2	4
5	-------	165	88	46	1	1	8
6	-------	178	69	44	1	2	12
7	-------	138	66	42	1	1	5
8	-------	134	84	40	1	1	4
9	-------	138	69	38	1	2	3
10	-------	142	66	38	3	1	7
11	-------	151	64	34	3	1	7
12	-------	178	56	34	1	1	7
13	-------	165	56	32	1	.2	7
14	-------	151	56	32	1	.2	31
15	-------	190	52	30	1	.2	11
16	-------	190	54	30	1	1	11
17	-------	190	81	29	1	1	10
18	-------	178	78	25	1	1	11
19	-------	204	132	25	1	.4	11
20	59	244	258	24	1	1	11
21	66	230	165	40	1	1	12
22	69	244	151	34	1	1	12
23	72	244	66	24	1	7	11
24	69	178	72	18	1	6	11
25	72	165	66	12	1	4	11
26	72	165	64	30	1	.4	11
27	69	165	49	11	1	.2	11
28	69	121	44	11	1	.2	11
29	84	117	46	10	1	.4	11
30	75	110	59	7	1	.4	12
31	69	-------	56	-------	2	.4	-------

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1926					1926				
1	-------	2.6	3.0	4.5	16	5.3	2.6	3.0	4.5
2	-------	2.6	3.0	4.2	17	4.5	2.6	3.8	4.5
3	-------	2.6	3.0	3.8	18	4.5	2.8	8.9	4.2
4	-------	2.6	3.0	3.8	19	6.0	2.6	12	3.8
5	-------	2.6	3.0	3.8	20	6.0	2.8	3.8	4.2
6	-------	2.6	3.0	3.8	21	5.3	3.0	4.2	4.5
7	-------	2.6	3.0	3.8	22	4.5	3.0	4.5	4.5
8	-------	2.8	3.0	3.8	23	3.0	3.0	4.2	4.5
9	-------	3.0	3.0	3.8	24	3.0	3.0	3.8	4.5
10	4.5	2.8	3.0	3.8	25	2.6	3.0	3.8	4.5
11	4.5	2.6	3.0	3.8	26	3.0	3.0	3.8	4.5
12	4.5	2.6	3.0	3.8	27	3.0	3.0	3.8	4.5
13	4.5	2.6	3.0	3.8	28	3.0	3.0	3.8	4.2
14	5.3	2.6	3.0	4.2	29	2.6	3.0	32	3.8
15	5.3	2.6	3.0	4.5	30	2.6	3.0	60	3.8
					31	-------	3.0	32	-------

NOTE.—Because of no gage-height record discharge estimated Aug. 20, 21, 31, Sept. 1-3, 5, 21, and 23, 1925; discharge interpolated on days for which gage was not read in July, August, and September, 1926.

Monthly discharge of Cottonwood Creek near Monument, Oreg., for the years ending September 30, 1925 and 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
March 20-31	84	59	70.4	1,680
April	244	64	159	9,460
May	258	44	82.7	5,090
June	66	7	32.4	1,930
July	5	1	1.5	92
August	6	.2	1.71	105
September	31	2	9.3	553
The period				18,900
1926				
June 10-30	6.0	2.6	4.17	174
July	3.0	2.6	2.78	171
August	60	3.0	7.50	461
September	4.5	3.8	4.12	245
The period				1,050

DESCHUTES RIVER BASIN

CRANE PRAIRIE RESERVOIR NEAR LAPINE, OREG.

LOCATION.—At reservoir dam, in NW. ¼ sec. 16, T. 21 S., R. 8 E., 28 miles by road west of Lapine, Deschutes County.

RECORDS AVAILABLE.—November 15, 1922, to September 30, 1926.

GAGE.—Vertical staff in sections on left bank; read by C. J. Keefer; datum 4,400 feet above sea level based on levels by United States Bureau of Reclamation.

EXTREMES OF CONTENTS.—Maximum stage recorded during year, 31.40 feet on October 1 (contents, 3,920 acre-feet); minimum stage, 28.52 feet September 25–30 (contents, 21 acre-feet).

1923–1926: Maximum stage recorded, 44.10 feet January 10–13, 1924 (contents, 50,830 acre-feet); minimum stage, 28.40 feet on December 19, 1924 (contents, zero).

Crane Prairie Reservoir temporary dam was completed in 1922, gates closed November 4, 1922; spillway crest at altitude 4,445 feet, capacity 55,200 acre-feet. Stored water intended to be used for irrigation but is not used on land for which it was intended. In June, 1924, by court order, gates were opened and all stored water released. No water stored in 1925 or 1926 except pondage due to constriction of river at reservoir gates.

Monthly stage and contents of Crane Prairie Reservoir near Lapine, Oreg., for the year ending September 30, 1926

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	30.36	1,860	−2,110	May 31	29.14	320	−62
Nov. 30	29.90	1,160	−700	June 30	29.78	101	−219
Dec. 31		[a] 440	−720	July 31	28.74	86	−15
Jan. 31		[a] 345	−95	Aug. 31	28.72	78	−8
Feb. 28		[a] 308	−37	Sept. 30	28.52	21	−57
Mar. 31	29.02	232	−76				
Apr. 30	29.22	382	+150	The year			−3,949

[a] Interpolated.

DESCHUTES RIVER AT CRANE PRAIRIE, NEAR LAPINE, OREG.

LOCATION.—In NW. ¼ sec. 16, T. 21 S., R. 8 E., 200 yards below Crane Prairie Dam and 28 miles by road west of Lapine, Deschutes County.

DRAINAGE AREA.—Indeterminate.

RECORDS AVAILABLE.—January 1, 1914, to June 30, 1917; February 23, 1922, to September 30, 1926; fragmentary gage readings 1907 to 1913.

GAGE.—Vertical staff on left bank, just above new Forest Service bridge. Stevens water-stage recorder used October 1 to November 5 and January 20 to April 6. Staff gage in sec. 17, about half a mile above present gage, used up to June 8, 1922. Gage read by C. J. Keefer.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Bed composed of rock and boulders; probably permanent; slight aquatic growth at times.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.91 feet October 1 and 2 (discharge, 392 second-feet); minimum stage, 1.16 feet September 25–30 (discharge, 165 second-feet).

1907–1917, 1922–1926: Maximum stage recorded, 2.40 feet April 18, 1924 (discharge, 604 second-feet); minimum stage, 0.05 foot April 24, 1923 (discharge, 2.5 second-feet, owing to closing of dam).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—Gates at dam at outlet of Crane Prairie Reservoir just above station were open throughout year, but water in reservoir was maintained at a stage higher than natural on account of small capacity of gates. (See p. 40.)

ACCURACY.—Stage-discharge relation changed slightly during winter. Rating curves well defined. Operation of water-stage recorder satisfactory October 1 to November 5 and January 20 to April 6; staff gage read to hundredths once daily for remainder of year except December 20 to January 19. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection or daily gage reading. Records excellent except for estimated periods, for which they are fair.

COOPERATION.—Record furnished by State engineer of Oregon.

Discharge measurements of Deschutes River at Crane Prairie near Lapine, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 18	1.63	290	June 28	1.28	197	Sept. 5	1.23	184
Mar. 11	1.32	208	Aug. 6	1.27	193	Sept. 17	1.21	175

Daily discharge, in second-feet, of Deschutes River at Crane Prairie, near Lapine, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	392	308	266		186	202	188	216	216	188	188	188
2	392	305	266		183	202	188	216	202	188	188	188
3	388	305	266		183	202	188	216	202	188	188	188
4	388	302	266		194	205	188	216	202	188	188	188
5	384	298	260		197	208	188	216	202	188	188	188
6	384	292	260		202	208	188	231	202	188	188	188
7	377	292	260		208	208	188	231	202	188	188	175
8	377	292	256		216	211	188	231	202	188	188	175
9	373	279	253		214	208	202	231	202	188	188	175
10	369	279	247	200	216	208	202	231	202	188	188	175
11	369	292	247		216	208	202	231	202	188	188	175
12	365	292	241		214	214	202	231	202	188	188	175
13	361	298	241		205	216	202	231	202	188	188	175
14	361	298	241		202	222	202	231	202	188	188	175
15	358	298	241		199	228	202	231	202	188	188	175
16	354	298	241		199	225	202	231	188	188	188	175
17	350	298	235		197	222	202	231	188	188	188	175
18	347	292	235		191	219	202	231	188	188	202	175
19	343	285	235		188	216	202	231	188	188	202	175
20	340	279		194	191	214	202	231	188	188	202	175
21	336	279		197	191	208	202	231	188	188	202	175
22	332	279		194	188	208	216	231	188	188	188	170
23	329	276		194	188	208	216	216	188	188	188	170
24	326	276		191	194	202	216	216	188	188	188	170
25	326	276	210	191	197	202	216	216	188	188	188	165
26	322	272		188	194	202	216	216	188	188	188	165
27	318	272		186	202	197	216	216	188	188	188	165
28	318	272		183	202	194	216	216	188	188	188	165
29	315	269		188	-------	194	216	216	188	188	188	165
30	312	266		186	-------	188	216	216	188	188	188	165
31	308	-------		188	-------	188	-------	216	-------	188	188	-------

NOTE.—No gage-height record Dec. 20 to Jan. 19; discharge estimated.

Monthly discharge of Deschutes River at Crane Prairie, near Lapine, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	392	308	352	21,600
November	308	266	287	17,100
December	266	----------	235	14,400
January	----------	183	196	12,100
February	216	183	198	11,000
March	228	188	208	12,800
April	216	188	202	12,000
May	231	216	224	13,800
June	216	188	195	11,600
July	188	188	188	11,600
August	202	188	190	11,700
September	188	165	175	10,400
The year	392	165	221	160,000

DESCHUTES RIVER ABOVE DAVIS CREEK, NEAR LAPINE, OREG.

LOCATION.—In SW. ¼ sec. 3, T. 22 S., R. 8 E., at wagon bridge at Graft ranch, half a mile above Davis Creek, and 12 miles west of Lapine, Deschutes County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—July 17, 1925, to September 30, 1926; and some discharge measurements made earlier.

GAGE.—Vertical staff on downstream side of bridge pier; gage read by George Graft.

DISCHARGE MEASUREMENTS.—Made from bridge, good section.

CHANNEL AND CONTROL.—Gravel and sand, fairly stable.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period July 17, 1925, to September 30, 1926, 2.02 feet on September 5 and 6, 1925 (discharge, 806 second-feet); minimum stage, 1.00 foot on September 25–30, 1926 (discharge, 496 second-feet). Meter measurement of April 25, 1923, made when dam at Crane Prairie was closed, gave 334 second-feet.

ICE.—No ice on account of proximity to spring.

DIVERSIONS.—None.

REGULATION.—Some water stored in Crane Prairie Reservoir (see p. 40).

ACCURACY.—Stage-discharge relation apparently permanent. Rating curve fairly well defined. Gage read to hundredths daily. Discharge ascertained by applying gage heights to rating table. Records good.

Discharge measurements of Deschutes River above Davis Creek, near Lapine, Oreg., during the years ending September 30, 1923–1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1922	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
Nov. 21	1.28	581	Sept. 25	1.90	792	Mar. 12	1.21	523
1923			Nov. 19	1.61	656	June 29	1.11	508
Apr. 25	.48	334	1926			Aug. 6	1.10	557
Sept. 17	.68	412	Jan. 20	1.24	563	Aug. 21	1.10	531
						Sept. 5	1.06	546

Daily discharge, in second-feet, of Deschutes River above Davis Creek, near Lapine, Oreg., for the years ending September 30, 1925 and 1926

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1925				1925			
1		774	806	16		806	806
2		774	806	17	774	806	790
3		774	806	18		806	790
4		790	806	19		806	790
5		790	806	20		806	790
6		790	806	21	774	806	790
7		790	806	22		806	790
8		790	806	23		806	790
9		790	806	24		806	790
10		790	806	25		806	790
11		790	806	26	774	806	790
12		790	806	27	774	806	790
13		806	806	28	774	806	790
14		806	806	29	774	806	790
15		790	806	30	774	806	790
				31	774	806	

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925–26												
1	790	694	664	602	556	556	541	541	556	526	526	520
2	790	694	664	586	556	556	541	541	556	526	526	520
3	774	694	664	602	556	556	526	541	556	526	526	520
4	774	694	664	586	556	556	541	556	541	526	526	517
5	774	679	648	586	571	556	541	556	541	526	526	514
6	774	679	648	586	571	556	541	556	541	526	526	514
7	758	679	648	586	586	556	541	556	541	526	526	514
8	758	679	648	586	586	556	541	571	541	526	526	514
9	758	679	648	586	586	556	541	571	541	526	526	511
10	758	679	648	586	586	556	541	571	541	526	526	511

Daily discharge, in second-feet, of Deschutes River above Davis Creek, near Lapine, Oreg., for the years ending September 30, 1925 and 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925-26												
11	758	694	632	586	571	556	541	571	541	526	526	511
12	742	694	632	586	571	556	541	571	541	526	526	508
13	742	694	632	571	571	556	541	571	541	526	526	508
14	742	694	632	571	571	556	541	571	541	526	526	505
15	742	679	632	571	571	571	541	571	526	526	526	505
16	742	694	632	571	556	571	541	556	526	526	526	505
17	742	679	632	571	556	571	541	556	541	526	526	505
18	742	679	632	571	556	571	541	556	541	526	526	505
19	726	679	632	571	556	571	541	556	541	526	526	505
20	726	679	632	571	541	571	541	556	541	526	526	505
21	726	679	632	571	541	571	541	556	541	526	526	505
22	726	664	617	556	556	571	541	556	526	526	526	508
23	726	664	617	556	556	571	541	556	526	526	523	508
24	726	664	617	556	556	556	541	556	526	526	523	502
25	726	664	617	556	556	556	541	556	526	526	523	496
26	726	664	617	556	556	556	541	556	526	526	523	496
27	726	679	617	556	556	541	541	556	526	526	523	496
28	710	679	617	556	556	541	541	556	526	526	523	496
29	710	679	617	556	-------	541	541	556	526	526	523	496
30	710	679	602	556	-------	526	541	556	526	526	523	496
31	710	-------	602	541	-------	541	-------	556	-------	526	520	------

Monthly discharge of Deschutes River above Davis Creek, near Lapine, Oreg., for the years ending September 30, 1925, and 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
July 17-31	----------	----------	774	23,000
August	806	774	798	49,100
September	806	790	799	47,500
1925-26				
October	790	710	743	45,700
November	694	664	681	40,500
December	664	602	633	38,900
January	602	541	573	35,200
February	586	541	563	31,300
March	571	526	557	34,200
April	541	526	540	32,100
May	571	541	558	34,300
June	556	526	537	32,000
July	526	526	526	32,300
August	526	520	525	32,300
September	520	496	507	30,200
The year	790	496	579	419,000

DESCHUTES RIVER AT PRINGLE FALLS, NEAR LAPINE, OREG.

LOCATION.—In NE. ¼ sec. 23, T. 21 S., R. 9 E., at head of Pringle Falls, 9 miles by road northwest of Lapine, Deschutes County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—December 26, 1915, to June 17, 1916; October 1, 1916, to June 30, 1917, and June 6, 1922, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on left bank about 250 yards above road bridge. Staff gage almost directly opposite used 1915 to 1917.

DISCHARGE MEASUREMENTS.—Made from cable half a mile below gage and below falls.

CHANNEL AND CONTROL.—Control is at head of falls, mostly rock and practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.44 feet at 1 a. m. October 1 (discharge, 990 second-feet); minimum stage from recorder, 1.65 feet September 25 (discharge, 614 second-feet).

1915–1917, 1922–1926: Maximum discharge recorded, 1,170 second-feet June 21–27, 29, and 30, 1917; minimum discharge, 540 second-feet December 27, 1915.

ICE.—None.

DIVERSIONS.—None.

REGULATION.—Some water stored in Crane Prairie Reservoir (see p. 40).

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

COOPERATION.—Record furnished by State engineer of Oregon.

Discharge measurements of Deschutes River at Pringle Falls, near Lapine, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 11	2.27	922	Mar. 1	1.90	719	Aug. 5	1.76	667
Jan. 20	1.92	740	July 11	1.78	671	Sept. 5	1.71	672

Daily discharge, in second-feet, of Deschutes River at Pringle Falls, near Lapine, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	990	890	840	770	725	725	702	702	680	702	658	614
2	990	890	840	770	725	725	702	702	680	702	635	614
3	965	890	840	770	702	725	702	702	680	702	658	614
4	965	865	840	770	770	725	702	702	680	680	658	635
5	965	865	840	770	748	725	702	702	680	680	658	635
6	965	865	840	770	748	725	702	702	680	680	658	635
7	965	865	815	770	770	725	702	702	680	680	680	635
8	965	865	815	770	770	725	702	702	680	680	680	635
9	940	865	815	770	748	725	702	702	680	680	680	635
10	940	865	815	770	748	725	702	702	680	680	680	635
11	940	890	815	770	748	725	702	702	680	680	680	635
12	940	890	815	770	748	725	702	702	680	680	680	635
13	940	890	815	770	748	725	680	702	680	658	702	635
14	940	865	815	748	725	748	680	702	680	658	702	635
15	940	865	815	748	748	748	680	702	680	658	702	635
16	940	865	815	748	725	748	658	702	680	658	702	635
17	915	865	815	748	725	748	658	702	702	658	702	635
18	915	865	792	748	}	748	658	702	702	658	702	635
19	915	865	792	725	}	725	658	702	702	658	702	635
20	915	840	792	725	}	725	635	702	725	658	702	635
21	915	840	792	748	}	702	635	702	725	635	702	635
22	915	840	792	725	}	702	635	725	725	635	680	614
23	915	840	792	725	725	702	635	725	725	635	680	614
24	915	840	792	725	}	680	635	702	725	635	658	614
25	915	840	792	725	}	680	658	702	725	635	658	614
26	915	840	792	725	}	680	658	702	725	635	658	}
27	890	840	792	725	}	680	658	702	725	635	635	}
28	890	840	770	725	}	680	658	702	725	635	635	} 614
29	890	840	770	725	-------	680	680	702	725	635	635	}
30	890	840	770	725	-------	680	680	680	702	635	635	}
31	890	-------	770	725	-------	680	-------	680	-------	635	635	------

NOTE.—Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Deschutes River at Pringle Falls, near Lapine, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	990	890	932	57,300
November	890	840	861	51,200
December	840	770	807	49,600
January	770	725	748	46,000
February	770	702	736	40,800
March	748	680	715	44,000
April	702	635	675	40,200
May	725	680	702	43,200
June	725	680	698	41,500
July	702	635	660	40,600
August	702	635	672	41,300
September	635	614	627	37,300
The year	990	614	736	533,000

DESCHUTES RIVER AT BENHAM FALLS, NEAR BEND, OREG.

LOCATION.—In SE. ¼ sec. 9, T. 19 S., R. 11 E., 50 yards above head of Benham Falls, 1½ miles below proposed dam site for Benham Falls Reservoir, and 14 miles by road south of Bend, Deschutes County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 30, 1909, to September 30, 1913; August 27 to December 22, 1920; July 1 to September 15, 1921; and February 12, 1924, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on left bank 50 yards above head of falls; inspected by C. M. Redfield and J. H. Ryan, water masters.

DISCHARGE MEASUREMENTS.—Made from cable 100 yards above gage.

CHANNEL AND CONTROL.—Control is rock reef at head of Benham Falls. Gage located in comparatively deep and sluggish water above head of falls.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.62 feet all day October 1 (discharge, 1,440 second-feet); minimum stage from recorder, 0.76 foot September 26 and 27 (discharge, 1,000 second-feet).

1909–1913, 1920–21, 1924–1926: Maximum stage of flood of November 27, 1909, not recorded, see record for station below Bend (p. 49); minimum stage recorded, 0.52 foot at noon December 22, 1924 (discharge, 870 second-feet).

ICE.—None.

DIVERSIONS.—Some irrigation in headwaters of river. Station is above all large diversions near Bend.

REGULATION.—Discharge since 1925 affected by storage regulation in Crescent Lake Reservoir.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined. Operation of water-stage recorder satisfactory except as stated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records excellent except for estimated periods, for which they are fair.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of Deschutes River at Benham Falls, near Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 12	1.51	1,380	July 5	1.27	1,280	Aug. 30	1.00	1,120
Jan. 21	1.19	1,200	July 8	1.30	1,240	Sept. 13	.88	1,080
Mar. 1	1.30	1,240	Aug. 11	1.02	1,100			

Daily discharge, in second-feet, of Deschutes River at Benham Falls, near Bend, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,440	1,350	1,350		1,220	1,270	1,200	1,220	1,110	1,270	1,170	1,110
2	1,440	1,350	1,350		1,220	1,270	1,200	1,220	1,110	1,240	1,170	1,080
3	1,440	1,350	1,350		1,200	1,270	1,200	1,220	1,080	1,240	1,170	1,080
4	1,440	1,350	1,350		1,240	1,270	1,170	1,220	1,080	1,240	1,170	1,080
5	1,440	1,350	1,410		1,330	1,270	1,240	1,240	1,080	1,240	1,140	1,080
6	1,440	1,330	1,380		1,330	1,270	1,240	1,240	1,080	1,240	1,140	1,080
7	1,440	1,330	1,350		1,330	1,270	1,240	1,270	1,080	1,270	1,140	1,060
8	1,410	1,330	1,330		1,350	1,270	1,240	1,300	1,080	1,270	1,140	1,060
9	1,410	1,330	1,300		1,380	1,270	1,240	1,330	1,080	1,300	1,170	1,060
10	1,410	1,350	1,300		1,440	1,270	1,240	1,330	1,080	1,270	1,140	1,060
11	1,410	1,380	1,300	1,240	1,440	1,270	1,240	1,300	1,080	1,270	1,140	1,060
12	1,410	1,380	1,330		1,410	1,270	1,240	1,300	1,080	1,270	1,110	1,060
13	1,410	1,380	1,330		1,350	1,240	1,240	1,270	1,140	1,270	1,110	1,060
14	1,380	1,380	1,300		1,330	1,270	1,240	1,270	1,170	1,270	1,110	1,060
15	1,380	1,380	1,270		1,330	1,270	1,240	1,240	1,200	1,270	1,110	1,060
16	1,380	1,380	1,300		1,300		1,220	1,220	1,200	1,270	1,080	1,060
17	1,380	1,380	1,300		1,300		1,220	1,220	1,200	1,240	1,080	1,060
18	1,380	1,380	1,300		1,270		1,220	1,220	1,220	1,240	1,110	1,060
19	1,380	1,350	1,300		1,270		1,220	1,200	1,240	1,240	1,110	1,040
20	1,380	1,350	1,300		1,270		1,220	1,200	1,240	1,240	1,080	1,040
21	1,380	1,350	1,300	1,220	1,270		1,220	1,200	1,240	1,240	1,080	1,040
22	1,350	1,350	1,300	1,220	1,270		1,220	1,170	1,270	1,220	1,080	1,040
23	1,350	1,330	1,300	1,200	1,270		1,240	1,170	1,270	1,220	1,060	1,020
24	1,350	1,300	1,330	1,200	1,270	1,240	1,240	1,170	1,270	1,220	1,060	1,010
25	1,350	1,300	1,330	1,200	1,270		1,240	1,170	1,240	1,200	1,060	1,010
26	1,350	1,330	1,300	1,200	1,270		1,240	1,170	1,240	1,200	1,060	1,000
27	1,350	1,350	1,300	1,170	1,270		1,220	1,140	1,240	1,170	1,060	1,000
28	1,350	1,350	1,300	1,200	1,270		1,220	1,140	1,240	1,170	1,060	1,010
29	1,350	1,330	1,300	1,200	-------		1,220	1,110	1,240	1,170	1,080	1,010
30	1,350	1,350	1,270	1,200	-------		1,220	1,110	1,240	1,170	1,110	1,010
31	1,350	-------	1,240	1,200	-------		-------	1,110	-------	1,170	1,110	------

NOTE.—Water-stage recorder not operating satisfactorily Dec. 31 to Jan. 20 and Mar. 16-31; discharge interpolated.

Monthly discharge of Deschutes River at Benham Falls, near Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,440	1,350	1,390	85,500
November	1,380	1,300	1,350	80,300
December	1,410	1,240	1,320	81,200
January	-------	1,170	1,230	75,600
February	1,440	1,200	1,300	72,200
March	1,270	1,240	1,250	76,900
April	1,240	1,170	1,230	73,200
May	1,330	1,110	1,220	75,000
June	1,270	1,080	1,170	69,600
July	1,300	1,170	1,240	76,200
August	1,170	1,060	1,110	68,200
September	1,110	1,000	1,050	62,500
The year	1,440	1,000	1,240	896,000

DESCHUTES RIVER BELOW LAVA ISLAND, NEAR BEND, OREG.

LOCATION.—In SW. ¼ sec. 23, T. 18 S., R. 11 E., half a mile below Lava Island, 1 mile below intake of Arnold Canal, and 6 miles southwest of Bend, Deschutes County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 27 to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on right bank; inspected by A. Moore.

DISCHARGE MEASUREMENTS.—Made from cable just above gage.

CHANNEL AND CONTROL.—Bed composed of rock and boulders; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.66 feet from 5 a. m. to 2 p. m. April 6 (discharge, 1,170 second-feet); minimum stage, 1.20 feet September 39 and 30 (discharge, 920 second-feet).

DIVERSIONS.—Arnold Canal diverts from right bank above head of Lava Island; also Morson Canal and a few small diversions above.

REGULATION.—Some regulation caused by operations at Crane Prairie and Crescent Lake Reservoirs and by diversions above station.

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

COOPERATION.—Record furnished by State engineer of Oregon.

Discharge measurements of Deschutes River below Lava Island, near Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 10	1.64	1,180	July 9	1.58	1,110	Aug. 30	1.36	1,000
June 13	1.34	991	July 23	1.55	1,090	Sept. 18	1.30	968
June 20	1.52	1,090	July 30	1.56	1,090	Sept. 29	1.20	908
July 5	1.54	1,070						

Daily discharge, in second-feet, of Deschutes River below Lava Island, near Bend, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		1,130	1,020	970	1,110	1,090	990
2		1,120	1,030	970	1,110	1,090	980
3		1,120	1,040	965	1,100	1,090	975
4		1,130	1,090	960	1,100	1,090	965
5		1,140	1,060	955	1,090	1,080	960
6		1,160	1,040	950	1,100	1,080	960
7		1,160	1,040	950	1,100	1,070	970
8		1,160	1,060	945	1,100	1,060	980
9		1,150	1,090	940	1,090	1,060	970
10		1,150	1,090	935	1,110	1,020	960
11		1,150	1,070	935	1,130	1,000	960
12		1,150	1,060	940	1,130	1,000	965
13		1,150	1,040	985	1,120	1,000	970
14		1,150	1,040	1,000	1,110	995	970
15		1,140	1,040	1,020	1,110	990	970
16		1,130	1,010	1,030	1,110	990	970
17		1,110	1,010	1,030	1,090	990	970
18		1,110	1,020	1,060	1,090	995	970
19		1,110	1,010	1,070	1,090	1,000	970
20		1,100	1,000	1,070	1,110	995	970

Daily discharge, in second-feet, of Deschutes River below Lava Island, near Bend, Oreg., for the year ending September 30, 1926—Continued

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
21	-------	1,100	1,020	1,080	1,110	995	965
22	-------	1,100	1,040	1,070	1,110	990	965
23	-------	1,100	1,030	1,080	1,110	1,000	970
24	-------	1,100	1,030	1,100	1,100	985	955
25	-------	1,080	1,010	1,110	1,090	980	935
26	-------	1,070	1,000	1,070	1,090	975	930
27	1,130	1,070	1,000	1,060	1,090	970	930
28	1,130	1,060	990	1,070	1,110	970	925
29	1,120	1,050	990	1,080	1,110	980	920
30	1,130	1,040	980	1,090	1,110	995	920
31	1,130	-------	980	-------	1,100	995	-------

Monthly discharge of Deschutes River below Lava Island, near Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March 27-31	1,130	1,120	1,130	11,200
April	1,160	1,040	1,126	66,600
May	1,090	980	1,030	63,300
June	1,110	935	1,020	60,700
July	1,130	1,090	1,100	67,600
August	1,090	970	1,020	62,700
September	990	920	960	57,100
The period				389,000

DESCHUTES RIVER BELOW BEND, OREG.

LOCATION.—In SE. ¼ sec. 20, T. 17 S., R. 12 E., half a mile below North Canal Dam and 2 miles north of Bend, Deschutes County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—November 27, 1914, to September 30, 1926.

GAGE.—Stevens water-stage recorder on right bank; inspected by W. L. Beebe.

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

CHANNEL AND CONTROL.—Bed composed of coarse gravel and boulders. Logs, drift, and aquatic plants lodged on wide, shallow control may affect stage-discharge relation at times.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.15 feet at 3 p. m. February 10 (discharge, 1,350 second-feet); minimum discharge about 5 second-feet seepage on June 16–23, July 3–7, August 12–29, and September 1, when all the flow was diverted for irrigation above station.

1915–1926: Maximum stage, from water-stage recorder, 2.90 feet December 7, 1921 (discharge, 2,500 second-feet); minimum discharge, that of 1926.

1905–1926: Maximum discharge of river in this vicinity, 4,820 second-feet at 7.45 a. m. November 27, 1909, for a gage height of 3.45 feet at pumping plant at Bend; no diversions.

ICE.—Stage-discharge relation unaffected by ice.

DIVERSIONS.—Station is below intakes of the six large canals which divert water from Deschutes River near Bend; only small diversions below station.

REGULATION.—Flow regulated by hydroelectric plant at Bend.

ACCURACY.—Stage-discharge relation permanent during year. Rating curve well defined. Operation of recorder satisfactory except as stated in footnote to table of daily discharge. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records excellent.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of Deschutes River below Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 23	1.94	1,170	Mar. 2	1.46	705
Jan. 21	1.85	1,070	July 29	.36	92

Daily discharge, in second-feet, of Deschutes River below Bend, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	610	764	1,200	1,250	944	730	756	98	60	25	124	5
2	625	1,070	1,200	1,160	1,090	722	587	58	65	6	124	9
3	640	1,060	1,190	1,120	1,080	1,010	595	32	82		120	45
4	633	1,060	1,190	1,160	1,160	1,200	572	67	82		120	17
5	625	1,050	1,200	1,100	1,200	1,250	558	54	89	5	124	13
6	625	1,040	1,250	807	1,200	1,250	595	54	140		120	13
7	625	1,020	1,200	518	1,200	1,200	558	391	154		124	114
8	618	1,010	1,170	705	1,250	1,200	530	338	147	12	124	117
9	633	1,020	1,140	1,030	1,300	1,200	558	316	140	71	124	117
10	681	1,020	1,140	1,150	1,300	1,180	516	315	133	85	124	114
11	705	1,040	1,160	1,130	1,300	1,180	509	237	98	85	102	114
12	673	1,040	1,180	1,120	1,300	1,180	509	83	69	92		114
13	648	1,060	1,200	1,120	1,250	1,170	509	11	44	92		120
14	648	1,060	1,200	1,150	1,140	1,180	469	7	15	88		130
15	633	1,080	1,190	1,180	1,120	1,180	449	31	8	80		140
16	618	1,070	1,200	1,180	1,100	1,180	436	44		85		140
17	618	1,060	1,200	1,160	1,130	1,180	385	56		88		143
18	625	1,060	1,180	1,140	1,060	1,160	355	26		88		150
19	580	1,050	1,040	1,080	1,040	1,130	349	14		76		154
20	572	1,050	852	1,060	1,050	1,120	338	16	5	80	5	158
21	587	1,070	782	1,070	1,060	1,120	338	73		90		158
22	587	1,120	925	1,070	1,130	1,100	290	117		92		150
23	558	1,150	1,170	1,050	1,130	1,110	285	95		88		176
24	551	1,200	1,180	1,040	1,140	1,110	260	111	21	102		176
25	551	1,160	1,250	1,050	1,150	1,110	206	100	82	88		185
26	544	1,000	1,200	1,060	1,110	1,090	198	95	47	80		185
27	537	852	1,200	1,080	861	1,070	161	114	35	82		185
28	544	934	1,250	1,080	714	1,040	117	78	33	111		202
29	544	1,200	1,250	934	-------	799	105	73	40	92		219
30	551	1,200	1,200	681	-------	747	103	69	51	95	69	229
31	565	-------	1,180	673	-------	861	-------	65	-------	124	29	-------

NOTE.—Water-stage recorder not operating Nov. 13 and 14, discharge interpolated. Water surface below inlet pipe June 16–23, July 3–7, Aug. 12–29, and Sept. 1. Seepage estimated at 5 second-feet (entire flow of river diverted above for irrigation).

Monthly discharge of Deschutes River below Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	705	537	605	37,200
November	1,200	764	1,050	62,500
December	1,250	782	1,160	71,300
January	1,250	518	1,040	64,000
February	1,300	714	1,130	62,800
March	1,250	722	1,090	67,000
April	756	103	407	24,200
May	391	7	104	6,400
June	154	----------	55.8	3,320
July	124	----------	68.5	4,210
August	124	----------	49.0	3,010
September	229	----------	126	7,500
The year	1,300	----------	570	413,000

DESCHUTES RIVER NEAR MADRAS, OREG.

LOCATION.—In NW. ¼ sec. 19, T. 10 S., R. 13 E., at proposed Pelton dam site, 5 miles above mouth of Shitike Creek, 8 miles below mouth of Metolius River, and 9 miles northwest of Madras, Jefferson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—December 28, 1923, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on right bank, just below dam site; inspected by J. L. Campbell.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Bed composed of boulders and heavy gravel; apparently permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder 3.59 feet at 9 to 11 p. m. February 8 (discharge, 6,940 second-feet); minimum stage from water-stage recorder, 0.34 foot for one or two hours on August 21, 22, 30, 31, September 1 and 2 (discharge, 3,220 second-feet).

1924–1926: Maximum stage from recorder, 6.54 feet at 5 a. m. February 6, 1925 (discharge, 10,700 second-feet); minimum stage from recorder, 0.34 foot for one or two hours on August 21, 22, 30, September 1, and 2, 1926 (discharge 3,220 second-feet).

ICE.—None. River is fed by huge springs, many of them within a few miles of the station.

DIVERSIONS.—Flow affected by diversions from upper Deschutes River, Crooked River, Tumalo and Squaw Creeks. Most of the low-water flow comes from springs entering below irrigation diversions.

REGULATION.—Some fluctuation due to power plants and canal intakes near Bend.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operating of water-stage recorder satisfactory except for a few days, when clock was not running. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspecting recorder graph. Records good.

The following discharge measurements were made:

November 30, 1925: Gage height, 1.72 feet; discharge, 4,570 second-feet.

June 6, 1926: Gage height, 0.58 foot; discharge, 3,460 second-feet.

Daily discharge, in second-feet, of Deschutes River near Madras, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,960	3,810	4,580	4,580	4,260	4,580	4,700	3,660	3,430	3,330	3,280	3,240
2	3,960	4,160	4,580	4,470	4,580	4,580	4,470	3,560	3,430	3,320	3,290	3,260
3	3,960	4,260	4,580	4,470	4,470	4,580	4,360	3,530	3,430	3,320	3,290	3,270
4	4,010	4,260	4,470	4,470	4,820	4,940	4,260	3,660	3,430	3,310	3,300	3,270
5	4,010	4,260	4,580	4,580	4,940	5,060	4,260	3,660	3,430	3,310	3,320	3,270
6	4,010	4,260	4,580	4,470	6,060	5,060	4,260	3,540	3,430	3,310	3,330	3,270
7	4,010	4,260	4,470	4,110	6,190	4,940	4,360	3,490	3,500	3,300	3,330	3,260
8	3,960	4,260	4,470	4,060	6,820	4,940	4,360	3,710	3,510	3,280	3,330	3,240
9	3,960	4,330	4,470	4,260	6,690	4,940	4,360	3,710	3,440	3,270	3,340	3,290
10	3,960	4,400	4,470	4,470	6,190	4,940	4,580	3,660	3,420	3,280	3,340	3,280
11	3,960	4,470	4,470	4,470	5,820	4,820	4,580	3,660	3,410	3,300	3,330	3,280
12	4,010	4,470	4,470	4,470	5,690	4,820	4,700	3,610	3,410	3,330	3,290	3,270
13	4,010	4,360	4,470	4,470	5,440	4,940	5,060	3,530	3,400	3,330	3,270	3,270
14	3,960	4,360	4,470	4,470	5,190	5,190	4,700	3,450	3,370	3,320	3,240	3,270
15	3,960	4,470	4,470	4,470	5,060	5,440	4,580	3,430	3,340	3,310	3,230	3,270
16	3,960	4,470	4,470	4,470	4,940	5,690	4,470	3,420	3,310	3,320	3,230	3,260
17	3,910	4,360	4,470	4,470	4,940	5,820	4,470	3,450	3,290	3,310	3,230	3,340
18	3,910	4,360	4,470	4,470	4,820	5,560	4,360	3,510	3,300	3,310	3,390	3,330
19	3,910	4,360	4,470	4,360	4,820	5,320	4,260	3,500	3,310	3,310	3,330	3,340
20	3,910	4,360	4,360	4,360	4,700	5,190	4,160	3,530	3,300	3,310	3,280	3,360

Daily discharge, in second-feet, of Deschutes River near Madras, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	3,910	4,360	4,260	4,360	4,700	5,190	4,060	3,500	3,290	3,300	3,250	3,360
22	3,910	4,470	4,260	4,360	4,700		4,010	3,470	3,280	3,310	3,240	3,410
23	3,910	4,470	4,700	4,360	4,820		3,960	3,500	3,270	3,310	3,260	3,380
24	3,860	4,470	4,700	4,360	4,820		3,860	3,490	3,270	3,320	3,270	3,380
25	3,860	4,580	4,700	4,360	4,820		3,810	3,480	3,290	3,330	3,260	3,390
26	3,860	4,470	4,580	4,360	4,820	5,160	3,760	3,480	3,290	3,330	3,290	3,390
27	3,860	4,260	4,580	4,360	4,820		3,760	3,470	3,340	3,290	3,300	3,400
28	3,860	4,260	4,580	4,360	4,470		3,660	3,520	3,310	3,290	3,260	3,410
29	3,860	4,260	4,580	4,470	-------		3,660	3,500	3,320	3,320	3,270	3,400
30	3,810	4,470	4,580	4,110	-------	4,470	3,660	3,450	3,330	3,320	3,240	3,390
31	3,810	-------	4,580	4,110	-------	4,700	-------	3,440	-------	3,300	3,230	-------

NOTE.—Discharge Nov. 9, 10, Mar. 22–29, June 14–16, Sept. 19, 24, and 25, when recorder was not operating, determined by interpolation and by comparison with flow of Deschutes River at Mecca and flow of Shitike Creek.

Monthly discharge of Deschutes River near Madras, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	4,010	3,810	3,930	242,000
November	4,580	3,810	4,350	259,000
December	4,700	4,260	4,510	277,000
January	4,580	4,060	4,390	270,000
February	6,820	4,260	5,160	287,000
March	5,820	4,470	5,060	311,000
April	5,060	3,660	4,250	253,000
May	3,710	3,420	3,530	217,000
June	3,510	3,270	3,360	200,000
July	3,330	3,270	3,310	204,000
August	3,390	3,230	3,290	202,000
September	3,410	3,240	3,320	198,000
The year	6,820	3,230	4,030	2,920,000

DESCHUTES RIVER AT MECCA, OREG.

LOCATION.—In SW. ¼ sec. 20, T. 9 S., R. 13 E., at bridge at Mecca station on Oregon Trunk Railway, Jefferson County, 1½ miles below mouth of Shitike Creek and 12 miles above mouth of Warm Springs River.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—June 7, 1911, to September 30, 1926.

GAGE.—Gurley 8-day recorder on right bank 75 feet above bridge. Staff gage read to August, 1924, and later when recorder was not operating. Recorder operated and gage read by H. E. Massey.

DISCHARGE MEASUREMENTS.—Made from highway bridge.

CHANNEL AND CONTROL.—Rock and gravel; subject to occasional slight shifts.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 4.10 feet about midnight of February 8, clock stopped (discharge, 7,570 second-feet); minimum stage from recorder, 1.87 feet on August 17 (discharge, 3,200 second-feet).

1911–1926: Maximum stage recorded, 6.9 feet during night of January 6, 1923 (discharge, 15,200 second-feet); minimum stage, 1.95 feet August 27–30, 1920 (discharge, 3,170 second-feet).

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

DIVERSIONS.—Flow affected by diversions from upper Deschutes River; only small diversions below Bend gaging station. Summer flow of Crooked River above head of lower canyon near Terrebonne and of Tumalo and Squaw Creeks practically all diverted.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Water-stage recorder operated satisfactorily except as indicated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection or daily gage reading, when available, during periods recorder was not operating. Records good except for periods of no gage-height record or only one daily gage reading, for which they are fair.

The following discharge measurements were made:

December 1, 1925: Gage height, 2.80 feet; discharge, 4,760 second-feet.

June 5, 1926: Gage height, 2.11 feet; discharge, 3,590 second-feet.

Daily discharge, in second-feet, of Deschutes River at Mecca, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,080	3,900	4,900		4,350	4,800	4,900	3,810	3,560	3,340	3,300	3,280
2	4,080	4,260	4,900		4,710		4,800	3,720	3,560	3,320	3,300	3,260
3	4,080	4,530	4,800	4,570	4,710	4,880	4,530	3,640	3,560	3,320	3,310	3,280
4	4,080	4,480	4,710		4,900		4,530	3,720	3,560	3,320	3,340	3,260
5	4,080	4,440	4,710		5,400		4,530	3,810	3,560	3,320	3,340	3,280
6	4,080	4,440	4,800	4,800	6,420	5,400	4,530	3,640	3,560	3,320	3,340	3,280
7	4,080	4,440	4,710	4,440	6,880	5,200	4,620	3,560	3,640	3,310	3,360	3,260
8	4,080	4,440	4,730	4,260	7,340	5,100	4,620	3,720	3,640	3,300	3,360	3,260
9	4,080	4,440	4,750	4,440			4,620		3,560	3,280	3,360	3,260
10	4,080	4,530	4,770	4,710	6,440		4,900		3,560	3,280	3,340	3,280
11	4,170	4,530	4,800	4,710			4,800		3,480	3,280	3,340	3,280
12	4,080	4,620	4,800	4,710	6,000		4,900		3,480	3,310	3,320	3,280
13	4,080	4,620	4,800	4,710		5,180	5,200	3,640	3,480	3,320	3,300	3,260
14	4,080	4,620	4,800	4,710	5,350		5,000		3,400	3,320	3,250	3,260
15	4,080	4,620	4,800	4,710			4,800		3,400	3,310	3,220	3,250
16	3,990	4,620	4,800	4,710	5,400		4,800		3,370	3,300	3,220	3,260
17	3,990	4,620	4,800	4,710		5,600	4,710		3,360	3,280	3,200	3,260
18	3,990	4,620	4,800	4,710	4,910	5,600	4,620	3,480	3,340	3,260	3,310	3,250
19	3,990	4,620	4,710	4,710		5,600	4,530	3,560	3,340	3,250	3,380	3,240
20	3,990	4,620	4,620	4,620		5,600	4,440	3,560	3,360	3,240	3,320	3,240
21	3,990	4,530	4,440	4,710	5,200	5,400	4,350	3,560	3,340	3,240	3,260	3,250
22	3,990	4,620	4,530	4,710		5,400	4,260	3,560	3,320	3,320	3,260	3,260
23	3,990	4,620	5,000	4,710		5,400	4,080	3,560	3,310	3,310	3,250	3,320
24	3,900	4,620	5,100	4,710		5,200	3,990	3,560	3,310	3,310		3,310
25	3,900	4,710	4,900	4,710	4,850	5,200	3,990	3,560	3,310	3,320		3,300
26	3,900	4,620	4,900	4,620		5,200	3,900	3,560	3,310	3,320	3,320	3,300
27	3,900	4,310	4,800	4,620		5,200	3,900	3,560	3,360	3,310		3,320
28	3,900	4,310	4,800	4,620		5,200	3,810	3,560	3,360	3,300		3,340
29	3,900	4,310	4,800	4,530	-------	5,100	3,810	3,640	3,360	3,300		3,300
30	3,900	4,800	4,800	4,350	-------	5,000	3,810	3,560	3,360	3,300		3,310
31	3,900	-------	4,710	4,350	-------	5,000	-------	3,560	-------	3,300	3,280	-------

NOTE.—Daily discharge for periods water-stage recorder was not operating, determined by the following methods: Oct. 20, 21, Nov. 4, Dec. 8–10, Sept. 27 and 28 by interpolation; Nov. 27–29, Jan. 1–5, Feb. 9–11, 13–15, 17–20, 22–28, Mar. 2–5, 9–16, May 9–17, and Aug. 24–30 by summation of discharge of Deschutes River near Madras and discharge of Shitike Creek at Warm Springs; Feb. 7 and 8 by mean daily gage heights determined from hydrograph based on maximum and minimum gage heights indicated by recorder pencil and gage-height graph of river near Madras; Feb. 12, 16, 21, Mar. 1, 6–8, 17–31 by applying daily staff-gage reading to rating table.

Monthly discharge of Deschutes River at Mecca, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	4,170	3,900	4,010	247,000
November	4,800	3,900	4,520	269,000
December	5,100	4,440	4,780	294,000
January	4,800	4,350	4,620	284,000
February	7,340	----------	5,370	298,000
March	5,600	----------	5,200	320,000
April	5,200	3,810	4,480	267,000
May	3,810	3,480	3,620	223,000
June	3,640	3,310	3,440	205,000
July	3,340	3,240	3,300	203,000
August	3,380	3,200	3,310	204,000
September	3,340	3,240	3,280	195,000
The year	7,340	3,200	4,150	3,010,000

DESCHUTES RIVER AT SHERARS BRIDGE, OREG.

LOCATION.—In NE. ¼ sec. 35, T. 3 S., R. 14 E., 1 mile below Sherars Bridge, Sherman County, one-fourth mile below mouth of Buck Creek, 43 miles above mouth of river.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—June 13 to September 23, 1923, and July 25 to November 6, 1924; July 1, 1925, to September 30, 1926. Gage-height record only February 13, 1912, to September 30, 1914.

GAGE.—Vertical staff on right bank; observer, F. L. Johnson, employee of Deschutes Falls Power Co. A gage half a mile above Sherars Bridge, in NE. ¼ sec. 3, T. 4 S., R. 14 E., was used prior to 1925.

DISCHARGE MEASUREMENTS.—Made from a cable at gage; section narrow and deep; current fairly uniform.

CHANNEL AND CONTROL.—Bed of stream and riffle 200 feet below gage composed of gravel and boulders; may shift in flood.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period July 1 to September 30, 1925, 1.6 feet July 1–3 and September 21–30 (discharge, 4,520 second-feet); minimum stage, 1.0 foot July 13–15 and 17–22 (discharge, 3,800 second-feet).

Maximum stage recorded during year ending September 30, 1926, 5.2 feet on March 16 (discharge not computed); minimum stage, 0.9 foot in July, August, and September (discharge, 3,680 second-feet).

1923–1926: Maximum and minimum stages, those of 1926.

ICE.—Never any ice at this station.

DIVERSIONS.—Same as for station at Mecca.

REGULATION.—Practically none.

ACCURACY.—Stage-discharge relation practically permanent during period. Rating curve well defined below 5,000 second-feet, not defined above 6,130 second-feet. Gage read once a day, generally to tenths. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

Discharge measurements of Deschutes River at Sherars Bridge, Oreg., during the years ending September 30, 1925 and 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
Oct. 13	1.20	4,000	Sept. 16	1.00	3,870
Oct. 27	1.15	4,000			
Nov. 6	1.88	4,910			

Daily discharge, in second-feet, of Deschutes River at Sherars Bridge, Oreg., for the years ending September 30, 1925 and 1926

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1925				1925				1925			
1	4,520	4,150	4,150	11	4,040	4,040	4,270	21	3,800	4,150	4,520
2	4,520	4,150	4,150	12	3,920	4,040	4,390	22	3,800	4,390	4,520
3	4,520	4,150	4,150	13	3,800	4,040	4,390	23	3,920	4,270	4,520
4	4,390	4,150	4,150	14	3,800	4,040	4,390	24	3,920	4,270	4,520
5	4,390	4,040	4,150	15	3,800	4,040	4,390	25	4,100	4,150	4,520
6	4,390	4,040	4,150	16	3,920	4,040	4,390	26	4,040	4,150	4,520
7	4,270	4,040	4,150	17	3,800	4,040	4,390	27	4,040	4,150	4,520
8	4,040	4,040	4,270	18	3,800	4,040	4,390	28	4,150	4,150	4,520
9	4,150	4,040	4,270	19	3,800	4,040	4,390	29	4,150	4,150	4,520
10	4,040	4,040	4,270	20	3,800	4,040	4,390	30	4,150	4,270	4,520
								31	4,150	4,270	------

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925-26												
1	4,390	4,330	4,790	5,390	4,930	6,130	5,750	4,390	4,040	3,800	3,800	3,680
2	4,390	4,650	4,790	5,390	4,930	5,750	5,750	4,390	4,040	3,800	3,800	3,680
3	4,390	4,790	4,790	5,390	4,930	5,750	5,560	4,270	4,040	3,800	3,800	3,680
4	4,390	4,790	4,790	5,390	5,940	6,130	5,390	4,270	3,920	3,800	3,800	3,680
5	4,390	4,790	4,790	5,390	------	6,130	5,390	4,390	3,920	3,800	3,800	3,680
6	4,390	4,790	4,930	5,390	------	6,130	5,390	4,520	3,920	3,800	3,800	3,680
7	4,390	4,650	4,930	5,390	------	5,940	5,390	4,390	3,920	3,800	3,800	3,680
8	4,390	4,790	4,930	5,390	------	5,940	5,390	4,390	3,920	3,800	3,800	3,680
9	4,390	4,790	4,930	5,390	------	5,940	5,390	4,270	3,920	3,800	3,680	3,680
10	4,390	4,790	4,930	5,390	------	5,940	5,560	4,390	3,920	3,740	3,680	3,680
11	4,390	4,790	4,930	5,230	------	5,940	5,750	4,390	3,920	3,740	3,680	3,680
12	4,390	4,930	4,930	5,070	------	5,940	5,750	4,270	3,920	3,740	3,680	3,680
13	4,390	4,930	4,930	5,070	------	------	5,750	4,270	3,920	3,800	3,680	3,680
14	4,390	4,930	4,930	5,070	------	------	5,750	4,270	3,920	3,800	3,680	3,680
15	4,390	4,930	4,930	5,070	------	------	5,560	4,150	3,920	3,800	3,680	3,680
16	4,390	4,930	4,930	5,070	------	------	5,390	4,040	3,920	3,800	3,680	3,800
17	4,390	4,930	4,930	5,070	6,130	------	5,390	4,040	3,920	3,680	3,680	3,800
18	4,390	4,930	4,930	5,070	5,940	------	5,390	4,040	3,920	3,680	3,800	3,800
19	4,390	4,930	4,930	5,070	5,750	------	5,390	4,040	3,920	3,680	4,040	3,800
20	4,390	4,930	4,930	5,070	5,750	------	5,390	4,040	3,800	3,680	3,800	3,800
21	4,390	4,790	4,930	5,070	5,750	------	4,930	4,040	3,800	3,680	3,680	3,800
22	4,390	4,790	5,230	5,070	5,750	6,130	4,790	4,040	3,800	3,680	3,680	3,800
23	4,390	4,790	6,130	5,070	5,750	5,940	4,790	4,040	3,800	3,680	3,680	3,920
24	4,390	4,790	6,130	5,070	5,750	5,940	4,650	4,040	3,800	3,680	3,680	3,800
25	4,270	4,790	6,130	5,070	6,770	5,940	4,650	4,040	3,800	3,800	3,680	3,800
26	4,270	4,790	5,750	5,070	6,540	5,940	4,520	4,040	3,800	3,800	3,680	3,800
27	4,270	4,790	5,390	4,930	6,540	5,940	4,520	4,040	3,800	3,800	3,680	3,800
28	4,270	4,790	5,390	4,930	6,130	5,750	4,520	4,040	3,800	3,800	3,740	3,860
29	4,270	4,790	5,390	4,930	------	5,750	4,520	4,040	3,800	3,800	3,680	3,860
30	4,270	4,790	5,390	4,930	------	5,750	4,520	4,040	3,800	3,800	3,680	3,860
31	4,270	------	5,390	4,930	------	5,750	------	4,040	------	3,800	3,680	------

NOTE.—Daily discharge Feb. 5–16 and Mar. 13–21, when flow was greater than 6,130 second-feet, not determined because stage-discharge relation is uncertain.

Monthly discharge of Deschutes River at Sherars Bridge, Oreg., for the years ending September 30, 1925 and 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
July	4,520	3,800	4,060	250,000
August	4,390	4,040	4,120	253,000
September	4,520	4,150	4,360	259,000
1925-26				
October	4,390	4,270	4,360	268,000
November	4,930	4,330	4,810	286,000
December	6,130	4,790	5,130	315,000
January	5,390	4,930	5,160	317,000
April	5,750	4,520	5,230	311,000
May	4,520	4,040	4,180	257,000
June	4,040	3,800	3,890	231,000
July	3,800	3,680	3,760	231,000
August	4,040	3,680	3,730	229,000
September	3,860	3,680	3,750	223,000

NOTE.—Discharge for February and March not determined.

DESCHUTES RIVER AT MOODY, NEAR BIGGS, OREG.

LOCATION.—In SE. ¼ sec. 26, T. 2 N., R. 15 E., opposite Moody railroad station, 1¼ miles above bridge of Oregon-Washington Railroad & Navigation Co., 1½ miles above mouth of river, and 5 miles southwest of Biggs, Sherman County.

DRAINAGE AREA.—About 9,180 square miles.

RECORDS AVAILABLE.—July 7, 1906, to September 30, 1926. October 19, 1897, to December 31, 1899, for station near Moro, 10 miles above mouth of river in NE. ¼ sec. 5, T. 1 S., R. 16 E. Records for 1908 and 1910 somewhat fragmentary.

GAGE.—Staff in two sections; the lower inclined, the upper vertical. Gage read by Frisco Parodi.

DISCHARGE MEASUREMENTS.—Made from a cable 450 feet above gage.

CHANNEL AND CONTROL.—Bed composed of rock and gravel; shifting only in floods.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.8 feet at noon February 7 (discharge, 13,300 second-feet); minimum stage, 2.12 feet in July, August, and September (discharge, 3,600 second-feet).

1906–1926: Maximum stage recorded, 10.2 feet on January 7, 1923 (discharge, 43,600 second-feet); minimum stage, 1.9 feet August 23–28, 1920 (discharge, 3,510 second-feet).

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

DIVERSIONS.—Summer discharge at this station has been progressively reduced since about 1904 or 1905 by diversions from the upper river. Some of the water returns, but the net reduction during midsummer now probably exceeds 20 per cent.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined. Staff gage read to quarter-tenths once a day except as indicated in footnote to daily-discharge table. Daily discharge ascertained by applying daily or mean daily gage height to rating table. Records good.

Discharge measurements of Deschutes River at Moody, near Biggs, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 21	2.42	4,430	Mar. 23	3.02	6,430	Sept. 15	2.13	3,580
Jan. 27	2.60	4,890	June 4	2.25	3,750			

Daily discharge, in second-feet, of Deschutes River at Moody, near Biggs, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,380	4,260	5,080	5,080	4,650	6,020	5,750	4,390	4,040	3,710	3,600	3,710
2	4,380	4,510	5,240	5,080	4,940	5,700	5,750	4,390	4,040	3,710	3,600	3,710
3	4,380	4,790	5,080	5,080	4,940	6,020	5,560	4,270	4,040	3,710	3,600	3,600
4	4,380	4,790	4,790	5,080	5,390	6,020	5,390	4,270	3,920	3,710	3,600	3,600
5	4,380	4,790	4,940	5,080	8,150	6,020	5,390	4,390	3,930	3,710	3,710	3,710
6	4,380	4,650	5,080	5,390	10,200	6,020	5,390	4,520	4,040	3,710	3,710	3,710
7	4,380	4,650	5,080	5,240	13,300	6,020	5,390	4,390	4,040	3,710	3,710	3,710
8	4,380	4,650	5,080	4,650	12,400	6,020	5,390	4,390	3,930	3,600	3,710	3,710
9	4,380	4,650	4,940	4,650	12,000	5,700	5,390	4,270	3,930	3,600	3,710	3,710
10	4,380	4,650	4,940	4,940	8,150	6,020	5,560	4,390	3,930	3,600	3,710	3,710
11	4,380	4,650	4,940	5,080	7,770	5,700	5,750	4,390	3,930	3,710	3,710	3,600
12	4,380	4,790	5,080	5,080	7,770	5,700	5,750	4,270	3,820	3,710	3,710	3,600
14	4,380	4,940	5,080	4,940	7,770	6,020	5,750	4,270	3,820	3,710	3,710	3,600
14	4,380	4,940	5,080	4,940	7,400	6,020	5,750	4,270	3,820	3,710	3,710	3,600
15	4,380	4,940	5,080	4,940	6,350	6,020	5,560	4,150	3,820	3,820	3,600	3,600
16	4,380	4,940	5,080	4,790	6,350	6,350	5,390	4,040	3,820	3,820	3,600	3,710
17	4,380	4,940	4,940	4,940	6,020	6,690	5,390	4,040	3,820	3,820	3,710	3,820
18	4,380	4,940	5,080	4,940	6,020	6,690	5,390	4,040	3,820	3,710	3,710	3,820
19	4,380	4,940	5,080	5,080	6,020	6,350	5,390	4,040	3,710	3,710	3,820	3,820
20	4,380	4,790	5,080	5,080	5,700	6,020	5,390	4,040	3,710	3,710	3,820	3,820
21	4,380	4,790	4,790	4,940	5,700	6,020	4,930	4,040	3,710	3,710	3,710	3,820
22	4,260	4,790	5,240	4,790	5,700	6,020	4,790	4,040	3,710	3,710	3,600	3,820
23	4,260	4,790	5,390	4,940	5,390	6,020	4,790	4,040	3,710	3,710	3,600	3,930
24	4,260	4,790	6,690	4,940	5,390	6,020	4,650	4,040	3,710	3,710	3,600	3,930
25	4,260	4,650	5,700	4,790	6,690	6,020	4,650	4,040	3,710	3,710	3,600	3,930
26	4,260	4,650	6,020	4,790	6,350	6,020	4,520	4,040	3,710	3,710	3,710	3,820
27	4,260	4,650	5,390	4,790	6,020	6,020	4,520	4,040	3,710	3,710	3,710	3,820
28	4,260	4,650	5,240	4,790	6,690	6,020	4,520	4,040	3,710	3,710	3,710	3,820
29	4,260	4,650	5,240	4,790	-------	6,020	4,520	4,040	3,710	3,710	3,710	3,820
30	4,260	4,790	5,080	4,790	-------	5,700	4,520	4,040	3,710	3,600	3,710	3,820
31	4,260	-------	5,080	4,790	-------	5,700	-------	4,040	-------	3,600	3,710	------

NOTE.—Daily discharge Apr. 1 to June 4 are for station on Deschutes River at Sherar; Moody gage-height record lost.

Monthly discharge of Deschutes River at Moody, near Biggs, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	4,380	4,260	4,340	267,000
November	4,940	4,260	4,750	283,000
December	6,690	4,790	5,180	319,000
January	5,390	4,650	4,940	304,000
February	13,300	4,650	7,120	395,000
March	6,690	5,700	6,020	370,000
April	5,750	4,520	5,230	311,000
May	4,520	4,040	4,180	257,000
June	4,040	3,710	3,830	228,000
July	3,820	3,600	3,700	228,000
August	3,820	3,600	3,680	226,000
September	3,930	3,600	3,750	223,000
The year	13,300	3,600	4,710	3,410,000

LITTLE DESCHUTES RIVER ABOVE WALKER BASIN INTAKE, NEAR LAPINE, OREG.

LOCATION.—In sec. 33, T. 23 S., R. 9 E., above intake of canal of Walker Basin project and below Crescent Creek, half a mile from river road to Crescent, and 12 miles southwest of Lapine, Deschutes County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 26, 1914, to September 14, 1917; May 7, 1919, to June 13, 1926, when station was discontinued (summer periods only, except May 1, 1922, to September 30, 1924). Records for 1919 and 1920 were collected below Walker Basin intake, but monthly discharge was corrected for the diversion.

GAGE.—Stevens continuous water-stage recorder on right bank above intake; inspected by C. M. Redfield.

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

CHANNEL AND CONTROL.—Bed composed of gravel and sand; may shift in floods. Banks steep, composed of silt, and overgrown with brush.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 3.55 feet from 4 to 12 p. m. June 13 (discharge, 194 second-feet); minimum stage, 2.51 feet 4 p. m. June 8 to 3 a. m. June 9 (discharge, 56 second-feet).

1914–1917, 1919–1926: Maximum stage, 6.73 feet June 12, 1917 (discharge, 835 second-feet); flood of November 24, 1909, may have reached 1,800 second-feet (estimated from records at Allen's ranch); minimum discharge recorded, 3.4 second-feet November 15, 1922 (gage height, 2.42 feet). Minimum discharge unaffected by storage, 40 second-feet September 3–11, 1915 (gage height, 0.40 foot at original gage).

ICE.—No records obtained during winter.

DIVERSIONS.—A few small ditches divert water above station; Walker Basin Canal diverts a short distance below.

REGULATION.—Affected by storage at Crescent Lake Reservoir.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Water-stage recorder operated satisfactorily only April 7 to May 16 and June 4–13. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection except May 17 to June 3 when discharge was interpolated. Records good except when discharge was estimated.

COOPERATION.—Record furnished by the State engineer of Oregon.

The following discharge measurements were made:

April 9, 1926: Gage height, 3.13 feet; discharge, 128 second-feet.

September 19, 1926: Gage height, 2.61 feet; discharge, 63 second-feet.

October 13, 1926: Gage height, 2.43 feet; discharge, 50 second-feet.

Daily discharge, in second-feet, of Little Deschutes River above Walker Basin intake, near Lapine, Oreg., for the year ending September 30, 1926

Day	April	May	June	Day	April	May	June
1	------	119	68	16	130	87	------
2	------	119	66	17	135		------
3	------	115	65	18	141		------
4	------	119	64	19	146		------
5	------	154	58	20	146		------
6	------	164	58	21	146		------
7	138	159	57	22	146		------
8	135	151	57	23	131	78	------
9	128	125	74	24	137		------
10	128	116	101	25	132		------
11	151	104	157	26	124		------
12	143	98	173	27	124		------
13	137	96	189	28	119		------
14	132	91	------	29	118		------
15	130	88	------	30	118		------

Monthly discharge of Little Deschutes River above Walker Basin intake, near Lapine, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 7–30	151	118	134	6,380
May	164		99.2	6,100
June 1–13	189	57	91.3	2,350
The period				14,830

LITTLE DESCHUTES RIVER NEAR LAPINE, OREG.

LOCATION.—In sec. 2, T. 22 S., R. 10 E., at wagon bridge at former town of Rosland, 1½ miles north of Lapine, Deschutes County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—September 22, 1910, to October 31, 1913, fragmentary; June 23 to November 2, 1918; August 26 to October 28, 1920; and May 15, 1924, to September 30, 1926.

GAGE.—Vertical staff on downstream side of east bent of bridge; read by Mrs. M. C. Bogue.

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

CHANNEL AND CONTROL.—Channel, earth banks, which are overflowed at high stages, sandy bottom. No well-defined control.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.84 feet July 7, 10, and 11 (discharge, 250 second-feet); minimum stage, 0.44 foot June 7 (discharge, 28 second-feet).

1910–1913, 1918, 1920, and 1924–1926: Maximum stage recorded, 4.6 feet, about June 12, 1912, observed from high-water marks July, 1912 (discharge, 760 second-feet); minimum discharge, that of June 7, 1926.

ICE.—Stage-discharge relation affected by ice December 29–31, January 1, 2, and 7–11; flow estimated from gage-height record, discharge measurement, observer's notes, and weather records.

DIVERSIONS.—Some water diverted above station for irrigating small tracts of land.

REGULATION.—Affected by storage at Crescent Lake Reservoir.

ACCURACY.—Stage-discharge relation permanent, except when affected by ice. Rating curve well defined. Staff gage read to hundredths once a day. Daily discharge ascertained by applying daily gage reading to rating table. Records excellent.

COOPERATION.—Record furnished by the State engineer of Oregon.

Discharge measurements of Little Deschutes River near Lapine, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 19	1.26	82	July 11	2.78	253	Aug. 13	1.58	103
Apr. 7	1.62	145	July 19	2.68	231	Sept. 3	1.36	95
July 2	2.52	212	Aug. 1	1.82	126	Sept. 19	1.16	78

Daily discharge, in second-feet, of Little Deschutes River near Lapine, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	71	98	98	74	102	78	86	42	208	128	102
2	68	71	102	78	71	102	78	86	37	208	128	94
3	68	71	110	78	68	98	86	86	36	222	119	90
4	68	71	208	78	94	98	86	86	35	222	128	86
5	68	68	110	82	110	102	94	94	31	222	119	86
6	64	57	102	78	119	102	102	119	29	236	102	82
7	64	57	86	78	128	94	110	119	28	250	128	82
8	68	60	86	78	208	94	110	148	29	250	119	78
9	68	78	78	74	222	102	102	148	31	250	119	78
10	64	74	78	74	195	94	102	119	38	250	110	78
11	64	78	86	71	159	94	102	110	71	250	110	74
12	64	90	94	68	159	94	110	110	119	250	110	71
13	64	98	90	68	128	94	110	98	119	250	110	74
14	64	90	110	64	90	110	110	94	138	236	102	71
15	64	86	94	68	110	110	102	78	128	250	102	71
16	64	94	102	78	102	110	102	78	159	236	102	74
17	64	94	102	78	78	110	102	78	195	222	98	74
18	68	94	94	78	90	94	110	74	195	208	102	74
19	71	90	98	82	94	86	110	71	208	236	102	74
20	71	90	102	74	94	86	110	68	208	208	102	64
21	71	82	98	86	90	86	110	64	222	195	102	54
22	71	71	94	74	94	94	110	68	222	195	94	49
23	71	68	98	71	94	86	110	64	208	195	90	47
24	71	74	102	82	90	86	110	64	195	195	86	44
25	68	90	110	74	98	82	110	60	195	159	86	43
26	71	90	119	71	110	82	98	57	208	148	86	43
27	71	94	110	68	119	78	94	49	208	138	86	42
28	71	102	94	71	110	78	90	47	222	128	94	42
29	71	102	90	78	------	78	90	44	222	138	98	42
30	71	94	86	78	------	78	86	49	222	138	102	42
31	71	------	82	86	------	78	------	43	------	128	102	------

NOTE.—Dec. 29–31, Jan. 1, 2, and 7–11, stage-discharge relation affected by ice; daily discharge estimated from observer's gage readings, notes regarding ice, and climatic records.

Monthly discharge of Little Deschutes River near Lapine, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	71	64	68.0	4,180
November	102	57	81.6	4,860
December	208	78	104	6,400
January	98	64	76.3	4,690
February	222	68	114	6,330
March	110	78	93.0	5,720
April	110	78	101	6,010
May	148	43	82.5	5,070
June	222	28	133	7,910
July	250	128	207	12,700
August	128	86	105	6,460
September	102	42	67.5	4,020
The year	250	28	102	74,200

CRESCENT LAKE RESERVOIR NEAR CRESCENT, OREG.

LOCATION.—At reservoir dam in sec. 11, T. 24 S., R. 6 E., 16 miles west of Crescent, Klamath County.

RECORDS AVAILABLE.—August 25, 1922, to September 30, 1926.

GAGE.—Vertical staff on outlet gate tower; zero at level of gate sill, elevation 4,826 feet. Readings reported to sea-level datum.

EXTREMES OF CONTENTS.—Maximum stage recorded during year, 4,842.42 feet on May 22 to June 9 (contents, 56,470 acre-feet); minimum stage, 4,834.40 feet on September 30 (contents, 28,140 acre-feet).

1922–1926: Maximum stage recorded, 4,845.55 feet July 15, 1923 (storage 67,760 acre-feet); minimum, that of September 30, 1926.

Crescent Lake Reservoir was completed in 1922; the water was stored back of a coffer dam beginning some time in August. As most of the storage is obtained by lowering the outlet, storage began with about 41,380 acre-feet, as computed above the sill of the outlet gate. Water used by Deschutes County municipal improvement district through its canal diverting from Deschutes River at Bend.

Monthly stage and contents of Crescent Lake Reservoir near Crescent, Oreg., for the year ending September 30, 1926

Date	Gage height	Contents	Loss or gain during month
	Feet	*Acre-feet*	*Acre-feet*
Oct. 31	4,839.42	45,740	+850
Nov. 30	----------	* 47,660	+1,920
Dec. 31	----------	* 49,240	+1,570
Jan. 31	----------	* 50,060	+820
Feb. 28	----------	* 52,090	+2,030
Mar. 31	* 4,841.25	* 52,270	+180
Apr. 30	4,841.92	54,670	+2,400
May 31	4,842.42	56,470	+1,800
June 30	4,839.60	46,380	−10,090
July 31	4,836.48	35,360	−11,020
Aug. 31	4,834.78	29,450	−5,910
Sept. 30	4,834.40	28,140	−1,310
The year	----------	----------	−16,750

* Interpolated.

CRESCENT CREEK BELOW COLD CREEK, NEAR CRESCENT, OREG.

LOCATION.—In SW. ¼ sec. 7, T. 24 S., R. 7 E., 1 mile below Cold Creek, 2 miles by road below outlet of Crescent Lake, and 15 miles west of Crescent, Klamath County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—August 30, 1912, to December 11, 1913; June 17 to December 12, 1922; May 30, 1923, to September 30, 1924; May 26 to September 30, 1925; and April 1 to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on left bank; inspected by J. H. Ryan.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders; wide and flat; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage during period April 1 to September 30, from water-stage recorder, 1.74 feet on June 19 and 20 (discharge, 283 second-feet); minimum stage recorded, −0.24 foot on September 19 (discharge, 12 second-feet), this discharge probably continued to end of September.

1912–13, 1922–1926: Maximum stage recorded, that of June 19 and 20, 1926; minimum discharge, 5 second-feet (gage height, −0.39 foot) October 27, 1923.

ICE.—None during period of record.

DIVERSIONS.—None.

REGULATION.—Gates in Crescent Lake Reservoir Dam closed October 1 to June 7 and September 18–30; water released June 8 to September 18.

ACCURACY.—Stage-discharge relation changing July 1–18 owing to drift lodging on control and again on July 19 when drift and several large boulders were removed from control. Rating curves well defined. Operation of water-stage recorder satisfactory except as indicated in footnote to table of daily discharge. Discharge ascertained by applying to proper rating table mean daily gage height determined from the recorder graph by inspection; except July 1–18, for which shifting-control method was used. Records good while recorder was in operation and storage was being released.

COOPERATION.—Record furnished by State engineer of Oregon.

Discharge measurements of Crescent Creek below Cold Creek, near Crescent, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 8	−0.10	21.8	July 20	1.21	188	Sept. 4	0.54	89.7
June 27	1.63	256	Do	1.21	186	Sept. 11	.39	66.2
July 17	1.64	237	July 21	1.16	182	Sept. 18	.27	51.9
July 19	1.07	170	July 31	.87	134	Do	.11	34.9
Do	.02	28.5	Aug. 5	.76	120	Sept. 19	−.24	11.2
July 20	1.22	195	Aug. 13	.65	104			
Do	1.21	187	Aug. 20	.63	97			

Daily discharge, in second-feet, of Crescent Creek below Cold Creek, near Crescent, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Sept.
1				247	126	100
2				251	124	95
3				249	130	92
4				251	124	88
5			18	255	122	85
6				255	130	82
7				253	126	80
8				251	125	75
9				261	119	73
10				259	113	71
			140			
11				249	114	68
12				247	110	66
13				247	106	65
14			207	243	104	62
15			217	239	104	60
	22	20				
16			233	223	101	61
17			235	229	104	60
18			249	229	101	43
19			275	180	100	12
20			277	193	96	
21			265	186	92	
22			263	174	84	
23			261	169	77	
24			263	162	95	
25			257	153	95	12
26			259	145	104	
27			261	134	122	
28			259	134	116	
29			257	134	113	
30			255	128	108	
31				132	104	

NOTE.—No gage-height record Apr. 1 to June 13 and Sept. 20–30; discharge estimated as probable flow of Cold Creek except June 8–13 when discharge was determined from storage released from Crescent Lake Reservoir (p. 61).

Monthly discharge of Crescent Creek below Cold Creek, near Crescent, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April			[a] 22.0	1,310
May			[a] 20.0	1,230
June	277		175	10,400
July	261	128	208	12,800
August	130	77	109	6,700
September	100		49.0	2,920
The period	277			35,400

[a] Estimated.

ARNOLD CANAL NEAR BEND, OREG.

LOCATION.—In SW. ¼ sec. 23, T. 18 S., R. 11 E., 1½ miles below intake of canal and 9 miles south of Bend, Deschutes County.

RECORDS AVAILABLE.—April 10, 1914, to September 30, 1926; information sufficient for an approximate estimate, October, 1912, to March, 1914.

GAGE.—Stevens 8-day recorder on right bank 200 feet below mouth of flume; inspected by A. Moore. Gage used prior to 1925 one-fourth mile upstream.

DISCHARGE MEASUREMENTS.—Made from collar of flume.

CHANNEL AND CONTROL.—Control is well-defined drop in rock cut 300 feet below gage; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.80 feet 5 a. m. to 1 p. m. May 20 (discharge, 139 second-feet); canal dry at times during year.

1914–1926: Maximum discharge, 151 second-feet on August 4, 1923 (stage, 2.50 feet, at former gage). Canal dry at times.

ICE.—Canal dry during coldest weather of winter.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Water-stage recorder operated only October 1–4 and May 3 to September 30; staff gage read to hundredths once a day for remainder of year except during winter when it was read only when water was turned into or out of canal. Daily discharge ascertained by applying mean daily gage height obtained by inspecting recorder graph or the daily gage reading to rating table. Records good except for periods during December to March, when gage was not read, for which they are poor.

COOPERATION.—Record furnished by State engineer of Oregon.

Arnold Canal diverts water from the right bank of Deschutes River at the head of Lava Island, in SW. ¼ sec. 27, T. 18 S., R. 11 E., and irrigates land south and east of Bend lying above the Central Oregon Irrigation District's Carey Act segregation.

Discharge measurements of Arnold Canal near Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 10	1.80	51	July 9	2.22	87	Sept. 8	1.97	66
June 13	2.41	101	July 26	1.75	50			
July 8	2.27	94	Aug. 19	2.22	90			

Daily discharge, in second-feet, of Arnold Canal near Bend, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99	70					54	78	112	91		91
2	91	70					36	78	112	90		89
3	78	62						87	112	89		91
4	29	62						32	111	91		95
5	78	62						56	100	91		9*
6	78	62		25		16		101	97	90		89
7	87	62	50	50				106	97	93		68
8	87	62		33		49		108	97	90		67
9	87	70						107	100	88		67
10	87	70				51		106	99	89	67	67
11	70	70						116	101	84	89	68
12	70	66						121	100	80	89	68
13	87	66	29		31			121	101	80	89	68
14	87	62						116	99	80	92	67
15	87	58				51		116	97	80	89	66
16	82	54						116	105	79	90	68
17	78	54			47		29	126	105	71	90	64
18	78	54					44	126	105	72	90	5[illegible]
19	78	54	27	20			44	134	104	69	90	4[illegible]
20	78	62				31	44	139	102	60	89	52
21	87	41	50		31		44	103	106	60	89	56
22	87			47			44	76	116	56	89	62
23	87						44	76	116	51	90	62
24	87		29				44	78	72	46	92	68
25	87						50	93	60	48	92	71
26	87			27			50	112	91	50	92	72
27	87						78	113	91	38	93	78
28	78						78	111	90		93	88
29	78						78	110	90		92	94
30	78	33				27	78	112	89		86	96
31	87					54		111			92	

NOTE.—No flow on days for which discharge is not given. From Nov. 30 to Apr. 2, except Mar. 10–20, discharge for each period water was in canal based on gage reading at time gate was opened and assumed to have remained constant during that period; discharge Mar. 10–20 was based on discharge measurement made Mar. 10. Discharge interpolated Sept. 22 and 23.

Monthly discharge of Arnold Canal near Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	99	70	81.5	5,010
November	70	0	44.2	2,630
December		0	[a] 28.5	1,750
January	50	0	[a] 14.1	867
February		0	[a] 14.0	778
March		0	[a] 25.3	1,560
April	78	0	28.0	1,670
May	139	32	103	6,330
June	116	60	99.2	5,900
July	93	0	64.7	3,980
August	93	0	63.4	3,900
September	96	49	73.0	4,340
The year	139	0	53.5	38,700

* Discharge partly estimated.

CENTRAL OREGON CANAL NEAR BEND, OREG.

LOCATION.—In NE. ¼ sec. 7, T. 18 S., R. 12 E., just above entrance to a flume section 200 feet below point where waters in main diversion canal are divided between this canal and Pilot Butte Canal and 2 miles south of Bend, Deschutes County.

RECORDS AVAILABLE.—May 11, 1905, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on left wing wall at entrance to flume section; inspected by Gustave Berry.

DISCHARGE MEASUREMENTS.—Made from yoke of flume 200 yards below gage.

CHANNEL AND CONTROL.—Channel, earth section at gage. Control, at head of timber flume, practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 4.88 feet at 5.30 p. m. May 4 (discharge, 455 second-feet); no flow at times.

1905–1926: Maximum stage recorded, 4.95 feet at 8 p. m. August 19, 1925 (discharge, 468 second-feet); no flow at times.

ICE.—Canal operated in winter only for a few days during periods of moderately cold weather, for furnishing water for domestic use. Gradient of flume below gage is sufficient to maintain open channel at all times.

ACCURACY.—Stage-discharge relation changed slightly on May 7. Rating curves well defined. Staff gage read to hundredths twice a day October 1 to April 6 and once a day April 7–25, also read after making change at head gate; water-stage recorder operated satisfactorily April 26 to September 30. Daily discharge ascertained by applying to rating table mean daily gage height determined from staff gage readings or by inspecting recorder graph or, for days of considerable fluctuation, by averaging discharges for intervals of a day. Records excellent.

COOPERATION.—Records furnished by State engineer of Oregon.

Central Oregon Canal diverts water from the right bank of Deschutes River in NE. ¼ sec. 13, T. 18 S., R. 11 E., and irrigates land lying to the east of Bend and near Powell Buttes.

Discharge measurements of Central Oregon Canal near Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 5	3.40	282	July 9	4.43	392	Aug. 16	4.64	416
July 6	4.56	393	July 27	4.45	395	Sept. 9	4.02	339

Daily discharge, in second-feet, of Central Oregon Canal near Bend, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	252	132			56	207	120	431	360	384	396	408
2	252					207	217	431	360	396	408	408
3	247					69	242	431	360	408	408	384
4	247						264	431	372	396	396	384
5	252			41			274	431	360	408	408	384
6	247			179			280	419	360	408	408	384
7	247			207			280	294	360	408	408	360
8	247			182			275	72	360	396	408	336
9	242			48			275	87	372	396	408	348
10	242						280	88	372	384	408	348
11	237						291	122	372	384	408	336
12	232						291	263	372	384	408	336
13	232						302	378	372	384	408	348
14	232						313	420	372	384	408	336
15	232						313	420	372	384	408	336
16	232						313	396	372	384	408	336
17	232						313	384	372	384	408	348
18	232						302	384	372	384	408	336
19	232		27				313	384	372	384	408	336
20	232		141				313	384	372	384	408	336

Daily discharge, in second-feet, of Central Oregon Canal near Bend, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	237	-------	177	-------	-------	-------	313	372	372	384	408	325
22	242	-------	118	-------	-------	-------	324	372	384	384	408	314
23	242	-------	-------	-------	-------	-------	335	372	384	384	408	325
24	242	-------	-------	-------	-------	-------	347	360	384	384	384	325
25	258	11	-------	-------	-------	-------	371	360	384	384	396	314
26	274	124	-------	-------	-------	-------	383	346	384	384	408	325
27	274	177	-------	-------	131	-------	407	332	384	396	408	314
28	274	177	-------	-------	207	64	407	360	384	396	408	292
29	269	115	-------	112	-------	167	419	360	384	408	408	292
30	274	-------	-------	217	-------	92	431	360	384	408	408	314
31	269	-------	-------	207	-------	-------	-------	360	-------	408	408	------

NOTE.—No flow on days for which discharge is not given.

Monthly discharge of Central Oregon Canal near Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	274	232	247	15,200
November	177	0	24.5	1,460
December	177	0	14.9	916
January	217	0	38.5	2,370
February	207	0	14.1	783
March	207	0	26.0	1,600
April	431	120	310	18,400
May	431	72	342	21,000
June	384	360	373	22,200
July	408	384	392	24,100
August	408	384	406	25,000
September	408	292	342	20,400
The year	431	0	217	153,000

PILOT BUTTE CANAL NEAR BEND, OREG.

LOCATION.—In NE. ¼ sec. 7, T. 18 S., R. 12 E., directly opposite gage on Central Oregon Canal, 200 feet below point where waters are divided between this canal and Central Oregon Canal, and 2 miles south of Bend, Deschutes County.

RECORDS AVAILABLE.—March 6, 1905, to September 30, 1926.

GAGE.—Vertical staff on right bank; read by Gustave Beery.

DISCHARGE MEASUREMENTS.—Made by wading 150 feet above gage.

CHANNEL AND CONTROL.—Channel, coarse gravel and small rocks. Control constriction and riffle 25 feet below gage; may be affected by débris.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.05 feet 8 a. m. to 5 p. m. April 4 (discharge, 32 second-feet); canal dry at times.

1905–1926: Maximum stage recorded, 3.10 feet June 8, 11–16, July 19–21, 1913 (discharge, 244 second-feet); canal dry at times.

ICE.—Canal dry during freezing weather.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Staff gage read to hundredths twice a day also after making change at head gate. Daily discharge ascertained by applying to rating table weighted mean daily gage height or, for days of considerable fluctuation, by averaging discharge for intervals of the day. Records good.

COOPERATION.—Records furnished by State engineer of Oregon.

Pilot Butte Canal diverts water from right bank of Deschutes River in NE. ¼ sec. 13, T. 18 S., R. 11 E., in a flume common to it and the Central Oregon Canal for irrigating lands lying mostly north of Bend and extending nearly to Crooked River. North Canal also diverts water into Pilot Butte Canal.

Discharge measurements of Pilot Butte Canal near Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
July 8	0.72	14.8	July 27	0.66	13.3	Sept. 9	0.62	11.2
July 9	.64	11.8	Aug. 17	.66	13.1			

Daily discharge, in second-feet, of Pilot Butte Canal near Bend, Oreg., for the year ending September 30, 1926

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

NOTE.—No flow on days for which discharge is not given.

Monthly discharge of Pilot Butte Canal near Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	15	6	8.9	547
November	9	0	1.2	71
December	9	0	.7	43
January	9	0	1.4	84
February	9	0	.7	38
March	9	0	1.2	74
April	19	0	11.3	672
May	23	3	15.7	965
June	20	15	16.5	982
July	16	12	13.0	799
August	12	12	12.0	738
September	12	11	12.0	714
The year	23	0	7.9	5,730

DESCHUTES COUNTY MUNICIPAL IMPROVEMENT DISTRICT CANAL AT BEND, OREG.

LOCATION.—In SE. ¼ sec. 29, T. 17 S., R. 12 E., at Bend, Deschutes County.

RECORDS AVAILABLE.—May 10, 1923, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on stream wall of canal 100 yards below intake; inspected by W. Andrew.

DISCHARGE MEASUREMENTS.—Made from footbridge near gage.

CHANNEL AND CONTROL.—Concrete and masonry lined at gage, trapezoidal section; permanent. Control is entrance of semicircular metal flume 100 yards below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 3.30 feet at 5 a. m. July 14 (discharge, 186 second-feet); no flow at times.

1923–1926: Maximum stage from recorder, 3.84 feet September 28, 1924 (discharge, 223 second-feet); no flow at times.

ICE.—None.

ACCURACY.—Stage-discharge relation changed during winter. Rating curves well defined. Water-stage recorder operated satisfactorily. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records good.

COOPERATION.—Records furnished by State engineer of Oregon.

Deschutes County Municipal Improvement District Canal diverts from Deschutes River in NE. ¼ sec. 32 at Bend, using surplus natural flow and water released from Crescent Lake Reservoir. The canal delivers water to the Tumalo project feed canal, to supplement the flow of Tumalo Creek in irrigating the Tumalo project.

Discharge measurements of Deschutes County Municipal Improvement District Canal at Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 14	2.78	135	July 8	3.16	174	Aug. 23	1.80	77
May 14	2.88	154	July 28	2.72	136	Sept. 2	2.03	90
July 3	3.16	163	Do	2.71	135	Sept. 9	1.93	86
Do	3.16	160	Aug. 18	1.65	67			

Daily discharge, in second-feet, of Deschutes County Municipal Improvement District Canal at Bend, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	May	June	July	Aug.	Sept.
1	108	116			177	95	98
2	108	108			177	92	83
3	108	130	21		177	89	83
4	108	130	53		177	89	89
5	105	130	59		177	89	92
6	108	130	69		177	89	92
7	108	130	86		182	89	86
8	112	126	104		177	89	83
9	112	119	121		172	89	83
10	112	130	128		172	92	86
11	108	126	140	33	172	92	86
12	108	122	148	67	172	92	83
13	112	130	152	92	177	92	86
14	112	130	118	98	177	83	69
15	119	122	14	114	182	77	58

Daily discharge, in second-feet, of Deschutes County Municipal Improvement District Canal at Bend, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	May	June	July	Aug.	Sept.
16	126	122	------	118	177	77	57
17	126	130	------	121	177	80	57
18	122	130	------	140	172	69	58
19	122	126	------	152	177	60	58
20	126	126	------	168	182	64	57
21	112	130	------	177	182	73	57
22	116	126	------	177	172	77	57
23	126	61	------	172	164	77	45
24	126	------	------	172	164	77	21
25	130	------	------	177	160	72	21
26	126	------	------	177	156	72	14
27	122	------	------	177	140	70	------
28	122	------	------	177	132	71	------
29	126	------	------	177	124	77	------
30	122	------	------	177	124	104	------
31	122	------	------	------	110	110	------

NOTE.—No flow on days for which discharge is not given.

Monthly discharge of Deschutes County Municipal Improvement District Canal at Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	130	105	117	7,190
November	130	0	94.3	5,610
May	152	0	39.1	2,400
June	177	0	95.4	5,680
July	182	110	166	10,200
August	110	60	82.8	5,090
September	98	0	58.6	3,490
The year	182	0	54.9	39,700

NOTE.—No flow during months for which discharge is not given.

NORTH CANAL NEAR BEND, OREG.

LOCATION.—In NW. ¼ sec. 28, T. 17 S., R. 12 E., 500 feet below bridge on road to Tumalo, one-fourth mile below intake, and 1 mile north of Bend, Deschutes County.

RECORDS AVAILABLE.—June 14, 1913, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder just above railroad bridge; inspected by W. L. Beebe.

DISCHARGE MEASUREMENTS.—Made from plank across canal 100 yards above gage.

CHANNEL AND CONTROL.—Concrete-lined section extends 1,000 feet below gage; below this point the canal is unlined and sides and bottom are very rough. Changes in unlined section affect stage-discharge relation.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 7.00 feet at 10 a. m. May 20 (discharge, 430 second-feet). Canal dry at times.

1913–1926: Maximum stage recorded, 7.28 feet at 9 a. m. July 12, 1925 (discharge, 460 second-feet). Canal dry at times.

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

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Water-stage recorder operated satisfactorily October 1–31 and March 28 to September 30; staff gage read to hundredths twice a day and after making change at head gate when recorder was not operating. Daily discharge ascertained by applying to rating table mean daily gage height. Records excellent.

COOPERATION.—Records furnished by State engineer of Oregon.

North Canal diverts water from the right bank of Deschutes River at a concrete dam 60 feet high, in NE. ¼ sec. 29, T. 17 S., R. 12 E. and extends eastward for 1 mile, where it discharges into Pilot Butte Canal.

Discharge measurements of North Canal near Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 29	3.65	156	June 22	6.54	389	Aug. 18	6.69	409
Apr. 2	4.70	235	July 8	6.64	375	Sept. 8	5.95	340
Apr. 22	6.50	375	July 29	6.27	357			

Daily discharge, in second-feet, of North Canal near Bend, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	217	164			88	203	203	421	367	376	358	376
2	217					203	225	421	358	394	358	376
3	217					68	233	412	340	394	358	367
4	217						241	421	340	394	367	367
5	217			18			257	421	331	394	367	367
6	217			182			257	412	305	394	367	376
7	217			203			273	412	305	394	358	349
8	217			77			281	421	297	394	367	331
9	217						289	421	297	349	367	340
10	217						305	421	297	340	376	331
11	217						305	421	297	340	394	340
12	217						305	421	297	340	394	340
13	217						322	403	322	340	394	340
14	217						331	376	367	340	394	340
15	217						331	421	376	340	394	340
16	217						331	421	385	340	394	340
17	217						358	421	385	340	394	340
18	217						358	421	394	340	394	331
19	217		77				358	421	394	340	403	331
20	217		203				358	412	394	340	412	331
21	217		203				376	385	394	340	403	331
22	217		68				385	385	394	340	403	331
23	233						385	385	394	340	394	322
24	249						385	376	394	340	340	305
25	249	26					394	376	376	340	367	305
26	249	161			21		394	367	367	340	376	305
27	249	175			168		412	367	367	340	376	305
28	249	189			203	17	421	367	367	358	385	305
29	249	152		103		154	421	367	367	367	376	305
30	249			203		203	421	367	358	358	340	273
31	249			182		203		367		358	340	

NOTE.—No flow on days for which discharge is not given.

Monthly discharge of North Canal near Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	249	217	226	13,900
November	189	0	28.9	1,720
December	203	0	17.8	1,090
January	203	0	31.2	1,920
February	203	0	17.2	955
March	203	0	33.9	2,080
April	421	203	330	19,600
May	421	367	401	24,700
June	394	297	354	21,100
July	394	340	356	21,900
August	412	340	378	23,200
September	376	273	335	19,900
The year	421	0	210	152,000

SWALLEY CANAL NEAR BEND, OREG.

LOCATION.—In NE. ¼ sec. 29, T. 17 S., R. 12 E., 100 yards above road crossing, one-fourth mile below intake of canal at North Canal Dam, and 1½ miles north of Bend, Deschutes County.

RECORDS AVAILABLE.—June 1, 1913, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on right bank at lower end of intake flume; inspected by W. L. Beebe.

DISCHARGE MEASUREMENTS.—Made from plank across flume.

CHANNEL AND CONTROL.—Earth canal of regular cross section and practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.31 feet at 7 p. m. May 21 (discharge, 109 second-feet). Canal dry at times.

1913–1926: Maximum discharge recorded, 116 second-feet at 10 p. m. July 13, 1925 (gage height, 2.38 feet). Canal dry at times.

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

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined. Water-stage recorder operated satisfactorily; staff gage read to hundredths twice a day during winter when recorder was not operated. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

COOPERATION.—Records furnished by State engineer of Oregon.

Swalley Canal diverts water from right bank of Deschutes River at North Canal Dam, in NE. ¼ sec. 29, and irrigates the Carey Act segregation of the Deschutes Reclamation & Irrigation Co. north of Bend and west of the Pilot Butte tract.

Discharge measurements of Swalley Canal near Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 13	1.31	37.4	June 22	2.09	86	Aug. 18	1.87	73
Mar. 6	.89	20.6	July 8	1.81	66	Sept. 8	1.62	56
Apr. 22	1.43	44	July 29	1.85	68			

Daily discharge, in second-feet, of Swalley Canal near Bend, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	43	11	2	3	21	28	72	83	66	72	71
2	58	44	16	2	19	19	26	81	85	65	71	72
3	58	44	22	2	19	18	25	81	86	64	71	73
4	56	44	25	3	19	18	25	89	87	63	71	73
5	51	44	27	5	19	18	25	90	79	64	72	73
6	51	45	27	5	19	19	25	85	75	66	72	73
7	51	42	26	5	19	18	25	89	75	67	72	61
8	52	40	27	12	19	18	25	85	76	68	73	55
9	39	40	27	2	19	18	24	85	77	67	73	55
10	------	40	17	2	19	19	23	85	77	66	71	55
11	------	40	7	------	19	18	16	84	75	66	71	55
12	26	39	7	------	19	18	------	79	75	66	72	55
13	39	38	7	------	20	19	------	72	75	66	71	55
14	40	38	7	------	19	19	------	63	91	68	70	55
15	40	38	7	1	19	19	5	81	96	72	72	55
16	40	38	10	7	19	18	26	88	92	71	71	55
17	40	38	17	13	19	18	29	92	91	71	71	55
18	41	38	18	12	20	19	29	97	91	71	73	55
19	41	38	19	12	21	20	31	102	94	71	74	55
20	42	38	6	12	21	24	34	106	92	71	73	55
21	42	24	------	12	21	29	33	106	91	71	71	55
22	42	8	------	12	21	30	41	97	89	71	70	55
23	42	9	7	14	21	30	48	90	93	71	70	56
24	42	9	17	17	21	30	48	87	88	71	72	56
25	42	9	17	16	21	30	48	85	69	71	70	57
26	42	9	17	------	21	29	48	85	66	71	69	57
27	42	9	7	------	21	29	52	85	67	71	70	57
28	42	9	------	------	21	29	55	85	67	72	71	57
29	42	9	2	------	------	29	57	83	67	72	71	57
30	42	9	2	------	------	28	60	85	66	72	73	58
31	42	------	2	------	------	28	------	85	------	72	71	------

NOTE.—No flow on days for which discharge is not given.

Monthly discharge of Swalley Canal near Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	58	0	41.5	2,550
November	45	8	30.4	1,810
December	27	0	12.9	793
January	17	0	5.4	332
February	21	3	19.2	1,070
March	30	18	22.5	1,380
April	60	0	30.4	1,810
May	106	63	86.4	5,310
June	96	66	81.2	4,830
July	72	63	68.8	4,230
August	74	69	71.4	4,390
September	73	55	59.2	3,520
The year	106	0	44.3	32,000

TUMALO CREEK NEAR BEND, OREG.

LOCATION.—In SE. ¼ sec. 23, T. 17 S., R. 11 E., one-fourth mile above diversion dam of feed canal of the Tumalo project, half a mile below highway bridge on old Bend-Sisters road, 4 miles above mouth, and 4 miles northwest of Bend, Deschutes County.

DRAINAGE AREA.—57 square miles.

RECORDS AVAILABLE.—November 1, 1913, to September 30, 1926; also during winters from October 6, 1906, to April 30, 1913, except 1909–10.

GAGE.—Stevens continuous water-stage recorder; inspected by W. Andrew. Records prior to November, 1910, obtained at different site.

DISCHARGE MEASUREMENTS.—At ordinary stages made by wading near gage or from footbridge across canal when all water is diverted; at flood stages, from a large tree fallen across stream about 200 yards below gage or by wading below diversion dam and adding measured canal flow.

CHANNEL AND CONTROL.—Bed composed of rock and gravel; fairly permanent. One channel at all stages; fairly straight above and below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.16 feet at 10 p. m. June 6 (discharge, 242 second-feet); minimum stage, from recorder, 0.82 foot at 11 p. m. July 2 (discharge, 15 second-feet).

1906–1926: Maximum stage recorded, 4.55 feet during winter of 1923, probably on January 6, clock stopped (discharge, 1,420 second-feet); minimum stage, from recorder, 0.55 foot October 28, 1922 (discharge, 4.0 second-feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Columbia Southern Canal diverted water above station during most of year. Water was diverted into head of Tumalo Creek from Crater Creek, tributary of Deschutes River; no record of this diversion in 1926.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve fairly well defined below 200 second-feet. Operation of water-stage recorder satisfactory except March 1–5. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records excellent.

COOPERATION.—Record furnished by the State engineer of Oregon.

Discharge measurements of Tumalo Creek near Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 14	1.02	28.1	Apr. 13	1.44	69	Sept. 2	1.34	58
Jan. 22	1.36	63	July 28	1.00	25.6	Sept. 29	1.08	36.1

Daily discharge, in second-feet, of Tumalo Creek near Bend, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	26	74	70	62		57	159	167	24	62	60
2	29	25	73	70	62		53	152	162	16	60	60
3	29	25	67	70	62	52	53	154	164	25	60	60
4	28	25	64	70	82		52	207	164	29	62	62
5	28	31	64	70	68		51	147	172	30	63	62
6	28	27	64	68	89	52	52	112	195	31	64	55
7	28	28	63	66	107	50	53	92	167	32	66	33
8	28	29	63	66	112	51	57	79	147	23	64	32
9	29	29	62	66	94	51	59	67	96	24	62	32
10	27	30	63	66	92	51	63	67	72	27	54	33
11	26	31	64	66	87	52	72	68	59	25	38	32
12	27	29	67	66	82	58	68	67	57	24	34	32
13	26	28	68	66	78	59	73	85	51	25	36	31
14	26	28	67	66	76	47	84	92	51	24	34	30
15	26	29	67	63	73	47	105	78	47	21	34	40
16	26	28	66	64	70	46	127	87	48	22	34	38
17	26	28	64	66	57	47	125	97	53	21	34	62
18	25	28	63	64	55	46	112	118	47	19	50	60
19	26	28	62	64	54	46	110	145	46	19	47	60
20	26	28	63	64	52	46	110	204	43	18	52	58

Daily discharge, in second-feet, of Tumalo Creek near Bend, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	25	26	73	63	52	45	105	152	42	18	66	57
22	25	26	87	62	52	45	99	154	38	19	64	58
23	26	34	114	62	52	45	90	131	40	21	66	51
24	27	59	89	62	52	45	94	90	44	28	66	32
25	27	66	79	63	52	46	112	78	35	29	66	32
26	27	64	78	64	52	47	136	79	32	28	66	32
27	27	64	76	63	52	46	145	84	32	28	59	32
28	27	64	73	63	52	46	154	110	25	25	40	32
29	27	64	70	63	------	47	175	170	21	27	42	32
30	26	64	72	62	------	54	170	152	24	33	43	32
31	26	------	72	62	------	59	------	152	------	62	42	------

NOTE.—Discharge Dec. 14, 31, Jan. 1–4, 8–10, 12–14, and 27, when stage-discharge relation was affected by ice, determined by study of gage-height record, observer's notes, and weather records. Water-stage recorder not operating Mar. 1–5; discharge interpolated.

Monthly discharge of Tumalo Creek near Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	30	25	26.9	1,650
November	67	25	36.4	2,170
December	114	62	70.7	4,350
January	70	62	65.2	4,010
February	112	52	68.9	3,830
March	59	45	49.5	3,040
April	175	51	93.9	5,590
May	207	67	117	7,190
June	195	21	78.0	4,640
July	62	16	25.7	1,580
August	66	34	52.6	3,230
September	62	30	44.1	2,620
The year	207	16	60.6	43,900

Combined monthly discharge of Tumalo Creek and Columbia Southern Canal near Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	74	64	68.3	4,200
November	75	59	66.5	3,960
December	114	62	70.7	4,350
January	70	62	65.2	4,010
February	112	62	[a] 74.9	4,160
March	89	64	[a] 70.7	4,350
April	230	77	134	7,970
May	272	105	[a] 164	10,100
June	199	75	118	7,020
July	96	57	[a] 72.4	4,450
August	78	58	63.8	3,920
September	------	54	59.4	3,530
The year	272	54	85.7	62,000

[a] Discharge of Columbia Southern Canal partly estimated.

COLUMBIA SOUTHERN CANAL NEAR TUMALO, OREG.

LOCATION.—In sec. 1, T. 18 S., R. 10 E., 200 feet below highway bridge across canal on Tumalo Creek road, 1 mile below head gates, 9 miles west of Bend, and 12 miles southwest of Tumalo, Deschutes County.

RECORDS AVAILABLE.—May 15, 1906, to May 23, 1914; May 5 to July 28, 1916; October 1, 1917, to November 2, 1921; and April 1, 1923, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on left bank; inspected by W. Andrew.

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

CHANNEL AND CONTROL.—Canal is earth cut 30 feet wide and 4 feet deep. Control not well defined but fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.82 feet at 8 a. m. May 15 (discharge, 91 second-feet); canal dry at times.

1906–1914, 1916–1921, 1923–1926: Maximum discharge recorded, 165 second-feet July 2, 1921 (gage height, 2.42 feet); canal dry at times.

ICE.—None during periods water was in canal.

DIVERSIONS.—None above gage.

REGULATION.—Flow controlled by head gates.

ACCURACY.—Stage-discharge relation changed slightly when water was out of canal during winter. Rating curves well defined. Water-stage recorder operated satisfactorily except as stated in footnote to table of daily discharge. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records excellent except for estimated periods, for which they are fair.

COOPERATION.—Record furnished by the State engineer of Oregon.

Columbia Southern Canal diverts water from Tumalo Creek in SE. ¼ sec. 2, T. 18 S., R. 10 E. It has been operated since 1916 primarily to supplement the Tumalo feed canal. Most of the water eventually finds its way to the Tumalo project canals.

Discharge measurements of Columbia Southern Canal near Tumalo, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 14	1.24	36.4	May 15	1.82	90	Sept. 29	1.02	21.1
Apr. 13	1.23	32.9	July 28	1.23	34.4			

Daily discharge, in second-feet, of Columbia Southern Canal near Tumalo, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	43			28	51		72		
2	39	43			27	51		61		
3	40	43		14	26	53		52		
4	40	43			26	58		53		
5	41	44			26	51		52		
6	43	44		14	27	45		54		
7	43	43		14	27	42	32	54		
8	44	40		14	28	40	42	52		
9	45	40		14	30	38	38	52		
10	46	40		13	31	38	34	53	8	
11	45	39		13	33	39	33	52	24	30
12	44	38		6	33	41	31	52	24	
13	43	38		11	36	46	30	53	24	
14	40	37		25	39	68	30	51	24	
15	40	38		26	42	91	28	49	25	
16	38	37		27	46		29		25	
17	38	37		26	47	75	34		25	
18	40	37		26	45		43		28	
19	40	38		26	46		46	50	29	
20	40	38		27	47	68	41		12	
21	40	38		27	47	59	42			
22	40	38	14	27	47	54	62			
23	40	29		28	46	49	62	38		6
24	40			28	47	42	82	38		22
25	41			28	50	40	80	38		22
26	42			27	53	39	80	38		22
27	42			27	54	41	78	36	8	22
28	42			27	54	24	75	36	24	22
29	43			28	55		75	36	25	22
30	43			29	55		75	24	25	22
31	43			30					17	

NOTE.—Water-stage recorder not operating Feb. 17 to Mar. 5, May 14, 16–19, June 22, 23, July 16–22, and Sept. 7–17; discharge determined by interpolation or by comparison with discharge records of Tumalo Creek near Bend. No flow on days for which discharge is not given.

Monthly discharge of Columbia Southern Canal near Tumalo, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	46	38	41.4	2,540
November	44	0	30.2	1,800
February	14	0	[a] 6.0	333
March	30	----------	21.2	1,300
April	55	26	39.9	2,370
May	91	0	47.4	2,910
June	82	0	40.1	2,390
July	72	0	46.6	2,870
August	29	0	11.2	689
September	----------	0	15.3	910
The year	91	0	25.0	18,100

[a] Estimated.

NOTE.—No flow during months for which no record is given.

TUMALO FEED CANAL NEAR BEND, OREG.

LOCATION.—In SE. ¼ sec. 23, T. 17 S., R. 11 E., in concrete-lined section, 300 feet below diversion dam, half a mile below bridge across Tumalo Creek on old road from Bend to Sisters, and 4 miles from Bend, Deschutes County.

RECORDS AVAILABLE.—May 21, 1914, when water was first diverted, to September 30, 1919; October 1–31, 1920; April 1 to September 30, 1921; May 19 to October 16, 1922; and April 1, 1923, to September 30, 1926.

GAGE.—Painted on sloping concrete lining; gage reader, W. Andrew.

DISCHARGE MEASUREMENTS.—Made from footbridge at gage.

CHANNEL AND CONTROL.—Trapezoidal concrete section. Control is sand trap just above intake of a steel flume.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 3.5 feet May 19, 20, and June 6 (discharge, 178 second-feet); canal dry at times.

1914–1926: Maximum stage recorded, 3.80 feet May 4–6, 1916 (discharge, 219 second-feet); canal dry at times.

ICE.—Water has to be turned out in extremely cold weather.

ACCURACY.—Stage-discharge relation practically permanent during year. Rating curve well defined. Staff gage read to half-tenths twice a day. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

COOPERATION.—Record furnished by the State engineer of Oregon.

Discharge measurements of Tumalo feed canal near Bend, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 14	1.75	27.8	Sept. 2	2.26	58
July 22	1.70	25.6	Sept. 29	1.85	36.1

Daily discharge, in second-feet, of Tumalo feed canal near Bend, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	27	70		41	41		98	146	23	62	59
2	27	27	70		41	41		118	140	21	66	59
3	27	27	70		41	41		128	128	31	62	59
4	27	27	70		17	41		128	158	31	66	59
5	27	27	70			41		113	146	34	62	59
6	27	27	70			27		103	171	34	59	59
7	27	27	70					94	128	34	66	31
8	27	29	70					85	98	29	59	31
9	27	29	70					66	73	31	66	31
10	27	29	70					66	62	31	47	31
11	27	29	70					66	62	29	31	31
12	27	29	70					66	70	29	31	31
13	27	29	70					66	53	27	31	31
14	27	29	47					66	47	29	31	31
15	27	29						59	45	23	31	31
16	27	29						85	47	23	31	45
17	27	29						94	47	23	31	59
18	27	29		15			41	118	41	21	56	59
19	27	29	41	41			41	178	38	23	53	59
20	27	29	62	41			41	178	38	23	47	59
21	27	29	66	41			41	140	38	23	62	59
22	27	29	66	41			41	128	34	23	59	59
23	27	66	73	41	26		57	128	38	27	59	59
24	27	66	70	41	41		73	89	41	31	59	31
25	27	70	70	41	41		73	73	36	34	59	31
26	27	70	66	41	41		73	73	34	34	59	31
27	27	70	66	41	41		73	73	31	31	59	31
28	27	70	66	41	41		73	81	27	29	31	31
29	27	70	66	41			98	164	23	31	31	31
30	27	70	66	41			98	146	23	31	31	31
31	27		44	41				134		62	31	

NOTE.—No flow on days for which discharge is not given.

Monthly discharge of Tumalo feed canal near Bend, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	27	27	27.0	1,660
November	70	27	39.2	2,330
December	73	0	57.4	3,530
January	41	0	17.6	1,080
February	41	0	13.3	739
March	41	0	7.5	461
April	98	0	27.4	1,630
May	178	59	103	6,330
June	171	23	68.8	4,090
July	62	21	29.2	1,800
August	66	31	49.3	3,030
September	59	31	43.6	2,590
The year	178	0	40.5	29,300

SQUAW CREEK NEAR SISTERS, OREG.

LOCATION.—In NW. ¼ sec. 32, T. 15 S., R. 10 E., immediately above intake of McCallister ditch and 5 miles by road above Sisters, Deschutes County.

DRAINAGE AREA.—63 square miles.

RECORDS AVAILABLE.—Irrigation seasons, 1913, 1914, 1916 to 1925, and October 1, 1925, to September 30, 1926. From July 1, 1906, to May 23, 1913, in sec. 29, at station below intake of McCallister ditch and 700 feet downstream.

GAGE.—Stevens continuous water-stage recorder on right bank; inspected by water master.

DISCHARGE MEASUREMENTS.—Made from cable 100 yards above gage or by wading near gage.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.90 feet 3 to 8 p. m. May 20 (discharge, 257 second-feet); minimum stage from recorder, 1.82 feet at noon January 26 (discharge, 26 second-feet).

1906–1926: Maximum stage recorded, 7.5 feet at old station, November 22, 1909 (discharge, estimated from extension of rating curve, 1,940 second-feet); minimum discharge recorded, 19 second-feet December 6, 1922 (gage height, 1.80 feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Pole Creek, a tributary of Squaw Creek from the west, has been diverted for irrigation. The diversion canal has been eroded until it carries entire flow of this creek. Low-water flow entirely diverted below station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve fairly well defined. Operation of water-stage recorder satisfactory except as stated in footnote to table of daily discharge. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records fair for October, January, and August; otherwise good.

COOPERATION.—Records furnished by the State engineer of Oregon.

Discharge measurements of Squaw Creek near Sisters, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 13	2.01	49	Jan. 22	1.92	41	Aug. 19	2.36	106
Dec. 3	2.03	55	Apr. 15	2.20	83	Sept. 10	2.02	55

Daily discharge, in second-feet, of Squaw Creek near Sisters, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		47	71	46	36	44	53	150	153	133	112	73
2		47	62	46	37	44	51	139	153	128	102	67
3		47	54	60	37	44	49	153	163	135	108	73
4		51	51	78	73	44	51	204	166	146	135	73
5		53	49	76	62	44	53	146	168	156	116	78
6		46	47	73	124	43	51	120	181	173	110	76
7		47	46	76	128	43	54	106	199	146	114	71
8		47	46	53	114	43	56	96	191	124	112	73
9		47	46	44	100	41	60	86	156	137	110	78
10		49	46	46	96	41	67	80	141	150	104	75
11		47	58	43	82	41	71	82	133	146	102	67
12		47	53	41	73	46	71	90	124	170	104	71
13		49	51	44	69	51	71	102	120	173	104	67
14		47	60	43	63	51	78	108	116	150	102	73
15	56	53	60	46	60	53	96	117	110	144	102	58
16		51	53	47	56	53	108	117	114	141	104	51
17		49	44	39	58	49	108	126	120	128	118	49
18		49	43	69	53	47	108	148	124	122	204	49
19		49	43	73	51	46	108	181	120	114	146	47
20		47	49	40	49	46	110	238	102	108	112	47
21		46	71	41	49	44	104	196	102	110	102	44
22		44	73	36	51	46	100	173	114	122	106	53
23		46	110	34	49	49	94	156	133	116	110	46
24		44	86	34	58	49	96	128	158	130	116	41
25		46	69	34	54	46	102	118	168	137	122	41
26		46	60	32	49	44	112	112	168	116	114	41
27		46	51	34	47	40	122	122	160	104	92	41
28	54	46	49	36	47	47	146	130	144	96	94	40
29	54	47	49	35	-------	50	160	144	146	104	90	40
30	53	53	53	34	-------	50	166	135	146	122	75	39
31	51	-------	54	36	-------	51	-------	137	-------	124	75	------

NOTE.—Water-stage recorder not operating satisfactorily Oct. 1–27, Mar. 29, 30, May 15 and 16; discharge interpolated. Stage-discharge relation affected by ice Dec. 28 to Jan. 19; discharge determined by study of gage-height graph, observer's notes, weather records, and gage-height graph of Little Deschutes River near Lapine.

Monthly discharge of Squaw Creek near Sisters, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October			55.6	3,420
November	53	44	47.8	2,840
December	110	43	56.7	3,490
January	78	32	47.4	2,910
February	128	36	65.2	3,620
March	53	40	46.1	2,830
April	166	49	89.2	5,310
May	238	80	134	8,240
June	199	102	143	8,510
July	173	96	132	8,120
August	204	75	110	6,760
September	78	39	58.1	3,460
The year	238	32	82.2	59,500

CROOKED RIVER NEAR CULVER, OREG.

LOCATION.—In NW. ¼ sec. 11, T. 12 S., R. 12 E., one-eighth mile below Cove power plant and 6 miles west of Culver, Jefferson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—October 1, 1917, to September 30, 1926.

GAGE.—Vertical staff on right bank 100 feet below power house; read by A. K. McAlpine.

DISCHARGE MEASUREMENTS.—Made from cable half a mile below gage.

CHANNEL AND CONTROL.—River banks, bed, and control composed of rocks and heavy boulders; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.9 feet, February 8 (discharge, 2,720 second-feet); minimum stage, 0.40 foot September 16 (discharge, 1,120 second-feet).

1917–1926: Maximum stage recorded, 5.6 feet on February 6, 1925 (discharge, 7,320 second-feet); minimum discharge, 970 second-feet July 12 to September 5, 1921 (gage height, 1.70 feet).

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

DIVERSIONS.—Practically all the summer flow of Crooked River above Prineville is diverted for irrigation. Low-water flow at this station is derived from springs a few miles above.

REGULATION.—Slight regulation by power plant above gage and storage reservoir on Ochoco project.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined. Gage read once a day to hundredths at low stages and to tenths at high stages. Daily discharge ascertained by applying daily gage height to rating table. Records good.

The following discharge measurements were made:

November 27, 1925: Gage height, 0.72 foot; discharge, 1,190 second-feet.

June 7, 1926: Gage height, 0.56 foot; discharge, 1,150 second-feet.

Daily discharge, in second-feet, of Crooked River near Culver, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,220	1,220	1,220	1,220	1,300	1,450	1,570	1,220	1,160	1,160	1,140	1,140
2	1,220	1,220	1,220	1,220	1,320	1,510	1,570	1,180	1,160	1,160	1,140	1,140
3	1,220	1,220	1,220	1,220	1,260	1,510	1,510	1,180	1,160	1,160	1,140	1,140
4	1,220	1,220	1,220	1,220	1,260	1,450	1,510	1,180	1,160	1,160	1,140	1,130
5	1,220	1,220	1,220	1,220	1,280	1,450	1,570	1,180	1,160	1,160	1,140	1,130
6	1,220	1,220	1,220	1,220	1,280	1,450	1,570	1,180	1,160	1,160	1,140	1,130
7	1,220	1,220	1,220	1,220	1,690	1,450	1,510	1,180	1,160	1,160	1,140	1,130
8	1,220	1,220	1,220	1,220	2,720	1,400	1,570	1,180	1,160	1,160	1,140	1,130
9	1,220	1,220	1,220	1,220	2,630	1,400	1,570	1,180	1,160	1,160	1,140	1,140
10	1,220	1,220	1,220	1,220	2,050	1,400	1,760	1,180	1,160	1,160	1,140	1,140
11	1,220	1,220	1,220	1,220	2,050	1,400	1,830	1,180	1,160	1,160	1,140	1,140
12	1,220	1,220	1,220	1,240	1,970	1,450	2,290	1,180	1,160	1,160	1,140	1,140
13	1,220	1,220	1,220	1,240	1,970	1,510	2,210	1,180	1,160	1,160	1,140	1,130
14	1,220	1,220	1,220	1,240	1,450	1,760	1,970	1,180	1,160	1,160	1,140	1,130
15	1,220	1,220	1,220	1,240	1,400	2,050	1,760	1,180	1,160	1,160	1,140	1,130
16	1,220	1,220	1,220	1,240	1,400	2,210	1,630	1,180	1,160	1,160	1,140	1,120
17	1,220	1,220	1,220	1,220	1,400	2,290	1,570	1,180	1,160	1,160	1,140	1,130
18	1,220	1,220	1,220	1,220	1,350	2,210	1,510	1,180	1,160	1,160	1,140	1,130
19	1,220	1,220	1,220	1,220	1,350	2,130	1,450	1,180	1,160	1,160	1,140	1,130
20	1,220	1,220	1,220	1,220	1,350	2,050	1,400	1,180	1,160	1,150	1,140	1,130
21	1,220	1,220	1,220	1,220	1,350	1,970	1,350	1,180	1,160	1,140	1,140	1,140
22	1,220	1,220	1,220	1,220	1,320	1,830	1,350	1,180	1,160	1,140	1,140	1,140
23	1,220	1,220	1,220	1,220	1,320	1,690	1,300	1,180	1,160	1,140	1,140	1,140
24	1,220	1,220	1,220	1,220	1,300	1,690	1,300	1,180	1,160	1,140	1,140	1,140
25	1,220	1,220	1,220	1,220	1,300	1,630	1,300	1,180	1,160	1,140	1,140	1,150
26	1,220	1,220	1,220	1,220	1,300	1,630	1,260	1,180	1,160	1,140	1,140	1,150
27	1,220	1,220	1,220	1,220	1,300	1,630	1,260	1,160	1,160	1,140	1,140	1,150
28	1,220	1,220	1,220	1,220	1,450	1,570	1,220	1,160	1,160	1,140	1,140	1,150
29	1,220	1,220	1,220	1,220	------	1,570	1,220	1,160	1,160	1,140	1,140	1,150
30	1,220	1,220	1,220	1,220	------	1,510	1,220	1,160	1,160	1,140	1,140	1,150
31	1,220	------	1,220	1,220	------	1,630	------	1,160	------	1,140	1,140	------

Monthly discharge of Crooked River near Culver, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,220	1,220	1,220	75,000
November	1,220	1,220	1,220	72,600
December	1,220	1,220	1,220	75,000
January	1,240	1,220	1,220	75,000
February	2,720	1,260	1,540	85,500
March	2,290	1,400	1,670	103,000
April	2,290	1,220	1,540	91,600
May	1,220	1,160	1,180	72,600
June	1,160	1,160	1,160	69,000
July	1,160	1,140	1,150	70,700
August	1,140	1,140	1,140	70,100
September	1,150	1,120	1,140	67,800
The year	2,720	1,120	1,280	928,000

OCHOCO CREEK ABOVE MILL CREEK, NEAR PRINEVILLE, OREG.

LOCATION.—In SW. ¼ sec. 36, T. 14 S., R. 17 E., on Dobb ranch, 1½ miles above mouth of Mill Creek and 12 miles east of Prineville, Crook County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—December 8, 1917, to September 30, 1922; February 18, 1924, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on right bank; inspected by S. B. Ellis.

DISCHARGE MEASUREMENTS.—Made from cable 75 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel; may shift slightly. Control is a riffle 100 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year occurred about February 7 when water-stage recorder was not operating. Stream bed dry at times. 1917–1922, 1924–1926: Maximum discharge recorded, 600 second-feet April 4, 1919, and February 4, 1925. Stream dry at times.

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

DIVERSIONS.—Many small private ditches divert water for a distance of about 30 miles above station.

REGULATION.—None above station; reservoir of Ochoco Irrigation District controls entire flow of the creek immediately below station.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operation of water-stage recorder satisfactory except as stated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection. Records good except for periods discharge was estimated, for which they are fair.

COOPERATION.—Record furnished by State engineer of Oregon.

The following discharge measurements were made:

February 15, 1926: Gage height, 1.32 feet; discharge, 45.6 second-feet.

March 22, 1926: Gage height, 1.21 feet; discharge, 44.2 second-feet.

Daily discharge, in second-feet, of Ochoco Creek above Mill Creek, near Prineville, Oreg., for the year ending September 30, 1926

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1			5	14	45	24	6	6
2			5	10	50	24	7	4
3		7	5	9	57	24	7	2
4			4	52	60	25	8	2
5			5		55	28	9	2
6		8	5		45	28	9	2
7		7	4	110	45	28	9	2
8		7	5		48	39	10	2
9		6	5		41	37	10	1
10		6	4		38	36	9	1
11		6	4	87	38	67	8	1
12		7	4	67	40	66	7	1
13		7	3	58	48	56	7	1
14		7	3	50	56	48	7	1
15			4	47	66	44	6	1
16			4	43	75	38	6	1
17		6	4	36	66	34	6	
18			4	36	56	31	6	
19			4	31	50	29	6	
20		6	4	31	48	26	6	
21		6	4	32	42	24	6	
22		7	4	30	40	24	6	
23	3	8	4	30	41	22	6	1
24		9	4	31	35	20	6	
25		9	3	34	32	19	7	
26		8	4	36	28	17	7	
27		7	4	38	27	14	7	
28		7	5	43	25	10	6	
29		7	9	-------	23	9	6	
30		6	9	-------	23	7	6	
31	-------	5	11	-------	23	-------	6	-------

NOTE.—Water-stage recorder not operating Nov. 1 to Dec. 5, 15–19, Feb. 5–10, and June 17–30. Discharge Feb. 5–10 estimated from storage accumulation in Ochoco Reservoir, interpolated for other periods. Stream dry Oct. 1 to Nov. 15 and July 1 to Sept. 30.

Monthly discharge of Ochoco Creek above Mill Creek, near Prineville, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
November		0	1.5	89
December	9	5	6.8	418
January	11	3	4.7	290
February		9	53.8	2,990
March	75	23	44.1	2,710
April	67	7	29.9	1,780
May	10	6	7.0	430
June	6	1	1.5	87
The year		0	12.1	8,790

NOTE.—No flow during months for which no record is given.

MILL CREEK NEAR PRINEVILLE, OREG.

LOCATION.—In SE. ¼ sec. 22, T. 14 S., R. 17 E., on Dill ranch, 1 mile above mouth and 10 miles east of Prineville, Crook County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 14 to September 5, 1916; December 8, 1917, to July 4, 1918; December 21, 1919, to September 30, 1922; April 1, 1924, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on left bank; inspected by S. B. Ellis.

DISCHARGE MEASUREMENTS.—Made by wading or from foot log at gage.

CHANNEL AND CONTROL.—Bed and control composed of gravel; subject to shift at high stages.

EXTREMES OF DISCHARGE.—Maximum stage, 2.1 feet reported to S. E. Ellis, watermaster, probably occurred February 7 (discharge, 112 second-feet); stream practically dry at times.

1916, 1918, 1920–1922, 1924–1926: Maximum discharge recorded, 314 second-feet February 4, 1925; stream practically dry every summer.

DIVERSIONS.—Many small ditches above station. Two diverted some water around gage during year; probably not more than a few hundred acre-feet.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined. Operation of water-stage recorder satisfactory except as stated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection. Records good except February 5–10, for which they are fair.

COOPERATION.—Record furnished by State engineer of Oregon.

The following discharge measurements were made:

February 11, 1926: Gage height, 1.70 feet; discharge, 74 second-feet.

March 22, 1926: Gage height, 0.90 foot; discharge, 23.1 second-feet.

Daily discharge, in second-feet, of Mill Creek near Prineville, Oreg., for the year ending September 30, 1926

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May
1	------	1	2	28	18	5	16		------	34	34	31	1
2	------	1	2	29	17	3	17	1	1	29	32	30	1
3	1	1	2	30	17	2	18		1	26	29	27	1
4	1	1	41	31	18		19		1	25	27	24	1
5	1	1		30	21	3	20	1	1	25	24	20	1
6	1	1		28	20		21	1	1	24	22	19	1
7	1	1	60	27	21	4	22	1	1	23	22	19	1
8	1	1		26	23	4	23	1	1	21	22	16	1
9	1	1		24	23	5	24	1	1	22	20	13	1
10	1	1		22	26	4	25	1		23	20	10	1
11	1	1	81	21	33	4	25	1		25	19	8	------
12	1	1	63	21	32	3	27	1	1	26	18	8	------
13	1	1	51	22	32	2	28	1		27	17	8	------
14	1	------	42	26	31	2	29	1		------	16	8	------
15	1	------	38	29	30	1	30	1		------	15	7	------
							31	1		------	18	------	------

NOTE.—Water-stage recorder was not operating Dec. 1–5, 15–19, Jan. 25–31, Feb. 5–10, May 4–6, and 26–31. Discharge Feb. 5–10 based on storage accumulation in Ochoco Reservoir; otherwise interpolated. Stream dry Oct. 1 to Dec. 2, Jan. 14–16, and May 26 to Sept. 30.

Monthly discharge of Mill Creek near Prineville, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
December	1	0	0.9	55
January	1	0	.9	55
February	----------	2	36.1	2,000
March	34	15	24.2	1,490
April	33	7	20.3	1,210
May	5	0	1.9	117
The year	----------	0	.7	4,930

NOTE.—No flow during months for which record is not given.

McKAY CREEK NEAR PRINEVILLE, OREG.

LOCATION.—In SE. ¼ sec. 28, T. 13 S., R. 16 E., one-fourth mile below Allen Creek and 9 miles north of Prineville, Crook County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—February 25, 1915, to June 21, 1916; January 17 to June 30, 1918; March 8 to May 30, 1919; January to June, 1920, fragmentary; and October 1, 1924, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on left bank; inspected by S. B. Ellis. Present gage is 3 miles above station used prior to July, 1916, and 1½ miles above station used 1918 to 1920.

DISCHARGE MEASUREMENTS.—Made by wading above gage.

CHANNEL AND CONTROL.—Bed composed of sand and gravel; fairly permanent; not affected by small irrigation dam below gage. Banks are overflowed at very high stages.

EXTREMES OF DISCHARGE.—Maximum discharge during year, which occurred about February 7 when water-stage recorder was not operating, estimated at 200 second-feet; stream dry at times.

1915–16, 1918–1920, 1925–26: Maximum stage recorded, 3.27 feet at 10 p. m. February 4, 1925 (discharge, 429 second-feet). Stream dry at times.

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

DIVERSIONS.—A few small ditches divert water above gage for irrigation; one a short distance below.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 150 second-feet. Water-stage recorder operated satisfactorily except as stated in footnote to daily-discharge table; staff gage read occasionally when recorder was not operating. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph or occasional staff gage readings. Records good except February 4–7, for which they are poor.

COOPERATION.—Record furnished by State engineer of Oregon.

The following discharge measurements were made:

February 14, 1926: Gage height, 1.10 feet; discharge, 40 second-feet.

March 22, 1926: Gage height, 0.84 foot; discharge, 21 second-feet.

Daily discharge, in second-feet, of McKay Creek near Prineville, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1				1	1	33	13	8		
2					1	36	11	7		
3			1	1	1	39	10	7		
4						41	11	11		
5						38	16	15		
					80					
6			1	1		32	16	14		
7			1			31	16	13		
8			1		146		17	11		
9			1		100		16	8		
10			1	1	110		16	8		0.5
						33				
11			1		97		25	8		
12			1		76		22	5		
13			1		61		19	3		
14			1	1	47		18	3		
15			1		41	35	18	3		
		1							1	
16					41	38	17	3		
17	1			1	34	34	15	2		
18	1				32	31	14	2		
19	1		1		31	27	12	2		
20	1			1	30	25	12	2		------
21	1				28	22	10	2		------
22	1		1		27	22	8	2		------
23	1				26	21	5	2		------
24	1			1	26	20	3	2		------
25	1				25	20	3			------
26	1				26	17	4			------
27	1		1	1	29	15	4	2		------
28	1				32	13	5			------
29	1				------	12	5			------
30	1				------	12	6			------
31	1	------		1	------	13	------	------	------	------

NOTE.—Water-stage recorder not operating Oct. 1–17, Nov. 1 to Dec. 5, Dec. 11 to Feb. 7, Mar. 8–14, Apr. 26–27, May 4, 15–18, and after May 24. Discharge Feb. 1–7 estimated by comparison with records of inflow into Ochoco Reservoir as indicated by storage accumulation; otherwise interpolated. Stream dry Oct. 1–16 and July 18 to Sept. 30.

Monthly discharge of McKay Creek near Prineville, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1	0	0.5	30
November			1.0	60
December	1	1	1.0	61
January	1	1	1.0	61
February		1	49.6	2,750
March	41	12	27.7	1,700
April	25	3	12.2	726
May	15	2	5.1	314
June			1.0	60
July		0	.29	18
The year		0	8.0	5,780

NOTE.—No flow during August and September.

METOLIUS RIVER NEAR GRANDVIEW, OREG.

LOCATION.—In NE. ¼ sec. 19, T. 11 S., R. 11 E., at Montgomery ranch, 10 miles northwest of Grandview post office, Jefferson County, and 11 miles above mouth.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—October 1, 1921, to September 30, 1926.

GAGE.—Vertical staff on right bank; read by E. A. Montgomery.

DISCHARGE MEASUREMENTS.—Made from cable one-fourth mile above gage.

CHANNEL AND CONTROL.—Bed composed of smooth boulders. Current swift. Channel straight. River confined to its banks at all stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.06 feet on February 7 (discharge, 2,200 second-feet); minimum stage, 0.28 foot September 25–30 (discharge, 1,280 second-feet).

1921–1926: Maximum stage recorded, 3.32 feet January 7, 1923 (discharge from approximate extension of rating curve, 5,780 second-feet); minimum stage, that of 1926.

ICE.—Ice never forms on this river.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 1,700 second-feet and fairly well defined from 1,700 to 2,200 second-feet. Staff gage read to even hundredths once a day. Daily discharge ascertained by applying daily gage height to rating table. Records excellent except for discharge above 1,700 second-feet, for which they are good.

The following discharge measurements were made:

November 26, 1925: Gage height, 0.38 foot; discharge, 1,390 second-feet.

June 7, 1926: Gage height, 0.45 foot; discharge, 1,440 second-feet.

Daily discharge, in second-feet, of Metolius River near Grandview, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,400	1,400	1,400	1,400	1,350	1,500	1,450	1,500	1,400	1,400	1,350	1,300
2	1,400	1,400	1,450	1,400	1,350	1,500	1,450	1,500	1,400	1,400	1,350	1,300
3	1,400	1,400	1,400	1,400	1,350	1,500	1,450	1,500	1,400	1,400	1,300	1,300
4	1,400	1,400	1,400	1,400	1,610	1,500	1,450	1,500	1,400	1,400	1,300	1,300
5	1,400	1,400	1,400	1,400	1,450	1,500	1,450	1,500	1,400	1,400	1,300	1,300
6	1,400	1,400	1,400	1,400	1,780	1,450	1,450	1,500	1,400	1,400	1,350	1,300
7	1,400	1,400	1,400	1,400	2,070	1,450	1,450	1,500	1,450	1,400	1,350	1,300
8	1,400	1,400	1,400	1,400	1,890	1,450	1,450	1,500	1,450	1,400	1,400	1,300
9	1,400	1,400	1,400	1,400	1,780	1,450	1,450	1,450	1,450	1,400	1,350	1,300
10	1,400	1,400	1,400	1,400	1,720	1,450	1,450	1,450	1,450	1,400	1,300	1,300
11	1,400	1,400	1,400	1,400	1,660	1,450	1,450	1,450	1,400	1,400	1,300	1,300
12	1,400	1,450	1,400	1,400	1,610	1,450	1,450	1,400	1,400	1,400	1,300	1,300
13	1,400	1,400	1,400	1,350	1,610	1,450	1,450	1,400	1,400	1,400	1,300	1,300
14	1,400	1,400	1,400	1,350	1,560	1,450	1,450	1,400	1,400	1,400		1,300
15	1,400	1,450	1,400	1,350	1,560	1,450	1,450	1,400	1,400	1,350		1,300
16	1,400	1,400	1,400	1,350	1,560	1,450	1,500	1,450	1,400	1,350		1,300
17	1,400	1,400	1,400	1,350	1,500	1,450	1,500	1,500	1,400	1,350		1,300
18	1,400	1,400	1,400	1,350	1,500	1,450	1,500	1,500	1,400	1,350	1,300	1,300
19	1,400	1,400	1,400	1,350	1,500	1,450	1,450	1,500	1,400	1,350		1,300
20	1,400	1,400	1,400	1,350	1,500	1,450	1,500	1,560	1,400	1,350		1,300
21	1,400	1,400	1,450	1,350	1,500	1,450	1,500	1,500	1,400	1,350		1,300
22	1,400	1,400	1,500	1,350	1,500	1,450	1,500	1,500	1,400	1,350	1,300	1,300
23	1,400	1,400	1,720	1,350	1,560	1,450	1,450	1,450	1,400	1,350	1,300	1,300
24	1,400	1,400	1,500	1,350	1,560	1,450	1,450	1,450	1,400	1,350	1,300	1,300
25	1,400	1,400	1,450	1,350	1,560	1,450	1,450	1,400	1,400	1,350	1,300	1,280
26	1,400	1,400	1,450	1,350	1,500	1,450	1,450	1,400	1,400	1,350	1,400	1,280
27	1,400	1,400	1,400	1,350	1,500	1,400	1,450	1,400	1,400	1,350	1,350	1,280
28	1,400	1,400	1,400	1,350	1,500	1,400	1,450	1,400	1,400	1,350	1,300	1,280
29	1,400	1,400	1,400	1,350	-------	1,400	1,500	1,400	1,400	1,350	1,350	1,280
30	1,400	1,400	1,400	1,350	-------	1,400	1,500	1,400	1,400	1,350	1,300	1,280
31	1,400	-------	1,400	1,350	-------	1,450	-------	1,400	-------	1,350	1,300	------

NOTE.—Gage-height record missing Aug. 14–21; discharge estimated.

Monthly discharge of Metolius River near Grandview, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,400	1,400	1,400	86,100
November	1,450	1,400	1,400	83,300
December	1,720	1,400	1,420	87,300
January	1,400	1,350	1,370	84,200
February	2,070	1,350	1,570	87,200
March	1,500	1,400	1,450	89,200
April	1,500	1,450	1,460	86,900
May	1,560	1,400	1,460	89,800
June	1,450	1,400	1,410	83,900
July	1,400	1,350	1,370	84,200
August	1,400	1,300	1,320	81,200
September	1,360	1,280	1,300	77,400
The year	2,070	1,280	1,410	1,020,000

LAKE CREEK NEAR SISTERS, OREG.

LOCATION.—In SE. ¼ sec. 24, T. 13 S., R. 8 E., one-fourth mile below outlet of Suttle Lake, 6 miles from mouth of creek, and 15 miles northwest of Sisters, Jefferson County.

DRAINAGE AREA.—20.5 square miles.

RECORDS AVAILABLE.—April 7, 1915, to September 30, 1926, with a few gaps; occasional readings during summers of 1911 to 1913.

GAGE.—Stevens continuous water-stage recorder on left bank; inspected by Joe Hansen.

CHANNEL AND CONTROL.—Bed composed of heavy gravel and boulders. Control shifts occasionally.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.17 feet, 2 to 6 a. m. February 14 (discharge, 87 second-feet); minimum stage from recorder, 0.46 foot August 12–15 and September 8–12 (discharge, 26 second-feet).

1911–1913, 1915–1926: Maximum stage from recorder, 2.58 feet January 10, 1923 (discharge, 302 second-feet); minimum stage recorded, 0.31 foot October 18, 1916 (discharge, 20 second-feet).

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed slightly on February 15. Rating curves well defined. Water-stage recorder operated satisfactorily except as stated in footnote to table of daily discharge. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records good except for periods discharge was estimated, for which they are fair.

COOPERATION. Records furnished by the State engineer of Oregon.

The following discharge measurements were made:

April 15, 1926: Gage height, 0.89 foot; discharge, 54 second-feet.

August 4, 1926: Gage height, 0.48 foot; discharge, 27.6 second-feet.

September 10, 1926: Gage height, 0.46 foot; discharge, 25.1 second-feet.

Daily discharge, in second-feet, of Lake Creek near Sisters, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	32	35	36		60	50	49	39	30	28	29
2	32	32	34	36		57	50	47	38	30	28	28
3	31	33	34	36		56	50		38	30	28	28
4	31	32		37		54	50		37	30	27	28
5	31	32		40	64	54	50		37	30	27	27
6	30	32		43		54	50		37	30	27	26
7	30	31		44		54	50		37	30	26	26
8	30	31	36	44		54	50	47	36	29	26	26
9	29	31		44	69	54	50		34	28	26	26
10	30	31		45	79	52	50		32	28	26	26
11	31	32		46	79	54	52		32	28	26	26
12	31	33		47	85	53	54		32	28	26	26
13	32	34	37	48	85	51	56	47	33	28	26	26
14	32	36		49	85	51	55		33	28	26	26
15	32	37		49	75	50	55		34	28	26	26
16	32	38		51	75	50	56	46	34	28	26	27
17	32	37		53	71	50	56		34	28	27	27
18	32	37		55	70	50	56		35	28	28	27
19	32	37		55	72	50	56	46	36	28	30	28
20	32	37		56	70	51	56	46	36	29	30	28
21	32	38		56	65	51	56	46	36	29	30	28
22	32	38	36	55	63	50	55	45	36	29	30	28
23	33	38		54	63	51	55	44	36	29	30	28
24	33	37		53	62	50	54	43	36	29	29	28
25	33	37		52	62	50	53	42	35	29	29	28
26	33	35			62	50	53	42	34	29	28	28
27	33	34			63	50	54	40	32	29	29	27
28	33	32		56	62	50	54	40	30	29	30	27
29	33	34			-------	50	53	40	30	29	30	27
30	33	34			-------	50	50	39	30	29	29	28
31	32	-------			-------	50	-------	39	-------	29	29	------

NOTE.—Water-stage recorder not operating satisfactorily Dec. 4–12, 14–31, Jan. 1, 2, 26–31, Feb. 1–8, May 3–12, 14–18, and Aug. 29 to Sept. 2; discharge interpolated.

Monthly discharge of Lake Creek near Sisters, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	33	29	31.7	1,950
November	38	31	34.4	2,050
December	37	34	35.9	2,210
January	56	36	49.0	3,010
February	85	62	68.9	3,830
March	60	50	52.0	3,200
April	56	50	53.0	3,150
May	49	39	45.0	2,770
June	39	30	34.6	2,060
July	30	28	28.9	1,780
August	30	26	27.8	1,710
September	29	26	27.1	1,610
The year	85	26	40.5	29,300

SHITIKE CREEK AT WARM SPRINGS, OREG.

LOCATION.—In NW. ¼ sec. 26, T. 9 S., R. 12 E., at Warm Springs, Jefferson County, 2 miles above mouth of creek and below all tributaries.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—June 11, 1911, to October 31, 1916; April 1, 1923, to September 30, 1926.

GAGE.—Vertical staff on left bank opposite store; read by L. E. See.

DISCHARGE MEASUREMENTS.—Made by wading near gage or from wagon bridges over three channels about one-fourth mile upstream.

CHANNEL AND CONTROL.—Bed composed of gravel and small boulders. Control shifts occasionally.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.56 feet on February 6 (discharge, 358 second-feet); minimum stage, 0.14 foot on September 10–15 (discharge, 39 second-feet).

1911–1916, 1923–1926: Maximum discharge recorded, 720 second-feet February 9, 1916, (gage height on old gage, 2.90 feet); minimum discharge, 32 second-feet September 7 and 13–18, 1924 (gage height, 0.20 foot).

ICE.—None.

DIVERSIONS.—Probably none above station.

REGULATION.—Practically none. There is a small power plant just above station.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined below and fairly well defined above 100 second-feet. Staff gage read to hundredths once a day except on February 6 when it was read twice. Daily discharge ascertained by applying daily gage height to rating table. Records good except for discharge above 100 second-feet, for which they are fair.

The following discharge measurements were made:

December 1, 1925: Gage height, 0.38 foot; discharge, 70 second-feet.

January 26, 1926: Gage height, 0.22 foot; discharge, 48.3 second-feet.

June 5, 1926: Gage height, 0.46 foot; discharge, 77 second-feet.

Daily discharge, in second-feet, of Shitike Creek at Warm Springs, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	46	67	56	56	97	83	116	87	54	44	51
2	49	46	90	54	56	97	83	112	87	54	44	46
3	49	49	59	54	51	94	87	108	87	54	44	44
4	49	49	59	54	101	94	87	172	90	51	44	44
5	49	46	59	59	101	94	87	161	87	51	44	44
6	49	44	62	67	208	94	83	128	87	51	44	44
7	49	44	56	62	340	90	83	120	87	51	41	44
8	46	46	54	59	295	83	83	116	83	51	41	41
9	46	49	54	56	236	83	83	87	73	51	41	41
10	46	54	54	56	196	80	87	83	73	51	41	39
11	46	59	54	54	172	76	104	87	73	49	41	39
12	46	59	59	54	150	76	104	87	67	49	41	39
13	46	56	62	54	128	83	104	90	65	49	41	39
14	46	51	62	54	120	87	108	97	65	49	41	39
15	46	51	59	54	108	90	112	101	65	46	41	39
16	49	51	59	51	97	97	139	104	65	46	41	56
17	49	51	56	51	94	94	128	112	65	46	41	51
18	49	49	56	54	94	90	128	112	65	46	46	46
19	49	49	56	54	90	87	120	128	80	46	65	44
20	49	49	59	54	87	87	116	139	73	46	59	44
21	46	49	80	51	87	87	112	128	67	46	46	44
22	46	49	94	51	83	83	104	108	65	46	46	83
23	44	49	150	51	83	83	101	97	62	46	46	80
24	44	49	150	51	83	87	101	90	62	44	46	62
25	46	49	104	51	83	83	104	90	62	44	44	56
26	49	49	87	51	87	83	108	87	62	44	44	49
27	49	51	76	51	94	80	112	87	56	44	44	46
28	46	49	73	51	94	80	112	90	56	44	44	46
29	46	49	67	54	------	76	120	90	54	44	46	49
30	46	62	62	54	------	80	120	87	54	44	46	49
31	46	------	60	59	------	90	------	83	------	44	49	------

Monthly discharge at Shitike Creek at Warm Springs, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	49	44	47.2	2,900
November	62	44	50.1	2,980
December	150	54	70.9	4,360
January	67	51	54.4	3,340
February	340	51	127	7,050
March	97	76	86.6	5,320
April	139	83	103	6,130
May	172	83	106	6,520
June	90	54	70.8	4,210
July	54	44	47.8	2,940
August	65	41	44.7	2,750
September	83	39	47.9	2,850
The year	340	39	71.0	51,400

WHITE RIVER BELOW TYGH VALLEY, OREG.

LOCATION.—In NW. ¼ sec. 8, T. 4 S., R. 14 E., just below Pacific Power & Light Co.'s plant at White River Falls, and 4½ miles below Tygh Valley, Wasco County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—November 20, 1917, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on left bank; inspected by M. F. Coberth and Ad Schmid.

DISCHARGE MEASUREMENTS.—Made from cable one-fourth mile below gage.

CHANNEL AND CONTROL.—Control of rock overlain with sand deposits; shifts occasionally.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 5.5 feet at 7 p. m. February 6 (discharge, 2,690 second-feet); minimum stage from recorder, 0.38 foot at 3.30 p. m. July 4 (discharge, 80 second-feet).

1917–1926: Maximum stage recorded, 12.9 feet at 11 a. m. January 6, 1923 (discharge, 13,300 second-feet); minimum discharge occurred December 11–14, 1919, owing to extreme cold, estimated from records at power plant at 10 second-feet.

ICE.—Stage-discharge relation not affected by ice because of mild winter.

DIVERSIONS.—Numerous small irrigation canals take out above this station.

REGULATION.—Operation of power plant above regulates flow to some extent.

ACCURACY.—Stage-discharge relation changed on February 6. Rating curve fairly well defined. Operation of water-stage recorder satisfactory except as indicated in footnote to table of daily discharge. Daily discharge ascertained by applying to rating table mean daily gage height determined from recorder graph by inspection. Gage heights applied indirectly by shifting-control method October 1 to November 13. Records good except those for October and July to September, which are fair.

Discharge measurements of White River below Tygh Valley, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 22	[a] 0.88	96	May 15	1.35	204	June 26	0.93	131
Dec. 2	1.44	271	May 22	1.32	215	Aug. 14	.57	95
Apr. 10	2.08	425	June 6	1.11	156	Sept. 17	1.05	137
Apr. 18	2.15	467	June 8	1.14	161			

[a] Large amount of sand running.

Daily discharge, in second-feet, of White River below Tygh Valley, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	131	105	218	245	271	600	478	280	188	130	102	107
2	129	105	237	240	261	582	445	274	173	130	104	108
3	125	112	208	245	242	565	430	280	169	130	99	103
4	124	108	194	237	400	565	430	370	162	134	100	100
5	127	105	210	326	680	548	415	415	158	130	97	116
6	108	104	213	445	2,000	512	400	340	158	134	96	114
7	110	102	222	326	1,650	478	415	310	158	134	98	125
8	108	104	192	284	1,500	460	385	295	149	133	97	132
9	110	107	185	264	1,020	445	400	268	142	133	97	127
10	110	124	185	250	910	430	415	248	140	130	96	122
11	108	153	196	255	788	415	478	238	136	123	95	119
12	112	158	240	245	700	445	445	228	133	127	94	117
13	105	153	245	237	620	720	430	228	129		95	106
14	105	162	222	237	548	680	430	232	133		94	110
15	102	170	203	245	530	720	445	215	133	124	94	113
16	108	179	203	237	530	720	460	208	133		99	160
17	102	174	199	274	478	660	460	225	133		100	142
18	105	194	199	261	460	620	460	295	133	122	108	139
19	102	170	199	142	445	582	460	262	137	119	124	142
20	105	162	208	237	445	565	445	253	129	118	122	137
21	102	156	400	250	430	530	430	240	130	119	107	122
22	102	158	620	263	430	512	385	218	132	119	103	160
23	102	158	788	248	415	565	365	200	134	117	101	169
24	102	158	620	237	822	548	340	198	130	119	98	133
25	104	156	478	235	965	530	325	190	130	117	96	127

Daily discharge, in second-feet, of White River below Tygh Valley, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
26	105	158	400	227	765	495	295	192	128	111	102	121
27	105	162	370	220	680	478	295	192	129	105	110	129
28	118	150	340	218	640	460	310	195	133	103	99	119
29	120	150	312	237	------	445	310	205	130	100	102	118
30	110	213	281	248	------	460	295	208	130	99	103	119
31	107	------	263	258	------	478	------	195	------	98	98	------

NOTE.—Daily staff-gage readings used Oct. 6–21, May 29–31, June 1, 15, 16, 23, and Aug. 21–26, when recorder was not operating. Discharge Nov. 14, 15, 28, and 29, when gage-height record is missing, and June 29, 30, July 1–3, 7, 8, and 13–17, when stage-discharge relation was affected by sand settling on river bed, determined by comparison with record of flow of Hood River near Powerdale.

Monthly discharge of White River below Tygh Valley, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	131	102	110	6,760
November	213	102	146	8,690
December	788	185	292	18,000
January	445	218	257	15,800
February	2,000	242	701	38,900
March	720	415	542	33,300
April	478	295	403	24,000
May	415	190	248	15,200
June	188	128	141	8,390
July	134	98	121	7,440
August	124	94	101	6,210
September	169	100	125	7,440
The year	2,000	94	263	190,000

KLICKITAT RIVER BASIN

KLICKITAT RIVER NEAR GLENWOOD, WASH.

LOCATION.—In SE. ¼ sec. 14, T. 7 N., R. 12 E., just below Dairy Creek, 2½ miles below southern boundary of Yakima Indian Reservation, 3 miles below Big Muddy Creek, and 6 miles north of Glenwood, Klickitat County.

DRAINAGE AREA.—356 square miles.

RECORDS AVAILABLE.—December 16, 1910, to June 30, 1926, with gaps in winters of 1921 to 1924. October 29, 1909, to December 15, 1910, at a point 1 mile above.

GAGE.—Stevens water-stage recorder referred to vertical staff on left bank; inspected by A. G. Hanson.

DISCHARGE MEASUREMENTS.—Made from cable just below gage.

CHANNEL AND CONTROL.—Control, heavy gravel; shifts in high water.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.99 feet at 8 a. m. April 18 (discharge, 1,750 second-feet); minimum stage recorded, 1.29 feet at time of observer's visit, September 18 (discharge, 367 second-feet).

1909–1926: Maximum stage recorded, 5.20 feet on original gage, November 24, 1909 (discharge, estimated by extension of rating curve, 6,250 second-feet); minimum discharge recorded, 285 second-feet at 1 p. m. November 13, 1915 (gage height, 0.63 foot).

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined. Operation of water-stage recorder satisfactory except February 27 to March 20 and May 21 to September 30. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection. Records good except for periods discharge was estimated, for which they are fair.

The following discharge measurements were made:
October 18, 1925: Gage height, 1.42 feet; discharge, 427 second-feet.
March 21, 1926: Gage height, 2.07 feet; discharge, 756 second-feet.
May 15, 1926: Gage height, 2.10 feet; discharge, 803 second-feet.

Daily discharge, in second-feet, of Klickitat River near Glenwood, Wash., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1	391	407	476	421	418		960	1,330
2	397	404	490	421	414		906	1,210
3	397	400	444	428	444		862	1,210
4	397	394	440	435	525		806	1,390
5	394	391	458	545	545		782	1,270
6	397	397	466	550	632		768	1,210
7	397	397	453	495	687		745	1,020
8	397	394	448	471	606		745	933
9	397	394	440	458	626		790	870
10	400	397	448	444	619		854	822
11	400	440	535	424	586	645	951	798
12	400	424	545	421	555		1,050	798
13	400	414	500	407	545		1,080	830
14	404	410	476	432	530		1,210	830
15	404	414	471	444	520		1,390	790
16	407	421	453	505	515		1,450	768
17	407	418	448	520	505		1,450	782
18	407	418	444	476	500		1,690	870
19	410	414	435	453	510		1,630	888
20	418	410	440	453	500		1,510	897
21	421	407	448	448	495	768	1,390	
22	414	391	520	444	485	768	1,270	
23	410	391	768	440	510	897	1,150	
24	407	400	738	432	530	879	1,120	
25	407	404	626	428	520	838	1,120	
26	404	397	575	421	515	854	1,140	806
27	418	397	540	418	515	806	1,210	
28	428	397	555	432	515	782	1,330	
29	421	397	485	428	-------	790	1,450	
30	414	407	466	424	-------	906	1,450	
31	410	-------	448	424	-------	1,005	-------	

NOTE.—Because recorder was not operating, discharge estimated from maximum and minimum stages indicated by recording pencil and by a comparison with gage-height graph for Lewis River near Cougar for Feb. 27–28, Mar. 1–20, and May 21–31. Daily discharge on June 27 was 515 second-feet and on Sept. 18 was 367 second-feet; based on staff-gage readings.

Monthly discharge of Klickitat River near Glenwood, Wash., for the year ending September 30, 1926

[Drainage area, 356 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	428	391	406	1.14	1.31	25,000
November	440	391	405	1.14	1.27	24,100
December	768	435	499	1.40	1.61	30,700
January	550	407	450	1.26	1.45	27,700
February	687	414	531	1.49	1.55	29,500
March	1,000		716	2.01	2.32	44,000
April	1,690	745	1,140	3.20	3.57	67,800
May	1,390	768	916	2.57	2.96	56,300
June			570	1.60	1.78	33,900
The period						339,000

NOTE.—Figures for June estimated from maximum and minimum stages indicated by recording pencil, staff-gage reading on June 27, and from gage-height graph for Lewis River near Cougar.

HOOD RIVER BASIN

HOOD RIVER AT POWERDALE, NEAR HOOD RIVER, OREG.

LOCATION.—In SE. ¼ sec 36, T. 3 N., R. 10 E., at Powerdale, three-fourths mile south of Hood River, Hood River County, above discharge of tailrace of Powerdale plant of Pacific Power & Light Co., and 1½ miles above mouth of stream.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 31, 1913, to September 30, 1926.

GAGE.—Friez water-stage recorder on right bank near power plant, about 1,000 feet above railroad bridge; inspected by R. E. Fewel and P. C. Agee.

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

CHANNEL AND CONTROL.—Bed composed of rock and boulders; shifts slightly.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 6.24 feet at 11 a. m. February 6 (discharge, 6,240 second-feet); minimum stage recorded, 1.45 feet for 10 hours on August 9 (discharge, 3 second-feet).

Minimum combined discharge of river and conduit recorded, 89 second-feet at 7 p. m. August 8; in river (gage height, 1.83 feet); conduit, zero.

1913–1926: Maximum stage recorded, 10.1 feet January 6, 1923 (discharge, 34,000 second-feet); minimum discharge, including conduit, that of August 8, 1926.

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

DIVERSIONS.—Large diversions for irrigation above station; water for power plant is diverted around gage. A record is kept of this diversion (p. 95).

REGULATION.—Water stored at sawmill at Dee has caused sudden fluctuations at low water in former years.

ACCURACY.—Stage-discharge relation changed slightly below 370 second-feet during high water on February 6. Rating curves used fairly well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined from recorder graph by inspection, or, for days of considerable variation in stage, by averaging the results obtained by applying the gage heights for shorter intervals to the rating table. Records good except for discharges below 10 second-feet, for which they are fair.

Discharge measurements of Hood River at Powerdale, near Hood River, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 20	1.61	43.3	June 3	1.60	25.8
Mar. 25	2.84	562	Sept. 14	1.55	16.7

Daily discharge, in second-feet, of Hood River at Powerdale, near Hood River, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	63	528	216	224	1,180	498	98	26	10	24	5[illegible]
2	48	63	600	196	200	1,020	468	92	24	12	10	47
3	40	56	361	182	182	920	510	60	24	13	10	23
4	74	48	307	165	695	875	588	395	22	13	6	3[illegible]
5	48	60	330	471	1,510	830	510	335	21	36	7	22
6	33	63	395	649	5,660	750	504	230	44	39	8	3[illegible]
7	63	53	240	432	5,520	750	492	180	19	13	6	1[illegible]
8	58	74	182	352	3,700	600	486	166	21	10	7	15
9	53	48	148	302	2,370	536	540	180	10	13	4	21
10	53	71	172	276	2,160	492	528	95	12	17	8	34
11	126	176	356	232	1,700	450	528	63	12	26	7	29
12	74	244	576	216	1,400	576	492	63	15	21	6	17
13	48	126	510	212	1,120	920	330	58	12	12	6	17
14	56	48	325	232	920	970	315	60	12	6	6	22
15	68	152	272	380	830	970	350	58	12	6	29	42
16	63	135	224	334	790	790	390	162	7	6	12	114
17	53	289	172	462	750	790	345	134	10	7	36	47
18	87	224	142	361	710	750	468	194	7	22	207	31
19	63	139	132	284	750	710	370	159	15	10	198	47
20	63	97	193	248	790	670	330	194	17	8	66	21
21	63	58	1,200	289	1,020	614	270	207	15	8	36	26
22	50	46	1,760	289	1,020	594	275	198	15	8	49	465
23	48	38	3,180	236	1,020	570	216	170	12	8	34	261
24	43	37	1,960	212	2,950	614	176	104	10	8	39	92
25	165	84	1,570	172	2,520	558	159	55	12	12	60	36
26	60	100	1,020	155	1,960	510	220	58	15	12	58	39
27	50	74	670	142	1,640	480	138	69	21	12	26	21
28	94	63	528	132	1,450	480	142	60	15	12	24	21
29	81	63	415	155	------	410	152	58	12	12	66	34
30	53	126	338	204	------	390	138	168	12	12	36	17
31	53	------	289	240	------	468	------	39	------	13	36	------

Monthly discharge of Hood River at Powerdale, near Hood River, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	165	33	64.7	3,980
November	289	37	97.3	5,790
December	3,180	132	616	37,900
January	649	132	272	16,700
February	5,660	182	1,630	90,500
March	1,180	390	685	42,100
April	588	138	364	21,700
May	395	39	134	8,240
June	44	7	16.0	952
July	39	6	13.5	830
August	207	4	36.4	2,240
September	465	15	57.2	3,400
The year	5,660	4	323	234,000

Combined daily discharge, in second-feet, of Hood River and Pacific Power & Light Co.'s conduit at Powerdale, near Hood River Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	427	380	990	676	694	1,460	821	563	440	302	248	479
2	414	382	1,060	659	669	1,350	794	536	426	284	242	389
3	388	383	825	646	649	1,230	847	530	424	291	242	301
4	394	367	767	630	1,140	1,180	845	867	425	306	248	417
5	377	373	794	932	1,970	1,130	824	806	454	332	233	343
6	385	373	715	1,110	6,000	1,050	831	697	470	385	236	333
7	377	366	705	894	5,770	975	830	651	470	363	235	336
8	374	366	646	813	3,970	965	805	636	466	294	222	334
9	369	365	612	766	2,730	926	832	601	393	313	233	322
10	369	454	642	737	2,520	898	837	570	363	379	242	341
11	402	573	821	696	2,050	856	830	528	356	355	246	346
12	401	660	1,050	680	1,730	895	799	522	343	395	237	306
13	378	563	976	672	1,430	1,260	794	514	320	404	232	331
14	384	482	788	696	1,210	1,200	786	512	309	348	227	339
15	380	517	738	841	1,200	1,270	826	489	308	312	217	378
16	388	588	688	798	1,170	1,240	860	420	289	306	250	562
17	380	749	639	908	1,100	1,110	817	539	259	290	297	457
18	368	661	603	793	1,030	1,080	762	669	292	272	577	453
19	378	561	593	749	1,080	1,020	742	634	330	260	648	413
20	383	528	638	715	1,130	987	739	668	345	248	510	385
21	394	508	1,640	755	1,320	940	737	680	291	254	387	396
22	388	479	2,200	754	1,400	878	751	589	281	266	355	922
23	369	466	3,600	704	1,410	860	686	565	296	266	341	717
24	379	458	2,310	644	3,310	908	646	557	333	287	371	537
25	369	540	1,660	637	2,860	856	627	495	366	310	396	473
26	382	557	1,360	621	2,280	811	621	470	384	294	443	451
27	388	532	1,130	608	1,950	781	612	524	380	257	394	429
28	434	513	986	597	1,660	702	614	499	323	247	371	425
29	412	515	840	622	-------	703	626	509	318	249	416	468
30	388	585	801	670	-------	737	609	462	326	265	376	431
31	379	-------	756	679	-------	792	-------	453	-------	273	402	------

Monthly discharge of Hood River and Pacific Power & Light Co.'s conduit at Powerdale, near Hood River, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	434	368	387	23,800
November	749	365	495	29,500
December	3,600	593	1,050	64,600
January	1,110	597	732	45,000
February	6,000	649	1,980	110,000
March	1,460	702	1,000	61,500
April	860	609	760	45,200
May	867	420	574	35,300
June	470	281	360	21,400
July	404	247	303	18,600
August	648	217	325	20,000
September	922	301	427	25,400
The year	6,000	217	691	500,000

EAST FORK IRRIGATION DISTRICT CANAL NEAR MOUNT HOOD, OREG.

LOCATION.—In SE. ¼ sec. 33, T. 1 N., R. 10 E., 1 mile below point of diversion, 1½ miles south of Mount Hood post office, Hood River County, and 2 miles east of Parkdale station on the Mount Hood Railroad.

RECORDS AVAILABLE.—June 17, 1913, to September 30, 1926; irrigation seasons only.

GAGE.—Stevens water-stage recorder on left side of canal just below road crossing; inspected by A. C. Shaw.

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

CHANNEL AND CONTROL.—Channel is smooth earth section. Head of flume probably acts as control; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 3.23 feet at 11 p. m. June 23 (discharge, 138 second-feet); canal dry at times.

1913–1926: Maximum discharge recorded, 153 second-feet July 9, 1919 (gage height, 3.42 feet); canal dry at times.

ICE.—No water carried in cold weather.

ACCURACY.—Stage-discharge relation changing August 20 to September 30, owing to exceptionally large amount of glacial sand carried. Rating curve well defined. Operation of water-stage recorder satisfactory except as stated in footnote to table of daily discharge. Daily discharge April 28 to August 19 ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records good except for estimated periods.

COOPERATION.—Record furnished by the State engineer of Oregon.

Discharge measurements of East Fork Irrigation District Canal near Mount Hood Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 7	2.75	102	July 12	3.08	130	Sept. 8	[a] 3.34	57
June 2	3.08	122	July 30	2.86	105	Sept. 15	[a] 3.15	29.2
July 9	3.05	116	Aug. 11	2.48	86			

[a] Stage-discharge relation affected by sand moving in channel.

Daily discharge, in second-feet, of East Fork Irrigation District Canal near Mount Hood, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1		83	127	127	102		16		98	131	116	88	
2		94	127	123	98		17		102	131	112	94	
3		94	127	123	98		18		102	131	112	94	
4		102	127	127	98		19		102	135	108	82	
5		102	131	127	94	62	20		100	119	108		
6		102	131	131	94		21		100	123	108		
7		102	127	127	94		22		98	131	112		
8		102	127	123	94	57	23		98	135	112		25
9		102	131	123	94		24		105	135	112		
10		98	131	123	94		25		112	135	112	75	
11		98	127	127	94	43	26		119	131	112		
12		102	123	127	91		27		119	129	108		
13		102	123	127	88		28	91	119	129	102		
14		98	127	123	88		29	94	119	127	105		
15		98	127	116	88	29	30	94	123	127	105		
							31		123		102		

NOTE.—Water-stage recorder not operating May 20–21, June 27–28, Aug. 24, and Sept. 1–30; staff gage read Sept. 8 and 15. Stage-discharge relation changing continually after Aug. 19. Discharge interpolated May 20–21, June 27–28, Aug. 20–31, Sept. 1–7, and 9–14; discharge estimated from observer's notes Sept. 16–30.

Monthly discharge of East Fork Irrigation District Canal near Mount Hood, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 28-30	94	91	93	553
May	123	83	104	6,400
June	135	119	129	7,680
July	131	102	117	7,190
August	102	----------	86.0	5,290
September	----------	----------	38.4	2,280
The period	----------	----------	----------	29,400

FARMERS CANAL NEAR OAKGROVE, OREG.

LOCATION.—In SW. ¼ sec. 20, T. 2 N., R. 10 E., 300 feet below mouth of flume crossing Ditch Creek, 2 miles below head of canal and 2 miles south of Oakgrove, Hood River County.

RECORDS AVAILABLE.—May 1 to August 30, 1917; July 7 to September 30, 1920; July 1 to September 30, 1921; June 1 to September 30, 1922; May 16 to August 31, 1925; and April 25 to September 2, 1926.

GAGE.—Vertical staff nailed to clump to oak trees on left bank; gage read by W. C. Davis. Prior to 1925 gage was 1 mile farther up canal in SE. ¼ sec. 30.

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

CHANNEL AND CONTROL.—Channel is earth section. Bed composed of hardpan; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period April 25 to September 2, 1926, 2.6 feet on several days in June, July, and August (discharge, 59 second-feet); minimum stage recorded, 1.9 feet April 25, May 8–9, and September 2 (discharge, 34 second-feet).

1917, 1920–1922, 1925–26: Maximum discharge recorded, 67 second-feet on several days in July and August, 1920.

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

COOPERATION.—Record furnished by State engineer of Oregon.

Farmers Canal diverts from right bank of Hood River in SE. ¼ sec. 36, T. 2 N., R. 9 E. Water is used for irrigating west side of Hood River Valley near Oakgrove and Rockford.

Discharge measurements of Farmers Canal near Oakgrove, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 6	2.40	53	July 12	2.56	61	Aug. 12	2.58	56
May 27	2.38	53	July 22	2.56	57	Sept. 2	1.88	34.6
June 30	2.56	56						

Daily discharge, in second-feet, of Farmers Canal near Oakgrove, Oreg., for the period April 25 to September 2, 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1		50	52	58	59	35	16		50	58	58	59	
2		50	52	58	59	34	17		52	58	58	59	
3		52	54	58	59		18		52	58	58	59	
4		54	54	58	59		19		52	58	58	59	
5		54	56	58	59		20		52	58	58	58	
6		54	58	58	59		21		52	58	58	56	
7		52	58	58	59		22		52	58	58	52	
8		34	58	58	59		23		52	58	58	49	
9		34	58	58	59		24		52	58	59	45	
10		36	58	58	59		25	34	52	59	59	43	
11		47	58	58	59		26	38	52	59	58	43	
12		47	58	58	59		27	43	52	58	58	41	
13		50	56	58	59		28	50	52	58	58	38	
14		50	56	58	59		29	50	52	58	58	36	
15		50	58	58	59		30	50	52	58	58	36	
							31		52		58	36	

NOTE.—No gage-height record Aug. 29 to Sept. 1; discharge interpolated.

Monthly discharge of Farmers Canal near Oakgrove, Oreg., for the period April 25 to September 2, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 25–30	50	34	44.2	525
May	54	34	49.8	3,060
June	59	52	57.2	3,400
July	59	58	58.1	3,570
August	59	36	53.4	3,280
The period				13,800

PACIFIC POWER & LIGHT CO.'S CONDUIT NEAR HOOD RIVER, OREG.

LOCATION.—In NE. ¼ sec. 36, T. 3 N., R. 10 E., at new power house on Hood River, half a mile southeast of Hood River, Hood River County.

RECORDS AVAILABLE.—May 1, 1923, to September 30, 1926. Also on tailrace of old plant October 1, 1913, to September 30, 1914, and January 1, 1916, to July 31, 1922, when operation of plant was discontinued.

GAGE.—Indicating dial of Venturi meter read every hour and integrating wattmeter read once a day at midnight by operator on duty at power house.

DISCHARGE MEASUREMENTS.—Made from collar of flume between diversion dam and intake to pipe line, 2½ miles above power house.

EXTREMES OF DISCHARGE.—Maximum daily output, 157,100 kilowatt-hours on April 15 (discharge, 476 second-feet); minimum discharge, zero when plant was shut down, which was only a few hours during the year.

1913–14, 1916–1926: Maximum discharge, that of April 15, 1926; plant shut down at times.

ACCURACY.—Relation of discharge in second-feet to electrical load in kilowatts practically permanent as operating head varies only about 5 feet from an average of about 195 feet. Kilowatt-discharge relation curve fairly well defined; from this curve, which is a straight line, has been prepared a rating table showing relation between output in kilowatt-hours for 24 hours and discharge in second-feet. Integrating wattmeter read once a day at midnight. Daily discharge ascertained by applying to rating table daily output in kilowatt-hours. Records excellent.

Pacific Power & Light Co.'s conduit diverts from Hood River in SE. ¼ sec. 11, T. 2 N., R. 10 E., immediately below mouth of Neal Creek. Water is returned to river in NE. ¼ sec. 36, T. 3 N., R. 10 E., being diverted around gage on Hood River at Powerdale, near Hood River.

The following discharge measurements were made:

March 25, 1926: Electric output, 3,700 kilowatts; discharge, 286 second-feet.

September 14, 1926: Electric output, 4,000 kilowatts; discharge, 314 second-feet.

Daily discharge, in second-feet, of Pacific Power & Light Co.'s conduit near Hood River, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	353	317	462	460	470	275	323	465	414	292	224	421
2	366	319	463	463	469	330	326	444	402	272	232	342
3	348	327	464	464	467	313	337	470	400	278	232	272
4	320	319	460	465	445	309	257	472	403	293	242	383
5	329	313	464	461	464	300	314	471	433	296	226	321
6	352	310	320	465	344	301	327	467	426	346	228	294
7	314	313	465	462	252	225	338	471	451	350	229	317
8	316	292	464	461	274	365	319	470	445	284	215	319
9	316	317	464	464	356	390	292	421	383	300	234	301
10	316	383	470	461	360	406	309	475	351	362	234	307
11	276	397	465	464	347	406	302	465	344	329	239	317
12	327	416	470	464	328	319	307	459	328	374	231	289
13	330	437	466	460	314	339	464	456	308	392	226	314
14	328	434	463	464	288	231	471	452	297	342	221	317
15	312	365	466	461	366	298	476	431	296	306	188	336
16	325	453	464	464	378	447	470	258	282	300	238	448
17	327	460	467	446	350	318	472	455	279	283	261	410
18	281	437	461	432	317	325	294	475	285	250	370	422
19	315	422	461	465	335	311	372	475	315	250	450	366
20	320	431	445	467	340	317	459	474	328	240	444	364
21	331	450	441	466	301	326	467	473	276	246	351	370
22	338	433	437	465	377	284	476	391	266	258	306	457
23	321	428	420	468	385	290	470	395	284	258	307	456
24	336	421	352	432	356	294	470	453	323	279	332	445
25	204	456	89	465	336	298	468	440	354	298	336	437
26	322	457	342	466	322	301	401	412	369	282	385	412
27	338	458	460	466	308	301	474	455	359	245	368	408
28	340	450	458	465	215	222	472	439	308	235	347	404
29	331	452	465	467	-------	293	474	451	306	237	350	434
30	335	459	463	466	-------	347	471	294	314	253	340	414
31	326	-------	467	439	-------	324	-------	414	-------	260	366	-------

Monthly discharge of Pacific Power & Light Co.'s conduit near Hood River, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	366	204	322	19,800
November	460	292	398	23,700
December	470	89	436	26,800
January	468	432	461	28,300
February	470	215	352	19,500
March	447	222	316	19,400
April	476	257	396	23,600
May	475	258	440	27,100
June	451	266	344	20,500
July	392	235	290	17,800
August	450	188	289	17,800
September	457	272	370	22,000
The year	476	89	368	266,000

WHITE SALMON RIVER BASIN

WHITE SALMON RIVER NEAR UNDERWOOD, WASH.

LOCATION.—In NW. ¼ sec. 14, T. 3 N., R. 10 E., 200 yards below Northwestern Electric Co.'s Condit power plant, 2 miles north of Underwood, Skamania County.

DRAINAGE AREA.—384 square miles (measured on map of Columbia National Forest).

RECORDS AVAILABLE.—March 1, 1915, to September 30, 1926. October 18, 1912, to February 26, 1913, at dam about 1 mile above.

GAGE.—Water-stage recorder on right bank; inspected by D. J. Shore, foreman of power plant.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Bed composed of rock and gravel; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 4.75 feet at 11 a. m. February 6 (discharge, 2,780 second-feet); minimum discharge, practically zero, when plant was occasionally shut down.

1915–1926: Maximum stage from high-water marks, 9.5 feet (old gage datum) December 29, 1917 (discharge, about 9,700 second-feet); minimum stage occurs when power plant is occasionally shut down suddenly, recorder does not operate to such low stages, discharge practically zero.

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

DIVERSIONS.—About 3,500 acres irrigated above this station.

REGULATION.—At low and medium stages practically all the water is used through the wheels of the power plant. Pond above dam covers about 80 acres; daily discharge has been corrected for storage.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined. Operation of water-stage recorder satisfactory except as indicated in footnote to table of daily discharge. Daily discharge ascertained by discharge integrator except as indicated in footnote to table of daily discharge. Records excellent.

Discharge measurements of White Salmon River near Underwood, Wash., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 19	2.32	784	Mar. 26	3.17	1,270	June 3	0.58	177
Mar. 26	3.18	1,270	June 2	1.86	551	July 29	2.37	819

Daily discharge, in second-feet, of White Salmon River near Underwood, Wash., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	576	496	585	615	643	1,220	1,150	852	697	571	483	478
2	571	503	633	611	619	1,180	1,110	818	672	573	498	497
3	562	497	571	584	642	1,220	1,130	816	659	575	502	474
4	556	506	550	591	823	1,110	1,090	1,010	638	559	473	453
5	541	503	580	667	1,230	1,090	1,030	1,090	644	567	473	468
6	579	492	559	824	2,320	1,040	1,050	1,040	623	553	489	451
7	575	489	527	741	2,550	1,030	1,050	987	634	578	489	464
8	583	493	535	701	2,140	994	1,030	960	616	540	469	450
9	547	520	534	653	1,800	980	1,070	934	629	534	489	440
10	529	538	532	644	1,690	970	1,060	926	627	567	481	450

Daily discharge, in second-feet, of White Salmon River near Underwood, Wash., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	527	627	637	619	1,550	942	1,120	901	611	546	479	444
12	544	611	766	609	1,390	1,000	1,110	880	599	512	473	437
13	534	552	703	587	1,260	1,070	1,110	854	636	552	458	443
14	545	547	634	599	1,170	1,130	1,130	835	611	502	475	442
15	514	565	603	600	1,130	1,190	1,180	821	610	552	475	453
16	537	578	579	624	1,120	1,250	1,190	777	604	529	473	477
17	527	594	576	763	1,070	1,250	1,130	798	628	513	465	500
18	543	583	551	727	1,040	1,190	1,090	855	629	509	495	482
19	520	565	551	701	1,040	1,180	1,200	840	626	512	474	451
20	519	532	567	661	1,120	1,150	1,180	909	645	512	474	442
21	517	527	630	661	1,190	1,170	1,220	822	630	506	488	481
22	530	524	774	651	1,190	1,100	1,050	859	629	504	480	586
23	517	527	1,030	666	1,200	1,160	1,010	851	627	495	477	593
24	523	520	1,140	628	1,420	1,200	1,000	807	615	497	474	529
25	534	519	951	623	1,480	1,140	888	768	628	493	478	488
26	516	512	888	618	1,400	1,120	907	727	614	504	482	475
27	506	511	787	605	1,310	1,110	914	704	615	495	492	468
28	526	501	726	616	1,240	1,050	898	712	599	497	496	493
29	525	498	690	629	-------	1,050	899	721	593	475	453	494
30	495	495	663	650	-------	1,090	874	689	586	493	477	498
31	491	-------	646	644	-------	1,150	-------	710	-------	489	477	------

NOTE.—Because water-stage recorder was not operating satisfactorily, daily discharge computed from electrical output of power plant Oct. 6–9, 18, Jan. 6, Mar. 3–12, Apr. 13–14, May 6, 25–28, and Sept. 16–20. Daily discharge based on mean daily gage height, as determined by inspection from recorder graph, Feb. 25–28. Daily discharge has been corrected for storage.

Monthly discharge of White Salmon River near Underwood, Wash., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	583	491	536	33,000
November	627	489	531	31,600
December	1,140	527	668	41,100
January	824	584	649	39,900
February	2,550	619	1,310	72,800
March	1,250	942	1,110	68,200
April	1,220	874	1,060	63,100
May	1,090	689	848	52,100
June	697	586	626	37,200
July	578	475	526	32,300
August	502	453	479	29,500
September	593	437	477	28,400
The year	2,550	437	732	529,000

NOTE.—Discharge corrected for storage at power plant.

SANDY RIVER BASIN

SANDY RIVER ABOVE SALMON RIVER, AT BRIGHTWOOD, OREG.

LOCATION.—In SW. ¼ sec. 24, T. 2 S., R 6 E., just back of the post office of Brightwood, Clackamas County, and three-fourths mile above mouth of Salmon River.

DRAINAGE AREA.—117 square miles, measured on Mt. Hood topographic map.

RECORDS AVAILABLE.—May 17, 1910, to December 31, 1912; March 1 to September 30, 1914; and March 11 to September 30, 1926.

GAGE.—Vertical staff on left pier of bridge; read by J. T. McIntyre.

DISCHARGE MEASUREMENTS.—Made by wading or from cable 2 miles upstream.

CHANNEL AND CONTROL.—Bed composed of rocks, sand, and gravel; shifts during floods. Banks high and not overflowed. Two channels at bridge join a short distance below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period March 11 to September 30, 2.10 feet during afternoon of March 12 and morning of March 13 (discharge, 910 second-feet); minimum stage recorded, 0.60 foot during mornings of July 29 and August 2 (discharge, 165 second-feet).

1910–1912, 1914, and 1926: Maximum stage, 6.8 feet January 13, 1912 (discharge, 6,940 second-feet); minimum stage, that of July 29 and August 2, 1926.

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent March 11 to August 16, changed frequently August 17 to September 30, owing to sand bars forming and washing out below gage. Rating curve fairly well defined during first period; no discharge measurements available to indicate time and amount of shifts during second period. Gage read to hundredths twice a day. Daily discharge March 11 to August 16 ascertained by applying mean daily gage height to rating table. Mean discharge for periods August 17 to September 30, estimated from comparison with the records of flow of Sandy River near Marmot and of Salmon River near Welches. Records good except for periods discharge was estimated, for which they are fair.

Discharge measurements of Sandy River above Salmon River, at Brightwood, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 13	0.38	195	Apr. 20	1.29	442	June 23	0.97	293
Mar. 30	1.30	463	May 18	1.40	498	Aug. 3	.66	185

Daily discharge, in second-feet, of Sandy River above Salmon River, at Brightwood, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		515	346	410	260	179	
2		475	337	396	249	179	
3		545	355	386	252	200	
4		550	540	396	282	193	
5		578	540	382	314	196	
6		578	460	410	328	210	
7		550	430	410	282	204	
8		545	420	400	246	196	
9		525	400	324	310	200	
10		535	373	310	337	224	
11	495	540	355	294	328	214	
12	720	505	346	286	314	220	
13	875	480	350	286	298	210	
14	875	470	350	310	260	207	
15	875	480	342	294	235	214	
16	810	470	319	278	235	228	360
17	720	445	490	282	224		
18	660	435	495	282	207		
19	578	440	460	386	193		
20	660	450	495	346	196		
21	578	425	530	286	207		
22	550	465	475	282	214		
23	630	410	465	310	214		
24	550	391	470	342	224	300	
25	520	378	430	328	235		
26	500	373	415	319	204		
27	485	373	475	319	182		
28	465	373	450	252	193		
29	450	378	490	294	186		
30	450	364	470	282	186		
31	485	-------	420	-------	193		-------

NOTE.—No record Oct. 1 to Mar. 10. Discharge Aug. 17 to Sept. 30 determined by comparison with records of flow of Sandy River near Marmot and of Salmon River near Welches.

Monthly discharge of Sandy River above Salmon River, at Brightwood, Oreg., for the year ending September 30, 1926

[Drainage area, 117 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
March 11-31	875	450	616	5.26	4.11	25,700
April	578	364	468	4.00	4.46	27,800
May	540	319	429	3.67	4.23	26,400
June	410	252	329	2.81	3.14	19,600
July	337	182	245	2.09	2.41	15,100
August		179	251	2.15	2.48	15,400
September			a 360	3.08	3.44	21,400
The period						151,000

a Estimated.

SANDY RIVER NEAR MARMOT, OREG.

LOCATION.—In SE. ¼ sec. 24, T. 2 S., R. 5 E., on Vanderhoof ranch, 1½ miles above Marmot post office, Clackamas County, 2 miles above Sandy River dam of Portland Electric Power Co., and 5 miles below mouth of Salmon River.

DRAINAGE AREA.—262 square miles (measured on topographic map).

RECORDS AVAILABLE.—August 15, 1911, to December 21, 1915, and July 1, 1919, to September 30, 1926. Combined discharge of Sandy River and canal gives same results for the gap in record.

GAGE.—Stevens 8-day water-stage recorder on right bank; inspected by employees of Portland Electric Power Co.

DISCHARGE MEASUREMENTS.—Made from a cable 1 mile below gage.

CHANNEL AND CONTROL.—Bed composed of rocks and gravel; may shift slightly.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 9.5 feet at 11 a. m. February 6 (discharge, 9,300 second-feet); minimum stage recorded, 2.00 feet at 10 a. m. to 12 p. m. October 24 (discharge, 253 second-feet).

1911–1926: Maximum stage recorded, 17.5 feet about noon of January 6, 1923 (discharge from extension of rating curve, 29,200 second-feet); minimum discharge recorded, that of October 24, 1926.

ICE.—Stage-discharge relation apparently unaffected by ice.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent during year. Rating curve well defined. Operation of water-stage recorder satisfactory except during portions of August and September when well and intake pipe were clogged with glacial silt. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records good.

Discharge measurements of Sandy River near Marmot, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 27	2.13	293	May 6	3.33	857	Sept. 9	2.20	330
Feb. 9	5.65	2,970	May 14	2.80	598			
Feb. 24	8.32	7,360	July 27	2.15	295			

Daily discharge, in second-feet, of Sandy River near Marmot, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	309	283	1,230	728	1,110	2,140	990	560	722	389	302	522
2	296	280	1,450	692	1,030	1,960	912	545	664	381	305	452
3	286	299	1,190	692	950	1,770	1,070	565	620	378	299	363
4	283	296	1,030	692	1,450	1,630	1,190	950	603	397	309	335
5	277	286	1,030	1,540	2,300	1,500	1,230	1,070	570	417	302	325
6	274	280	990	1,720	7,700	1,320	1,190	912	586	434	309	322
7	274	274	875	1,230	6,210	1,230	1,110	779	586	397	302	335
8	274	274	760	1,070	4,150	1,190	1,070	734	555	378	296	322
9	271	283	698	950	3,200	1,110	1,030	704	500	409	302	322
10	271	332	680	840	3,090	990	990	658	475	434	305	315
11	271	505	766	760	2,580	950	1,030	614	456	425	299	283
12	271	728	1,270	704	2,230	1,320	950	586	443	417	296	283
13	271	704	1,320	669	1,910	1,820	912	576	430	393	289	277
14	271	598	990	716	1,680	1,770	875	570	434	359	283	274
15	268	636	875	805	1,580	1,820	840	555	443	339	289	315
16	265	669	840	875	1,580	1,630	805	535	421	335	296	630
17	262	990	798	1,070	1,580	1,450	772	669	413	325	322	642
18	262	1,070	779	990	1,500	1,320	716	798	409	305	753	581
19	259	772	760	912	1,450	1,190	710	753	564	305	1,070	505
20	265	620	1,330	912	1,630	1,320	760	792	560	305	581	461
21	271	520	5,070	1,820	1,860	1,190	698	912	461	315	446	510
22	268	425	4,440	1,860	2,000	1,110	805	805	438	325	386	1,210
23	256	430	5,070	1,580	2,000	1,270	704	792	443	325	386	1,190
24	253	417	3,200	1,400	6,070	1,110	658	840	475	335	378	912
25	277	550	2,230	1,230	4,750	1,030	636	779	470	335	336	722
26	277	598	1,770	1,070	3,420	990	620	792	461	322	404	630
27	312	875	1,400	990	2,780	912	608	840	438	302	386	568
28	413	760	1,190	912	2,380	875	603	786	401	302	336	568
29	359	734	1,030	1,190	-------	840	608	950	413	309	336	652
30	312	990	912	1,190	-------	840	598	875	421	315	352	722
31	296	-------	805	1,070	-------	912	-------	772	-------	315	386	-------

NOTE.—Intake pipe to float well clogged Aug. 21 to Sept. 1; discharge is flow in Sandy River Canal plus 4 second-feet estimated leakage.

Monthly discharge of Sandy River near Marmot, Oreg., for the year ending September 30, 1926

[Drainage area, 262 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	413	253	283	1.08	1.24	17,400
November	1,070	274	549	2.10	2.34	32,700
December	5,070	680	1,510	5.76	6.64	92,800
January	1,860	669	1,060	4.05	4.67	65,200
February	7,700	950	2,650	10.1	10.52	147,000
March	2,140	840	1,310	5.00	5.76	80,600
April	1,230	598	856	3.27	3.65	50,900
May	1,070	535	744	2.84	3.27	45,700
June	722	401	496	1.89	2.11	29,500
July	434	302	355	1.35	1.56	21,800
August	1,070	283	376	1.44	1.66	23,100
September	1,210	274	520	1.98	2.21	30,900
The year	7,700	253	881	3.36	45.63	638,000

ZIGZAG RIVER AT TWIN BRIDGES, NEAR RHODODENDRON, OREG.

LOCATION.—In NW. ¼ sec. 11, T. 3 S., R. 7 E., 200 feet above upper of the Twin Bridges on the Mount Hood Loop Highway and 5½ miles above Rhododendron, Clackamas County.

DRAINAGE AREA.—5.2 square miles (measured on topographic map).

RECORDS AVAILABLE.—March 17 to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder; inspected by engineers of United States Geological Survey.

DISCHARGE MEASUREMENTS.—Made from foot log or by wading.

CHANNEL AND CONTROL.—Artificial log control just below gage; may shift from changes in velocity of approach.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 1.18 feet at 1 p. m. August 18 (discharge, about 54 second-feet); minimum stage, 0.78 foot during morning hours of August 10 and 11 (discharge, about 9 second-feet).

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

DIVERSIONS.—None.

REGULATIONS.—None.

ACCURACY.—Stage-discharge relation changing June 27 to August 17; practically permanent before and after those dates. Rating curves fairly well defined. Operation of water-stage recorder satisfactory except as indicated in footnote to daily discharge. Daily discharge after March 29 ascertained by applying to rating table mean daily gage height determined from recorder graph by inspection except June 27 to August 17, when shifting-control method was used. Records good except for estimated period, for which they are fair.

Discharge measurements of Zigzag River at Twin Bridges, near Rhododendron, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 18	(a)	32.5	Apr. 22	1.21	33.2	Aug. 4	0.93	19.2
Mar. 25	1.21	34.1	June 24	1.14	24.0	Sept. 3	.88	17.4

a Gage height not determined.

Daily discharge, in second-feet, of Zigzag River at Twin Bridges, near Rhododendron, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		33	33	24	24	21	22
2		30	33	24	24	20	21
3		29	34	25	23	20	20
4		29	41	27	23	21	18
5		29	34	28	23	20	17
6		28	30	29	23	21	19
7		30	29	29	20	18	22
8		32	28	27	20	19	21
9		32	29	25	22	17	18
10		33	28	24	22	15	19
11		33	28	24	22	16	
12		32	29	24	23	18	
13		33	29	23	23	18	
14		34	28	24	22	19	
15		36	27	23	22	20	
16		36	28	22	22	20	
17	33	34	30	22	22	23	
18	33	33	32	24	23	42	
19	33	33	32	28	23		
20	33	33	34	25	24		22
21	33	32	34	23	24		
22	33	32	32	24	23		
23	33	32	30	24	21		
24	33	32	30	25	21		
25	33	33	28	25	20	24	
26	33	33	27	24	19		
27	33	34	27	24	21		
28	33	34	25	22	20		
29	33	36	27	23	21		
30	34	34	25	23	21		
31	34		24		20		

NOTE.—Daily discharge Mar. 17–25 determined from temporary staff-gage readings and two discharge measurements. Discharge interpolated Mar. 21 and 26–29, for which gage-height record is missing. Because of no connection between float well and river on Aug. 19–31, Sept. 1, 2, and 11–30 discharge determined by study of hydrographs of Zigzag River at Rhododendron and of Little Zigzag River at Twin Bridges.

Monthly discharge of Zigzag River at Twin Bridges, near Rhododendron, Oreg., for the year ending September 30, 1926

[Drainage area, 5.2 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
March 17–31	34	33	33.1	6.37	3.55	985
April	36	28	32.5	6.25	6.97	1,930
May	41	24	29.8	5.73	6.61	1,830
June	29	22	24.6	4.73	5.28	1,460
July	24	19	22.0	4.23	4.88	1,350
August	42	15	21.9	4.21	4.85	1,350
September		17	21.2	4.08	4.55	1,260
The year						10,200

ZIGZAG RIVER AT RHODODENDRON, OREG.

LOCATION.—In NW. ¼ sec. 11, T. 3 S., R. 7 E., just below bridge on Vine Maple Road and one-fourth mile south of post office at Rhododendron, Clackamas County.

DRAINAGE AREA.—31 square miles (measured on topographic map).

RECORDS AVAILABLE.—February 11, 1920, to September 15, 1921; March 11 to September 30, 1926.

GAGE.—Vertical staff fastened to overhanging tree on right bank 15 feet below bridge on Vine Maple Road; read by Messrs. Liebman, Blodgett, and Smith. Old gage just above mouth of Still Creek.

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

CHANNEL AND CONTROL.—Bed composed of coarse gravel, rocks, and boulders; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period March 11 to September 30, 1926, 2.24 feet March 15 (discharge, 260 second-feet); minimum stage, 1.32 feet July 24, 27, 28, September 2, 12, and 13 (discharge, 59 second-feet).

ICE.—Ice never forms.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 200 second-feet and fairly well defined between 200 and 260 second-feet. Gage read to even hundredths of a foot twice a day. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Zigzag River at Rhododendron, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 26	1.86	163	June 25	1.52	90	Sept. 3	1.43	77
Apr. 23	1.73	127	Aug. 6	1.34	61			

Daily discharge, in second-feet, of Zigzag River at Rhododendron, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		180	120	102	73	64	110
2		156	118	102	73	64	64
3		156	120	101	73	65	75
4		156	180	99	73	67	70
5		167	144	97	73	61	75
6		156	130	95	77	63	75
7		156	120	93	75	61	73
8		156	120	87	73	61	70
9		156	116	85	77	68	67
10		167	108	85	70	73	67
11	144	167	104	87	68	68	67
12	232	156	102	85	67	70	60
13	246	144	102	85	67	68	60
14	232	144	102	92	65	67	64
15	246	144	101	90	65	67	71
16	218	139	114	85	67	68	92
17	205	132	128	85	67	77	95
18	192	134	124	85	67	156	82
19	180	137	118	112	67	124	80
20	180	139	118	108	67	99	82
21	180	130	124	87	67	93	83
22	167	134	116	85	63	88	139
23	192	126	118	83	61	88	110
24	167	122	112	82	61	71	97
25	156	122	108	80	63	80	93
26	156	128	106	78	61	99	88
27	156	126	118	76	59	112	82
28	144	126	120	75	60	137	82
29	144	124	120	73	63	144	80
30	144	124	118	73	61	73	78
31	180		108		63	92	

Monthly discharge of Zigzag River at Rhododendron, Oreg., for the year ending September 30, 1926

[Drainage area, 31 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
March 11-31	246	144	184	5.94	4.65	7,660
April	180	122	143	4.61	5.14	8,510
May	180	101	118	3.81	4.39	7,260
June	112	73	88.4	2.85	3.18	5,260
July	77	59	67.3	2.17	2.50	4,140
August	156	61	83.5	2.69	3.10	5,130
September	139	60	81.0	2.61	2.91	4,820
The period						42,800

LITTLE ZIGZAG RIVER AT TWIN BRIDGES, NEAR RHODODENDRON, OREG.

LOCATION.—In NW. ¼ sec. 11, T. 3 S., R. 7 E., 500 feet above upper of Twin Bridges on Mount Hood Loop Highway and 5½ miles above Rhododendron, Clackamas County.

DRAINAGE AREA.—3.7 square miles (measured on topographic map).

RECORDS AVAILABLE.—March 17 to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder; inspected by engineers of United States Geological Survey.

DISCHARGE MEASUREMENTS.—Made from footlog or by wading.

CHANNEL AND CONTROL.—Artificial log control 15 feet below gage; may shift from changes in velocity of approach.

EXTREMES OF DISCHARGE.—Maximum and minimum discharge occurred during period August 11–25, when recorder was not operating satisfactorily.

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent; affected by submergence of control July 20 to August 3. Rating curve well defined. Temporary staff gage read twice a day March 17–24. Operation of recorder satisfactory except as indicated in footnote to daily discharge. Daily discharge March 17–23 estimated from daily gage heights and two discharge measurements. From March 24 daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of recorder graph, except July 20 to August 3, when mean daily gage height was applied indirectly by shifting-control method, and August 11–23, when mean discharge for period was estimated. Records good except for July and August, for which they are fair.

Discharge measurements of Little Zigzag River at Twin Bridges, near Rhododendron, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 18		24.9	Apr. 22	0.96	24.2	Aug. 4	0.87	19.5
Mar. 24	0.98	25.0	June 24	.96	22.9	Sept. 3	.86	19.5

NOTE.—Temporary gage read 1.21 feet on Mar. 18 and 1.20 feet on Mar. 24.

Daily discharge, in second-feet, of Little Zigzag River at Twin Bridges, near Rhododendron, Oreg., for the year ending September 30, 1926

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

NOTE.—Discharge interpolated Mar. 21. Gage-height graph discarded as erroneous Aug. 10–23, because of poor connection between river and well, and mean discharge for period estimated by a comparison with hydrographs for gaging stations on Zigzag River at Twin Bridges and at R [illegible]

Monthly discharge of Little Zigzag River at Twin Bridges, near Rhododendron, Oreg., for the year ending September 30, 1926

[Drainage area, 3.7 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
March 17–31	25	23	24.4	6.59	3.67	726
April	25	23	23.2	6.27	7.00	1,380
May	26	21	22.7	6.14	7.08	1,400
June	24	21	22.5	6.08	6.78	1,340
July	24	18	20.5	5.54	6.39	1,260
August			21.3	5.76	6.64	1,310
September	23	18	19.9	5.38	6.00	1,180
The period						8,600

STILL CREEK NEAR GOVERNMENT CAMP,[1] OREG.

LOCATION.—In NW. ¼ sec. 25, T. 3 S., R. 8½ E., 100 yards below mouth of Mineral Creek, half a mile northwest of Summit ranger station, and 2 miles southeast of Government Camp, Clackamas County.

DRAINAGE AREA.—2.8 square miles (measured on topographic map).

RECORDS AVAILABLE.—May 23, 1910, to May 31, 1912; May 19 to September 30, 1926.

GAGE.—Vertical staff on left bank; read to September 2 by Forest Service employees and later by M. F. Ryan.

DISCHARGE MEASUREMENTS.—Made by wading 200 feet above gage.

CHANNEL AND CONTROL.—Bed composed of boulders, gravel, and sand; practically permanent. Channel is full of fallen logs; banks high and not overflowed.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period May 19 to September 30, 1.06 feet September 15 (discharge, 16 second-feet); minimum stage, 0.90 foot, September 4–14 (discharge, 10 second-feet).

1910–1912, 1926: Maximum stage, 2.20 feet, October 2, 1911 (discharge, 37 second-feet); minimum stage, 0.80 foot, November 12, 1911 (discharge, 5.0 second-feet).

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changing during July. Rating curves used May 19 to June 30 and August 6 to September 30 fairly well defined; shifting-control method used July 1–31. Gage read once a week May 19 to June 6; once a day June 24 to July 15; two or three times a week July 16 to September 30. Daily discharge ascertained by applying daily gage reading to rating curve; shifting-control method used July 1–31. Records good except for days or periods estimated, for which they are fair.

Discharge measurements of Still Creek near Government Camp, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 21	0.98	15.5	Aug. 6	0.91	10.5
June 24	.94	13.0	Sept. 3	.92	10.1

[1] Station formerly described as "near Rowe."

Daily discharge, in second-feet, of Still Creek near Government Camp, Oreg., for the year ending September 30, 1926

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

NOTE.—Because of no gage-height record discharge interpolated or estimated by comparison with record for Salmon River near Government Camp June 1, 3-5, 7-23, July 16, 19, 20, 22, 23, 26, 28, 29, Sept. 1, 2, 5, 6, 10-13, 18-20, 22, 23, 26-28. No record on days for which no discharge is given.

Monthly discharge of Still Creek near Government Camp, Oreg., for the year ending September 30, 1926

[Drainage area, 2.8 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
May 19-31			15.0	5.36	2.59	387
June	15	13	14.0	5.00	5.58	833
July	13	11	11.9	4.25	4.90	732
August			12.0	4.29	4.95	738
September	16	10	11.3	4.04	4.51	672
The period						3,360

NOTE.—Mean discharge, May 19-31, determined on basis of three daily discharge figures and for August on one discharge measurement and study of flow of Salmon Creek near Government Camp.

STILL CREEK AT RHODODENDRON,[2] OREG.

LOCATION.—In SW. ¼ sec. 2, T. 3 S., R. 7 E., 300 yards above mouth, 100 feet below Still Creek highway bridge on Mount Hood Loop Highway, and half a mile west of Rhododendron post office, Clackamas County.

DRAINAGE AREA.—23 square miles (measured on topographic map).

RECORDS AVAILABLE.—February 14, 1920, to September 15, 1921; March 11 to September 30, 1926.

GAGE.—Vertical staff fastened to large tree; read by Messrs. Liebman, Blodgett, and Smith.

DISCHARGE MEASUREMENTS.—Made at low stages by wading; at high stages from bridge 1½ miles upstream.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders; may shift during extremely high water. One channel at all stages.

[2] Formerly described as "at Zigzag."

EXTREMES OF DISCHARGE.—Maximum stage recorded during period March 11 to September 30, 2.16 feet March 15 (discharge, 190 second-feet); minimum stage, 1.06 feet September 12 and 14 (discharge, 16 second-feet).

1920–21, 1926: Maximum stage recorded, 5.0 feet March 17, 1921 (discharge not computed); minimum stage, that of 1926.

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined below and fairly well defined above 150 second-feet. Gage read to hundredths of a foot twice a day. Daily discharge ascertained by applying mean daily gage height to rating table. Records excellent.

Discharge measurements of Still Creek at Rhododendron, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 12	1.77	103	May 18	1.50	57	Aug. 5	1.15	21.8
Apr. 22	1.60	71	June 25	1.31	39.5			

Daily discharge, in second-feet, of Still Creek at Rhododendron, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		95	50	67	33	23	33
2		86	47	63	31	22	23
3		91	51	56	31	22	22
4		99	72	51	31	23	21
5		105	83	50	31	24	20
6		101	69	47	31	22	20
7		95	66	47	31	22	20
8		90	62	45	31	22	20
9		90	59	45	29	22	20
10		91	56	45	28	22	18
11	80	91	52	43	27	22	18
12	109	84	51	41	27	22	16
13	153	83	50	41	27	22	18
14	166	75	50	44	27	22	17
15	190	73	49	43	27	22	19
16	178	72	51	42	26	22	46
17	142	73	62	40	25	24	45
18	130	67	59	40	27	76	36
19	120	69	58	44	26	88	30
20	109	72	59	49	25	51	29
21	103	67	67	41	25	40	34
22	99	78	67	39	25	31	69
23	120	66	67	38	26	25	73
24	103	62	66	37	25	19	56
25	95	58	63	37	25	18	51
26	88	58	62	37	25	23	41
27	83	53	69	37	25	22	35
28	81	53	67	37	25	20	36
29	78	52	75	35	25	20	34
30	76	51	75	35	24	21	33
31	84	------	72	------	24	23	------

Monthly discharge of Still Creek at Rhododendron, Oreg., for the year ending September 30, 1926

[Drainage area, 23 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
March 11-31	190	76	114	4.96	3.87	4,750
April	105	51	76.7	3.33	3.72	4,560
May	83	47	61.5	2.67	3.08	3,780
June	67	35	43.9	1.91	2.13	2,610
July	33	24	27.3	1.19	1.37	1,680
August	88	18	27.6	1.20	1.38	1,700
September	73	16	31.8	1.38	1.54	1,890
The period						21,000

SALMON RIVER NEAR GOVERNMENT CAMP,[3] OREG.

LOCATION.—In sec. 31, T. 3 S., R. 9 E., near lower end of Red Top Meadows and 4 miles southeast of Government Camp, Clackamas County.

DRAINAGE AREA.—8.0 square miles (measured on topographic map).

RECORDS AVAILABLE.—May 24, 1910, to May 31, 1912; April 21 to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder 5 feet upstream from former recorder installation; inspected by engineers of United States Geological Survey.

DISCHARGE MEASUREMENTS.—Made by wading 150 feet downstream from gage.

CHANNEL AND CONTROL.—Bed composed of coarse gravel and small boulders; shifts occur from accumulation of drift and sand and submergence of riffle just below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period April 21 to September 30, 1.52 feet at 8 p. m. May 4 (discharge, 75 second-feet); minimum discharge recorded, 13 second-feet at 4 to 8 p. m. September 9 (gage height, 0.89 foot).

1910–1912, 1926: Maximum stage, 2.10 feet November 11, 1911 (discharge, 175 second-feet); minimum discharge, that of September 9, 1926.

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation affected 0.02 foot by log on control April 21 to May 19; practically permanent May 20 to August 17; changing August 18 to September 21. Rating curve fairly well defined. Operation of water-stage recorder satisfactory except September 22–30, when paper was torn by recording pencil. Daily discharge ascertained by applying to rating table mean daily gage height determined from recorder graph by inspection April 21 to August 17 and by shifting-control method August 18 to September 21. Records good except August 18 to September 30, for which they are fair.

[3] Formerly described as "near Rowe."

Discharge measurements of Salmon River near Government Camp, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 21	[a] 1.15	43.8	June 24	0.75	21.6	Sept. 3	1.07	19.4
May 19	.96	33.9	Aug. 4	.62	15.1			

[a] Stage-discharge relation affected by log on control.

Daily discharge, in second-feet, of Salmon River near Government Camp, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1		34	27	21	21	33	16		31	23	21	15	32
2		33	26	20	17	24	17		40	23	21	17	24
3		35	26	20	17	19	18		39	24	18	34	19
4		66	26	20	17	18	19		33	34	18	30	18
5		50	26	20	16	17	20		35	26	18	26	19
6		40	26	22	16	16	21	46	36	22	19	25	22
7		37	25	21	15	14	22	48	32	21	21	29	
8		35	25	20	15	14	23	41	32	21	21	31	
9		33	24	23	15	14	24	40	32	23	20	31	
10		32	24	22	15	15	25	40	29	24	21	31	
11		31	24	23	15	15	26	39	30	23	21	31	30
12		32	24	23	15	15	27	38	34	23	20	29	
13		31	22	22	15	16	28	38	30	20	17	30	
14		31	25	20	15	17	29	37	31	21	18	31	
15		29	24	20	16	22	30	36	28	21	20	31	
							31		27		21	33	

NOTE.—Because of no gage-height record Sept. 22-30 mean discharge estimated by comparison with records of near-by gaging stations.

Monthly discharge of Salmon River near Government Camp, Oreg., for the year ending September 30, 1926

[Drainage area, 8.0 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
April 21-30	48	36	40.3	5.04	1.87	799
May	66	27	34.5	4.31	4.97	2,120
June	34	20	24.1	3.01	3.36	1,430
July	23	17	20.4	2.55	2.94	1,250
August	34	15	22.4	2.80	3.23	1,380
September		14	22.4	2.80	3.12	1,330
The period						8,310

SALMON RIVER AT WELCHES, OREG.

LOCATION.—In S. ½ sec. 9, T. 3 S., R. 7 E., just below mouth of Sheeny Creek, 200 feet west of Tawney's Hotel, and three-fourths mile southeast of Welches post office, Clackamas County.

DRAINAGE AREA.—100 square miles (measured on topographic map).

RECORDS AVAILABLE.—July 26, 1920, to September 15, 1921; April 1, 1925, to September 30, 1926. August 15, 1913, to September 30, 1914, at station three-fourths mile downstream.

GAGE.—Vertical staff on right bank, read by F. H. Tawney.

DISCHARGE MEASUREMENTS.—Made by wading near gage or from footbridge half a mile below.

CHANNEL AND CONTROL.—Bed composed of coarse gravel; one channel at all stages; shifts occasionally.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 3.80 feet February 6 (discharge, 2,920 second-feet); minimum stage recorded, —0.18 foot August 11–16 (discharge, 68 second-feet).

1913–14, 1920–21, 1925–26: Maximum discharge recorded, 5,230 second-feet January 2, 1921; minimum discharge recorded, that of August 11–16, 1926.

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed slightly February 7, 1926. Rating curves used before and after change well defined below and fairly well defined above 1,200 second-feet. Staff gage read to hundredths once a day. Daily discharge ascertained by applying daily gage height to rating table. Records good.

Discharge measurements of Salmon River at Welches, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 13	—0.20	75	Apr. 23	0.50	218	Aug. 3	—0.15	73
Mar. 26	.70	352	June 25	.06	111			

Daily discharge, in second-feet, of Salmon River at Welches, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	75	395	255	345	690	422	184	197	100	74	109
2	90	75	395	236	320	625	345	171	184	100	74	122
3	82	82	295	218	275	595	370	162	171	100	74	104
4	82	82	275	218	658	565	395	395	165	100	71	92
5	82	82	275	755	690	505	395	395	160	96	71	88
6	82	75	275	625	2,920	478	395	295	148	96	71	84
7	82	75	255	478	2,000	450	370	277	143	96	71	84
8	82	75	218	345	1,360	422	345	259	138	92	71	80
9	82	75	197	320	1,120	395	345	242	132	92	71	77
10	82	82	197	275	960	370	345	219	132	92	71	77
11	82	236	345	255	820	345	345	204	127	92	68	74
12	75	255	183	236	690	625	345	181	122	88	68	74
13	75	218	505	218	690	625	320	184	122	88	68	74
14	75	218	183	236	625	625	295	184	122	88	68	74
15	75	197	275	295	505	625	286	177	118	88	68	77
16	75	190	255	345	505	565	277	177	118	80	68	197
17	75	345	236	345	478	505	268	242	118	80	92	160
18	75	295	236	345	450	478		259	118	80	160	122
19	75	218	255	295	450	505		250	138	80	345	104
20	75	153	960	345	505	478	270	234	148	80	143	96
21	75	138	1,900	345	565	450		268	132	80	122	118
22	75	120	1,360	370	625	395		234	122	80	104	505
23	69	115	1,620	478	820	422	250	234	118	77	92	345
24	69	107	960	478	2,700	395	238	227	113	77	84	143
25	69	124	690	395	1,440	370	227	219	113	77	77	103
26	69	153	625	370	1,040	345	211	219	109	77	92	100
27	82	218	565	422	890	345	204	227	109	77	113	92
28	107	211	450	450	755	345	197	219	109	74	96	88
29	98	197	395	422	-------	320	197	211	104	74	88	88
30	82	295	320	370	-------	320	191	211	104	74	100	84
31	75	-------	275	345	-------	345	-------	204	-------	74	96	------

NOTE.—Because of no gage-height record discharge estimated by comparison with record of Sandy River at Brightwood, Apr. 18–22 and 24.

Monthly discharge of Salmon River at Welches, Oreg., for the year ending September 30, 1926

[Drainage area, 100 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	107	69	79.5	0.795	0.92	4,890
November	345	75	159	1.59	1.77	9,460
December	1,900	183	496	4.96	5.72	30,500
January	755	218	358	3.58	4.13	22,000
February	2,920	275	900	9.00	9.37	50,000
March	690	320	468	4.68	5.40	28,800
April	422	191	298	2.98	3.32	17,700
May	395	162	231	2.31	2.66	14,200
June	197	104	132	1.32	1.47	7,860
July	100	74	85.5	.855	.99	5,260
August	345	68	94.5	.945	1.09	5,810
September	505	74	121	1.21	1.35	7,200
The year	2,920	68	281	2.81	38.19	204,000

BULL RUN RIVER NEAR BULL RUN, OREG.

LOCATION.—In SE. ¼ sec. 25, T. 1 S., R. 5 E., 1½ miles above intake of Portland water-supply pipe line and 5 miles east of Bull Run, Clackamas County.

DRAINAGE AREA.—102 square miles.

RECORDS AVAILABLE.—August 20, 1907, to September 30, 1926; also readings on a gage of city water department January 5, 1895, to November 13, 1906.

GAGE.—Stevens continuous water-stage recorder on left bank, inspected by employees of Portland Water Bureau.

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

CHANNEL AND CONTROL.—Bed composed of rocks and gravel; shifting in extreme floods.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 8.75 feet at 7 a. m. February 6 (discharge, 10,200 second-feet); minimum discharge, 63 second-feet August 13–16 (gage height, from water-stage recorder, 0.17 foot).

1895–1926: Maximum discharge recorded, 20,300 second-feet November 20, 1921, at spillway of diversion dam; minimum discharge recorded, that of August 13–16, 1926.

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

DIVERSIONS.—None above station. The three water-supply pipes divert practically all the low-water flow 1½ miles below station.

REGULATION.—The flow is regulated to a small extent during the summer by storage in Bull Run Lake.

ACCURACY.—Stage-discharge relation changed slightly February 6. Two well-defined rating curves used, identical above 280 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records excellent.

Discharge measurements of Bull Run River near Bull Run, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	0.13	64	May 6	1.26	424	Sept. 9	0.46	129
Jan. 27	1.45	548	July 27	.25	80			

Daily discharge, in second-feet, of Bull Run River near Bull Run, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	95	97	1,390	372	805	1,030	348	163	425	129	69	510
2	84	100	1,470	340	688	900	328	157	372	126	69	360
3	77	116	1,310	336	616	805	594	175	332	121	69	260
4	70	112	1,140	344	1,470	704	616	480	304	118	67	205
5	70	97	1,030	1,140	2,520	627	• 622	475	272	115	67	175
6	68	93	835	965	7,090	540	578	445	252	113	76	157
7	68	90	682	704	4,120	500	515	392	233	110	85	148
8	68	90	561	572	2,200	490	465	445	212	108	85	140
9	68	90	480	490	1,550	460	425	455	202	105	83	140
10	68	270	465	435	1,710	420	400	405	193	102	76	129
11	68	680	742	388	1,430	392	415	344	184	102	69	126
12	66	1,140	1,470	360	1,170	605	384	308	181	100	67	113
13	66	1,040	1,280	344	900	835	360	276	178	100	63	110
14	66	775	868	356	775	715	328	276	196	100	63	110
15	64	932	688	600	742	671	312	256	196	97	63	163
16	66	932	572	1,280	835	644	296	236	181	100	63	561
17	66	1,550	505	1,510	932	605	284	525	169	102	80	545
18	66	1,350	510	1,310	835	671	268	715	166	100	292	480
19	66	868	460	1,200	835	594	256	583	292	97	260	368
20	66	638	917	1,280	1,030	688	276	638	288	95	344	312
21	66	505	5,840	1,550	1,390	600	260	688	216	92	219	576
22	66	415	3,760	1,240	1,430	535	288	610	193	90	154	1,670
23	66	364	3,840	1,030	1,280	535	248	632	181	87	126	1,040
24	66	340	1,100	868	5,520	470	222	622	166	87	113	682
25	86	530	1,240	715	3,570	430	216	525	157	85	100	505
26	79	644	932	616	2,120	400	202	495	151	85	199	415
27	114	805	742	530	1,510	368	193	605	148	80	196	376
28	201	654	583	505	1,200	348	184	520	142	76	140	360
29	162	620	525	805	------	328	175	550	140	74	140	405
30	119	932	465	868	------	316	166	535	132	69	148	388
31	107	------	968	710	------	312	------	475	------	69	230	------

Monthly discharge of Bull Run River near Bull Run, Oreg., for the year ending September 30, 1926

[Drainage area, 102 square miles]

Month	Discharge in second-feet				• Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	201	64	81.5	0.799	0.92	5,010
November	1,550	90	562	5.51	6.15	33,400
December	5,840	460	1,210	11.9	13.72	74,400
January	1,550	336	767	7.52	8.67	47,200
February	7,090	616	1,800	17.6	18.33	100,000
March	1,030	312	566	5.55	6.40	34,800
April	622	166	341	3.34	3.73	20,300
May	715	157	452	4.43	5.11	27,800
June	425	132	215	2.11	2.35	12,800
July	129	69	97.9	.960	1.11	6,020
August	344	63	125	1.23	1.42	7,690
September	1,670	110	384	3.76	4.20	22,800
The year	7,090	63	541	5.30	72.11	392,000

LITTLE SANDY RIVER NEAR BULL RUN, OREG.

LOCATION.—In NE. ¼ sec. 10, T. 2 S., R. 5 E., three-eighths mile above Portland Electric Power Co.'s dam and tunnel from Sandy River and between 3 and 4 miles east of Bull Run station, Clackamas County.

DRAINAGE AREA.—23 square miles.

RECORDS AVAILABLE.—May 21, 1911, to April 29, 1913, fragmentary; July 1, 1919, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on left bank; inspected by employees of the Portland Electric Power Co.

DISCHARGE MEASUREMENTS.—Made from suspension bridge or by wading at gage.

CHANNEL AND CONTROL.—Stream bed composed of boulders and gravel; fairly permanent. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 6.00 feet at 9 a. m. February 24 (discharge, 1,550 second-feet); minimum stage, from recorder, 1.72 feet 8 p. m. August 13 to 3 a. m. August 14 (discharge, 14 second-feet).

1911–1913, 1919–1926: Maximum stage from recorder, 8.90 feet November 20, 1921 (discharge, 3,950 second-feet); minimum discharge recorded, 10 second-feet September 17, 1924 (gage height, 1.77 feet).

ICE.—Stage-discharge relation unaffected by ice.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation apparently permanent. 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. Records good.

The following discharge measurements were made:

February 9, 1926: Gage height, 3.64 feet; discharge, 270 second-feet.

June 29, 1926: Gage height, 2.08 foot; discharge, 34.5 second-feet.

Daily discharge, in second-feet, of Little Sandy River near Bull Run, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	23	25	228	71	189	187	82	39	78	31	16	131
2	19	29	228	67	154	165	71	37	71	30	16	80
3	18	38	202	72	134	154	110	40	65	29	15	58
4	18	34	175	72	249	136	110	87	59	28	15	47
5	17	29	163	196	384	120	124	86	54	27	15	43
6	17	26	128	154	1,060	109	115	81	51	26	15	39
7	17	24	108	120	720	99	103	68	47	25	15	39
8	17	25	93	103	406	102	92	70	45	25	15	36
9	16	30	81	93	284	97	82	73	43	25	15	33
10	16	47	84	81	322	87	80	62	41	23	14	30
11	16	110	113	77	241	84	87	55	40	23	14	29
12	16	177	236	71	198	145	78	51	38	22	14	28
13	15	209	194	67	163	169	71	51	38	22	14	26
14	15	145	141	74	143	136	65	53	44	21	14	26
15	15	179	118	108	140	124	61	49	47	20	15	45
16	15	150	103	119	158	116	58	47	40	20	15	133
17	15	263	93	128	161	109	55	80	37	20	20	128
18	15	211	98	106	158	109	54	113	36	20	58	96
19	15	134	86	96	152	97	52	87	88	19	80	73
20	15	99	221	106	165	122	62	106	74	20	80	62
21	15	78	990	370	196	103	56	126	56	20	47	86
22	14	67	665	297	214	93	71	106	47	19	36	244
23	14	59	665	214	202	99	56	113	43	18	30	156
24	15	56	336	177	1,100	88	52	119	41	18	26	103
25	26	119	209	145	690	81	47	93	39	18	25	81
26	20	108	158	124	406	76	45	86	37	18	41	66
27	53	165	130	109	275	71	43	99	35	18	40	57
28	76	119	110	106	219	68	42	86	34	18	31	55
29	46	122	97	191	------	65	40	120	33	17	30	78
30	33	183	87	177	------	62	40	97	34	16	47	84
31	29	------	78	148	------	64	------	84	------	16	48	------

Monthly discharge of Little Sandy River near Bull Run, Oreg., for the year ending September 30, 1926

[Drainage area, 23 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	76	14	21.6	0.939	1.08	1,330
November	263	24	102	4.43	4.94	6,070
December	990	78	207	9.00	10.38	12,700
January	370	67	130	5.65	6.51	7,990
February	1,100	134	317	13.8	14.37	17,600
March	187	62	108	4.70	5.42	6,640
April	124	40	70.1	3.05	3.40	4,170
May	126	37	79.5	3.46	3.99	4,890
June	88	33	47.8	2.08	2.32	2,840
July	31	16	21.7	.943	1.09	1,330
August	80	14	28.3	1.23	1.42	1,740
September	244	26	73.1	3.18	3.55	4,350
The year	1,100	14	99.0	4.30	58.47	71,600

WILLAMETTE RIVER BASIN

MIDDLE FORK OF WILLAMETTE RIVER AT EULA, OREG.

LOCATION.—In sec. 18, T. 20 S., R. 2 E., one-fourth mile southwest of railroad station and post office of Eula, Lane County, and 8 miles below mouth of North Fork.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—July 1, 1923, to September 30, 1926.

GAGE.—Inclined staff in three sections on right bank; read by Lorene Blakely.

DISCHARGE MEASUREMENTS.—Made from cable 1 mile above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel and small boulders; shifting in floods.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 10.5 feet at 10 a. m. February 6 (discharge, 15,800 second-feet); minimum stage, 1.60 feet August 6–17 (discharge, 480 second-feet).

1923–1926: Maximum stage recorded, 12.0 feet December 30, 1924 (discharge, 19,500 second-feet); minimum discharge, that of August 6–17, 1926.

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

DIVERSIONS.—None.

REGULATION.—Considerable diurnal fluctuation during low water owing to operation of logging dam 10 miles upstream, but accuracy of record probably not greatly affected.

ACCURACY.—Stage-discharge relation changed February 6 for discharges below 2,150 second-feet. Two rating curves used; each well defined below 3,000 second-feet and fairly well defined below 6,000 second-feet. Gage read once a day, generally to tenths, at medium and high stages and to half-tenths at low water; read twice a day in floods. Daily discharge ascertained by applying daily gage height to rating table. Records good except for a few days of high water, for which they are fair.

Daily measurements of Middle Fork of Willamette River at Eula, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 24	1.84	517	Apr. 17	3.50	2,070	Sept. 13	1.64	505
Mar. 6	4.50	3,030	July 25	1.78	562			

Daily discharge, in second-feet, of Middle Fork of Willamette River at Eula, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	770	630	1,300	2,400	3,190	4,440	1,610	1,610	1,110	710	530	870
2	770	630	2,920	2,400	3,050	4,440	1,520	1,610	1,070	710	505	790
3	850	700	2,400	1,920	2,920	4,270	1,350	1,610	1,030	675	505	710
4	770	700	2,150	1,500	7,190	4,100	1,820	1,710	990	675	505	710
5	560	700	1,810	1,500	8,670	3,780	1,820	2,920	950	675	505	675
6	700	630	1,760	1,920	12,900	3,330	1,820	2,660	950	675	480	640
7	700	500	1,300	1,920	12,200	2,660	1,820	1,930	950	640	480	640
8	630	630	1,300	1,700	9,110	2,400	1,820	1,930	910	640	480	610
9	700	630	1,200	1,700	7,390	2,400	1,820	1,930	910	580	480	580
10	700	770	1,110	1,810	7,190	2,530	1,820	1,820	870	580	480	580
11	700	1,020	1,400	2,270	6,620	2,400	3,480	1,710	870	580	480	555
12	560	3,050	2,600	2,150	5,860	2,400	2,400	1,710	870	580	480	530
13	630	1,810	2,920	2,030	5,120	2,270	2,270	1,710	870	580	480	530
14	560	1,110	2,030	2,150	4,440	2,270	2,150	1,710	870	580	480	530
15	700	1,110	1,920	2,150	3,940	2,270	1,930	1,710	870	580	480	530
16	700	1,110	1,810	2,400	4,100	2,660	1,930	1,520	830	580	480	710
17	630	1,110	1,700	2,920	3,630	2,660	1,820	1,350	830	580	480	1,190
18	630	1,020	1,300	2,790	3,480	2,400	1,820	1,350	830	530	505	950
19	630	1,020	1,400	3,190	3,330	2,400	1,820	1,350	830	530	1,190	710
20	700	1,200	1,700	3,050	3,190	2,270	1,820	1,350	830	530	990	580
21	630	1,200	4,100	3,480	3,190	2,040	1,820	1,350	830	530	790	640
22	500	930	4,950	3,780	3,480	1,930	1,930	1,350	790	610	640	710
23	500	700	7,100	3,780	3,940	1,820	1,820	1,350	790	580	555	910
24	500	770	6,810	3,630	7,550	1,710	1,820	1,350	750	530	530	710
25	500	1,500	5,120	3,630	8,670	1,710	1,820	1,350	710	555	505	640
26	630	2,030	3,330	3,780	6,810	1,710	1,710	1,350	710	555	505	580
27	630	3,330	2,660	3,630	5,860	1,710	1,710	1,270	710	555	830	555
28	770	1,700	1,920	3,330	5,300	1,710	1,710	1,230	710	555	640	530
29	700	1,200	1,810	3,190	-------	1,710	1,710	1,190	710	555	640	555
30	630	1,200	1,700	3,480	-------	1,610	1,710	1,190	710	555	675	640
31	630	-------	2,400	3,780	-------	1,610	-------	1,150	-------	530	830	-------

Monthly discharge of Middle Fork of Willamette River at Eula, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	850	500	652	40,100
November	3,330	500	1,150	68,400
December	7,100	1,110	2,510	154,000
January	3,780	1,500	2,690	165,000
February	12,900	2,920	5,800	322,000
March	4,440	1,610	2,500	154,000
April	3,480	1,350	1,880	112,000
May	2,920	1,150	1,590	97,800
June	1,110	710	855	50,900
July	710	530	591	36,300
August	1,190	480	585	36,000
September	1,190	530	670	39,900
The year	12,900	480	1,760	1,280,000

WILLAMETTE RIVER AT EUGENE, OREG.

LOCATION.—In SW. ¼ sec. 29, T. 17 S., R. 3 W., at highway bridge at Eugene, Lane County.

DRAINAGE AREA.—2,050 square miles (measured on base map of Oregon).

RECORDS AVAILABLE.—June 1, 1919, to September 30, 1926. Record at Springfield November 27, 1911, to September 30, 1913.

GAGE.—Vertical staff graduated to tenths, fixed to first pier from left bank of highway bridge; read by G. M. de Brokert.

DISCHARGE MEASUREMENTS.—Made from highway bridge at Springfield 4 miles by river above gage.

CHANNEL AND CONTROL.—Channel straight with even current. Bed composed of gravel and sand; subject to shift at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 15.0 feet at midnight February 6 (discharge, 62,400 second-feet); minimum stage, −0.74 foot on August 11 (discharge, 500 second-feet).

1911–1913, 1919–1926: Maximum stage recorded, 18.0 feet January 7, 1923 (discharge, 72,500 second-feet); minimum discharge, that of August 11, 1926.

The maximum stage in recent years from records of United States Weather Bureau, 21.5 feet November 23, 1909 (discharge, about 96,000 second-feet).

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed December 23 and February 7. Rating curve used as follows: October 1 to December 22, well defined below 13,000 second-feet; December 23 to February 6, fairly well defined; February 7 to September 30, fairly well defined below 15,000 second-feet. Gage read to tenths; once a day; to hundredths during August and September; extra readings at flood stages. Daily discharge ascertained by applying daily gage height or mean daily gage height to rating table. Records good.

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

Discharge measurements of Willamette River at Eugene, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 18	0.35	750	Feb. 28	5.12	12,400	July 23	−0.42	701
Jan. 10	1.72	2,660	Apr. 16	1.52	2,930			

Daily discharge, in second-feet, of Willamette River at Eugene, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,080	620	1,330	2,340	6,880	10,600	1,840	1,960	1,600	830	670	1,200
2	940	580	3,120	2,340	7,160	9,240	1,840	1,960	1,500	920	670	1,010
3	940	670	4,020	2,760	6,100	8,300	1,960	1,840	1,400	920	670	875
4	880	720	3,120	2,760	16,400	7,440	2,620	1,840	1,300	1,010	670	830
5	880	580	2,800	3,060	45,100	6,620	3,220	4,260	1,200	1,010	600	750
6	820	620	2,090	3,540	39,100	5,840	3,380	4,880	1,400	830	670	750
7	880	620	1,840	4,060	52,800	5,100	3,060	4,460	1,300	830	600	790
8	880	620	1,730	3,880	31,000	4,660	3,060	3,880	1,300	830	600	750
9	880	580	1,730	3,060	20,700	4,660	2,900	3,380	1,300	830	600	670
10	880	620	1,730	2,760	18,200	4,460	2,900	3,220	1,200	830	600	670

Daily discharge, in second-feet, of Willamette River at Eugene, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	820	770	1,620	2,760	20,700	4,060	2,760	2,900	1,200	830	500	670
12	820	2,220	1,960	2,480	15,900	3,700	4,060	2,760	1,200	830	530	635
13	820	2,960	4,900	2,340	12,000	3,700	3,540	2,620	1,200	830	565	635
14	820	2,090	3,820	2,480	9,920	3,700	3,060	2,480	1,200	750	600	670
15	820	1,730	3,820	2,480	8,000	3,540	3,060	2,340	1,100	750	600	670
16	820	1,840	2,800	2,760	7,720	3,700	2,900	2,200	1,100	750	530	710
17	820	1,420	3,820	2,760	10,300	3,700	2,900	2,080	1,100	750	530	1,720
18	770	1,160	3,640	6,100	8,600	3,540	2,760	1,960	1,100	750	670	1,600
19	770	1,160	5,620	7,440	8,000	3,380	2,760	1,960	1,100	750	1,400	1,300
20	770	940	3,120	4,880	8,600	3,220	2,620	1,960	1,100	750	1,400	1,100
21	770	940	8,560	4,060	10,900	3,060	2,480	2,200	1,100	750	1,010	965
22	745	820	8,900	5,580	13,500	3,060	2,340	1,960	1,100	670	875	965
23	745	770	13,500	4,880	14,700	2,480	3,220	1,960	1,100	670	710	920
24	745	720	13,500	4,880	26,300	2,620	2,760	1,840	1,100	750	750	920
25	720	670	8,920	4,260	36,400	2,760	2,480	1,840	1,100	750	670	920
26	745	1,010	6,360	3,880	25,800	2,620	2,200	1,720	1,100	670	710	790
27	720	1,620	4,880	3,700	15,900	2,760	2,200	1,600	1,100	750	1,060	920
28	720	1,840	4,060	3,700	13,500	2,340	2,080	1,720	1,010	670	1,100	750
29	695	1,240	3,880	3,880	-------	2,080	2,200	1,720	1,010	670	920	750
30	645	1,240	3,700	9,920	-------	1,960	2,080	1,840	920	670	830	790
31	620	-------	2,900	7,440	-------	1,840	-------	1,720	-------	670	1,200	------

Monthly discharge of Willamette River at Eugene, Oreg., for the year ending September 30, 1926

[Drainage area, 2,050 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	1,080	620	806	0.393	0.45	49,600
November	2,960	580	1,110	.541	.60	66,000
December	13,500	1,330	4,440	2.17	2.50	273,000
January	9,920	2,340	3,970	1.94	2.24	244,000
February	52,800	6,100	18,200	8.88	9.25	1,010,000
March	10,600	1,840	4,220	2.06	2.38	259,000
April	4,060	1,840	2,710	1.32	1.47	161,000
May	4,880	1,600	2,420	1.18	1.36	149,000
June	1,600	920	1,180	.576	.64	70,200
July	1,010	670	783	.382	.44	48,100
August	1,400	500	758	.370	.43	46,600
September	1,720	635	890	.434	.48	53,000
The year	52,800	500	3,360	1.64	22.24	2,430,000

WILLAMETTE RIVER AT ALBANY, OREG.

LOCATION.—In SW. ¼ sec. 6, T. 11 S., R. 3 E., at end of Broadalbin Street, Albany, Linn County, half a mile above Southern Pacific Railroad bridge, just below mouth of Calapooya River, and 9 miles by river above Santiam River.

DRAINAGE AREA.—4,860 square miles.

RECORDS AVAILABLE.—November 24, 1878, to April 30, 1882; January 21, 1892, to September 30, 1926; some fragmentary records 1883 to 1888.

GAGE.—Vertical staff in two sections on right bank; read by F. M. French.

DISCHARGE MEASUREMENTS.—Made from Southern Pacific Railroad bridge.

CHANNEL AND CONTROL.—Bed composed of sand and fine gravel; control practically permanent. Above gage height of 17 feet some water flows through a slough several hundred feet to left of main channel.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 24.7 feet early in morning of February 8 (discharge, 143,000 second-feet); minimum stage, 0.4 foot September 10–16 (discharge, 2,020 second-feet).

1878–1882, 1892–1926: Maximum stage recorded, 32.8 feet January 14, 1881 (discharge, 229,000 second-feet); minimum stage, 0.2 foot September 21–27, 1879 (discharge, 1,870 second-feet, somewhat uncertain).

The maximum stage ever known was 36.0 feet December 8, 1861 (discharge estimated from extension of rating curve, 274,000 second-feet); lowest discharge in recent years, that of September 10–16, 1926.

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

DIVERSIONS.—The Albany power canal has diverted water from South Santiam River near Lebanon and has discharged into Willamette River above gage and measuring section since the early nineties. It ordinarily carries between 100 and 250 second-feet (see p. 13).

REGULATION.—Practically none.

ACCURACY.—Stage-discharge relation apparently permanent during year. Rating curve well defined between 2,400 and 40,000 second-feet and fairly well defined above 40,000 second-feet. Gage read to tenths once a day, twice February 6–9. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

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

The following discharge measurements were made:

October 31, 1925: Gage height, 0.70 foot; discharge, 2,530 second-feet.

January 23, 1926: Gage height, 4.90 feet; discharge, 14,100 second-feet.

July 22, 1926: Gage height, 0.60 foot; discharge, 2,420 second-feet.

Daily discharge, in second-feet, of Willamette River at Albany, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,800	2,400	5,960	8,880	20,800	35,600	6,240	5,680	4,160	2,800	2,210	2,400
2	2,600	2,400	5,960	7,680	18,400	30,600	6,240	5,680	4,160	2,800	2,210	2,600
3	2,600	2,400	11,400	6,800	16,400	26,400	5,960	5,400	3,920	2,600	2,210	2,600
4	2,600	2,600	11,100	6,520	18,000	23,300	5,960	5,140	3,920	2,600	2,210	2,400
5	2,600	2,600	8,880	7,980	36,000	21,200	5,960	5,680	3,920	2,600	2,210	2,400
6	2,600	2,600	7,980	9,480	75,200	20,000	8,280	10,100	3,920	2,600	2,210	2,210
7	2,600	2,600	7,080	11,100	106,000	18,800	8,280	10,400	3,680	2,600	2,210	2,210
8	2,600	2,600	6,520	10,700	131,000	18,000	8,280	9,780	3,680	2,600	2,210	2,210
9	2,600	2,600	6,240	9,480	113,000	15,300	7,980	9,180	3,680	2,600	2,210	2,210
10	2,600	2,800	5,680	8,880	77,100	13,400	7,680	8,580	3,680	2,600	2,210	2,020
11	2,800	3,440	5,400	8,280	56,800	13,100	7,680	7,980	3,440	2,600	2,210	2,020
12	2,800	4,160	5,140	7,980	51,100	12,000	7,680	7,380	3,440	2,600	2,210	2,020
13	2,800	7,680	5,400	7,380	40,200	11,400	8,580	6,800	3,220	2,600	2,210	2,020
14	2,800	8,580	13,400	6,800	35,000	11,100	8,280	6,520	3,220	2,400	2,210	2,020
15	2,800	7,080	10,700	6,800	26,400	10,700	7,980	6,240	3,220	2,400	2,210	2,020
16	2,800	7,680	8,880	7,380	24,600	10,100	7,680	5,960	3,220	2,400	2,210	2,020
17	2,600	6,800	7,980	7,980	25,100	10,400	7,380	5,680	3,000	2,400	2,210	2,210
18	2,600	6,240	7,980	10,400	26,400	10,400	7,080	5,680	3,000	2,400	2,210	3,440
19	2,600	5,960	8,280	10,400	24,200	10,100	7,080	5,400	3,000	2,400	2,210	3,920
20	2,600	5,680	8,580	15,300	24,500	9,480	7,080	5,140	3,000	2,400	3,000	3,680
21	2,600	5,680	11,100	13,800	27,800	8,880	6,800	5,140	3,000	2,400	3,220	3,680
22	2,400	5,400	24,500	13,800	33,500	8,880	6,520	5,680	3,000	2,400	2,800	3,000
23	2,400	4,880	25,500	14,200	37,600	8,580	6,520	5,400	3,000	2,400	2,400	2,600
24	2,400	4,400	32,500	13,400	45,100	8,580	6,800	5,400	3,000	2,400	2,400	2,400
25	2,400	4,160	31,500	12,700	58,000	8,280	6,520	5,140	3,000	2,400	2,400	2,400
26	2,400	4,160	21,600	11,700	77,100	7,980	6,520	4,880	2,800	2,400	2,400	2,400
27	2,400	4,640	17,200	11,100	65,200	7,680	6,520	4,640	2,800	2,400	2,400	2,400
28	2,400	5,140	14,500	10,100	46,100	7,380	6,240	4,640	2,800	2,400	2,210	2,400
29	2,400	5,140	12,400	11,100	-------	7,080	6,240	4,640	2,800	2,400	2,210	2,210
30	2,400	5,680	10,400	15,700	-------	6,800	5,960	4,400	2,800	2,400	2,210	2,210
31	2,400	-------	9,480	23,300	-------	6,520	-------	4,160	-------	2,400	2,210	------

Monthly discharge of Willamette River at Albany, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2,800	2,400	2,580	159,000
November	8,580	2,400	4,610	274,000
December	32,500	5,140	11,900	732,000
January	23,300	6,520	10,600	652,000
February	131,000	16,400	47,700	2,650,000
March	35,600	6,520	13,500	830,000
April	8,580	5,960	7,070	421,000
May	10,400	4,160	6,210	382,000
June	4,160	2,800	3,320	198,000
July	2,800	2,400	2,500	154.000
August	3,220	2,210	2,320	143,000
September	3,920	2,020	2,480	148,000
The year	131,000	2,020	9,310	6,740,000

COAST FORK OF WILLAMETTE RIVER AT SAGINAW, OREG.

LOCATION.—In NW. ¼ sec. 15, T. 20 S., R. 3 W., at highway bridge at Saginaw, Lane County, 1 mile below mouth of Row River.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—October 1, 1923, to September 30, 1926.

GAGE.—Chain gage on highway bridge; read by M. H. Horn for the United States Weather Bureau.

DISCHARGE MEASUREMENTS.—Made from suspension footbridge a quarter of a mile downstream; conditions favorable. Low-water measurements made by wading below bridge.

CHANNEL AND CONTROL.—River generally sluggish and fairly straight. Control is well-defined gravel riffle about 200 yards below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded, 11.6 feet during afternoon of February 4 (discharge, 24,100 second-feet); minimum discharge, about 25 second-feet August 16 (gage height, 0.75 foot, affected by backwater from temporary dam).

1923–1926: Maximum stage recorded, that of February 4, 1926; minimum discharge recorded, that of August 16, 1926.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed February 4 and changing June 6 to September 30, owing to temporary dam on control. Rating curve used October 1 to February 3 well defined below 5,000 second-feet; curve used February 4 to May 31 fairly well defined between 80 and 15,000 second-feet, latter curve used indirectly June 6 to September 30. Gage read to hundredths at low and medium stages and to tenths at high stages; read once daily except February 4–6, when it was read twice daily. Daily discharge ascertained by applying daily gage reading to rating table except June 6 to September 30, when shifting-control method was used. Records good except for July and September, for which they are fair, and for August, for which they are poor.

Discharge measurements of Coast Fork of Willamette River at Saginaw, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 14	1.62	561	Apr. 17	1.39	479	Sept. 14	[a] 0.82	49.5
Jan. 16	1.46	477	June 14	.75	121	Sept. 23	[a] .97	108
Feb. 28	4.50	4,180	July 26	[a] 1.00	46.2			

[a] Affected by temporary dam used to divert water to pump used in gravel pit.

Daily discharge, in second-feet, of Coast Fork of Willamette River at Saginaw, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	150	53	580	370	940	2,910	485	398		76		159
2	150	53	1,570	330	905	2,340	515	370		72		148
3	150	61	1,390	340	905	2,210	545	370	310	70		101
4	120	53	1,310	405	14,600	1,830	790	359		66		80
5	120	57	1,310	405	11,100	1,470	830	545		64		72
6	90	70	1,230	430	14,300	1,470	830	1,470	234	64		60
7	90	65	1,150	430	7,260	1,360	870	1,470	216	62		56
8	90	70	1,120	405	5,540	950	645	1,080	192	68		54
9	90	75	975	380	5,140	680	485	870	170	74	30	54
10	65	90	1,310	340	4,740	715	425	750	166	76		44
11	90	203	1,570	375	4,540	750	830	750	166	78		34
12	65	1,310	2,460	380	5,140	715	830	750	152	86		36
13	65	2,840	1,480	460	4,010	610	830	715	138	76		44
14	65	580	800	550	2,620	610	680	578	120	70		50
15	90	550	1,080	580	2,340	545	715	485	117	64		66
16	65	580	1,120	730	2,340	425	645	425	120	58		72
17	65	550	1,080	800	2,340	425	578	425	128			98
18	65	550	1,150	1,390	2,480	515	578	326	131		50	80
19	45	550	1,150	1,570	2,480	515	610	315	131		337	62
20	45	490	1,310	1,230	2,760	485	578	342	162	50	192	54
21	65	380	3,260	1,150	4,540	455	515	455	138		170	70
22	65	350	5,100	1,480	3,850	425	485	398	117		117	66
23	65	227	2,460	1,390	5,340	398	485	370	110		98	104
24	45	120	1,570	1,230	14,600	370	485	348	104	44	95	117
25	45	148	1,390	1,230	9,180	425	455	295	117	46	95	110
26	45	550	1,120	940	7,040	425	485	425	110	42	159	
27	65	380	1,080	905	5,740	425	485	398	92	40	173	
28	45	350	800	610	4,010	398	455	370	89	37	114	80
29	45	380	700	2,700	-------	370	455	455	86	36	134	
30	45	490	550	2,700	-------	359	425	425	78	31	156	
31	65	-------	490	2,840	-------	398	-------	410	-------	30	176	-------

NOTE.—Daily discharge June 1–5, for which gage readings are missing, and July 17–23, Aug. 1–7, and Sept. 26–30, for which stage-discharge relation is uncertain, determined by study of gage heights, observer's notes, precipitation record, and discharge measurement of Row River above Mosly Creek.

Monthly discharge of Coast Fork of Willamette River at Saginaw, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	150	45	76.5	4,700
November	2,840	53	408	24,300
December	5,100	490	1,410	86,700
January	2,840	330	938	57,700
February	14,600	905	5,380	299,000
March	2,910	359	838	51,500
April	870	425	601	35,800
May	1,470	295	553	34,000
June	----------	78	164	9,760
July	86	30	57.4	3,530
August	337	----------	83.1	5,110
September	159	34	76.4	4,550
The year	14,600	----------	852	617,000

McKENZIE RIVER AT McKENZIE BRIDGE, OREG.

LOCATION.—In sec. 14, T. 16 S., R. 5 E., at highway bridge at McKenzie Bridge, Lane County.

DRAINAGE AREA.—353 square miles.

RECORDS AVAILABLE.—August 8, 1910, to September 30, 1926, with some breaks.

GAGE.—Vertical staff attached to right abutment of highway bridge at McKenzie Bridge; read by Felix Sparks.

DISCHARGE MEASUREMENTS.—Made from cable three-eighths mile above ranger station.

CHANNEL AND CONTROL.—Bed composed of rocks and gravel; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year determined from high-water marks, 5.4 feet probably on February 6 (discharge, 8,300 second-feet); minimum stage recorded, 0.42 foot September 8–13 (discharge, 934 second-feet).

1910–1926: Maximum stage recorded, 8.3 feet on January 6, 1923, determined by leveling to high-water marks (discharge from extension of rating curve, 18,000 second-feet); minimum discharge, 890 second-feet on October 13–26, 1924.

ICE.—Stage-discharge relation unaffected by ice.

DIVERSIONS.—None.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined. Gage read to hundredths once a day. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

The following discharge measurements were made:

October 11, 1925: Gage height, 0.63 foot; discharge, 1,100 second-feet.

February 20, 1926: Gage height, 1.65 feet; discharge, 1,870 second-feet.

August 9, 1926: Gage height, 0.48 foot; discharge, 1,020 second-feet.

Daily discharge, in second-feet, of McKenzie River at McKenzie Bridge, Oreg., for the year ending September 30, 1926.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	May	June	July	Aug.	Sept.
1	1,100	1,050	1,240	------	------	------	1,200	1,070	976	976
2	1,100	1,050	1,390	------	------	------	1,190	1,060	976	976
3	1,100	1,050	1,310	------	------	------	1,190	1,060	976	962
4	1,100	1,050	1,240	------	------	------	1,190	1,060	976	962
5	1,100	1,030	1,230	------	------	------	1,170	1,060	976	948
6	1,090	1,030	1,220	1,510	------	------	1,170	1,060	976	948
7	1,070	1,030	1,200	1,470	------	------	1,170	1,060	976	948
8	1,070	1,050	1,190	1,430	------	------	1,160	1,050	976	934
9	1,060	1,050	1,190	1,390	------	------	1,140	1,050	976	934
10	1,060	1,050	1,170	1,350	3,090	------	1,130	1,050	976	934
11	1,060	1,190	1,200	1,350	------	------	1,130	1,040	976	934
12	1,060	1,200	1,430	------	------	------	1,130	1,030	976	934
13	1,060	1,140	1,350	------	------	------	1,120	1,030	976	934
14	1,060	1,100	1,270	------	------	------	1,120	1,030	976	948
15	1,060	1,160	1,270	------	------	------	1,120	1,030	976	990
16	1,060	1,130	1,270	------	------	------	1,100	1,020	976	1,020
17	1,060	1,190	------	------	------	------	1,090	1,020	990	1,060
18	1,060	1,160	------	------	------	------	1,090	1,000	1,050	1,050
19	1,060	1,120	------	------	------	1,270	1,130	1,000	1,050	990
20	1,060	1,120	------	------	1,880	1,270	1,120	1,000	990	955
21	1,060	1,120	------	------	------	1,270	1,100	1,000	976	955
22	1,060	1,090	------	------	------	1,270	1,100	1,000	976	976
23	1,060	1,050	------	------	------	1,270	1,090	1,000	962	976
24	1,060	1,050	------	------	------	1,270	1,090	1,000	962	955
25	1,050	1,100	------	------	------	1,240	1,090	1,000	962	955
26	1,050	1,120	------	------	------	1,200	1,100	990	962	955
27	1,050	1,140	------	------	------	1,200	1,090	990	969	955
28	1,050	1,140	------	------	------	1,200	1,090	990	962	955
29	1,050	1,130	------	------	------	1,200	1,070	990	962	941
30	1,050	1,160	------	------	------	1,200	1,070	990	976	941
31	1,050	------	------	------	------	1,200	------	983	976	------

NOTE.—Gage not read on days for which discharge is not given.

Monthly discharge of McKenzie River at McKenzie Bridge, Oreg., for the year ending September 30, 1926

[Drainage area, 353 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	1,100	1,050	1,070	3.03	3.49	65,800
November	1,200	1,030	1,100	3.12	3.48	65,500
December 1–16	1,430	1,170	1,260	3.57	2.12	40,000
May 19–31	1,270	1,200	1,240	3.51	1.70	32,000
June	1,200	1,070	1,120	3.17	3.54	66,600
July	1,070	983	1,020	2.89	3.33	62,700
August	1,050	962	979	2.77	3.19	60,200
September	1,060	934	963	2.73	3.05	57,300

McKENZIE RIVER NEAR VIDA, OREG.

LOCATION.—In NE. ¼ sec. 5, T. 17 S., R. 3 E., at Rennie ranch and suspension bridge, 1 mile above head of Martin Rapids, and 5 miles above Vida, Lane County.

DRAINAGE AREA.—930 square miles (measured on Forest Service map).

RECORDS AVAILABLE.—September 22, 1924, to September 30, 1926. At station at head of Martin Rapids, gage heights only June 25, 1910, to March 31, 1911.

GAGE.—Inclined gage on left bank 50 feet below suspension footbridge; read by Jake Zindel.

DISCHARGE MEASUREMENTS.—Made from suspension footbridge.

CHANNEL AND CONTROL.—Channel is wide, shallow, and straight. Banks high and not overflowed. Current even and bottom fairly smooth. Control is well-defined coarse-gravel riffle 100 feet below gage; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded, 8.5 feet at 8 a. m. February 6 (discharge, 24,400 second-feet); minimum stage, 0.45 foot on September 14 and 15 (discharge, 1,430 second-feet).

1924–1926: Maximum stage recorded, 9.1 feet February 3, 1925 (discharge, about 26,700 second-feet); minimum stage recorded, that of September 14 and 15, 1926.

ICE.—Stage-discharge relation unaffected by ice.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent. Two rating curves used; identical above 1,690 second-feet; well defined below 12,000 second-feet. Gage read once daily; read to tenths at high and medium stages, to hundredths at low stages. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

The following discharge measurements were made:

October 11, 1925: Gage height, 0.61 foot; discharge 1,620 second-feet.

February 21, 1926: Gage height, 2.68 feet; discharge, 5,200 second-feet.

August 10, 1926: Gage height, 0.48 foot; discharge, 1,510 second-feet.

Daily discharge, in second-feet, of McKenzie River near Vida, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,760	1,630	3,720	2,830	4,350	6,290	2,520	2,520	2,220	1,640	1,480	1,600
2	1,760	1,630	3,720	2,670	4,140	6,020	2,520	2,520	2,220	1,640	1,480	1,500
3	1,690	1,630	5,030	2,830	3,720	5,760	2,520	2,370	2,080	1,640	1,480	1,480
4	1,690	1,570	4,350	2,670	9,840	5,030	3,000	3,170	2,080	1,640	1,480	1,480
5	1,690	1,690	2,520	3,000	10,500	4,800	3,170	3,930	2,080	1,640	1,480	1,480
6	1,690	1,690	2,670	3,530	24,400	4,350	3,000	3,170	2,080	1,640	1,480	1,480
7	1,690	1,640	2,370	3,260	20,400	3,930	3,000	3,000	2,080	1,640	1,480	1,480
8	1,690	1,950	2,520	2,830	14,100	3,930	3,000	2,830	2,080	1,640	1,480	1,480
9	1,760	2,020	2,150	2,830	10,200	3,930	2,830	2,830	2,080	1,580	1,480	1,480
10	1,690	2,370	2,080	2,830	13,800	3,530	2,830	2,830	1,950	1,580	1,480	1,480
11	1,640	3,440	1,820	2,830	8,880	3,170	2,830	2,670	1,950	1,580	1,480	1,460
12	1,690	3,440	2,370	2,600	7,400	3,170	2,830	2,520	1,820	1,580	1,460	1,460
13	1,690	3,440	3,720	2,600	6,290	3,170	2,670	2,520	1,820	1,580	1,460	1,460
14	1,760	2,600	5,510	2,600	5,510	3,350	2,520	2,520	1,820	1,580	1,460	1,430
15	1,760	2,600	4,800	2,830	5,030	3,720	2,520	2,520	1,690	1,580	1,460	1,460
16	1,760	2,600	3,170	2,830	5,030	3,720	2,830	2,520	1,690	1,580	1,460	1,820
17	1,690	2,150	3,350	3,930	5,270	3,930	2,830	2,520	1,690	1,580	1,460	2,150
18	1,630	2,520	3,720	3,350	4,570	3,930	2,830	2,370	1,690	1,580	1,880	1,880
19	1,690	2,150	3,720	3,530	4,570	3,350	2,830	2,370	1,690	1,580	1,880	1,640
20	1,690	3,000	4,140	3,530	4,570	3,170	2,830	2,370	1,690	1,560	1,570	1,530
21	1,690	3,000	4,140	3,530	5,030	3,000	2,830	2,370	1,690	1,560	1,480	1,530
22	1,690	3,000	11,400	3,930	5,760	3,000	2,830	2,370	1,580	1,560	1,480	1,820
23	1,690	2,830	12,800	3,720	5,510	2,830	2,830	2,220	1,580	1,530	1,480	1,820
24	1,630	3,000	7,980	3,720	10,800	2,830	2,670	2,220	1,580	1,530	1,480	1,620
25	1,630	3,080	7,120	3,530	10,200	2,670	2,520	2,220	1,580	1,530	1,480	1,570
26	1,690	3,080	5,510	3,000	8,580	2,670	2,520	2,080	1,580	1,530	1,600	1,530
27	1,690	3,000	4,140	3,000	7,690	2,520	2,520	2,080	1,580	1,530	1,640	1,530
28	1,760	3,080	3,530	3,000	6,840	2,520	2,520	2,080	1,580	1,480	1,500	1,530
29	1,760	3,080	3,260	3,720	-------	2,520	2,520	2,220	1,580	1,480	1,480	1,540
30	1,630	3,080	3,000	4,800	-------	2,520	2,520	2,220	1,580	1,480	1,640	1,530
31	1,630	-------	2,830	4,140	-------	2,520	-------	2,220	-------	1,480	1,690	------

Monthly discharge of McKenzie River near Vida, Oreg., for the year ending September 30, 1926

[Drainage area, 930 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	1,760	1,630	1,700	1.83	2.11	105,000
November	3,440	1,570	2,530	2.72	3.04	151,000
December	12,800	1,820	4,300	4.62	5.33	264,000
January	4,800	2,600	3,230	3.47	4.00	199,000
February	24,400	3,720	8,320	8.95	9.32	462,000
March	6,290	2,520	3,610	3.88	4.47	222,000
April	3,170	2,520	2,740	2.95	3.29	163,000
May	3,930	2,080	2,530	2.72	3.14	156,000
June	2,220	1,580	1,810	1.95	2.18	108,000
July	1,640	1,480	1,570	1.69	1.95	96,500
August	1,880	1,460	1,530	1.65	1.90	94,100
September	2,150	1,430	1,580	1.70	1.90	94,000
The year	24,400	1,430	2,920	3.14	42.63	2,110,000

McKENZIE RIVER NEAR SPRINGFIELD, OREG.

LOCATION.—In NE. ¼ sec. 32, T. 17 S., R. 1 W., at Hendricks Bridge, 2 miles southwest of Walterville and 10 miles east of Springfield, Lane County.

DRAINAGE AREA.—1,100 square miles.

RECORDS AVAILABLE.—September 12, 1905, to March 31, 1915; August 1 to September 30, 1926.

GAGE.—Vertical staff on pier of highway bridge; read by Harry P. Jackson.

DISCHARGE MEASUREMENTS.—Made from bridge.

CHANNEL AND CONTROL.—Bed composed of coarse gravel and small boulders; shifting in flood. Slight backwater effect from fish screens 100 yards downstream.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period August 1 to September 30, 2.1 feet September 18 (discharge, 1,300 second-feet); minimum stage, 1.0 foot September 15 (discharge, 535 second-feet).

1905–1915, 1926: Maximum stage recorded, 13.0 feet November 22, 1909 (discharge, 43,500 second-feet); minimum stage, that of September 15, 1926.

ICE.—None.

DIVERSIONS.—Eugene power canal diverts around station about half the low-water flow. (See p. 129.)

REGULATION.—None.

ACCURACY.—Stage-discharge relation shifting owing to accumulation of trash on fish racks 100 yards below. Gage read to half-tenths once a day. Daily discharge ascertained by shifting-control method. Records fair.

The following discharge measurements were made:

July 23, 1926: Gage height, 1.45 feet; discharge, 771 second-feet.

August 30, 1926: Gage height, 1.28 feet; discharge, 689 second-feet.

September 23, 1926: Gage height, 1.74 feet; discharge 1,010 second-feet.

Daily discharge, in second-feet, of McKenzie River near Springfield, Oreg., for the year ending September 30, 1926

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	690	825	11	660	635	21	755	895
2	690	755	12	660	610	22	790	895
3	675	690	13	660	635	23	690	1,050
4	675	660	14	660	610	24	635	755
5	660	755	15	660	535	25	635	755
6	660	825	16	660	895	26	690	720
7	690	755	17	660	1,220	27	825	690
8	690	635	18	825	1,300	28	690	660
9	690	635	19	1,220	1,050	29	660	635
10	660	635	20	895	970	30	690	635
						31	895	

Monthly discharge of McKenzie River near Springfield, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
August	1,220	635	719	44,200
September	1,300	535	777	46,200

EUGENE POWER CANAL NEAR WALTERVILLE, OREG.

LOCATION.—In SE. ¼ sec. 23, T. 17 S., R. 1 W., 150 yards below intake and 2 miles east of Walterville, Lane County.

RECORDS AVAILABLE.—July 24 to September 30, 1926. September 7, 1911, to March 31, 1915, at a station 3 miles below.

GAGE.—Vertical staff on footbridge; read by H. A. Morris.

DISCHARGE MEASUREMENTS.—Made from bridge at gage.

CHANNEL AND CONTROL.—Canal excavated in gravel; straight with no defined control.

EXTREMES OF DISCHARGE.—Maximum stage recorded July 24 to September 30, 3.28 feet September 17 (discharge, 1,030 second-feet); minimum stage recorded, 1.70 feet September 5 (discharge, 430 second-feet).

1911–1915, 1926; Maximum discharge, that of September 17, 1926; Canal probably dry at times.

ICE.—None.

ACCURACY.—Stage-discharge relation probably permanent. Rating curve fairly well defined above 700 second-feet. Gage read to hundredths once a day. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

Eugene power canal diverts water from McKenzie River in SE. ¼ sec. 23, T. 17 S., R. 1 W., and extends 3½ miles to the power plant in NW. ¼ sec. 29; the tailrace discharges into Camp Creek 4 miles above its mouth. The water is diverted around gage on McKenzie River near Springfield.

The following discharge measurements were made:

July 24, 1926: Gage height, 2.73 feet; discharge, 770 second-feet.

August 2, 1926: Gage height, 2.84 feet; discharge, 889 second-feet.

Daily discharge, in second-feet, of Eugene power canal near Walterville, Oreg., for the year ending September 30, 1926

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	-------	710	910	11	-------	870	870	21	-------	830	525
2	-------	830	910	12	-------	830	870	22	-------	830	560
3	-------	790	870	13	-------	830	910	23	-------	830	630
4	-------	830	830	14	-------	870	950	24	790	830	950
5	-------	830	430	15	-------	750	990	25	790	910	950
6	-------	790	430	16	-------	830	1,030	26	790	950	490
7	-------	830	525	17	-------	830	1,030	27	790	870	830
8	-------	710	830	18	-------	950	460	28	790	910	870
9	-------	830	830	19	-------	870	460	29	830	910	950
10	-------	830	870	20	-------	830	460	30	830	910	910
								31	830	910	-------

Monthly discharge of Eugene power canal near Walterville, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
July 24–31	830	790	805	12,800
August	950	710	843	51,800
September	1,030	430	771	45,900

LONG TOM RIVER NEAR MONROE, OREG.

LOCATION.—In sec. 21, T. 14 S., R. 5 W., at highway bridge 1½ miles north of Monroe, Benton County.

DRAINAGE AREA.—400 square miles.

RECORDS AVAILABLE.—November 13, 1920, to April 30, 1926.

GAGE.—Vertical staff on right abutment of bridge; read by William Pfouts.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of silt and gravel. Banks low and wooded. Control, 400 feet below gage; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage during period October 1 to April 30, 14.4 feet, from high-water marks, on February 7 (discharge, 17,300 second-feet); minimum stage recorded, 0.34 foot November 1 (discharge, 9 second-feet).

1920–1926: Maximum discharge recorded, 18,600 second-feet January 7, 1923 (gage height, 14.4 feet); minimum discharge recorded, 8 second-feet September 5–19 and 23, 1924 (gage height, 0.26 foot).

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

DIVERSIONS.—None.

REGULATION.—Probably some fluctuation at low stages due to pondage at mill dam at Monroe.

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

Discharge measurements of Long Tom River near Monroe, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 10	0.47	22.5	Feb. 28	8.55	2,790
Jan. 10	1.75	309	May 1	.88	99

Daily discharge, in second-feet, of Long Tom River near Monroe, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1	29	9	94	274	1,490	2,320	166
2	21	16	111	226	1,380	1,760	166
3	29	29	131	226	1,100	1,410	166
4	29	29	166	226	2,000	1,200	196
5	32	29	154	312	3,450	1,030	226
6	29	32	142	418	8,600	930	262
7	26	35	111	446	15,700	810	286
8	29	24	98	418	13,700	782	274
9	24	26	78	364	8,060	698	262
10	16	29	74	325	6,200	642	238
11	21	41	78	262	5,820	558	214
12	21	60	82	238	4,310	502	190
13	22	98	102	214	3,290	446	178
14	24	120	131	190	2,440	446	166
15	14	142	214	238	1,900	390	142
16	12	142	166	274	1,850	364	142
17	14	111	166	502	2,050	364	142
18	14	107	154	810	1,980	358	131
19	16	102	202	1,490	1,900	351	131
20	19	107	418	1,490	2,150	338	120
21	26	89	962	1,270	3,050	312	131
22	21	71	1,100	930	3,550	274	120
23	19	60	1,490	754	3,750	262,	120
24	19	54	1,680	642	4,980	226	120
25	16	54	1,600	558	5,460	214	120
26	19	54	1,270	530	5,140	202	120
27	14	54	984	418	4,550	190	116
28	16	60	698	390	3,370	190	107
29	16	71	418	558	-------	178	102
30	16	92	418	930	-------	166	98
31	12	-------	338	1,450	-------	166	-------

Monthly discharge of Long Tom River near Monroe, Oreg., for the year ending September 30, 1926

[Drainage area, 400 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	32	12	20.5	0.051	0.06	1,260
November	142	9	64.9	.162	.18	3,860
December	1,680	74	446	1.12	1.29	27,400
January	1,490	190	560	1.40	1.61	34,400
February	15,700	1,100	4,400	11.0	11.45	244,000
March	2,320	166	583	1.46	1.68	35,800
April	286	98	165	.412	.46	9,820
The period						357,000

MUDDY CREEK NEAR CORVALLIS, OREG.

LOCATION.—In SW. ¼ sec. 29, T. 12 S., R. 5 W., at highway bridge 1½ miles east of Independence School and 3 miles south of Corvallis, Benton County.

DRAINAGE AREA.—114 square miles (revised; from national-forest maps).

RECORDS AVAILABLE.—October 30, 1920, to June 30, 1921, November 1, 1921, to April 30, 1923, and December 18, 1925, to April 30, 1926.

GAGE.—Vertical staff nailed to pile of bridge; read by B. F. Bowers. Readings for 1925 and 1926 refer to a datum 1.0 foot lower than that previously used.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Deep and narrow, very crooked; water overflows banks at about 10-foot stage below but not at gage. Control not defined but apparently permanent.

EXTREMES OF DISCHARGE.—Maximum stage during period December 18 to April 30, 18.4 feet on February 6 or 7, determined from high-water marks (discharge, 3,420 second-feet); minimum stage recorded, 1.3 feet April 30 (discharge, 36 second-feet).

1921–1923, 1926: Maximum discharge recorded, 3,500 second-feet January 7, 1923 (stage, 17.53 feet); minimum stage, −0.79 foot September 12–14, 1922 (discharge, 11 second-feet).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve fairly well defined below 2,000 second-feet. Gage read once a day to tenths. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

The following discharge measurements were made:

January 17, 1926: Gage height, 5.00 feet; discharge, 159 second-feet.

February 14, 1926: Gage height, 10.54 feet; discharge, 511 second-feet.

May 9, 1926: Gage height, 1.90 feet; discharge, 54 second-feet.

Daily discharge, in second-feet, of Muddy Creek near Corvallis, Oreg., for the year ending September 30, 1926

Day	Dec.	Jan.	Feb.	Mar.	Apr.	Day	Dec.	Jan.	Feb.	Mar.	Apr.
1		132	440	635	66	16		105	440	116	57
2		102	370	505	66	17		160	523	112	54
3		96	326	448	63	18	75	255	505	108	54
4		99	695	424	60	19	81	272	514	105	54
5		105	1,740	302	78	20	152	296	580	105	51
6		140	2,790	266	81	21	350	278	1,110	102	51
7		136	2,440	230	78	22	392	230	1,300	99	48
8		120	1,740	210	75	23	472	195	1,740	96	48
9		108	1,680	195	69	24	550	170	2,040	84	48
10		99	1,380	180	69	25	480	156	1,520	81	45
11		96	1,140	160	66	26	392	140	1,420	81	45
12		84	940	148	66	27	302	124	1,170	78	42
13		81	695	136	63	28	225	132	860	75	42
14		78	514	128	60	29	170	255		72	39
15		108	440	120	57	30	144	408		69	36
						31	136	416		69	

Monthly discharge of Muddy Creek near Corvallis, Oreg., for the year ending September 30, 1926

[Drainage area, 120 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
December 18–31	550	75	280	2.46	1.28	7,780
January	416	78	167	1.46	1.68	10,300
February	2,790	326	1,110	9.74	10.14	61,600
March	635	69	179	1.57	1.81	11,000
April	81	36	57.7	.506	.56	3,430
The period						94,100

NORTH SANTIAM RIVER AT MEHAMA, OREG.

LOCATION.—In NW. ¼ sec. 18, T. 9 S., R. 2 E., at Mehama, Marion County' half a mile below mouth of Little North Santiam River and 1 mile north of Lyons railroad station.

DRAINAGE AREA.—665 square miles (revised).

RECORDS AVAILABLE.—July 11, 1905, to March 31, 1907; October 11, 1910, to September 30, 1914; September 9, 1921, to September 30, 1926.

GAGE.—Staff in two sections on right bank; lower section inclined, upper vertical. Auxiliary gage about half a mile below regular gage. Gages read by W. P. Mulkey.

DISCHARGE MEASUREMENTS.—Made from highway bridge 200 feet above gage.

CHANNEL AND CONTROL.—Bed composed of coarse gravel and boulders; shifting in floods.

EXTREMES OF DISCHARGE.—Maximum stage during year, 12.0 feet during night of February 5–6, noted from high-water marks the next morning (discharge, 34,000 second-feet); minimum discharge, 480 second-feet on August 10–17 (stage, −0.08 foot, on auxiliary gage).

1905–1907, 1910–1914, 1921–1926: Maximum stage, 17.5 feet November 20, 1921, and January 6, 1923 (discharge, 62,000 second-feet); minimum stage, 1.45 feet September 18, 1924 (discharge, 420 second-feet).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation at regular gage practically permanent during year except as affected by backwater from diversion dam March 13 to August 25; fairly permanent at lower gage which was used from April 1 to August 22. Rating curves for both gages fairly well defined. Daily discharge ascertained by applying daily gage reading to rating table except March 13–31 and August 23–25, when shifting-control method was used. Records good except for March and August, for which they are fair.

Discharge measurements of North Santiam River at Mehama, Oreg., during the year ending September 30, 1926

Date	Auxiliary-gage height	Gage height	Discharge	Date	Auxiliary-gage height	Gage height	Discharge
	Feet	*Feet*	*Sec.-ft.*		*Feet*	*Feet*	*Sec.-ft.*
Nov. 8		1.50	582	May 31	0.65	[a] 3.28	1,400
Feb. 13		4.45	5,190	July 21	.04	[a] 2.22	593
Apr. 14	0.94	[a] 3.60	2,100	Aug. 24	−.02	[a] 1.79	649
May 26	.70	[a] 3.38	1,540	Sept. 8		1.65	685

[a] Stage-discharge relation affected by temporary diversion dam.

Daily discharge, in second-feet, of North Santiam River at Mehama, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	670	580	3,340	2,130	4,340	5,940	1,740	1,380	1,380	780	540	1,160
2	670	580	5,460	1,980	4,130	5,460	1,650	1,300	1,380	780	510	1,280
3	670	580	4,130	1,980	3,720	5,460	1,650	1,210	1,300	780	510	2,450
4	580	580	3,340	1,830	4,780	5,460	2,140	1,650	1,210	720	510	900
5	580	580	2,800	2,450	9,300	4,560	2,140	3,000	1,210	720	510	805
6	580	580	2,620	5,220	30,000	3,340	2,140	2,560	1,130	780	510	760
7	580	580	2,290	3,530	24,000	3,530	2,140	2,140	1,130	670	510	760
8	580	580	2,130	2,980	15,600	3,530	2,140	2,040	1,130	670	510	715
9	580	580	1,980	2,620	9,900	3,340	2,140	2,040	1,050	670	510	670
10	580	670	1,830	2,450	9,300	2,980	2,140	1,940	980	720	480	670
11	580	1,540	1,830	2,130	8,220	2,800	2,140	1,740	980	670	480	652
12	580	2,980	3,720	1,980	6,920	2,800	2,340	1,650	980	670	480	625
13	580	2,620	4,780	1,830	5,700	2,800	2,140	1,650	910	670	480	598
14	580	1,980	3,340	1,830	4,780	2,980	2,040	1,560	910	670	480	598
15	580	1,680	2,800	2,290	4,560	3,340	2,040	1,470	910	648	480	580
16	580	2,450	2,620	2,290	4,560	3,530	2,140	1,380	910	637	480	1,280
17	580	2,620	2,450	4,340	5,000	3,160	1,940	1,470	840	615	480	1,980
18	580	3,720	2,450	3,920	4,340	3,160	1,840	1,650	840	615	780	1,980
19	580	2,620	2,290	3,340	4,340	2,800	1,740	1,650	910	593	1,560	1,480
20	580	1,980	2,450	2,800	5,460	2,800	1,740	1,840	1,210	582	1,210	1,160
21	580	1,540	11,400	3,530	5,940	2,450	1,650	2,040	980	593	910	1,050
22	580	1,410	11,700	4,130	6,420	2,210	1,840	1,940	910	593	670	1,830
23	580	1,280	14,800	3,720	5,460	2,210	1,740	1,740	910	582	670	2,800
24	580	1,160	8,740	3,530	10,800	2,210	1,560	1,940	840	571	670	1,830
25	580	1,160	6,420	3,160	11,700	2,060	1,470	1,740	840	582	650	1,410
26	580	1,830	5,000	2,980	9,020	1,900	1,470	1,560	840	582	760	1,160
27	580	3,340	3,920	2,620	7,440	1,760	1,470	1,650	780	571	1,160	1,050
28	580	2,620	3,340	2,450	6,660	1,610	1,470	1,650	780	560	850	950
29	580	1,980	2,980	3,160	-------	1,610	1,470	1,650	780	550	760	1,000
30	580	2,800	2,620	4,780	-------	1,480	1,470	1,560	780	540	850	1,050
31	580	-------	2,450	3,920	-------	1,610	-------	1,470	-------	540	1,050	-------

Monthly discharge of North Santiam River at Mehama, Oreg., for the year ending September 30, 1926

[Drainage area, 665 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	670	580	589	0.886	1.02	36,200
November	3,720	580	1,640	2.47	2.76	97,600
December	14,800	1,830	4,260	6.41	7.39	262,000
January	5,220	1,830	2,960	4.45	5.13	182,000
February	30,000	3,720	8,300	12.5	13.02	461,000
March	5,940	1,480	3,060	4.60	5.30	188,000
April	2,340	1,470	1,860	2.80	3.12	111,000
May	3,000	1,210	1,750	2.63	3.03	108,000
June	1,380	780	991	1.49	1.66	59,000
July	780	540	643	.967	1.11	39,500
August	1,560	480	678	1.02	1.18	41,700
September	2,800	580	1,170	1.76	1.96	69,600
The year	30,000	480	2,290	3.44	46.68	1,660,000

SOUTH SANTIAM RIVER AT WATERLOO, OREG.

LOCATION.—In NW. ¼ sec. 28, T. 12 S., R. 1 W., 4 miles above Hamilton Creek, at Waterloo, Linn County.

DRAINAGE AREA.—640 square miles.

RECORDS AVAILABLE.—July 28, 1905, to March 31, 1907; October 31, 1910, to December 31, 1911; July 1, 1923, to September 30, 1926.

GAGE.—Inclined staff on left bank, 200 yards below former highway bridge, on which was located the gage used 1905–1911; read by Leo Lueck.

DISCHARGE MEASUREMENTS.—Made by wading near gage or from highway bridge 4 miles downstream and below Hamilton Creek, the flow of which is deducted.

CHANNEL AND CONTROL.—Bed composed of gravel and small boulders; may shift during extreme floods.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 13.5 feet in afternoon of February 6 (discharge, 46,200 second-feet); minimum stage, 1.5 feet October 14–16, 26–31, November 1–3, and 7 (discharge, 100 second-feet).

1905–1907, 1911, 1923–1926: Maximum recorded stage that is considered reliable, 16.8 feet February 16, 1907 (discharge, 50,000 second-feet); minimum discharge, 100 second-feet on several days in September, October, and November, 1925.

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent, except July 9–17, 20–31, and August 1–17, when it was affected by logs on control. Rating curve fairly well defined below 15,000 second-feet. Staff gage read once a day to tenths except at low stages when it was read to half or quarter tenths. Daily discharge ascertained by applying to rating table daily gage reading except for periods stage-discharge relation was affected by logs, when daily gage reading was applied indirectly. Observer's gage readings June 30 to July 6 discarded as erroneous and discharge estimated. Records good except for discharge above 15,000 second-feet and June 30 to August 17, for which they are fair.

The following discharge measurements were made:
November 8, 1925: Gage height, 1.64 feet; discharge, 154 second-feet.
April 15, 1926: Gage height, 3.10 feet; discharge, 1,170 second-feet.
July 21, 1926: Gage height, 1.86 feet; discharge, 194 second-feet.

Daily discharge, in second-feet, of South Santiam River at Waterloo, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	215	100	2,620	1,920	4,680	7,180	990	800	890		175	525
2	215	100	3,240	1,340	4,420	6,160	990	800	890		175	490
3	215	100	4,160	1,220	4,420	5,220	990	800	845		143	430
4	215	175	3,240	1,220	8,230	4,160	990	1,770	800	190	167	370
5	195	175	1,620	1,480	18,700	3,920	1,100	2,820	755		135	340
6	195	135	1,340	1,920	38,000	3,460	1,100	2,430	710		135	340
7	175	100	1,100	2,430	27,700	3,020	1,100	2,250	710	175	135	310
8	175	135	890	2,250	22,700	2,820	1,220	1,920	670	175	135	285
9	175	135	710	1,920	15,200	2,820	1,220	1,770	630	175	135	260
10	135	175	430	1,620	12,200	2,820	1,340	1,620	630	175	135	260
11	135	175	215	1,480	8,630	2,620	1,340	1,480	560	195	135	251
12	135	2,430	430	1,340	8,230	2,620	1,340	1,340	490	175	135	238
13	135	1,480	800	1,340	7,530	2,620	1,480	1,220	490	135	135	238
14	100	1,220	1,340	1,340	6,480	2,430	1,220	990	490	135	135	224
15	100	1,480	2,080	1,340	5,520	2,250	1,220	890	525	135	135	370
16	100	1,770	1,340	1,480	4,420	2,250	1,100	890	560	135	135	630
17	135	2,080	1,620	3,460	5,520	2,250	1,100	890	560	135	135	1,840
18	135	2,430	1,770	3,020	5,520	2,080	1,100	890	560	135	490	1,920
19	135	1,920	1,770	3,020	5,840	1,920	990	755	630	135	1,100	1,340
20	135	1,340	1,920	3,020	6,480	1,770	990	560	630	135	800	800
21	135	800	18,700	3,240	7,180	1,620	990	430	630	175	490	630
22	135	630	17,700	3,460	9,030	1,480	990	370	560	215	430	1,040
23	135	430	24,200	3,920	7,530	1,340	990	370	460	215	310	940
24	135	430	20,200	4,160	22,200	1,220	890	400	370	215	285	800
25	135	490	14,200	4,160	20,700	1,220	890	430	310	215	270	755
26	100	630	9,030	3,920	12,700	1,220	800	430	260	195	260	710
27	100	800	5,220	3,460	9,830	1,100	800	430	215	195	430	630
28	100	890	2,620	3,020	7,180	1,100	800	460	215	195	490	560
29	100	1,620	2,250	2,820	-------	1,100	800	560	215	195	370	525
30	100	2,250	1,770	5,520	-------	990	800	710	200	183	560	560
31	100	-------	1,340	4,940	-------	990	-------	845	-------	183	560	------

Monthly discharge of South Santiam River at Waterloo, Oreg., for the year ending September 30, 1926

[Drainage area, 640 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	215	100	143	0.223	0.26	8,790
November	2,430	100	888	1.39	1.55	52,800
December	24,200	215	4,830	7.55	8.70	297,000
January	5,520	1,220	2,610	4.08	4.70	160,000
February	38,000	4,420	11,300	17.7	18.43	628,000
March	7,180	990	2,510	3.92	4.52	154,000
April	1,480	800	1,060	1.66	1.85	63,100
May	2,820	370	1,040	1.62	1.87	64,000
June	890	200	549	.858	.96	32,700
July	215	135	176	.275	.32	10,800
August	1,100	135	299	.467	.54	18,400
September	1,920	224	620	.969	1.08	36,900
The year	38,000	100	2,110	3.30	44.78	1,530,000

ALBANY POWER CANAL NEAR LEBANON, OREG.

LOCATION.—In SW. ¼ sec. 2, T. 12 S., R. 2 W., one-eighth of a mile below spillway gates and 1 mile north of Lebanon, Linn County.

RECORDS AVAILABLE.—April 17 to September 30, 1926. February 22 to December 31, 1919, at station near Albany, where discharge is practically the same.

GAGE.—Vertical staff on pier of bridge; gage read by W. D. Parton.

DISCHARGE MEASUREMENTS.—Made from bridge.

CHANNEL AND CONTROL.—Smooth canal section fairly straight with no obstructions or defined control.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period April 17 to September 30, 3.4 feet on May 5 and 11 (discharge, 248 second-feet); water shut off April 28 to May 5, leakage estimated 10 second-feet.

1919 and 1926: Maximum discharge recorded, 295 second-feet March 2 and May 29–31, 1919 (gage height at station near Albany, 2.30 feet).

ICE.—None.

ACCURACY.—Stage-discharge relation probably fairly permanent. Rating curve well defined above 140 second-feet. Gage read to tenths about once a week. Daily discharge ascertained by applying daily gage reading to rating table. Records fair.

Albany power canal diverts from South Santiam River in NE. ¼ sec. 11, T. 12 S., R. 2 W., at Lebanon and discharges into Calapooya River, practically at its mouth, in Albany, after passing through the power plant of the Mountain States Power Co. Most of the water is first diverted from the South Santiam River through Lebanon ditch in sec. 19, T. 12 S., R. 1 W. and used for power at Lebanon, the tailrace discharging into the Albany power canal about one-fourth of a mile below lower diversion. The records show the increase in discharge at the gaging station on Willamette River at Albany due to the diversion from the South Santiam River Basin.

The following discharge measurements were made:
April 16, 1926: Gage height, 3.35 feet; discharge, 242 second-feet.
July 22, 1926: Gage height, 2.38 feet; discharge, 155 second-feet.

Daily discharge, in second-feet, of Albany power canal near Lebanon, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1		10					16		228			106	
2		10					17	248	200				
3		10					18		228				
4		10	209		127		19						
5		165					20				157		100
6		248				88	21		233	173			
7				120			22	243			157		
8		248					23						
9							24					120	
10					127		25		238				
11		248					26						
12							27	238					100
13				149		88	28	79	228	134			
14		238	200				29	10					
15							30	10			134	127	
							31						

NOTE.—Daily discharge interpolated April 18–26, May 7–10, 12–15, 19–24, and 26–31. Leakage through head gates Apr. 28 to May 5 estimated at 10 second-feet. No record on days for which no discharge is given.

Monthly discharge of Albany power canal near Lebanon, Oreg., for the year ending September 30, 1926

Month	Mean discharge in second-feet	Run-off in acre-feet	Month	Mean discharge in second-feet	Run-off in acre-feet
April 17-30	198	5,500	August	121	7,440
May	207	12,700	September	94.0	5,590
June	179	10,700			
July	143	8,790	The period		50,700

NOTE.—Discharge based on weekly gage readings.

CLACKAMAS RIVER AT BIG BOTTOM, OREG.

LOCATION.—In SE. ¼ sec. 26, T. 6 S., R. 7 E., half a mile above proposed dam site, just below Pot Creek, 10 miles above mouth of Oak Grove Fork, and 28 miles southeast of Estacada, Clackamas County.

DRAINAGE AREA.—132 square miles (measured on topographic maps).

RECORDS AVAILABLE.—April 11, 1920, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on right bank referenced to an outside gage; inspected by employees of Portland Electric Power Co.

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

CHANNEL AND CONTROL.—Bed composed of boulders. Control fairly permanent. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 5.70 feet at noon February 6 (discharge, 3,160 second-feet); minimum stage from recorder, 1.35 feet for few hours on August 6 and 7 (discharge, 220 second-feet).

1920–1926: Maximum stage from water-stage recorder, 8.15 feet January 7, 1923 (discharge, 6,600 second-feet); minimum discharge recorded, 210 second-feet September 22, 1924 (stage, 1.40 feet).

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent after tree was blasted off control on November 12. Rating curve well defined. Water-stage recorder operated satisfactorily throughout year. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection except October 1 to November 12, when mean daily gage height was applied indirectly. Records good.

COOPERATION.—Field data furnished by the Portland Electric Power Co.

Discharge measurements of Clackamas River at Big Bottom, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 8	1.53	236	Feb. 10	3.56	1,200	June 10	1.47	247
Oct. 17	1.52	236	Mar. 9	2.11	437	July 9	1.40	234
Nov. 12	1.88	330	Mar. 10	2.06	431	Do	1.40	207
Dec. 8	1.64	279	Apr. 8	1.98	399	Aug. 6	1.36	218
Jan. 8	1.78	318	May 11	1.70	307	Do	1.36	220
Jan. 9	1.76	315	June 9	1.48	249	Sept. 13	1.36	206
Feb. 9	3.42	1,060	Do	1.47	217	Do	1.36	218
Feb. 10	3.56	1,210						

Daily discharge, in second-feet, of Clackamas River at Big Bottom, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	244	238	376	324	334	542	400	306	255	232	224	232
2	242	238	393	315	327	542	382	298	258	232	224	230
3	242	242	337	312	324	520	393	295	255	230	224	230
4	240	240	312	306	588	500	420	365	252	230	222	228
5	240	238	309	348	794	500	420	420	252	228	222	226
6	238	238	303	379	2,680	480	400	368	250	228	222	226
7	238	238	295	340	2,140	460	396	344	248	228	222	226
8	236	236	285	324	1,480	460	390	334	246	228	222	224
9	236	248	285	318	1,120	440	390	321	246	228	222	224
10	236	275	285	312	1,120	420	420	312	246	226	224	224
11	236	344	334	306	928	420	440	300	244	226	224	222
12	236	330	440	298	770	420	420	295	242	226	224	222
13	236	309	396	295	678	460	400	292	242	224	224	222
14	236	282	348	300	610	480	400	290	242	224	224	222
15	234	309	327	306	588	520	420	285	242	224	222	234
16	234	309	324	315	565	542	420	282	242	224	226	288
17	234	327	318	382	520	520	420	285	240	224	228	265
18	236	315	318	344	500	500	393	285	240	224	282	244
19	236	288	312	324	520	480	390	280	246	224	258	236
20	234	282	324	318	542	480	386	285	246	224	242	232
21	234	270	542	318	520	460	372	288	242	226	236	230
22	234	268	610	327	520	440	390	282	238	226	232	246
23	234	265	820	321	500	460	362	280	236	226	230	246
24	234	262	655	318	770	460	344	280	236	224	228	232
25	234	265	542	315	745	440	334	275	236	224	228	230
26	234	282	460	309	678	420	327	270	234	224	238	228
27	236	315	420	306	632	400	324	270	234	226	236	226
28	236	292	393	306	588	396	321	270	234	224	228	226
29	236	288	372	348	-------	390	312	268	234	224	228	230
30	234	309	358	340	-------	396	309	260	234	224	232	228
31	234	-------	340	334	-------	400	-------	258	-------	224	232	-------

Monthly discharge of Clackamas River at Big Bottom, Oreg., for the year ending September 30, 1926

[Drainage area, 132 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	244	234	236	1.79	2.06	14,500
November	344	236	278	2.11	2.35	16,500
December	820	285	391	2.96	3.41	24,000
January	382	295	323	2.45	2.82	19,900
February	2,680	324	789	5.98	6.23	43,800
March	542	390	463	3.51	4.05	28,500
April	440	309	383	2.90	3.24	22,800
May	420	258	298	2.26	2.61	18,300
June	258	234	243	1.84	2.05	14,500
July	232	224	226	1.71	1.97	13,900
August	282	222	230	1.74	2.01	14,100
September	288	222	233	1.77	1.98	13,900
The year	2,680	222	338	2.56	34.78	245,000

CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OREG.

LOCATION.—In NE. ¼ sec. 21, T. 5 S., R. 6 E., a quarter of a mile above Three Lynx Creek and 17 miles southeast of Estacada, Clackamas County.

DRAINAGE AREA.—488 square miles (measured on topographic maps).

RECORDS AVAILABLE.—October 1, 1911, to December 31, 1913; October 1, 1921, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on right bank; inspected by employees of Portland Electric Power Co.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Bed composed of heavy gravel and boulders, overlain with some lighter material washed in from construction operations immediately above.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 10.2 feet at 11 a. m. February 6 (discharge, 17,300 second-feet); minimum stage, from water-stage recorder, 0.79 foot at 2 and 5 a. m. September 5 (discharge, 445 second-feet; Oak Grove power plant shut down temporarily).

1911–1913 and 1921–1926: Maximum stage recorded, 15.2 feet January 6, 1923 (discharge, 33,700 second-feet); minimum discharge, 375 second-feet on August 10 and 16, 1924 (gage height, 0.91 foot).

ICE.—Ice never forms.

DIVERSIONS.—None.

REGULATION.—Some fluctuation during low water due to operation of Oak Grove Power project; monthly mean unaffected.

ACCURACY.—Stage-discharge relation changed slightly during high water. Two well-defined rating curves used, identical above 1,880 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records excellent.

COOPERATION.—Field data furnished by Portland Electric Power Co.

Discharge measurements of Clackamas River above Three Lynx Creek, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 20	1.35	746	Jan. 5	2.12	1,280	May 3	1.88	1,140
Nov. 17	2.30	1,420	Feb. 5	4.28	3,760	May 8	2.10	1,410
Nov. 24	1.51	849	Feb. 8	6.42	7,460	June 3	1.38	770
Nov. 27	2.30	1,400	Feb. 25	5.13	4,900	July 3	1.07	595
Dec. 3	2.26	1,380	Mar. 16	3.07	2,180	Aug. 4	1.02	573
Dec. 22	4.48	3,890	Apr. 3	2.34	1,480	Sept. 6	.90	494

Daily discharge, in second-feet, of Clackamas River above Three Lynx Creek, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	708	618	1,690	1,150	1,600	2,760	1,450	955	955	643	555	654
2	682	695	1,880	1,150	1,510	2,580	1,410	990	850	648	560	660
3	662	618	1,510	1,040	1,390	2,520	1,490	1,020	815	660	566	621
4	606	618	1,390	1,150	2,700	2,400	1,570	1,330	850	616	572	616
5	669	618	1,270	1,390	3,980	2,460	1,530	1,610	780	594	566	560
6	650	618	1,190	1,880	14,500	2,080	1,490	1,410	720	660	566	544
7	682	618	1,190	1,560	11,700	1,930	1,490	1,290	780	621	560	626
8	695	612	1,080	1,470	7,410	1,880	1,450	1,250	780	621	560	577
9	662	643	1,000	1,350	5,210	1,840	1,490	1,170	692	604	560	582
10	669	830	1,000	1,190	5,030	1,700	1,530	1,210	720	616	566	599
11	630	1,230	1,110	1,230	4,120	1,610	1,610	1,100	720	582	555	566
12	618	1,310	1,780	1,110	3,490	1,700	1,530	1,020	720	599	560	572
13	662	1,110	1,780	1,080	3,020	1,840	1,490	1,020	665	604	550	577
14	650	970	1,430	1,080	2,580	1,980	1,450	1,020	720	610	555	566
15	650	1,040	1,350	1,190	2,460	2,130	1,490	885	692	599	544	604

Daily discharge, in second-feet, of Clackamas River above Three Lynx Creek, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	656	1,190	1,310	1,190	2,400	2,180	1,490	1,020	692	594	550	1,060
17	656	1,430	1,270	1,600	2,290	2,000	1,450	990	692	604	604	1,020
18	618	1,430	1,270	1,600	2,130	1,900	1,370	1,060	692	588	750	885
19	624	1,190	1,230	1,430	2,240	1,790	1,370	990	750	599	815	692
20	630	1,040	1,350	1,390	2,520	1,840	1,370	990	750	582	692	720
21	630	900	3,840	1,430	2,580	1,740	1,290	1,060	750	566	604	692
22	630	802	3,700	1,470	2,760	1,660	1,410	1,020	692	582	610	815
23	630	900	4,700	1,470	2,580	1,700	1,250	920	665	594	599	955
24	630	823	3,560	1,390	5,030	1,660	1,210	1,060	692	599	588	780
25	618	816	2,640	1,430	4,860	1,570	1,170	990	665	604	582	750
26	606	900	2,130	1,310	3,980	1,490	1,130	955	648	572	665	621
27	656	1,350	1,780	1,190	3,490	1,450	1,110	990	599	572	632	720
28	695	1,190	1,640	1,270	3,080	1,370	1,110	1,020	720	616	665	665
29	695	1,080	1,430	1,430	-------	1,370	1,060	920	648	604	599	720
30	618	1,350	1,350	1,600	-------	1,370	1,020	850	648	560	626	692
31	630	-------	1,270	1,510	-------	1,410	-------	885	-------	588	632	-------

Monthly discharge of Clackamas River above Three Lynx Creek, Oreg., for the year ending September 30, 1926

[Drainage area, 488 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	708	606	649	1.33	1.53	39,900
November	1,430	612	951	1.95	2.18	56,600
December	4,700	1,000	1,780	3.65	4.21	109,000
January	1,880	1,040	1,350	2.77	3.19	83,000
February	14,500	1,390	3,950	8.09	8.42	219,000
March	2,760	1,370	1,870	3.83	4.42	115,000
April	1,610	1,020	1,380	2.83	3.16	82,100
May	1,610	850	1,060	2.17	2.50	65,200
June	955	599	725	1.49	1.66	43,100
July	660	560	603	1.24	1.43	37,100
August	815	544	600	1.23	1.42	36,900
September	1,060	544	690	1.41	1.57	41,100
The year	14,500	544	1,280	2.62	35.69	928,000

CLACKAMAS RIVER NEAR CAZADERO, OREG.

LOCATION.—In NE. ¼ sec. 11, T. 4 S., R. 4 E., half a mile above backwater from Cazadero Dam of Portland Electric Power Co. and 3 miles southeast of Cazadero, Clackamas County.

DRAINAGE AREA.—665 square miles (revised; measured on topographic map).

RECORDS AVAILABLE.—January 1, 1909, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on right bank, referred to a vertical staff gage in well and to an inclined and vertical staff gage on bank and outside of well used since October 10, 1922; inspected by employees of Portland Electric Power Co.

DISCHARGE MEASUREMENTS.—Made from a cable half a mile below gage.

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

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 45.70 feet at 1 p. m. February 6 (discharge, 21,900 second-feet); minimum stage from recorder, 32.03 feet at noon October 20, caused by shutdown at power house at Three Lynx (discharge, 410 second-feet).

1909–1926: Maximum stage recorded from watermark inside of recorder shelter, 56.2 feet about 6 p. m. January 6, 1923 (discharge, 60,000 second-feet); minimum discharge from recorder, that of October 20, 1925.

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

DIVERSIONS.—None.

REGULATION.—Flow is regulated to some extent by power house of Portland Electric Power Co., just above Three Lynx Creek. Water is diverted from Oak Grove Fork at intake and returned to Clackamas River through this power house.

ACCURACY.—Stage-discharge relation for low stage changed slightly during high water. Two rating curves used, well defined below 10,000 second-feet and identical above 2,100 second-feet. Daily discharge ascertained by applying to rating table mean daily gage heights obtained by inspecting recorder graph. Records good.

COOPERATION.—Most of field data furnished by Portland Electric Power Co.

Discharge measurements of Clackamas River near Cazadero, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 29	32.80	737	Feb. 7	42.78	13,100	July 8	32.69	682
Nov. 18	35.02	2,220	Feb. 15	36.04	3,360	Aug. 17	32.29	560
Nov. 28	34.08	1,510	Mar. 23	34.95	2,040			
Dec. 2	35.82	3,020	Apr. 27	33.67	1,280			

Daily discharge, in second-feet, of Clackamas River near Cazadero, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	820	730	2,190	1,460	2,370	3,850	1,840	1,200	1,230	795	676	870
2	820	752	2,760	1,420	2,190	3,520	1,730	1,140	1,140	795	680	845
3	775	775	2,190	1,360	2,010	3,300	1,800	1,230	1,050	795	656	770
4	708	752	1,920	1,420	3,720	3,080	2,070	1,620	1,080	770	656	700
5	798	730	1,720	2,000	5,700	2,860	2,030	2,070	939	720	660	700
6	775	730	1,600	2,860	17,200	2,660	1,950	1,840	970	795	672	680
7	775	730	1,530	2,280	13,700	2,420	1,910	1,660	970	770	664	720
8	730	730	1,460	1,920	9,100	2,370	1,870	1,590	970	745	656	700
9	775	775	1,330	1,760	6,580	2,280	1,840	1,480	920	720	656	680
10	752	945	1,300	1,600	6,320	2,110	1,910	1,480	920	745	656	700
11	730	1,420	1,420	1,600	5,410	1,990	1,990	1,380	920	720	636	664
12	708	1,760	2,370	1,460	4,520	2,110	1,910	1,320	895	720	664	676
13	730	1,560	2,660	1,390	3,850	2,460	1,800	1,290	870	720	644	680
14	752	1,240	2,010	1,390	3,410	2,510	1,760	1,290	920	720	648	664
15	752	1,330	1,760	1,560	3,080	2,760	1,760	1,140	895	720	636	720
16	775	1,560	1,760	1,600	3,080	2,760	1,760	1,260	895	700	648	1,300
17	752	1,920	1,630	2,240	2,970	2,510	1,700	1,260	870	700	700	1,260
18	775	2,060	1,680	2,190	2,360	2,370	1,620	1,320	870	700	995	1,140
19	708	1,600	1,600	1,920	2,860	2,240	1,620	1,260	995	700	1,260	895
20	708	1,360	1,350	1,880	3,190	2,240	1,620	1,320	1,020	700	920	870
21	730	1,180	5,860	2,190	3,410	2,110	1,560	1,350	945	680	770	870
22	752	1,030	5,930	2,370	3,740	2,030	1,660	1,320	920	700	770	1,050
23	730	1,090	8,300	2,240	3,410	2,110	1,560	1,230	845	680	720	1,260
24	730	1,030	5,280	2,100	7,280	1,990	1,450	1,380	845	700	700	1,050
25	730	1,030	3,850	2,010	7,130	1,870	1,350	1,320	845	700	680	970
26	730	1,150	4,180	1,840	5,800	1,800	1,350	1,260	870	700	770	820
27	775	1,760	2,510	1,720	4,760	1,730	1,320	1,290	753	676	820	895
28	845	1,600	2,190	1,600	4,180	1,660	1,320	1,320	849	720	820	845
29	820	1,420	1,920	2,140	-------	1,700	1,260	1,290	795	672	710	895
30	775	1,760	1,760	2,510	-------	1,660	1,260	1,170	795	676	770	870
31	730	-------	1,600	2,280	-------	1,700	-------	1,170	-------	680	770	------

Monthly discharge of Clackamas River near Cazadero, Oreg., for the year ending September 30, 1926

[Drainage area, 665 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	845	708	757	1.14	1.31	46,500
November	2,060	730	1,220	1.83	2.04	72,600
December	8,300	1,300	2,590	3.89	4.48	159,000
January	2,860	1,360	1,880	2.83	3.26	116,000
February	17,200	2,010	5,140	7.73	8.05	285,000
March	3,850	1,660	2,350	3.53	4.07	144,000
April	2,070	1,260	1,690	2.54	2.83	101,000
May	2,070	1,140	1,360	2.05	2.36	83,600
June	1,230	753	927	1.39	1.55	55,200
July	795	672	720	1.08	1.24	44,300
August	1,260	636	732	1.10	1.27	45,000
September	1,300	664	859	1.29	1.44	51,100
The year	17,200	636	1,660	2.50	33.90	1,200,000

OAK GROVE FORK AT TIMOTHY MEADOWS, OREG.

LOCATION.—In SW. ¼ sec. 23, T. 5 S., R. 8 E., one-third of a mile above Timothy Meadows dam site, 11¼ miles above station at intake, 17 miles above mouth of Oak Grove Fork, and 29 miles southeast of Estacada, Clackamas County.

DRAINAGE AREA.—54 square miles (measured on topographic map).

RECORDS AVAILABLE.—February 25, 1913, to November 26, 1916; July 14, 1918, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on right bank; inspected by employees of Portland Electric Power Co.

DISCHARGE MEASUREMENTS.—Made from footbridge 20 feet above gage.

CHANNEL AND CONTROL.—Bed composed of gravel. Control fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage, from water-stage recorder, 1.31 feet 11 to 12 p. m. February 7 (discharge, 325 second-feet); minimum stage, from water-stage recorder, 0.46 foot September 27 and 28 (discharge, 95 second-feet).

1913–1916, 1918–1926: Maximum stage from recorder, 3.20 feet January 7, 1923 (discharge, 970 second-feet); minimum stage recorded, that of September 27 and 28, 1926.

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed during high water on February 6. Rating curves used before and after change, fairly well defined. Water-stage recorder operated satisfactorily except June 22 to July 10 and August 4–16. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection. Records good.

COOPERATION.—Field data furnished by Portland Electric Power Co.

Discharge measurements of Oak Grove Fork at Timothy Meadows, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 2	0.58	121	Mar. 12	0.84	191	June 15	0.56	122
Nov. 14	.58	117	Apr. 10	.66	191	Do	.56	124
Dec. 4	.53	116	May 14	.62	143	July 11	.53	113
Jan. 11	.56	119	Do	.62	140	Aug. 17	.48	101
Feb. 12	.93	222	Do	.62	141	Sept. 28	.46	94

Daily discharge, in second-feet, of Oak Grove Fork at Timothy Meadows, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	121	116	116	116	120	207	196	154	128		105	100
2	121	116	116	118	120	204	196	152	128		105	100
3	121	116	114	118	118	199	199	149	126		105	100
4	121	116	112	118	131	196	207	167	126			100
5	121	116	112	135	146	191	207	175	126			100
										114		
6	121	116	112	151	254	186	202	167	126			100
7	121	116	114	135	310	183	196	162	126			100
8	120	116	114	133	295	183	194	157	126			100
9	120	116	114	131	259	183	194	152	123			100
10	120	120	114	125	254	178	199	149	121			100
											104	
11	120	120	116	118	234	178	202	147	121	113		100
12	120	121	118	118	218	196	196	141	121	110		100
13	120	120	120	118	207	207	191	141	121	110		100
14	120	120	118	118	202	207	188	136	121	110		100
15	118	120	118	118	196	213	188	136	121	110		102
16	118	121	118	120	194	215	186	136	118	110		108
17	118	121	114	125	183	213	186	136	118	110	102	102
18	118	123	112	123	183	210	180	136	121	110	102	102
19	118	123	111	121	183	207	178	136	121	110	102	100
20	118	125	111	120	183	207	178	136	118	110	102	100
21	118	125	131	120	180	204	175	136	118	110	102	100
22	118	127	135	121	180	202	175	136		108	102	100
23	118	129	153	121	180	202	173	136		108	102	100
24	118	129	155	121	245	202	170	136		108	102	97
25	118	127	153	121	248	199	167	136		110	102	97
									116			
26	118	123	142	121	237	196	165	134		108	102	97
27	118	118	131	120	229	194	162	134		108	102	96
28	118	116	121	120	218	194	160	134		105	102	95
29	118	116	118	120	-------	191	157	134		105	102	100
30	116	109	116	120	-------	191	157	131		105	100	100
31	116	-------	116	121	-------	194	-------	128	-------	105	100	------

NOTE.—Because clock of water-stage recorder was not operating, mean discharge estimated June 22–30, July 1–10, and August 4–16.

Monthly discharge of Oak Grove Fork at Timothy Meadows, Oreg., for the year ending September 30, 1926

[Drainage area, 54 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	121	116	119	2.20	2.54	7,320
November	129	109	120	2.22	2.48	7,140
December	155	111	121	2.24	2.58	7,440
January	151	116	123	2.28	2.63	7,560
February	310	118	204	3.78	3.94	11,300
March	215	183	198	3.67	4.23	12,200
April	207	157	184	3.41	3.80	10,900
May	175	128	143	2.65	3.06	8,790
June	128	----------	121	2.24	2.50	7,200
July	----------	105	110	2.04	2.35	6,760
August	105	100	103	1.91	2.20	6,330
September	108	95	99.8	1.85	2.06	5,940
The year	310	95	137	2.54	34.37	98,900

OAK GROVE FORK AT PORTLAND ELECTRIC POWER CO.'S INTAKE, OREG.

LOCATION.—In SE. ¼ sec. 4, T. 6 S., R. 7 E., three-fourths of a mile above intake of Oak Grove power plant of Portland Electric Power Co. and 24 miles southeast of Estacada, Clackamas County.

DRAINAGE AREA.—126 square miles (measured on topographic map).

RECORDS AVAILABLE.—December 3, 1923, to September 30, 1926. At site below Kink Creek May 21, 1909, to December 2, 1923; some breaks in record.

GAGE.—Stevens continuous water-stage recorder on right bank; inspected by employees of Portland Electric Power Co.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Bed composed of boulders; irregular but apparently fairly permanent. A small spring-fed tributary enters just below cable, discharge of which is included in measurements.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 3.04 feet at 11 a. m. February 6 (discharge, 1,340 second-feet); minimum stage recorded, 1.46 feet September 25–27 (discharge, 286 second-feet).

1909–1926: Maximum stage, from water-stage recorder at former site, 5.45 feet January 7, 1923 (discharge, 5,000 second-feet); minimum discharge recorded, that of September 25–27, 1926.

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed February 6. Two well defined rating curves used. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records excellent.

COOPERATION.—Field data furnished by Portland Electric Power Co.

Discharge measurements of Oak Grove Fork at Portland Electric Power Co.'s intake, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 12	1.56	311	Jan. 13	1.65	366	June 18	1.56	321
Oct. 18	1.57	318	Feb. 6	3.02	1,320	July 14	1.51	315
Nov. 13	1.63	356	Mar. 11	1.92	510	Aug. 10	1.49	298
Nov. 25	1.57	334	Apr. 16	1.90	500	Sept. 7	1.47	286
Dec. 9	1.64	355	May 13	1.68	399			

Daily discharge, in second-feet, of Oak Grove Fork at Portland Electric Power Co.'s intake, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	328	312	378	369	383	662	548	405	355	313	309	309
2	328	312	383	369	373	648	530	400	355	318	309	300
3	324	320	356	365	373	634	548	405	355	313	309	295
4	324	312	351	365	470	608	554	475	350	313	309	295
5	324	312	351	465	545	596	542	475	345	313	304	295
6	324	312	351	465	1,180	572	530	445	341	313	304	295
7	324	312	337	416	1,220	560	518	425	341	313	304	291
8	324	312	337	401	1,060	548	518	420	341	313	300	291
9	320	328	332	392	900	542	512	415	341	313	300	291
10	320	351	332	378	900	518	542	400	336	313	300	291
11	320	378	361	369	795	512	542	395	336	313	300	291
12	320	373	401	369	760	560	524	390	336	313	295	291
13	320	356	383	365	690	608	512	390	332	309	295	291
14	320	341	356	373	648	602	512	385	332	309	295	291
15	324	365	351	378	620	634	512	380	332	313	295	322

Daily discharge, in second-feet, of Oak Grove Fork at Portland Electric Power Co.'s intake, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	324	361	351	387	608	634	500	380	332	313	295	345
17	324	383	351	411	584	608	495	390	327	309	304	313
18	324	369	346	392	572	602	495	390	332	309	341	300
19	320	341	341	373	572	584	485	380	345	304	336	295
20	320	332	369	373	584	596	485	380	341	309	309	295
21	316	328	575	401	572	572	480	380	332	304	304	295
22	316	324	613	396	578	560	475	375	327	309	300	318
23	316	320	721	392	560	572	455	380	322	309	295	300
24	312	320	613	392	830	554	445	375	322	309	295	291
25	324	324	540	387	865	542	440	370	318	309	295	286
26	312	337	490	373	795	536	435	370	322	309	313	286
27	324	337	455	373	725	524	425	370	318	309	300	286
28	328	328	420	373	690	518	425	365	318	304	295	291
29	316	341	411	396	-------	512	415	365	318	304	295	291
30	316	341	396	392	-------	518	410	365	313	309	300	291
31	316	-------	383	387	-------	536	-------	360	-------	313	295	------

Monthly discharge of Oak Grove Fork at Portland Electric Power Co.'s intake, Oreg., for the year ending September 30, 1926

[Drainage area, 126 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	328	312	321	2.55	2.94	19,700
November	382	312	336	2.67	2.98	20,000
December	721	332	411	3.26	3.76	25,300
January	465	365	388	3.08	3.55	23,900
February	1,220	373	695	5.52	5.75	38,600
March	662	512	573	4.55	5.25	35,200
April	554	410	494	3.92	4.37	29,400
May	475	360	394	3.13	3.61	24,200
June	355	313	334	2.65	2.96	19,900
July	318	304	310	2.46	2.84	19,100
August	341	295	303	2.40	2.77	18,600
September	345	286	297	2.36	2.63	17,700
The year	1,220	286	403	3.20	43.41	292,000

LEWIS RIVER BASIN

LEWIS RIVER NEAR COUGAR, WASH.

LOCATION.—In SE. ¼ sec. 29, T. 7 N., R. 5 E., Skamania County, three-quarters of a mile above Peterson ranch, 1 mile below Swift Creek, and 5 miles above Cougar, Cowlitz County.

DRAINAGE AREA.—483 square miles (measured on topographic map).

RECORDS AVAILABLE.—July 1, 1910, to March 2, 1912; June 19, 1924, to September 30, 1926. July 27, 1909, to June 30, 1910, at a site about 1,000 feet above Swift Creek.

GAGE.—Stevens continuous water-stage recorder on right bank; inspected by Ole Peterson.

DISCHARGE MEASUREMENTS.—Made from cable 40 feet below gage.

CHANNEL AND CONTROL.—Bed composed of sand and gravel. Control, at head of island 1,000 feet below gage, composed of coarse gravel and large boulders.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 6.25 feet at 2 to 5 p. m. February 7 (discharge, 11,100 second-feet);

minimum stage recorded, 0.24 foot at 4 to 7 a. m. September 14 (discharge, 524 second-feet).

1910–1912, 1924–1926: Maximum stage recorded, 13.8 feet November 21, 1910 (discharge, not computed); minimum discharge, 500 second-feet September 22, 1924 (gage height, 0.30 foot).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed below 8,000 second-feet on February 7. Rating curve used before change well defined; curve used after change well defined except below 650 second-feet, when it is fairly well defined. Operation of water-stage recorder satisfactory except June 26 and July 5–29. Daily discharge ascertained by applying to rating table mean daily gage height obtained from recorder graph by inspection or, for days of considerable variation in stage, by averaging the discharges obtained by applying to rating table mean gage height for shorter intervals. Records good except for discharge below 650 second-feet, for which they are fair.

Discharge measurements of Lewis River near Cougar, Wash., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 25	0.94	1,160	Apr. 6	2.04	2,170	July 30	0.54	725
Feb. 17	2.72	3,110	May 26	1.76	1,750			

Daily discharge, in second-feet, of Lewis River near Cougar, Wash., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	756	586	2,200	2,400	2,140	3,550	2,490	1,900	1,610	890	687	644
2	740	579	2,570	2,200	2,020	3,390	2,350	1,780	1,560	876	668	614
3	740	579	2,200	2,080	2,140	3,310	2,490	1,840	1,510	862	674	584
4	726	579	2,140	2,080	3,650	3,230	2,280	3,000	1,460	834	680	578
5	719	572	2,400	3,000	5,620	3,080	2,280	3,000	1,410		656	590
6	712	579	2,260	3,260	10,200	2,860	2,140	2,560	1,360		650	572
7	719	572	2,080	2,670	10,800	2,700	2,080	2,350	1,320	840	656	560
8	726	586	1,970	2,460	8,950	2,560	2,080	2,350	1,280		650	554
9	719	670	1,860	2,330	7,450	2,490	2,210	2,210	1,280		650	554
10	712	900	2,140	2,200	7,450	2,350	2,350	2,020	1,230		644	566
11	712	1,590	4,800	2,080	6,450	2,280	2,490	1,960	1,180	862	638	554
12	691	1,440	5,840	2,020	5,500	2,630	2,490	1,900	1,140		638	548
13	677	1,250	4,800	1,920	4,580	3,000	2,490	1,960	1,100		644	542
14	656	1,070	2,330	1,920	4,000	3,310	2,560	1,960	1,110	815	632	548
15	656	1,250	3,260	1,970	3,640	3,810	2,780	1,780	1,100		620	602
16	642	1,800	2,810	2,340	3,390	4,090	3,000	1,720	1,100		620	785
17	621	2,140	2,670	3,500	3,160	3,900	2,860	2,020	1,030	750	668	946
18	600	1,800	2,570	2,960	2,930	3,810	2,780	2,210	1,050		806	855
19	593	1,540	2,330	2,670	3,080	3,470	2,780	2,080	1,040		757	701
20	593	1,390	2,570	2,600	3,390	3,390	2,780	2,350	1,030		785	650
21	600	1,250	5,140	2,600	3,550	3,080	2,490	2,280	1,030	750	715	785
22	600	1,160	6,290	2,570	3,900	2,930	2,280	2,140	1,010		656	1,780
23	586	1,070	8,840	2,460	3,720	3,000	2,080	2,080	1,010		644	1,320
24	579	1,070	8,200	2,330	4,680	2,860	1,840	2,020	986		650	970
25	600	1,070	6,290	2,200	4,680	2,700	1,840	1,780	978	778	644	799
26	593	1,070	5,000	2,140	4,280	2,560	1,840	1,780	958		750	764
27	642	1,070	4,320	2,080	4,000	2,420	2,020	1,960	938		750	722
28	698	1,070	3,670	2,020	3,720	2,350	2,080	1,780	938	730	650	729
29	663	1,070	3,260	2,200	-------	2,210	2,140	1,780	922		650	848
30	621	1,200	2,880	2,200	-------	2,280	2,020	1,660	906	694	638	820
31	593	-------	2,600	2,140	-------	2,420	-------	1,610	-------	701	632	------

NOTE.—Recorder was not operating June 26; discharge interpolated. Recorder was not operating satisfactorily July 5–29 because of poor connection between well and river and only observer's weekly gage readings are available. Braced figures represent mean discharge for periods indicated, estimated by comparison with hydrographs of gaging stations near Amboy and near Ariel.

Monthly discharge of Lewis River near Cougar, Wash., for the year ending September 30, 1926

[Drainage area, 483 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	756	579	661	1.37	1.58	40,600
November	2,140	572	1,090	2.26	2.52	64,900
December	8,840	1,860	3,620	7.50	8.65	223,000
January	3,500	1,920	2,370	4.91	5.66	146,000
February	10,800	2,020	4,750	9.83	10.24	264,000
March	4,090	2,210	2,970	6.15	7.09	183,000
April	3,000	1,840	2,350	4.87	5.43	140,000
May	3,000	1,610	2,060	4.27	4.92	127,000
June	1,610	906	1,150	2.38	2.66	68,400
July	890	694	793	1.64	1.89	48,800
August	806	620	671	1.39	1.60	41,300
September	1,780	542	736	1.52	1.70	43,800
The year	10,800	542	1,920	3.98	53.94	1,390,000

LEWIS RIVER NEAR AMBOY, WASH.

LOCATION.—In sec. 36, T. 6 N., R. 3 E., at a former river crossing known as Cresap's ferry, 1 mile below new bridge on county road between Amboy and Cougar, 1½ miles below Canyon Creek, 2 miles above Speilei Creek, and 5 miles northeast of Amboy, Clark County.

DRAINAGE AREA.—665 square miles (measured on topographic map).

RECORDS AVAILABLE.—January 20, 1911, to September 30, 1926.

GAGE.—Inclined staff with vertical upper section on left bank; read by J. M. Hanley.

DISCHARGE MEASUREMENTS.—Made from cable 30 feet above gage.

CHANNEL AND CONTROL.—Bed composed of gravel and small boulders; shifts during extreme floods.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.3 feet at 8 a. m. February 6 (discharge, 20,300 second-feet); minimum stage, −0.15 foot September 12–14 (discharge, 720 second-feet).

1911–1926: Maximum stage determined by leveling to high-water marks, 16.4 feet December 18, 1917 (discharge estimated from extension of rating curve, 60,000 second-feet); minimum discharge recorded, 660 second-feet September 5–14 and 19–22, 1924 (gage height, −0.20 foot).

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent, slight change assumed to have occurred December 23. Two well-defined rating curves used, identical above 3,120 second-feet. Gage read twice a day to hundredths at medium and low stages, to tenths at high stages. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

The following discharge measurements were made:

February 18, 1926: Gage height, 2.62 feet; discharge, 4,380 second-feet.

May 27, 1926: Gage height, 1.91 feet; discharge, 2,880 second-feet.

July 31, 1926: Gage height, 0.08 foot; discharge, 878 second-feet.

Daily discharge, in second-feet, of Lewis River near Amboy, Wash., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	864	750	3,680	3,210	3,120	5,570	2,970	2,380	2,250	1,130	890	890
2	834	750	4,410	2,900	3,040	5,200	2,970	2,250	2,180	1,130	855	855
3	822	750	3,980	2,820	3,040	4,850	3,120	2,520	2,120	1,130	855	820
4	822	750	4,080	2,670	5,700	4,740	3,300	3,580	2,060	1,130	855	820
5	816	750	4,520	3,880	8,600	4,410	3,120	3,880	1,990	1,130	855	785
6	810	750	4,080	4,520	19,900	4,080	3,040	3,490	1,930	1,130	855	785
7	810	750	3,490	3,780	16,400	3,680	2,970	3,490	1,870	1,130	855	785
8	810	750	3,120	3,400	11,900	3,680	2,820	3,400	1,810	1,090	876	785
9	810	840	2,950	3,210	9,520	3,490	2,820	3,210	1,750	1,090	890	785
10	810	1,130	3,040	2,970	10,500	3,300	3,040	2,970	1,750	1,050	855	750
11	780	2,470	8,600	2,820	9,200	3,210	3,120	2,820	1,640	1,050	855	750
12	780	2,330	10,500	2,670	7,400	3,780	3,120	2,670	1,580	1,090	820	720
13	780	2,050	8,300	2,520	6,380	4,080	3,120	2,670	1,530	1,050	820	720
14	762	1,680	5,700	2,670	5,700	4,520	3,040	2,670	1,530	1,050	785	720
15	762	1,920	4,740	2,970	5,440	4,960	3,490	2,670	1,480	1,050	785	785
16	762	3,490	4,100	3,580	5,200	5,200	3,490	2,380	1,480	1,010	785	1,130
17	762	4,410	3,880	5,830	4,740	4,960	3,490	2,520	1,420	1,010	834	1,810
18	750	3,880	3,780	5,080	4,520	4,850	3,210	2,820	1,420	970	930	1,530
19	750	2,950	3,490	4,300	4,520	4,520	3,120	3,040	1,420	970	1,050	1,220
20	750	2,470	4,080	4,300	5,700	4,520	3,040	3,400	1,420	970	1,050	1,050
21	750	2,190	10,200	4,630	6,240	4,300	2,900	3,300	1,370	970	970	1,320
22	750	1,920	11,600	4,630	7,400	4,080	2,820	3,300	1,320	970	890	5,320
23	750	1,740	17,200	4,300	6,660	3,980	2,520	3,120	1,320	970	820	2,900
24	750	1,740	11,900	3,880	11,200	3,880	2,380	2,970	1,270	970	820	1,990
25	750	1,800	8,900	3,580	9,840	3,680	2,320	2,820	1,270	970	785	1,700
26	750	1,800	6,800	3,300	8,000	3,400	2,380	2,820	1,220	930	1,090	1,320
27	750	1,800	5,830	3,120	6,800	3,120	2,380	2,970	1,220	930	970	1,320
28	762	1,800	4,960	2,970	6,100	3,120	2,380	2,740	1,220	930	890	1,320
29	780	1,740	4,520	3,300	-------	2,970	2,520	2,670	1,180	890	855	1,530
30	780	1,860	4,080	3,490	-------	2,970	2,520	2,520	1,180	890	834	1,420
31	780	-------	3,490	3,210	-------	3,120	-------	2,380	-------	890	820	------

Monthly discharge of Lewis River near Amboy, Wash., for the year ending September 30, 1926

[Drainage area 665 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	864	750	781	1.17	1.35	48,000
November	4,410	750	1,800	2.71	3.02	107,000
December	17,200	2,950	5,940	8.93	10.30	365,000
January	5,830	2,520	3,560	5.35	6.17	219,000
February	19,900	3,040	7,600	11.4	11.87	422,000
March	5,570	2,970	4,070	6.12	7.06	250,000
April	3,490	3,320	2,920	4.39	4.90	174,000
May	3,880	2,250	2,920	4.39	5.06	180,000
June	2,250	1,180	1,570	2.36	2.63	93,400
July	1,130	890	1,020	1.53	1.76	62,700
August	1,090	785	874	1.31	1.51	53,700
September	5,320	720	1,290	1.94	2.16	76,800
The year	19,900	720	2,830	4.26	57.79	2,050,000

LEWIS RIVER NEAR ARIEL, WASH.

LOCATION.—In SE. ¼ sec. 33, T. 6 N., R. 2 E., 3½ miles southwest of Ariel post office, Cowlitz County, and 12 miles by road above mouth of river.

DRAINAGE AREA.—733 square miles (measured on topographic map).

RECORDS AVAILABLE.—July 27, 1922, to September 30, 1926. July 7 to November 30, 1909, for station at Ariel, 3½ miles upstream.

GAGE.—Inclined staff on right bank; read by Walter and Cleo Chilton.

DISCHARGE MEASUREMENTS.—Made from cable 60 feet above gage.

CHANNEL AND CONTROL.—Bed composed of gravel; smooth and fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 9.79 feet during afternoon of February 6 (discharge, 26,200 second-feet); minimum stage, 0.58 foot on September 12–14 discharge, 794 second-feet).

1909, 1922–1926: Maximum stage recorded, 14.85 feet February 3, 1925 (discharge, 42,600 second-feet); minimum discharge, 760 second-feet September 12, 13, and 18–22, 1924 (gage height, 0.60 foot).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve fairly well defined. Staff gage read to hundredths twice a day except October 4–24 and July 25 to August 16 when it was read once a day. Daily discharge ascertained by applying daily gage reading or mean daily gage height to rating table except as indicated in footnote to daily-discharge table. Records good.

The following discharge measurements were made:

February 16, 1926: Gage height, 3.20 feet; discharge, 5,350 second-feet.

May 25, 1926: Gage height, 2.18 feet; discharge, 3,110 second-feet.

July 31, 1926: Gage height, 0.75 foot; discharge, 918 second-feet.

Daily discharge, in second-feet, of Lewis River near Ariel, Wash., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	900	858	3,830	4,520	3,600	6,450	2,930	2,240	2,320	1,190	950	930
2	890	850	4,520	4,520	3,600	6,450	2,930	2,240	2,240	1,190	950	910
3	850	858	4,290	4,520	3,600	6,150	2,930	2,240	2,150	1,190	950	890
4	850	858	4,760	4,060	6,450	6,150	3,150	3,830	2,150	1,190	950	890
5	850	858	5,010	4,060	9,760	6,150	3,150	4,060	1,990	1,140	950	890
6	850	842	5,280	3,830	25,500	6,150	2,930	3,600	1,910	1,140	940	874
7	850	810	4,520	3,830	21,700	5,860	2,930	3,370	1,830	1,140	940	866
8	858	842	3,830	3,830	16,300	5,570	2,930	3,370	1,830	1,140	940	858
9	874	970	3,830	3,600	15,000	5,280	2,930	3,370	1,760	1,140	940	842
10	874	1,190	3,600	3,370	14,700	4,760	3,150	3,150	1,680	1,140	950	826
11	866	2,320	9,760	3,150	13,500	4,760	3,150	3,150	1,680	1,140	950	810
12	866	2,720	12,900	2,930	10,100	4,760	3,150	3,150	1,680	1,090	950	794
13	866	2,320	11,000	2,930	7,650	5,010	3,150	2,930	1,680	1,090	950	794
14	850	1,910	9,450	2,930	6,750	5,280	3,370	2,930	1,550	1,050	960	794
15	834	2,150	8,250	3,370	6,450	5,280	3,370	2,510	1,480	1,040	960	970
16	834	3,600	7,350	5,570	6,150	5,280	3,370	2,320	1,420	1,010	970	1,420
17	834	4,520	6,750	7,950	5,570	5,010	3,370	3,600	1,420	1,010	980	1,760
18	826	5,010	6,450	7,350	5,570	5,010	3,370	3,600	1,360	990	1,110	1,830
19	826	4,520	6,750	6,750	5,570	4,760	3,370	3,600	1,360	990	1,170	1,300
20	826	3,830	6,750	5,280	5,570	4,760	3,370	3,370	1,300	980	1,170	1,100
21	826	3,150	15,300	5,280	5,860	4,520	3,150	3,600	1,300	970	1,160	1,420
22	826	2,240	16,000	5,570	5,860	4,520	2,930	3,370	1,300	970	1,010	5,860
23	826	1,910	22,300	5,010	7,650	4,290	2,720	3,370	1,300	970	882	2,930
24	834	1,830	16,600	4,290	15,300	4,290	2,510	3,150	1,300	970	874	2,320
25	834	1,830	13,200	4,060	16,300	3,830	2,420	2,930	1,300	990	874	1,760
26	874	1,830	10,400	4,060	12,900	3,600	2,420	2,930	1,300	990	1,110	1,550
27	920	1,910	7,050	3,830	8,550	3,370	2,420	2,930	1,300	990	1,190	1,090
28	1,010	1,990	5,860	3,830	6,750	3,150	2,320	2,930	1,240	990	1,070	1,190
29	1,030	1,910	5,570	4,060	-------	3,150	2,320	2,930	1,190	990	970	1,620
30	1,010	2,420	5,280	4,060	-------	3,150	2,240	2,720	1,190	970	940	1,680
31	930	-------	4,760	3,830	-------	2,930	-------	2,510	-------	950	930	------

NOTE.—Because observer's gage readings on Sept. 19 and 20 gave results too low and were obviously wrong, the daily discharge was estimated from a comparison with record obtained at gaging station near Amboy.

Monthly discharge of Lewis River near Ariel, Wash., for the year ending September 30, 1926

[Drainage area, 733 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	1,030	826	871	1.19	1.37	53,600
November	5,010	810	2,100	2.87	3.20	125,000
December	22,300	3,600	8,100	11.0	12.68	498,000
January	7,950	2,930	4,390	5.99	6.91	270,000
February	25,500	3,600	9,720	13.3	13.85	540,000
March	6,450	2,930	4,830	6.59	7.60	297,000
April	3,370	2,240	2,950	4.02	4.48	176,000
May	4,060	2,240	3,100	4.23	4.88	191,000
June	2,320	1,190	1,580	2.16	2.41	94,000
July	1,190	950	1,060	1.45	1.67	65,200
August	1,190	874	988	1.35	1.56	60,800
September	5,860	794	1,390	1.90	2.12	82,700
The year	25,500	794	3,390	4.62	62.73	2,450,000

SWIFT CREEK NEAR COUGAR, WASH.

LOCATION.—In NW. ¼ sec. 28, T. 7 N., R. 5 E., Skamania County, one-eighth of a mile above mouth, 2 miles east of Peterson ranch, and 6 miles east of Cougar, Cowlitz County.

DRAINAGE AREA.—26 square miles (measured on topographic map).

RECORDS AVAILABLE.—July 27 to October 31, 1909; June 18, 1924, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on left bank 200 feet above Forest Service trail bridge; read by Ole Peterson.

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

CHANNEL AND CONTROL.—Bed composed of coarse gravel and boulders. One channel except at extremely high stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.46 feet at 4 a. m. December 23 (discharge, 1,060 second-feet); minimum stage recorded, 0.49 foot, which occurred a few hours each day on September 12–15 (discharge, 98 second-feet).

1909, 1924–1926: Maximum stage, from recorder, 2.98 feet February 3, 1925 (discharge, 1,470 second-feet); minimum discharge, 80 second-feet September 17, 21, and October 7, 1924 (gage height, 0.40 foot).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent to July 25, changing thereafter owing to accumulation of glacial sand on control. Fairly well-defined rating curve used to July 25; shifting-control method used thereafter. Operation of water-stage recorder satisfactory from December 13 to July 11; unsatisfactory for a considerable portion of the remainder of the year, but daily gage heights can usually be estimated. Daily discharge ascertained by applying to rating table daily gage height obtained by inspecting recorder graph, except as indicated in footnote to table of daily discharge. Records good, December to June; fair for October, November, and July to September.

Discharge measurements of Swift Creek near Cougar, Wash., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 24	0.70	152	Apr. 8	0.80	178	July 30	0.59	121
Feb. 17	.88	228	May 26	.80	180			

Daily discharge, in second-feet, of Swift Creek near Cougar, Wash., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	119	114	209	154	161	227	178	147	163	133	117	108
2	117	114	186	150	159	218	173	147	159	133	115	108
3	117	114	186	150	166	212	198	163	154	131	114	108
4	117	114	218	150	248	203	184	195	154	129	112	108
5	119	114	233	230	320	198	184	184	154	133	112	106
6	117	114	230	195	590	186	178	171	150	131	112	106
7	119	114		176	505	181	176	171	147	129	110	105
8	117	114		171	360	181	176	198	150	127	110	105
9	117	123		166	300	176	171	181	147	129	108	105
10	117	159	250	161	340	176	173	171	145	127	108	103
11	115	212		161	282	176	171	171	145	127	106	103
12	114	171		154	248	209	168	166	147	125	106	102
12	114	145	264	154	233	209	168	163	147		106	100
14	114	133	230	154	224	206	168	161	147		106	100
15	114	192	198	161	212	212	168	161	145	125	106	112
16	114	264	173	209	198	224	166	159	145		110	133
17	114	320	173	233	198	224	166	198	142		119	147
18	114	248	171	198	190	248	166	212	142	125	140	130
19	112	201	159	181	218	233	181	195	142		115	112
20	114	184	212	181	233	233	173	206	136		125	108
21	114	168	455	186	264	224	168	206	136	123	114	163
22	114	166	430	181	282	215	163	195	136		110	203
23	114	157	680	176	248	212	159	201	138		108	
24	112	152	360	171	360	201	157	195	136		108	159
25	117	152	282	166	320	195	157	181	133	121	108	
26	117	145	248	161	282	186	154	181	134		145	115
27	123	147	215	154	248	178	152	198	136	121	117	106
28	119	142	201	157	233	176	152	176	136		112	119
29	114	136	186	168	-------	176	152	173	133		106	122
30	114	163	173	168	-------	176	147	166	133	121	108	125
31	114	-------	163	161	-------	178	-------	163	-------	119	108	------

NOTE.—Gage heights missing Dec. 7–12, June 26, July 13–17, 19–24, 26–29, Sept. 18, 23–25, and 29; discharge interpolated. Discharge July 30 to Sept. 30 determined by shifting-control method based on discharge measurement made July 30 and another made Oct. 6, 1926.

Monthly discharge of Swift Creek near Cougar, Wash., for the year ending September 30, 1926

[Drainage area, 26 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	123	112	116	4.46	5.14	7,130
November	220	114	160	6.15	6.86	9,520
December	680	159	250	9.62	11.09	15,400
January	233	150	172	6.62	7.63	10,600
February	590	159	272	10.5	10.93	15,100
March	248	176	202	7.77	8.96	12,400
April	198	147	168	6.46	7.21	10,000
May	212	147	179	6.88	7.93	11,000
June	163	133	144	5.54	6.18	8,570
July	133	119	125	4.81	5.54	7,690
August	145	106	113	4.35	5.02	6,950
September	203	100	121	4.65	5.19	7,200
The year	680	100	168	6.46	87.68	122,000

CANYON CREEK NEAR AMBOY, WASH.

LOCATION.—In SW. ¼ sec. 4, T. 5 N., R. 4 E., at wagon bridge, 2 miles above mouth and 6 miles northeast of Amboy, Clark County.

DRAINAGE AREA.—64 square miles.

RECORDS AVAILABLE.—July 25, 1922, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder just below bridge; read by J. C. Hanley and W. H. Lawffer.

DISCHARGE MEASUREMENTS.—Made from cable above bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders; shifting in floods.

EXTREMES OF DISCHARGE.—Maximum stage, from water-stage recorder, 7.93 feet at 8 a. m. February 6 (discharge, 6,220 second-feet); minimum stage, from recorder, 0.14 foot October 19–24 (discharge, 15 second-feet).

1922–1926: Maximum stage, 11.3 feet December 24, 1922, observed from high-water mark (discharge, 13,000 second-feet); minimum discharge, that of October 19–24, 1925.

ICE.—None during year.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed February 7. Two rating curves used; well defined below 1,000 second-feet, identical above 1,330 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records good.

Discharge measurements of Canyon Creek near Amboy, Wash., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 19	2.44	513	May 27	1.67	287
Apr. 9	1.22	190	July 28	.30	31.6

Daily discharge, in second-feet, of Canyon Creek near Amboy, Wash., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	21	510	265	400	610	174	92	235	52	29	64
2	28	19	640	242	370	515	165	90	216	48	28	55
3	24	20	660	235	382	462	235	120	203	46	27	48
4	24	21	700	242	818	415	240	310	189	42	27	42
5	22	21	700	492	1,200	367	214	334	178	42	27	40
6		21	580	510	4,140	319	205	310	167	42	27	39
7		21	475	430	2,560	280	196	285	156	42	26	38
8	21	21	400	370	1,470	265	185	370	146	42	26	37
9		26	355	331	1,020	243	178	373	140	41	24	35
10		88	445	295	1,050	226	180	325	129	41	24	34
11	20	278	1,160	275	910	207	183	280	123	40	24	33
12	20	355	1,670	258	715	295	172	245	118	40	24	30
13	19	310	1,130	240	570	379	161	226	112	38	24	29
14	19	242	780	270	498	373	158	210	105	38	24	29
15	19	315	600	346	480	373	152	191	103	38	24	59
16	18	510	475	532	462	340	146	180	98	38	23	268
17	18	780	430	840	498	310	140	245	95	38	28	292
18	17	680	445	720	480	361	134	400	90	37	76	221
19	15	460	415	580	515	343	140	376	96	36	68	158
20	15	355	765	620	715	370	138	415	95	35	53	130

Daily discharge, in second-feet, of Canyon Creek near Amboy, Wash., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	15	280	3,470	840	990	331	130	430	84	34	52	236
22	15	315	2,400	800	1,140	304	142	415	79	33	39	990
23	15	210	2,680	680	1,110	292	129	385	74	33	34	550
24	15	198	1,330	562	3,210	270	123	364	69	33	30	358
25	19	232	860	475	1,890	245	114	316	67	33	29	268
26	18	215	660	415	1,200	228	109	298	62	32	94	216
27	32	255	510	370	935	210	105	301	60	32	84	185
28	55	238	415	349	738	198	103	280	58	32	54	185
29	43	230	367	415	-------	187	98	282	55	31	46	189
30	32	285	320	445	-------	169	96	265	53	29	44	189
31	25	-------	290	415	-------	174	-------	248	-------	30	42	------

Monthly discharge of Canyon Creek near Amboy, Wash., for the year ending September 30, 1926

[Drainage area, 64 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	55	15	22.5	0.352	0.41	1,380
November	780	19	234	3.66	4.08	13,900
December	3,470	290	859	13.4	15.45	52,800
January	840	235	447	6.98	8.05	27,500
February	4,140	370	1,090	17.0	17.70	60,500
March	610	169	312	4.88	5.63	19,200
April	240	96	155	2.42	2.70	9,220
May	430	90	289	4.52	5.21	17,800
June	235	53	115	1.80	2.01	6,840
July	52	29	37.7	.589	.68	2,320
August	94	23	38.1	.595	.69	2,340
September	990	29	168	2.62	2.92	10,000
The year	4,140	15	309	4.83	65.53	224,000

KALAMA RIVER BASIN

KALAMA RIVER NEAR KALAMA, WASH.

LOCATION.—In sec. 7, T. 6 N., R. 1 E., 150 feet below power house of Puget Sound Power & Light Co. and 9 miles by road east of Kalama, Cowlitz County.

DRAINAGE AREA.—184 square miles (measured on Mount St. Helens quadrangle and map of Columbia National Forest).

RECORDS AVAILABLE.—July 6, 1911, to January 11, 1912; December 1, 1912, to September 30, 1913; August 19, 1916, to September 30, 1926.

GAGE.—Vertical staff bolted to rock ledge; section, 0 to 3.3 feet, on right bank; section 0 to 8 feet, on left bank; upper section, 8 to 12 feet, in a cove on right bank; read by E. G. Moser and H. E. Tegarden.

DISCHARGE MEASUREMENTS.—Made from cable half a mile below gage or by wading.

CHANNEL AND CONTROL.—Control is rock reef and bar of coarse gravel 100 feet below gage; may shift in extreme floods.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.0 feet at 4 p. m. December 21 and 8 a. m. December 23 (discharge, 5,980 second-feet); minimum stage, 0.54 foot October 21–23 (discharge, 173 second-feet).

1911–1913, 1916–1926: Maximum stage recorded, 10.6 feet at 9 a. m. January 8, 1923 (discharge, 12,300 second-feet); minimum stage, 0.50 foot September 17 and 22, 1924 (discharge, 158 second-feet).

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

DIVERSIONS.—None.

REGULATION.—Operation of power plant causes some fluctuation, but gage is read only at times when load is steady.

ACCURACY.—Stage-discharge relation for low stages changed February 7. Two well defined rating curves used. Gage read once a day to hundredths at low stages, and twice a day to tenths at high stages. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

The following discharge measurements were made:

February 15, 1926: Gage height, 2.90 feet; discharge, 1,350 second-feet.

May 31, 1926: Gage height, 1.74 feet; discharge, 614 second-feet.

August 14, 1926: Gage height, 0.61 foot; discharge, 211 second-feet.

Daily discharge, in second-feet, of Kalama River near Kalama, Wash., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	212	186	1,310	810	1,310	1,820	632	395	580	295	233	295
2	202	186	1,380	750	1,170	1,660	605	395	555	295	228	249
3	196	186	1,170	720	1,170	1,660	720	555	510	295	228	238
4	191	182	1,310	720	2,300	1,450	632	780	490	295	228	233
5	186	178	1,450	1,170	3,210	1,380	690	810	470	280	222	228
6	186	178	1,170	1,310	5,560	1,240	632	780	470	280	222	222
7	186	178	1,000	1,100	4,470	1,100	605	810	450	280	222	222
8	186	186	840	960	3,330	1,030	605	1,100	450	280	222	217
9	186	300	720	870	2,700	1,000	580	1,030	430	280	222	212
10	186	430	1,240	780	2,600	900	632	840	412	265	222	212
11	182	1,380	3,330	720	2,300	840	605	750	412	265	222	212
12	182	1,240	2,900	690	2,000	1,240	555	660	395	265	217	207
13	182	1,030	2,200	630	1,660	1,100	532	632	395	265	217	207
14	178	750	1,590	810	1,520	1,100	510	605	395	265	217	207
15	178	870	1,310	840	1,380	1,100	510	555	395	260	217	238
16	178	1,900	1,100	1,170	1,380	1,100	490	510	378	260	212	295
17	178	1,900	1,170	1,900	1,380	1,100	470	632	360	254	238	360
18	178	1,520	1,170	1,820	1,310	1,170	470	840	360	254	310	325
19	178	1,100	1,170	1,520	1,590	1,100	510	810	395	254	260	295
20	178	870	1,820	1,590	2,300	1,100	490	810	378	249	265	265
21	173	690	5,980	1,740	2,600	960	490	810	360	249	238	395
22	173	572	4,240	1,660	3,200	900	510	780	342	249	233	1,240
23	173	495	5,560	1,590	2,900	870	490	810	342	249	222	750
24	173	520	3,330	1,450	4,860	810	470	810	325	243	222	470
25	218	545	2,300	1,310	4,080	750	450	720	325	243	217	395
26	186	495	1,740	1,170	3,200	720	450	750	325	238	632	360
27	270	750	1,450	1,030	2,600	660	430	780	310	238	295	325
28	270	630	1,240	1,030	2,100	660	430	750	310	238	254	342
29	223	572	1,100	1,380	-------	632	412	720	310	238	238	325
30	212	660	960	1,450	-------	605	412	660	310	233	233	342
31	196	-------	870	1,380	-------	632	-------	605	-------	233	233	------

Monthly discharge of Kalama River near Kalama, Wash., for the year ending September 30, 1926

[Drainage area, 184 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	270	173	193	1.05	1.21	11,900
November	1,900	178	689	3.74	4.17	41,000
December	5,980	720	1,870	10.20	11.76	115,000
January	1,900	630	1,160	6.30	7.26	71,300
February	5,660	1,170	2,510	13.60	14.16	139,000
March	1,820	605	1,040	5.65	6.51	64,000
April	720	412	534	2.90	3.24	31,800
May	1,100	395	726	3.95	4.55	44,600
June	580	310	398	2.16	2.41	23,700
July	295	233	261	1.42	1.64	16,000
August	632	212	246	1.34	1.54	15,100
September	1,240	207	329	1.79	2.00	19,600
The year	5,980	173	820	4.46	60.45	594,000

COWLITZ RIVER BASIN

COWLITZ RIVER AT MOSSY ROCK, WASH.

LOCATION.—In sec. 1, T. 12 N., R. 2 E., at county highway bridge 1 mile north of Mossy Rock, Lewis County, and 2½ miles above mouth of Tilton River.

DRAINAGE AREA.—1,170 square miles (measured on pl. 1, Water-Supply Paper 313).

RECORDS AVAILABLE.—January 1, 1912, to September 30, 1917 (fragmentary); March 12 to September 30, 1926.

GAGE.—Vertical staff in four sections on left bank 100 feet above bridge; read by employees of Backus-Brooks Co.

DISCHARGE MEASUREMENTS.—Made from highway bridge.

CHANNEL AND CONTROL.—Channel above and below gage is deep canyon, whose walls are almost vertical. Control is a broad riffle, 450 feet below gage, composed of sand, gravel, and boulders; shifting at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 6.4 feet on March 16 (discharge, 8,120 second-feet); minimum stage, 1.45 feet on November 8, 1925 (discharge, 835 second-feet; determined by discharge measurement).

1912–1917, 1926: Maximum stage recorded, 18.0 feet January 7–8, 1914 (discharge, 30,300 second-feet); minimum stage, 1.40 feet October 10–13, 1915 (discharge, 825 second-feet).

Flood of November, 1906, as determined by leveling from high-water marks pointed out by residents, reached a stage corresponding to 29.4 feet on present staff gage (discharge, about 51,000 second-feet).

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

DIVERSIONS.—None.

REGULATION.—None.

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

Discharge measurements of Cowlitz River at Mossy Rock, Wash., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 8	1.45	835	Apr. 30	4.79	5,560	Aug. 14	1.84	1,190
Mar. 12	4.00	4,030	June 19	2.69	2,220			

Daily discharge, in second-feet, of Cowlitz River at Mossy Rock, Wash., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	4,580	4,900	3,200	1,950	1,300	1,140
2	-------	4,260	4,100	3,200	1,950	1,300	1,240
3	-------	4,100	4,100	3,200	1,820	1,460	1,040
4	-------	3,950	4,900	3,200	1,820	1,300	1,040
5	-------	3,650	6,040	3,200	1,950	1,300	1,040
6	-------	3,500	5,060	3,200	1,950	1,240	1,040
7	-------	3,350	4,100	3,800	2,080	1,140	995
8	-------	3,350	3,800	3,500	1,820	1,240	1,040
9	-------	3,500	3,650	3,200	1,820	1,190	950
10	-------	3,950	3,350	2,760	1,700	1,190	995
11	-------	4,420	3,200	2,480	1,700	1,240	1,040
12	4,100	4,900	3,200	2,340	1,950	1,140	950
13	4,900	4,900	3,350	2,340	2,080	1,240	910
14	6,040	5,220	3,800	2,210	1,950	1,190	910
15	7,230	6,040	3,650	2,340	1,580	1,140	950
16	8,120	7,060	3,350	2,210	1,580	1,300	1,140
17	7,230	7,060	3,200	2,080	1,460	1,240	1,140
18	6,380	6,380	4,100	2,210	1,400	1,350	1,090
19	5,700	6,380	5,060	2,210	1,400	1,700	950
20	5,380	6,040	4,420	2,340	1,350	1,350	995
21	4,900	5,380	4,740	2,080	1,350	1,460	995
22	4,580	4,740	4,740	2,080	1,300	1,240	2,480
23	4,900	4,100	4,420	2,080	1,460	1,090	2,900
24	5,220	3,800	4,100	2,210	1,300	1,190	1,950
25	4,740	3,500	3,800	2,340	1,350	1,400	1,580
26	4,580	3,500	3,500	2,210	1,520	1,580	1,460
27	4,260	3,800	3,500	2,210	1,350	1,580	1,350
28	3,950	4,740	3,650	2,080	1,240	1,350	1,300
29	3,800	5,060	3,500	1,950	1,240	1,240	1,460
30	3,950	5,380	3,500	1,950	1,350	1,350	1,460
31	4,420	-------	3,200	-------	1,520	1,240	-------

Monthly discharge of Cowlitz River at Mossy Rock, Wash., for the year ending September 30, 1926

[Drainage area, 1,170 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
March 12–31	8,120	3,800	5,220	4.46	3.32	207,000
April	7,060	3,350	4,690	4.01	4.47	279,000
May	6,040	3,200	4,000	3.42	3.94	246,000
June	3,800	1,950	2,550	2.18	2.43	152,000
July	2,080	1,240	1,620	1.38	1.59	99,600
August	1,700	1,090	1,300	1.11	1.28	79,900
September	2,900	910	1,250	1.07	1.19	74,400
The period	----------	----------	----------	----------	----------	1,140,000

STREAMS BETWEEN COLUMBIA RIVER AND KLAMATH RIVER

ROGUE RIVER BASIN

ROGUE RIVER ABOVE PROSPECT,[1] OREG.

LOCATION.—In NE. ¼ sec. 19, T. 32 S., R. 3 E., 1½ miles above intake of power flume of California Oregon Power Co., 3 miles above mouth of Mill Creek, and 2 miles northwest of Prospect, Jackson County.

DRAINAGE AREA.—315 square miles.

RECORDS AVAILABLE.—July 17, 1907, to February 17, 1912, and October 1, 1923, to September 30, 1926.

GAGE.—Lietz water-stage recorder on left bank, inspected by L. H. Pankey.

DISCHARGE MEASUREMENTS.—Made from cable at gage, section good.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders at and below gage. Control is a bar just below gage which becomes an island at low stages; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 3.89 feet at 4 p. m. February 4 (discharge, 2,450 second-feet); minimum stage, from recorder, 1.28 feet September 13–14 (discharge, 268 second-feet).

1907–1912, 1923–1926: Maximum stage recorded, 7.0 feet November 22, 1909 (discharge estimated from extension of rating curve, 9,300 second-feet, both stage and discharge very uncertain); minimum stage recorded, that of September 13–14, 1926.

ICE.—None.

DIVERSIONS.—None above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operation of water-stage recorder satisfactory except June 22 to July 18 and September 7–12. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph, except for periods of no gage-height record, which were estimated by comparison with discharge of Rogue River below Prospect and of California Oregon Power Co.'s flume. Records good except those for estimated periods, which are fair.

Discharge measurements of Rogue River above Prospect, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 9	1.56	375	May 17	1.75	472
Mar. 17	2.28	800	July 19	1.34	302

[1] Formerly designated as "near Prospect."

Daily discharge, in second-feet, of Rogue River above Prospect, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	393	362	616	497	766	938	666	545	393		287	303
2	389	367	778	492	714	986	638	529	393	315	287	295
3	384	371	550	497	666	978	622	513	389		287	287
4	380	367	492	463	1,510	962	610	588	384		287	283
5	384	367	468	497	1,460	922	690	720	376	311	283	283
6	407	371	453	578	1,780	855	684	632	371		283	279
7	411	371	439	534	1,960	813	696	594	371		283	
8	393	380	430	502	1,720	813	696	583	367		283	
9	389	402	420	482	1,410	785	660	556	367	307	279	
10	384	430	411	468	1,620	752	644	534	367		283	272
11	380	502	425	458	1,360	740	778	529	362		283	
12	380	529	529	448	1,180	733	708	524	362	319	279	
13	380	458	487	443	1,010	733	684	513	354		279	268
14	380	430	448	448	900	799	684	508	354		275	268
15	376	453	448	463	848	855	708	502	354		275	272
16	380	448	448	458	820	834	726	477	354	303	275	336
17	376	468	448	578	759	778	708	468	354		283	328
18	371	468	448	524	746	740	678	463	354		367	295
19	371	434	448	508	752	714	638	458	362	291	358	287
20	376	420	448	477	746	708	627	472	376	291	303	283
21	371	407	513	487	740	678	610	458	349	295	291	283
22	376	398	834	468	772	666	622	439		299	287	283
23	371	393	1,180	468	740	684	616	439		295	283	283
24	371	393	930	468	759	690	594	439		295	283	279
25	367	411	740	448	915	678	588	434	332	295	283	275
26	367	487	654	443	915	666	594	430		291	311	275
27	367	472	616	448	922	654	588	430		295	303	275
28	367	434	583	472	922	644	583	416	324	295	291	275
29	367	425	566	696	-------	644	572	411	320	291	291	275
30	367	434	539	708	-------	654	572	402	320	291	341	287
31	367	-------	518	678	-------	678	-------	398	-------	291	332	------

NOTE.—Braced figures give mean discharge for periods indicated.

Monthly discharge of Rogue River above Prospect, Oreg., for the year ending September 30, 1926

[Drainage area, 315 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	411	367	379	1.20	1.38	23,300
November	529	362	422	1.34	1.50	25,100
December	1,180	411	558	1.77	2.04	34,300
January	708	443	503	1.60	1.84	30,900
February	1,960	666	1,050	3.33	3.47	58,300
March	986	644	767	2.43	2.80	47,200
April	778	572	649	2.06	2.30	38,600
May	720	398	497	1.58	1.82	30,600
June	393	----------	356	1.13	1.26	21,200
July	----------	----------	302	.959	1.11	18,600
August	367	275	294	.933	1.08	18,100
September	336	268	283	.898	1.00	16,800
The year	1,960	268	501	1.59	21.60	363,000

ROGUE RIVER AT PROSPECT, OREG.

LOCATION.—In SW. ¼ sec. 29, T. 32 S., R. 3 E., at site of proposed diversion dam of new Prospect power development, below Schoolmarm Creek, 1,000 feet above intake of California Oregon Power Co.'s flume, half a mile northwest of Prospect, Jackson County, and 1½ miles below station designated as above Prospect.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—July 1, 1925, to September 30, 1926; station discontinued.

GAGE.—Stevens continuous water-stage recorder on left bank; vertical staff at same location prior to July 14, 1925.

DISCHARGE MEASUREMENTS.—Made from a foot log at gage.

CHANNEL AND CONTROL.—Stream-bed, rock overlain with a little gravel; practically permanent. Control, at diversion to power flume, practically permanent during 1925, but changing during 1926.

EXTREMES OF DISCHARGE.—Maximum stage during period July 1, 1925, to September 30, 1926, from water-stage recorder, 4.47 feet at 4 p. m. February 4 (discharge estimated at 2,600 second-feet); minimum stage recorded, 0.71 foot about 9 a. m. on September 13, 14, and 15, 1926 (discharge, 288 second-feet).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed during high water in February and during June and July owing to raising of diversion dam. Rating curves used as follows: July 1, 1925, to February 3, 1926, poorly defined; February 4 to May 31, 1926, fairly well defined; July 14 to September 30, 1926, fairly well defined; shifting-control method used June 1 to July 5, 1926. Operation of water-stage recorder satisfactory. Staff gage read to half-tenths twice a week July 1–12 1925. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph or daily gage reading. Records fair.

Discharge measurements of Rogue River at Prospect, Oreg., for the period June 3, 1925, to October 15, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*
June 3	2.65	1,460	July 9	1.40	537	Sept. 22	1.00	413
June 4	2.51	1,190	July 14	1.29	504	Do	1.00	423
June 18	2.14	810	July 17	1.24	479	Sept. 29	.96	401
June 22	2.17	888	July 20	1.17	458	Oct. 9	.96	416
June 25	1.96	788	July 27	1.11	450	Oct. 13	.94	406
June 27	1.88	787	Aug. 1	1.09	443	1926		
June 29	1.74	698	Aug. 12	1.01	417			
June 30	1.69	665	Aug. 16	1.01	438	Mar. 18	1.92	793
July 6	1.50	616	Aug. 21	.98	405	May 17	1.19	491
July 7	1.45	559	Sept. 4	1.00	431	July 19	.85	320
July 9	1.40	551	Sept. 5	.98	425	Oct. 15	.94	346

Daily discharge, in second-feet, of Rogue River at Prospect, Oreg., for the years ending September 30, 1925 and 1926

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1925											
1	640	445	420	11	531	430	408	21	471	422	435
2		445	420	12		428	405	22	468	435	425
3	610	442	422	13	517	428	405	23	465	507	420
4		438	428	14	504	428	422	24	465	438	418
5		438	422	15	498	428	418	25	462	425	415
6	580	435	425	16	492	428	422	26	459	425	415
7	562	435	420	17	486	425	450	27	456	428	412
8	554	432	450	18	480	425	440	28	456	428	412
9	545	432	415	19	477	422	538	29	453	425	422
10	531	432	410	20	471	422	459	30	450	422	440
								31	448	422	-------

Daily discharge, in second-feet, of Rogue River at Prospect, Oreg., for the years ending September 30, 1925 and 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925–26												
1	420	405	730	495	820	1,020	680	560	422	350	310	310
2	418	408	790	480	735	1,080	660	542	422	350	310	302
3	415	415	528	495	685	1,080	640	525	410	350	310	298
4	415	408	480	480		1,080	640	600	410	350	310	292
5	412	402	465	510		1,020	755	730	410	350	310	295
6	438	408	450	600		960	730	640	410		310	295
7	438	405	448	528		900	755	600	398		305	295
8	420	415	440	510	1,660	900	730	580	398		305	292
9	415	438	435	495		870	705	560	398		308	295
10	415	465	432	480		810	705	560	398	336	310	292
11	415	528	440	480		780	870	542	385		310	292
12	415	580	545	465		755	755	542	385		310	290
13	415	495	495	450	1,150	780	730	525	385		310	290
14	412	450	465	465	1,020	870	730	525	385	322	310	290
15	412	480	450	465	960	930	755	510	385	322	310	300
16	412	480	450	480	930	930	780	495	385	322	310	390
17	410	510	450	600	840	840	755	495	385	322	322	390
18	410	510	465	545	780	780	705	495	385	322	410	335
19	405	465	450	510	780	730	660	480	385	322	405	322
20	402	438	465	480	780	730	660	495	398	322	322	322
21	405	425	528	495	780	705	620	480	372	322	310	310
22	402	420	880	480	840	680	640	465	372	322	308	310
23	405	420	1,340	495	780	730	620	465	372	322	302	310
24	402	420	970	495	840	730	600	465	372	322	302	310
25	402	442	735	480	1,020	705	600	450	372	310	305	305
26	402	510	640	480	1,020	680	620	450	372	310	335	302
27	405	495	620	480	1,020	680	600	450	372	310	322	305
28	405	450	600	510	1,020	660	600	450	372	322	310	305
29	405	438	562	760	-------	680	600	450	360	310	310	308
30	405	428	528	790	-------	680	580	450	360	310	375	322
31	405	-------	510	735	-------	705	-------	435	-------	310	348	-------

NOTE.—Daily discharge July 2–5, 8, and 10–12, 1925, for which gage heights are missing, and Feb. 4–12 and July 6–13, 1926, when stage-discharge relation is doubtful, determined by study of discharge record and records of flow of Rogue River above Prospect.

Monthly discharge of Rogue River at Prospect, Oreg., for the years ending September 30, 1925 and 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
July	640	448	513	31,500
August	507	422	433	26,600
September	538	405	427	25,400
The period				83,500
1925–26				
October	438	402	412	25,300
November	580	402	452	26,900
December	1,340	432	574	35,300
January	790	450	523	32,200
February		685	1,130	62,800
March	1,080	660	822	50,500
April	870	580	683	40,600
May	730	435	516	31,700
June	422	360	388	23,100
July	350	310	328	20,200
August	410	302	320	19,700
September	390	290	309	18,400
The year		290	534	387,000

ROGUE RIVER BELOW PROSPECT, OREG.

LOCATION.—In NW. ¼ sec. 6, T. 33 S., R. 3 E., at Prospect power plant of California Oregon Power Co., 1 mile below mouth of Mill Creek, 2 miles below Prospect, Jackson County, and 47 miles northeast of Medford.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—August 3, 1913, to September 30, 1926.

GAGE.—Vertical staff on right bank 100 feet above power house; read by J. Ludo Grieve, of California Oregon Power Co.

DISCHARGE MEASUREMENTS.—Made from cable 500 feet above gage.

CHANNEL AND CONTROL.—Bed composed of large boulders; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.68 feet at 4 p. m. February 4 (discharge, 2,530 second-feet; total, including discharge of flume, 2,720 second-feet); minimum stage, 2.10 feet on September 13–15 and 20–30 (discharge, 295 second-feet; total, including discharge of flume, 470 second-feet on September 15).

1913–1926: Maximum stage recorded, 6.5 feet at 5.30 p. m. (discharge, 8,180 second-feet; total, including discharge of flume, 8,370 second-feet); minimum discharge recorded, 285 second-feet on a number of days in September and October, 1924; minimum, including discharge of flume, 455 second-feet October 13, 1924.

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

DIVERSIONS.—The California Oregon Power Co.'s flume diverts around this station; a record is kept of this diversion (see p. 164).

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed February 11. Rating curves well defined. Gage read to hundredths twice a day. Daily discharge ascertained by applying mean daily gage height to rating table. Records fair.

Discharge measurements of Rogue River below Prospect, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 17	3.23	909	July 19	2.19	332
May 17	2.61	560	Sept. 11	2.12	303

Daily discharge, in second-feet, of Rogue River below Prospect, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	483	457	496	535	925	1,090	770	628	457	365	319	327
2	465	457	925	535	855	1,090	740	655	457	365	315	319
3	474	457	610	535	755	1,090	710	600	440	360	315	311
4	465	457	560	535	1,670	1,090	710	682	435	360	311	311
5	465	453	535	560	1,570	1,020	830	770	435	355	311	311
6	492	457	510	638	1,910	1,020	770	710	435	355	311	307
7	492	453	510	585	2,050	950	830	655	425	340	311	303
8	474	457	501	560	1,780	950	770	655	415	345	311	303
9	474	465	492	535	1,570	890	770	628	415	345	307	303
10	474	510	492	535	1,780	890	740	628	415	340	307	299
11	474	585	492	510	1,460	830	950	600	410	340	307	299
12	474	610	585	510	1,300	830	830	600	410	360	307	299
13	474	560	560	510	1,160	830	830	600	405	355	307	295
14	478	492	510	510	1,020	890	830	572	405	345	303	295
15	474	492	510	510	1,020	950	830	572	400	335	303	295

Daily discharge, in second-feet, of Rogue River below Prospect, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	474	510	501	510	950	950	890	545	395	335	303	355
17	461	535	501	665	890	890	830	545	395	335	303	355
18	465	510	510	585	830	830	770	545	395	335	385	319
19	461	510	510	560	830	830	770	545	395	327	395	303
20	465	510	510	560	830	830	740	545	420	327	331	295
21	461	478	560	560	830	770	710	545	405	327	319	295
22	457	474	925	535	890	770	740	518	390	327	311	295
23	457	465	1,480	560	830	830	710	518	385	327	311	295
24	461	465	1,070	560	890	830	682	518	375	327	311	295
25	457	470	785	535	1,090	770	682	490	365	323	311	295
26	457	535	725	510	1,020	770	682	490	365	327	327	295
27	457	510	695	510	1,020	740	682	490	365	327	327	295
28	457	501	638	560	1,020	740	682	468	365	323	319	295
29	457	483	610	855	------	740	682	474	365	319	319	295
30	457	488	585	855	------	770	655	468	365	319	370	295
31	457	------	560	785	------	770	------	457	------	319	345	------

NOTE.—Daily discharge does not include flow diverted through California Oregon Power Co.'s flume

Monthly discharge of Rogue River below Prospect, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	492	457	468	28,800
November	610	453	494	29,400
December	1,480	492	628	38,600
January	855	510	574	35,300
February	2,050	755	1,170	65,000
March	1,090	740	879	54,000
April	950	655	761	45,300
May	770	457	571	35,100
June	457	365	403	24,000
July	365	319	338	20,800
August	395	303	320	19,700
September	355	295	305	18,100
The year	2,050	295	572	414,000

Combined monthly discharge of Rogue River and California Oregon Power Co.'s flume near Prospect, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	670	621	641	39,400
November	785	622	670	39,900
December	1,640	666	801	49,300
January	1,040	684	751	46,200
February	2,220	933	1,350	75,000
March	1,270	914	1,060	65,200
April	1,140	838	941	56,000
May	957	644	753	46,300
June	642	550	589	35,000
July	550	499	522	32,100
August	584	482	502	30,900
September	542	470	485	28,900
The year	2,220	470	751	544,000

ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OREG.

LOCATION.—In sec. 18, T. 36 S., R. 2 W., at Raygold railroad station, just below dam and power house of the California Oregon Power Co., half a mile below mouth of Bear Creek, and 6 miles northwest of Central Point, Jackson County.

DRAINAGE AREA.—2,020 square miles.

RECORDS AVAILABLE.—August 30, 1905, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder referred to vertical staff bolted to concrete pier of bridge near right bank; gage inspected by James Robins and H. D. Hamer, of the California Oregon Power Co.

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

CHANNEL AND CONTROL.—Bed composed of rock and boulders; practically permanent. One channel at all stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 5.94 feet at 6 p. m. February 4 (discharge, 10,000 second-feet); minimum stage recorded, 0.05 foot June 10, July 10 and 11 (discharge, 625 second-feet), true minimum may be less as recorder does not operate below zero stage. Discharge may have gone as low as 500 second-feet momentarily owing to sudden decrease in power load.

1905–1926: Maximum stage recorded, 20.00 feet at 7.30 a. m. November 23, 1909 (discharge estimated by extension of rating curve at 60,000 second-feet); minimum stage indeterminate, as water goes below intake pipe of well during low stages which are usually of short duration.

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

DIVERSIONS.—A large area of land is irrigated from Rogue River and its tributaries.

REGULATION.—Discharge is influenced by changes of load on power plant just above station.

ACCURACY.—Stage-discharge relation permanent. 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. Records good.

Discharge measurements of Rogue River at Raygold, near Central Point, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 20	0.98	1,320	May 14	1.01	1,320	Sept. 20	0.48	896
Jan. 14	1.41	1,720	June 24	.52	928			
Mar. 15	1.84	2,090	Aug. 24	.38	831			

Daily discharge, in second-feet, of Rogue River at Raygold, near Central Point, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,230	1,150	1,470	1,470	2,950	3,080	1,670	1,370	1,070	868	770	926
2	1,190	1,150	2,530	1,520	2,710	3,010	1,620	1,370	1,070	854	784	868
3	1,150	1,150	1,940	1,520	2,410	2,890	1,620	1,370	1,070	875	784	868
4	1,110	1,190	1,670	1,520	5,730	2,830	1,620	1,420	1,030	868	784	833
5	1,230	1,190	1,520	1,570	6,020	2,710	1,670	1,830	1,030	868	784	826
6	1,230	1,190	1,470	1,720	4,660	2,590	1,780	1,720	1,030	861	791	833
7	1,370	1,190	1,420	1,720	5,600	2,470	1,720	1,670	990	854	784	826
8	1,280	1,190	1,370	1,620	5,020	2,410	1,720	1,620	1,030	868	777	826
9	1,230	1,230	1,370	1,570	3,990	2,350	1,670	1,520	966	854	777	833
10	1,280	1,280	1,320	1,520	5,210	2,230	1,620	1,520	974	861	777	833

Daily discharge, in second-feet, of Rogue River at Raygold, near Central Point, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	1,190	1,370	1,320	1,520	4,840	2,170	1,880	1,470	958	833	777	833
12	1,190	1,620	1,420	1,470	3,990	2,110	1,940	1,420	958	840	777	840
13	1,190	1,670	1,570	1,420	3,400	2,050	1,830	1,370	966	868	784	826
14	1,230	1,470	1,520	1,370	2,950	2,110	1,780	1,370	966	805	777	819
15	1,150	1,420	1,420	1,470	2,830	2,230	1,720	1,320	966	819	777	826
16	1,230	1,520	1,370	1,520	3,010	2,230	1,780	1,320	966	826	784	840
17	1,190	1,520	1,320	2,000	2,950	2,170	1,780	1,280	958	805	777	990
18	1,110	1,520	1,370	2,290	2,710	2,050	1,720	1,230	926	812	791	918
19	1,320	1,470	1,420	2,000	2,650	2,000	1,670	1,280	942	826	926	882
20	1,150	1,320	1,520	1,780	2,590	2,000	1,620	1,230	982	826	990	868
21	1,150	1,320	1,720	1,830	2,590	1,940	1,570	1,230	990	805	882	875
22	1,110	1,280	2,890	2,050	3,080	1,880	1,570	1,190	910	812	861	868
23	1,190	1,280	3,200	1,940	3,080	1,880	1,570	1,150	950	819	777	868
24	1,150	1,230	2,950	1,880	3,830	1,880	1,520	1,230	926	819	812	875
25	1,150	1,280	2,890	1,780	4,660	1,880	1,470	1,150	918	812	805	847
26	1,150	1,370	2,000	1,670	3,990	1,830	1,470	1,150	918	805	833	868
27	1,150	1,420	1,830	1,620	3,540	1,720	1,470	1,150	910	798	875	854
28	1,150	1,320	1,720	1,620	3,270	1,720	1,470	1,150	910	798	854	875
29	1,150	1,280	1,670	3,200	-------	1,720	1,470	1,110	910	805	840	875
30	1,150	1,320	1,570	3,540	-------	1,670	1,470	1,110	896	805	934	875
31	1,150	-------	1,470	2,830	-------	1,720	-------	1,110	-------	791	990	------

Monthly discharge of Rogue River at Raygold, near Central Point, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,370	1,110	1,190	73,200
November	1,670	1,150	1,330	79,100
December	3,200	1,320	1,750	108,000
January	3,540	1,370	1,820	112,000
February	6,020	2,410	3,720	207,000
March	3,080	1,670	2,180	134,000
April	1,940	1,470	1,650	98,200
May	1,830	1,110	1,340	82,400
June	1,070	896	970	57,700
July	875	791	831	51,100
August	990	770	820	50,400
September	990	819	860	51,200
The year	6,020	770	1,520	1,100,000

CALIFORNIA OREGON POWER CO.'S FLUME NEAR PROSPECT, OREG.

LOCATION.—In NW. ¼ sec. 32, T. 32 S., R. 3 E., half a mile below intake, half a mile northwest of Prospect, Jackson County, and 1½ miles above lower end of flume.

RECORDS AVAILABLE.—August 1, 1913, to September 30, 1926.

GAGE.—Vertical staff in stilling box on right side of flume; gage read by employees of California Oregon Power Co.

DISCHARGE MEASUREMENTS.—Made from collar of flume.

CHANNEL AND CONTROL.—Wooden flume, supports of which are practically stable.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 3.95 feet February 4 (discharge, 192 second-feet); minimum stage, 3.47 feet October 29 and December 23 (discharge, 164 second-feet).

1913–1926: Maximum stage recorded on old gage above forebay, 2.7 feet April 25, 26, 30, May 1, 2, 1916, and December 12, 1919 (discharge, 212 second-feet). Flume dry at times.

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

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

California Oregon Power Co.'s flume diverts water from Rogue River in SW. ¼ sec. 30, T. 32 S., R. 3 E., and extends about 2 miles to power house in NW. ¼ sec. 6, T. 33 S., R. 3 E., where a head of about 500 feet is developed.

The following discharge measurements were made:

March 17, 1926: Gage height, 3.68 feet; discharge, 172 second-feet.

May 17, 1926: Gage height, 3.76 feet; discharge, 177 second-feet.

Daily discharge, in second-feet, of California Oregon Power Co.'s flume near Prospect, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	181	178	184	174	181	181	175	182	185	185	180	185
2	179	165	167	172	180	181	174	182	185	185	179	183
3	177	171	171	178	178	176	174	181	185	185	179	181
4	178	168	176	177	192	177	176	185	184	184	180	181
5	176	178	174	179	175	177	181	187	184	184	180	179
6	177	178	174	184	181	174	176	184	183	184	179	180
7	178	179	174	180	168	172	178	180	184	187	178	178
8	177	181	175	179	176	176	179	179	183	187	178	178
9	174	174	175	180	170	174	179	178	184	186	178	177
10	175	177	174	178	182	174	178	183	184	186	179	176
11	175	178	174	177	178	172	185	182	184	185	179	176
12	174	175	182	176	172	176	174	181	188	188	179	176
13	174	174	174	174	172	176	181	180	188	174	179	176
14	173	174	170	174	168	177	181	179	187	185	179	176
15	173	176	172	175	172	184	182	178	187	185	179	175
16	173	176	174	174	174	174	183	178	186	185	180	187
17	172	182	173	184	170	172	178	180	186	185	180	186
18	172	178	174	177	179	174	179	180	186	184	190	184
19	171	175	175	176	178	174	177	179	186	183	189	185
20	174	174	175	174	178	173	178	182	188	182	179	184
21	173	171	178	174	178	177	180	182	187	183	184	182
22	171	177	172	174	180	176	180	180	186	184	182	181
23	167	175	164	174	178	177	179	182	186	184	183	180
24	174	176	166	174	176	178	178	182	185	184	182	181
25	169	176	166	172	184	176	181	182	187	181	181	181
26	173	184	168	176	179	175	185	181	185	181	184	180
27	172	182	176	176	179	174	185	181	188	181	185	180
28	170	181	174	177	182	174	185	179	187	182	184	181
29	164	179	172	187	-------	174	184	187	187	182	179	181
30	168	178	175	174	-------	174	183	187	185	181	190	181
31	169	-------	176	178	-------	175	-------	187	-------	180	190	-------

Monthly discharge of California Oregon Power Co.'s flume near Prospect, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	181	164	173	10,600
November	184	165	176	10,500
December	184	164	173	10,600
January	187	172	177	10,900
February	192	168	177	9,830
March	184	172	176	10,800
April	185	174	180	10,700
May	187	178	182	11,200
June	188	183	186	11,100
July	188	174	184	11,300
August	190	178	182	11,200
September	187	175	180	10,700
The year	192	164	179	129,000

MILL CREEK NEAR PROSPECT, OREG.

LOCATION.—In SE. ¼ sec. 28, T. 32 S., R. 3 E., 1 mile northeast of Prospect, Jackson County, and 2 miles above mouth.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—August 23 to October 19, 1910, and May 26, 1925, to September 30, 1926.

GAGE.—Vertical staff; read by L. H. Pankey.

DISCHARGE MEASUREMENTS.—Made from footlog at gage.

CHANNEL AND CONTROL.—Stream bed of shifting pumice, stream everywhere choked with logs, drift, and brush.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period May 26, 1925, to September 30, 1926, 2.9 feet from high-water marks, probably on February 4 (discharge, 157 second-feet); minimum discharge recorded, 32 second-feet on September 27, 1926 (gage height, 0.15 foot).

ICE.—None.

DIVERSIONS.—None.

REGULATIONS.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve poorly defined. Gage read to hundredths once or twice a week. Daily discharge ascertained by applying gage reading to rating table except September 5 to December 21, 1925, and September 13–27, 1926, when shifting-control method was used. Records fair.

Discharge measurements of Mill Creek near Prospect, Oreg., during the years ending September 30, 1925 and 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
June 5	2.35	124	July 22	0.49	44.6	Mar. 18	1.60	83
June 20	1.54	100	July 30	.44	45.8	May 18	.67	52
June 26	1.20	66	Aug. 12	.39	42.2	July 20	.15	34.6
June 30	1.00	59	Aug. 17	.41	52			
July 10	.62	51	Sept. 5	.41	40.9			
July 17	.54	49.6	Sept. 12	.45	41.5			
July 22	.49	43.8	Oct. 13	.57	39.1			

Daily discharge, in second-feet, of Mill Creek near Prospect, Oreg., for the years ending September 30, 1925 and 1926

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1925						1925					
1		145				16					
2		145				17		84	45	42	
3				42		18					
4						19		80			51
5		127			42	20		80			
6		127				21			45		
7						22			45	42	
8				42		23					
9						24					
10		104	48			25					
11						26	145	68			42
12				42	42	27					
13						28			42	42	
14						29					
15		89		42		30		61	42		
						31					

Daily discharge, in second-feet, of Mill Creek near Prospect, Oreg., for the years ending September 30, 1925 and 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925-26												
1					68	94						
2											34	
3	39							57				
4				51								
5			45				80			36		
6						84						34
7		39							42			
8					133							
9											34	
10	39							61				
11				51								
12			51				84			36		
13	39											34
14		45							42			
15					99	89						
16											34	
17	39							51				
18				54		84		51				
19			45				80			36		
20										36		34
21		42	51						39			
22					80	76						
23											34	
24	39							48				
25				51								
26							76			34		
27												32
28		45	57						39			
29						76						
30											39	
31	39							45				

NOTE.—Daily discharge given for days gage was read.

Monthly discharge of Mill Creek near Prospect, Oreg., for the years ending September 30, 1925 and 1926

Month	Mean discharge in second-feet	Run-off in acre-feet	Month	Mean discharge in second-feet	Run-off in acre-feet
1925			January	51.8	3,190
June	94.8	5,640	February	95.0	5,280
July	45.0	2,770	March	83.8	5,150
August	42.0	2,580	April	80.0	4,760
September	44.2	2,630	May	52.2	3,210
			June	40.5	2,410
The period		13,600	July	35.6	2,190
			August	35.0	2,150
1925-26			September	33.5	1,990
October	39.0	2,400			
November	42.8	2,550	The year	53.0	38,300
December	49.8	3,060			

NOTE.—Mean discharge ascertained by averaging available daily discharge except that, when discharge for consecutive days is given, only the discharge for one of the days was used.

MIDDLE FORK OF ROGUE RIVER NEAR PROSPECT, OREG.

LOCATION.—In NE. ¼ sec. 1, T. 33 S., R. 3 E., at intake of proposed diversion into Rogue River 5 miles southeast of Prospect, Jackson County, and 4 miles above junction with South Fork.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 19, 1925, to September 30, 1926.

GAGE.—Lietz water-stage recorder installed June 17, 1925, vertical staff used prior to that date. Recorder and gage moved 10 feet downstream on October 17, and set to read the same as previously. Inspected by S. R. Towne and L. H. Pankey.

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

CHANNEL AND CONTROL.—Stream bed overlain with pumice, with some logs and brush near control.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period May 19, 1925, to September 30, 1926, 1.93 feet May 26, 1925 (discharge, 335 second-feet); minimum stage, from water-stage recorder, 1.17 feet September 6–9 and 12–13, 1926 (discharge, 83 second-feet). No record of maximum that occurred in February.

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation fairly permanent except as affected by drift lodging on control. Rating curve used May 19, 1925, to February 1, 1926, and July 20 to September 30, 1926, poorly defined; curve used for period control was obstructed by drift, February 6 to July 11, 1926, also poorly defined. Operation of water-stage recorder satisfactory except as indicated in footnote to daily discharge. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records fair.

Discharge measurements of Middle Fork of Rogue River near Prospect, Oreg., during the years ending September 30, 1925 and 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*
June 17	1.72	221	July 18	1.46	148	Sept. 29	1.36	124
June 24	1.71	252	July 28	1.43	145	Oct. 9	1.36	121
June 27	1.71	239	Aug. 11	1.39	140			
July 1	1.59	208	Aug. 18	1.37	135	1926		
July 7	1.52	184	Aug. 21	1.37	124	May 18	1.41	127
July 15	1.48	165	Sept. 4	1.37	124	July 20	1.21	92

Daily discharge, in second-feet, of Middle Fork of Rogue River near Prospect, Oreg., for the years ending September 30, 1925 and 1926

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1925						1925					
1		315	196	136	128	16		246	156	131	123
2		313	196	133	126	17		246	154	128	164
3		312	192	133	126	18		246	152	126	160
4		285	188	133	126	19	320	238		126	155
5		258	182	133	123	20		234		126	149
6			178	133	123	21		230		126	142
7			174	133	126	22		230		136	136
8		252	171	133	123	23		238	147	136	131
9			168	133	121	24		242		133	126
10			164	133	121	25		242		131	121
11		246	161	131	121	26	335	246		131	121
12		246	160	131	121	27		242		128	121
13		246	160	131	121	28	320		142	128	123
14		246	159	128	121	29		219	139	128	123
15		246	158	133	121	30			136	128	123
						31			136	128	

Daily discharge, in second-feet, of Middle Fork of Rogue River near Prospect, Oreg., for the years ending September 30, 1925 and 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925–26												
1	123	131	174	136	152	215	145	161	110	96	90	90
2	121	131	174	133	150	207	142	157	108	96	90	88
3	121	131	152	133	150	203	142	151	108	94	90	88
4	121	131	142	133	250	199	142	185	106	92	90	86
5	121	131	139	139	200	192	145	181	106	92	90	84
6	131	131	142	145	226	188	145	168	106	92	90	83
7	126	131	139	139	264	185	148	161	106	94	88	83
8	123	131	139	136	255	185	148	154	106	90	86	83
9	123	131	139	133	239	181	148	148	103	90	88	83
10	123	133	142		264	174	154	145	103	90	86	84
11	123	139	139		251	168	192	139	101	90	88	84
12	123	142	185	134	239	161	168	136	101		88	83
13	121	139	174		222	164	168	136	101		86	83
14	127	133	161		215	174	168	133	101		86	84
15	133	139	152		199	178	174	130	101		86	88
16	133	136	142	136	192	174	178	130	101	91	86	94
17	136	136	133		181	164	196	130	99		88	88
18	136	136	126		171	161	196	130	99		103	88
19	136	136	123		168	157	181	127	99		90	88
20	133	136	128		164	154	174	130	97	92	88	86
21	133	136	139	135	164	151	168	124	97	92	88	86
22	133	136	171		171	148	174	124	97	92	86	84
23	131	136	219		171	151	161	124	96	90	84	86
24	131	139	199		196	151	161	122	96	88	84	86
25	131	152	185	133	207	148	164	119	96	88	86	86
26	131	161	178		207	145	164	117	96	88	88	86
27	131	158	174		218	145	164	115	97	88	86	88
28	131	152	164	142	218	145	168	112	97	88	86	86
29	131	152	158		-------	145	168	112	97	88	90	88
30	131	155	149		-------	148	164	112	96	88	92	90
31	131	-------	142		-------	148	-------	112	-------	88	90	-------

NOTE.—Daily discharge interpolated June 1, 2, 4, 6–10, 12–14, 16, 28–30, July 12–14, 16, 17, 19–27, Aug. 3, Sept. 18, and Oct. 14, 1925, Jan. 10–15, 17–24, 26–31, and July 14–16, 1926, when gage-height record was missing and July 12, 13, and 17–19, 1926, when stage-discharge relation was doubtful. Daily discharge Feb. 2–5, when recorder was not operating, determined by study of records of Rogue River near Prospect.

Monthly discharge of Middle Fork of Rogue River near Prospect, Oreg., for the years ending September 30, 1925 and 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
June	315	----------	250	14,900
July	196	136	160	9,840
August	136	126	131	8,060
September	164	121	129	7,680
The period	----------	----------	----------	40,500
1925–26				
October	136	121	128	7,870
November	161	131	139	8,270
December	219	123	156	9,590
January	----------	----------	137	8,420
February	264	150	204	11,300
March	215	145	168	10,300
April	196	142	164	9,760
May	185	112	136	8,360
June	110	96	101	6,010
July	96	88	90.8	5,580
August	103	84	88.3	5,430
September	94	83	86.1	5,120
The year	264	83	133	96,200

RED BLANKET CREEK NEAR PROSPECT, OREG.

LOCATION.—In NE. ¼ sec. 34, T. 32 S., R. 3 E., 2½ miles east of Prospect, Jackson County, and 2 miles above mouth of creek.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 22, 1925, to September 30, 1926.

GAGE.—Vertical staff; read by L. H. Pankey.

DISCHARGE MEASUREMENTS.—Made by wading at gage.

CHANNEL AND CONTROL.—Channel shifting pumice bed, choked with brush and drift. Measuring conditions poor.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period May 22, 1925, to September 30, 1926, 1.93 feet May 22, 1925 (discharge, 214 second-feet); minimum stage recorded, −0.22 foot on August 16, 1926 (discharge, 42 second-feet).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation fairly permanent. Rating curve fairly well defined. Gage read to hundredths once or twice a week. Daily discharge for days when gage was read ascertained by applying gage reading to rating table. Records fair.

Discharge measurements of Red Blanket Creek near Prospect, Oreg., during the years ending September 30, 1925 and 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*
June 6	1.47	166	July 17	0.66	111	Sept. 4	0.36	67
June 17	1.26	141	July 22	.60	84	Sept. 12	.35	73
June 22	1.29	171	Do	.60	100			
June 26	1.18	155	July 29	.47	84	1926		
July 1	.96	139	Do	.47	94	Mar. 18	.70	88
July 7	.80	111	Aug. 11	.40	72	May 18	.33	69
July 11	.70	97	Aug. 17	.36	72	July 19	−.16	43.1
July 17	.66	86						

Daily discharge, in second-feet, of Red Blanket Creek near Prospect, Oreg., for the years ending September 30, 1925 and 1926

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1			112			16					
2						17		146	88	69	
3		166		75		18					
4					69	19					85
5					69	20					
6		166	100			21		146			
7			100			22	214	146	85	72	
8				72		23					
9						24					
10		146	92			25					
11			92	72		26		136			72
12					69	27					
13						28			75		
14						29	178		75	69	
15		146		72		30		112			
						31					

Daily discharge, in second-feet, of Red Blanket Creek near Prospect, Oreg., for the years ending September 30, 1925 and 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					100	116						
2											42	
3	72							78				
4				78								
5			78				75			48		
6						104						46
7		72							55			
8					190							
9											42	
10	75							78				
11				75								
12			82				85			46		
13												46
14		78							55			
15					116	100						
16											42	
17	75							69				
18				78		92		69				
19			75				88			44		
20												48
21		75	82						52			
22					104	85						
23											42	
24	72							63				
25				78								
26							85			44		
27												48
28		78	85			82			50			
29												
30											48	
31	72							60				

NOTE.—Daily discharge given for days gage was read.

Monthly discharge of Red Blanket Creek near Prospect, Oreg., for the years ending September 30, 1925 and 1926

Month	Mean discharge in second-feet	Run-off in acre-feet	Month	Mean discharge in second-feet	Run-off in acre-feet
1925			1925–1926		
June	145	8,630	January	77.2	4,750
July	92.0	5,660	February	128	7,110
August	71.6	4,400	March	96.5	5,930
September	73.8	4,390	April	83.2	4,950
			May	69.6	4,280
The period		23,100	June	53.0	3,150
			July	45.5	2,800
1925–26			August	43.2	2,660
October	73.2	4,500	September	47.0	2,800
November	75.8	4,510			
December	80.4	4,940	The year	72.2	52,400

NOTE.—Mean discharge ascertained by averaging available daily discharge except that, when discharge for consecutive days is given, only the discharge for one of the days was used.

SOUTH FORK OF ROGUE RIVER NEAR PROSPECT, OREG.

LOCATION.—In SW. ¼ sec. 7, T. 33 S., R. 4 E., a quarter of a mile below mouth of Imnaha Creek and 9 miles (by road and trail) southeast of Prospect, Jackson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 26, 1924, to September 30, 1926.

GAGE. Stevens 8-day water-stage recorder on left bank; operated by employees of California Oregon Power Co.

DISCHARGE MEASUREMENTS.—Made from cable 25 feet upstream from gage or by wading; measuring section fair.

CHANNEL AND CONTROL.—Bed composed of smooth gravel near right bank; large boulders and bedrock near left bank. Control is riffle over bedrock, overlain with a few large boulders, 20 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.53 feet at 10 p. m. December 1 (discharge, 216 second-feet); minimum stage, from recorder, 0.27 foot on September 13–15 (discharge, 41 second-feet).

1924–1926: Maximum stage recorded, 3.97 feet December 1, 1924 (discharge, 1,500 second-feet); minimum stage, that of September 13–15, 1926.

ICE.—None during year.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly 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. Records good.

The following discharge measurements were made:

March 18, 1926: Gage height, 1.10 feet; discharge, 142 second-feet.

May 18, 1926: Gage height, 0.80 foot; discharge, 101 second-feet.

July 20, 1926: Gage height, 0.41 foot; discharge, 58 second-feet.

Daily discharge, in second-feet, of South Fork of Rogue River near Prospect, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	74	141	102	107	153	127	112	89	65	50	52
2	82	74	160	100	104	153	126	110	85	64	47	48
3	80	76	127	97	103	153	124	108	84	64	46	47
4	82	76	115	98	134	146	127	126	83	63	46	46
5	83	74	109	104	140	146	134	146	80	63	47	44
6	106	73	104	117	140	146	134	140	78	62	47	44
7	97	73	101	110	160	146	134	134	78	65	46	43
8	90	73	97	106	168	146	140	127	77	65	46	43
9	86	73	96	102	153	146	134	123	77	63	45	43
10	84	77	94	101	186	140	134	120	77	60	46	42
11	84	83	97	98	177	140	168	119	76	60	45	42
12	84	92	110	96	160	134	153	115	76	60	44	42
13	83	91	106	95	153	140	146	113	76	59	44	41
14	82	85	98	95	146	146	146	110	74	58	44	41
15	80	94	97	94	140	153	146	108	74	57	44	43
16	79	96	95	95	140	153	153	106	76	57	44	59
17	79	96	95	101	134	146	153	104	74	57	46	52
18	78	96	94	97	134	140	140	102	73	57	65	50
19	78	94	92	95	134	134	134	101	74	56	56	48
20	77	91	95	95	127	140	134	100	76	55	51	46
21	76	86	106	96	127	134	127	98	73	55	48	46
22	76	85	134	97	134	134	134	97	72	56	47	46
23	76	83	177	95	127	134	127	98	72	55	46	45
24	76	83	168	92	140	134	124	98	71	54	45	44
25	77	88	146	90	160	134	123	97	70	53	46	44
26	77	104	127	89	153	127	123	96	68	53	51	43
27	76	97	123	89	153	127	122	95	67	52	50	43
28	76	90	118	89	153	127	119	94	66	51	48	44
29	76	88	113	100	------	127	118	92	66	51	51	44
30	76	94	108	100	------	127	117	91	66	51	62	45
31	74	------	103	101	------	127	------	90	------	50	55	------

Monthly discharge of South Fork of Rogue River near Prospect, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	106	74	81.1	4,990
November	104	73	85.3	5,080
December	177	92	114	7,010
January	117	89	97.9	6,020
February	186	103	142	7,890
March	153	127	140	8,610
April	168	117	134	7,970
May	146	90	109	6,700
June	89	66	74.9	4,460
July	65	50	57.8	3,550
August	65	44	48.3	2,970
September	59	41	45.3	2,700
The year	186	41	93.9	68,000

SOUTH FORK OF BIG BUTTE CREEK NEAR BUTTE FALLS, OREG.

LOCATION.—In SW. ¼ sec. 11, T. 35 S., R. 2 E., just below Ginger Creek, 1 mile above Butte Falls, Jackson County, and 2 miles above junction of North and South Forks.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—September 20, 1910, to October 5, 1911; August 5 to October 10, 1915; October 31, 1917, to September 30, 1922; and March 28, 1925, to September 30, 1926. These records are almost directly comparable with those at station below Butte Falls, August 23, 1922, to March 31, 1925.

GAGE.—Stevens continuous water-stage recorder on right bank; inspected by engineers at time of meter measurements.

DISCHARGE MEASUREMENTS.—Made by wading or from cable 20 feet below gage; both sections rough and require care for accurate results.

CHANNEL AND CONTROL.—Control, rock and boulders; probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from high-water mark, 1.35 feet sometime during period recorder was stopped February 10–24 (discharge, 328 second-feet); minimum stage, from water-stage recorder, 0.48 foot at 7 p. m. August 16 (discharge, 60 second-feet).

1910–11, 1915, 1917–1922, and 1925–26: Maximum stage recorded, 3.4 feet February 21, 1921 (discharge, 1,480 second-feet); minimum discharge, that of August 16, 1926.

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

DIVERSIONS.—A canal diverts water above station for use in State fish hatchery, but water is returned to creek just above station through Ginger Creek. A small amount of land is irrigated above this station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed, apparently during freshet of May 4–6. Rating curves well defined. Operation of water-stage recorder satisfactory except February 10–24, when pencil was broken, and April 22–25 and September 12–20, when clock stopped. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph; estimated February 10–24 and September 12–20; interpolated April 22–25. Records good except for estimated period in February, for which they are poor.

Discharge measurements of South Fork of Big Butte Creek near Butte Falls, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 3	0.70	105	Apr. 26	0.67	94	July 28	0.58	71
Oct. 30	.70	95	May 13	.66	83	Sept. 21	.59	72
Dec. 14	.74	108	June 9	.61	74			
Mar. 4	.95	173	July 1	.60	73			

Daily discharge, in second-feet, of South Fork of Big Butte Creek near Butte Falls, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94	96	116	104	136	194	100	90	78	73	69	71
2	94	96	143	104	130	182	100	90	76	72	69	71
3	94	100	124	109	124	178	100	90	76	72	68	71
4	96	100	114	109	150	167	102	91	76	72	67	72
5	96	98	109	111	143	163	104	96	74	72	67	72
6	114	98	106	116	136	156	104	94	74	71	66	72
7	109	98	104	111	136	146	104	90	74	71	66	73
8	104	98	104	109	133	146	100	87	74	71	65	73
9	100	100	102	106	133	146	100	87	74	71	65	73
10	100	100	102	104		133	98	84	74	71	64	73
11	98	111	104	104	250	124	114	84	74	71	64	73
12	98	130	109	102		122	106	85	74	71	63	
13	98	122	106	100		119	102	84	74	72	62	
14	96	111	104	102		116	100	82	74	72	62	
15	96	109	104	106		116	98	80	74	72	61	
16	96	106	104	109		114	96	80	74	72	61	73
17	94	106	102	116		114	96	80	74	72	61	
18	94	104	102	111	180	111	94	80	74	72	63	
19	94	102	104	109		111	94	80	74	72	62	
20	94	100	109	106		106	94	82	74	72	61	
21	94	96	119	116		106	93	82	74	72	61	71
22	94	94	143	124		106		82	74	72	61	72
23	94	94	140	119	220	106	92	82	74	72	61	71
24	94	94	130	116		106		82	74	72	61	71
25	94	94	122	111	244	102		80	73	72	62	72
26	96	96	116	111	228	102	91	80	73	72	64	72
27	96	96	114	109	216	102	90	79	73	72	64	72
28	96	94	111	109	205	102	88	79	73	71	65	72
29	98	94	109	133	------	100	88	78	73	71	67	72
30	96	98	106	140	------	109	90	78	73	69	72	72
31	96	------	104	136	------	100	------	78	------	69	71	------

Monthly dicharge of South Fork of Big Butte Creek near Butte Falls, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	114	94	97.0	5,960
November	130	94	101	6,010
December	143	102	112	6,890
January	140	100	112	6,890
February	----------	124	186	10,300
March	194	100	126	7,750
April	114	88	97.1	5,780
May	96	78	83.7	5,150
June	78	73	74.1	4,410
July	73	69	71.5	4,400
August	72	61	64.4	3,960
September	----------	71	72.3	4,300
The year	----------	61	99.2	71,800

EAGLE POINT IRRIGATION DISTRICT CANAL AT BUTTE FALLS, OREG

LOCATION.—In NE. ¼ sec. 10, T. 35 S., R. 2 E., 1,200 feet below intake flume across South Fork of Big Butte Creek and half a mile north of Butte Falls, Jackson County.

RECORDS AVAILABLE.—During irrigation seasons, 1924–1926.

GAGE.—Vertical staff in stilling box on left bank; read by C. E. Wymore, ditch walker for Eagle Point Irrigation District.

DISCHARGE MEASUREMENTS.—Made from footbridge at gage.

CHANNEL AND CONTROL.—Canal is earth section on a steep hillside, Bed of clay, gravel, and boulders. Control is transition section, 90 feet downstream, at entrance to semicircular wooden flume.

EXTREMES OF DISCHARGE.—Maximum stage recorded, 2.56 feet July 8 and 9 (discharge, 51 second-feet); canal dry at times.

1924–1926: Maximum discharge, that of July 8 and 9, 1926. Canal dry at times.

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

Eagle Point Irrigation District Canal, completed in the spring of 1924, diverts from South Fork of Big Butte Creek in NE. ¼ sec. 10, T. 35 S., R. 2 E., for the irrigation of lands near Eagle Point. About 1,750 acres is irrigated. A considerable portion of the return water finds its way to Little Butte Creek between the station at Bieberstedt ranch and station below Eagle Point at the Crater Lake highway bridge.

Discharge measurements of Eagle Point Irrigation District Canal at Butte Falls Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 3	1.53	15.0	Apr. 10	2.14	32.5	July 1	2.44	44.1
Oct. 30	1.10	5.87	May 13	1.99	27.6	July 28	2.38	43.0
Do	1.29	9.54	June 9	2.35	41.5	Sept. 21	2.11	31.4

Daily discharge, in second-feet, of Eagle Point Irrigation District Canal at Butte Falls, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		30	36	41	47	42	30
2		31	36	41	44	42	30
3		31	36	41	48	42	30
4		31	38	41	47	42	30
5		32	40	41	48	42	30
6		32	42	41	48	42	29
7		32	21	41	50	42	23
8		33	15	41	51	42	9.0
9		33	29	41	40	41	9.0
10		33	25	41	50	41	9.0
11		35	35	41	48	41	9.0
12			27	41	48	41	31
13		16	27	41	45	41	31
14		35	27	41	44	41	31
15		38	27	41	44	41	31
16		39	27	41	44	41	31
17		39	30	41	44	41	31
18		39	30	41	43	41	31
19		40	31	41	42	41	31
20		41	31	41	42	41	31

Daily discharge, in second-feet, of Eagle Point Irrigation District Canal at Butte Falls, Oreg., for the year ending September 30, 1926—Continued

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
21		39	43	41	42	41	31
22		31	43	41	42	37	31
23	4	31	43	41	41	37	31
24		31	43	40	41	37	23
25		31	43	40	43	37	23
26	21	33	43	40	43	37	9.8
27	21	37	43	40	43	37	9.8
28	21	37	43	43	43	37	9.8
29	21	18	43	47	43	37	9.8
30	26	37	22	46	42	29	9.8
31	28	------	21	------	42	29	------

NOTE.—Mar. 20-25 part of flow diverted above; flow passing gage, estimated at 4 second-feet. Irrigation season began Mar. 26. Canal dry on Apr. 12 and part of a few other days. No record for October to February except discharge measurements on Oct. 3 and 30. Some water diverted for stock purposes during October and November.

Monthly discharge of Eagle Point Irrigation District Canal at Butte Falls, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March	28	0	5.10	314
April	41	0	32.2	1,920
May	43	15	33.5	2,060
June	47	40	41.3	2,460
July	51	40	44.6	2,740
August	42	29	39.5	2,430
September	31	9.0	23.5	1,400
The period	51	0	31.4	13,300

SOUTH FORK OF LITTLE BUTTE CREEK NEAR LAKECREEK, OREG.

LOCATION.—In SE. ¼ sec. 29, T. 36 S., R. 2 E., one-fourth of a mile above intake of Mount Pitt Irrigation Co.'s South Fork Canal and 1½ miles southeast of Lakecreek post office, Jackson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 29, 1921, to September 30, 1926. At station in sec. 11, T. 37 S., R. 2 E., 5 miles above Lakecreek post office, November 26, 1910, to April 19, 1913.

GAGE.—Stevens water-stage recorder on left bank; inspected by employees of Mount Pitt Irrigation Co.

CHANNEL AND CONTROL.—Bed composed of gravel and small boulders; somewhat shifting in floods.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.32 feet on February 10 (discharge, 261 second-feet); minimum stage recorded, 1.00 foot at 7 p. m. July 6 (discharge, 6 second-feet).

1910–1913, 1921–1926: Maximum stage recorded, 5.25 feet on December 30, 1924 (discharge, 3,000 second-feet); minimum discharge, 5 second-feet, very uncertain, December 8, 1911 (reading on old gage, 0.60 foot).

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

DIVERSIONS.—Several hundred acres irrigated in small tracts above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed as indicated by discharge measurements during period March 17–25. Rating curves used before and after change well defined. Operation of water-stage recorder satisfactory except as indicated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height determined from recorder graph by inspection. Records good, except for periods when discharge was estimated, for which they are fair.

Discharge measurements of South Fork of Little Butte Creek near Lakecreek, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 18	1.34	22.1	May 18	1.30	19.2	Aug. 17	1.10	8.8
Mar. 6	1.74	77	May 29	1.25	15.8	Sept. 22	1.14	9.8
Mar. 16	1.68	69	June 8	1.12	9.2	Sept. 30	1.19	11.0
Mar. 26	1.58	47.4	June 22	1.14	10.2			
Apr. 24	1.45	31.7	July 28	1.10	8.5			

Daily discharge, in second-feet, of South Fork of Little Butte Creek near Lakecreek, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	19	30	29		110	50	27	14	8	8	13
2	19	19	72	29		104	48	25	14	8	8	12
3	19	22	45	31		100	49	23	13	8	8	11
4	18	22	34	32		94	55	29	11	8	8	11
5	18	19	31	40	55	90	55	56	11	8	7	11
6	34	21	31	43		88	56	52	10	7	8	11
7	30	20	28	38		92	56	45	9	8	8	11
8	26	21	27	36		94	56	42	9	8	8	10
9	24	21	26	35		97	53	37	9	8	8	9
10	22	21	26	31	233	88	49	34	9	8	7	10
11	21	22	24	32	155	82	86	29	8	8	7	10
12	21	31	24	29	123	80	74	28	9	8	8	10
13	20	36	25	28	107	76	58	26	10	8	8	10
14	20	30		27	92	72	56	26	10	8	8	10
15	19	29	24	34	86	74	53	25	9	8	8	10
16	20	28		34	80	70	50	25	9	8	8	11
17	20	30		35	70	70	49	21	10	8	8	12
18	20	32	24	35	69	69	50	20	9	8	10	11
19	20	29	25	35	62	69	45	18	8	8	9	10
20	20	27	25	34	61	69	42	17	9	8	9	10
21	20	29	29	40	64	67	40	17	9	8	8	11
22	20	29	43	56	80	62	40	17	10	9	8	10
23	20	25	49	50	88	61	39	18	10	8	8	9
24		25	48	43	120	56	35	18	10	8	8	8
25		24	40	40	182	53	32	18	9	8	8	9
26	20	23	37		155	50	30	18	9	8	11	10
27		24	34		134	49	30	16	9	8	11	10
28		27	32	45	120	50	28	15	8	8	9	11
29		26	30		-------	50	27	16	8	8	10	13
30	20	25	28		-------	48	27	15	8	8	15	13
31	20	-------	27		-------	50	-------	15	-------	8	14	------

NOTE.—Water-stage recorder not operating satisfactorily Oct. 24–29, Dec. 14–17, and Jan. 26 to Feb. 9. Discharge Jan. 26 to Feb. 9 estimated by comparison with record of North Fork of Little Butte Creek; otherwise, by interpolation.

Monthly discharge of South Fork of Little Butte Creek near Lakecreek, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	34	18	21.0	1,290
November	36	19	25.2	1,500
December	72	24	31.9	1,960
January		27	37.6	2,310
February	233		92.0	5,110
March	110	48	73.7	4,530
April	86	27	47.3	2,810
May	56	15	25.4	1,560
June	14	8	9.7	577
July	9	7	8.0	492
August	15	7	8.7	535
September	13	8	10.6	631
The year	233	7	32.2	23,300

LITTLE BUTTE CREEK ABOVE EAGLE POINT, OREG.

LOCATION.—In NW. ¼ sec. 5, T. 36 S., R. 1 E., at Bieberstedt ranch, 1 mile above intake of Eagle Point Canal and 3 miles east of Eagle Point, Jackson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 24, 1916, to September 22, 1926. Station at Tronson ranch, below intake of Eagle Point Canal, was maintained July 13, 1907, to April 30, 1916.

GAGE.—Vertical staff on right bank; read by Carl Bieberstedt. A staff gage 200 feet below was used up to September 30, 1924, and for some high-water periods thereafter.

CHANNEL AND CONTROL.—Channel is in bedrock overlain on one side by firm gravel; practically permanent.;

EXTREMES OF DISCHARGE.—Maximum stage recorded during periods October 1 to December 31 and April 1 to September 30, 2.36 feet at 5 p. m. December 1 (discharge, 210 second-feet); minimum stage, 1.04 feet at 4.15 p. m. June 26 (discharge, 7.0 second-feet).

1916–1926: Maximum stage recorded, 13.0 feet on present gage, 12.7 feet by old gage, at 4 a. m. December 30, 1924 (discharge, 7,000 second-feet); minimum discharge, 6.0 second-feet June 17, 1924 (gage height, 0.10 foot).

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

DIVERSIONS.—The Mount Pitt Irrigation Co. and Medford Irrigation District Canal divert water above station, the records at Bradshaw drop showing about the quantity carried past the gage; also, the municipal water supply (about 7.5 second-feet) for Medford is taken out above. Several hundred acres are irrigated along the creek above station. Eagle Point Canal diverts just below this station but above the old station at Tronson ranch (see p. 189).

REGULATION.—Water was stored in Fish Lake Reservoir from October to April and released from May to September (see p. 181).

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined. Gage read to hundredths twice a day October 1 to December 31 and once a day April 1 to September 22. Daily discharge ascertained by applying daily or mean daily gage height to rating table except as stated in footnote to table of daily discharge. Records fair.

Discharge measurements of Little Butte Creek above Eagle Point, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 26	1.41	28.5	May 29	1.20	15.0
Mar. 16	1.94	117	July 30	1.09	9.2

Daily discharge, in second-feet, of Little Butte Creek above Eagle Point, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	23	129	------	25	16	16	13	8.3	16
2	23	26	159	------	20	19	14	13	10	13
3	23	41	92	------	18	22	14	9.2	13	16
4	23	37	73	------	30	29	21	11	11	14
5	23	37	66	------	31	58	15	13	9.2	14
6	63	37	62	------	37	37	12	14	9.6	15
7	46	28	60	------	41	28	14	13	9.6	15
8	33	28	60	------	39	20	19	9.6	7.8	13
9	29	30	57	------	33	19	16	8.7	8.3	13
10	28	33	54	------	31	15	18	7.8	12	14
11	28	35	54	------	100	15	16	12	9.6	15
12	30	58	70	------	49	15	18	12	9.2	13
13	40	70	68	------	35	14	22	14	12	13
14	45	49	58	------	22	15	18	9.6	13	14
15	44	57	57	------	16	16	16	11	9.2	12
16	36	57	57	111	16	12	19	12	11	18
17	28	66	54	------	14	18	20	13	7.8	18
18	28	66	54	------	8.7	14	18	11	16	16
19	28	60	58	------	12	16	16	11	16	15
20	29	54	77	------	11	16	15	11	16	18
21	35	54	73	------	13	16	14	12	18	13
22	31	51	136	------	12	18	16	14	15	9.6
23	46	49	140	------	11	18	15	11	15	------
24	31	49	103	------	12	16	12	12	13	------
25	30	49	86	------	11	17	12	13	11	------
26	31	51	79	------	14	14	7.0	12	19	------
27	32	51	73	------	13	15	13	13	14	------
28	32	49	70	------	12	14	13	12	14	------
29	25	51	66	------	7.8	16	13	13	14	------
30	23	57	66	------	11	16	13	9.2	29	------
31	25	------	63	------	------	14	------	11	21	------

NOTE.—Because of no gage-height record discharge interpolated or estimated by comparison with other records of flow Apr. 1–2, 3, 11, 13, 27–28, May 8, and July 7. Gage was not read on days for which discharge is not given.

Monthly discharge of Little Butte Creek above Eagle Point, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	63	23	32.0	1,970
November	70	23	46.8	2,780
December	159	54	76.6	4,710
April	100	7.8	23.5	1,400
May	58	12	19.0	1,170
June	22	7.0	15.5	922
July	14	7.8	11.6	713
August	29	7.8	13.0	799
September 1–22	18	9.6	14.4	628

LITTLE BUTTE CREEK BELOW EAGLE POINT, OREG.

LOCATION.—In SW. ¼ sec. 3, T. 36 S., R. 1 W., at bridge on Crater Lake highway about 1 mile above mouth of Antelope Creek and half a mile southwest of Eagle Point, Jackson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 1 to September 20, 1924; June 1 to September 20, 1925; and April 1 to September 22, 1926, when station was discontinued. Some miscellaneous measurements in 1923.

GAGE.—Vertical staff gage on right bank 30 feet above bridge; read by G. W. Daley, deputy water master.

CHANNEL AND CONTROL.—Rocky riffle overlain with small gravel and obstructed at times by growth of aquatic plants.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.13 feet from discharge measurement March 6 (discharge, 132 second-feet); minimum stage recorded, 1.19 feet June 6 (discharge, 5.8 second-feet).

1924–1926: Maximum discharge estimated at 800 second-feet June 1, 1925 (water over top of gage); minimum discharge, that of June 6, 1926.

ICE.—None during period of record.

DIVERSIONS.—Station is below all diversions from Little Butte Creek and below practically all return seepage water from irrigation, including the lands of the Eagle Point Irrigation District watered from Big Butte Creek.

REGULATION.—Discharge is entirely controlled by operation of irrigation diversions above.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined between 6 and 30 second-feet and fairly well defined between 30 and 150 second-feet. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table except as stated in footnote to table of daily discharge. Records good except for days when discharge exceeds 30 second-feet, for which they are fair.

Discharge measurements of Little Butte Creek below Eagle Point, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 26	1.57	24.8	Apr. 23	1.33	10.8	Aug. 17	1.27	7.7
Mar. 6	2.13	132	June 4	1.29	9.0	Sept. 21	1.39	13.6
Mar. 16	2.08	117	July 31	1.27	7.2			

Daily discharge, in second-feet, of Little Butte Creek below Eagle Point, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	30	12	12	8.0	8.0	18	16	10	11	10	8.0	8.4	15
2	20	14	14	8.4	8.4	15	17	12	14	9.4	8.0	8.4	16
3	15	15	11	8.7	8.0	16	18	12	11	12	8.4	8.4	15
4	16	26	9.1	9.4	8.4	16	19	13	9.4	11	7.7	7.4	14
5	30	67	9.4	8.7	8.0	14	20	12	13	10	7.7	9.4	16
6	32	54	5.8	9.4	7.7	12	21	11	14	9.1	7.4	11	14
7	32	35	7.0	9.7	8.4	13	22	12	11	9.1	8.7	10	12
8	32	20	10	10	9.1	12	23	10	14	12	8.0	12	------
9	30	16	12	9.4	7.7	8.7	24	9.4	14	12	7.4	11	------
10	27	15	11	14	7.7	7.4	25	9.9	14	9.4	8.7	8.7	------
11	101	13	11	9.4	8.0	8.7	26	9.9	14	9.4	8.7	10	------
12	63	13	11	10	8.4	8.7	27	9.9	7.7	9.4	10	10	------
13	37	14	10	9.4	8.7	7.7	28	10	12	10	8.7	10	------
14	17	14	12	9.9	9.4	11	29	10	13	8.7	9.1	11	------
15	13	14	11	8.0	9.4	12	30	10	14	7.7	11	28	------
							31	------	9.4	------	8.4	20	------

NOTE.—Daily discharge estimated Apr. 1, 2, 28–30, May 1, 2, 8, June 26, July 7, and Aug. 11, for which gage-height record is missing. Gage not read on days for which discharge is not given.

Monthly discharge of Little Butte Creek below Eagle Point, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	101	9.4	21.9	1,300
May	67	7.7	17.3	1,060
June	14	5.8	10.2	607
July	14	7.4	8.98	552
August	28	7.4	9.97	613
September 1–22	18	7.4	12.8	559
The period				4,690

FISH LAKE RESERVOIR NEAR LAKECREEK, OREG.

LOCATION.—In SW. ¼ sec. 3, T. 37 S., R. 4 E., at dam of Fish Lake Reservoir, 18 miles east of Lakecreek post office, Jackson County.

RECORDS AVAILABLE.—December 8, 1915, to September 30, 1926.

GAGE.—Vertical staff on outside of new outlet tower graduated to read heights above sea level. Gage read by employees of Mount Pitt Irrigation Co.

EXTREMES OF STAGE.—Maximum stage recorded during year, 4,820.10 feet April 13–28 (contents, 5,256 acre-feet); minimum stage, 4,800.92 feet September 15 and 20 (contents, 95 acre-feet).

1915–1926: Maximum stage recorded, 4,824.97 feet at 7 a. m. June 19 (contents, 7,112 acre-feet); minimum contents, practically zero.

COOPERATION.—Gage-height record and capacity table furnished by Mount Pitt Irrigation Co.

Gage height and contents on last day of each month of Fish Lake Reservoir near Lakecreek, Oreg., for the year ending September 30, 1926

Date	Gage height	Contents	Loss or gain during month
	Feet	*Acre-feet*	*Acre-feet*
Oct. 31	4,813.98	3,184	+1,158
Nov. 30	4,816.38	3,962	+778
Dec. 31	4,817.94	4,495	+533
Jan. 31	4,818.85	4,817	+322
Feb. 28	4,819.63	5,094	+277
Mar. 31	4,819.97	5,212	+118
Apr. 30	4,819.88	5,181	−31
May 31	4,814.52	3,355	−1,826
June 30	4,801.67	163	−3,192
July 31	4,801.02	103	−60
Aug. 31	4,800.97	99	−4
Sept. 30	4,802.56	264	+165
The year			−1,762

NORTH FORK OF LITTLE BUTTE CREEK AT FISH LAKE, NEAR LAKECREEK, OREG.

LOCATION.—In SE. ¼ sec. 4, T. 37 S., R. 4 E., at outlet of Fish Lake, 18 miles east of Lakecreek post office, Jackson County.

DRAINAGE AREA.—15 square miles.

RECORDS AVAILABLE.—October 21, 1914, to July 20, 1915; June 11 to November 5, 1916; and May 26, 1917, to September 30, 1926.

GAGE.—Lietz water-stage recorder 500 yards below dam; inspected by employees of Mount Pitt Irrigation Co.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed composed of gravel and boulders; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, from water-stage recorder, 3.43 feet at 2 a. m. June 8 (discharge, 145 second-feet); minimum stage recorded, 0.90 foot October 1 (discharge, 2.4 second-feet).

1914–1926: Maximum stage recorded, that of June 8, 1926; creek bed practically dry during fall of 1923, 1924, and 1925, when gates of dam were first closed.

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

DIVERSIONS.—Water has been diverted from Fourmile Creek over divide beginning in 1924. The amount of water delivered to Fish Lake during 1926 has been estimated as follows: April, 95 acre-feet; May, 1,860 acre-feet; June, 1,790 acre-feet; July, 77 acre-feet; total, 3,820 acre-feet.

REGULATION.—Discharge is controlled by reservoir dam at outlet of Fish Lake one-fourth mile above; for record of monthly storage in reservoir see preceding station record.

ACCURACY.—Stage-discharge relation permanent. 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. Records excellent.

Discharge measurements of North Fork of Little Butte Creek at Fish Lake, near Lakecreek, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 7	1.26	8.4	May 1	2.39	63	June 24	2.77	90
Apr. 12	1.48	13.6	Do	2.73	86	July 1	2.19	48.3
Apr. 26	1.49	14.0	June 9	3.35	138	July 23	1.81	28.5
Apr. 28	1.86	29.2	June 11	3.40	142	Aug. 19	1.79	26.5

Daily discharge, in second-feet, of North Fork of Little Butte Creek at Fish Lake, near Lakecreek, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	8.1	11	11	11	13	13	72	87	50	26	26
2	2.7	8.3	11	11	11	13	13	86	93	48	26	25
3	2.9	8.3	11	11	11	13	13	85	109	46	26	26
4	2.9	8.3	11	11	11	13	13	85	122	44	26	24
5	3.2	8.3	11	11	11	13	13	76	121	41	26	24
6	3.8	8.3	11	11	11	13	13	50	130	39	26	24
7	3.7	8.3	11	11	11	13	14	36	131	39	26	24
8	4.2	8.5	11	11	11	13	14	46	142	36	26	24
9	4.4	8.5	11	11	11	13	14	55	139	35	25	24
10	4.4	8.8	11	11	12	13	14	49	138	34	25	24
11	4.4	9.0	11	11	12	13	14	50	139	33	26	24
12	4.4	9.0	11	11	12	13	14	49	139	32	26	24
13	4.6	9.0	11	11	12	13	14	50	138	31	26	24
14	4.8	9.2	11	11	12	13	14	64	138	31	25	24
15	4.9	9.0	11	11	12	13	14	68	137	31	25	24
16	5.0	9.0	11	11	12	13	14	71	138	31	25	26
17	5.2	9.2	11	11	12	13	14	69	137	30	26	26
18	5.2	9.2	11	11	12	13	14	77	128	28	26	24
19	5.6	9.2	11	11	12	13	14	87	120	28	26	24
20	6.3	9.4	11	11	12	13	14	87	114	28	26	23
21	6.5	9.4	12	11	12	13	14	87	119	28	26	23
22	6.5	9.4	12	11	12	13	14	87	114	28	25	16
23	6.6	9.4	12	11	13	13	14	87	102	27	25	15
24	6.6	9.4	12	11	13	13	14	86	86	26	24	14
25	6.6	9.7	12	11	13	13	14	86	72	26	24	13
26	6.6	9.9	11	11	13	13	14	87	65	26	25	13
27	6.8	9.9	11	11	13	13	14	87	60	26	25	13
28	7.0	9.9	11	11	13	13	20	87	56	26	24	12
29	7.2	10	11	11	-------	13	36	88	53	26	24	11
30	7.4	10	11	11	-------	13	55	88	51	26	27	11
31	7.7	-------	11	11	-------	13	-------	88	-------	26	26	------

Monthly discharge of North Fork of Little Butte Creek at Fish Lake, near Lakecreek, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	7.7	2.4	5.18	319
November	10	8.1	9.06	539
December	12	11	11.2	689
January	11	11	11.0	676
February	13	11	11.9	661
March	13	13	13.0	799
April	55	13	16.1	958
May	88	36	73.2	4,500
June	142	51	111	6,600
July	50	26	32.5	2,000
August	27	24	25.5	1,570
September	26	11	21.0	1,250
The year	142	2.4	28.4	20,600

NOTE.—Monthly discharge not corrected for gain or loss of storage in Fish Lake Reservoir.

NORTH FORK OF LITTLE BUTTE CREEK ABOVE MEDFORD INTAKE, NEAR LAKECREEK, OREG.

LOCATION.—In SW. ¼ sec. 25, T. 36 S., R. 2 E., 200 yards above intake of city of Medford water-supply pipe and 5 miles above mouth of South Fork and Lakecreek post office, Jefferson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—September 10, 1911, to March 31, 1913; May 26, 1922, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on right bank; inspected by employees of Mount Pitt Irrigation Co.

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

CHANNEL AND CONTROL.—Bed composed of gravel and boulders; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 2.30 feet at 8 a. m. June 8 (discharge, 168 second-feet); minimum stage, from recorder, 1.37 feet September 29 and 30 (discharge, 22 second-feet).

1911–1913, 1922–1926: Maximum stage from water-stage recorder, 3.30 feet December 30, 1924 (discharge, estimated by extension of rating curve, 680 second-feet); minimum stage, from recorder, 1.24 feet October 12–14, 1924 (discharge, 15 second-feet).

ICE.—None.

DIVERSIONS.—Some minor diversions for irrigation about station. Hanley ditches and water-supply pipe line of city of Medford divert just below gage.

REGULATION.—Flow is regulated by storage in Fish Lake 12 miles upstream. (See p. 181.)

ACCURACY.—Stage-discharge relation permanent. Rating curve very well defined to 200 second-feet. Operation of water-stage recorder satisfactory except as indicated in footnote to daily discharge. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records excellent.

Discharge measurements of North Fork of Little Butte Creek above Medford intake, near Lakecreek, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 26	1.47	29.6	May 1	1.92	87	June 22	2.14	134
Mar. 6	1.62	44.6	May 5	2.05	113	July 30	1.58	40.1
Mar. 26	1.58	40.9	June 8	2.30	168	Sept. 22	1.52	33.8

Daily discharge, in second-feet, of North Fork of Little Butte Creek above Medford intake, near Lakecreek, Oreg., for the year ending September 30, 1926

Day	Oct.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25			95	108	70	40	37
2	26			112	116	68	40	36
3	26	48	40	112	128	66	39	37
4				116	148	64	39	36
5				110	148	61	39	36
6		45		84	155	60	39	36
7		45	41	68	157	58	39	36
8		45		76	168	55	38	35
9		45	41	88	164	54	38	35
10		43	42	81	161	51	37	34
11		42	46	81	166	50	36	34
12		42	42	80	164	48	37	34
13		42	41	80	161	47	38	34
14		42	41	86	161	46	38	33
15			41	95	161	46	38	33
16			41	97	161	45	38	35
17			41	97	161	43	38	35
18			41	100	155	43	38	35
19			41	114	144	42	37	34
20		41	40	114	137	43	36	34
21			40	114	137	42	36	34
22			40	114	137	42	36	30
23			40	114	122	42	36	26
24			40	112	110	41	36	26
25			40	112	97	41	37	24
26	30	40	40	112	86	40	37	23
27		40	40	110	83	40	37	23
28		40	42	110	80	40	36	23
29		40	60	110	76	40	38	22
30		40	81	110	73	40	41	22
31		40		110		40	38	

NOTE.—Water-stage recorder did not operate Oct. 4–25, Oct. 27 to Mar. 5, Mar. 15–25, and Apr. 1–8. Daily discharge for Mar. 1–5 estimated by comparing station record with record of station at Fish Lake; discharge interpolated for Mar. 15–25 and Apr. 1–8.

Monthly discharge of North Fork of Little Butte Creek above Medford intake, near Lakecreek, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March			42.6	2,620
April	81	40	42.8	2,550
May	116	68	100	6,150
June	168	73	134	7,970
July	70	40	48.6	2,990
August	41	36	37.7	2,320
September	37	22	31.7	1,890
The period				26,500

NOTE.—No record for months for which discharge is not given.

NORTH FORK OF LITTLE BUTTE CREEK ABOVE INTAKE OF ROGUE RIVER VALLEY CANAL, NEAR LAKECREEK, OREG.

LOCATION.—In NW. ¼ sec. 21, T. 36 S., R. 2 E., one-eighth of a mile above intake of Rogue River Valley Canal and 1 mile above Lakecreek post office, Jackson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 20 to October 13, 1916; May 7, 1917, to September 30, 1919, and April 13, 1921, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on right bank; inspected by L. S. Brophy, engineer of Mount Pitt Irrigation Co.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Bed composed of boulders and gravel; fairly permanent except in extreme floods.

EXTREMES OF DISCHARGE.—Maximum discharge during year, from water-stage recorder, 1.80 feet at 10 a. m. June 9 (discharge, 161 second-feet); minimum stage, from recorder, 0.69 foot at 5 p. m. September 29 (discharge, 8 second-feet).

1916–1919, 1921–1926: Maximum stage recorded, 5.42 feet at 3 a. m. December 30, 1924 (discharge, 1,560 second-feet); minimum discharge, 8 second-feet October 15, 1924, and September 29, 1926.

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

DIVERSIONS.—Pipe line for water supply of city of Medford, capacity about 7.5 second-feet, carries water past gage. Several hundred acres irrigated above station.

REGULATION.—Flow is regulated by storage in Fish Lake Reservoir, 12 miles upstream. (See p. 181.)

ACCURACY.—Stage-discharge relation permanent. 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; interpolated, March 17–25. Records excellent.

Discharge measurements of North Fork of Little Butte Creek above intake of Rogue River Valley Canal, near Lakecreek, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 18	1.05	34.2	Apr. 24	0.92	22.8	June 26	1.31	67
Mar. 6	1.14	44.4	May 1	1.29	64	July 28	.88	21.3
Mar. 26	1.06	33.5	June 8	1.75	145	Aug. 17	.82	15.1
Apr. 13	1.04	32.5	June 22	1.58	111	Sept. 22	.80	12.7

Daily discharge, in second-feet, of North Fork of Little Butte Creek above intake of Rogue River Valley Canal, near Lakecreek, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	26	57	36	48	50	30	70	83	45	18	19
2	15	28	50	34	44	48	23	88	87	45	20	19
3	14	36	40	38	42	47	23	90	105	44	21	18
4	15	33	38	38	57	46	25	110	123	44	19	19
5	17	32	37	40	46	45	29	105	123	42	16	20
6	33	33	37	42	44	45	28	78	129	38	22	19
7	20	31	36	39	44	45	28	62	129	37	21	19
8	18	30	36	39	42	45	24	60	143	36	19	19
9	17	31	36	38	42	45	25	66	152	32	19	20
10	16	32	34	38	108	44	31	60	143	30	19	19

Daily discharge, in second-feet, of North Fork of Little Butte Creek above intake of Rogue River Valley Canal, near Lakecreek, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	17	33	36	38	64	44	41	61	140	29	18	19
12	17	45	39	38	53	42	31	61	140	27	18	15
13	17	40	39	37	48	41	29	58	140	25	20	19
14	17	34	37	38	47	41	25	65	140	24	20	18
15	17	37	37	42	46	41	24	72	143	23	20	16
16	18	33	37	41	46	41	20	77	145	24	18	24
17	18	39	36	42	44		19	74	143	24	15	18
18	18	36	34	45	42		21	74	134	24	19	18
19	19	33	36	46	42		19	85	123	25	19	16
20	21	33	41	42	42		19	87	118	24	18	16
21	22	33	52	60	42	38	19	87	114	23	19	15
22	21	33	52	52	61		24	85	114	22	20	13
23	20	33	48	47	55		24	87	99	22	19	12
24	19	32	42	44	77		24	87	87	19	16	12
25	19	33	40	42	71		20	87	74	19	19	11
26	19	33	39	41	62	36	20	87	64	21	26	13
27	19	32	39	39	56	36	18	87	62	19	23	13
28	19	32	38	38	52	36	18	85	56	18	22	11
29	22	33	38	46	------	37	34	87	52	18	29	10
30	22	34	36	44	------	34	56	87	47	19	37	11
31	27	------	36	47	------	34	------	85	------	17	23	------

Monthly discharge of North Fork of Little Butte Creek above intake of Rogue River Valley Canal, near Lakecreek, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	33	14	19.0	1,170
November	45	26	33.4	1,990
December	57	34	39.8	2,450
January	60	34	41.6	2,560
February	108	42	52.4	2,910
March	50	34	40.8	2,510
April	56	18	25.7	1,530
May	110	58	79.2	4,870
June	152	47	112	6,660
July	45	17	27.7	1,700
August	37	15	20.4	1,250
September	24	10	16.4	976
The year	152	10	42.2	30,600

HOPKINS CANAL[1] NEAR BROWNSBORO, OREG.

LOCATION.—In SW. ¼ sec. 8, T. 36 S., R. 1 E., at head of Bradshaw drop, 50 feet below intake of Medford Irrigation District Canal, 2 miles southwest of Brownsboro, 8 miles below intake, and 16 miles from Medford, Jackson County.

RECORDS AVAILABLE.—Irrigation seasons of 1913, 1915–1919, and 1921–1926.

GAGE.—Stevens 8-day water-stage recorder on right bank; read by L. S. Brophy.

DISCHARGE MEASUREMENTS.—Made by wading or from plank.

CHANNEL AND CONTROL.—Bed composed of solid rock reef, 50 feet below gage; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during season, from water-stage recorder, 1.94 feet at 2 p. m. April 4 (discharge, 53 second-feet); canal dry at times.

1913, 1915–1919, 1921–1926: Maximum discharge recorded, 2.31 feet at noon June 1, 1925 (discharge, 77 second-feet); canal dry each winter.

[1] Formerly published as "Rogue River Valley Canal."

ACCURACY.—Stage-discharge relation permanent. Rating curve very well defined. Operation of recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph except August 1–20, for which shifting-control method was used. Records excellent.

The name Hopkins Canal is applied to the old portion, below the diversion point of the Medford Irrigation District Canal, of the Rogue River Valley Canal which diverts water from North Fork of Little Butte Creek in NE. ¼ sec. 20, T. 36 S., R. 2 E., to irrigate about 4,500 acres in the basin of Bear Creek. Any seepage or return water from irrigation of about 300 acres above this point reaches Little Butte Creek above the station on Little Butte Creek above Eagle Point.

Discharge measurements of Hopkins Canal near Brownsboro, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 18	0.70	2	Apr. 23	1.35	21.8	Aug. 17	1.00	8.81
Mar. 26	1.55	31.6	May 5	1.59	33.6	Aug. 31	1.13	14.2
Apr. 3	1.87	49.6	May 20	1.54	30.7	Do	1.13	14.0
Apr. 12	1.77	43.2	June 4	1.58	32.6	Do	1.13	14.2
Apr. 15	1.51	29.8	June 30	1.30	19.8	Sept. 30	.90	7.44
Apr. 17	1.42	25.6	July 26	.96	8.30			

Daily discharge, in second-feet, of Hopkins Canal near Brownsboro, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	18		41	22	26	15	7.7	15
2	13	19		48	30	28	14	9.9	15
3	9.9	17		50	31	29	15	10	14
4	7.4	14		51	35	32	14	11	14
5	8.8	14		42	36	32	15	7.4	13
6	12	13		38	30	34	15	8.2	12
7	12	18		43	24	35	13	9.6	12
8	11	19		44	27	38	14	8.5	12
9	14	19		43	30	43	12	8.8	12
10	14	19		41	29	42	12	9.3	13
11	14	19		43	25	41	11	7.7	13
12	14	20		43	26	41	12	6.7	13
13	10	14		44	25	42	11	7.4	14
14		12		42	22	43	14	8.2	14
15		12		32	24	44	12	9.3	14
16		6.3		24	23	43	14	10	16
17	11	3.8		25	22	44	14	9.3	20
18	12	3.5		26	22	42	14	14	19
19	12	3.4		26	29	38	15	14	14
20	11	3.0		24	28	34	15	11	13
21	11		8.6	21	27	34	15	8.5	16
22	10		15	20	26	34	14	8.5	19
23	3.7		15	22	27	28	14	9.3	12
24	5.8		18	16	30	26	11	8.2	11
25	9.6		30	12	31	20	9.1	8.0	6.7
26	9.6		31	13	30	21	9.1	9.6	6.7
27	9.6		30	12	28	15	9.9	15	9.3
28	9.3		32	11	26	14	9.6	14	9.1
29	17		32	12	26	13	11	15	13
30	18		36	17	27	15	9.6	23	8.8
31	18		36		27		9.6	17	

NOTE.—No gage-height record Nov. 21 to Mar. 20; some water diverted during winter for stock. Canal dry Oct. 14–16 and Mar. 1–20.

Monthly discharge of Hopkins Canal near Brownsboro, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	18	0	10.3	633
November 1–20	20	3.0	13.4	532
March	36	0	9.15	563
April	51	11	30.9	1,840
May	36	22	27.3	1,680
June	44	13	32.4	1,930
July	15	9.1	12.7	781
August	23	6.7	10.5	646
September	20	6.7	13.1	780

NOTE.—No record Nov. 21 to Feb. 28.

MEDFORD IRRIGATION DISTRICT CANAL NEAR BROWNSBORO, OREG.

LOCATION.—In SW. ¼ sec. 8, T. 36 S., R. 1 E., 100 yards below diversion from Rogue River Valley Canal and 2 miles southwest of Brownsboro, Jackson County.

RECORDS AVAILABLE.—May 14, 1922, to September 30, 1926.

GAGE.—Lietz water-stage recorder on right bank, inspected by E. J. Leach of Medford Irrigation District.

DISCHARGE MEASUREMENTS.—Made from a footbridge near gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 3.44 feet at 2 p. m. June 22 (discharge, 85 second-feet); canal dry at times.

1922–1926: Maximum discharge recorded, 91 second-feet November 18, 1923 (gage height, 2.95 feet); canal dry at times.

REGULATION.—Flow regulated at diversion from Rogue River Valley Canal.

ACCURACY.—Stage-discharge relation affected by growth of aquatic plants. Well defined rating curves used April 11–25 and June 11 to July 16; the first curve was used for September although not well defined. Operation of water-stage recorder satisfactory April 11 to July 16; staff gage read daily for subsequent days when water was diverted. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph, except April 26 to June 10, for which shifting-control method was used. Records good.

Medford Irrigation District Canal diverts water from Rogue River Valley Canal in SW. ¼ sec. 8, just above Bradshaw drop, and extends along the east side of Rogue River to Phoenix, where its water is conducted across Bear Creek in a siphon into Phoenix Canal. About 8,900 acres was irrigated in 1925.

Discharge measurements of Medford Irrigation District Canal near Brownsboro, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 12	0.69	5.17	May 20	2.55	59.4	June 26	2.39	39.4
Apr. 13	1.52	23.0	June 11	3.22	76.4	June 30	1.73	20.9
Apr. 15	1.90	35.6	June 12	3.24	73.0	July 8	1.48	13.7
Apr. 17	1.78	32.0	June 17	3.33	80.5			
Apr. 23	1.78	32.2	June 22	3.43	82.7			

Daily discharge, in second-feet, of Medford Irrigation District Canal near Brownsboro, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	------	44	58	20	------	6	16	33	59	80	0.7	------	------
2	------	54	57	19	------	5	17	31	54	81	------	------	------
3	------	58	61	17	------	5	18	33	50	82	------	------	------
4	------	61	69	16	------	5	19	33	56	81	------	------	3
5	------	64	73	16	------	5	20	32	60	79	------	------	7
6	------	61	75	15	------	5	21	30	58	79	------	------	5
7	------	56	75	15	------	5	22	30	56	82	------	------	------
8	------	57	76	15	------	4	23	30	56	75	------	------	------
9	------	59	77	14	------	3	24	26	56	68	------	------	------
10	------	56	76	11	------	------	25	24	56	56	------	------	------
11	1.4	52	73	10	------	------	26	23	58	39	------	------	------
12	5.2	48	74	9.2	------	------	27	21	58	35	------	------	------
13	13	48	78	6.3	------	------	28	18	54	31	------	2	------
14	23	50	80	4.3	------	------	29	26	52	27	------	------	------
15	31	58	80	3.2	------	------	30	33	58	20	------	------	------
							31	------	59	------	------	5	------

NOTE.—No flow on days for which discharge is not given.

Monthly discharge of Medford Irrigation District Canal near Brownsboro, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	33	0	16.6	988
May	64	44	55.7	3,420
June	82	20	66.6	3,960
July	20	0	6.18	380
August	5	0	.2	12
September	7	0	1.9	113
The year	82	0	12.3	8,870

NOTE.—No flow during months for which discharge is not given.

EAGLE POINT CANAL NEAR EAGLE POINT, OREG.

LOCATION.—In SE. ¼ sec. 31, T. 35 S., R. 1 E., half-way between point of diversion and point where canal crosses Eagle Point-Brownsboro road, 100 feet above intake of Pelouze lateral, and 2½ miles east of Eagle Point, Jackson County.

RECORDS AVAILABLE.—Irrigation seasons 1920 to 1926.

GAGE.—Vertical staff fixed to an alder tree on left bank; read by G. W. Daley, assistant water master.

CHANNEL AND CONTROL.—Artificial earth channel. Banks high and uniform. No definite control.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period April 1 to September 22, 1.93 feet at 8 a. m. April 4 (discharge, 30 second-feet); canal dry April 13 and 14 and at times in winter.

1920–1926: Maximum discharge recorded, 31 second-feet August 23, 1925.

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

DIVERSIONS.—None.

REGULATION.—Flow in canal regulated by head gates.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Staff gage read to hundredths once or twice a day. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

The Eagle Point Canal of Little Butte Irrigation Co. diverts water from Little Butte Creek, in SE. ¼ sec. 31, T. 35 S., R. 1 E.; water is used for irrigating near Eagle Point.

Discharge measurements of Eagle Point Canal near Eagle Point, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 16	1.10	5.19	May 29	1.54	15.8	Aug. 31	1.56	16.0
Apr. 12	.37	.30	June 17	1.66	19.8	Do	1.56	16.2
Apr. 15	1.57	16.8	July 30	1.34	9.90	Do	1.56	16.1
Apr. 23	1.34	10.8	Aug. 17	1.25	8.27	Sept. 21	1.42	12.6

Daily discharge, in second-feet, of Eagle Point Canal near Eagle Point, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	13	18	15	10	11	14	16	13	14	16	11	10	13
2	13	21	14	11	11	14	17	15	17	18	12	8.8	16
3	13	21	15	9.2	12	13	18	14	14	18	13	11	14
4	30	21	14	9.7	12	13	19	13	15	16	12	15	13
5	25	21	15	12	11	13	20	12	17	16	10	14	16
6	22	19	13	12	9.4	14	21	13	14	14	12	13	12
7	22	19	13	12	10	14	22	12	17	14	13	13	9.2
8	22	18	17	12	8.4	12	23	10	19	15	12	13	------
9	22	16	16	9.2	8.6	12	24	9.4	18	13	11	11	------
10	22	18	17	7.1	9.2	12	25	8.2	16	10	10	9.7	------
11	22	16	15	14	9.4	12	26	13	15	12	13	18	------
12	22	15	17	11	9.0	14	27	11	19	12	13	15	------
13	------	14	19	12	10	12	28	9.4	14	12	12	13	------
14	------	17	18	12	12	13	29	9.0	15	12	12	14	------
15	16	18	17	10	12	11	30	11	17	12	10	18	------
							31	------	14	------	11	17	------

NOTE.—No flow Apr. 13 and 14. No record Oct. 1 to Mar. 31 and Sept. 23–30.

Monthly discharge of Eagle Point Canal near Eagle Point, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	30	0	14.6	869
May	21	14	17.0	1,050
June	19	10	14.8	881
July	14	7.1	11.3	695
August	18	8.4	11.9	732
September 1–22	16	9.2	13.0	567
The period				4,790

EMIGRANT GAP RESERVOIR NEAR ASHLAND, OREG.

LOCATION.—In SE. ¼ sec. 20, T. 39 S., R. 2 E., at Emigrant Gap Dam of Talent Irrigation District, 8 miles southeast of Ashland, Jackson County.

RECORDS AVAILABLE.—December 16, 1924, to September 30, 1926.

GAGE.—Vertical staff on upstream face of dam; graduated to read elevation above sea level; read by employees of Talent Irrigation District.

EXTREMES OF STAGE.—Maximum stage recorded during year, 2,154.35 feet April 13–15 (contents, 4,684 acre-feet). Reservoir practically dry until November 5 and after middle of August.

Emigrant Gap Reservoir was completed in 1924 by Talent Irrigation District to provide water for lands under East and Talent laterals in vicinity of Talent, Oreg.

Monthly stage and contents of Emigrant Gap Reservoir near Ashland, Oreg., for the year ending September 30, 1926

	Gage height	Contents	Loss or gain during month
	Feet	*Acre-feet*	*Acre-feet*
Oct. 31		0	−518
Nov. 30		200	+200
Dec. 31	2,106.08	572	+372
Jan. 31	2,115.60	971	+399
Feb. 28	2,146.25	3,591	+2,620
Mar. 31	2,153.60	4,574	+983
Apr. 30	2,148.93	3,933	−641
May 31	2,129.40	1,867	−2,066
June 30	2,108.42	656	−1,211
July 31		[a] 340	−316
Aug. 31		0	−340
Sept. 30		0	0
The year			−518

[a] Interpolated.

NOTE.—From Feb. 12 to about Mar. 15, part of Neil Creek was diverted into Emigrant Gap Reservoir estimated diversion, 150 acre-feet.

EMIGRANT CREEK NEAR ASHLAND, OREG.

LOCATION.—In SE. ¼ sec. 20, T. 39 S., R. 2 E., 500 feet below Emigrant Gap Reservoir Dam and 8 miles by road southeast of Ashland, Jackson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—January 27, 1920, to September 30, 1926 with some gaps during low-water periods.

GAGE.—Stevens continuous water-stage recorder on right bank.

DISCHARGE MEASUREMENTS.—Made by wading or from bridge 200 feet above gage.

CHANNEL AND CONTROL.—Bed composed of gravel; shifts during floods. Channel fairly straight.

EXTREMES OF DISCHARGE.—Maximum stage during year from recorder, 5.40 feet at 11 a. m. October 7 (discharge, 73 second-feet). Stream bed practically dry from November 5 to February 1.

1920–1926: Maximum discharge, 2,100 second-feet at 10.30 a. m. April 20, 1925; maximum stage, unaffected by storage, from water-stage recorder, 7.65 feet February 13, 1921 (discharge, 900 second-feet). Creek bed dry each summer.

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

DIVERSIONS.—Station is above practically all diversions in Rogue River Valley, except East Lateral (see p. 200) and Ashland Lateral (see p. 199). Keene Creek Canal diverts water into Emigrant Creek from Klamath River Basin.

REGULATION.—Flow regulated by storage in Emigrant Gap Reservoir of Talent Irrigation District, capacity, 8,224 acre-feet, immediately upstream. Reservoir gates were closed November 5, stored water released beginning April 27.

ACCURACY.—Stage-discharge relation changed during winter. Well-defined rating curves used October 1 to November 4 and February 1 to August 30. Operation of water-stage recorder satisfactory, except for several short periods during low flow. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph; discharge estimated February 4–25 and March 17–26. Records good.

Discharge measurements of Emigrant Creek near Ashland, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 8	3.64	0.4	May 11	4.18	22.2	July 2	4.05	14.8
May 11	3.65	.4	June 9	4.11	21.2	Aug. 16	3.86	5.8
Do	3.84	4.3	June 14	4.12	19.0			

Daily discharge, in second-feet, of Emigrant Creek near Ashland, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Feb.	Mar.	Apr.	May	June	July	Aug.
1		1.9		0.2	0.5	11	23	16	6.0
2		2.1	0.1	.2	.5	11	23	16	5.7
3		3.2	.1	.3	.5	11	22	16	5.7
4		1.2		.3	.5	7.2	20	16	5.7
5				.3	.5	7.2	20	16	4.5
6				.3	.5	.7	20	16	4.2
7	47			.4	.5	.3	19	16	4.2
8	45			.4	.5	.3	19	16	4.2
9	27			.4	.5	.4	19	16	3.8
10	25			.4	.5	.4	19	16	3.4
11	24			.4	.5	3.2	19	16	4.5
12	22			.4	.5	4.9	19	16	6.1
13	21			.5	.5	8.6	19	16	6.1
14	20		.1	.5	.5	9.1	18	16	6.1
15	18			.5	.5	9.6	12	16	5.7
16	14			.5	.5	12	12	16	5.7
17	7.7				.5	12	12	16	5.3
18	2.2				.5	13	12	16	4.9
19	1.9				.5	17	12	16	4.9
20	2.1				.5	22	12	16	5.3
21	1.9			.5	.5	24	12	5.3	5.3
22	1.8				.5	26	11	.1	4.9
23	1.7				.6	26	12		4.9
24	1.7				.6	26	16		4.9
25	1.7				.6	25	16	2.6	4.2
26	1.6		.1		.6	27	16	4.5	3.4
27	1.7		.1	.5	2.9	27	16	7.2	2.4
28	1.8		.1	.5	7.7	27	16	6.8	1.2
29	1.8			.4	12	27	16	6.4	.4
30	1.9			.5	11	27	15	6.0	.1
31	1.8			.5		26		6.0	

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

Monthly discharge of Emigrant Creek near Ashland, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	47	0	9.56	588
November	3.2	0	.28	17
February	.1	0	.10	6
March	.5	.2	.43	26
April	12	.5	1.57	93
May	27	.3	14.5	892
June	23	11	16.6	988
July	16	0	11.8	726
August	6.1	0	4.31	265
The period	47	0	4.97	3,600

BEAR CREEK NEAR ASHLAND, OREG.

LOCATION.—In sec. 31, T. 38 S., R. 1 E., 300 yards below mouth of Butler Creek, 3 miles southeast of Talent, and 3 miles northwest of Ashland, Jackson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—Irrigation seasons of 1923 to 1926.

GAGE.—Gurley water-stage recorder on left bank; inspected by J. E. Bunnell, assistant water master.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Gravel bar, 200 feet below gage, acts as control. Channel divided at low stages, shifting in high stages. Right bank low, left bank high; both wooded.

EXTREMES OF DISCHARGE.—Maximum stage during year, indicated by recorder, 3.27 feet probably on February 4 (discharge, about 375 second-feet). Minimum stage during period March 10 to September 30, from water-stage recorder, 0.58 foot at 3 p. m. August 2 (discharge, 0.4 second-foot).

1923–1926: Maximum discharge recorded, that of February 4, 1926; minimum discharge recorded, 0.4 second-foot August 24, 1923, and August 2, 1926.

ICE.—None.

DIVERSIONS.—Station is below diversions of the Talent Irrigation District and above point of return of most of seepage water from area irrigated.

REGULATION.—None, except by irrigation diversions.

ACCURACY.—Stage-discharge relation permanent during period of record, except as affected by débris on control in September. Fairly well defined rating curve used March 10 to August 31; shifting-control method used September 1–30. Operation of recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. Records fair.

Discharge measurements of Bear Creek near Ashland, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 5	1.10	12.3	Apr. 21	0.86	4.1	July 12	0.84	3.0
Oct. 12	1.45	36.5	May 18	.74	2.6	Aug. 2	.58	.5
Oct. 26	1.15	10.9	May 28	.86	4.4	Aug. 16	.60	.4
Mar. 10	1.33	24.3	June 2	.69	1.2	Sept. 15	.78	.7
Mar. 22	1.07	8.6	June 16	.69	1.1	Sept. 30	1.00	2.5
Mar. 28	.68	.8						

Daily discharge, in second-feet, of Bear Creek near Ashland, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		1.5	2.4	2.4	0.5	0.9	2.0
2		1.4	2.8	1.6	.5	.7	1.8
3		1.4	3.2	1.5	.5	.5	1.6
4		1.4	6.1	1.4	.5	.5	1.4
5		1.6	9.5	1.3	.6	.5	1.1
6		1.1	7.3	1.2	.6	.5	1.2
7		1.3	6.8	1.3	.5	.5	1.3
8		3.7	6.3	1.3	.5	.6	1.1
9		6.1	5.5	1.2	.6	.8	.9
10	24	6.6	4.4	1.3	.6	.5	1.0

Daily discharge, in second feet, of Bear Creek near Ashland, Oreg., for the year ending September 30, 1926—Continued

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
11	24	8.7	4.3	1.4	0.6	0.5	1.0
12	23	7.0	3.4	1.4	1.4	.5	1.0
13	23	4.6	3.2	1.4	.6	.5	.9
14	23	4.3	3.4	1.4	.5	.5	.9
15	24	5.0	2.8	1.3	.5	.8	.8
16	25	4.6	3.4	1.4	.5	.6	1.1
17	24	6.1	4.3	1.3	.5	.5	1.4
18	23	5.5	2.2	.9	.5	.5	1.4
19	21	5.2	1.8	.8	.7	.6	1.4
20	21	4.1	2.2	.8	.5	.6	1.4
21	14	3.0	2.1	.7	.5	.7	1.1
22	11	3.0	1.0	.7	.5	.8	1.0
23	9.5	4.8	1.2	.6	.5	1.0	1.3
24	9.2	4.1	2.6	.7	.5	.6	
25	9.0	3.0	2.6	.7	.6	.9	
26	6.6	2.6	2.7	.9	.7	1.5	2.0
27	2.4	2.1	4.1	1.2	.5	1.8	
28	1.2	2.2	3.5	1.0	.5	2.2	
29	1.2	3.0	2.6	.6	.5	2.6	
30	1.0	2.8	2.8	.5	.7	4.6	2.6
31	1.1		3.5		.7	2.6	

NOTE.—No gage-height record Sept. 24–29; discharge interpolated. No record Oct. 1 to Mar. 9.

Monthly discharge of Bear Creek near Ashland, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March 10–31	25	1.0	14.6	637
April	8.7	1.1	3.73	222
May	9.5	1.0	3.68	226
June	2.4	.5	1.14	68
July	1.4	.5	.58	36
August	4.6	.5	1.00	61
September		.8	1.42	84
The period				1,330

BEAR CREEK BELOW PHOENIX CANAL, NEAR TALENT, OREG.

LOCATION.—In sec. 23, T. 38 S., R. 1 W., 500 feet below intake of Phoenix Canal and 1 mile north of Talent, Jackson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 11 to September 30, 1923; May 13 to July 9, 1924; May 11 to September 30, 1925; and March 10 to September 30, 1926.

GAGE.—Friez 8-day water-stage recorder on left bank; inspected by employees of Medford Irrigation District.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Channel, fairly straight; banks, high and not overflowed except during extremely high stages. Riffle 100 feet downstream, where bed is composed of gravel and boulders, forms a well-defined and practically permanent control.

EXTREMES OF DISCHARGE.—Maximum stage during period March 10 to September 30, from water-stage recorder, 1.02 feet at 4 p. m. March 10 (discharge, 30 second-feet); stream practically dry August 1–27.

1923–1926: Maximum stage recorded, 1.93 feet June 1, 1925 (discharge, 173 second-feet); stream practically dry at times each season.

DIVERSIONS.—Many diversions for irrigation above.

REGULATION.—None except by irrigation diversions.

ACCURACY.—Stage-discharge relation changing owing to growth of aquatic plants on control. Well-defined rating curve used March 10 to June 5 and August 28 to September 30; shifting-control method used June 6 to July 31. Operation of water-stage recorder satisfactory except as stated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records fair.

Discharge measurements of Bear Creek below Phoenix Canal, near Talent, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 3	0.76	13.2	Mar. 22	0.80	13.6	June 23	0.25	0.25
Mar. 10	1.02	30.1	Apr. 21	.20	.25	July 26	.36	.61
Mar. 15	.94	22.9	June 2	.24	.40	Sept. 30	.44	1.48

Daily discharge, in second-feet, of Bear Creek below Phoenix Canal, near Talent, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0.3	0.1	0.3	0.3		0.7
2		.3	.1	.4	.4		.5
3		.3	.1	.4	.4		.5
4		.3	.2	.4	.4		.4
5		.3	.4	.3	.4		.3
6		.3	.3	.3	.4		.3
7		.3	.3	.3	.4		.3
8		.3	.3	.3	.5		.3
9		.3	.3	.3	.5		.3
10	30	.3	.3	.2	.5		.3
11	29	.3	.3	.2	.5		.2
12	27	.4	.3	.2	.5		.3
13	26	.3	.3	.2	.5		.3
14	28	.3	.3	.2	.6		.2
15	26	.3	.3	.3	.6		.3
16	26	.3	.3	.3	.7		.3
17	23	.3	.4	.3	.7		.4
18	24	.3	.3	.2	.7		.4
19	24	.3	.4	.2	.7		
20	19	.3	.5	.3	.6		
21	15	.3	.8	.2	.6		
22	15	.3	.6	.3	.5		
23	7.4	.3	.4	.3	.5		
24	5.9	.3	.4	.2	.5		.7
25	3.0	.3	.4	.2	.6		
26	2.2	.2	.3	.2	.6		
27	.6	.2	.3	.3	.6		
28	.4	.2	.3	.3	.6	.5	
29	.3	.2	.3	.3	.6	.5	
30	.2	.2	.3	.3	.6	.9	1.0
31	.2		.3		.3	1.3	

NOTE.—Braced figure shows mean discharge for period indicated; estimated because water-stage recorder was not operating satisfactorily. Stream dry August 1-27.

Monthly discharge of Bear Creek below Phoenix Canal, near Talent, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March 10-31	30	0.2	15.1	659
April	.4	.2	.29	17
May	.8	.1	.33	20
June	.4	.2	.27	16
July	.7	.3	.53	33
August	1.3	0	.10	6
September		.2	.50	30
The period				781

BEAR CREEK AT MEDFORD, OREG.

LOCATION.—In NW. ¼ sec. 30, T. 37 S., R. 1 W., just above Main Street Bridge in Medford, Jackson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 13, 1915, to September 30, 1926, with breaks during low-water periods. Station discontinued.

GAGE.—Lietz water-stage recorder on left bank at southeast corner of Page Theater Building; gage inspected by employees of Mount Pitt Irrigation Co.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of loose gravel. A concrete sewer passing under stream forms a partial control.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.95 feet at 5 p. m February 4 (discharge, 425 second-feet); minimum stage, from recorder, 0.75 foot at midnight August 20 (discharge, 0.6 second-feet).

1915–1926: Maximum stage determined from high-water marks, 6.8 feet in forenoon of February 9, 1919 (discharge, estimated from extension of rating curve, 2,400 second-feet); stream practically dry at times.

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

DIVERSIONS.—A large area is irrigated above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed during high water February 4. Rating curves well defined. Operation of water-stage recorder satisfactory except as stated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph or by shifting-control method. Records fair except February 15 to May 20, for which they are good, and August 22 to September 30, for which they are poor.

Discharge measurements of Bear Creek at Medford, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 13	1.45	30.5	Mar. 27	1.08	7.9	Aug. 6	0.86	1.6
Jan. 14	1.38	25.0	Apr. 23	1.02	5.7	Aug. 24	(a)	.7
Mar. 9	1.52	41.8	May 13	1.00	5.2	Sept. 7	(a)	1.7
Mar. 20	1.42	31.2	June 26	1.01	3.4	Sept. 17	(a)	2.1

(a) Channel excavated near midstream, taking water away from gage.

Daily discharge, in second-feet, of Bear Creek at Medford, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	21	26	27	49	46	7.0	3.6	2.2	2.8	2.5	------
2	24	23	54	27	43	43	6.6	4.2	1.7	2.5	3.0	------
3	21	25	42	28	40	42	6.6	4.2	1.7	2.5	2.8	------
4	22	27	35	28	206	41	7.4	7.0	1.9	2.5	3.0	------
5	24	26	29	28	169	40	7.4	9.5	2.2	3.3	2.8	------
6	30	22	28	28	109	38	7.8	11	3.3	3.3	1.9	------
7	37	23	26	28	98	38	8.6	12	4.2	2.2	1.6	1.7
8	82	24	22	27	90	38	7.8	11	3.9	3.3	1.6	------
9	60	24	24	26	78	39	7.0	12	3.9	3.6	1.6	------
10	52	24	26	26	129	37	6.6	10	4.2	3.0	1.4	------
11	52	28	26	24	124	36	7.4	9.0	4.2	3.6	1.2	------
12	51	31	28	21	86	34	7.0	7.4	3.9	4.2	.9	------
13	50	32	26	21	70	33	7.0	5.8	3.6	3.6	1.2	------
14	48	28	23	23	64	33	6.2	5.8	4.2	3.3	.9	------
15	45	29	24	24	58	33	5.4	5.8	3.9	3.3	.9	------
16	40	28	23	26	55	33	6.2	5.8	2.8	3.6	.9	------
17	34	25	22	28	50	31	7.0	6.6	3.0	3.3	.8	2.1
18	30	24	24	28	46	29	6.6	5.8	2.2	2.8	1.9	------
19	26	26	26	26	47	29	7.4	4.7	3.3	3.3	2.0	------
20	24	24	28	[illegible]4	49	27	7.0	4.7	4.4	3.3	1.1	------
21	22	24	30	30	44	23	6.6	4.7	3.6	3.3	1.1	------
22	21	22	39	32	52	23	6.2	5.8	2.2	3.0	.9	------
23	22	21	41	33	48	22	5.4	6.2	2.5	2.8	.9	------
24	22	23	38	32	46	19	4.7	7.4	3.0	2.2	.7	------
25	23	21	35	30	61	14	4.2	7.4	3.0	2.2		------
26	22	23	32	27	59	12	4.7	7.4	3.0	2.8		------
27	21	23	32	26	54	10	4.2	5.8	2.8	2.5	2	------
28	21	22	30	28	49	8.6	3.3	4.7	3.3	2.0		------
29	21	22	28	41	------	7.8	3.0	3.0	3.0	1.9		------
30	20	24	27	55	------	7.8	3.0	4.4	2.5	1.9		------
31	21	------	26	49	------	7.8	------	4.7	------	2.2		------

NOTE.—Because of no gage-height record, discharge estimated as follows: By interpolation Oct. 11, Dec. 10, 11, 24, 25, Jan. 15, July 31, Aug. 22 and 23; from precipitation records Oct. 13–16, Jan. 20, and 21; as measured discharge Aug. 24, Sept. 7, and 17; by comparison with record of Bear Creek Canal Aug. 25–31; Shifting-control method used Oct. 8 to Feb. 3 and May 21 to July 30.

Monthly discharge of Bear Creek at Medford, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	82	20	32.6	2,000
November	32	21	24.6	1,460
December	54	22	29.7	1,830
January	55	21	29.1	1,790
February	206	40	74.0	4,110
March	46	7.8	28.2	1,730
April	8.6	3.0	6.18	368
May	12	3.0	6.69	411
June	4.4	1.7	3.12	186
July	4.2	1.9	2.91	179
August	3.0	----------	1.66	102
September	----------	----------	[a]2.50	149
The year	206	----------	19.8	14,300

[a] Estimated.

BEAR CREEK NEAR CENTRAL POINT, OREG.

LOCATION.—In sec. 2, T. 37 S., R. 2 W., 1 mile northeast of Central Point, Jackson County, on road to Agate station.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 23 to September 30, 1923; April 1 to September 30, 1924; April 30 to September 30, 1925; and March 30 to July 6, 1926, when station was discontinued.

GAGE.—Barrett and Lawrence water-stage recorder on right bank 600 feet above highway bridge; inspected by L. S. Brophy.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Bed composed of gravel, with cobblestone riffle 300 feet below gage, somewhat shifting in floods. Left bank may be overflowed during extremely high water.

EXTREMES OF DISCHARGE.—Maximum discharge recorded during period March 30 to July 16, 11 second-feet March 30 (gage height, 1.30 feet); minimum discharge, 0.1 second-foot July 16 (gage height, 1.29 feet).

1923–1926: Maximum stage recorded, 2.58 feet at 3 p. m. April 30, 1925 (discharge, 212 second-feet); stream practically dry at times.

ICE.—No record during winter.

DIVERSIONS.—Station below all present diversions, at intake of proposed Oakleigh Canal. During irrigation season practically all water is diverted, the flow being mostly return water.

REGULATION.—Only by head gates of irrigation canals.

ACCURACY.—Stage-discharge relation changed frequently owing to growth of moss and weeds in channel and on control. Rating curve poorly defined. Operation of water-stage recorder satisfactory except April 21, 22, and June 19–23. Daily discharge ascertained by applying to rating table mean daily gage height corrected for backwater, when control was obstructed; discharge interpolated April 21, 22, and June 19–23. Records poor.

Discharge measurements of Bear Creek near Central Point, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 10	1.75	42.3	Apr. 23	1.22	3.9	June 4	1.40	1.6
Apr. 3	1.18	6.0	May 13	1.22	3.6	June 24	1.34	.6

Daily discharge, in second-feet, of Bear Creek near Central Point, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Day	Apr.	May	June	July
1	6.7	3.0	2.5	1.3	16	4.9	3.8	3.4	0.1
2	6.4	2.7	3.2	1.1	17	4.6	3.4	3.0	------
3	6.4	3.0	1.8	.9	18	4.6	3.0	3.2	------
4	7.0	3.8	1.4	1.3	19	4.6	3.4		------
5	7.4	5.5	1.7	1.3	20	4.0	3.4		------
6	7.0	5.5	2.0	1.4	21	4.0	3.8	2.0	------
7	7.8	6.4	1.8	2.1	22	4.0	3.6		------
8	8.3	6.4	1.8	2.1	23	4.0	3.8		------
9	7.8	6.4	2.3	1.1	24	4.0	4.6	.8	------
10	7.4	7.4	3.0	.3	25	3.6	4.3	1.8	------
11	6.4	5.8	3.6	.8	26	3.2	3.6	2.3	------
12	5.2	4.3	3.4	2.1	27	3.0	3.0	2.7	------
13	5.5	3.6	3.4	1.6	28	2.9	3.0	1.4	------
14	5.8	4.0	3.2	.6	29	3.2	2.7	1.6	------
15	5.2	4.0	2.9	.3	30	3.0	3.6	2.1	------
					31	------	3.0	------	------

Monthly discharge of Bear Creek near Central Point, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	8.3	2.9	5.26	313
May	7.4	2.7	4.12	253
June	3.6	.8	2.34	139
July 1–16	2.1	.1	1.15	36

ASHLAND LATERAL NEAR ASHLAND, OREG.

LOCATION.—In NW. ¼ sec. 33, T. 39 S., R. 2 E., at point where canal passes through Songer Gap, a divide separating Emigrant Creek and Hill Creek Basins, 9 miles southeast of Ashland, Jackson County.

RECORDS AVAILABLE.—May 29 to September 30, 1925, and April 1 to August 31, 1926.

GAGE.—Stevens 8-day water-stage recorder; inspected by J. E. Bunnell, assistant watermaster.

DISCHARGE MEASUREMENTS.—Made from footbridge near gage.

CHANNEL AND CONTROL.—Gage is at upper end of concrete section; break in grade 40 feet downstream acts as control; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.81 feet at 3 p. m. July 1 (discharge, 27 second-feet); canal dry at times.

1925–26: Maximum stage, that of July 1, 1926; canal dry at times.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operation of water-stage recorder satisfactory April 8 to August 6; one daily reading April 1 and 6. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph; interpolated April 2–5 and 7. Records excellent.

Ashland lateral which diverts from Sampson Creek in SW. ¼ sec. 26, T. 39 S., R. 2 E., is used to irrigate 800 acres on west side of Emigrant Creek near Ashland and to deliver to city of Ashland, under contract, water sufficient to irrigate 600 acres. Beginning about May 1 practically all the discharge at this station was contributed by Keene Creek Canal, which diverts from Keene Creek in the Klamath River Basin. Records for Keene Creek Canal are published in Water-Supply Paper 631.

Discharge measurements of Ashland lateral near Ashland, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 1	1.30	12.6	June 16	0.77	3.02	July 22	0.70	2.18
Apr. 8	1.32	12.9	June 23	1.34	13.8	July 24	.88	4.59
Apr. 21	.89	4.66	July 2	1.43	15.9			
June 1	1.39	14.3	July 12	1.36	15.1			

Daily discharge, in second-feet, of Ashland lateral near Ashland, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Day	Apr.	May	June	July	Aug.
1	13	12	15	21	7.8	16	4.7	7.3	10	16	------
2	13	12	15	15	6.9	17	4.7	7.3	11	16	------
3	13	12	16	16	3.3	18	4.7	7.4	10	16	------
4	13	13	18	18	9	19	4.7	9.9	10	16	------
5	13	9.4	18	15	.3	20	4.7	10	12	16	------
6	13	5.0	18	15	.1	21	4.5	12	12	12	------
7	13	5.0	14	15	------	22	4.7	12	15	2.2	------
8	13	5.0	12	15	------	23	4.5	12	13	1.1	------
9	8.2	2.5	13	15	------	24	4.5	14	16	3.2	------
10	8.0	------	13	14	------	25	4.4	14	16	5.6	------
11	11	3.9	12	16	------	26	4.4	14	16	5.5	------
12	5.0	3.9	15	16	------	27	4.5	14	18	5.5	------
13	3.5	7.8	12	16	------	28	9.4	14	15	6.2	------
14	5.5	7.8	12	15	------	29	10	14	18	6.5	------
15	4.8	7.6	9.7	17	------	30	12	15	22	8.2	------
						31	------	15	------	8.2	------

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

Monthly discharge of Ashland lateral near Ashland, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	13	3.5	7.88	469
May	15	0	9.64	593
June	22	9.7	14.2	845
July	21	1.1	12.4	762
August	7.8	0	.62	38
The year				2,710

EAST LATERAL NEAR ASHLAND, OREG.

LOCATION.—In SE. ¼ sec. 20, T. 39 S., R. 2 E., 500 feet below Emigrant Gap Dam and 7 miles southeast of Ashland, Jackson County.

RECORDS AVAILABLE.—Irrigation seasons of 1923 to 1926.

GAGE.—Stevens 8-day recorder on left bank; inspected by employees of Talent Irrigation District and by J. E. Bunnell.

DISCHARGE MEASUREMENTS.—Made from footbridge at gage.

CHANNEL AND CONTROL.—Short concrete-lined section with bottom below grade where sediment may collect, earth section above and below. No defined control; affected by growth of aquatic plants.

EXTREMES OF DISCHARGE.—Maximum stage during season, from water-stage recorder, 2.45 feet at 5 p. m. June 14 (discharge, 50 second-feet); canal dry at times.

1923–1926: Maximum discharge recorded, 52 second-feet, July 20–22, 1925 (gage height, 2.84 feet); canal dry at times.

ICE.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changing June 10–14. Rating curves fairly well defined. Operation of water-stage recorder satisfactory except for short periods; daily staff-gage readings used May 2–8. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph except June 10–14, for which shifting-control method was used. Records good, except May 2–8 for which they are fair.

East lateral of Talent Irrigation District diverts water from Emigrant Creek in SE. ¼ sec. 20, at Emigrant Gap Dam, for the irrigation of about 3,363 acres of land lying along the right or east side of Bear Creek Valley and extending to a point nearly opposite Medford.

Discharge measurements of East lateral near Ashland, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 8	0.67	7.13	June 9	2.30	42.2	July 2	1.76	31.3
Apr. 21	1.64	27.4	June 14	2.33	46.7	July 13	1.95	36.5
May 11	1.14	14.8	June 28	1.64	29.4	July 22	.79	9.17

Daily discharge, in second-feet, of East lateral near Ashland, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Day	Mar.	Apr.	May	June	July
1		4.4	24	35	31	16		14	20	47	40
2		4.4	25	38	32	17		22	21	45	39
3		4.5	25	38	32	18		23	22	45	40
4		4.5	25	38	32	19		24	24	45	39
5		3.6	22	39	32	20		26	24	45	35
6			12	39	32	21		27	24	39	21
7			12	39	32	22		27	27	34	8.6
8		4.1	12	41	32	23		27	28	33	6.7
9		7.1	14	42	32	24		29	28	32	6.6
10		7.0	14	43	33	25		29	29	33	6.0
11		7.0	16	44	33	26		29	30	31	3.8
12		7.1	19	45	34	27		28	31	30	
13		8.6	21	45	36	28		29	34	29	
14		10	22	46	38	29		29	33	30	
15		11	21	47	40	30		26	33	31	
						31	3.4		34		

Monthly discharge of East lateral near Ashland, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March	3.4	0	0.11	7
April	29	0	15.7	934
May	34	12	23.4	1,440
June	47	29	38.9	2,310
July	40	0	24.1	1,480
The year	47	0	8.54	6,170

TALENT LATERAL NEAR ASHLAND, OREG.

LOCATION.—In SE. ¼ sec. 32, T. 38 S., R. 1 E., three-fourths of a mile below intake, half a mile below mouth of Ashland Creek, and 1 mile north of Ashland, Jackson County.

RECORDS AVAILABLE.—Irrigation seasons 1920 to 1926.

GAGE.—Stevens 8-day water-stage recorder, inspected by employees of Talent Irrigation District. Station located at intake prior to 1925.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Channel excavated in earth and gravel; shifts slightly owing to growth of aquatic plants.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.63 feet at 10 a. m. May 24 (discharge, 39 second-feet); canal dry at times.

1923–1926: Maximum discharge recorded, 39 second-feet at 5 p. m. April 23, 1925, and May 24, 1926.

ACCURACY.—Stage-discharge relation changed frequently owing to growth of aquatic plants. Rating curve used as standard, 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 or mean daily gage height to which a variable correction was applied, April 25 to July 6. Records good except for period April 25 to July 6, for which they are fair.

Talent lateral diverts water from Bear Creek in SW. ¼ sec. 33, above mouth of Ashland Creek, but Ashland Creek may be diverted to enter Bear Creek above Talent lateral. In 1926 water from Talent lateral irrigated about 2,600 acres of land, lying principally on the left or southwest side of Bear Creek.

Discharge measurements of Talent lateral near Ashland, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 22	1.14	7.10	June 2	2.47	29.6	July 22	0.84	4.09
Mar. 27	1.27	10.2	June 12	2.22	24.2	July 24	.62	1.90
Apr. 8	1.57	14.6	June 15	1.84	17.0	Aug. 11	.75	2.62
Apr. 21	1.44	12.8	June 16	1.87	18.7	Aug. 16	.97	4.78
May 4	2.18	27.0	Do	1.84	17.3	Sept. 15	.31	.10
May 18	1.80	17.6	June 23	1.72	15.9			
May 25	2.36	31.0	July 7	1.80	19.7			

Daily discharge, in second-feet, of Talent lateral near Ashland, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		7.0	18	30	18	6.2	0.8
2		7.7	17	30	17	5.7	.5
3		9.9	18	30	15	5.2	.4
4		13	24	27	17	4.8	.3
5		12	21	27	18	4.4	.3
6		12	19	28	19	3.7	.3
7		14	15	26	20	3.4	.3
8		13	11	25	19	3.5	.3
9		9.4	10	25	18	3.4	.2
10		9.5	9.5	24	18	3.2	.2
11		14	8.4	23	19	3.0	.2
12		20	9.4	24	18	5.1	.2
13		18	12	25	18	5.3	.2
14		17	14	25	18	5.3	.2
15		16	13	19	15	5.1	.1
16		14	11	17	15	4.8	.1
17		14	12	16	17	4.8	
18		16	16	16	18	5.1	
19		15	19	15	19	4.8	
20		14	26	16	18	4.4	
21	5.0	13	28	16	16	4.3	
22	7.0	15	31	16	4.3	4.1	
23	7.1	15	35	15	2.9	4.0	
24	6.4	12	36	18	2.0	4.0	
25	5.2	12	31	17	1.1	3.7	
26	5.9	11	32	18	4.1	3.5	
27	9.7	9.4	32	20	6.8	3.0	
28	8.4	10	34	19	7.4	2.1	
29	8.3	17	34	17	6.4	1.6	
30	8.9	18	33	17	5.7	1.5	
31	8.0		32		6.2	1.1	

Monthly discharge of Talent lateral near Ashland, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March	9.7	0	2.58	159
April	20	7.0	13.3	791
May	36	8.4	21.3	1,310
June	30	15	21.4	1,270
July	20	1.1	13.4	824
August	6.2	1.1	4.00	246
September	.8	0	.15	9
The year	36	0	6.37	4,610

WEST FORK OF ASHLAND CREEK NEAR ASHLAND, OREG.

LOCATION.—In sec. 32, T. 39 S., R. 1 E., three-quarters of a mile above confluence with East Fork, half a mile above diversion for power plant, and 4 miles south of Ashland, Jackson County.

DRAINAGE AREA.—9.4 square miles (measured on map of Crater National Forest).

RECORDS AVAILABLE.—September 1, 1924, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on right bank; inspected by E. R. Hosler, water superintendent.

CHANNEL AND CONTROL.—Bed composed of solid rock and boulders; permanent except as boulders have been removed to prevent lodging of drift.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.89 feet at 9 a. m. February 4 (discharge, 66 second-feet); minimum stage, from recorder, 0.44 foot at 8 a. m. August 1 (discharge, 1.4 second-feet).

1924–1926: Maximum stage, 2.85 feet at 1 a. m. October 31, 1924 (discharge computed from weir and orifice data at diversion dam, 203 second-feet); minimum discharge recorded, 1.4 second-feet on September 12, 1924, and August 1, 1926.

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

DIVERSIONS.—None above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed November 19, when boulder was removed from control. Rating curves very well defined before and after shift. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records excellent.

Discharge measurements of West Fork of Ashland Creek near Ashland, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 12	0.64	3.8	Mar. 8	0.73	6.0	July 24	0.48	1.8
Oct. 24	.60	3.1	Apr. 21	.79	7.1	Aug. 16	.47	1.7
Nov. 19	.64	4.3	May 4	.93	11.8	Sept. 15	.47	16
Dec. 19	.62	3.9	June 16	.59	3.1			

Daily discharge, in second-feet, of West Fork of Ashland Creek near Ashland, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	3.3	8.3	3.7	5.4	6.3	5.6	8.3	4.6	2.6	1.8	2.2
2	3.7	3.5	7.0	3.5	5.2	6.3	5.4	8.3	4.4	2.6	1.8	2.2
3	3.7	3.8	5.2	3.5	5.9	6.3	5.4	8.0	4.4	2.8	1.8	1.9
4	3.3	3.8	4.8	4.4	37	6.3	5.6	9.7	4.3	2.6	1.8	1.8
5	3.7	3.8	4.6	4.6	16	6.1	6.1	8.6	4.1	2.6	1.7	1.8
6	6.2	4.0	4.4	4.4	14	5.9	6.3	8.0	4.1	2.6	1.7	1.8
7	4.6	4.2	4.4	4.3	13	5.9	7.5	7.5	3.9	2.4	1.7	1.8
8	4.2	4.6	4.3	4.1	12	6.1	6.8	7.2	3.9	2.4	1.6	1.8
9	4.2	4.7	3.9	3.9	11	5.9	6.3	7.0	3.5	2.2	1.6	1.8
10	4.0	4.6	3.9	3.9	14	5.6	6.6	6.8	3.5	2.0	1.6	1.8
11	4.0	5.3	3.9	3.9	11	5.6	7.5	6.8	3.4	2.0	1.6	1.8
12	4.0	5.8	4.1	3.7	9.7	5.6	6.8	6.6	3.4	2.0	1.7	1.8
13	4.0	4.7	3.7	3.7	8.9	5.9	6.8	6.6	3.5	2.0	1.6	1.8
14	4.0	4.4	3.7	3.9	8.3	6.6	7.0	6.3	3.5	1.9	1.7	1.8
15	3.8	4.9	3.9	3.9	7.7	6.3	7.5	6.1	3.5	1.9	1.8	1.7
16	3.8	4.7	3.9	4.1	7.2	6.3	7.7	6.1	3.4	1.9	1.7	1.8
17	3.7	4.7	4.1	4.3	7.0	6.1	7.7	6.1	3.2	1.9	1.8	1.8
18	3.7	4.9	4.1	4.1	6.8	5.9	7.7	6.1	3.2	1.9	1.8	1.8
19	3.7	4.3	3.9	3.9	6.6	5.6	7.7	6.1	3.2	1.9	1.8	1.8
20	3.5	3.7	4.1	3.7	6.3	5.6	7.7	5.6	3.0	1.9	1.7	1.8
21	3.5	3.5	5.9	4.8	6.3	5.4	7.7	5.4	3.0	1.9	1.7	1.8
22	3.5	3.5	7.5	4.4	6.3	5.4	8.0	5.4	2.9	1.9	1.7	1.8
23	3.3	3.5	6.6	4.3	6.1	5.6	7.7	5.6	2.9	1.9	1.6	1.7
24	3.3	3.5	5.4	4.3	6.6	5.6	8.0	6.1	2.8	1.9	1.6	1.7
25	3.3	4.3	4.8	3.9	6.8	5.6	8.3	5.6	2.8	1.9	1.7	1.7
26	3.3	4.4	4.6	3.7	6.3	5.4	8.6	5.4	2.6	2.0	2.2	1.7
27	3.3	4.1	4.4	3.9	6.3	5.4	8.9	5.2	2.8	2.0	1.9	1.7
28	3.3	3.9	4.4	4.6	6.3	5.4	8.9	4.8	2.8	1.9	1.9	1.8
29	3.3	4.3	4.3	7.2	-------	5.6	9.2	5.0	2.6	1.8	2.9	1.8
30	3.3	4.4	4.1	5.6	-------	5.6	8.6	4.8	2.6	1.7	3.0	2.0
31	3.3	-------	3.9	5.6	-------	5.9	-------	4.6	-------	1.8	2.6	-------

Monthly discharge of West Fork of Ashland Creek near Ashland, Oreg., for the year ending September 30, 1926

[Drainage area, 9.4 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	6.2	3.3	3.75	0.399	0.46	231
November	5.8	3.3	4.24	.451	.50	252
December	8.3	3.7	4.71	.501	.58	290
January	7.2	3.5	4.25	.452	.52	261
February	37	5.2	9.43	1.00	1.04	524
March	6.6	5.4	5.84	.621	.72	359
April	9.2	5.4	7.32	.779	.87	436
May	9.7	4.6	6.44	.685	.79	396
June	4.6	2.6	3.39	.361	.40	202
July	2.8	1.7	2.09	.222	.26	129
August	3.0	1.6	1.84	.196	.23	113
September	2.2	1.7	1.82	.194	.22	108
The year	37	1.6	4.56	.485	6.59	3,300

EAST FORK OF ASHLAND CREEK NEAR ASHLAND, OREG.

LOCATION.—In sec. 28, T. 39 S., R. 1 E., a quarter of a mile above confluence with West Fork, 100 yards above diversion for power plant, and 3½ miles south of Ashland, Jackson County.

DRAINAGE AREA.—7.8 square miles (measured on map of Crater National Forest).

RECORDS AVAILABLE.—September 1, 1924, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on left bank; inspected by E. R. Hosler, water superintendent.

CHANNEL AND CONTROL.—Bed composed of large boulders. Well-defined riffle just below gage; slightly shifting in floods.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.68 feet at 10 a. m. February 4 (discharge, 48 second-feet); minimum stage, from recorder, 0.62 foot at 1 a. m. August 25 (discharge, 1.3 second-feet).

1924–1926: maximum stage from water-stage recorder, 2.30 feet on October 31, 1924 (discharge, 171 second-feet); minimum discharge, that of August 25, 1926.

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

DIVERSIONS.—None above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed during March and April. Well defined rating curves used October 1 to March 15 and April 21 to September 30; shifting-control method used March 16 to April 20. Operation of water-stage recorder satisfactory, except as stated in footnote to table of daily discharge. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph. Records good.

Discharge measurements of East Fork of Ashland Creek near Ashland, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 12	0.80	4.3	Dec. 19	0.78	3.6	June 16	0.82	4.5
Oct. 24	.78	3.1	Mar. 8	.89	6.3	July 24	.72	2.2
Nov. 19	.81	3.8	Apr. 21	.96	8.0	Aug. 16	.66	1.8
Do	.81	4.2	May 4	1.10	14.4	Sept. 15	.66	1.8

Daily discharge, in second-feet, of East Fork of Ashland Creek near Ashland, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	3.5	8.4	3.6	4.8		5.4	9.6	6.2	3.1	2.1	2.0
2	3.6	3.6	6.7	3.6	4.5		5.2	9.6	6.0	3.1	2.1	2.0
3	3.6	3.8	4.5	3.8	5.1	6.5	5.1	10	6.0	3.1	2.0	1.9
4	3.6	3.8	4.3	4.3	28		5.1	12	6.0	3.1	2.0	1.9
5	3.8	3.8	4.0	4.5	16		5.6	11	5.8	3.1	2.0	1.9
6	5.9	4.0	4.0	4.3	16	6.2	6.2	10	5.8	3.1	2.0	1.9
7	4.5	4.0	3.8	4.0	16	6.2	7.6	10	5.5	3.5	2.0	1.9
8	4.3	4.3	3.8	3.6	14	6.4	7.1	9.6	5.5	3.6	2.0	1.9
9	4.0	4.5	4.0	3.6	13	6.7	6.2	9.6	5.2	3.6	2.0	1.9
10	4.0	5.1	3.8	3.6	16	6.4	6.4	9.3	5.0	3.5	2.0	1.8
11	4.0	5.4	3.8	3.8	14	6.2	7.1	9.0	4.8	3.5	2.0	1.8
12	4.0	5.6	4.3	3.8	12	6.2	6.7	9.0	5.0	3.3	2.0	1.8
13	4.0	4.5	4.0	3.6	10	6.4	6.7	8.7	4.8	3.1	1.9	1.8
14	3.8	4.3	4.0	3.6	9.7	7.6	7.6	8.7	4.8	2.9	1.9	1.8
15	3.8	5.1	4.0	3.6	9.3	8.4	8.4	8.4	4.8	2.7	1.9	1.8
16	3.6	4.5	3.8	3.8	8.4	7.1	8.8	8.4	4.5	2.6	1.9	1.9
17	3.6	4.3	3.8	4.0	7.6	6.4	8.4	8.4	4.5	2.6	1.8	2.0
18	3.6	4.5	3.6	3.6	7.1	6.2	8.8	8.0	4.2	2.4	1.9	2.0
19	3.6	4.3	3.5	3.6	7.1	5.9	8.8	8.0	4.2	2.4	1.8	2.0
20	3.6	4.0	3.6	3.5	6.7	5.9	8.8	8.0	4.2	2.4	1.8	2.0
21	3.6	4.0	4.0	4.0	6.7	5.9	8.7	8.0	4.0	2.4	1.8	2.0
22	3.6	4.0	5.6	4.0	6.7	5.9	8.7	7.7	3.8	2.4	1.5	2.0
23	3.6	4.0	5.1	3.6	6.7	6.2	8.4	8.0	3.6	2.4	1.5	1.9
24	3.6	4.0	4.5	3.6	7.1	5.9	8.7	8.4	3.6	2.4	1.5	1.8
25	3.6	4.5	4.0	3.5	7.6	5.9	9.0	8.0	3.5	2.4	1.4	1.8
26	3.5	4.8	4.0	3.5	7.1	5.6	9.3	7.4	3.5	2.4	1.9	1.8
27	3.5	4.0	4.0	3.5	6.7	5.4	9.6	7.1	3.5	2.4	1.8	1.8
28	3.5	4.0	3.8	4.0	6.7	5.4	9.6	6.5	3.5	2.4	1.8	1.8
29	3.5	5.1	3.8	5.6	-------	5.4	9.6	6.5	3.3	2.2	2.7	1.9
30	3.3	5.1	3.6	4.8	-------	5.6	9.6	6.5	3.1	2.2	3.1	2.0
31	3.3	-------	3.6	4.8	-------	5.5	-------	6.2	-------	2.2	2.2	------

NOTE.—No gage-height record Mar. 1–5, 31, Apr. 1, Sept. 13, and 14; discharge interpolated

Monthly discharge of East Fork of Ashland Creek near Ashland, Oreg., for the year ending September 30, 1926

[Drainage area, 7.8 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	5.9	3.3	3.78	0.485	0.56	232
November	5.6	3.5	4.35	.558	.62	259
December	8.4	3.5	4.25	.545	.63	261
January	5.6	3.5	3.89	.499	.58	239
February	28	4.5	10.0	1.28	1.33	555
March	8.4	5.4	6.24	.800	.92	384
April	9.6	5.1	7.71	.989	1.10	459
May	12	6.2	8.57	1.10	1.27	527
June	6.2	3.1	4.61	.591	.66	274
July	3.6	2.2	2.79	.358	.41	172
August	3.1	1.4	1.95	.250	.29	120
September	2.0	1.8	1.89	.242	.27	112
The year	28	1.4	4.97	.637	8.64	3,590

PHOENIX CANAL AT TALENT, OREG.

LOCATION.—In NW. ¼ sec. 23, T. 38 S., R. 1 W., behind barn of Southern Oregon Experiment Station, three-eighths of a mile below intake, and 1 mile north of Talent, Jackson County.

RECORDS AVAILABLE.—Irrigation seasons, 1916 to 1926.

GAGE.—Lietz water-stage recorder on left bank; inspected by J. E. Bunnell, assistant water master. Gage just below intake used prior to 1925.

DISCHARGE MEASUREMENTS.—Made from footbridge.

CHANNEL AND CONTROL.—Concrete channel subject to silt deposition and moss growth; no definite control.

EXTREMES OF DISCHARGE.—Maximum discharge during season, 19 second-feet at 3 p. m. April 23 (gage height, from water-stage recorder, 1.29 feet); canal dry at times.

1916–1926: Maximum discharge recorded, 48 second-feet May 28, 1921 (gage height, 3.14 feet); canal dry at times.

ACCURACY.—Stage-discharge relation changing owing to growth of aquatic plants. Standard rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by shifting-control method; mean daily gage height obtained by inspecting recorder graph. Records fair.

Phoenix Canal diverts water from Bear Creek in NW. ¼ sec. 23, T. 38 S., R. 1 W., and furnishes a supplemental water supply for the portion of the Medford Irrigation District lands lying west of Bear Creek.

Discharge measurements of Phoenix Canal at Talent, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 15	0.26	2.72	May 20	1.05	5.40	July 13	0.72	1.89
Mar. 22	.69	8.36	May 25	1.36	7.20	July 23	.58	1.78
Mar. 27	.42	4.86	May 29	1.32	5.95	July 26	.45	1.21
Mar. 31	.23	2.46	June 1	1.34	5.24	July 31	.39	1.05
Apr. 12	1.03	14.3	June 2	1.36	5.29	Aug. 11	.34	1.02
Apr. 21	.60	6.81	June 12	1.52	4.17	Aug. 16	.34	.84
May 3	.70	6.44	June 16	1.45	3.30	Aug. 21	.28	.65
May 4	.99	11.1	June 23	1.18	3.37	Aug. 25	.21	.46
May 11	1.11	11.2	June 26	.92	2.42	Sept. 17	.22	.82
May 13	1.09	10.3	June 30	.74	1.79			

Daily discharge, in second-feet, of Phoenix Canal at Talent, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		3.0	5.1	5.6	2.0	1.6	1.3
2		3.2	5.2	5.0	1.8	1.6	1.0
3		3.8	6.0	4.2	1.6	1.4	.9
4		4.7	9.1	3.9	1.6	1.1	.6
5		4.8	17	3.7	1.8	.8	.5
6		4.1	14	2.9	1.8	.8	.4
7		3.6	14	2.4	2.4	.9	.4
8		6.2	13	1.7	2.3	.8	.5
9		8.2	12	1.9	2.1	.8	.5
10		9.5	11	1.9	1.8	.8	.5
11		11	9.9	2.5	2.3	.7	.5
12		13	10	3.0	2.1	.6	.5
13		8.8	8.8	2.7	1.6	.7	.5
14		7.8	9.1	2.9	1.4	.6	.5
15	1.6	7.8	7.6	3.1	1.9	.6	.6
16		8.0	8.5	3.8	2.1	.6	.7
17		9.5	8.7	4.4	2.1	.7	1.0
18	3.6	9.1	5.9	3.6	2.4	.8	1.1
19		8.8	5.1	4.3	2.6	.6	
20		8.0	4.8	5.6	2.5	.6	
21		6.7	3.9	5.5	2.7	.6	
22	5.5	6.6	3.8	4.4	1.8	.5	
23	7.8	8.2	4.3	4.2	1.5	.5	
24	9.3	8.2	7.0	2.9	1.2	.5	.6
25	11	6.6	5.9	2.6	1.0	.5	
26	9.1	5.7	6.7	2.1	1.1	.7	
27	4.8	5.2	7.8	2.0	1.0	.8	
28	3.6	4.8	8.0	2.6	1.2	.8	
29	3.8	5.6	5.7	1.9	.9	.8	
30	2.9	5.7	5.6	1.6	.9	1.6	-------
31	2.7	-------	6.4	-------	1.2	2.1	-------

NOTE.—No gage-height record March 16–21 and September 19–29; mean discharge estimated. No flow on days for which discharge is not given.

Monthly discharge of Phoenix Canal at Talent, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March	11	0	2.70	166
April	13	3.0	6.87	409
May	17	3.8	8.06	496
June	5.6	1.6	3.30	196
July	2.7	.9	1.76	108
August	2.1	.5	.85	52
September	----------	.0	.62	37
The year	17	0	2.02	1,460

NOTE.—No flow during months for which discharge is not given.

McDONALD CREEK CANAL NEAR TALENT, OREG.

LOCATION.—In NE. ¼ sec. 34, T. 39 S., R. 1 W., 8 miles by road south of Talent, Jackson County.

RECORDS AVAILABLE.—Irrigation seasons, 1923 to 1926.

GAGE.—Vertical staff on left bank 150 feet above weir at end of canal, where water is discharged into Wagner Creek; read by employees of Talent Irrigation District.

DISCHARGE MEASUREMENTS.—Made from footbridge 20 feet above gage.

CHANNEL AND CONTROL.—Channel is in smooth earth section. Control at low stages is a slight riffle 20 feet below gage; at higher stages, is probably the weir 150 feet below gage. Slight changes in stage-discharge relation may be caused by shifting sand dunes.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.11 feet at 6 p. m. May 4 (discharge, 13 second-feet); canal dry at times.

1923–1926: Maximum stage recorded, 1.45 feet July 6, 1923 (discharge, 24.2 second-feet).

ICE.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Gage read to hundredths twice a day. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

McDonald Creek Canal diverts water from McDonald Creek, tributary to Little Applegate River, practically on line between SE. ¼ sec. 10 and SW. ¼ sec. 11, T. 40 S., R. 1 W., and discharges it into head of Wagner Creek, from which it is again diverted for irrigation of about 1,500 acres near Talent.

Discharge measurements of McDonald Creek Canal near Talent, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 30	0.84	7.19	May 11	0.88	7.98
Apr. 12	.90	7.80	June 2	.64	4.0

Daily discharge, in second-feet, of McDonald Creek Canal at Wagner Gap near Talent, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	Day	Mar.	Apr.	May	June
1		7.1	11	3.8	16		9.7	6.7	
2		6.7	11	3.6	17	1.9	10	6.7	
3		7.1	9.9	3.5	18	3.8	9.4	6.3	
4		6.7	12	3.2	19	3.8	9.4	6.3	
5		7.3	11	1.6	20	3.9	9.4	6.0	
6		7.9	10		21	5.1	9.7	6.0	
7		9.7	10		22	7.1	10	5.6	
8		8.8	9.2		23	7.5	10	5.6	
9		8.8	9.0		24	7.7	10	6.1	
10		8.8	9.2		25	7.5	10	5.8	
11		9.7	8.5		26	7.3	11	5.4	
12		8.8	8.3		27	7.1	11	5.3	
13		9.2	7.7		28	7.5	11	4.9	
14		9.9	7.7		29	7.5	11	4.6	
15		9.9	7.1		30	7.7	11	4.3	
					31	7.5		3.9	

Monthly discharge of McDonald Creek Canal near Talent, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March	7.7	0	3.00	184
April	11	6.7	9.30	553
May	12	3.9	7.46	459
June	3.8	.0	.52	31
The year	12	0	1.70	1,230

EVANS CREEK NEAR ROGUE RIVER, OREG.

LOCATION.—In sec. 26, T. 34 S., R. 3 W., at Bybee Springs, 1 mile below junction of East and West Forks of Evans Creek, 8 miles above former post office at Wimer, 15 miles northeast of Rogue River post office, Jackson County, and 38 miles northwest of Medford.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—October 1, 1925, to September 30, 1926.

GAGE.—Vertical staff on right bank; read by W. M. Lusk.

DISCHARGE MEASUREMENTS.—At low and medium stages made by wading near gage; high-water measurements made from a private cable bridge 120 feet below gage.

CHANNEL AND CONTROL.—Control is solid rock riffle with some overlying boulders 300 feet below gage. Right bank overflowed at high stages.

EXTREMES OF DISCHARGE.—Maximum stage during year determined by leveling to high-water marks, 6.40 feet February 4 (discharge, 3,000 second-feet); minimum stage recorded, 0.54 foot August 10–16 (discharge, 4.0 second-feet).

ICE.—None.

DIVERSIONS.—Numerous small diversions for irrigating land along river above gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation apparently permanent. Rating curve well defined below 250 second-feet and fairly well defined below 2,000 second-feet. Gage read to hundredths once a day. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

Discharge measurements of Evans Creek near Rogue River, Oreg., during the period September 15, 1925, to September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
Sept. 15	0.73	10.0	Mar. 2	1.84	173	June 28	0.58	4.8
Oct. 1	.80	14.1	Mar. 25	1.12	46.9	July 16	.57	4.5
Nov. 21	.89	21.4	Apr. 14	.98	29.7	Sept. 23	.64	6.3

Daily discharge, in second-feet, of Evans Creek near Rogue River, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	13	44	42	222	200	37	16	12	4.3	5.0	7.1
2	14	13	86	34	185	176	35	16	12	4.3	5.0	7.1
3	14	16	44	34	185	171	34	16	12	4.3	4.7	6.4
4	14	22	32	32	1,970	167	34	26	11	4.3	4.7	5.7
5	13	17	28	37	520	140	42	32	9.6	4.3	4.3	5.0
6	16	16	24	39	520	128	42	32	8.5	4.3	4.3	4.7
7	16	16	22	34	700	109	39	34	8.5	4.3	4.3	4.3
8	16	16	22	37	450	102	37	32	7.1	5.0	4.3	4.3
9	14	17	20	39	320	99	34	28	7.1	5.0	4.3	4.3
10	14	24	19	54	380	86	32	24	7.1	4.7	4.0	4.7
11	14	26	19	65	290	86	34	22	7.1	4.3	4.0	4.7
12	14	71	26	44	260	83	32	20	7.1	4.3	4.0	4.7
13	14	54	34	30	210	77	32	20	7.1	4.3	4.0	4.7
14	14	32	34	37	185	71	30	19	6.4	4.3	4.0	4.7
15	14	47	24	32	171	68	28	19	6.4	4.7	4.0	5.0
16	14	44	22	30	260	68	28	17	6.4	4.7	4.0	6.4
17	13	47	22	235	235	65	28	16	6.4	4.7	4.3	7.1
18	13	44	37	140	210	60	26	16	5.7	4.7	5.0	7.8
19	13	30	44	106	235	57	26	16	5.7	4.7	7.8	7.8
20	13	26	57	86	235	57	26	16	5.7	4.7	7.8	7.8

Daily discharge, in second-feet, of Evans Creek near Rogue River, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	13	22	77	89	260	57	24	16	6.4	4.7	5.0	7.1
22	13	20	185	120	320	54	26	14	5.0	4.3	5.0	6.4
23	13	20	235	116	290	52	24	14	5.0	4.3	5.0	6.4
24	13	20	120	96	380	49	22	16	4.7	4.3	5.0	6.4
25	13	19	80	86	320	47	20	14	4.7	4.3	5.0	6.4
26	13	20	63	71	290	47	20	16	4.7	4.3	7.8	6.4
27	13	19	52	65	235	44	19	14	4.7	4.3	7.8	6.4
28	13	19	44	86	222	44	14	14	4.7	4.3	7.8	7.1
29	13	17	39	1,080	-------	44	16	14	4.7	4.3	7.1	7.1
30	13	19	34	290	-------	42	16	14	4.7	4.3	7.1	7.1
31	13	-------	32	260	-------	39	-------	13	-------	4.7	7.1	-------

Monthly discharge of Evans Creek near Rogue River, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	16	13	13.7	842
November	71	13	26.2	1,560
December	235	19	52.3	3,220
January	1,080	30	114	7,010
February	1,970	171	359	19,900
March	200	39	83.5	5,130
April	42	14	28.6	1,700
May	34	13	19.2	1,180
June	12	4.7	6.94	413
July	5.0	4.3	4.46	274
August	7.8	4.0	5.27	324
September	7.8	4.3	6.04	359
The year	1,970	4.0	58.0	41,900

PLEASANT CREEK NEAR ROGUE RIVER, OREG.

LOCATION.—In sec. 28, T. 34 S., R. 4 W., at Owens Bridge, 1½ miles above mouth of Ditch Creek, 3.2 miles northwest of former post office of Wimer, 10 miles north of Rogue River post office, Jackson County, and 33 miles from Medford.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—November 15, 1925, to June 30, 1926.

GAGE.—Vertical staff on upstream side of bridge on right bank; gage reader, G. P. Martin.

DISCHARGE MEASUREMENTS.—Made from downstream side of bridge or by wading.

CHANNEL AND CONTROL.—Control, sand and gravel, somewhat shifting.

EXTREMES OF DISCHARGE.—Maximum stage during period November 15 to June 30 determined by leveling to high-water mark, 5.0 feet probably on February 4 (discharge, 825 second-feet); minimum stage recorded, 0.37 foot on June 28 (discharge, estimated 0.1 second-foot).

ICE.—None.

DIVERSIONS.—Considerable water diverted for irrigating small tracts above gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed at high water. Rating curves fairly well defined below 50 second-feet. Gage read to hundredths once a day. Daily discharge ascertained by applying daily gage reading to rating table. Records fair.

Discharge measurements of Pleasant Creek near Rogue River, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 15	0.94	7.8	Mar. 2	1.14	32.2	Apr. 14	0.58	2.6
Nov. 21	.76	2.7	Mar. 25	.74	8.0	June 28	.37	.1

Daily discharge, in second-feet, of Pleasant Creek near Rogue River, Oreg., for the year ending September 30, 1926

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1		15	3.8	22	39	6.5	2.0	1.6
2		8.6	3.6	20	32	4.5	2.0	1.2
3		5.9	4.2	24	29	5.2	2.0	1.0
4		4.2	4.8	412	28	5.5	6.5	1.0
5		3.6	4.2	109	22	5.8	3.9	.7
6		3.4	4.8	125	22	5.2	3.9	.6
7		3.3	4.8	117	20	5.8	6.5	.5
8		2.9	4.8	109	18	5.2	5.2	.5
9		2.9	4.2	80	16	5.2	4.6	.3
10		2.9	4.2	87	16	5.2	3.9	.3
11		3.3	4.2	67	15	4.8	3.2	.3
12		3.3	4.2	56	14	4.5	3.2	.3
13		3.3	3.6	44	14	4.5	3.2	.4
14		3.3	3.6	42	13	3.2	3.2	.5
15	7.9	3.3	4.2	39	12	3.2	2.8	.5
16	5.9	2.9	4.2	56	10	3.2	2.6	.7
17	5.9	4.2	10	52	10	3.2	2.4	.7
18	5.3	4.2	15	46	10	3.2	2.4	.5
19	3.6	5.3	12	60	10	3.2	2.0	.5
20	3.3	7.6	10	67	9.7	3.2	2.0	.4
21	2.9	10	13	70	9.3	3.2	2.0	.3
22	2.8	15	15	70	8.9	3.2	2.0	.3
23	2.6	17	12	72	8.9	2.8	2.0	
24	2.6	10	11	80	8.1	2.4	2.0	
25	2.6	8.6	10	75	8.1	2.4	2.0	.2
26	2.6	7.2	9.3	65	8.1	2.4	2.4	
27	2.6	6.2	8.6	50	7.3	2.0	2.4	
28	2.2	5.3	10	44	6.9	2.0	2.4	.1
29	2.4	4.8	91	-------	6.5	2.0	2.0	.1
30	2.6	4.8	29	-------	5.2	2.0	1.8	.1
31	-------	4.1	26	-------	5.8	-------	1.8	-------

NOTE.—Gage not read Sundays or holidays; discharge interpolated. Braced figure shows estimated mean discharge for period indicated.

Monthly discharge of Pleasant Creek near Rogue River, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
November 15–30	7.9	2.2	3.61	115
December	17	2.9	6.01	370
January	91	3.6	11.3	695
February	412	20	77.1	4,280
March	39	5.2	14.3	879
April	6.5	2.0	3.82	227
May	6.5	1.8	2.91	179
June	1.6	.1	.48	29
The period				6,770

APPLEGATE RIVER NEAR RUCH,[6] OREG.

LOCATION.—In sec. 15, T. 39 S., R. 3 W., at Cameron bridge, 1¾ miles above mouth of Little Applegate River and 4½ miles southwest of Ruch, Jackson County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—June 18, 1911, to September 30, 1914, and September 10, 1925, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder at downstream end of concrete pier near left bank; inspected by Geological Survey engineers. Datum of gage used 1911–1914 was 0.88 foot lower.

DISCHARGE MEASUREMENTS.—Made by wading near gage at low stages from bridge at medium and high stages.

CHANNEL AND CONTROL.—Control is wide gravel riffle, 300 feet below gage; shifting only in extreme floods. Stream bed, straight; banks overflowed at extremely high stages.

EXTREMES OF DISCHARGE.—Maximum stage, from water-stage recorder, during the period September 10, 1925, to September 30, 1926, 6.36 feet at 1 p. m. February 4 (discharge, 4,770 second-feet); minimum stage from recorder, 0.29 foot on September 16, 17, 25, and 26, 1926 (discharge, 7.6 second-feet), 1911–1914; 1925–26: Maximum stage recorded, that of February 4, 1926; minimum discharge, that of September 16, 17, 25, and 26, 1926.

ICE.—None during the year.

DIVERSIONS.—Many diversions above gage for irrigation of lands adjacent to river. The Comstock (or Cameron) ditch diverts some water around gage on left bank. Part of the flow of Sturgis Fork is diverted around gage into Thompson Creek.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed during October and November. Well-defined rating curve used September 10 to October 14, and indirectly October 15 to November 11; rating curve used November 12 to September 30 well defined above 10 second-feet. Operation of water-stage recorder satisfactory; one daily reading of staff gage September 10–17, 1925. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph except October 15 to November 11, when shifting-control method was used. Records good.

Discharge measurements of Applegate River near Ruch, Oreg., during the period June 27, 1925, to September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
June 27	0.94	134	Oct. 24	0.47	43.3	May 14	1.12	149
July 9	.64	81	Nov. 18	1.04	125	June 24	.52	29.5
July 18	.57	66				July 15	.43	20.5
July 29	.44	50	1926			July 31	.37	12.8
Sept. 30	.48	54	Mar. 2	1.82	454	Aug. 28	.37	12.0
Oct. 13	.49	55	Mar. 25	1.52	315			

[6] Previously published as "near Buncom."

Daily discharge, in second-feet, of Applegate River near Ruch, Oreg., for the period September 10, 1925, to September 30, 1926

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	54	58	482	96	250	434	263	156	67	22	14	17
2	------	53	61	506	90	205	452	241	150	64	25	15	14
3	------	53	65	221	88	202	464	237	136	57	22	14	13
4	------	53	72	147	82	2,560	476	241	161	51	22	14	12
5	------	54	72	116	84	1,540	464	263	191	49	21	13	12
6	------	65	71	103	88	1,860	440	286	177	41	21	13	15
7	------	71	71	88	84	2,180	424	350	170	41	22	12	14
8	------	61	74	82	78	1,580	424	360	161	38	20	13	11
9	------	62	83	76	74	1,160	396	317	158	43	23	12	11
10	48	62	108	71	71	1,330	370	304	167	35	20	12	12
11	48	59	141	69	69	1,000	350	317	167	30	19	12	11
12	48	57	205	86	66	837	330	299	158	28	26	12	9
13	46	57	144	86	64	677	335	299	150	28	22	12	9
14	43	57	101	74	60	573	407	308	144	27	19	12	8
15	43	54	141	71	60	524	458	335	134	28	19	11	8
16	43	52	161	71	62	500	424	330	124	31	16	11	8
17	120	50	153	71	128	434	380	294	116	27	14	11	8
18	------	50	128	103	98	407	340	258	109	27	13	10	8
19	------	48	112	98	84	494	317	229	101	27	17	9	8
20	------	45	96	86	76	536	308	221	101	26	16	9	8
21	------	44	84	103	72	494	281	205	98	27	16	9	9
22	------	44	78	164	88	476	272	194	96	33	16	9	9
23	------	45	71	350	86	418	290	188	90	33	16	9	10
24	------	42	69	281	82	396	304	180	92	31	16	10	11
25	------	42	66	202	80	429	290	180	90	31	15	10	9
26	------	45	94	164	74	412	272	191	84	30	10	11	9
27	------	46	98	150	72	418	258	202	80	27	12	14	10
28	------	48	88	131	147	424	254	194	74	28	12	14	10
29	------	49	86	121	586	------	254	194	72	25	12	14	10
30	55	52	141	112	412	------	263	177	76	27	12	14	11
31	------	85	------	103	290	------	286	------	71	------	14	17	------

Monthly discharge of Applegate River near Ruch, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	71	42	52.5	3,230
November	205	58	99.7	5,930
December	506	69	148	9,100
January	586	60	116	7,130
February	2,560	202	797	44,300
March	476	254	355	21,800
April	360	177	255	15,200
May	191	71	124	7,620
June	67	25	35.2	2,090
July	26	10	17.8	1,090
August	17	9	12.0	738
September	17	8	10.5	625
The year	2,560	8	164	119,000

ILLINOIS RIVER AT KERBY, OREG.

LOCATION.—In NW. ¼ sec. 9, T. 39 S., R. 8 W., half a mile west of Kerby, Josephine County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—March 7 to September 30, 1926.

GAGE.—Vertical staff on left bank of stream; read by E. L. Hoskins.

DISCHARGE MEASUREMENTS.—Made from cable footbridge 25 feet above gage, measuring conditions good. Low-water measurements made by wading at gage.

CHANNEL AND CONTROL.—Well-defined gravel riffle 300 feet below gage; left bank high and wide, right bank overflowed at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 4.8 feet on May 7 (discharge, 1,590 second-feet); minimum stage, 2.00 feet on August 12 and 13 (discharge, 18 second-feet).

ICE.—None.

DIVERSIONS.—A large area above gaging station is irrigated. The station is below all important diversions.

REGULATION.—Some water stored in a small reservoir near Waldo.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined. Staff gage read to hundredths once a day. Daily discharge ascertained by applying daily gage height to rating table. Records good.

COOPERATION.—Records furnished by State engineer of Oregon.

Discharge measurements of Illinois River at Kerby, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 7	4.00	966	May 16	3.28	458	July 9	2.16	42.1
Mar. 23	3.24	453	June 9	2.44	98	Aug. 11	2.02	21.4
Apr. 16	3.08	349	June 23	2.29	66	Sept. 17	2.14	32.6

Daily discharge, in second-feet, of Illinois River at Kerby, Oreg., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	310	180	146	48	26	24
2	------	310	166	146	48	26	24
3	------	310	180	117	45	26	21
4	------	484	260	117	45	26	21
5	------	484	550	117	45	24	21
6	------	420	965	117	45	24	21
7	965	550	1,590	117	42	24	21
8	965	550	1,330	104	42	24	21
9	895	550	1,100	101	42	24	21
10	825	550	1,040	91	42	21	21
11	755	484	1,040	91	42	21	21
12	685	420	895	91	42	18	21
13	685	420	755	80	38	18	21
14	685	484	617	68	35	21	21
15	685	484	484	68	32	21	21
16	617	357	484	68	32	21	35
17	550	362	420	68	32	21	35
18	617	310	310	68	32	21	32
19	617	310	310	68	32	24	32
20	484	310	310	68	29	26	32
21	550	260	260	68	29	26	32
22	420	362	260	64	29	26	32
23	452	362	260	64	29	24	29
24	484	260	260	52	26	21	29
25	484	218	260	48	26	21	29
26	362	180	180	48	26	21	29
27	362	180	180	48	26	21	29
28	362	180	180	48	26	21	29
29	362	180	180	48	26	21	32
30	362	180	180	48	26	24	32
31	362	------	180	------	26	26	------

Monthly discharge of Illinois River at Kerby, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March 7–31	965	362	584	29,000
April	550	180	361	21,500
May	1,590	166	496	30,500
June	146	48	81.6	4,860
July	48	26	35.0	2,150
August	26	18	22.9	1,410
September	35	21	26.3	1,560
The period				91,000

COQUILLE RIVER BASIN

SOUTH FORK OF COQUILLE RIVER AT POWERS, OREG.

LOCATION.—In SW. ¼ sec. 13, T. 31 S., R. 12 W., 1,000 feet below Salmon Creek, 200 feet above Bingham Creek, and one-fourth of a mile due west of Powers post office, Coos County, present terminus of Marshfield branch of Southern Pacific Railroad.

DRAINAGE AREA.—168 square miles (measured on topographic and Douglas County Abstract Co.'s maps).

RECORDS AVAILABLE.—September 4, 1916, to September 30, 1926. Station discontinued.

GAGE.—Inclined staff in three sections on left bank under footbridge; read by Ray Brown.

DISCHARGE MEASUREMENTS.—Made by wading. Footbridge washed out in flood, no equipment at present for high-water measurements.

CHANNEL AND CONTROL.—Control, gravel and solid rock; shifts during floods.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 15.5 feet at 8 a. m. February 4 (discharge, 20,000 second-feet); minimum discharge, 17 second-feet August 5–18, 22–25, and September 10 (gage height, 3.75 feet).

1916–1926: Maximum discharge recorded, 17.5 feet October 31, 1924 (discharge, 25,300 second-feet); minimum discharge, 17 second-feet September 12, 14, 16, and 18, 1924, and August 5–18, 22–25, and September 10, 1926.

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

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed February 4. Two rating curves used, identical above 1,180 second-feet, well defined below 500 second-feet, and fairly well defined below 11,000 second-feet. Gage read once a day to quarter-tenths at low water, to half-tenths at medium stages, and twice a day to tenths at high stages. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

Discharge measurements of South Fork of Coquille River at Powers, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 18	4.80	301	June 23	4.00	46.5	Sept. 1	3.90	33.7
Mar. 24	4.50	208	Aug. 16	3.75	17.4	Sept. 24	3.82	24.4
Apr. 5	5.04	462	Aug. 26	3.82	22.7			

Daily discharge, in second-feet, of South Fork of Coquille River at Powers, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		22	330	308	1,650	1,010	172	80	130	36	20	33
2		22	880	285	1,450	815	150	80	110	36	20	32
3		28	740	330	1,750	710	150	76	95	36	20	31
4	27	60	490	308	12,600	675	325	172	80	36	18	28
5		40	380	285	4,160	675	470	325	80	34	17	24
6		34	330	265	11,500	640	352	640	70	33	17	22
7	26	28	308	245	5,300	570	275	1,090	60	33	17	21
8	26	28	285	225	2,810	535	352	1,010	60	33	17	20
9	26	53	245	205	1,850	440	352	815	53	33	17	18
10	26	110	205	205	1,850	410	325	710	53	33	17	17
11	26	670	188	205	1,550	410	325	570	46	32	17	
12	26	1,850	550	205	1,360	380	300	470	46	31	17	
13	24	810	1,270	205	1,180	380	275	440	46	30	17	
14	22	550	810	188	970	352	255	352	53	28	17	
15	22	1,360	490	188	890	352	235	325	53	26	17	
16	22	2,950	245	205	5,700	325	195	275	53	24	17	
17	22	1,750	740	1,360	1,850	352	195	255	53	24	17	35
18	22	950	1,020	1,270	1,450	325	172	235	53	24	17	
19	22	670	1,270	1,180	3,370	300	172	215	53	24	20	
20	22	490	1,270	880	3,510	275	150	275	46	24	20	
21	22	380	1,550	810	2,950	255	150	235	46	24	22	
22	22	285	1,450	950	2,680	235	159	195	46	24	17	
23	22	265	2,070	880	2,420	227	150	195	46	24	17	
24	22	225	1,450	810	2,300	195	150	195	46	22	17	24
25	22	205	1,360	740	2,070	195	142	172	43	22	17	
26	22	188	1,270	705	1,750	195	130	172	43	22	24	22
27	22	170	1,020	670	1,450	195	110	150	43	22	28	
28	22	170	810	2,180	1,180	186	104	150	40	22	28	
29	22	170	610	5,100	-------	186	95	172	40	22	31	
30	22	170	405	2,810	-------	172	80	150	40	22	46	
31	22	-------	330	2,180	-------	172	-------	150	-------	22	40	------

NOTE.—Gage-height record missing Oct. 1–6, Sept. 11–23, and 25–30; discharge estimated. Daily discharge interpolated Oct. 9, 11, 13, 15, 19, 21, 23, 25, 27, 29, Nov. 1, Dec. 25, Jan. 10, June 17, July 5, 7, 9, 11, 13, 15, 18, 20, 22, 25, 27, 29, Aug. 2, 4, 6, 8, 10, 12, 15, 17, 24, Sept. 2, 7, and 9, for which there are no gage readings.

Monthly discharge of South Fork of Coquille River at Powers, Oreg., for the year ending September 30, 1926

[Drainage area, 168 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	----------	22	23.8	0.142	0.16	1,460
November	2,950	22	490	2.92	3.26	29,200
December	2,070	188	786	4.68	5.40	48,300
January	5,100	188	851	5.07	5.84	52,300
February	12,600	890	2,980	17.7	18.43	166,000
March	1,010	172	392	2.33	2.69	24,100
April	470	80	216	1.29	1.44	12,900
May	1,090	76	334	1.99	2.29	20,500
June	130	40	57.5	.342	.38	3,420
July	36	22	27.7	.165	.19	1,700
August	46	17	20.7	.123	.14	1,270
September	----------	17	28.6	.170	.19	1,700
The year	12,600	17	501	2.98	40.41	363,000

UMPQUA RIVER BASIN

SOUTH UMPQUA RIVER NEAR BROCKWAY, OREG.

LOCATION.—In sec. 15, T. 28 S., R. 6 W., at Winston Bridge, 6 miles south of Roseburg, 3 miles below Lookingglass Creek, 3 miles east of Brockway post office, Douglas County, and 18 miles above confluence with North Umpqua River.

RECORDS AVAILABLE.—December 6, 1905, to June 30, 1912, and October 1, 1923, to September 30, 1926. Station discontinued.

DRAINAGE AREA.—1,630 square miles (measured on topographic and Forest Service maps).

GAGE.—Chain gage on bridge; relation to datum of original gage not determined. Gage read by Kenneth Winston.

DISCHARGE MEASUREMENTS.—Made from bridge at gage or by wading below control.

CHANNEL AND CONTROL.—One channel at all ordinary stages. Bed of stream at control, one-fourth of a mile below gage, composed of gravel and boulders on left bank, bedrock on right bank; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year determined from high-water marks, 17.8 feet, probably on February 3 (discharge, 35,000 second-feet); minimum stage recorded, 0.51 foot August 12 and 13 (discharge, 36 second-feet).

1905–1912, 1923–1926: Maximum stage recorded, 26.0 feet January 4, 1907, determined by leveling to high-water mark (discharge, obtained by extending 1907 rating curve parallel to that for 1924, 71,000 second-feet); minimum discharge, that of August 12 and 13, 1926. Flood of February 21, 1927, reached a stage of 30.0 feet, determined by leveling to well-defined high-water marks (discharge, 78,000 second-feet). The flood of February, 1890, reached a stage just 2 feet higher, according to John Lander, who lived near the bridge at the time of both floods (discharge, 85,000 second-feet).

ICE.—Practically none ever forms.

DIVERSIONS.—Numerous small diversions for irrigation above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation practically permanent, except as affected by growth of aquatic plants. Rating curve well defined between 50 and 25,000 second-feet. Gage read to hundredths once a day; readings from October to February somewhat uncertain. Daily discharge ascertained by applying daily gage reading to rating table; shifting-control method used June 1 to September 30. Records for October to February and August and September, fair; for March to July, good.

Discharge measurements of South Umpqua River near Brockway, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 23	1.98	345	Feb. 23	8.14	8,130	July 8	0.82	64
Dec. 15	2.65	658	Apr. 20	2.44	534	Sept. 4	1.12	109

Daily discharge, in second-feet, of South Umpqua River near Brockway, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	154	176	370	865	7,750	5,320	805	370	226	70	43	124
2	154	176	435	745	5,860	4,800	805	391	226	70	43	115
3	165	165	805	745	22,600	3,880	745	435	200	64	43	108
4	165	165	608	745	15,200	3,100	690	435	200	64	43	108
5	154	176	370	745	12,500	2,610	690	530	200	64	42	94
6	154	188	332	925	10,100	2,390	690	662	188	62	41	87
7	165	188	350	925	9,880	2,390	690	805	176	64	41	81
8	165	200	253		8,930	2,180	690	865	165	62	40	81
9	176	226	226		7,990	2,080	690	805	154	62	40	81
10	176	282	213		7,290	1,980	662	690	144	61	39	75
11	176	350	226		4,160	1,880	662	635	133	58	37	81
12	176	435	213		3,880	1,690	662	555	124	53	36	81
13	176	530	391		3,490	1,600	635	505	124	52	36	75
14	176	530	530		3,360	1,420	635	480	144	51	37	75
15	176	176	805		3,230	1,420	635	435	144	50	37	75
16	176	176	865		4,020	1,420	608	413	144	48	37	75
17	176	253	925		5,320	1,260	608	370	144	47	37	78
18	176	298	865		7,070	1,190	580	350	144	45	46	81
19	176	370	985		7,520	1,190	530	413	133	45	60	81
20	176	391	1,600	2,500	8,690	1,190	505	370	133	45	75	81
21	176	480	4,470		8,930	1,120	480	332	133	46	81	81
22	176	505	6,640		9,640	1,120	480	314	115	46	81	87
23	176	480	7,070		7,750	1,120	480	314	108	47	87	94
24	176	458	4,800		10,400	1,120	480	314	108	46	165	87
25	176	391	2,730		10,400	1,120	480	298	100	45	253	87
26	176	350	2,180		9,880	1,120	458	314	100	45	200	100
27	176	282	1,880		6,440	1,120	435	350	94	44	108	115
28	176	314	1,510		5,500	865	413	282	87	44	75	108
29	176	314	1,190		-------	805	391	282	81	44	87	108
30	176	350	1,120		-------	805	370	253	75	43	94	108
31	176	-------	925		-------	805	-------	253	-------	43	115	------

NOTE.—Gage readings Jan. 8–31, uncertain; mean discharge determined by study of records of North Umpqua River at Winchester and Umpqua River near Elkton.

Monthly discharge of South Umpqua River near Brockway, Oreg., for the year ending September 30, 1926

[Drainage area, 1,630 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	176	154	172	0.106	0.12	10,600
November	530	165	312	.191	.21	18,600
December	7,070	213	1,480	.908	1.05	91,000
January	----------	745	2,120	1.30	1.50	130,000
February	22,600	3,230	8,140	4.99	5.20	452,000
March	5,320	805	1,810	1.11	1.28	111,000
April	805	370	589	.361	.40	35,000
May	865	253	446	.274	.32	27,400
June	226	75	142	.087	.10	8,450
July	70	43	52.6	.032	.04	3,230
August	253	36	71.2	.044	.05	4,380
September	124	75	90.4	.055	.06	5,380
The year	22,600	36	1,240	.761	10.33	897,000

UMPQUA RIVER NEAR ELKTON, OREG.

LOCATION.—In sec. 8, T. 23 S., R. 7 W., at ferry crossing 4 miles south (by road) from Elkton, Douglas County, and 8 miles upstream from Elk Creek.

DRAINAGE AREA.—3,680 square miles.

RECORDS AVAILABLE.—October 18, 1905, to December 31, 1906; May 12, 1907, to September 30, 1926.

GAGE.—Staff in five sections. Low-water section inclined; others vertical. Gage read by T. H. Gilbreth.

DISCHARGE MEASUREMENTS.—Made from car on ferry cable 100 feet below gage.

CHANNEL AND CONTROL.—Bed composed of gravel; somewhat shifting. Control consists of rock; practically permanent, except when affected by growth of aquatic plants in summer.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 20.0 feet at 7 a. m. February 5 (discharge, 67,000 second-feet); minimum stage recorded, −0.25 foot at 5 p. m. July 18 (discharge, 640 second-feet).

1905–1926: Maximum stage recorded, 38.5 feet (present datum) at 7 a. m. November 23, 1909 (discharge estimated from extension of rating curve, 163,000 second-feet); minimum discharge recorded, that of July 18, 1926.

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

DIVERSIONS.—Numerous small diversions above station, mostly in South Umpqua Basin.

REGULATION.—Practically none.

ACCURACY.—Stage-discharge relation changed slightly December 12, affecting only low stages; affected by growth of aquatic plants during July, August, and September. Two fairly well defined rating curves used, identical above 3,000 second-feet. Gage read twice a day to half-tenths at low water, to tenths at medium and high stages. Daily discharge ascertained by applying mean daily gage heights to rating table; shifting-control method used July to September. Records good.

The following discharge measurements were made:

December 17, 1925: Gage height, 1.66 feet; discharge, 2,780 second-feet.

April 21, 1926: Gage height, 1.26 feet; discharge, 2,360 second-feet.

July 26, 1926: Gage height, −0.05 foot; discharge, 722 second-feet.

Daily discharge, in second-feet, of Umpqua River near Elkton, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,160	1,080	1,520	3,000	12,900	14,400	2,440	1,760	1,270	880	700	920
2	1,250	1,080	1,680	2,720	10,800	12,600	2,440	1,700	1,270	880	700	960
3	1,250	1,120	5,260	2,720	9,350	10,800	2,440	1,700	1,220	880	700	960
4	1,250	1,160	4,560	2,720	21,300	10,200	2,440	1,700	1,170	880	735	920
5	1,200	1,250	3,590	3,000	60,200	8,120	2,440	1,810	1,170	840	700	880
6	1,160	1,250	2,660	3,590	37,100	7,440	2,860	3,290	1,170	770	700	840
7	1,160	1,200	2,420	4,900	45,100	6,800	3,000	3,590	1,120	770	700	805
8	1,120	1,200	2,180	4,560	31,100	6,010	3,000	3,290	1,080	770	700	805
9	1,160	1,160	1,950	4,070	23,400	5,820	3,000	3,140	1,080	770	670	840
10	1,160	1,200	1,730	3,590	22,700	5,630	2,720	3,000	1,080	770	700	840
11	1,120	1,300	1,620	3,140	23,400	4,900	2,720	2,720	1,080	735	700	805
12	1,160	1,430	1,730	2,720	19,900	4,560	3,000	2,440	1,080	735	700	840
13	1,160	2,180	4,560	2,580	15,700	4,390	3,140	2,180	1,040	735	700	840
14	1,120	2,990	5,820	2,440	12,600	4,230	3,000	2,050	1,000	735	700	840
15	1,160	2,990	4,560	2,440	10,200	4,230	2,720	1,870	1,000	735	700	840
16	1,160	2,180	3,590	2,720	12,000	4,230	2,580	1,810	1,000	735	700	880
17	1,120	2,690	2,860	3,590	19,900	4,230	2,440	1,760	1,000	700	700	880
18	1,120	2,690	2,720	9,600	17,100	3,910	2,440	1,700	1,000	670	735	1,040
19	1,120	2,550	3,440	12,600	14,400	3,910	2,440	1,590	1,000	700	770	1,120
20	1,120	2,420	4,560	9,100	18,500	3,590	2,310	1,590	1,000	670	920	1,120
21	1,080	1,950	7,660	7,010	21,300	3,440	2,180	1,590	1,000	670	1,000	1,000
22	1,080	1,680	12,600	6,600	21,300	3,290	2,180	1,590	1,080	670	840	1,000
23	1,080	1,520	16,400	8,120	24,400	3,000	2,050	1,590	1,000	670	805	960
24	1,080	1,430	18,500	7,440	26,200	3,000	1,930	1,480	1,000	670	805	960
25	1,080	1,430	11,100	6,800	45,100	2,860	1,930	1,480	1,000	670	770	920
26	1,080	1,380	7,440	5,630	31,100	2,860	1,930	1,480	960	700	770	920
27	1,080	1,480	6,010	5,080	22,700	2,720	1,810	1,480	960	700	770	960
28	1,080	1,680	4,900	4,560	17,800	2,720	1,810	1,480	920	735	805	880
29	1,080	1,680	4,230	4,900	-------	2,580	1,760	1,370	920	735	920	880
30	1,080	1,620	3,750	21,300	-------	2,580	1,810	1,370	920	735	840	880
31	1,080	-------	3,290	16,400	-------	2,440	-------	1,370	-------	700	770	-------

Monthly discharge of Umpqua River near Elkton, Oreg., for the year ending September 30, 1926

[Drainage area, 3,680 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	1,250	1,080	1,130	0.307	0.35	69,500
November	2,990	1,080	1,700	.462	.52	101,000
December	18,500	1,520	5,130	1.39	1.60	315,000
January	21,300	2,440	5,790	1.57	1.81	356,000
February	60,200	9,350	23,100	6.28	6.54	1,280,000
March	14,400	2,440	5,210	1.42	1.64	320,000
April	3,140	1,760	2,430	.660	.74	145,000
May	3,590	1,370	1,970	.535	.62	121,000
June	1,270	920	1,050	.285	.32	62,500
July	880	670	742	.202	.23	45,600
August	1,000	670	756	.205	.24	46,500
September	1,120	805	911	.248	.28	54,200
The year	60,200	670	4,040	1.10	14.89	2,920,000

COW CREEK NEAR AZALEA, OREG.

LOCATION.—In sec. 33, T. 31 S., R. 4 W., 3 miles northwest of Azalea, Douglas County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—April 1 to September 30, 1926.

GAGE.—Vertical staff on right bank 400 feet below Fisher farm house; read by J. Fisher.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 1.50 feet April 5 and May 4 (discharge, 38 second-feet); minimum stage, 0.80 foot August 16 (discharge, 4.5 second-feet).

DIVERSIONS.—There are minor diversions for irrigation above station.

REGULATION.—None.

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

Discharge measurements of Cow Creek near Azalea, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 6	1.99	92	May 23	1.18	14.8	July 23	0.86	6.0
Mar. 28	1.44	34	June 24	.98	8.2	Sept. 2	.92	7.0
Apr. 20	1.27	21	July 7	.91	6.2	Sept. 15	.87	5.9

Daily discharge, in second-feet, of Cow Creek near Azalea, Oreg., for the year ending September 30, 1926

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	32	16	11	7.2	5.5	8.0	16	23	16	9.3	5.9	4.5	6.5
2	30	16	11	7.2	5.5	7.0	17	24	16	9.0	5.9	4.7	7.2
3	30	33	11	7.2	5.3	7.0	18	23	16	9.0	5.9	6.8	5.9
4	30	38	10	7.0	5.3	6.5	19	22	16	9.9	5.9	6.8	5.9
5	38	33	10	7.0	5.3	6.5	20	21	16	9.3	5.9	6.5	6.5
6	33	33	10	7.2	5.3	5.9	21	21	16	9.0	5.9	6.5	7.0
7	32	33	9.6	6.8	5.3	5.9	22	21	16	9.0	5.9	6.8	7.0
8	30	30	9.3	7.5	5.3	5.9	23	21	16	8.5	5.7	6.8	7.0
9	29	25	9.0	7.2	5.3	5.9	24	21	16	8.5	5.7	6.5	6.8
10	27	22	9.0	7.0	5.1	5.9	25	20	15	8.0	5.5	7.0	6.8
11	30	20	9.3	6.8	5.1	5.7	26	19	14	7.2	5.5	7.0	6.8
12	27	18	9.3	6.3	5.1	5.7	27	19	14	7.0	5.5	6.8	6.5
13	27	18	9.3	5.9	5.1	5.7	28	19	14	7.0	5.5	6.8	6.8
14	26	18	9.3	5.9	4.9	5.7	29	17	14	7.2	5.5	7.2	6.8
15	23	17	9.3	5.9	4.9	5.9	20	16	13	7.2	5.5	9.6	7.0
							31	------	12	------	5.5	9.0	------

Monthly discharge of Cow Creek near Azalea, Oreg., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	38	16	25.0	1,490
May	38	12	19.7	1,210
June	11	7.0	9.05	539
July	7.2	5.5	6.23	383
August	9.6	4.5	6.05	372
September	8.0	5.7	6.46	384
The period				4,380

NORTH UMPQUA RIVER AT TOKETEE FALLS, OREG.

LOCATION.—In T. 26 S., R. 3 E. (unsurveyed), one-eighth mile below mouth of Clearwater River, half a mile above Toketee Falls, and 30 miles east of Hoaglin post office, Douglas County.

DRAINAGE AREA.—337 square miles (measured on topographic map).

RECORDS AVAILABLE.—February 26, 1908, to July 20, 1909; December 19, 1914, to November 19, 1917; and July 1, 1924, to September 30, 1926, with missing periods.

GAGE.—Stevens continuous water-stage recorder on left bank.

DISCHARGE MEASUREMENTS.—Made from cable 75 feet below gage; good measuring section.

CHANNEL AND CONTROL.—Bed composed of boulders, rock, and heavy gravel; fairly smooth; liable to shift during high stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 2.35 feet at 6 p. m. February 6 (discharge, 1,620 second-feet); minimum stage from water-stage recorder, 0.88 foot August 13–16 (discharge, 530 second-feet).

1908–1909, 1915–1917, 1924–1926: Maximum stage recorded, 4.30 feet on February 4, 1925 (discharge, from extension of rating curve, 3,760 second-feet); minimum stage, 0.81 foot October 21, 1924 (discharge, 525 second-feet).

ICE.—Stage-discharge relation not affected, as much of the water comes from springs.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed February 8 and changing September 10 to 30 owing to accumulation of drift on control. Two well-defined rating curves used. 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 method used September 10–30. Records excellent.

Discharge measurements of North Umpqua River at Toketee Falls, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 11	1.11	682	July 18	0.95	570
May 19	1.24	742	Sept. 10	[a].95	539

[a] Brush and logs lodged on control; open-water gage height, 0.89 foot.

Daily discharge, in second-feet, of North Umpqua River at Toketee Falls, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	698	667	828	776	854	1,140	875	816	684	600	552	552
2	692	692	848	770	841	1,180	875	804	678	594	552	540
3	692	692	757	776	822	1,140	840	798	678	594	552	540
4	685	685	730	770	1,060	1,140	840	910	672	594	546	540
5	679	679	718	776	1,130	1,100	875	910	666	594	546	535
6	685	667	711	808	1,450	1,060	875	840	666	594	540	535
7	685	661	704	776	1,530	1,020	875	822	660	588	535	535
8	679	679	692	770	1,420	1,020	840	816	660	588	535	535
9	673	679	685	730	1,300	1,020	840	804	654	588	535	540
10	667	704	679	724	1,380	980	875	792	654	582	530	535
11	685	756	704	744	1,300	945	945	786	654	588	530	540
12	692	770	770	750	1,220	945	910	774	648	588	535	540
13	692	730	724	744	1,140	945	910	774	648	582	530	540
14	692	704	692	750	1,100	980	910	774	642	576	530	535
15	692	744	704	756	1,060	1,020	910	762	642	576	530	540
16	685	724	704	763	1,060	1,020	945	756	636	576	530	588
17	685	737	704	828	1,020	980	945	750	630	576	535	576
18	679	724	698	796	980	945	910	750	624	576	600	552
19	679	711	698	782	980	945	875	744	642	576	564	546
20	673	698	724	770	980	945	875	768	636	570	540	540
21	661	692	822	782	980	910	840	744	624	570	540	540
22	673	685	915	782	980	910	875	738	624	576	535	535
23	673	679	1,090	782	980	910	840	738	618	570	535	540
24	673	685	950	782	1,220	910	834	732	612	564	535	530
25	673	711	854	776	1,260	875	834	720	612	564	540	530
26	673	756	822	763	1,220	875	840	714	606	564	558	530
27	673	730	848	763	1,180	875	840	714	606	558	546	530
28	667	704	828	763	1,180	875	840	702	606	558	535	530
29	667	698	813	848	-------	875	840	702	600	558	546	540
30	667	698	796	841	-------	875	828	696	600	558	582	558
31	667	-------	776	841	-------	875	-------	690	-------	552	564	------

Monthly discharge of North Umpqua River at Toketee Falls, Oreg., for the year ending September 30, 1926

[Drainage area, 337 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	698	661	680	2.02	2.33	41,800
November	770	661	705	2.09	2.33	42,000
December	1,090	679	774	2.30	2.65	47,600
January	848	724	777	2.31	2.66	47,800
February	1,530	822	1,130	3.35	3.49	62,800
March	1,180	875	975	2.89	3.33	60,000
April	945	828	872	2.59	2.89	51,900
May	910	690	769	2.28	2.63	47,300
June	684	600	639	1.90	2.12	38,000
July	600	552	577	1.71	1.97	35,500
August	600	530	544	1.61	1.86	33,400
September	588	530	542	1.61	1.80	32,300
The year	1,530	530	746	2.21	30.06	540,000

NORTH UMPQUA RIVER ABOVE ROCK CREEK, NEAR GLIDE, OREG.

LOCATION.—In NW. ¼ sec. 12, T. 26 S., R. 3 W., 7 miles east of Glide, Douglas County, half a mile above mouth of Rock Creek, 7 miles above mouth of Little River, and 19 miles northeast of Roseburg.

DRAINAGE AREA.—886 square miles (measured on Forest Service maps).

RECORDS AVAILABLE.—June 15, 1924, to September 30, 1926.

GAGE.—Water-stage recorder on left bank; inspected by J. H. Hayes.

DISCHARGE MEASUREMENTS.—Made from cable one fourth of a mile above gage. Channel deep and current sluggish at low stages.

CHANNEL AND CONTROL.—One channel at gage at all stages. Control is a reef of solid rock, 200 feet below gage; permanent. Stream bed composed of rock and boulders at gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 11.08 feet at 4 p. m. February 6 (discharge, 18,600 second-feet); minimum stage from recorder, 2.10 feet from 2 to 10 p. m. August 16 (discharge, 645 second-feet).

1924–1926: Maximum stage, 15.45 feet at 5 a. m. December 30, 1924 (discharge, 37,900 second-feet); minimum stage, that of August 16, 1926.

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

DIVERSIONS.—No diversions above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed during high water on February 6. Two well-defined rating curves used. Operation of water-stage recorder satisfactory except for short periods. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspecting recorder graph. Records good.

Discharge measurements of North Umpqua River above Rock Creek, near Glide, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 22	2.64	901	Feb. 24	7.14	6,620	Sept. 3	2.22	690
Jan. 15	3.33	1,350	Apr. 19	3.32	1,320			
Feb. 23	5.73	4,050	July 8	2.32	726			

Daily discharge, in second-feet, of North Umpqua River above Rock Creek, near Glide, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	915	818	1,350	1,240	2,830	4,000	1,300	1,120	920	725	681	748
2	890	818	2,970	1,200	2,500	3,690	1,300	1,090	920	748	677	705
3	865	890	1,820	1,240	2,220	3,330	1,260	1,060	920	748	677	705
4	865	865	1,470	1,240	9,200	3,000	1,260	1,230	892	748	677	685
5	865	865	1,310	1,470	7,220	2,690	1,420	1,840	892	748	677	681
6	865	840	1,240	1,960	12,900	2,460	1,380	1,660	865	725	673	677
7	890	818	1,160	1,640	10,200	2,240	1,380	1,500	865	725	673	673
8	865	840	1,100	1,470	7,160	2,130	1,340	1,540	865	725	669	669
9	865	865	1,030	1,310	5,180	2,080	1,300	1,460	840	725	665	669
10	865	915	1,000	1,240	6,530	1,930	1,300	1,380	840	725	665	665
11	865	1,160	1,030	1,200	5,920	1,840	1,580	1,340	840	725	661	661
12	865	1,640	2,560	1,160	4,650	1,740	1,580	1,260	840	725	661	661
13	865	1,510	2,700	1,130	3,690	1,700	1,460	1,230	840	725	661	657
14	865	1,130	1,690	1,130	3,060	1,740	1,420	1,200	815	725	657	653
15	840	1,200	1,350	1,350	2,870	1,840	1,420	1,160	815	705	653	657
16	840	1,310	1,350	1,350		1,840	1,420	1,120	815	705	649	770
17	840	1,200	1,390	2,970		1,740	1,420	1,090	815	705	657	892
18	840	1,240	1,470	2,970		1,660	1,380	1,060	815	705	770	815
19	818	1,100	1,470	2,270	2,800	1,580	1,300	1,060	815	705	892	748
20	818	1,000	2,010	1,920		1,540	1,300	1,090	865	685	748	705
21	818	940	4,500	1,960		1,460	1,260	1,120	840	685	705	705
22	818	915	4,850	2,700	4,820	1,420	1,300	1,060	815	685	681	705
23	818	890	7,220	2,440	4,320	1,420	1,260	1,030	792	685	669	705
24	818	890	4,160	2,270	7,260	1,420	1,200	1,060	792	685	665	685
25	818	890	2,700	1,960	9,060	1,380	1,200	1,030	792	685	661	681
26	818	1,100	2,060	1,740	6,320	1,340	1,200	1,000	792	685	725	673
27		1,240	1,820	1,600	5,180	1,300	1,200	1,000	770	685	770	669
28		1,100	1,640	1,560	4,480	1,300	1,160	975	770	681	705	669
29	818	1,000	1,470	3,410	-------	1,260	1,160	975	770	681	705	669
30		1,030	1,390	4,160	-------	1,260	1,160	975	770	677	792	705
31		-------	1,310	3,110	-------	1,300	-------	948	-------	677	815	------

NOTE.—No gage-height records Oct. 27–30 and Feb. 16–21; mean discharge estimated by study of record of North Umpqua River at Toketee Falls.

Monthly discharge of North Umpqua River above Rock Creek, near Glide, Oreg., for the year ending September 30, 1926

[Drainage area, 886 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	915	818	845	0.954	1.10	52,000
November	1,640	818	1,030	1.16	1.29	61,300
December	7,220	1,000	2,080	2.35	2.71	128,000
January	4,160	1,130	1,880	2.12	2.44	116,000
February	12,900	2,220	5,160	5.82	6.06	287,000
March	4,000	1,260	1,920	2.17	2.50	118,000
April	1,580	1,160	1,320	1.49	1.66	78,600
May	1,840	948	1,180	1.33	1.53	72,600
June	920	770	833	.941	1.05	49,600
July	748	677	708	.799	.92	43,500
August	892	649	698	.788	.91	42,900
September	892	653	699	.789	.88	41,600
The year	12,900	649	1,510	1.70	23.05	1,090,000

NORTH UMPQUA RIVER AT WINCHESTER, OREG.

LOCATION.—In NE. ¼ sec. 25, T. 26 S., R. 6 W., at Southern Pacific Railroad bridge in Winchester, Douglas County, 100 yards below new highway bridge, 300 yards below plant of California-Oregon Power Co., and 5 miles north of Roseburg.

DRAINAGE AREA.—1,290 square miles (measured on topographic and Forest Service maps).

RECORD AVAILABLE.—November 10, 1908, to December 31, 1913; October 1, 1923, to September 30, 1926.

GAGE.—Vertical staff in sections bolted to left railroad bridge pier. Datum of gage since 1924, 0.74 foot higher than that of earlier gage.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or from old highway bridge above Winchester Dam.

CHANNEL AND CONTROL.—Bed composed of rock and gravel; practically permanent. One channel at high and low stages; two at medium stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 10.2 feet at 5 p. m. February 4 (discharge, 23,300 second-feet); minimum discharge, 590 second-feet at 5 p. m. on October 22 and 23 (gage height, 0.36 foot).

1908–1913, 1923–1926: Maximum stage recorded, 28.1 feet on November 23, 1909 (discharge, 92,000 second-feet), information obtained from other gaging stations on the river and from residents indicated this to have been the highest flood in at least 50 or 60 years; minimum discharge, that of October 22 and 23, 1925.

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

DIVERSIONS.—None.

REGULATION.—Considerable diurnal fluctuation occurs owing to operation of hydroelectric plant immediately above station.

ACCURACY.—Stage-discharge relation changed during high water in February. Two fairly well defined rating curves used, identical above 3,800 second-feet. Gage read to hundredths twice a day; considerable diurnal fluctuation during October and November, owing to changing load on power plant; practically none during June to September. Daily discharge ascertained by applying mean daily gage height to rating table. Records good except those for October and November, which are fair.

The following discharge measurements were made:

November 23, 1925: Gage height, 1.18 feet; discharge 1,040 second-feet.

April 18, 1926: Gage height, 1.70 feet; discharge, 1,740 second-feet.

July 8, 1926: Gage height, 0.59 foot; discharge, 775 second-feet.

Daily discharge, in second-feet, of North Umpqua River at Winchester, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	872	808	1,130	1,490	4,010	5,550	1,660	1,320	1,120	830	670	900
2	872	975	4,010	1,490	3,650	5,140	1,560	1,320	1,080	795	670	830
3	1,010	905	3,180	1,580	3,180	4,560	1,560	1,280	1,040	760	670	700
4	840	1,050	1,800	1,580	14,200	4,010	1,560	1,370	1,040	760	670	682
5	1,010	940	1,580	1,800	13,300	3,670	1,770	2,000	1,000	795	646	670
6	905	840	1,400	3,330	19,200	3,350	1,770	2,240	1,000	760	682	676
7	905	745	1,400	2,430	16,600	3,050	1,770	1,770	935	760	682	670
8	1,010	872	1,220	2,040	12,100	2,770	1,660	1,770	970	760	670	795
9	840	872	1,180	1,800	8,040	2,770	1,660	1,880	935	730	652	670
10	840	872	1,090	1,680	9,870	2,630	1,560	1,770	830	760	658	664
11	808	975	1,050	1,490	9,600	2,500	1,770	1,660	900	730	652	658
12	840	1,800	1,800	1,490	7,300	2,240	2,000	1,560	830	730	670	646
13	808	2,290	4,190	1,310	5,550	2,120	2,000	1,460	865	730	688	646
14	808	1,490	2,430	1,310	4,560	2,240	1,770	1,320	900	730	628	646
15	808	1,130	1,800	1,680	4,010	2,370	1,770	1,200	900	700	622	658
16	808	1,680	1,580	1,680	5,340	2,370	1,660	1,320	900	700	622	676
17	808	1,400	1,680	3,650	5,760	2,240	1,660	1,280	900	700	616	730
18	808	1,490	1,800	4,750	4,940	2,120	1,660	1,280	865	694	730	1,000
19	808	1,400	1,920	3,830	4,750	2,000	1,660	1,280	900	682	1,160	865
20	840	1,180	2,730	3,030	4,370	2,000	1,660	1,280	900	694	865	760

Daily discharge, in second-feet, of North Umpqua River at Winchester, Oreg., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
21	808	1,050	5,340	2,290	5,970	1,880	1,560	1,240	900	682	795	730
22	775	975	7,070	4,010	8,300	1,770	1,560	1,280	865	682	700	700
23	775	940	11,500	3,650	7,070	1,770	1,460	1,240	900	682	676	700
24	808	905	6,190	3,330	12,100	1,770	1,460	1,240	900	688	682	700
25	872	872	3,830	2,880	17,200	1,770	1,370	1,240	865	670	682	682
26	905	1,050	2,880	2,430	11,000	1,770	1,370	1,200	830	670	670	670
27	808	1,400	2,430	2,160	8,300	1,660	1,320	1,120	830	670	795	670
28	905	1,220	2,430	2,160	6,630	1,660	1,160	1,160	830	682	795	664
29	840	1,090	1,920	3,830	-------	1,560	1,280	1,120	830	676	700	646
30	808	1,050	1,680	6,410	-------	1,560	1,460	1,120	830	670	730	694
31	940	-------	1,580	4,750	-------	1,560	-------	1,120	-------	670	730	------

Monthly discharge of North Umpqua River at Winchester, Oreg., for the year ending September 30, 1926

[Drainage area, 1,290 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	1,010	775	855	0.663	0.76	52,600
November	2,290	745	1,140	.884	.99	67,800
December	11,500	1,050	2,770	2.15	2.48	170,000
January	6,410	1,310	2,620	2.03	2.34	161,000
February	19,200	3,180	8,460	6.56	6.83	470,000
March	5,550	1,560	2,530	1.96	2.26	156,000
April	2,000	1,160	1,600	1.24	1.38	95,200
May	2,240	1,120	1,400	1.09	1.26	86,100
June	1,120	830	913	.708	.79	54,300
July	830	670	717	.556	.64	44,100
August	1,160	616	706	.547	.63	43,400
September	1,000	646	713	.553	.62	42,400
The year	19,200	616	2,000	1.55	20.98	1,440,000

SILETZ RIVER BASIN

SILETZ RIVER AT SILETZ, OREG.

LOCATION.—In NW. ¼ sec. 9, T. 10 S., R. 10 W., three-eighths of a mile above county road to Toledo and three-eighths of a mile southwest of Siletz, Lincoln County.

DRAINAGE AREA.—204 square miles (measured on special drainage-basin map prepared from subdivisional surveys).

RECORDS AVAILABLE.—November 25, 1905, to May 4, 1912; January 1 to June 7, 1924; and November 5, 1924, to September 30, 1926.

GAGE.—Staff gage back of house of S. C. Brassfield, the gage reader; staff gage, about one-fourth mile upstream, used 1905 to 1912, and chain gage at highway bridge used January to June, 1924.

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

CHANNEL AND CONTROL.—Bed composed of coarse gravel and sand; shifts in extreme floods.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 14.0 feet at 10 a. m. February 6 (discharge, 16,800 second-feet); minimum stage, —1.40 feet October 25 (discharge, 53 second-feet).

1905–1912, 1924–1926: Maximum stage, 24.6 feet about 2 p. m. November 22, 1909, determined by leveling to high-water marks in 1910 (discharge,

from extension of rating curve, 34,600 second-feet); minimum discharge recorded, that of October 25, 1925.

The flood of November 20, 1921, reached a stage of 31.16 feet at the bridge, and 28.2 feet at present gage, as determined by leveling to well-authenticated high-water marks (discharge, by extension of rating curves, 40,800 second-feet).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—Operation of the Cobbs & Mitchell logging dam at Valsetz may affect discharge slightly at times, during low and medium stages.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined. Gage read once a day to tenths and occasionally to even hundredths at low stages. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

Discharge measurements of Siletz River at Siletz, Oreg., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 17	−1.30	73	Feb. 6	13.30	15,600
Jan. 16	.58	1,010	July 9	−.98	159

Daily discharge, in second-feet, of Siletz River at Siletz, Oreg., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	144	100	1,640	1,320	2,510	1,970	540	295	740	215	95	255
2	120	105	1,560	1,160	2,900	1,800	540	275	670	215	95	255
3	105	115	1,480	1,020	4,220	1,800	540	255	670	215	86	295
4	95	115	1,480	1,160	7,100	1,720	512	1,160	670	180	82	295
5	91	120	1,400	1,320	10,200	1,640	485	1,320	635	180	82	295
6	86	120	1,480	1,640	15,100	1,480	460	1,020	600	180	73	318
7	77	120	1,560	1,640	12,800	1,400	460	1,240	570	180	69	318
8	77	126	1,640	1,560	7,700	1,320	460	1,560	540	180	73	318
9	82	126	1,800	1,480	4,220	1,240	435	1,400	485	168	73	318
10	91	670	1,800	1,480	3,010	1,160	435	1,090	435	168	77	340
11	86	1,480	2,150	1,020	2,490	1,160	435	880	410	168	73	340
12	82	2,150	2,060	1,020	1,970	1,090	435	880	385	168	77	340
13	77	2,510	2,150	915	1,970	1,020	435	740	340	168	73	340
14	73	2,420	2,240	950	2,240	950	410	810	340	165	82	318
15	77	2,700	2,600	1,020	2,150	950	385	880	340	162	86	318
16	73	3,340	3,120	1,090	2,060	915	340	880	318	162	141	318
17	73	2,240	2,240	1,480	1,970	915	318	880	295	162	385	340
18	77	2,150	2,240	3,340	1,880	880	295	810	318	162	540	340
19	86	1,800	2,420	2,240	1,720	810	295	880	295	162	435	340
20	82	1,640	9,290	2,150	1,970	810	295	810	295	156	385	362
21	77	1,640	10,500	3,120	2,330	740	318	880	340	156	295	670
22	73	1,720	8,420	3,450	3,670	740	295	880	340	162	295	1,480
23	69	1,640	8,900	3,450	4,440	740	295	880	295	156	255	1,640
24	73	1,400	6,860	3,340	15,100	705	295	880	295	156	255	1,480
25	53	1,400	5,320	3,120	7,460	670	295	950	295	150	215	1,320
26	95	1,240	4,220	2,900	4,660	670	295	1,020	275	150	215	1,240
27	95	1,160	3,340	2,700	2,330	635	295	950	275	144	215	1,160
28	95	1,020	2,800	2,600	2,150	635	318	880	255	138	255	1,090
29	100	880	2,150	2,510	-------	635	340	880	255	120	255	1,090
30	100	1,320	1,640	2,330	-------	635	340	810	235	100	255	950
31	98	-------	1,320	2,240	-------	600	-------	740	-------	95	255	------

Monthly discharge of Siletz River at Siletz, Oreg., for the year ending September 30, 1926

[Drainage area, 204 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October	144	53	86.5	0.424	0.49	5,320
November	3,340	100	1,250	6.13	6.84	74,400
December	10,500	1,320	3,280	16.1	18.56	202,000
January	3,450	915	1,960	9.61	11.08	121,000
February	15,100	1,720	4,730	23.2	24.16	263,000
March	1,970	600	1,050	5.15	5.94	64,600
April	540	295	387	1.90	2.12	23,000
May	1,560	255	897	4.40	5.07	55,200
June	740	235	407	2.00	2.23	24,200
July	215	95	163	.799	.92	10,000
August	540	69	189	.926	1.07	11,600
September	1,640	255	616	3.02	3.37	36,700
The year	15,100	53	1,230	6.03	81.85	891,000

NEHALEM RIVER BASIN

ROCK CREEK NEAR KEASEY, OREG.

LOCATION.—In SE. ¼ SW. ¼ sec. 6, T. 4 N., R. 5 W., one-third of a mile above diversion dam of the Vernonia Light & Power Co., 1¼ miles above post office and railroad station at Keasey, Columbia County.

DRAINAGE AREA.—39 square miles (measured on county and private maps).

RECORDS AVAILABLE.—September 11, 1925, to September 30, 1926.

GAGE.—Vertical staff on right bank; read by George King.

DISCHARGE MEASUREMENTS.—Made from foot log 100 yards above gage or by wading.

CHANNEL AND CONTROL.—Stream bed of rock overlain with gravel and boulders. Control is a riffle 50 feet below gage; practically permanent. Stream does not overflow banks.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.5 feet December 21 and 22 (discharge, 1,620 second-feet); minimum stage, 0.64 foot on November 8 (discharge, 9 second-feet).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—Water is stored in logging dam several miles above gage and is released during low-water period. Considerable water was released during September and October, 1925, but none at the time of the minimum discharge, November 8.

ACCURACY.—Stage-discharge relation apparently permanent during year. Rating curve well defined between 14 and 100 second-feet. Gage read once a day, generally to hundredths. Daily discharge ascertained by applying daily gage reading to rating table. Records good.

Discharge measurements of Rock Creek near Keasey, Oreg., during the period September 11, 1925, to September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
Sept. 11	0.86	15.8	Jan. 22	1.98	200	Feb. 8	2.88	526
			Feb. 7	3.22	715	June 24	1.02	27.6
1926								
Jan. 21	2.12	231						

Daily discharge, in second-feet, of Rock Creek near Keasey, Oreg., for the period September 11, 1925, to September 30, 1926

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	16	15	230	143	245	245	46	36	51	24	16	14
2	-------	15	15	260	135	180	192	46	36	51	24	16	14
3	-------	14	15	180	115	415	168	48	36	46	24	16	14
4	-------	14	15	125	115	640	168	54	106	43	22	16	14
5	-------	14	14	106	104	1,170	168	54	125	42	22	14	15
6	-------	14	12	106	180	700	156	56	135	41	22	14	15
7	-------	13	10	106	168	700	156	59	156	41	22	14	14
8	-------	13	9	106	135	530	148	55	125	41	21	14	14
9	-------	16	24	94	135	395	135	55	115	41	21	14	13
10	-------	14	156	106	135	320	129	55	107	41	21	14	13
11	16	16	180	168	125	245	125	55	96	41	20	14	13
12	16	14	135	305	107	192	125	54	82	41	16	14	21
13	16	13	96	395	107	192	125	52	72	38	16	13	15
14	16	14	96	245	107	192	119	49	68	36	16	13	12
15	15	16	245	205	106	192	119	49	62	36	16	13	22
16	15	13	290	205	115	192	115	48	62	36	16	18	62
17	15	12	180	230	260	192	107	48	56	36	16	16	68
18	15	12	125	218	260	180	100	44	65	36	18	22	72
19	21	12	125	230	275	192	96	44	62	36	18	22	82
20	15	12	115	320	260	245	92	48	56	36	18	20	62
21	15	12	115	1,620	230	375	92	62	51	36	17	22	62
22	14	12	78	1,620	205	530	87	52	56	33	17	23	111
23	13	16	78	1,240	168	820	87	46	62	33	16	18	68
24	13	14	73	1,170	168	1,030	87	42	56	28	18	16	46
25	16	16	70	700	168	640	82	42	51	28	18	13	36
26	15	16	70	320	146	530	75	38	48	26	18	31	33
27	15	16	72	218	146	355	70	36	56	26	17	36	28
28	48	16	78	218	205	305	70	36	56	26	17	30	24
29	21	25	85	205	230	-------	56	36	58	26	17	22	24
30	15	18	96	168	230	-------	56	36	54	24	17	19	22
31	-------	16	-------	156	230	-------	51	-------	54	-------	17	16	------

Monthly discharge of Rock Creek near Keasey, Oreg., for the years ending September 30, 1925 and 1926

[Drainage area, 39 square miles]

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1925						
September 11–30	48	13	17.2	0.441	0.33	682
1925–26						
October	25	12	14.6	.374	.43	898
November	290	9	89.6	2.30	2.57	5,330
December	1,620	94	373	9.56	11.02	22,900
January	275	104	168	4.31	4.97	10,300
February	1,170	180	425	10.9	11.35	23,600
March	245	51	116	2.97	3.42	7,130
April	62	36	48.2	1.24	1.38	2,870
May	156	36	72.9	1.87	2.16	4,480
June	51	24	36.5	.936	1.04	2,170
July	24	16	18.8	.482	.56	1,160
August	36	13	18.0	.462	.53	1,110
September	111	12	34.1	.874	.98	2,030
The year	1,620	9	116	2.97	40.41	84,000

MISCELLANEOUS DISCHARGE MEASUREMENTS

In addition to the records of stream flow obtained at gaging stations and reported in the preceding pages, measurements of flow were made at a number of other points, as shown by the following table:

Miscellaneous discharge measurements in Pacific slope drainage basins in Oregon and in lower Columbia River Basin during the year ending September 30, 1926

Deschutes River Basin, Oreg.

Date	Stream	Tributary to—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Nov. 19	Sheep Bridge Springs (north vent).	Deschutes River	SE. ¼ sec. 20, T. 21 S., R. 8 E.		38.0
19	Sheep Bridge Springs (south vent).	do	do		51
16	Brown Creek	do	Sec. 30, T. 21 S., R. 8 E., near head.		40.2
17	Davis Creek (largest single spring at head).	do	Sec. 18, T. 22 S., R. 8 E.		54
20	Spring	Davis Creek	First spring below upper bridge 1 mile below head of Davis Creek.		79
20	do	do	Second spring below upper bridge 1 mile below head of Davis Creek.		68
21	Fall River	Deschutes River	Sec. 10, T. 22 S., R. 8 E., below two vents at Fish hatchery.		103
22	Spring River	do	NW. ¼ sec. 6, T. 20 S., R. 11 E., at mouth.		118
22	do	do	SW. ¼ sec. 1, T. 20 S., R. 10 E., at head.		37.3
28	Crooked River	do	Trail crossing, sec. 33, T. 13 S., R. 13 E.		110
29	do	do	Above Opal Springs, NE. ¼ sec. 33, T. 12 S., R. 12 E.		841
24	Metolius River	do	NE. ¼ sec. 22, T. 13 S., R. 9 E., below Black Butte Springs at head of river.		122
26	Spring	Metolius River	SW. ¼ sec. 10, T. 13 S., R. 9 E., one-fourth mile below mouth of Lake Creek.		108
24	Heising Spring	do	NW. ¼ sec. 34, T. 12 S., R. 9 E. (on west side of river) above Jack Creek.		144
26	Spring	do	NW. ¼ sec. 34, T. 12 S., R. 9 E. (on east side of river).		14.4
24	Jack Creek	Heising Spring	At mouth near line between secs. 27 and 34, T. 12 S., R. 9 E.		54
25	Roaring Creek	Canyon Creek	SW. ¼ sec. 20, T. 13 S., R. 9 E., half a mile above mouth.		54
26	Allen Spring	Metolius River	SW. ¼ sec. 11, T. 12 S., R. 9 E., at Allen ranch.		11.5

Sandy River Basin, Oreg.

May 14	Sandy River	Columbia	One-fourth mile below dam of Portland Electric Power Co. near Marmot.	732.55	57
Aug. 6	Devil Creek	Zigzag River	300 feet above mouth near Rhododendron.		2.1
6	Lady Creek	do	150 feet above mouth near Rhododendron.		3.8
20	Salmon River	Sandy River	300 feet below mouth of Linney Creek.		135
21	Mud Creek	Salmon River	SW. ¼ sec. 11, T. 4 S., R. 8½ E., at proposed dam site.		6.8

Willamette River Basin, Oreg.

Sept. 22	Willamette River	Columbia River	Oregon City	[a] 1.40	6,450
28	do	do	do	[a] .80	6,230
June 10	Coast Fork of Willamette River.	Willamette River	Above Little River		15
Do	do	do	London		23
Sept. 21	do	do	do		20

[a] Gage below locks at Oregon City.

Miscellaneous discharge measurements in Pacific slope drainage basins in Oregon and in lower Columbia River Basin during the year ending September 30, 1926—Continued

Willamette River Basin, Oreg.—Continued

Date	Stream	Tributary to—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
June 12	Row River	Coast Fork of Willamette River.	Above Mosby Creek		71
Aug. 11	do	do	do		17
June 23	Layng Creek	Row River	Below Junette Creek		11
15	do	do	At mouth		18
Sept. 20	do	do	do		16
June 22	Frank Brice Creek	do	Below Champion Creek		10
12	do	do	At mouth		20
Sept. 20	do	do	do		15
June 14	Sharp Creek	do	Above Buck Creek		6
Sept. 20	do	do	At mouth		8
June 11	Mosby Creek	do	Sec. 5, T. 22 S., R. 2 W		14
11	do	do	At mouth		17
Sept. 20	do	do	do		13
Oct. 20	Clackamas River	Willamette River	Just below mouth of Cripple Creek.	1,133.42	351
15	do	do	300 feet below Portland Electric Power Co.'s dam near Cazadero.		36
15	do	do	1,000 feet above railroad bridge at Cazadero.		119
15	do	do	do		61
16	Collawash River	Clackamas River	4,000 feet above mouth	.61	48
19	Roaring River	do	1,200 feet above mouth		41
19	do	do	do		42
19	Fish Creek	do	1,000 feet above mouth		9.2
5	South Fork	do	200 feet below falls		12.7
5	North Fork	do	1,500 feet above mouth		7.9

Kalama River Basin, Wash.

Apr. 7	Kalama River	Columbia River	Above Merrill Lake, sec. 4, T. 7 N., R. 4 E.		41.1
June 30	do	do	do	0.42	28.0
July 3	do	do	do	.40	26.7
1	do	do	Below Cold Spring, sec. 7, T. 7 N., R. 4 E.	.30	166
3	do	do	do	.29	167
Aug. 6	do	do	Sleifer's cabin, sec. 21, T. 7 N., R. 3 E.		148
11	do	do	Below Elk Creek, sec. 24, T. 7 N., R. 2 E.		150
May 22	do	do	Above Pigeon Springs, sec. 31, T. 7 N., R. 2 E.		606
Aug. 14	do	do	do		169
July 24	Spring (outlet of Merrill Lake).	Kalama River	Sec. 7, T. 7 N., R. 4 E	.51	28.1
3	Cold Spring	do	do		19.6
Aug. 6	Elk Creek	do	Near mouth, sec. 24, T. 7 N., R. 2 E.		9.9

Rogue River Basin, Oreg.

Oct. 3	Big Butte Springs, channel No. 1.	South Fork of Big Butte Creek.	In NE. ¼ SW. ¼ sec. 20, T. 35 S., R. 3 E.		15.4
30	do	do	do		14.1
Mar. 4	do	do	do		14.4
Apr. 26	do	do	do		13.4
June 9	do	do	do		13.0
July 1	do	do	do		[b]13.4
28	do	do	do		13.2
Sept. 25	do	do	do		13.2
Oct. 3	South Fork of Big Butte Creek.	Big Butte Creek	In NE. ¼ NE. ¼ sec. 20, T. 35 S., R. 3 E., above Rancheria Creek.		59
30	do	do	do		51
Apr. 26	do	do	In SE. ¼ sec. 17, T. 35 S., R. 3 E., 75 feet above Rancheria Creek.		61
June 9	do	do	do		53
July 1	do	do	do		50
28	do	do	In NE. ¼ NE. ¼ sec. 20, T. 35 S., R. 3 E.		43.1
Sept. 25	do	do	do		44.6
July 1	do	do	NE. ¼ sec. 10, T. 34 S., R. 2 E		41.8
Sept. 21	do	do	do		51.2

[b] About July 1 work was begun driving tunnel to increase flow of springs for Medford water supply.

Miscellaneous discharge measurements in Pacific slope drainage basins in Oregon and in lower Columbia River Basin during the year ending September 30, 1926—Continued

Rogue River Basin, Oreg.—Continued

Date	Stream	Tributary to—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
July 21	Clark Creek	Big Butte Creek	Above diversions, in sec. 8, T. 34 S., R. 2 E.		2.0
Nov. 7	Tunnel leak	North Fork of Little Butte Creek.	At Fish Lake Reservoir	[e]4,814.65	3.0
Apr. 12	do	do	do	[e]4,820.09	6.0
27	do	do	do	[e]4,820.10	5.6
26	Cold Spring Creek	do	At mouth, in sec. 5, T. 37 S., R. 4 E.	.52	14.4
June 11	do	do	do	.52	15.4
July 2	do	do	do	.49	12.8
23	do	do	do	.46	11.4
Sept. 29	South Fork of Little Butte Creek.	Little Butte Creek	Below Soda Creek, in sec. 18, T. 37 S., R. 3 E.		12.3
Apr. 21	Emigrant Creek	Bear Creek	Above Talent Irrigation District's siphon in sec. 34, T. 39 S., R. 2 E.	.42	2.6
8	Sampson Creek	Emigrant Creek	Above Ashland lateral, in sec. 27, T. 39 S., R. 2 E.	1.05	14.3
June 2	do	do	do	1.16	21.2
Mar. 30	Wagner Creek	Bear Creek	At bridge, above East Fork of Wagner Creek, sec. 14, T. 39 S., R. 1 W.		7.8
Apr. 12	do	do	do	.40	10.7
16	do	do	do	.46	11.4
21	do	do	do	.44	11.0
27	do	do	do	.49	11.9
May 11	do	do	do	.36	9.3
14	do	do	do	.36	9.4
19	do	do	do	.20	7.0
28	do	do	do	.15	5.7
June 2	do	do	do	−.16	4.5
Dec. 29	Squaw Creek	Applegate River	Two-thirds mile below Squaw Lake, in NE. ¼ sec. 3, T. 41 S., R. 3 W.	.41	2.6
Mar. 13	do	do	do	.42	3.1
13	do	do	do	.42	3.0
Apr. 16	do	do	do	.50	5.7
July 15	Applegate River	Rogue River	Below Cook ditch, in sec. 21, T. 38 S., R. 4 W.		21.2
13	Little Applegate River.	Applegate River	Above Gallagher ditch, 1½ miles above Yale Creek.	.50	5.7
Mar. 13	do	do	Above Sterling Creek	.60	17.6
Apr. 16	do	do	do	.82	33.2
May 14	do	do	do	.50	12.6
June 24	do	do	do	.40	9.3
July 31	do	do	do	.20	3.4
Aug. 8	do	do	do	.29	5.9

Umpqua River Basin, Oreg.

May 21	North Umpqua River.	Umpqua River	At Kelsay Valley, probably in sec. 18, T. 26 S., R. 6 E.		284
July 17	do	do	do		248
Sept. 7	do	do	do		255
Oct. 12	Lake Creek	North Umpqua River.	Former gaging station at outlet of Diamond Lake.	1.03	173
May 20	Spring River	do	Trail crossing, near SE. cor. sec. 18, T. 26 S., R. 6 E.		177
July 17	do	do	do		174
Sept. 7	do	do	do		169
Oct. 10	Clearwater River	do	Above Trap Creek	.48	134
May 20	do	do	do	.56	151
July 18	do	do	do	.40	128
Sept. 8	do	do	do	.37	111
8	do	do	do	.37	120
11	do	do	do	.37	114
Oct. 11	Fish Creek	do	Below Camas Creek	4.23	48.5
Sept. 3	Little River	do	At mouth, Clide		23.5

Siletz River Basin, Oreg.

July 8	South Fork of Siletz River.	Siletz River	Below dam at Valsetz, in NE. ¼ sec. 28, T. 8 S., R. 8 W.	1.11	9.6
9	Euchre Creek	do	Former gaging station in sec. 16, T. 9 S., R. 10 W.	−.20	[d]7.0

[e] Gage height on Fish Lake Reservoir. [d] Estimated.

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