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GEOLOGICAL SURVEY

GEORGE OTIS SMITH, Director

Water-Supply Paper 654

SURFACE WATER SUPPLY *of the* UNITED STATES 1927

PART XII

NORTH PACIFIC SLOPE
DRAINAGE 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, 1927

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of flow made on streams in the United States during the year ending September 30, 1927.

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 year ending June 30, 1895-1928

1895-----	\$12, 500. 00	1919-----	\$148, 244. 10
1896-----	24, 500. 00	1920-----	175, 000. 00
1897-1899-----	50, 000. 00	1921-----	180, 000. 00
1900-----	70, 000. 00	1922-----	180, 000. 00
1901-2-----	100, 000. 00	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
1911-1917-----	150, 000. 00	1928-----	147, 000. 00
1918-----	175, 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 5,330 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July, 1927, 1,750 gaging stations were

being maintained by the Geological Survey and the cooperating organizations. Many miscellaneous discharge measurements are 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 stretch of the channel or artificial structure below the gage which determines the stage-discharge relation at the gage.

EXPLANATION OF DATA

The data presented in this report cover the year beginning October 1, 1926, and ending September 30, 1927. 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 underground 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 supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from

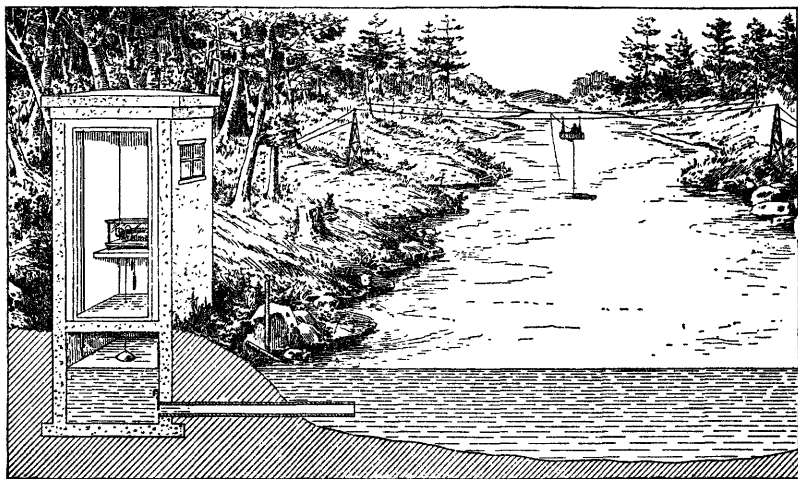


FIGURE 1.—Typical gaging station

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

From the discharge measurements rating tables are prepared that give the discharge for any stage. The application of the daily gage height 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 showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off.

The description of the station gives, in addition to statements regarding location and type of gage, 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 maximum discharge given under "Extremes" does not represent the crest discharge unless a water-stage recorder was in operation or unless a nonrecording gage was read at the time of the crest.

The table of daily discharge gives, in general, the discharge in second-feet corresponding to the daily gage height, which may be a once daily reading or the mean of twice daily readings of a nonrecording gage, or the mean daily gage height obtained from a water-stage recorder graph.

At stations on streams subject to sudden or rapid diurnal fluctuation 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 for obtaining mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

In the table of monthly discharge the column headed "Maximum" gives the maximum daily discharge, and not the discharge when the water surface was at crest height. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" is the average flow during the month. On this average flow are based computations recorded in the remaining columns, which are defined on page 2.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

The station description gives a statement in regard to the general accuracy of the records. "Excellent" indicates that records are accurate within 5 per cent; "good," within 10 per cent; "fair," within 15 per cent; and "poor," 20 per cent or more.

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.

The table of monthly discharge gives a general idea of the flow at the station. The table of daily discharge allows more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on data previously published.

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.

PUBLICATIONS

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

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 parts:

A, Pacific slope basins in Washington and upper Columbia River Basin.

B, Snake River Basin.

C, Pacific slope basins in Oregon and lower Columbia River Basin.

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

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

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

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

Augusta, Me., Statehouse.
Boston, Mass., 2500 Customhouse.
Hartford, Conn., 60 Washington Street.
Albany, N. Y., 506 Broadway-Arcade Building.
Trenton, N. J., 710 Trenton Trust Building.
Charlottesville, Va., Brooks Museum, University of Virginia.
South Charleston, W. Va., Naval Ordnance Plant.
Asheville, N. C., 210 Post Office Building.
Columbia, S. C., 801 National Loan & Trust Building.
Ocala, Fla., Federal Building.
Chattanooga, Tenn., 630 Power Building.
Tuscaloosa, Ala., Post Office Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Chicago, Ill., 1503 Consumers Building.
Indianapolis, Ind., 315 Federal Building.
Lansing, Mich., M9 State Office Building.
Madison, Wis., 337N State Capitol.
St. Paul, 202 Old State Capitol.
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., 210 Post Office Building.
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., 416 Power Block.
Tacoma, Wash., 406 Federal Building.
Portland, Oreg., 606 Post Office Building.
San Francisco, Calif., 303 Customhouse.
Los Angeles, Calif., 751 South Figueroa Street, room 510.
Honolulu, Hawaii, Territorial Office Building.

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

Stream-flow records have been obtained at about 5,330 points in the United States, and the data obtained have been published in the reports tabulated on page 7.

Stream-flow data in reports of the United States Geological Survey

[A = Annual Report; B = Bulletin; W = Water-Supply Paper]

Report	Character of data	Year
10th A, pt. 2	Descriptive information only	
11th A, pt. 2	Monthly discharge and descriptive information	1884 to Sept., 1890.
12th A, pt. 2	do	1884 to June 30, 1891.
13th A, pt. 3	Mean discharge in second-feet	1884 to Dec. 31, 1892.
14th A, pt. 2	Monthly discharge (long-time records, 1871 to 1893)	1888 to Dec. 31, 1893.
B 131	Descriptions, measurements, gage heights, and ratings	1893 and 1894.
16th A, pt. 2	Descriptive information only	
B 140	Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years)	1895.
W 11	Gage heights (also gage heights for earlier years)	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years)	1895 and 1896.
W 15	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas.	1897.
W 16	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte, and western United States	1897.
19th A, pt. 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.
W 641 to 654	do	1927.

The records at most of the stations discussed in these reports extend over a series of years. Miscellaneous measurements at many points other than regular gaging stations have been made each year, and are published under "Miscellaneous discharge measurements" at the end of each report, in the same relative order as the regular gaging stations. 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 number of the papers on surface-water supply published from 1899 to 1927. The data for any particular station will be found in the reports covering the years during which the station was maintained. For example, data from 1910 to 1920 for any station in the area covered by Part III are published in Water-Supply Papers 283, 303, 323, 353, 383, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

[For basins included see p. 5]

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII-A	XII-B	XII-C
1899 *	35	35, 36	36	36	36	36, 37	37	37	37, 38	38, * 39	38, f 39	38	38	38
1900 *	47, * 48	48, * 49	48, * 49	49	49	49, * 50	50	50	50	51	51	51	51	51
1901	65, 75	65, 75	65, 75	65, 75	65, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82, 83	* 82, 83	* 82, 83	* 82, 83	* 82, 83	* 83, 84	* 83, 84	* 83, 84	* 83, 84	* 85	* 85	* 85	* 85	* 85
1903	97	* 97, 98	98	98	98	99	99	99	100	100	100	100	100	100
1904	* 124, * 125	p 126, 127	128	129	* 128, 130	130, * 131	* 128, 131	132	133	133, * 134	134	135	135	135
1905	* 165, * 166	p 167, 168	169	170	171	172	* 169, 173	174	175, * 177	176, * 177	177	178	178	* 177, 178
1906	* 201, * 202	p 203, 204	205	206	207	208	* 205, 209	210	211	212, * 213	213	214	214	214
1907-8	241	242	243	244	245	246	247	248	249	250, * 251	251	252	252	252
1909	261	262	263	264	265	266	267	268	269	270, * 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	332	332
1913	351	352	353	354	355	356	357	358	359	360	361	362-A	362-B	332-C
1914	381	382	383	384	385	386	387	388	389	390	391	362-A	362-B	362-C
1915	401	402	403	404	405	406	407	408	409	410	411	412	413	414
1916	431	432	433	434	435	436	437	438	439	440	441	442	443	444
1917	451	452	453	454	455	456	457	458	459	460	461	462	463	464
1918	471	472	473	474	475	476	477	478	479	480	481	482	483	484
1919-20	501	502	503	504	505	506	507	508	509	510	511	512	513	514
1921	521	522	523	524	525	526	527	528	529	530	531	532	533	534
1922	541	542	543	544	545	546	547	548	549	550	551	552	553	554
1923	561	562	563	564	565	566	567	568	569	570	571	572	573	574
1924	581	582	583	584	585	586	587	588	589	590	591	592	593	594
1925	601	602	603	604	605	606	607	608	609	610	611	612	613	614
1926	621	622	623	624	625	626	627	628	629	630	631	632	633	634
1927	641	642	643	644	645	646	647	648	649	650	651	652	653	654

* 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.

James River only.

* Galatin River.

* Green and Gunnison Rivers and Grand River above junction with Gunnison.

* Mohave River only.

* Kings and Kerns Rivers and south Pacific slope basins.

* 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.

* Wissluncheon and Schuykill Rivers to James River.

* Scioto River.

* Loup and Platte Rivers near Columbus, Nebr., and all tributaries below junction with Platte.

* Tributaries of Mississippi from east.

* Lake Ontario and tributaries to St. Lawrence River proper.

* Hudson Bay only.

* New England rivers only.

* Hudson River to Delaware River, inclusive.

* Susquehanna River to Yackin River, inclusive.

* Platte and Kansas Rivers.

* Great Basin in California except Truckee and Carson River Basins.

* Below junction with Gila.

* Rogue, Umpqua, and Siletz Rivers only.

* Scioto River.

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.

The work in Oregon was carried on in cooperation with Rhea Luper, State engineer, who represented his State in the cooperative investigations.

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

Special acknowledgments are due for financial assistance rendered by the United States Corps of Engineers and by municipalities, corporations, and individuals, as follows: 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.; Columbia Valley Power Co.; Oregon-California Hydroelectric Co.; California Oregon Power Co.; Northwestern Electric Co.; Pacific Power & Light Co.; Portland Electric Power Co.; Puget Sound Power & Light Co.; Rogue River Valley Canal Co.; Prairie Power Co.; Deschutes Falls Power 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 the direction of F. F. Henshaw and G. H. Canfield, district engineers, assisted by K. N. Phillips and Wendell Dawson. Data for some stations in Oregon, as noted in the station descriptions, were collected by the State under supervision of Rhea Luper, State engineer. Records for these stations, computed in the office of the State engineer, were reviewed and prepared for publication by F. F. Henshaw, G. H. Canfield, and K. N. Phillips.

Data for stations in the Walla Walla River 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, Wesley Johnston, C. E. Douglass, and J. R. Gatewood.

The manuscript was assembled and reviewed by Warren Withee.

GAGING-STATION RECORDS

MAIN STREAM

COLUMBIA RIVER AT THE DALLES, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 3, T. 1 N., R. 13 E., at foot of Court Street at The Dalles, 18 miles below Deschutes River, above Hood and Klickitat Rivers. Zero of gage is 46.55 feet above mean sea level.

DRAINAGE AREA.—237,000 square miles.

RECORDS AVAILABLE.—June, 1878, to September, 1927. Maximum stages, 1858 to 1877.

EXTREMES.—Maximum discharge during year, 690,000 second-feet June 18 (gage height, 38.8 feet); minimum, 74,000 second-feet October 5 (gage height, 1.0 foot).

1858-1927: Maximum discharge, 1,170,000 second-feet June 6, 1894 (gage height, 59.6 feet); minimum, 47,000 second-feet December 17, 1919 (gage height, -4.0 feet on gage at Cascade Locks).

REMARKS.—Records good. Gage readings at Cascade Locks, 40 miles downstream, used for periods of ice effect at The Dalles, January 21 to February 2 and February 15-19. Quantity of water diverted for irrigation is large in the aggregate but constitutes only a small proportion of the total flow; low-water flow, which comes in winter, is little affected. Gage-height record furnished by United States Weather Bureau.

Daily discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	77,500	105,000	126,000	94,000	96,300	129,000	120,000	291,000	433,000	602,000	260,000	144,000
2.....	76,800	102,000	148,000	97,000	102,000	125,000	120,000	292,000	432,000	587,000	255,000	143,000
3.....	76,100	102,000	156,000	104,000	104,000	123,000	124,000	289,000	428,000	568,000	249,000	141,000
4.....	76,100	101,000	162,000	103,000	112,000	124,000	131,000	289,000	430,000	553,000	243,000	141,000
5.....	74,000	101,000	165,000	106,000	118,000	125,000	136,000	281,000	437,000	539,000	240,000	143,000
6.....	74,700	101,000	168,000	109,000	125,000	126,000	138,000	272,000	445,000	522,000	236,000	143,000
7.....	76,100	100,000	164,000	113,000	132,000	127,000	141,000	266,000	461,000	511,000	229,000	143,000
8.....	75,400	98,000	155,000	113,000	130,000	123,000	142,000	260,000	491,000	497,000	222,000	141,000
9.....	75,400	96,000	145,000	110,000	118,000	122,000	141,000	252,000	532,000	483,000	216,000	138,000
10.....	74,700	98,000	139,000	107,000	109,000	121,000	138,000	248,000	591,000	471,000	213,000	139,000
11.....	74,700	99,000	136,000	106,000	103,000	120,000	138,000	245,000	638,000	453,000	208,000	139,000
12.....	75,400	99,000	131,000	104,000	97,000	117,000	138,000	243,000	646,000	435,000	202,000	142,000
13.....	76,100	99,000	124,000	101,000	93,100	115,000	137,000	248,000	653,000	422,000	195,000	142,000
14.....	77,500	98,000	123,000	98,000	90,400	113,000	135,000	257,000	660,000	407,000	190,000	144,000
15.....	76,800	97,000	120,000	98,000	90,800	114,000	129,000	267,000	673,000	392,000	187,000	150,000
16.....	78,200	103,000	115,000	98,000	89,700	120,000	127,000	287,000	682,000	374,000	183,000	158,000
17.....	80,300	101,000	111,000	97,000	88,600	123,000	133,000	315,000	688,000	361,000	181,000	165,000
18.....	84,200	102,000	109,000	98,000	96,300	125,000	139,000	359,000	690,000	352,000	178,000	168,000
19.....	82,600	99,000	109,000	95,000	104,000	125,000	143,000	405,000	688,000	345,000	178,000	169,000
20.....	85,000	97,000	106,000	96,000	99,000	123,000	143,000	422,000	682,000	335,000	176,000	169,000
21.....	89,500	95,000	109,000	97,400	143,000	120,000	142,000	418,000	679,000	327,000	173,000	172,000
22.....	94,000	92,200	109,000	95,200	155,000	115,000	139,000	405,000	675,000	320,000	170,000	172,000
23.....	97,000	92,200	106,000	91,900	172,000	112,000	136,000	392,000	668,000	311,000	170,000	172,000
24.....	98,000	92,200	104,000	89,700	185,000	113,000	136,000	379,000	662,000	305,000	165,000	172,000
25.....	98,000	98,000	101,000	88,600	190,000	115,000	136,000	376,000	655,000	299,000	160,000	168,000
26.....	99,000	105,000	98,000	86,500	163,000	116,000	142,000	376,000	655,000	294,000	156,000	163,000
27.....	102,000	112,000	95,000	83,500	150,000	117,000	160,000	385,000	646,000	287,000	155,000	156,000
28.....	101,000	120,000	92,200	82,500	139,000	117,000	201,000	397,000	644,000	279,000	153,000	155,000
29.....	100,000	126,000	91,300	87,500	-----	117,000	243,000	414,000	642,000	275,000	150,000	155,000
30.....	105,000	137,000	92,200	87,700	-----	117,000	276,000	424,000	627,000	272,000	148,000	154,000
31.....	106,000	-----	92,200	93,000	-----	121,000	-----	433,000	-----	266,000	145,000	-----

Monthly discharge, in second-feet, of Columbia River at The Dalles, Oreg., 1926-27

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	106,000	74,000	85,100	0.359	0.41	5,230,000
November.....	137,000	92,200	102,000	.430	.48	6,070,000
December.....	168,000	91,300	123,000	.519	.60	7,560,000
January.....	113,000	82,500	97,800	.413	.48	6,010,000
February.....	190,000	88,600	121,000	.511	.53	6,720,000
March.....	129,000	112,000	120,000	.506	.58	7,380,000
April.....	276,000	120,000	147,000	.620	.69	8,750,000
May.....	433,000	243,000	329,000	1.39	1.60	20,200,000
June.....	690,000	428,000	598,000	2.52	2.81	35,600,000
July.....	602,000	266,000	401,000	1.69	1.95	24,700,000
August.....	260,000	145,000	193,000	.814	.94	11,900,000
September.....	172,000	138,000	153,000	.646	.72	9,100,000
The year.....	690,000	74,000	206,000	.869	11.79	149,000,000

TRIBUTARIES OF COLUMBIA RIVER BELOW MOUTH OF SNAKE RIVER

WALLA WALLA RIVER BASIN

WALLA WALLA RIVER NEAR MILTON, OREG.

LOCATION.—Water-stage recorder 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.

RECORDS AVAILABLE.—February, 1903, to May, 1906; March, 1918, to September, 1927. Incomplete.

EXTREMES.—Maximum discharge during year, 1,050 second-feet November 29 (gage height, 2.70 feet); minimum, 77 second-feet August 9 (gage height, 0.71 foot).

1903-1906, 1918-1927: Maximum discharge, about 8,130 second-feet May 30, 1906, determined by slope-area method; minimum, 69 second-feet July 29, 1926 (gage height, 0.21 foot).

REMARKS.—Records good except those for January 21-23, March 8-13, and July 22-26, which were estimated. No record October 3 to November 23. Small amount of diversion for irrigation above station. Flow regulated somewhat, especially at low water, by Pacific Power & Light Co.'s power plant 5 miles upstream. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100		547	200	222	283	311	498	281	143	89	100
2	106		633	305	421	311	320	434	281	143	89	100
3			568	394	455	320	328	414	303	143	89	102
4			506	343	425	320	307	405	316	138	89	100
5			426	320	329	307	287	368	325	130	89	97
6			364	302	277	299	287	341	338	125	88	108
7			305	274	218	303	332	341	405	115	86	111
8			277	251	190		328	328	620	111	86	111
9			239	230	160		311	311	620	108	84	106
10			255	222	148		283	334	536	108	80	111
11			251	213	135		267	354	450	111	89	181
12			236	206	132		246	372	390	113	91	165
13			211	208	125		239	429	343	106	91	194
14			200	208	122	332	257	519	311	108	91	298
15			200	228	122	324	307	604	281	104	91	226
16			225	261	120	303	299	583	257	102	91	181
17			264	261	132	287	283	567	237	97	91	160
18			302	264	253	275	267	465	211	97	88	148
19			284	251	343	257	249	455	194	95	88	135
20			271	228	475	267	225	376	174	95	88	128
21			251	220	834	303	215	343	162	95	88	118
22			239	212	672	337	228	320	160		88	115
23			216	204	545	345	271	303	162		88	115
24		534	216	195	434	382	395	325	162	92	88	113
25		493	216	190	377	359	604	334	148		89	111
26		432	211	185	341	320	724	348	204		89	108
27		375	206	185	307	303	660	338	218	88	89	118
28		363	200	190	291	291	621	316	204	89	89	160
29		655	198	193		283	582	286	171	89	91	237
30		661	190	190		295	529	269	148	89	93	435
31			195	190		337		273		89	91	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November 24-30	661	363	502	6,980
December	633	190	287	17,600
January	394	185	236	14,500
February	834	120	307	17,000
March	382	257	311	19,100
April	724	215	352	20,900
May	604	269	386	23,700
June	620	148	287	17,100
July	143	88	106	6,520
August	93	80	88.7	5,450
September	435	97	150	8,930
The period				158,000

TOUCHET RIVER AT BOLLES, WASH.

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

DRAINAGE AREA.—284 square miles.

RECORDS AVAILABLE.—February, 1924, to September, 1927.

EXTREMES.—Maximum discharge during year, 3,690 second-feet February 21 (gage height, 6.23 feet); minimum, 10 second-feet August 24 (gage height, 0.7 foot).

1924-1927: Maximum discharge, that of February 21, 1927; minimum, 1.4 second-feet July 30, 1926 (gage height, 0.42 foot).

REMARKS.—Records good except those for November 25-28, December 4-25, January 20-26, and July 7-30, which were estimated. Numerous small ditches divert water above gage for irrigation. Considerable fluctuation in stage at extremely low water caused by operation of flour mill at Waitsburg.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	60	30	945	274	507	523	475	527	204	77	42	47
2.....	60	24	950	506	1,320	630	467	455	204	77	47	47
3.....	68	21	790	732	1,180	680	467	414	201	77	51	44
4.....	63	19		732	1,060	630	439	407	204	77	48	57
5.....	58	18		790	880	590	410	372	207	74	45	44
6.....	56	35		705	732	551	382	348	207	65	44	52
7.....	65	76		625	640	588	479	323	216	63	39	70
8.....	67	54	435	519	547	587	467	306	288	61	38	68
9.....	57	44		434	491	495	439	293	327	59	39	65
10.....	42	39		396	439	463	407	290	290	57	35	74
11.....	43	38		365	407	435	382	296	264	55	38	133
12.....	43	35		337	386	414	354	310	239	53	42	121
13.....	43	38		320	362	439	334	344	221	51	38	110
14.....	44	47		299	344	565	323	382	198	49	26	173
15.....	40	101	255	293	435	539	354	451	184	46	30	136
16.....	42	389		316	393	495	362	495	171	44	27	103
17.....	85	242		320	414	503	358	495	158	42	24	88
18.....	65	218		354	689	555	330	410	143	40	22	81
19.....	43	198		337	705	580	306	382	138	38	22	74
20.....	33	190		280	1,480	605	274	340	124	36	22	67
21.....	28	163		190	2,390	760	267	303	112	34	20	63
22.....	26	179	255	175	1,400	820	264	283	101	32	22	62
23.....	18	289		185	1,140	760	286	267	96	30	23	57
24.....	20	585		215	880	950	410	258	99	28	23	57
25.....	50			250	760	790	645	264	90	29	23	58
26.....	129	750	233	285	680	705	820	270	105	30	27	54
27.....	139		230	354	615	615	790	258	114	31	27	57
28.....	81		221	396	551	551	680	242	101	32	30	74
29.....	58	1,220	216	310		503	565	230	90	33	38	124
30.....	42	850	236	296		479	515	218	83	34	39	148
31.....	35		255	286		491		207		35	39	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	139	18	54.9	3,380
November.....	1,220	18	271	16,100
December.....	950	216	359	22,100
January.....	790	175	383	23,600
February.....	2,390	344	780	43,300
March.....	950	414	590	36,300
April.....	820	264	435	25,900
May.....	527	207	337	20,700
June.....	327	83	173	10,300
July.....	77	28	48.0	2,950
August.....	51	20	33.2	2,040
September.....	173	44	80.0	4,760
The year.....	2,390	18	292	211,000

UMATILLA RIVER BASIN

UMATILLA RIVER ABOVE MCKAY CREEK, NEAR PENDLETON, OREG.

LOCATION.—Water-stage recorder in N.W. $\frac{1}{4}$ sec. 8, T. 2 N., R. 32 E., near main line of Oregon-Washington Railroad & Navigation Co., one-fourth mile above mouth of McKay Creek, and 2 miles west of Pendleton.

RECORDS AVAILABLE.—May, 1921, to September, 1927. Records at Pendleton, February, 1891, to July, 1892, and May, 1903, to March, 1906, are directly comparable.

EXTREMES.—Maximum discharge during year, 3,160 second-feet April 26 (gage height, 6.76 feet); minimum, 13 second-feet August 20 (gage height, 2.17 feet).

1921-1927: Maximum discharge, 5,400 second-feet April 22, 1922 (gage height, 6.6 feet); minimum, 7 second-feet August 14, 1924 (gage height, 1.87 feet).

REMARKS.—Records good except those for October 30 to November 11, December 10-14, January 18, 19, February 21, and 22, which were estimated. Small amount of diversion for irrigation above station. Considerable regulation at low stages caused by operation of mills at Pendleton. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60		1,250	359	456	716	856	1,440	370	144	28	36
2	60		1,560	598	1,600	765	870	1,240	355	133	28	37
3	62		1,250	891	1,900	835	870	1,120	340	126	28	38
4	64		1,050	940	1,950	870	884	1,160	340	119	28	39
5	62		877	905	1,560	891	891	1,080	330	108	27	41
6	62	60	716	835	1,130	856	898	976	340	97	27	42
7	62		598	751	905	835	898	960	340	87	27	52
8	62		526	669	765	835	905	920	549	80	28	62
9	62		487	598	650	779	905	850	822	74	28	62
10	62			552	565	709	891	850	724	72	27	61
11	62			513	487	695	800	871	619	70	21	68
12	62	64	484	470	437	695	730	871	514	70	23	103
13	62	72		470	380	800	716	960	440	64	28	103
14	66	74		475	354	975	870	1,000	392	54	28	150
15	66	82	481	584	338	940	1,170	1,120	345	55	27	245
16	66	104	450	765	319	940	1,210	1,120	316	54	25	197
17	70	132	408	786	354	905	1,090	1,040	296	55	25	152
18	70	126	462	734	730	821	975	871	268	50	25	130
19	68	121	456	682	1,050	730	870	808	245	46	25	110
20	68	126	431	630	1,470	695	744	696	219	45	21	99
21	66	118	420	520	1,900	695	669	612	193	42	20	90
22	62	132	391	506	1,600	800	676	570	179	41	21	86
23	62	202	354	506	1,420	891	835	542	168	40	17	80
24	62	304	319	513	1,130	940	1,340	549	165	39	20	76
25	62	632	319	513	975	940	2,100	542	147	38	21	75
26	76	487	289	513	835	940	2,750	542	150	36	21	74
27	86	408	271	450	779	940	2,750	514	282	34	21	72
28	82	354	267	403	716	905	2,360	476	236	33	27	90
29	82	751	271	408	-----	863	1,970	440	186	32	28	158
30	78	1,600	308	370	-----	863	1,620	404	165	30	30	1,240
31	78	-----	349	354	-----	856	-----	380	-----	29	34	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	86	60	66.9	4,110
November	1,600	-----	215	12,800
December	1,560	267	548	33,700
January	940	354	589	36,200
February	1,950	319	956	53,100
March	975	695	856	51,400
April	2,750	669	1,170	69,600
May	1,440	380	823	50,600
June	822	147	334	19,900
July	144	29	64.4	3,960
August	34	17	25.3	1,560
September	1,240	36	129	7,680
The year	2,750	17	476	345,000

UMATILLA RIVER ABOVE FURNISH RESERVOIR, NEAR YOAKUM, OREG.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 17, T. 2 N., R. 31 E., at Oregon-Washington Railroad & Navigation Co.'s bridge one-fourth mile above Campbell, 5 miles above Yoakum, and 10 miles west of Pendleton; just above backwater from Furnish Reservoir.

RECORDS AVAILABLE.—June to August, 1915; July, 1916, to September, 1927.

EXTREMES.—Maximum discharge during year, 3,600 second-feet February 21 (gage height, 6.31 feet); minimum, 48 second-feet November 3, 5, and 6 (gage height, 1.36 feet).

1916-1927: Maximum discharge, 10,000 second-feet January 3, 1921 (gage height, 9.9 feet); minimum, 14 second-feet August 17, 1926 (gage height, 1.17 feet).

REMARKS.—Records good except those for November 29 to December 13, December 18, 20, 22, 23, and January 21-28, which were estimated. Diversions for irrigation above station from main river and from McKay and Birch Creeks. Some regulation at low stages caused by operation of mills at Pendleton. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	61	68	860	416	465	840	1,460	1,660	428	160	202	108
2.....	61	68		558	1,690	930	1,380	1,420	406	148	199	106
3.....	62	66		1,000	2,180	1,040	1,940	1,240	406	138	199	106
4.....	64	68		1,040	2,230	1,070	1,350	1,240	406	132	202	100
5.....	64	69		1,070	1,900	1,070	1,240	1,180	392	128	199	98
6.....	62	69	860	965	1,420	1,040	1,210	1,100	388	116	193	97
7.....	62	69		870	1,140	1,000	1,380	1,040	410	216	190	83
8.....	64	76		780	965	1,040	1,420	1,000	550	272	196	80
9.....	64	73		706	840	965	1,320	930	960	272	190	74
10.....	64	73		656	728	900	1,210	930	900	272	100	74
11.....	62	67	860	602	662	870	1,000	1,070	750	272	86	83
12.....	61	73		568	607	840	798	1,070	642	272	86	110
13.....	62	72		552	552	965	762	1,070	560	264	84	106
14.....	66	70		678	552	515	1,240	870	1,100	475	268	83
15.....	67	84		640	629	485	1,320	1,180	1,180	415	276	83
16.....	66	93	563	840	465	1,280	1,280	1,210	370	272	82	175
17.....	67	126	480	870	490	1,350	1,210	1,140	348	264	78	142
18.....	70	120	455	900	780	1,180	1,070	1,000	325	256	78	125
19.....	67	120	430	840	1,380	1,280	930	860	284	233	78	114
20.....	66	126	418	717	1,610	1,210	1,040	776	260	233	78	104
21.....	64	120	406	580	3,180	1,210	1,180	700	219	233	77	98
22.....	62	129	398		2,580	1,350	1,280	648	196	226	78	93
23.....	61	185	390		1,860	1,460	1,460	598	175	222	83	88
24.....	61	324	383		1,420	1,570	1,810	593	166	216	112	85
25.....	64	482	383		1,180	1,350	2,230	588	148	216	114	83
26.....	78	473	356	495	1,040	1,770	3,020	637	163	216	114	82
27.....	73	415	329		965	1,730	3,090	576	248	216	114	85
28.....	73	364	316		870	1,380	2,660	545	240	208	122	97
29.....	69	800	312		495	1,100	2,230	520	193	205	122	145
30.....	66	1,700	352		485	1,380	1,870	480	175	205	122	930
31.....	66	-----	402	435	-----	1,350	-----	451	-----	205	120	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	78	61	65.1	4,000
November.....	1,700	66	221	13,200
December.....	-----	312	609	37,400
January.....	1,070	416	683	42,000
February.....	3,180	465	1,220	67,800
March.....	1,770	840	1,200	73,800
April.....	3,090	762	1,500	89,300
May.....	1,660	451	921	56,600
June.....	960	148	387	23,000
July.....	276	116	220	13,500
August.....	202	77	125	7,690
September.....	930	74	134	7,970
The year.....	3,180	61	602	436,000

UMATILLA RIVER NEAR UMATILLA, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 21, T. 5 N., R. 28 E., near main line of Oregon-Washington Railroad & Navigation Co., $1\frac{1}{2}$ miles below diversion point of West Division Main Canal of Umatilla project, and 2 miles above Umatilla and mouth of river.

DRAINAGE AREA.—2,130 square miles.

RECORDS AVAILABLE.—October, 1903, to September, 1927.

EXTREMES.—Maximum discharge during year, 3,490 second-feet April 27 and 28 (gage height, 5.3 feet); minimum, 11 second-feet June 5 (gage height, 2.05 feet).

1903-1927: Maximum discharge, 19,600 second-feet May 31, 1906 (gage height, 11.0 feet); no flow during several periods.

REMARKS.—Records good. Several diversions for irrigation above station; Brownell Canal diverts below. Flow regulated to small extent by storage in Furnish and Cold Springs Reservoirs. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	13	• 30	885	140	1,090	715	1,160	1,890	15	13	22	176
2.....	12	• 29	1,090	145	1,300	765	1,090	1,370	14	36	20	133
3.....	20	• 29	1,300	211	1,890	765	1,230	625	13	154	15	64
4.....		• 29	1,090	295	2,130	765	1,300	334	12	154	• 15	62
5.....		• 29	885	1,370	2,620	765	885	463	12	34	• 15	42
6.....		• 29	715	1,370	2,130	715	820	439	12	27	15	48
7.....		75	715	1,300	1,970	1,090	765	447	15	20	• 15	57
8.....		• 75	715	1,370	1,660	1,160	765	471	17	16	15	71
9.....		• 76	670	1,090	1,300	1,230	765	479	51	14	• 15	64
10.....		• 76	625	1,020	1,090	1,230	765	471	97	14	15	66
11.....		• 77	625	1,020	950	1,230	765	463	295	14	29	68
12.....		78	625	950	820	1,230	670	479	57	14	39	73
13.....		• 76	535	885	535	1,230	535	471	53	15	37	92
14.....		73	535	950	495	1,160	391	471	39	15	21	107
15.....		• 73	535	950	463	1,160	625	495	37	• 15	20	103
16.....		• 72	519	950	361	1,090	820	503	34	• 15	18	133
17.....		• 72	535	885	391	1,090	765	471	30	22	15	164
18.....	• 20	• 71	580	950	439	1,090	715	511	30	23	• 15	178
19.....	• 19	71	511	1,020	535	1,020	625	314	26	16	• 15	118
20.....	• 18	• 71	495	950	670	1,020	625	234	24	15	15	107
21.....	18	71	439	885	715	1,020	511	164	23	15	16	83
22.....	• 20	• 76	341	885	1,370	950	380	83	27	• 15	• 16	• 90
23.....	• 22	• 81	321	820	2,290	950	670	154	37	15	• 16	97
24.....	• 24	86	194	950	2,290	1,160	765	86	37	15	16	95
25.....	• 24	199	211	• 950	1,440	1,370	1,510	78	60	• 15	• 16	89
26.....	• 25	239	178	• 950	580	1,740	2,290	64	71	• 15	• 16	86
27.....	• 26	245	164	950	715	1,510	3,490	37	86	15	16	• 90
28.....	• 26	251	169	950	715	1,510	3,490	53	62	• 15	• 16	• 95
29.....	• 27	288	154	1,020	-----	1,440	3,310	50	57	• 15	• 16	100
30.....	• 28	355	150	1,160	-----	1,370	2,790	23	53	15	83	107
31.....	30	-----	150	1,090	-----	1,230	-----	19	-----	19	150	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	30	12	21	1,290
November.....	355	29	103	6,130
December.....	1,300	150	537	33,000
January.....	1,370	140	917	56,400
February.....	2,620	361	1,190	66,100
March.....	1,740	715	1,120	68,900
April.....	3,490	391	1,180	70,200
May.....	1,890	19	395	24,300
June.....	295	12	47.2	2,810
July.....	154	13	26.3	1,620
August.....	150	15	24.6	1,510
September.....	178	42	95.3	5,670
The year.....	3,490	12	466	338,000

• Interpolated.

McKAY CREEK NEAR PILOT ROCK, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 23, T. 1 N., R. 32 E., at county-road bridge 1 mile above backwater from McKay Dam and 5 miles northeast of Pilot Rock.

RECORDS AVAILABLE.—May to August, 1921; October, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 554 second-feet February 21 (gage height, 6.26 feet); no flow August 4 to September 13.

1921, 1926-27: Maximum discharge, that of February 21, 1927; no flow at times during summer.

REMARKS.—Records good except those for estimated periods, which are fair. Numerous small diversions for irrigation above station; none between station and McKay Reservoir. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....		175	a 250	165	200	260	187	21	14	a 1	0
2.....		172		455	257	254	163	19	11	a 1	
3.....		178		502	275	260	150	15	10	1	
4.....		188		490	282	245	141	a 14	9	0	
5.....		155	300	406	272	230	126	a 13	9		a 0
6.....		128	251	326	295	240	103	a 13	7		
7.....		101	215	269	288	257	98	a 13	5		
8.....		122	180	234	282	245	95	a 44	4		
9.....		118	155	204	260	223	88	a 103	4		
10.....	a 10	108	132	180	240	200	82	90	3		
11.....		120	116	159	226	192	78	75	3		
12.....		144	101	141	245	187	69	64	3		
13.....		137	116	124	337	163	48	54	3		2
14.....		94	128	111	398	194	46	2	2		
15.....		a 103	165	110	395	240		41	2		19
16.....		112	226	106	344	230	a 46	36	2		14
17.....		139	218	145	326	210		33	2	0	12
18.....		165	212	266	292	192		26	2		10
19.....	13	153	190	308	272	170		43	20	2	10
20.....	13	146		362	263	145	38	13	2		9
21.....	13	132		534	301	132	34	7	2	a 0	8
22.....	15	116		455	351	137	34	7	2		8
23.....	30	98		373	340	163	34	7	2		8
24.....	63	83	a 150	301	333	221	34	10	1	0	8
25.....	81	83		260	301	282	34	8	1		8
26.....	68	72		237	275	312	34	9	1		7
27.....	62	68		218	260	308	30	23	1	a 0	7
28.....	62	66		202	240	275	27	25	1		8
29.....	130	69			242	234	25	20	1		58
30.....	170	132	118		292	204	23	18	a 1		113
31.....		a 200	108		298		21		a 1		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....			a 5.0	307
November.....	170		30.0	1,790
December.....	200	66	125	7,690
January.....	300	101	175	10,800
February.....	534	106	273	15,200
March.....	398	200	290	17,800
April.....	312	132	220	13,100
May.....	187	21	66.7	4,100
June.....	103	7	29.6	1,760
July.....	14	1	3.6	221
August.....	1	0	1.1	6
September.....	113	0	10.3	613
The year.....	534	0	101	73,400

a Estimated.

McKAY CREEK NEAR PENDLETON, OREG.

LOCATION.—Water-stage recorder, installed January 15, 1927, in sec. 34, T. 2 N., R. 32 E., 250 feet above irrigation diversion dam, one-fourth mile below McKay Dam, and 5 miles south of Pendleton. Present gage is 250 feet upstream from gage used prior to October 1, 1926.

RECORDS AVAILABLE.—November, 1918, to September, 1923; October, 1924, to September, 1927. Comparable record at station 4 miles downstream, May, 1903, to July, 1904; April, 1922, to September, 1924.

EXTREMES.—Maximum discharge during year, 944 second-feet April 3 (gage height, 3.44 feet); minimum (estimated), 2 second-feet at various times when gates in McKay Dam were closed.

1903-4, 1918-1927: Maximum discharge, 3,250 second-feet February 10, 1921; no flow at times.

REMARKS.—Records good except those for estimated periods, which are fair. Diversions for irrigation above McKay Reservoir use total summer flow. Flow regulated by small amount of storage above McKay Dam, which was completed in 1927. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....		5	3	180	2	22	3	182	71
2.....		5	3	318	2	17	3	182	71
3.....		4	3	799	2	40	3	182	63
4.....		4	3	198	2	36	3	182	60
5.....		4	3	220	2	27	3	182	60
6.....		4	3	196	2	26	16	182	38
7.....		5	3	226	2	26	189	182	15
8.....		6	3	229	2	26	214	180	2
9.....		6	7	224	2	26	214	142	
10.....		7	3	243	28	25	211	53	
11.....		7	5	123	166	24	208	53	
12.....		7	3	2	146	24	206	53	
13.....		7	3	2	79	10	208	53	
14.....		6	3	3	68	4	226	53	
15.....	4	6	5	2	57	4	226	53	
16.....	4	6	60	2	53	11	226	53	
17.....	4	6	327	86	34	27	226	53	
18.....	4	6	266	2	68	27	206	53	
19.....	4	4	468	2	64	27	194	53	
20.....	4	4	468	338	67	27	194	53	2
21.....	4	3	365	564	57	27	194	53	
22.....	4	3	401	675	47	19	194	53	
23.....	4	3	468	675	53	4	189	74	
24.....	4	3	228	401	47	4	180	102	
25.....	4	3	171	2	47	4	182	102	
26.....	4	3	675	2	61	4	182	102	
27.....	4	3	675	2	60	4	182	102	
28.....	5	3	283	2	61	4	184	102	
29.....	5		33	2	58	4	184	102	
30.....	5		262	2	50	3	184	102	
31.....	5		54		38		184	87	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....			2	123
November.....			3	179
December.....			3	184
January.....	5		4.1	252
February.....	7	3	4.8	267
March.....	675	3	170	10,500
April.....	799	2	191	11,400
May.....	166	2	46.0	2,830
June.....	40	3	17.8	1,060
July.....	226	3	162	9,960
August.....	182	53	102	6,270
September.....	71		14.1	839
The year.....	799		60.4	43,900

* Estimated.

BIRCH CREEK AT RIETH, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 13, T. 2 N., R. 31 E., one-fourth mile above mouth and 1 mile southwest of Rieth.

RECORDS AVAILABLE.—May, 1921, to September, 1923, incomplete; April to September, 1927. Comparable record at former station near Pilot Rock, 8 miles upstream, October, 1919, to September, 1926.

EXTREMES.—Maximum discharge during year, 418 second-feet April 26 (gage height, 3.18 feet); no flow at times.

1919-1927: Maximum discharge, 1,270 second-feet April 13, 1920, at station near Pilot Rock.

REMARKS.—Records good except those for April 1-3 and July 25 to September 30, which were estimated. Diversions for irrigation above station. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1927

Day	Apr.	May	June	July	Aug.	Day	Apr.	May	June	July	Aug.
1-----	100	162	36	3.3	0	16-----	99	51	57	2.3	0
2-----		140	34	5.0	0	17-----	102	42	50	2.1	0
3-----		120	32	6.0	0	18-----	91	42	43	2.1	0
4-----	97	110	33	6.0	0	19-----	79	40	34	1.7	0
5-----	91	110	31	5.8	0	20-----	64	42	18	1.5	0
6-----	91	102	28	5.5	0	21-----	58	40	6.9	.9	0
7-----	96	90	54	5.0	0	22-----	54	40	3.3	0	0
8-----	101	86	77	4.5	0	23-----	75	42	3.1	.2	0
9-----	99	83	175	2.7	0	24-----	130	37	2.9	0	0
10-----	97	75	175	2.5	0	25-----	283	34	2.9	0	0
11-----	91	72	140	3.3	0	26-----	358	35	2.5	0	0
12-----	84	64	120	3.3	0	27-----	358	35	2.5	0	0
13-----	72	60	94	3.1	0	28-----	320	36	3.5	0	0
14-----	75	56	77	2.9	0	29-----	232	40	4.2	0	0
15-----	91	53	67	2.7	0	30-----	188	38	4.2	0	0
						31-----		36		0	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April-----	358	54	129	7,680
May-----	162	34	64.9	3,990
June-----	175	2.5	47.0	2,800
July-----	6.0	0	2.34	144
August-----	0	0	0	0
September-----			* 4.0	238
The period-----				14,800

* Estimated.

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

Furnish Canal diverts from right bank of Umatilla River in sec. 36, T. 3 N., R. 29 E. Crayne-Lisle Canal diverts from left bank of Furnish Canal half a mile below Furnish Canal head gate but above gage on Furnish Canal. Slusher and Taylor ditches divert from left bank of Umatilla River near Nolin. Wilson-Ramos ditches divert from right bank of Umatilla River half a mile above intake of Umatilla project feed canal, which diverts from right bank of Umatilla River in SW. $\frac{1}{4}$ sec. 22, T. 3 N., R. 29 E.; water used to feed Cold Springs Reservoir of United States Bureau of Reclamation. Western Land & Irrigation Co.'s canal diverts from left bank of Umatilla River in NE. $\frac{1}{4}$ sec. 21, T. 3 N., R. 29 E.; gage 1 mile below intake. Allen Canal diverts from right bank of Western Land & Irrigation Co.'s canal half a mile below head gate. Dillon Canal diverts from left bank of Umatilla River in sec. 5, T. 3 N., R. 29 E. Maxwell Canal diverts from right bank of Umatilla River in SW. $\frac{1}{4}$ sec. 28, T. 4 N., R. 28 E. West Division Main Canal diverts from left bank of Umatilla River in SW. $\frac{1}{4}$ sec. 28, T. 5 N., R. 28 E. Brownell Canal diverts from right bank of Umatilla River about 2 miles below West Division Main Canal diversion and $1\frac{1}{2}$ miles above mouth of Umatilla River.

Water diverted by all these canals is used for irrigation of lands on both sides of Umatilla River below Furnish Reservoir except that diverted by West Division Main Canal, which is applied to lands along Columbia River in vicinity of Irrigon.

Monthly diversions, in acre-feet, from Umatilla River between Furnish Reservoir and Umatilla, Oreg., for the irrigation season, 1927

Month	Furnish Canal	Crayne-Lisle Canal	Slusher and Taylor ditches	Wilson-Ramos ditches	Umatilla project feed canal	Western Land & Irrigation Co.'s canal	Allen Canal	Dillon Canal	Maxwell Canal	West Division Main Canal	Brownell Canal	Total
April.....	3,920	512	752	278	14,700	5,910	1,120	541	2,020	6,070	553	36,400
May.....	6,080	652	532	408	12,500	11,400	596	676	3,030	7,990	627	44,500
June.....	5,400	577	516	251	5,880	6,840	1,260	484	934	7,620	702	30,500
July.....	5,680	61	370	61	6	7,380	1,200	542	1,240	7,870	1,170	25,600
August.....	1,670	12	150	14	46	4,350	1,080	317	1,320	8,180	1,180	18,300
September.....	0	0	0	0	0	1,630	845	0	934	6,370	561	10,300
The period..	22,800	1,810	2,320	1,010	23,100	37,500	6,100	2,560	9,480	44,100	4,790	166,000

^a April 17-30.

^b 157 acre-feet in March, making a total of 1,970 acre-feet for the year ending September 30, 1927.

^c 50,300 acre-feet November to March, making a total of 83,400 acre-feet for the year ending September 30, 1927.

NOTE.—Records furnished by State engineer of Oregon.

JOHN DAY RIVER BASIN

JOHN DAY RIVER AT PRAIRIE CITY, OREG.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 10, T. 13 S., R. 33 E., above outlet of Prairie power canal, at power plant three-fourths mile southwest of Prairie City.

RECORDS AVAILABLE.—October, 1926, to September, 1927. Record below outlet of Prairie power canal, October, 1916, to September, 1917, and March, 1925, to September, 1926.

EXTREMES.—Maximum mean daily discharge during year (estimated), 900 second-feet June 9 (water level above top of gage); minimum, 6 second-feet August 20-22 (gage height, 0.46 foot).

REMARKS.—Records good except those for January 21-23 and June 8-10, which were estimated. Diversions for irrigation and for Prairie power canal above station. Daily-discharge table does not include flow in Prairie power canal; monthly table shows flow of river above outlet of canal and combined flow of John Day River and Prairie power canal. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, of John Day River at Prairie City, Oreg., 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	15	15	70	35	33	83	138	379	181	106	18	8
2.....	12	14	76	151	292	97	151	336	168	92	20	8
3.....	22	14	116	120	235	101	147	306	125	76	18	8
4.....	15	16	93	112	250	116	133	264	156	71	20	10
5.....	13	16	90	104	116	97	116	250	181	76	18	12
6.....	14	15	73	97	120	101	125	250	235	53	18	18
7.....	16	14	64	79	79	86	120	207	336	48	14	16
8.....	16	16	59	56	59	90	116	194	600	40	12	22
9.....	16	17	35	51	70	79	116	194	900	42	10	20
10.....	16	15	49	49	73	76	129	108	800	40	10	27
11.....	16	14	64	47	67	79	116	181	730	40	7	20
12.....	17	14	61	51	56	79	108	168	605	42	9	45
13.....	21	15	49	59	47	86	112	168	525	42	7	45
14.....	14	14	45	70	22	138	133	207	485	40	8	42
15.....	16	18	45	120	47	112	151	292	445	35	10	34
16.....	18	18	42	83	47	67	168	379	410	35	7	29
17.....	18	17	64	54	45	108	168	437	375	37	10	27
18.....	17	19	67	54	61	108	156	437	340	35	8	29
19.....	16	19	59	54	64	70	147	408	324	40	8	24
20.....	16	54	45	32	138	93	116	364	277	40	6	19
21.....	16	45	47	16	350	108	129	321	262	37	6	17
22.....	16	42	35	16	181	108	129	264	234	35	6	17
23.....	14	40	27	16	142	104	151	250	220	35	7	19
24.....	14	40	23	30	129	120	194	235	220	33	10	19
25.....	14	54	27	36	129	112	306	207	193	40	10	17
26.....	14	47	40	42	125	116	437	207	193	40	10	17
27.....	16	42	32	42	104	104	497	221	193	33	7	17
28.....	14	42	35	40	64	120	497	235	180	27	10	29
29.....	12	61	33	35	-----	120	467	207	155	20	7	48
30.....	12	73	33	30	-----	129	408	207	128	18	7	51
31.....	14	-----	32	30	-----	147	-----	181	-----	14	7	-----

Month	John Day River above Prairie power canal				Combined flow of John Day River and Prairie power canal			
	Maximum	Minimum	Mean	Run-off in acre-feet	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	22	12	15.5	953	63	56	60.5	3,720
November.....	73	14	28.0	1,670	118	56	75.7	4,500
December.....	116	23	52.6	3,230	167	75	103	6,330
January.....	151	16	58.4	3,590	195	51	108	6,640
February.....	350	33	112	6,220	399	76	162	9,000
March.....	147	67	102	6,270	195	121	149	9,160
April.....	497	108	196	11,700	548	159	245	14,600
May.....	437	168	262	16,100	491	213	312	19,200
June.....	900	125	339	20,200	950	170	387	23,000
July.....	106	14	43.9	2,700	149	62	85.9	5,280
August.....	20	6	10.5	646	68	31	45.7	2,810
September.....	51	8	23.8	1,420	106	40	74.7	4,440
The year.....	900	6	103	74,700	950	31	150	109,000

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

LOCATION.—Water-stage recorder, installed October 10, 1926, in sec. 20, T. 12 S., R. 26 E., on John Day Highway, 0.7 mile above Rock Creek Bridge and 7 miles northwest of Dayville. Prior to October 10, 1926, a staff gage at same site was used; datum unchanged.

RECORDS AVAILABLE.—April, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 3,600 second-feet June 9 (gage height, 10.25 feet); minimum, 12 second-feet August 31 (gage height, 0.65 foot).

1926-27: Maximum discharge, that of June 9, 1927; minimum, 6.6 second-feet July 26, 1926 (gage height, 0.26 foot).

REMARKS.—Records good except those for October 2, 3, 5, December 14 and 15, which are fair. Numerous diversions for irrigation above station. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	80	127	575	313	438	715	1,200	2,100	750	516	58	18
2.....	80	127	575	516	1,530	830	1,250	1,940	715	412	66	18
3.....	80	127	790	680	1,390	950	1,290	1,670	680	386	76	20
4.....	80	127	790	830	1,290	1,030	1,200	1,480	645	360	71	23
5.....	85	127	575	910	950	990	1,070	1,390	680	360	66	30
6.....	90	127	516	830	790	950	1,030	1,390	750	313	62	42
7.....	90	127	490	715	680	870	1,030	1,390	910	290	58	58
8.....	90	127	438	610	575	870	990	1,340	1,880	247	58	85
9.....	90	127	412	545	545	830	990	1,290	3,410	208	58	108
10.....	102	127	360	516	516	750	990	1,250	2,760	173	58	127
11.....	102	134	438	490	490	715	990	1,200	2,420	157	53	150
12.....	102	127	490	516	490	715	950	1,160	2,100	150	50	182
13.....	102	134	412	516	464	790	950	1,120	1,830	127	50	190
14.....	102	134	336	545	438	1,200	950	1,070	1,670	108	48	182
15.....	96	134	313	575	438	1,120	1,070	1,200	1,530	90	49	182
16.....	102	142	360	610	438	990	1,200	1,670	1,390	80	45	165
17.....	108	150	412	516	412	950	1,200	1,880	1,250	80	41	165
18.....	108	165	516	490	464	950	1,160	1,780	1,120	76	36	157
19.....	108	182	490	490	545	870	1,120	1,620	1,030	76	30	150
20.....	108	208	438	464	910	870	1,030	1,530	950	76	26	142
21.....	114	268	412	290	1,940	916	990	1,290	870	76	25	134
22.....	114	268	386	208	1,430	950	990	1,200	790	66	24	127
23.....	114	290	336	313	1,070	990	1,120	1,120	750	66	23	127
24.....	114	313	290	412	910	1,070	1,390	990	750	58	23	127
25.....	108	360	313	438	830	1,070	1,940	910	715	58	20	134
26.....	114	336	336	438	830	1,030	2,530	910	645	66	16	127
27.....	114	336	313	464	790	1,030	2,870	870	645	66	15	127
28.....	120	313	313	438	750	1,070	2,870	910	645	62	14	150
29.....	120	386	313	412	-----	1,070	2,640	870	610	62	16	182
30.....	114	545	313	360	-----	1,120	2,310	830	545	62	20	199
31.....	120	-----	313	360	-----	1,250	-----	790	-----	58	20	-----
Month	Maximum			Minimum			Mean			Run-off in acre-feet		
October.....	120			80			102			6,270		
November.....	545			127			206			12,300		
December.....	790			290			431			26,500		
January.....	910			208			510			31,400		
February.....	1,940			412			798			44,300		
March.....	1,250			715			952			58,500		
April.....	2,870			950			1,380			82,100		
May.....	2,100			790			1,300			79,900		
June.....	3,410			545			1,180			79,200		
July.....	518			58			161			9,900		
August.....	76			14			41.1			2,530		
September.....	199			18			121			7,200		
The year.....	3,410			14			595			431,000		

JOHN DAY RIVER AT McDONALD, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 11, T. 1 N., R. 19 E., at ferry at McDonald post office, half a mile below mouth of Rock Creek and 21 miles above junction with Columbia River.

DRAINAGE AREA.—7,800 square miles.

RECORDS AVAILABLE.—December, 1904, to September, 1927.

EXTREMES.—Maximum discharge during year, 12,900 second-feet April 28 (gage height, 7.12 feet); minimum, 96 second-feet September 2 and 3 (gage height, 1.16 feet).

1905-1927: Maximum discharge, 22,800 second-feet February 6, 1907 (gage height, 10.38 feet); minimum, 23 second-feet August 14, 1926 (gage height, 0.83 foot).

Maximum stage known, 12.8 feet, probably in 1894 (discharge estimated, 33,000 second-feet).

REMARKS.—Records good except those for period of ice effect, December 13-16, which are fair. Diversions for irrigation above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	136	225	872	825	1,540	3,200	5,750	9,650	3,000	1,730	225	102
2.....	156	225	1,600	872	2,810	3,200	5,450	8,950	3,000	1,600	225	96
3.....	156	225	1,600	920	3,630	4,100	4,880	7,930	3,000	1,410	225	96
4.....	156	225	1,870	2,150	6,050	4,880	4,880	6,950	2,810	1,290	200	102
5.....	156	225	2,300	2,810	5,750	4,610	4,610	6,350	2,810	1,290	200	102
6.....	156	252	2,010	3,000	4,100	4,610	4,100	5,750	3,000	1,180	225	108
7.....	168	252	1,730	2,810	3,200	4,100	3,860	5,450	3,410	1,180	200	118
8.....	168	252	1,470	2,460	2,810	3,860	4,100	4,880	4,100	1,070	200	118
9.....	177	252	1,350	2,150	2,460	3,860	4,100	4,610	7,250	970	200	129
10.....	185	252	1,230	1,730	2,150	3,630	3,860	4,350	12,500	825	200	129
11.....	185	235	1,120	1,600	2,150	3,200	3,860	4,100	10,400	825	177	185
12.....	200	279	920	1,600	2,010	3,000	3,860	4,350	8,610	692	168	303
13.....	205	279	785	1,600	1,730	3,000	3,410	4,350	7,590	692	156	368
14.....	200	252		1,600	1,730	4,100	3,200	4,880	6,350	650	156	381
15.....	200	290		1,600	1,600	4,880	3,410	5,450	5,750	608	156	381
16.....	200	310		1,730	1,540	4,880	4,350	6,650	5,160	535	156	476
17.....	225	279	650	2,150	1,540	4,350	4,610	7,250	4,610	512	151	462
18.....	225	310	780	2,300	1,600	3,630	4,350	7,590	4,100	476	140	448
19.....	225	310	970	1,870	1,870	3,860	4,350	6,950	3,630	462	136	441
20.....	225	342	1,600	1,730	3,000	3,410	4,100	6,050	3,200	407	136	434
21.....	225	420	1,290	1,600	4,880	3,410	3,860	5,450	3,000	407	118	381
22.....	225	407	1,120	780	10,000	3,410	3,200	4,610	2,810	374	118	374
23.....	225	420	1,120	780	6,650	4,100	3,410	3,860	2,460	342	118	355
24.....	225	512	1,120	565	5,160	4,350	3,860	4,350	2,300	329	118	342
25.....	225	692	825	608	4,100	4,880	5,450	3,860	2,300	290	115	329
26.....	252	692	780	1,070	3,630	4,880	7,930	3,860	3,410	279	105	310
27.....	252	920	780	1,540	3,630	4,610	11,100	3,860	2,150	279	102	310
28.....	225	1,020	825	1,730	3,630	4,350	12,500	3,860	2,150	252	102	310
29.....	225	920	780	2,460	-----	4,350	12,100	3,860	2,150	252	102	310
30.....	225	970	780	1,730	-----	4,610	11,100	3,630	2,010	252	102	310
31.....	225	-----	825	1,600	-----	4,880	-----	3,410	-----	252	102	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October.....	252					136			201		12,400	
November.....	1,020					225			408		24,300	
December.....	2,300					650			1,140		70,100	
January.....	3,000					565			1,680		103,000	
February.....	10,000					1,540			3,390		188,000	
March.....	4,880					3,000			4,070		250,000	
April.....	12,500					3,200			5,320		317,000	
May.....	9,650					3,410			5,390		331,000	
June.....	12,500					2,010			4,300		256,000	
July.....	1,730					252			698		42,900	
August.....	225					102			156		9,590	
September.....	476					96			277		16,500	
The year.....	12,500					96			2,240		1,620,000	

STRAWBERRY CREEK NEAR PRAIRIE CITY, OREG.

LOCATION.—Staff gage in S. $\frac{1}{2}$ sec. 8, T. 14 S., R. 34 E., at bridge on Nelson ranch, 6 miles southeast of Prairie City.

RECORDS AVAILABLE.—November, 1916, to September, 1917 (gage heights only); April, 1925, to September, 1927.

EXTREMES.—Maximum discharge during year, 234 second-feet June 9; maximum gage height, 2.15 feet June 6; minimum discharge, 5.9 second-feet March 21. 1925-1927: Maximum discharge and gage height occurred in June, 1927; minimum discharge, 2.8 second-feet by discharge measurement October 14, 1926.

REMARKS.—Records fair; discharge estimated March 1-5 and June 6-9. No record October 1 to February 28. Two small ditches divert water for irrigation above station.

Daily and monthly discharge, in second-feet, 1927

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	6.5	6.8	67	61	78	14	8.1
2.....		8.0	59	65	78	14	7.8
3.....		7.1	52	69	76	14	8.1
4.....		6.5	43	88	72	13	8.1
5.....		6.2	40	103	71	13	8.1
6.....	6.5	6.2	40	120	70	12	7.8
7.....	6.8	6.2	39	140	64	12	7.8
8.....	6.8	6.5	39	180	62	12	7.2
9.....	6.5	6.5	36	234	62	12	7.2
10.....	6.5	6.5	40	222	64	12	7.0
11.....	6.2	6.2	48	175	60	12	7.0
12.....	6.2	6.2	61	164	57	12	7.0
13.....	6.2	6.2	67	154	57	11	7.2
14.....	6.2	6.5	73	154	52	11	7.2
15.....	6.5	7.4	98	154	46	11	7.2
16.....	7.1	7.7	110	154	41	11	7.0
17.....	7.7	7.7	133	144	38	11	7.0
18.....	7.1	8.0	140	134	34	10	7.0
19.....	6.2	7.7	126	134	29	10	6.7
20.....	6.2	7.7	105	134	29	10	6.7
21.....	5.9	7.4	83	124	28	9.6	6.7
22.....	6.2	7.4	73	134	25	9.3	6.7
23.....	6.2	8.0	57	124	24	8.6	6.7
24.....	6.5	13	61	124	21	8.6	6.7
25.....	6.8	25	69	111	20	8.6	6.7
26.....	6.8	45	81	124	19	8.6	6.7
27.....	6.8	77	88	115	17	8.9	6.4
28.....	6.8	81	83	104	16	8.6	6.4
29.....	6.5	77	77	90	15	8.6	6.4
30.....	6.5	71	73	85	15	8.6	7.0
31.....	6.5		65		14	8.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March.....			6.54	402
April.....	81	6.2	18.3	1,090
May.....	140	36	71.8	4,410
June.....	234	61	131	7,800
July.....	78	14	43.7	2,690
August.....	14	8.1	10.7	668
September.....	8.1	6.4	7.12	424
The period.....				17,500

PRAIRIE POWER CANAL AT PRAIRIE CITY, OREG.

LOCATION.—Staff gage in sec. 11, T. 13 S., R. 33 E., 40 feet above county-road bridge over canal and 1 mile south of Prairie City.

RECORDS AVAILABLE.—May, 1925, to September, 1927.

EXTREMES.—Maximum discharge during year, 65 second-feet February 20 and September 11; maximum gage height, 3.38 feet June 15 and 24; minimum discharge, 26 second-feet August 22; minimum gage height, 2.48 feet August 24.

1925-1927: Maximum discharge, 70 second-feet May 20, 1926 (gage height, 3.22 feet); minimum, 18 second-feet June 8, 11, 12, 28, 29, and July 1-3, 1926 (gage height, 2.0 feet).

REMARKS.—Records fair. This canal diverts from John Day River in SE. ¼ sec. 7, T. 13 S., R. 34 E. The water is used by power plant at Prairie City and is returned to river below gaging station at Prairie City. Records furnished by the State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	54	57	57	54	54	54	50	46	43	50	38
2	49	54	57	61	57	54	57	54	46	46	50	63
3	50	50	57	54	61	54	57	54	45	44	50	36
4	49	50	57	54	50	50	57	54	45	45	49	38
5	49	50	54	54	57	50	57	54	46	44	47	41
6	49	50	57	54	54	50	54	50	50	45	50	54
7	49	50	57	54	54	50	54	50	50	38	48	57
8	49	50	57	54	54	50	54	50	50	40	46	57
9	49	50	57	54	54	49	54	49	50	36	44	61
10	49	50	57	54	54	50	54	50	50	36	40	57
11	49	50	54	57	54	49	54	54	45	36	30	65
12	50	54	54	54	54	48	54	50	49	35	31	54
13	49	54	54	54	50	54	54	50	49	35	31	57
14	49	54	48	57	54	54	54	54	50	40	32	57
15	49	54	57	54	54	54	54	54	54	41	34	54
16	50	54	54	57	54	57	57	54	50	49	33	57
17	50	54	54	57	54	57	54	54	47	44	33	57
18	50	57	54	57	54	54	54	54	49	44	33	54
19	50	61	57	57	57	54	54	54	46	43	30	57
20	50	61	54	57	65	54	54	54	48	44	30	57
21	50	54	54	35	61	50	49	54	48	46	30	57
22	50	54	54	37	57	50	54	54	49	45	26	57
23	49	54	54	54	57	50	50	46	49	48	30	57
24	50	54	54	54	50	50	54	44	50	45	27	57
25	50	54	54	54	50	50	57	47	41	48	33	57
26	50	57	54	57	50	50	54	45	43	44	34	57
27	50	54	54	57	50	50	54	46	50	44	36	57
28	50	54	57	54	54	50	54	48	50	44	36	57
29	50	57	54	54	---	50	50	46	47	49	36	54
30	50	57	57	54	---	49	54	47	46	49	35	57
31	50	---	57	54	---	54	---	46	---	50	36	---
Month					Maximum	Minimum	Mean	Run-off in acre-feet				
October					50	49	49.5	3,040				
November					61	50	53.7	3,200				
December					57	48	55.2	3,390				
January					61	35	54.0	3,320				
February					65	50	54.6	3,030				
March					57	48	51.6	3,170				
April					57	49	54.2	3,230				
May					54	44	50.6	3,110				
June					54	41	47.9	2,850				
July					50	35	43.2	2,660				
August					50	26	37.1	2,280				
September					65	33	53.6	3,190				
The year					65	26	50.4	36,500				

NORTH FORK OF JOHN DAY RIVER AT MONUMENT, OREG.

LOCATION.—Water-stage recorder in E. $\frac{1}{2}$ sec. 1, T. 9 S., R. 27 E., just below entrance to canyon, three-fourths mile west of Monument.

RECORDS AVAILABLE.—March, 1925, to September, 1927.

EXTREMES.—Maximum discharge during year, 8,370 second-feet April 27 (gauge height, 7.96 feet); minimum, 99 second-feet October 7 (gauge height, 0.41 foot).

1925-1927: Maximum discharge, that of April 27, 1927; minimum, 62 second-feet August 26, 1926 (gauge height, 0.16 foot).

REMARKS.—Records good except those for estimated periods, which are fair. Numerous small diversions for irrigation above station. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	111		1,040	653	1,000	1,520	2,820	5,050	1,900	895		
2.	111		1,070	1,070	2,590	2,480	2,640	4,210	1,850	828		
3.	111		1,380	1,650	2,880	2,420	2,640	3,690	1,800	782		
4.	110		1,040	1,470	2,700	2,420	2,320	3,430	1,900	769		
5.	113	133	795	1,650	1,800	2,200	2,100	3,180	2,200	750		140
6.	106		762	1,380	1,470	2,000	2,100	2,880	2,260	678		
7.	102		665	1,260	1,300	1,800	2,320	2,820	2,760	611	154	
8.	104		635	1,040	1,140	1,800	2,370	2,700	5,330	557		
9.	110	135	505	860	1,040	1,650	2,260	2,590	7,360	515		
10.	113	129	587	828	1,000	1,470	2,050	2,940	5,630	475		
11.	113	127	860	795	895	1,470	1,850	3,060	4,770	450		190
12.	119	123	795	795	860	1,520	1,800	3,300	4,080	425		197
13.		123		788	828	2,370	1,800	3,690	3,560	405		309
14.		125		890	736	2,940	2,100	4,350	3,060	365		276
15.		131		1,140	736	2,480	2,700	5,190	2,760	336		268
16.		142		1,340	782	1,950	2,700	5,480	2,480	314		252
17.		197		1,070	795	1,900	2,480	5,330	2,260	300		229
18.		181		930	1,340	1,750	2,320	5,480	2,050	284		201
19.		165		930	1,700	1,560	2,100	3,820	1,900	272		190
20.		125	187	500	895	2,200	1,600	1,800	3,430	1,700	256	179
21.		260			5,480	1,850	1,750	2,880	1,560	248		173
22.		370			3,560	2,370	1,800	2,760	1,470	237		
23.		355			2,480	2,420	2,540	2,760	1,380	221		
24.		405			1,950	2,760	3,560	2,590	1,380	218		
25.		593			1,800	2,480	5,330	2,540	1,300	214		
26.		557		800	1,850	2,320	7,040	2,540	1,260	211		210
27.	131	455			1,750	2,260	7,860	2,540	1,380	197		
28.	131	415			1,470	2,260	7,200	2,480	1,260			
29.	131	776	698			2,420	6,240	2,200	1,070			
30.	^b 131	930	^b 711			2,760	5,480	2,000	1,000	180		
31.	^b 131		717			3,180		1,850				

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October		102	120	7,380
November	930	123	265	15,800
December	1,380		660	40,600
January	1,650		974	59,900
February	5,480	736	1,720	95,500
March	3,180	1,470	2,140	132,000
April	7,860	1,750	3,140	187,000
May	5,480	1,850	3,350	206,000
June	7,360	1,000	2,490	148,000
July	895		404	24,800
August			110	6,760
September			192	11,400
The year	7,860	102	1,290	935,000

* Estimated.

^b Interpolated.

COTTONWOOD CREEK NEAR MONUMENT, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 30, T. 9 S., R. 28 E., 300 feet above a private irrigation diversion dam and 4 miles south of Monument.

RECORDS AVAILABLE.—March, 1925, to September, 1927; summer record only.

EXTREMES.—Maximum discharge during year, 298 second-feet June 10 (gage height, 1.76 feet); minimum, 5.1 second-feet August 14–20 (gage height, 0.50 foot).

1925–1927: Maximum discharge, that of June 10, 1927; maximum gage height, 2.45 feet May 25, 1925; minimum discharge, 0.2 second-foot August 13–15, 27, and 28, 1925.

REMARKS.—Records fair. Gage read on alternate days; discharge interpolated for days of missing gage height. Several small diversions for irrigation above station. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1927

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....		85	195	48	19	6.8	5.7
2.....		85	172	42	19	6.8	5.7
3.....		85	150	42	19	6.8	5.7
4.....		82	142	42	19	6.8	5.7
5.....		80	135	42	19	6.6	5.7
6.....		82	124	42	19	6.3	6.6
7.....		85	113	158	19	6.3	7.4
8.....	70	85	110	274	18	6.3	7.7
9.....	72	85	106	286	16	6.3	8.0
10.....	75	82	96	298	14	6.3	9.5
11.....	72	80	85	250	13	6.0	11
12.....	70	75	85	203	12	5.7	11
13.....	95	70	85	162	12	5.4	8.0
14.....	120	68	80	120	11	5.1	8.0
15.....	100	65	75	100	10	5.1	8.0
16.....	80	65	70	80	9.4	5.1	8.0
17.....	82	65	65	70	8.8	5.1	8.0
18.....	85	62	62	60	8.4	5.1	8.0
19.....	85	60	60	60	8.0	5.1	8.0
20.....	85	60	60	44	8.0	5.1	8.0
21.....	82	60	60	29	8.0	5.4	8.0
22.....	80	70	72	29	7.4	5.7	8.0
23.....	82	80	85	29	8.0	5.7	8.0
24.....	85	93	80	29	8.0	5.7	9.0
25.....	85	106	75	29	8.0	6.0	10
26.....	85	234	68	29	7.7	6.3	10
27.....	102	266	60	29	7.4	6.0	11
28.....	120	230	60	26	7.4	5.7	12
29.....	110	195	60	23	7.4	5.7	12
30.....	99	195	60	21	7.1	5.7	12
31.....	92		53		6.8	5.7	
Month	Maximum	Minimum	Mean	Run-off in acre-feet			
March 8–31.....	120	70	88.0	4,190			
April.....	266	60	101	6,010			
May.....	195	53	90.4	5,560			
June.....	298	21	89.9	5,350			
July.....	19	6.8	11.8	728			
August.....	6.8	5.1	5.86	360			
September.....	12	5.7	8.46	503			
The period.....				22,700			

NOTE.—A discharge of 5.4 second-feet was measured Oct. 12, 1926.

DESCHUTES RIVER BASIN

CRANE PRAIRIE RESERVOIR NEAR LAPINE, OREG.

LOCATION.—Staff gage at reservoir dam in NW. $\frac{1}{4}$ sec. 16, T. 21 S., R. 8 E., 15 miles northwest of Lapine. Gage readings give elevation above mean sea level.

RECORDS AVAILABLE.—November, 1922, to September, 1927.

EXTREMES.—Maximum elevation during year, 4,432.90 feet June 26 (contents, 7,650 acre-feet); minimum, 4,428.36 feet November 4–12 (contents, zero).

1922–1927: Maximum elevation, 4,444.10 feet January 10–13, 1924 (contents, 50,830 acre-feet); minimum, that of November 4–12, 1926.

REMARKS.—Records good; furnished by State engineer of Oregon.

Monthly elevation and contents of Crane Prairie Reservoir near Lapine, Oreg., 1926–27

Date	Elevation (feet)	Contents (acre-feet)	Gain or loss during month (acre-feet)	Date	Elevation (feet)	Contents (acre-feet)	Gain or loss during month (acre-feet)
Sept. 30.....	4,428.52	21	-----	May 31.....	4,431.60	4,370	+3,689
Oct. 31.....	28.38	0	-21	June 30.....	32.75	7,240	+2,870
Nov. 30.....	28.92	173	+173	July 31.....	32.68	7,060	-180
Dec. 31.....	28.52	21	-152	Aug. 31.....	32.04	5,420	-1,640
Jan. 31.....	-----	35	+14	Sept. 30.....	32.18	5,760	+340
Feb. 28.....	28.86	140	+105				
Mar. 31.....	29.12	305	+165	The year.....	-----	-----	+5,739
Apr. 30.....	29.52	681	+376				

• Interpolated.

DESCHUTES RIVER AT CRANE PRAIRIE, NEAR LAPINE, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 16, T. 21 S., R. 8 E., 200 yards below Crane Prairie Dam and 15 miles northwest of Lapine.

RECORDS AVAILABLE.—January, 1914, to June, 1917; February, 1922, to September, 1927.

EXTREMES.—Maximum discharge during year, 418 second-feet August 25-31 (gage height, 2.02 feet); minimum, 155 second-feet October 30 to November 12 (gage height, 1.12 feet).

1914-1917, 1922-1927: Maximum discharge, 604 second-feet April 18, 1924 (gage height, 2.40 feet); minimum, 2.5 second-feet April 24, 1923, owing to closing of dam (gage height, 0.05 foot).

REMARKS.—Records good except those for estimated periods, which are fair. No diversions. Some regulation caused by operations at Crane Prairie Dam. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	165	155	216	170	175	197	216	258	288	350	318	400
2	165	155	216	186	180	197	216	258	303	350	318	350
3	165	155	216	186	180	197	202	258	303	350	334	350
4	165	155	216	186	180	191	197	258	303	350	334	366
5	165	155	202	186	180	191	197	258	303	350	350	366
6	165	155	202	186	175	191	197	258	303	350	350	366
7	165	155	197	186	175	197	202	258	303	350	350	366
8	165	155	197	186	165	197	202	258	318	350	350	366
9	165	155	197	186	165	186	202	258	318	350	350	366
10	165	155	186	180	165	186	197	258	318	350	350	366
11	165	155	186	175	165	186	191	258	318	350	350	366
12	165	155	180	175	165	191	191	258	318	350	366	383
13	165	160	175	175	165	197	197	258	318	334	366	383
14	165	160	175	175	165	197	202	273	318	334	383	383
15	165	165	170	175	165	197	202	273	334	318	383	383
16	165	175	170	170	165	186	202	273	334	318	383	366
17	165	175	180	170	165	186	202	288	334	318	383	366
18	160	180	180	170	175	186	202	288	334	318	383	366
19	160	180	180	170	175	180	202	288	303	318	383	366
20	160	186	175	175	180	202	303	303	318	383	366	366
21	160	186	175	180	180	202	303	303	318	383	366	366
22	160	186	170	202	180	202	244	318	318	383	366	366
23	160	186	165	202	186	216	230	350	318	383	366	366
24	160	186	202	202	191	230	230	383	318	400	366	366
25	160	186	170	202	197	244	244	383	318	418	350	350
26	160	186	170	202	202	258	244	418	318	418	334	334
27	160	186	170	197	216	258	244	418	318	418	334	334
28	160	186	175	197	216	258	258	418	318	418	334	334
29	160	202	175	172	216	258	258	418	318	418	350	350
30	155	216	170	216	258	258	400	318	418	418	350	350
31	155	170	216	216	273	273	273	318	418	418	350	350
Month	Maximum			Minimum			Mean			Run-off in acre-feet		
October	165	155	162	165	155	162	165	155	162	9,960	10,200	11,300
November	216	186	184	216	186	184	216	186	184	10,700	9,940	12,000
December	216	186	179	216	186	179	216	186	179	12,000	12,700	16,100
January	186	180	195	186	180	195	186	180	195	20,000	20,400	23,100
February	202	165	202	202	165	202	202	165	202	23,100	21,700	21,700
March	216	180	202	216	180	202	216	180	202	178,000		
April	258	191	214	258	191	214	258	191	214			
May	303	230	262	303	230	262	303	230	262			
June	418	288	336	418	288	336	418	288	336			
July	350	318	331	350	318	331	350	318	331			
August	418	318	376	418	318	376	418	318	376			
September	400	334	364	400	334	364	400	334	364			
The year	418	155	246	418	155	246	418	155	246			

DESCHUTES RIVER ABOVE DAVIS CREEK, NEAR LAPINE, OREG.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ 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.

RECORDS AVAILABLE.—July, 1925, to September, 1927.

EXTREMES.—Maximum discharge during year, 770 second-feet August 28 and 29 (gage height, 1.94 feet); minimum, 468 second-feet December 23 (gage height, 0.88 foot).

1925-1927: Maximum discharge, 806 second-feet August 13, 14, and August 16 to September 16, 1925 (gage height, 2.0 feet); minimum, that of December 23, 1926. A discharge of 334 second-feet was measured on April 25, 1923, when gates in Crane Prairie Dam were closed.

REMARKS.—Records good except those for September 8 and 10-12, which were interpolated. No diversions. Flow regulated to small extent by storage in Crane Prairie Reservoir. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	500	478	527	495	489	505	516	582	596	667	667	755
2.....	500	478	527	495	489	505	511	568	610	667	667	696
3.....	500	481	527	505	492	503	511	568	610	667	667	696
4.....	500	484	527	505	492	503	505	568	610	667	667	682
5.....	500	486	522	505	495	495	505	568	610	667	682	682
6.....	500	486	516	476	492	495	505	568	610	652	696	696
7.....	497	481	516	478	489	495	508	568	624	667	696	696
8.....	497	478	511	484	486	503	511	568	624	667	696	703
9.....	497	478	505	489	484	503	511	568	624	667	696	710
10.....	497	478	500	489	484	503	511	568	624	667	696	714
11.....	497	478	508	489	484	500	516	568	638	667	696	718
12.....	495	478	505	489	484	500	516	568	638	667	710	722
13.....	495	481	503	489	484	500	519	582	638	667	710	725
14.....	495	484	476	492	481	500	522	582	638	667	725	725
15.....	495	492	478	495	478	495	522	582	638	652	725	725
16.....	495	495	478	495	478	495	522	582	638	652	725	725
17.....	495	497	505	492	478	495	522	596	638	652	725	725
18.....	492	492	503	489	481	495	519	596	652	652	725	725
19.....	489	497	503	489	505	495	516	610	624	638	725	725
20.....	486	505	495	489	511	495	516	624	610	652	725	725
21.....	484	505	489	484	516	495	524	624	610	652	725	725
22.....	484	505	481	484	522	495	516	527	624	652	725	710
23.....	484	497	468	484	505	495	527	540	667	652	725	710
24.....	486	495	484	484	508	497	540	554	696	652	725	710
25.....	484	505	489	484	508	505	554	540	725	652	725	710
26.....	484	505	478	484	505	505	568	554	725	652	755	710
27.....	484	505	484	484	505	511	568	568	725	652	755	710
28.....	481	500	505	484	505	516	582	568	725	652	770	696
29.....	478	554	511	489	-----	522	568	568	725	652	770	696
30.....	473	527	495	489	-----	522	568	568	667	667	755	696
31.....	478	-----	489	489	-----	522	-----	582	-----	667	755	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	500	473	491	30,200
November.....	554	478	493	29,300
December.....	527	468	500	30,700
January.....	505	476	489	30,100
February.....	522	478	494	27,400
March.....	522	495	502	30,900
April.....	582	505	527	31,400
May.....	624	527	573	35,200
June.....	725	596	646	38,400
July.....	667	638	659	40,500
August.....	770	667	716	44,000
September.....	755	682	711	42,300
The year.....	770	468	567	410,000

DESCHUTES RIVER AT PRINGLE FALLS, NEAR LAPINE, OREG.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 23, T. 21 S., R. 9 E., at head of Pringle Falls, 7 miles northwest of Lapine.

RECORDS AVAILABLE.—December, 1915, to June, 1917; June, 1922, to September, 1927.

EXTREMES.—Maximum discharge during year, 984 second-feet August 27 to September 1 (gage height, 2.4 feet); minimum (estimated), 590 second-feet December 14 and 15.

1915-1917, 1922-1927: Maximum discharge, 1,170 second-feet June 21-27, 29, and 30, 1917; minimum, 540 second-feet December 27, 1915.

REMARKS.—Records good except those for estimated periods, which are fair. No diversions. Flow regulated to small extent by storage in Crane Prairie Reservoir. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		614	680	614	* 650	* 672	694	* 750	786			984
2		614	680	658	* 650	* 672	694	763	786			934
3		614	702	635	650	* 672	694	740	810			909
4		614	680	658	650	672	694	740	810			909
5		614	658	658		672	672	740	810			909
6	* 614	614	658	658		672	672	740	810		* 875	909
7		635	635	658		672	672	740	810			934
8		614	635	635		672	694	740	810			934
9		614	635	635		672	694	740	810			934
10		614	635	635	* 645	672	672	740	810			934
11		614	635	635		672	672	740	810	* 855		934
12	614	614	635	635		694	672	740	810		909	959
13	614	614	614	635		694	672	740	810			959
14	614	614	* 590	635		694	672	740	810			959
15	614	635	* 590	635		672	694	740	810			* 959
16	614	635	* 600	635	628	672	694	740	810			959
17	614	614	* 620	614	628	650	694	740	810			959
18	614	614	635	614	650	650	694	740	810			959
19	614	614	635	635	650	650	694	763	810			959
20	614	635	635	635	717	628	694	763	786		* 940	959
21	614	635	614		740	628		763	786			959
22	614	614	614		694	628		694	786	834		934
23	614	614			672	628		694	834			934
24	614	614			* 672	628		694	859			934
25	614	614			* 672	628		628	884			934
26	614	614	* 610	* 640	* 672	628	* 735	694	909	* 840		934
27	614	614			* 672	628		717	934		984	909
28	614	635			* 672	628		717	934		984	909
29	614	680				628		740	934		984	909
30	* 614	680				650		740	934		984	909
31	* 614					672		763			984	
Month						Maximum	Minimum	Mean	Run-off in acre-feet			
October						614	614	614	37,800			
November						680	614	623	37,100			
December						702	590	629	38,700			
January						658	614	638	39,200			
February						740	628	658	36,500			
March						694	628	657	40,400			
April							672	702	41,800			
May						763	628	733	45,100			
June						934	786	831	49,400			
July								850	52,800			
August						984		921	56,600			
September						984	909	937	55,800			
The year						984	590	733	531,000			

* Estimated.

DESCHUTES RIVER AT BENHAM FALLS, NEAR BEND, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 9, T. 19 S., R. 11 E., 50 yards above head of Benham Falls, $1\frac{1}{2}$ miles below proposed dam site for Benham Falls Reservoir, and 10 miles southwest of Bend.

RECORDS AVAILABLE.—March, 1909, to September, 1913; August, 1920, to September, 1921; February, 1924, to September, 1927.

EXTREMES.—Maximum discharge during year, 1,780 second-feet May 24 and 25 (gage height, 2.16 feet); minimum, 836 second-feet about January 22 (gage height, 0.24 foot).

1909-1913, 1920-21, 1924-1927: Maximum stage occurred during flood of November 27, 1909 (gage height and discharge not determined); minimum discharge, that of January 22, 1927.

REMARKS.—Records excellent except those for estimated periods, which are fair. Minor diversions for irrigation above station. Some regulation caused by storage in Crane Prairie and Crescent Lake Reservoirs. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,020	1,040	1,380	1,110		1,300		1,660	1,550	1,610	1,440	1,610
2.....	1,020	1,040	1,410	1,140		1,300		1,660	1,550	1,550	1,460	1,610
3.....	1,020	1,040	1,410	1,200		1,300		1,720	1,550	1,490	1,460	1,550
4.....	1,020	1,050	1,410	1,200		1,300		1,720	1,550	1,490	1,460	1,550
5.....	1,040	1,030	1,380	1,220		1,300		1,720	1,550	1,460	1,460	1,550
6.....	1,040	1,040	1,360	1,220		1,270		1,720	1,550	1,460	1,460	1,460
7.....	1,040	1,040	1,330	1,240		1,270		1,720	1,550	1,440	1,460	1,440
8.....	1,050	1,040	1,300	1,200	1,120	1,270		1,720	1,550	1,440	1,460	1,410
9.....	1,060	1,040	1,240	1,200		1,270		1,720	1,550	1,440	1,460	1,410
10.....	1,060	1,040	1,220	1,170		1,270	1,300	1,720	1,550	1,440	1,460	1,410
11.....	1,070	1,040	1,200	1,140		1,240		1,660	1,550	1,410	1,460	1,440
12.....	1,080	1,040	1,220	1,140		1,240		1,660	1,610	1,410	1,460	1,460
13.....	1,070	1,040	1,200	1,140		1,300		1,660	1,610	1,410	1,490	1,460
14.....	1,080	1,050	970	1,170		1,330		1,610	1,610	1,380	1,490	1,460
15.....	1,080	1,070	947	1,170		1,330		1,610	1,610	1,380	1,490	1,460
16.....	1,080	1,100	1,140	1,140	1,110	1,300		1,610	1,610	1,380	1,550	1,440
17.....	1,070	1,100	1,380	1,140	1,110	1,270		1,610	1,550	1,360	1,550	1,440
18.....	1,060	1,100	1,300	1,140	1,140	1,270		1,610	1,550	1,360	1,550	1,440
19.....	1,060	1,140	1,240	1,140	1,200	1,240		1,660	1,550	1,360	1,550	1,440
20.....	1,050	1,220	1,220	1,080	1,200	1,220	1,330	1,660	1,550	1,360	1,550	1,440
21.....	1,050	1,220	1,220		1,360	1,220	1,300	1,720	1,490	1,360	1,550	1,410
22.....	1,040	1,220	1,200		1,360	1,240	1,300	1,720	1,490	1,330	1,550	1,410
23.....	1,040	1,220	1,050		1,360	1,270	1,330	1,720	1,490	1,360	1,550	1,410
24.....	1,040	1,220	899		1,300	1,270	1,360	1,780	1,490	1,380	1,550	1,410
25.....	1,040	1,220	1,040		1,300	1,300	1,410	1,720	1,490	1,440	1,550	1,410
26.....	1,040	1,240	1,200	1,110	1,330		1,460	1,660	1,550	1,410	1,550	1,410
27.....	1,040	1,240	1,220		1,300		1,490	1,660	1,550	1,410	1,550	1,410
28.....	1,040	1,240	1,240		1,300		1,550	1,610	1,610	1,410	1,610	1,410
29.....	1,040	1,300	1,140			1,320	1,550	1,610	1,610	1,410	1,610	1,410
30.....	1,040	1,360	1,140				1,610	1,550	1,660	1,440	1,610	1,410
31.....	1,040		1,140					1,550		1,440	1,610	
Month						Maximum	Minimum	Mean	Run-off in acre-feet			
October.....						1,080	1,020	1,050	64,600			
November.....						1,360	1,030	1,130	67,200			
December.....						1,410	899	1,220	75,000			
January.....						1,240		1,150	70,700			
February.....						1,360		1,180	65,500			
March.....						1,330	1,220	1,280	78,700			
April.....						1,610		1,350	80,300			
May.....						1,780	1,550	1,670	103,000			
June.....						1,610	1,490	1,560	92,800			
July.....						1,610	1,330	1,420	87,300			
August.....						1,610	1,440	1,520	93,500			
September.....						1,610	1,410	1,450	86,300			
The year.....						1,780	899	1,330	965,000			

DESCHUTES RIVER BELOW LAVA ISLAND, NEAR BEND, OREG.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 23, T. 18 S., R. 11 E., three-fourths mile below Lava Island, 1 mile below intake of Arnold Canal, and 6 miles southwest of Bend. Prior to May 4, 1927, gage was a quarter of a mile upstream.

RECORDS AVAILABLE.—March, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 1,560 second-feet May 5-10 (gage height, 1.35 feet, lower gage); minimum, 830 second-feet December 24, 1926-27: Maximum and minimum discharge, same as above.

REMARKS.—Records excellent except those for estimated periods, which are fair. Arnold Canal diverts water for irrigation above station. Flow regulated by storage in Crescent Lake and Crane Prairie Reservoirs. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	930	900	91,230	1,040	1,030	1,100	1,170	1,370	1,260	1,370	1,210	1,320
2-----	945	900	91,250	1,040	1,030	1,110	1,220	1,410	1,260	1,340	1,230	1,320
3-----	935	900	1,270	1,060	1,040	1,120	1,220	1,460	1,250	1,280	1,250	1,430
4-----	930	900	1,160	1,060	1,040	1,120	1,210	1,490	1,250	1,250	1,250	1,370
5-----	925	900	1,220	1,060	1,060	1,120	1,200	1,560	1,240	1,250	1,250	1,270
6-----	920	900	1,190	1,080	1,050	1,120	1,150	1,560	1,230	1,230	1,250	1,240
7-----	915	900	1,160	1,080	1,040	1,120	1,150	1,560	1,220	1,210	1,250	1,220
8-----	915	895	1,140	1,060	1,020	1,120	1,170	1,560	1,220	1,210	1,250	1,210
9-----	910	900	1,130	1,060	1,010	1,110	1,180	1,560	1,220	1,210	1,250	1,220
10-----	910	900	1,110	1,090	1,000	1,110	1,190	1,560	1,350	1,200	1,250	1,250
11-----	910	900	1,100	1,070	995	1,110	1,170	1,490	1,370	1,190	1,260	1,270
12-----	905	895	1,130	1,060	980	1,090	1,170	1,490	1,340	1,180	1,260	1,270
13-----	905	895	1,150	1,060	995	1,170	1,150	1,430	1,340	1,180	1,270	1,270
14-----	910	895	995	1,060	1,000	1,200	1,150	1,430	1,340	1,160	1,270	1,270
15-----	905	960	895	1,070	1,010	1,210	1,170	1,430	1,330	1,160	1,280	1,260
16-----	910	1,010	1,040	1,060	1,020	1,200	1,170	1,430	1,330	1,160	1,280	1,260
17-----	905	1,010	1,210	1,060	1,030	1,180	1,160	1,430	1,330	1,160	1,280	1,260
18-----	900	1,020	1,180	1,060	1,040	1,170	1,180	1,430	1,320	1,150	1,280	1,260
19-----	895	1,050	1,120	1,060	1,060	1,110	1,180	1,430	1,320	1,140	1,280	1,260
20-----	895		1,090	1,030	1,130	1,140	1,180	1,456	1,300	1,140	1,280	1,250
21-----	900		1,080	955	1,190	1,130	1,170	1,470	1,280	1,140	1,280	1,250
22-----	900		1,070	945	1,200	1,140	1,170	1,480	1,260	1,140	1,280	1,250
23-----	900		1,020	940	1,180	1,160	1,170	1,490	1,250	1,140	1,280	1,240
24-----	900		858	1,050	1,160	1,170	1,190	1,490	1,260	1,180	1,280	1,210
25-----	905	1,130	930	1,110	1,150	1,170	1,200	1,490	1,270	1,210	1,280	1,210
26-----	900		1,030	1,140	1,170	1,190	1,210	1,370	1,290	1,210	1,300	1,210
27-----	895			1,140	1,130	1,150	1,250	1,370	1,330	1,190	1,340	1,230
28-----	895			1,060	1,090	1,150	1,270	1,330	1,360	1,190	1,340	1,240
29-----	900		1,100	1,030		1,150	1,300	1,290	1,370	1,180	1,340	1,220
30-----	900			1,020		1,150	1,320	1,280	1,430	1,180	1,340	1,220
31-----	900			1,010		1,150		1,270		1,190	1,340	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	945	895	909	55,900
November-----		895	1,000	59,500
December-----	1,270	858	1,110	68,200
January-----	1,140	940	1,050	64,600
February-----	1,200	980	1,070	59,400
March-----	1,210	1,090	1,140	70,100
April-----	1,320	1,150	1,190	70,800
May-----	1,560	1,270	1,450	89,200
June-----	1,430	1,220	1,300	77,400
July-----	1,370	1,140	1,200	73,800
August-----	1,340	1,210	1,280	78,700
September-----	1,430	1,210	1,260	75,000
The year-----	1,560	858	1,160	843,000

* Estimated.

DESCRUTES RIVER BELOW BEND, OREG.

LOCATION.—Water-stage recorder in SE. ¼ sec. 20, T. 17 S., R. 12 E., half a mile below North Canal Dam and 2 miles north of Bend.

RECORDS AVAILABLE.—November, 1914, to September, 1927.

EXTREMES.—Maximum discharge during year, 1,560 second-feet February 24 (gage height, 2.35 feet); minimum, 30 second-feet July 16 (gage height, -0.02 foot).

1914-1927: Maximum discharge, 2,500 second-feet December 7, 1921 (gage height, 2.90 feet); minimum, about 5 second-feet June 16-23, July 3-7, and August 12-29, 1926.

Maximum discharge of river in this vicinity since 1905, 4,820 second-feet November 27, 1909; no diversions.

REMARKS.—Records good except those below 100 second-feet and those for estimated periods, which are fair. Six large canals divert above station; small diversions below. Flow regulated by hydroelectric plant at Bend and storage in Crescent Lake and Crane Prairie Reservoirs. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	233	852	1,160	1,030	972	1,150	1,130	610	346	309	155	335
2.....	224	843	1,220		981	1,130	1,180	625	346	309	135	346
3.....	233	861	1,220		906	1,130	1,070	645	319	251	138	424
4.....	246	852	1,220		730	1,090	981	664	299	228	159	443
5.....	242	852	1,200		681	843	782	689	269	219	185	335
6.....	256	861	1,160	1,060	673	714	756	681	237	198	141	309
7.....	271	852	1,140	1,060	664	730	790	705	224	170	145	335
8.....	271	852	1,110	1,060	861	782	799	705	215	148	148	356
9.....	276	852	1,120	1,070	981	953	816	689	242	128	159	413
10.....	271	861	1,080	1,110	981	1,060	816	• 669	378	125	155	572
11.....	266	852	1,040	1,070	972	1,120	825	• 588	430	112	163	648
12.....	266	• 830	1,080	1,060	962	1,060	799	• 598	367	106	155	625
13.....	276	• 808	1,060	1,060	972	1,080	807	530	362	100	155	681
14.....	293	• 786		1,070	1,020	1,180	782	• 517	356	94	141	714
15.....	276	764		906	1,070	1,200	773	• 514	309	91	141	722
16.....	293	764		697	1,000	1,190	705	• 537	299	• 94	145	714
17.....	288	825		689	1,040	1,160	673	• 524	265	• 110	141	730
18.....	282	962		773	1,050	1,140	681	• 489	274	• 87	159	766
19.....	276	1,060		1,050	1,070	1,140	640	469	269	• 97	163	756
20.....	266	1,050		1,030	1,150	1,120	625	• 482	246	• 150	159	764
21.....	260	1,050	• 970	• 950	1,220	1,110	648	• 515	206	85	166	773
22.....	516	1,030		• 940	1,240	1,120	648	• 531	189	94	163	773
23.....	852	1,020		• 950	1,220	1,150	656	523	189	106	163	764
24.....	843	925		1,070	1,270	1,180	673	• 520	194	178	159	697
25.....	843	843		1,100	1,180	1,160	648	• 530	202	178	174	697
26.....	834	888		1,130	1,210	1,160	656	430	233	145	185	714
27.....	807	981		1,130	1,160	1,130	595	424	274	132	215	739
28.....	799	1,150		1,050	1,130	1,120	587	430	284	145	309	730
29.....	807	1,120		1,000	-----	1,100	565	373	309	148	294	730
30.....	799	1,140		981	-----	1,100	565	390	335	155	284	689
31.....	816	-----	-----	962	-----	1,120	-----	367	-----	163	319	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	852	224	435	26,700
November.....	1,150	764	913	54,300
December.....	1,220	-----	1,040	64,000
January.....	1,130	689	1,010	62,100
February.....	1,270	664	1,010	56,100
March.....	1,200	714	1,080	66,400
April.....	1,180	565	756	45,000
May.....	705	367	547	33,600
June.....	430	189	282	16,800
July.....	309	87	150	9,220
August.....	319	135	177	10,900
September.....	773	309	609	36,200
The year.....	1,270	87	665	481,000

• Estimated.

DESCHUTES RIVER NEAR MADRAS, OREG.

LOCATION.—Water-stage recorder in NW. ¼ sec. 19, T. 10 S., R. 13 E., at proposed Pelton dam site, 5 miles above mouth of Shitike Creek and 9 miles northwest of Madras.

RECORDS AVAILABLE.—December, 1923, to September, 1927.

EXTREMES.—Maximum discharge during year, 10,500 second-feet February 20 (gage height, 6.40 feet); minimum, 3,370 second-feet October 2 (gage height, 0.51 foot).

1923-1927: Maximum discharge, 10,700 second-feet February 6, 1925 (gage height, 6.54 feet); minimum, 3,220 second-feet August 21, 22, and August 30 to September 2, 1926 (gage height, 0.34 foot).

REMARKS.—Records excellent except those for estimated periods, which are fair. Diversions for irrigation near Bend. Gage-height record furnished by Columbia Valley Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.-----	3,400	3,960	5,940	4,470	4,950	5,800	6,560	6,060	4,260	4,260	3,610	3,760
2.-----	3,400	4,010	6,060	4,700	5,440		6,190	5,820	4,160	4,260	3,610	3,810
3.-----	3,480	4,010	5,820	4,940	5,190		6,060	5,690	4,160	4,160	3,580	3,810
4.-----	3,460	4,010	* 5,700	5,060	5,560		6,060	5,440	4,160	4,060	3,600	3,910
5.-----	3,460	4,010	* 5,560	5,440	5,560		5,690	5,440	4,260	4,010	3,600	3,910
6.-----	3,470	4,060	5,440	5,690	5,060	5,690	6,060	5,190	4,360	3,960	3,660	3,810
7.-----	3,520	4,060	5,190	5,690	4,820	5,500	5,440	5,190	4,360	3,960	3,610	3,760
8.-----	3,500	4,060	4,940	5,320	4,700		5,440	5,060	4,580	3,960	3,580	3,810
9.-----	3,480	4,060	4,820	5,060	4,940		5,560	4,940	4,700	3,910	3,570	3,860
10.-----	3,460	4,060	4,700	4,940	4,820		5,440	4,940	4,940	3,860	3,570	4,060
11.-----	3,470	4,060	4,700	4,820	4,700	5,500	5,190	4,820	5,190	3,810	3,570	4,260
12.-----	3,470	4,060	4,700	4,820	4,700		5,190	4,700	5,060	3,810	3,590	4,260
13.-----	3,480	4,060	4,820	4,820	4,700		5,190	4,820	4,820	3,760	3,570	4,260
14.-----	3,490	4,010	4,580	4,700	4,700		5,440	4,580	4,700	3,760	3,570	4,260
15.-----	3,470		4,470	4,700	4,700		5,820	4,700	4,580	3,710	3,580	4,260
16.-----	3,610	*4,300	4,470	4,360	4,700	5,940	6,190	4,940	4,470	3,710	3,600	4,260
17.-----	3,660		4,700	4,360	4,700	5,820	6,060	4,940	4,470	3,710	3,620	4,260
18.-----	3,610		4,580	4,360	4,940	5,560	5,500	4,820	4,360	3,660	3,610	4,260
19.-----	3,520		4,470	4,580	4,940	5,440		4,700	4,260	3,550	3,610	
20.-----	3,480		4,470	4,470	7,400	5,440		4,580	4,160	3,620	3,600	
21.-----	3,480	4,580	4,700	4,400	8,660	5,440		4,580	4,160	3,660	3,590	*4,200
22.-----	3,480	4,470	4,700	4,330	8,060	5,440	5,500	4,580	4,160	3,600	3,580	
23.-----	3,760	4,470	4,580	4,260	7,560	5,560		4,580	4,160	3,620	3,570	
24.-----	4,060	4,470	4,360	4,360	* 7,180	5,940		4,580	4,160	3,660	3,560	4,110
25.-----	4,060	4,470	4,360	4,470	* 6,800	6,060		4,580	4,110	3,710	3,570	4,110
26.-----	4,160	4,470	4,470	4,470	* 6,440	6,060	6,690	4,580	4,060	3,710	3,570	4,110
27.-----	4,060	4,360	4,580	4,700	* 6,060	6,060	7,060	4,470	4,160	3,650	3,610	4,160
28.-----	3,960	4,360	4,580	4,820	5,800	6,060	7,060	4,360	4,160	3,610	3,630	4,470
29.-----	3,960	5,560	4,580	4,580	-----	5,940	6,690	4,260	4,160	3,610	3,710	4,470
30.-----	3,960	5,440	4,580	4,580	-----	6,060	6,440	4,260	4,260	3,620	3,710	4,260
31.-----	3,960	-----	4,580	4,580	-----	6,320	-----	4,260	-----	3,620	3,710	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	4,160	3,400	3,640	224,000
November-----	5,560	3,960	4,300	256,000
December-----	6,060	4,360	4,850	298,000
January-----	5,690	4,260	4,740	291,000
February-----	8,660	4,700	5,640	313,000
March-----	6,320	-----	5,750	354,000
April-----	7,060	5,190	5,890	350,000
May-----	6,060	4,260	4,850	298,000
June-----	5,190	4,060	4,390	261,000
July-----	4,260	3,600	3,800	234,000
August-----	3,710	3,560	3,600	221,000
September-----	4,470	3,760	4,110	245,000
The year-----	8,660	3,400	4,620	3,340,000

* Estimated.

DESCHUTES RIVER AT MECCA, OREG.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 20, T. 9 S., R. 13 E., at bridge at Mecca, $1\frac{1}{2}$ miles below mouth of Shitike Creek.

RECORDS AVAILABLE.—June, 1911, to January, 1927; discontinued.

EXTREMES.—Maximum discharge during year, 7,340 second-feet November 29 (gage height, 4.03 feet); minimum, 3,310 second-feet October 1, 2, 6, and 7 (gage height, 1.94 feet).

1911-1927: Maximum discharge, 15,200 second-feet January 6, 1923 (gage height, 6.9 feet); minimum, 3,170 second-feet August 27-30, 1920 (gage height, 1.95 feet).

REMARKS.—Records good except those for October 9-13, 27, November 13, 22, 23, 26, and 27, which were estimated. Diversions for irrigation from main stream near Bend and from Tumalo Creek, Squaw Creek, and upper Crooked River.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Day	Oct.	Nov.	Dec.	Jan.
1	3,310	4,080	6,650	4,710	16	3,640	4,620	4,710	-----
2	3,310	4,080	6,880	4,900	17	3,720	4,350	4,900	-----
3	3,340	4,080	6,420	5,200	18	3,720	4,170	4,900	-----
4	3,340	4,080	6,210	5,400	19	3,640	4,170	4,710	-----
5	3,320	4,080	6,210	5,800	20	3,560	4,260	4,710	-----
6	3,310	4,080	5,800	-----	21	3,560	4,620	4,900	-----
7	3,320	4,260	5,400	-----	22	3,560	4,680	5,000	-----
8	3,370	4,170	5,200	-----	23	3,720	4,740	4,900	-----
9	-----	4,080	5,100	-----	24	4,080	4,800	4,710	-----
10	-----	4,080	5,000	-----	25	4,170	4,900	4,620	-----
11	3,460	4,080	5,000	-----	26	4,260	4,830	4,620	-----
12	-----	4,080	5,000	-----	27	4,170	4,770	4,620	-----
13	-----	4,080	5,100	5,000	28	4,080	4,710	4,800	-----
14	3,560	4,080	4,900	4,900	29	4,080	6,210	4,800	-----
15	3,560	4,170	4,620	-----	30	4,080	6,420	4,800	-----
					31	4,080	-----	4,800	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,260	3,310	3,650	224,000
November	6,420	4,080	4,460	265,000
December	6,650	4,620	5,160	317,000

DESCHUTES RIVER AT SHERARS BRIDGE, OREG.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 35, T. 3 S., R. 14 E., one-fourth mile below mouth of Buck Creek, 1 mile below Sherars Bridge, and 43 miles above mouth of river.

RECORDS AVAILABLE.—June, 1923, to September, 1927. Incomplete.

EXTREMES.—Maximum discharge during year (estimated), 32,000 second-feet February 21 (gage height, 13.5 feet); minimum, 3,860 second-feet October 1 and 2 (gage height, 1.05 feet).

1923-1927: Maximum discharge, that of February 21, 1927; minimum, 3,680 second-feet on several days in July, August, and September, 1926 (gage height, 0.9 foot).

REMARKS.—Records good except those for December 6, 19, and February 20-26, which were estimated. Regulation and diversions for irrigation in upper portion of basin near Bend and Prineville. Gage-height record furnished by Deschutes Falls Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,860	4,330	9,630	5,390	6,330	9,140	8,880	9,400	5,830	5,080	4,160	4,230
2	3,860	4,390	9,630	5,540	13,000	9,930	8,620	8,880	5,830	5,080	4,160	4,230
3	3,920	4,390	8,990	7,010	10,600	9,930	8,360	8,360	5,830	5,080	4,160	4,230
4	3,920	4,390	7,520	7,520	9,310	9,660	8,100	8,100	5,830	4,900	4,160	4,230
5	3,920	4,390	7,260	7,790	8,070	9,400	7,840	7,840	6,030	4,900	4,160	4,230
6	3,920	4,390	6,900	7,790	7,010	8,620	7,590	7,590	6,230	4,300	4,160	4,230
7	3,920	4,520	6,540	7,260	6,540	8,100	7,350	7,350	6,660	4,730	4,160	4,230
8	3,980	4,520	6,330	6,770	6,330	8,100	7,110	7,350	7,110	4,730	4,160	4,230
9	3,980	4,460	6,130	5,940	6,130	7,840	7,110	7,110	7,350	4,730	4,080	4,230
10	3,920	4,390	5,750	5,940	5,940	7,840	7,110	7,110	7,110	4,730	4,080	4,560
11	3,920	4,390	5,750	5,940	5,940	7,590	6,880	7,590	7,590	4,560	4,080	4,900
12	3,920	4,390	5,750	5,750	5,750	7,590	6,880	7,590	7,590	4,560	4,080	4,900
13	4,040	4,390	5,750	5,750	5,560	7,590	6,880	7,110	7,110	4,560	4,080	4,900
14	4,040	4,390	5,560	5,750	5,560	8,620	7,110	7,350	6,880	4,560	4,080	4,900
15	3,980	4,390	5,070	5,560	5,750	8,620	7,840	7,590	6,660	4,560	4,080	4,900
16	4,040	5,390	5,070	5,560	5,750	8,620	8,100	8,100	6,230	4,390	4,080	4,900
17	4,100	4,930	5,560	5,390	5,940	8,360	8,100	8,360	6,230	4,390	4,080	4,900
18	4,100	4,650	5,390	5,390	9,950	7,840	7,590	8,100	6,030	4,390	4,080	4,730
19	4,040	4,650	5,310	5,390	8,070	7,590	7,590	7,590	5,830	4,310	4,080	4,730
20	3,980	4,790	6,230	5,390		7,350	7,590	7,110	5,830	4,310	4,080	4,730
21	3,920	5,070	5,230	5,230		7,350	7,110	6,880	5,640	4,230	4,080	4,730
22	3,920	4,930	5,230	5,070		7,350	6,660	6,880	5,640	4,230	4,080	4,730
23	4,040	4,930	5,070	4,790	15,000	7,590	6,660	6,880	5,640	4,230	4,080	4,730
24	4,390	5,070	5,070	4,790		7,840	7,110	6,880	5,640	4,230	4,080	4,730
25	4,520	5,390	4,930	4,930		8,100	8,880	6,880	5,450	4,230	4,080	4,730
26	4,520	5,750	4,930	5,070		8,360	9,660	6,880	5,260	4,230	4,080	4,730
27	4,650	5,940	5,070	5,390	10,200	8,620	11,200	6,660	5,260	4,160	4,080	4,730
28	4,520	6,130	5,070	5,940	9,660	8,360	11,400	6,440	5,260	4,160	4,080	4,900
29	4,390	10,600	5,230	5,560		8,100	10,990	6,230	5,260	4,160	4,160	5,450
30	4,330	11,400	5,230	5,390		8,100	10,200	6,030	5,260	4,160	4,160	5,640
31	4,270		5,230	5,390		8,360		6,030		4,160	4,230	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,650	3,860	4,090	251,000
November	11,400	4,330	5,190	309,000
December	9,630	4,930	5,980	368,000
January	7,790	4,790	5,850	360,000
February		5,560	9,370	520,000
March	9,930	7,350	8,270	508,000
April	11,400	6,660	8,080	481,000
May	9,400	6,030	7,320	450,000
June	7,590	5,260	6,140	365,000
July	5,080	4,160	4,500	277,000
August	4,230	4,080	4,110	253,000
September	5,640	4,230	4,670	278,000
The year		3,860	6,110	4,400,000

DESCHUTES RIVER AT MOODY, NEAR BIGGS, OREG.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ sec. 26, T. 2 N., R. 15 E., opposite Moody railroad station, $1\frac{1}{2}$ miles above mouth of river, and 5 miles southwest of Biggs.

DRAINAGE AREA.—9,180 square miles.

RECORDS AVAILABLE.—July, 1906, to September, 1927. October, 1897, to December, 1899, for station near Moro, 10 miles above mouth of river.

EXTREMES.—Maximum discharge during year, 32,400 second-feet February 21 (gage height, 8.4 feet); minimum, 3,820 second-feet October 21 and 23 (gage height, 2.22 feet).

1906-1927: Maximum discharge, 43,600 second-feet January 7, 1923 (gage height, 10.2 feet); minimum, 3,510 second-feet August 23-28, 1920 (gage height, 1.9 feet).

REMARKS.—Records good. Discharge estimated October 1-9. Summer discharge is reduced by diversions for irrigation in upper river basin. Gage-height record furnished by Eastern Oregon Land Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	3,860	4,260	8,550	5,700	5,700	8,150	8,150	9,400	6,020	5,240	4,150	4,150
2.....	3,860	4,260	8,970	6,020	12,000	9,400	8,150	8,150	6,020	5,240	4,150	4,380
3.....	3,920	4,260	8,550	7,400	10,200	9,800	7,700	8,150	6,020	5,390	4,260	4,260
4.....	3,920	4,260	7,400	8,150	9,400	9,400	7,400	7,770	6,020	5,080	4,260	4,260
5.....	3,920	4,260	7,400	8,150	7,770	8,970	7,400	7,400	6,020	4,940	4,150	4,260
6.....	3,920	4,380	7,040	8,150	7,400	8,550	6,690	7,400	6,020	4,790	4,150	4,260
7.....	3,920	4,260	6,350	7,400	6,690	7,770	6,690	7,040	6,350	4,790	4,150	4,260
8.....	3,980	4,510	6,020	6,690	6,690	7,400	6,690	6,690	6,690	4,790	4,040	4,260
9.....	3,980	4,510	6,020	6,350	6,350	7,400	6,690	6,690	7,040	4,790	4,040	4,260
10.....	3,980	4,510	5,700	6,020	6,350	7,400	6,690	6,690	6,690	4,510	4,040	4,380
11.....	3,980	4,510	5,700	6,020	6,020	7,400	6,350	6,690	7,040	4,510	4,040	4,940
12.....	3,980	4,510	5,700	6,020	6,020	7,040	6,350	6,690	6,690	4,510	4,040	5,080
13.....	3,980	4,380	5,700	6,020	6,020	7,040	6,350	6,690	6,690	4,510	4,040	4,790
14.....	4,040	4,510	5,390	6,020	5,700	8,150	6,350	7,040	6,350	4,510	4,040	4,790
15.....	3,980	4,510	5,240	5,700	5,700	8,150	7,040	7,400	6,350	4,380	4,040	4,790
16.....	4,040	5,080	5,240	5,700	5,700	7,770	7,400	7,770	6,020	4,260	4,040	4,790
17.....	4,150	4,940	5,700	5,390	6,020	7,770	7,400	8,150	6,020	4,380	4,040	4,790
18.....	4,150	4,790	5,700	5,390	9,400	7,400	7,400	7,770	6,020	4,260	4,040	4,790
19.....	4,040	4,650	5,390	5,390	8,550	7,040	7,040	7,400	6,020	4,260	4,040	4,790
20.....	3,980	4,790	5,390	5,080	9,400	7,400	6,690	6,690	5,390	4,260	4,040	4,790
21.....	3,820	4,790	5,390	5,080	25,200	7,040	6,690	6,690	5,390	4,260	4,040	4,790
22.....	3,980	5,390	5,700	5,080	19,200	7,040	6,690	6,690	5,240	4,260	4,040	4,790
23.....	3,820	5,080	5,390	4,790	15,200	7,400	7,040	6,350	5,390	4,260	4,040	4,790
24.....	4,040	5,390	5,240	5,080	14,700	7,400	6,690	6,350	5,390	4,260	4,040	4,650
25.....	4,510	5,390	5,080	5,240	11,000	7,400	8,970	6,350	5,390	4,260	4,040	4,510
26.....	4,510	6,020	5,390	5,390	10,600	7,770	9,400	6,350	5,240	4,260	4,040	4,510
27.....	4,650	6,020	5,390	5,390	10,200	7,770	10,600	6,350	5,240	4,260	4,040	4,650
28.....	4,510	5,700	5,390	6,020	9,800	7,770	10,600	6,020	5,240	4,150	4,040	4,940
29.....	4,260	12,400	5,390	6,020	-----	7,400	11,500	6,020	5,240	4,150	4,040	5,390
30.....	4,260	10,200	5,390	6,020	-----	7,400	9,800	6,020	5,240	4,150	4,040	5,390
31.....	4,260	-----	5,700	5,700	-----	7,400	-----	6,020	-----	4,150	4,040	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	4,650	3,820	4,060	250,000
November.....	12,400	4,260	5,220	311,000
December.....	8,970	5,080	6,020	370,000
January.....	8,150	4,790	6,020	370,000
February.....	25,200	5,700	9,390	521,000
March.....	9,800	7,040	7,780	478,000
April.....	11,500	6,350	7,620	453,000
May.....	9,400	6,020	7,000	430,000
June.....	7,040	5,240	5,950	384,000
July.....	5,390	4,150	4,510	277,000
August.....	4,260	4,040	4,070	250,000
September.....	5,390	4,150	4,650	277,000
The year.....	25,200	3,820	6,000	4,340,000

LITTLE DESCHUTES RIVER NEAR LAPINE, OREG.

LOCATION.—Staff gage in sec. 2, T. 22 S., R. 10 E., at wagon bridge at former town of Rosland, $1\frac{1}{2}$ miles north of Lapine.

RECORDS AVAILABLE.—September, 1910, to October 1913, fragmentary; June to November, 1918; August to October, 1920; May, 1924, to September, 1927.

EXTREMES.—Maximum discharge during year, 750 second-feet May 21 (gage height, 4.98 feet); minimum, 42 second-feet October 8 (gage height, 0.68 foot).

1910–1913, 1918, 1920, 1924–1927: Maximum discharge, 760 second-feet about June 12, 1912; maximum gage height, that of May 21, 1927; minimum discharge, 28 second-feet June 7, 1926.

REMARKS.—Records good except those for periods of ice effect, December 13–23, January 3–7, and January 18 to February 20, which are fair. Small diversions for irrigation above station. Flow regulated by storage in Crescent Lake Reservoir. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	43	43	282	110		222	208	630	340	225	210	225
2.....	43	44	265	138		250	222	678	340	196	196	225
3.....	43	43	265			208	222	678	305	183	210	170
4.....	43	44	265			222	208	654	305	170	210	130
5.....	43	43	222	140		208	195	654	288	170	210	93
6.....	43	43	171			208	195	630	288	170	210	93
7.....	43	47	171			171	195	606	305	158	196	89
8.....	42	47	159	119		182	195	582	305	152	196	89
9.....	43	49	159	119		171	208	558	340	146	210	89
10.....	50	50	159	119	78	148	195	534	376	135	210	102
11.....	50	49	171	94		182	195	487	394	130	210	106
12.....	49	50	138	94		208	182	464	394	130	225	106
13.....	47	50		94		222	182	464	376	125	225	97
14.....	43	54	128	94		250	182	442	358	120	225	93
15.....	43	60		94		195	208	464	340	115	225	89
16.....	44	68	168	94		182	236	487	225	115	225	93
17.....	46	119		94		195	208	534	305	115	225	89
18.....	47	110				195	208	582	305	110	225	85
19.....	49	102			92	182	222	637	288	110	210	85
20.....	50	110	126	80	100	195	208	704	288	106	210	85
21.....	49	148			182	208	208	750	271	146	210	85
22.....	49	138			222	222	222	704	255	170	210	81
23.....	49	119		72	222	222	250	615	255	170	210	81
24.....	47	110	94		208	222	282	594	255	170	210	85
25.....	47	119	102		195	236	300	471	255	183	196	81
26.....	47	128	102		195	222	378	432	240	135	196	81
27.....	49	128	119	70	208	222	442	413	288	305	210	81
28.....	47	119	119		182	208	497	413	322	183	225	85
29.....	47	138	119			208	534	413	288	196	240	93
30.....	47	208	119			208	606	376	255	210	240	97
31.....	44		110			208		376		210	225	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	50	42	46.0	2,830
November.....	208	43	86.0	5,120
December.....	282	94	153	9,410
January.....			96.6	5,940
February.....	222		115	6,390
March.....	250	148	206	12,700
April.....	606	182	259	15,400
May.....	750	376	549	33,800
June.....	394	240	305	18,100
July.....	305	106	160	9,840
August.....	240	196	214	13,200
September.....	225	81	103	6,130
The year.....	750	42	192	139,000

CRESCENT LAKE RESERVOIR NEAR CRESCENT, OREG.

LOCATION.—At reservoir dam in sec. 11, T. 24 S., R. 6 E., 14 miles west of Crescent. Zero of gage is 4,826.0 feet above mean sea level.

RECORDS AVAILABLE.—August, 1922, to September, 1927.

EXTREMES.—Maximum elevation during year, 4,841.9 feet July 18 (contents, 54,600 acre-feet); minimum, 4,834.40 feet October 1 and 2 (contents, 28,140 acre-feet).

1922-1927: Maximum elevation, 4,845.55 feet July 15, 1923 (contents, 67,760 acre-feet); minimum, 4,834.4 feet September 30 to October 2, 1926 (contents, 28,140 acre-feet).

REMARKS.—Water stored in Crescent Lake Reservoir is used by Deschutes County Municipal Improvement District through its canal diverting from Deschutes River at Bend. Record furnished by State engineer of Oregon.

Monthly stage and contents, 1926-27

Date	Gage height (feet)	Contents (acre-feet)	Gain or loss during month (acre-feet)	Date	Gage height (feet)	Contents (acre-feet)	Gain or loss during month (acre-feet)
Sept. 30.....	8.40	28,140	-----	May 31.....	-----	* 45,800	+4,800
Oct. 31.....	8.62	28,900	+760	June 30.....	-----	* 52,340	+6,540
Nov. 30.....	9.60	32,290	+3,390	July 31.....	-----	* 52,280	-60
Dec. 31.....	10.36	34,940	+2,650	Aug. 31.....	12.32	41,840	-10,440
Jan. 31.....	10.78	36,410	+1,470	Sept. 30.....	-----	* 42,930	+1,090
Feb. 28.....	11.54	39,080	+2,670	The year.....			+14,790
Mar. 31.....	11.78	39,930	+850				
Apr. 30.....	-----	* 41,000	+1,070				

* Interpolated.

CRESCENT CREEK AT CRESCENT LAKE, NEAR CRESCENT, OREG.

LOCATION.—Staff gage in sec. 11, T. 24 S., R. 6 E., 100 yards below dam at outlet of Crescent Lake and 14 miles west of Crescent.

RECORDS AVAILABLE.—July to September, 1927.

EXTREMES.—Maximum discharge during period, 209 second-feet August 24 (gage height, 2.22 feet); no flow September 4-30, when gates in dam were closed.

REMARKS.—Records good except those for estimated periods, which are fair. Flow regulated by storage in Crescent Lake Reservoir, this storage being released July 20 to September 3 for Deschutes County Municipal Improvement District canal near Bend. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1927

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1.....	} * 154		171	11.....	} * 4	192	0	21.....	99	200	0
2.....			84	12.....		197	0	22.....	98	205	0
3.....			20	13.....		197	0	23.....	97	201	0
4.....		160	0	14.....		205	0	24.....	96	201	0
5.....		160	0	15.....		199	0	25.....	101	201	0
6.....	} * 4	* 165	0	16.....	} 40	201	0	26.....	126	199	0
7.....		* 170	0	17.....		190	0	27.....	126	197	0
8.....		176	0	18.....		184	0	28.....	126	192	0
9.....		176	0	19.....		188	0	29.....	139	190	0
10.....		176	0	20.....		194	0	30.....	* 142	* 192	0
								31.....	* 146	194	-----
Month											
				Maximum				Minimum			
								Mean			
								Run-off in acre-feet			
July.....				146				45.5			
August.....				205				186			
September.....				171				9.2			
The period.....											
								14,790			

* Estimated.

DIVERSIONS FROM DESCHUTES RIVER NEAR BEND, OREG.

The following canals divert from Deschutes River between the gaging station at Benham Falls and the station below Bend: Arnold Canal diverts from right bank of Deschutes River at head of Lava Island, in SW. $\frac{1}{4}$ sec. 27, T. 18 S., R. 11 E.; water used for irrigation of lands southeast of Bend. Central Oregon Canal diverts from right bank in NE. $\frac{1}{4}$ sec. 13, T. 18 S., R. 11 E.; water used for irrigation of lands east of Bend. Pilot Butte Canal diverts in NE. $\frac{1}{4}$ sec. 17, T. 18 S., R. 12 E., from Central Oregon Canal above gage on that canal; water used for irrigation of lands east and northeast of Bend. Deschutes County Municipal Improvement District Canal diverts from left bank in NE. $\frac{1}{4}$ sec. 32, T. 17 S., R. 12 E., at Bend; water used to supplement flow of Tumalo project feed canal for irrigation of lands near Tumalo; water stored at Crescent Lake Reservoir is diverted by this canal. North and Swalley Canals divert from right bank in NE. $\frac{1}{4}$ sec. 29, T. 17 S., R. 12 E.; water used to irrigate lands north of Bend, mostly near Redmond. No other diversions between the gaging station at Benham Falls and the station below Bend.

Monthly diversions, in acre-feet, 1926-27

Month	Arnold Canal	Central Oregon Canal	Pilot Butte Canal	Deschutes County Municipal Improvement District Canal	North Canal	Swallay Canal	Total
October.....	6, 110	13, 200	472	0	11, 600	2, 780	34, 200
November.....	2, 960	1, 840	198	0	1, 620	0	6, 620
December.....	1, 560	1, 290	66	0	953	498	4, 370
January.....	1, 110	1, 160	66	0	941	394	3, 670
February.....	1, 210	1, 300	71	0	1, 350	289	4, 250
March.....	1, 910	2, 070	100	0	1, 130	572	5, 780
April.....	702	12, 700	528	0	10, 800	928	25, 700
May.....	6, 400	22, 400	1, 100	1, 810	23, 900	3, 520	59, 100
June.....	6, 550	23, 000	1, 110	4, 530	24, 700	6, 190	66, 100
July.....	7, 130	25, 500	1, 100	4, 950	25, 200	6, 120	70, 000
August.....	7, 070	25, 800	885	10, 000	25, 800	4, 660	74, 200
September.....	3, 830	15, 400	508	2, 460	15, 800	3, 500	41, 500
The year.....	46, 500	146, 000	6, 200	23, 800	144, 000	29, 400	396, 000

NOTE.—Records furnished by State engineer of Oregon.

TUMALO CREEK NEAR BEND, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 23, T. 17 S., R. 11 E., one-fourth mile above diversion dam of feed canal of the Tumalo project, 4 miles above mouth, and 4 miles northwest of Bend.

DRAINAGE AREA.—57 square miles.

RECORDS AVAILABLE.—November, 1913, to September, 1927; also during winters from October, 1906, to April, 1913, except 1909-10.

EXTREMES.—Maximum discharge during year, 367 second-feet June 10 (gage height, 2.37 feet); minimum, 25 second-feet September 1 (gage height, 0.98 foot).

1906-1927: Maximum discharge, 1,420 second-feet about January 6, 1923 (gage height, 4.55 feet); minimum, 4.0 second-feet October 28, 1922 (gage height, 0.55 foot).

REMARKS.—Records good except those for estimated periods, which are fair. Columbia Southern Canal diverts above station. Records furnished by State engineer of Oregon.

Daily discharge, in second-feet, of Tumalo Creek near Bend, Oreg., 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1.-----	33	52	162	65	75	65	64	129	152	186	70	32	
2.-----	35	50	184		64	65	64	118	150	175	49	35	
3.-----	45	50	140		59	64	65	107	155	152	44	30	
4.-----	37	47	118		69	58	64	65	95	155	141	46	27
5.-----	34	46	108	69	55	64	65	91	195	139	46	26	
6.-----	37	60	99	67	55	64	67	88	256	150	44	26	
7.-----	43	60	94	67	55	64	67	89	293	180	40	37	
8.-----	38	52	89	67	56	62	67	88	309	180	37	93	
9.-----	38	52	85	67	56	62	64	84	305	160	39	93	
10.-----	38	51	82	65	56	62	62	80	313	127	37	88	
11.-----	43	52	82	65	80	64	61	82	318	131	36	103	
12.-----	54	52	84	69	58	65	62	93	286	147	36	93	
13.-----	57	51	67	59	70	62	62	127	290	147	35	70	
14.-----	57	51		67	79	69	64	172	318	150	34	67	
15.-----	57	78		69	56	69	65	208	290	122	33	65	
16.-----	108	103		67	56	64	67	249	267	109	35	65	
17.-----	90	72	62	62	56	64	67	278	278	124	33	65	
18.-----	63	62		62	56	62	67	221	249	113	33	67	
19.-----	58	59		63	56	61	67	183	235	111	35	67	
20.-----	54	159			88	61	67	163	238	99	33	69	
21.-----	54	140	60		84	61	69	144	264	89	30	65	
22.-----	53	103	60	75	62	70	136	290	95	28	67		
23.-----	51	94		64	67	62	80	150	290	99	26	69	
24.-----	51	99			72	62	95	172	290	95	26	69	
25.-----	72	89			70		64	62	124	186	260	86	26
26.-----	63	84	64		64	155	178	235	86	27	64		
27.-----	54	79		70	64	64	178	163	192	80	27	109	
28.-----	50	87			65	64	178	150	163	75	27	158	
29.-----	50	239	51		159	64	178	136	180	79	28	144	
30.-----	51	159		64			163	136	183	80	28	109	
31.-----	52			64			150	150		79	27		

Monthly discharge of Tumalo Creek and Columbia Southern Canal near Bend, Oreg., 1926-27

Month	Tumalo Cr��ek			Run-off in acre-feet	Columbia Southern Canal (run-off in acre-feet)	Combined run-off in acre-feet
	Discharge in second-feet					
	Maximum	Minimum	Mean			
October	108	33	52.3	3,220	473	3,690
November	239	46	81.1	4,830	0	4,830
December	184		79.6	4,890	0	4,890
January		62	66.8	4,110	0	4,110
February	88	55	63.9	3,550	0	3,550
March	70	61	63.8	3,920	0	3,920
April	178	61	86.3	5,140	18	5,160
May	278	80	143	8,790	2,240	11,000
June	318	150	247	14,700	4,650	19,400
July	186	75	122	7,500	3,390	10,900
August	70	26	35.3	2,170	2,910	5,080
September	158	26	71.3	4,240	649	4,890
The year	318	26	92.6	67,100	14,300	81,400

SQUAW CREEK NEAR SISTERS, OREG.

LOCATION.—Water-stage recorder in NW. ¼ sec. 32, T. 15 S., R. 10 E., immediately above intake of McCallister ditch and 4 miles by road above Sisters.

DRAINAGE AREA.—63 square miles.

RECORDS AVAILABLE.—Irrigation seasons, 1913, 1914, 1916–1925; October, 1925, to September, 1927. From July, 1906, to May, 1913, at station 700 feet downstream, below intake of McCallister ditch.

EXTREMES.—Maximum discharge during year, 496 second-feet November 29 (gage height, 3.58 feet); minimum, 33 second-feet November 5 (gage height, 1.87 feet).

1906–1927: Maximum discharge (estimated), 1,940 second-feet November 22, 1909 (gage height at old station, 7.5 feet); minimum, 19 second-feet December 6, 1922.

REMARKS.—Records good except those for estimated periods, which are fair. Pole Creek, a tributary above station, has been diverted for irrigation. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	41	37	280	* 65	* 70	76	50	107	144	264	187	142
2.....	46	37	314	* 65	71	76	50	100	157	264	174	129
3.....	46	36	217	65	68	76	50	102	174	248	174	122
4.....	37	36	160	}	64	73	50	98	217	232	174	132
5.....	40	34	125		59	71	50	96	232	232	187	125
6.....	49	58	116		}	58	70	50	91	280	232	174
7.....		48	104	56		68	50	91	297	264	160	89
8.....		39	96	53		68	50	87	314	280	160	85
9.....		40	91	51	52	66	50	91	297	280	155	87
10.....		41	89	64	53	66	50	93	297	248	157	102
11.....	}	44	87	64	55	64	50	93	297	248	155	116
12.....		44	84	64	56	65	51	104	280	264	150	98
13.....		44	73	64	58	70	51	118	314	280	139	82
14.....		45	59	62	59	71	53	160	332	280	127	76
15.....		126	68	62	59	68	56	187	314	248	132	75
16.....	* 50	141	73	60	58	65	53	232	332	248	139	73
17.....		96	73	59	56	64	52	217	349	264	139	73
18.....		82	71	59	56	59	53	174	332	264	142	76
19.....		76	68	58	56	55	53	155	332	264	142	82
20.....		112	66	55	71	52	52	139	297	248	144	84
21.....	}	170	64	52	118	52	52	129	297	232	132	84
22.....		137	66	53	111	52	53	132	314	232	125	82
23.....		128	55	}	104	52	66	139	314	248	125	82
24.....		130	93		52	78	155	314	248	122	73	
25.....		114	89		52	89	174	314	264	120	71	
26.....	}	108	}	}	87	52	107	160	297	264	113	73
27.....		96			84	51	118	142	264	248	116	160
28.....		106			80	50	122	127	232	232	111	134
29.....		39	385		}	50	118	122	248	232	100	116
30.....		39	280			50	113	127	264	217	89	89
31.....		39	50			50	129	202	93			

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	-----	37	47.4	2,910
November.....	385	34	95.7	5,690
December.....	314	55	96.1	5,910
January.....	-----	52	61.1	3,760
February.....	118	52	69.8	3,880
March.....	76	50	61.5	3,780
April.....	122	50	64.7	3,850
May.....	232	87	131	8,060
June.....	349	144	282	16,800
July.....	280	202	251	15,400
August.....	187	89	141	8,670
September.....	160	71	97.3	5,790
The year.....	385	34	116	84,500

* Estimated.

CROOKED RIVER NEAR CULVER, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 11, T. 12 S., R. 12 E., one-eighth mile below Cove power plant and 3 miles northwest of Culver.

RECORDS AVAILABLE.—October, 1917, to September, 1927.

EXTREMES.—Maximum discharge during year, 4,330 second-feet April 27 and 28 (gage height, 3.80 feet); minimum, 1,080 second-feet July 17 to August 28 (gage height, 0.46 foot).

1917-1927: Maximum discharge, 7,320 second-feet February 6, 1925 (gage height, 5.6 feet); minimum, 970 second-feet July 12 to September 5, 1921.

REMARKS.—Records good except those above 3,000 second-feet, which are fair. Summer flow diverted for irrigation above Prineville. Springs increase flow about 1,000 second-feet in a few miles above station. Flow regulated slightly by storage in Ochoco Reservoir.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,110	1,140	2,020	1,290	1,350	1,860	3,090	3,060	1,350	1,170	1,080	1,140
2.....	1,110	1,140	1,780	1,290	1,350	1,860	2,670	2,670	1,350	1,170	1,080	1,140
3.....	1,110	1,140	1,940	1,350	1,350	2,100	2,370	2,370	1,290	1,170	1,080	1,140
4.....	1,110	1,140	1,940	1,350	2,190	2,470	2,370	2,280	1,290	1,170	1,080	1,140
5.....	1,110	1,140	2,020	1,860	2,470	2,280	2,370	2,190	1,290	1,170	1,080	1,140
6.....	1,110	1,140	1,940	2,280	2,190	2,100	2,280	2,100	1,290	1,170	1,080	1,140
7.....	1,110	1,140	1,860	2,280	2,100	2,020	2,280	2,020	1,290	1,170	1,080	1,140
8.....	1,110	1,140	1,700	2,190	2,020	2,020	2,280	1,940	1,290	1,170	1,080	1,170
9.....	1,110	1,140	1,420	2,190	1,940	2,020	2,280	1,860	1,290	1,170	1,080	1,170
10.....	1,110	1,140	1,350	2,100	1,780	1,940	2,190	1,780	1,350	1,170	1,080	1,170
11.....	1,170	1,140	1,350	1,860	1,560	1,940	1,940	1,700	1,780	1,170	1,080	1,290
12.....	1,170	1,140	1,290	1,700	1,420	1,860	2,020	1,700	1,700	1,170	1,080	1,290
13.....	1,170	1,140	1,290	1,630	1,420	1,780	2,100	1,700	1,560	1,170	1,080	1,260
14.....	1,170	1,140	1,290	1,490	1,420	1,860	2,280	1,630	1,490	1,170	1,080	1,260
15.....	1,170	1,140	1,290	1,420	1,350	2,020	2,770	1,630	1,420	1,170	1,080	1,260
16.....	1,170	1,140	1,290	1,420	1,350	2,190	3,690	1,630	1,350	1,170	1,080	1,230
17.....	1,170	1,140	1,290	1,350	1,350	2,100	2,980	1,630	1,290	1,080	1,080	1,230
18.....	1,170	1,140	1,290	1,290	1,350	2,020	2,980	1,630	1,290	1,080	1,080	1,230
19.....	1,170	1,140	1,350	1,230	1,350	1,860	2,770	1,630	1,230	1,080	1,080	1,230
20.....	1,170	1,140	1,350	1,230	1,350	1,780	2,470	1,630	1,230	1,080	1,080	1,230
21.....	1,170	1,140	1,290	1,230	1,560	1,780	2,370	1,630	1,200	1,080	1,080	1,200
22.....	1,170	1,140	1,290	1,230	2,670	1,780	2,370	1,560	1,200	1,080	1,080	1,170
23.....	1,170	1,140	1,290	1,170	2,670	2,020	2,280	1,560	1,170	1,080	1,080	1,170
24.....	1,170	1,140	1,290	1,170	2,100	2,280	2,770	1,560	1,170	1,080	1,080	1,170
25.....	1,170	1,140	1,290	1,230	1,940	2,370	3,210	1,560	1,170	1,080	1,080	1,170
26.....	1,170	1,170	1,290	1,230	1,860	2,470	3,590	1,560	1,170	1,080	1,080	1,170
27.....	1,170	1,170	1,290	1,290	1,860	2,470	4,330	1,560	1,230	1,080	1,080	1,170
28.....	1,140	1,170	1,290	1,290	1,860	2,470	4,330	1,490	1,290	1,080	1,080	1,170
29.....	1,140	1,170	1,290	1,290	-----	2,370	3,590	1,490	1,230	1,080	1,140	1,170
30.....	1,140	1,230	1,290	1,290	-----	2,470	3,210	1,490	1,170	1,080	1,110	1,170
31.....	1,140	-----	1,290	1,350	-----	2,770	-----	1,420	-----	1,080	1,140	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,170	1,110	1,150	70,700
November.....	1,230	1,140	1,150	68,400
December.....	2,020	1,290	1,460	89,800
January.....	2,280	1,170	1,500	92,200
February.....	2,670	1,350	1,760	97,800
March.....	2,770	1,780	2,110	130,000
April.....	4,330	1,940	2,720	162,000
May.....	3,090	1,420	1,800	111,000
June.....	1,780	1,170	1,310	78,000
July.....	1,170	1,080	1,130	69,500
August.....	1,140	1,080	1,080	66,400
September.....	1,290	1,140	1,190	70,800
The year.....	4,330	1,080	1,530	1,110,000

METOLIUS RIVER NEAR GRANDVIEW, OREG.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 19, T. 11 S., R. 11 E., at Montgomery ranch, 8 miles northwest of Grandview.

RECORDS AVAILABLE.—October, 1921, to September, 1927.

EXTREMES.—Maximum discharge during year, 3,870 second-feet February 20 (gage height, 2.16 feet); minimum, 1,280 second-feet October 1-3 (gage height, 0.28 foot).

1921-1927: Maximum discharge, about 5,780 second-feet January 7, 1923 (gage height, 3.32 feet); minimum, 1,280 second-feet September 25 to October 3, 1926 (gage height, 0.28 foot).

REMARKS.—Records good except those above 2,000 second-feet, which are poor. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,280	1,300	1,830	1,400	1,660	1,830	1,610	1,720	1,610	1,780	1,500	1,400
2.....	1,280	1,300	1,720	1,610	1,660	1,780	1,610	1,720	1,660	1,720	1,500	1,450
3.....	1,280	1,300	1,660	1,610	1,660	1,780	1,610	1,720	1,660	1,720	1,500	1,450
4.....	1,300	1,300	1,610	1,610	1,610	1,720	1,610	1,660	1,660	1,660	1,500	1,450
5.....	1,300	1,300	1,560	1,610	1,610	1,720	1,610	1,660	1,720	1,660	1,500	1,450
6.....	1,300	1,300	1,560	1,560	1,610	1,720	1,560	1,660	1,830	1,660	1,500	1,400
7.....	1,300	1,300	1,500	1,500	1,560	1,660	1,560	1,610	1,950	1,660	1,500	1,400
8.....	1,300	1,300	1,500	1,500	1,500	1,660	1,560	1,610	2,200	1,660	1,500	1,400
9.....	1,300	1,300	1,500	1,450	1,500	1,660	1,560	1,610	1,950	1,660	1,500	1,400
10.....	1,300	1,300	1,450	1,450	1,500	1,660	1,560	1,610	1,950	1,610	1,500	1,500
11.....	1,300	1,300	1,450	1,450	1,500	1,610	1,560	1,610	1,950	1,610	1,500	1,500
12.....	1,300	1,300	1,400	1,450	1,450	1,610	1,560	1,610	1,950	1,610	1,500	1,500
13.....	1,300	1,300	1,400	1,450	1,450	1,660	1,560	1,720	1,950	1,610	1,500	1,450
14.....	1,300	1,300	1,400	1,450	1,450	1,660	1,500	1,720	1,950	1,610	1,450	1,400
15.....	1,300	1,500	1,400	1,450	1,450	1,660	1,560	1,830	1,950	1,610	1,450	1,400
16.....	1,300	1,450	1,400	1,450	1,450	1,660	1,500	1,830	1,950	1,610	1,450	1,400
17.....	1,300	1,400	1,450	1,450	1,450	1,660	1,500	1,950	1,950	1,610	1,450	1,400
18.....	1,300	1,350	1,400	1,450	1,560	1,660	1,500	1,950	1,830	1,610	1,450	1,400
19.....	1,300	1,350	1,400	1,450	1,660	1,610	1,500	1,830	1,830	1,610	1,450	1,400
20.....	1,300	1,350	1,400	1,450	3,180	1,610	1,500	1,780	1,830	1,610	1,450	1,400
21.....	1,300	1,400	1,400	1,350	3,710	1,610	1,500	1,720	1,830	1,610	1,450	1,400
22.....	1,300	1,400	1,400	1,300	2,780	1,610	1,500	1,720	1,830	1,610	1,450	1,400
23.....	1,300	1,400	1,400	1,300	2,480	1,610	1,500	1,720	1,830	1,610	1,450	1,400
24.....	1,300	1,400	1,400	1,300	2,200	1,610	1,560	1,720	1,830	1,610	1,420	1,400
25.....	1,350	1,450	1,400	1,400	2,070	1,610	1,610	1,720	1,830	1,610	1,400	1,400
26.....	1,500	1,400	1,400	1,400	1,950	1,610	1,660	1,720	1,830	1,610	1,400	1,400
27.....	1,450	1,400	1,400	1,400	1,830	1,610	1,660	1,720	1,830	1,610	1,400	1,400
28.....	1,400	1,610	1,400	1,400	1,830	1,610	1,720	1,720	1,780	1,560	1,400	1,610
29.....	1,300	2,340	1,400	1,400	-----	1,610	1,720	1,660	1,780	1,560	1,400	1,720
30.....	1,300	2,070	1,400	1,400	-----	1,610	1,720	1,860	1,780	1,560	1,400	1,500
31.....	1,300	-----	1,400	1,400	-----	1,610	-----	1,660	-----	1,560	1,400	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,500	1,280	1,310	80,600
November.....	2,340	1,300	1,420	84,500
December.....	1,830	1,400	1,460	89,800
January.....	1,610	1,300	1,450	89,200
February.....	3,710	1,450	1,830	102,000
March.....	1,830	1,610	1,650	101,000
April.....	1,720	1,500	1,570	93,400
May.....	1,950	1,610	1,720	106,000
June.....	2,200	1,610	1,850	110,000
July.....	1,780	1,560	1,650	100,000
August.....	1,500	1,400	1,460	89,800
September.....	1,720	1,400	1,440	85,700
The year.....	3,710	1,280	1,560	1,130,000

LAKE CREEK NEAR SISTERS, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 24, T. 13 S., R. 8 E., one-fourth mile below outlet of Suttle Lake, 6 miles above mouth of creek, and 13 miles northwest of Sisters.

DRAINAGE AREA.—20.5 square miles.

RECORDS AVAILABLE.—April, 1915, to September, 1927, incomplete; occasional readings during summers of 1911–1913.

EXTREMES.—Maximum discharge during year (estimated), 130 second-feet November 30; minimum, 30 second-feet August 31 and September 17. 1911–1913, 1915–1927: Maximum discharge, 302 second-feet January 10, 1923 (gage height, 2.58 feet); minimum, 20 second-feet October 18, 1916 (gage height, 0.31 foot).

REMARKS.—Records fair. Discharge estimated for periods indicated by braced figures and also for December 7, January 23, 24, February 23, 24, and June 29 to July 2. No diversions above station. No regulation except by natural storage in Suttle Lake. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	67			43	45					61	36	
2	67		100	44	48	80		87	102	58	36	
3	67				48					55	36	
4	67				48					55	36	31
5	67		83		48				96			
6	69		83	46	48	72		95				
7	70		80		48	71		95				
8	70	65	77		48	71	54					32
9	70		69		48	71			110			32
10	70		62		47					48		36
11	70			49	47							36
12	68			48	45							35
13	68			46	44							
14	68			46	42	65						
15	68		50	45	42			110				32
16	68			44	42		52			42		
17	68			43	42		52			42		
18	68			42	44		52		100	42	33	
19	67		48	44	52		52			42		
20			48	44	66	59	52					
21			48	45	70	60						
22			48	45	75	59						
23		90	48	45	95	58						
24			48	44	100	58				39		34
25	66		48	44		57			77			
26			47	44	90	57	66	117	77			
27			47	43		57			76			
28			44	42					71			
29			44	42						36		
30			43	44		56			64	36		
31			43	45						35		
Month							Maximum	Minimum	Mean	Run-off in acre-feet		
October							70		67.4	4,140		
November									77.5	4,610		
December								43	59.9	3,680		
January							49		44.8	2,750		
February							100		58.6	3,250		
March									65.3	4,020		
April									57.7	3,430		
May								52	108	6,640		
June									96.9	5,770		
July							61	35	44.6	2,740		
August							36		33.4	2,050		
September									33.0	1,960		
The year									62.2	45,000		

SHITIKE CREEK AT WARM SPRINGS, OREG.

LOCATION.—Staff gage in NW. ¼ sec. 26, T. 9 S., R. 12 E., at Warm Springs, 2 miles above mouth of creek, below all tributaries.

RECORDS AVAILABLE.—June, 1911, to October, 1916; April, 1923, to September, 1927.

EXTREMES.—Maximum discharge during year, 1,100 second-feet February 20 (gage height, 3.30 feet); minimum, 49 second-feet October 1 (gage height, 0.22 foot).

1911-1916, 1923-1927: Maximum discharge, that of February 20, 1927; minimum, 32 second-feet September 7 and 13-18, 1924 (gage height, 0.20 foot).

REMARKS.—Records fair except those above 250 second-feet, which are poor. Probably no diversions above station. No regulation.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	49	56	325	73	87	164	142	176	153	153	84	58
2.....	54	54	392	139	184	164	142	164	153	153	84	58
3.....	49	54	250	139	172	176	142	164	176	142	81	61
4.....	62	51	196	128	150	164	142	153	187	142	81	61
5.....	59	51	150	120	124	164	132	164	200	132	77	61
6.....	54	59	139	116	112	153	132	153	212	132	74	61
7.....	56	73	112	101	108	142	132	142	255	132	70	64
8.....	59	67	101	90	101	142	121	153	285	132	67	67
9.....	59	56	94	87	94	142	121	142	270	132	67	70
10.....	59	56	94	80	90	142	117	142	240	121	67	77
11.....	56	54	101	73	87	142	113	142	226	121	67	81
12.....	70	54	108	73	80	142	110	142	212	121	67	84
13.....	83	56	97	73	76	153	113	164	212	121	67	81
14.....	80	56	94	70	76	142	117	187	200	121	64	74
15.....	83	65	90	70	76	142	117	212	187	117	64	67
16.....	87	184	94	70	76	142	121	240	187	117	64	64
17.....	83	120	97	70	73	142	121	255	187	110	64	64
18.....	73	101	87	70	150	132	117	212	200	106	64	61
19.....	59	97	80	70	112	121	117	187	187	98	61	61
20.....	54	90	73	76	900	132	113	164	176	98	61	61
21.....	54	90	70	80	550	142	110	153	176	98	61	58
22.....	51	101	70	87	430	142	113	142	187	95	61	55
23.....	51	108	70	87	330	142	121	132	187	98	58	52
24.....	51	108	65	87	270	142	132	153	187	95	58	55
25.....	56	161	65	83	240	142	142	153	176	91	58	52
26.....	65	128	62	87	226	142	176	164	164	88	58	52
27.....	73	108	59	90	200	142	212	164	176	84	58	52
28.....	67	116	59	83	187	142	240	153	176	84	55	121
29.....	56	358	59	67	-----	142	226	142	164	84	58	142
30.....	56	375	65	62	-----	142	212	142	164	84	58	106
31.....	56	-----	67	59	-----	142	-----	142	-----	84	58	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	87	49	62.1	3,820
November.....	375	51	104	6,190
December.....	392	59	112	6,890
January.....	139	59	85.8	5,280
February.....	900	73	191	10,600
March.....	176	121	145	8,920
April.....	240	110	139	8,270
May.....	255	132	164	10,100
June.....	285	153	195	11,600
July.....	153	84	112	6,890
August.....	84	55	65.7	4,040
September.....	142	52	69.4	4,130
The year.....	900	49	120	86,700

WHITE RIVER BELOW TYGH VALLEY, OREG.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 8, T. 4 S., R. 14 E., just below Pacific Power & Light Co.'s plant at White River Falls and $4\frac{1}{2}$ miles below Tygh Valley.

RECORDS AVAILABLE.—November, 1917, to September, 1927.

EXTREMES.—Maximum discharge during year, 7,880 second-feet February 20 (gage height, 9.3 feet); minimum, 119 second-feet October 2 (gage height, 0.85 foot).

1917-1927: Maximum discharge, 13,300 second-feet January 6, 1923 (gage height, 12.9 feet); minimum (estimated), 10 second-feet December 11-14, 1919.

REMARKS.—Records good except those above 1,500 second-feet, which are fair. Discharge interpolated March 11, 12, 16, August 24, 25, 29, and 30. Diversions for irrigation above station. Low-water flow regulated to some extent by operation of power plant.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	120	156	1,630	452	510	960	612	1,190	748	325	162	169
2.....	119	144	1,440	1,060	1,790	990	590	1,050	770	325	162	162
3.....	173	133	960	1,020	2,000	870	590	1,050	795	310	164	158
4.....	139	129	680	990	1,020	820	570	1,050	820	295	158	149
5.....	134	144	680	1,080	770	770	550	900	820	295	156	156
6.....	134	169	612	845	748	748	550	870	870	280	149	158
7.....	136	310	530	748	725	748	550	845	960	277	149	169
8.....	175	205	470	635	635	702	550	845	1,120	256	151	175
9.....	149	185	435	612	570	680	510	900	1,020	245	144	162
10.....	160	185	435	550	510	658	490	930	960	238	144	175
11.....	152	192	510	510	470	673	452	930	930	232	142	235
12.....	178	175	510	470	452	687	452	960	870	235	144	225
13.....	248	190	490	490	435	702	490	1,080	795	238	142	212
14.....	205	235	418	452	435	725	550	1,260	770	235	140	185
15.....	185	293	385	435	470	658	635	1,590	725	222	139	173
16.....	242	590	452	435	510	646	658	1,630	680	210	139	167
17.....	248	400	470	400	530	635	635	1,510	635	208	139	160
18.....	222	340	435	490	1,650	590	658	1,300	612	198	136	156
19.....	198	169	452	418	1,080	570	612	1,160	590	190	133	152
20.....	175	280	418	355	3,480	530	570	1,020	550	188	134	152
21.....	156	271	418	355	4,920	530	550	960	530	182	132	149
22.....	149	268	452	355	3,110	570	530	960	490	188	129	152
23.....	144	310	470	355	2,360	570	590	930	470	175	132	139
24.....	140	370	470	355	1,750	658	748	900	452	175	132	144
25.....	146	452	310	355	1,470	680	635	900	435	185	134	139
26.....	218	490	325	355	1,120	702	1,590	900	418	171	135	134
27.....	205	490	325	355	1,120	658	1,710	845	385	162	137	142
28.....	167	452	310	355	1,020	658	1,670	795	385	156	140	192
29.....	152	1,950	325	385	-----	658	1,440	795	370	156	141	310
30.....	146	1,670	550	385	-----	658	1,300	725	340	160	143	355
31.....	147	-----	510	355	-----	635	-----	725	-----	160	144	-----
Month	Maximum					Minimum		Mean		Run-off in acre-feet		
October.....	248					119		170		10,500		
November.....	1,950					129		378		22,500		
December.....	1,630					310		544		33,400		
January.....	1,080					355		529		32,500		
February.....	4,920					455		1,270		70,500		
March.....	990					530		688		42,300		
April.....	1,710					452		735		43,700		
May.....	1,630					725		1,020		62,700		
June.....	1,120					340		677		40,300		
July.....	325					156		222		13,600		
August.....	164					129		143		8,790		
September.....	355					134		177		10,500		
The year.....	4,920					119		541		391,000		

KLICKITAT RIVER BASIN

KLICKITAT RIVER NEAR GLENWOOD, WASH.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 14, T. 7 N., R. 12 E., half a mile below Dairy Creek, 3 miles below Big Muddy Creek, and 5 miles north of Glenwood.

DRAINAGE AREA.—356 square miles.

RECORDS AVAILABLE.—December, 1910, to August, 1927; incomplete. October, 1909, to December, 1910, at a point 1 mile above.

EXTREMES.—Maximum discharge during year, 4,490 second-feet May 8 (gage height, 4.18 feet); minimum, 590 second-feet August 21 (gage height, 1.80 feet).

1909-1927: Maximum discharge, about 6,250 second-feet November 24, 1909 (gage height, 5.20 feet on original gage); minimum, 285 second-feet November 13, 1915.

REMARKS.—Records good except those for April 1 and May 18-26, which were estimated. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1927

Day	Apr.	May	June	July	Aug.	Day	Apr.	May	June	July	Aug.
1.....	850	1,840	2,000	1,410	764	16.....	883	3,450	2,280	1,030	-----
2.....	820	1,700	2,280	1,380	756	17.....	892	3,210	2,180	1,030	-----
3.....	756	1,640	2,470	1,340	740	18.....	901	-----	2,090	1,010	-----
4.....	748	1,570	2,670	1,290	732	19.....	892	-----	1,920	1,000	-----
5.....	740	1,510	2,770	1,240	-----	20.....	847	-----	1,920	970	-----
6.....	732	1,450	3,100	1,210	-----	21.....	838	-----	1,840	950	628
7.....	732	1,450	3,830	1,200	-----	22.....	847	2,650	1,920	940	725
8.....	732	3,580	4,360	1,200	-----	23.....	940	-----	1,840	940	-----
9.....	710	1,640	3,960	1,160	-----	24.....	1,150	-----	1,700	940	-----
10.....	702	1,700	3,450	1,130	-----	25.....	1,510	-----	1,640	930	-----
11.....	688	1,770	3,100	1,130	-----	26.....	2,090	-----	1,570	901	-----
12.....	672	1,920	2,570	1,120	-----	27.....	2,370	2,090	1,510	847	-----
13.....	702	2,280	2,570	1,100	-----	28.....	2,470	1,920	1,450	820	-----
14.....	772	2,670	2,570	1,090	-----	29.....	2,180	1,840	1,450	796	-----
15.....	874	3,210	2,470	1,050	-----	30.....	2,000	1,770	1,450	788	-----
						31.....	-----	1,840	-----	788	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acres-feet
April.....	2,470	672	1,070	3.01	3.36	63,700
May.....	3,580	1,450	2,250	6.32	7.29	138,000
June.....	4,360	1,450	2,360	6.63	7.40	140,000
July.....	1,410	788	1,060	2.98	3.44	65,200
The period	-----	-----	-----	-----	-----	407,000

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

HOOD RIVER BASIN

HOOD RIVER NEAR HOOD RIVER, OREG.¹

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 36, T. 3 N., R. 10 E., at Powerdale, one-fourth mile above Pacific Power & Light Co.'s plant and three-fourths mile south of Hood River. Zero of gage is 105.91 feet above mean sea level.

RECORDS AVAILABLE.—March, 1913, to September, 1927.

EXTREMES.—Maximum discharge during year, 12,400 second-feet February 21 (gage height, 8.1 feet); minimum, 17 second-feet October 1 and 4 (gage height, 1.55 feet).

1913-1927: Maximum discharge, 34,000 second-feet January 6, 1923 (gage height, 10.1 feet); minimum, 3 second-feet August 9, 1926 (gage height, 1.45 feet).

REMARKS.—Records fair except those for February 11 and September 4-18, which were estimated. Diversions for irrigation above station. Pacific Power & Light Co.'s conduit diverts water around gage; see p. 54 for record of this diversion. Low-water flow regulated by pondage at sawmill at Dee.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	17	101	3,560	816	944	1,300	1,050	1,200	760	435	195	486
2.....	29	66	2,660	2,040	2,470	1,200	920	1,010	736	391	124	250
3.....	83	58	1,900	2,470	1,900	1,100	920	1,250	744	373	111	195
4.....	17	58	1,400	1,900	1,620	1,000	960	1,200	792	364	165	170
5.....	21	58	1,300	1,620	1,350	928	978	978	848	328	137	140
6.....	19	234	1,020	1,350	1,150	960	776	840	996	319	195	175
7.....	380	370	800	1,200	880	987	638	856	1,150	302	137	215
8.....	480	207	728	1,100	752	1,100	523	969	1,300	286	86	190
9.....	110	142	675	987	698	1,050	675	912	1,200	234	86	130
10.....	101	110	682	840	631	1,020	744	944	1,030	195	86	90
11.....	270	145	944	744	596	944	603	944	978	180	86	220
12.....	450	138	1,150	682	562	987	568	1,050	912	226	81	520
13.....	325	375	768	675	596	1,200	562	1,300	904	242	45	400
14.....	355	875	603	603	549	1,100	617	1,250	936	74	111	290
15.....	295	1,340	510	542	610	952	705	1,450	952	79	45	180
16.....	1,120	1,960	568	568	720	872	720	1,450	920	202	45	140
17.....	1,120	920	603	462	808	880	752	1,500	904	275	31	115
18.....	621	710	645	638	1,300	800	832	978	864	209	31	100
19.....	426	400	610	705	1,660	760	808	920	824	202	31	98
20.....	335	355	645	523	7,580	800	675	760	848	206	38	116
21.....	238	390	645	400	8,660	848	530	682	822	198	63	140
22.....	176	415	610	450	5,030	816	480	542	712	198	45	151
23.....	180	628	542	445	4,130	840	582	332	682	195	45	127
24.....	426	670	510	440	2,850	936	856	310	705	242	45	104
25.....	256	1,120	549	450	2,120	800	1,200	1,000	720	230	31	116
26.....	360	1,400	440	456	1,970	872	1,720	1,030	575	230	31	114
27.....	290	1,020	373	462	1,720	904	1,620	960	530	230	45	174
28.....	194	1,450	360	610	1,400	824	1,300	800	492	310	108	638
29.....	142	8,160	462	562	-----	1,030	1,250	800	480	165	54	1,400
30.....	138	2,560	848	589	-----	920	1,200	744	486	159	49	996
31.....	194	-----	776	486	-----	1,050	-----	728	-----	230	31	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,120	17	296	18,200
November.....	8,160	58	881	52,400
December.....	3,560	360	900	55,300
January.....	2,470	400	833	51,200
February.....	8,660	549	1,970	109,000
March.....	1,300	760	961	59,100
April.....	1,720	480	859	51,100
May.....	1,500	310	958	58,900
June.....	1,300	480	827	49,200
July.....	435	74	242	14,900
August.....	195	31	77.8	4,780
September.....	1,400	-----	273	16,200
The year.....	8,660	17	747	540,000

¹ Published previously as Hood River at Powerdale, near Hood River, Oreg.

Combined daily and monthly discharge, in second-feet, of Hood River and Pacific Power & Light Co.'s conduit near Hood River, Oreg., 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	417	501	4,000	1,280	1,390	1,660	1,050	1,510	1,100	780	536	771
2.....	440	463	3,020	2,440	2,850	1,580	920	1,400	1,080	733	469	575
3.....	506	461	2,240	2,880	2,250	1,460	920	1,640	1,090	686	463	535
4.....	437	446	1,760	2,300	1,990	1,340	960	1,620	1,140	662	498	499
5.....	400	450	1,300	2,020	1,720	1,310	978	1,400	1,160	650	470	484
6.....	428	629	1,340	1,760	1,500	1,300	800	1,240	1,340	656	543	577
7.....	839	645	1,240	1,590	1,300	1,400	949	1,270	1,510	651	467	624
8.....	942	600	1,180	1,500	1,140	1,510	813	1,270	1,650	624	423	549
9.....	569	557	1,120	1,320	1,090	1,430	929	1,320	1,570	610	414	519
10.....	539	523	1,130	1,240	997	1,410	922	1,340	1,400	547	426	479
11.....	680	545	1,390	1,140	992	1,340	920	1,350	1,230	557	421	552
12.....	900	556	1,240	1,080	925	1,350	900	1,430	1,250	579	417	922
13.....	773	766	1,190	1,080	925	1,500	896	1,620	1,250	587	366	811
14.....	804	1,100	1,040	1,000	947	1,470	956	1,570	1,300	454	418	672
15.....	759	1,720	960	949	1,000	1,350	1,040	1,760	1,300	426	372	585
16.....	1,490	2,350	1,000	903	1,110	1,310	1,060	1,790	1,270	548	392	544
17.....	1,320	1,310	1,050	884	1,210	1,290	1,060	1,810	1,250	578	392	504
18.....	1,010	1,050	1,100	1,060	1,690	1,180	1,150	1,340	1,200	576	387	438
19.....	807	794	1,060	1,140	1,940	1,110	1,160	1,290	1,130	553	391	494
20.....	698	727	1,100	935	7,900	1,100	1,030	1,400	1,190	540	390	514
21.....	640	721	1,080	788	9,000	1,170	875	1,020	1,180	530	349	546
22.....	588	808	1,060	828	5,360	1,180	910	807	1,060	531	366	561
23.....	540	1,030	1,000	843	4,360	1,170	983	746	1,030	533	360	532
24.....	516	1,080	956	875	3,230	1,290	1,120	721	1,060	568	372	509
25.....	644	1,510	898	922	2,470	1,160	1,600	1,400	1,060	567	345	519
26.....	768	1,800	778	937	2,310	1,230	2,140	1,450	895	565	341	521
27.....	703	1,420	805	902	1,950	1,230	2,000	1,370	866	565	361	593
28.....	609	1,790	825	1,010	1,780	1,140	1,660	1,170	829	648	408	1,040
29.....	544	8,530	944	963	-----	1,030	1,660	1,130	854	511	364	1,790
30.....	500	2,960	1,320	903	-----	920	1,610	1,070	812	498	333	1,400
31.....	410	-----	1,250	926	-----	1,050	-----	1,020	-----	546	346	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,490	400	685	42,100
November.....	8,530	446	1,260	75,000
December.....	4,000	778	1,300	79,900
January.....	2,880	788	1,240	76,200
February.....	9,000	925	2,330	129,000
March.....	1,660	920	1,290	79,300
April.....	2,140	800	1,130	67,200
May.....	1,810	721	1,320	81,200
June.....	1,650	812	1,170	69,600
July.....	780	426	583	35,800
August.....	543	333	406	25,000
September.....	1,790	438	656	39,000
The year.....	9,000	333	1,110	799,000

PACIFIC POWER & LIGHT CO.'S CONDUIT NEAR HOOD RIVER, OREG.

LOCATION.—Venturi meter in NE. $\frac{1}{4}$ sec. 36, T. 3 N., R. 10 E., at Pacific Power & Light Co.'s plant on Hood River, half a mile southeast of Hood River.

RECORDS AVAILABLE.—May, 1923, to September, 1927. Also on tailrace of old plant October, 1913, to September 1914, and January, 1916, to July, 1922.

EXTREMES.—Maximum discharge during year, 500 second-feet September 10; no flow (plant shut down) March 29 to April 5 and for a few hours at other times.

1913-14, 1916-1927: Maximum discharge, that of September 10, 1927; no flow at times, when plant was shut down.

REMARKS.—Records good. Discharge October 1 to November 28 based on electrical output of power plant. This conduit diverts from Hood River in SE. $\frac{1}{4}$ sec. 11, T. 2 N., R. 10 E., immediately below mouth of Neal Creek. Water is returned to river in NE. $\frac{1}{4}$ sec. 36, T. 3 N., R. 10 E., being diverted around gage on Hood River near Hood River.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	400	400	436	469	449	365	0	314	339	345	341	285
2.....	411	397	363	396	382	380	0	393	345	342	345	325
3.....	423	403	335	408	346	365	0	390	343	313	342	340
4.....	420	388	360	395	372	344	0	421	344	298	328	329
5.....	379	392	5	401	366	378	0	421	317	322	333	344
6.....	409	395	319	407	354	338	24	405	341	337	348	402
7.....	459	275	444	393	418	408	311	414	364	349	330	409
8.....	462	393	450	395	389	413	290	298	347	338	337	359
9.....	459	415	450	331	391	376	254	408	368	376	328	389
10.....	438	413	450	396	366	387	178	401	373	352	340	389
11.....	410	400	450	394	396	394	317	409	255	377	335	332
12.....	450	418	89	399	363	365	332	384	336	353	336	402
13.....	448	391	424	404	329	301	334	324	347	345	321	411
14.....	449	224	441	402	398	366	339	323	363	380	307	382
15.....	464	379	450	407	390	394	334	314	348	347	327	405
16.....	371	388	433	335	386	435	337	339	348	346	347	404
17.....	198	390	450	422	399	409	307	313	345	300	361	389
18.....	387	339	450	424	393	379	315	367	337	367	356	338
19.....	381	394	450	436	375	350	357	371	306	351	360	396
20.....	363	372	450	412	322	298	355	382	344	334	352	398
21.....	402	331	437	388	335	319	345	341	346	332	286	406
22.....	412	393	454	378	333	369	430	265	344	333	321	410
23.....	360	398	460	398	231	334	401	414	350	338	315	405
24.....	90	406	446	435	376	350	263	411	355	326	327	405
25.....	388	394	349	472	353	365	398	403	345	337	314	403
26.....	408	398	338	481	342	356	419	422	320	335	310	407
27.....	413	400	432	440	228	323	377	410	336	335	316	419
28.....	415	340	465	396	378	314	361	370	337	338	302	420
29.....	402	366	482	401	-----	0	408	354	374	346	310	383
30.....	362	405	476	314	-----	0	412	328	326	339	284	401
31.....	216	-----	471	440	-----	0	-----	287	-----	316	315	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	464	90	389	23,900
November.....	418	224	380	22,600
December.....	482	5	404	24,800
January.....	481	314	405	24,900
February.....	449	228	363	20,200
March.....	435	0	328	20,200
April.....	430	0	273	16,200
May.....	422	265	367	22,600
June.....	374	255	341	20,300
July.....	380	298	340	20,900
August.....	361	284	328	20,200
September.....	420	285	383	22,800
The year.....	482	0	359	260,000

WHITE SALMON RIVER BASIN

WHITE SALMON RIVER NEAR UNDERWOOD, WASH

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 14, T. 3 N., R. 10 E., 200 yards below Northwestern Electric Co.'s conduit power plant, 2 miles north of Underwood.

DRAINAGE AREA.—384 square miles.

RECORDS AVAILABLE.—March, 1915, to September, 1927. October, 1912, to February, 1913, at dam 1 mile above.

EXTREMES.—Maximum discharge during year, 4,410 second-feet February 22 (gage height, 6.25 feet); practically no flow when plant was occasionally shut down.

1915-1927: Maximum discharge, about 9,700 second-feet December 29, 1917 (gage height, 9.5 feet, old datum); practically no flow at times, when plant was shut down.

REMARKS.—Records good. Diversions for irrigation above station. Flow below 1,300 second-feet regulated by operation of power plant and pondage above dam; daily discharge has been corrected for storage.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	483	511	2,250	1,160	1,300	1,770	1,320	1,690	1,540	1,200	876	767
2-----	491	479	3,260	2,110	2,250	1,680	1,320	1,630	1,580	1,180	881	787
3-----	495	483	2,000	2,620	2,400	1,630	1,320	1,690	1,530	1,110	884	780
4-----	503	471	1,610	2,390	2,180	1,590	1,330	1,640	1,740	1,150	868	760
5-----	479	475	1,520	2,190	1,950	1,510	1,300	1,600	1,820	1,150	872	792
6-----	467	519	1,550	1,980	1,760	1,440	1,300	1,560	1,860	1,090	859	761
7-----	499	571	1,320	1,890	1,550	1,570	1,320	1,560	1,980	1,080	862	805
8-----	523	527	1,160	1,710	1,480	1,510	1,280	1,600	2,190	1,030	859	776
9-----	515	511	1,060	1,520	1,390	1,430	1,250	1,600	2,140	1,010	849	763
10-----	491	491	1,030	1,470	1,320	1,380	1,230	1,640	2,080	1,000	845	776
11-----	555	487	1,120	1,360	1,280	1,370	1,200	1,640	1,970	1,010	858	832
12-----	599	523	1,120	1,280	1,250	1,450	1,190	1,640	1,860	995	812	801
13-----	675	603	980	1,260	1,230	1,530	1,220	1,710	1,800	1,010	829	776
14-----	627	627	898	1,150	1,130	1,570	1,240	1,810	1,750	974	836	763
15-----	591	708	922	1,130	1,200	1,420	1,310	2,000	1,700	990	837	730
16-----	1,020	716	930	1,150	1,300	1,440	1,310	2,170	1,630	964	845	701
17-----	1,130	647	908	1,100	1,310	1,440	1,320	2,270	1,590	938	825	688
18-----	849	599	878	1,160	1,960	1,350	1,310	2,130	1,540	924	831	676
19-----	716	575	865	1,140	2,260	1,320	1,310	1,920	1,480	938	800	676
20-----	651	583	878	1,050	3,400	1,320	1,260	1,780	1,460	930	819	680
21-----	591	555	890	958	4,140	1,400	1,250	1,660	1,510	930	784	688
22-----	567	595	856	965	3,900	1,440	1,210	1,600	1,430	910	783	701
23-----	547	716	832	1,020	3,380	1,440	1,260	1,640	1,400	899	774	676
24-----	535	852	834	1,050	2,850	1,480	1,300	1,680	1,400	926	768	663
25-----	547	1,180	840	1,010	2,420	1,440	1,500	1,700	1,360	938	764	651
26-----	551	1,310	816	1,000	2,170	1,410	1,750	1,690	1,320	918	744	647
27-----	539	1,300	813	982	1,980	1,340	1,870	1,600	1,300	890	756	704
28-----	507	1,460	816	1,090	1,860	1,360	2,010	1,520	1,270	878	741	793
29-----	503	2,430	893	1,070	-----	1,330	1,900	1,480	1,300	895	742	880
30-----	491	2,160	1,270	1,040	-----	1,360	1,750	1,390	1,260	906	744	856
31-----	467	-----	1,170	1,050	-----	1,360	-----	1,430	-----	910	744	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	1,130	467	587	36,100
November-----	2,430	471	789	46,900
December-----	3,260	813	1,170	71,900
January-----	2,620	958	1,360	83,600
February-----	4,140	1,130	2,020	112,000
March-----	1,770	1,320	1,450	89,200
April-----	2,010	1,190	1,380	82,100
May-----	2,270	1,390	1,700	105,000
June-----	2,190	1,260	1,630	97,000
July-----	1,200	878	989	60,800
August-----	884	741	815	50,100
September-----	880	647	745	44,300
The year-----	4,140	467	1,210	879,000

NOTE.—Discharge computed from electrical output of power plant and flow over dam Oct. 1 to Nov. 25, Nov. 30 to Dec. 29, Jan. 16-30, and July 12 to Sept. 4.

SANDY RIVER BASIN

SANDY RIVER ABOVE SALMON RIVER, AT BRIGHTWOOD, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 24, T. 2 S., R. 6 E., at Brightwood, three-fourths mile above mouth of Salmon River.

DRAINAGE AREA.—117 square miles.

RECORDS AVAILABLE.—May, 1910, to December, 1912; March to September, 1914; March, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 5,120 second-feet November 29; maximum gage height, 5.3 feet February 20; minimum discharge, 244 second-feet August 30 and 31.

1910-1912, 1914, 1926-27: Maximum discharge, 6,940 second-feet January 13, 1912 (gage height, 6.8 feet); minimum, 165 second-feet July 29 and August 2, 1926 (gage height, 0.60 foot).

REMARKS.—Records good except those for October 1-7, which were estimated. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		400	1,810	860	710	825	590	965	890	500	362	327
2		360	1,400	1,600	1,400	760	590	890	965	500	367	327
3		342	1,210	1,600	1,210	760	590	1,040	890	500	362	292
4		325	1,030	1,210	1,030	700	640	1,040	965	500	350	296
5	800	325	1,030	1,210	860	640	640	890	1,040	460	336	318
6		640	860	860	710	640	590	890	1,220	454	332	356
7		610	785	860	645	640	640	890	1,220	454	322	412
8	550	475	710	785	580	640	640	825	1,430	454	322	327
9	475	425	710	710	550	595	590	825	1,220	448	322	264
10	400	400	645	645	510	595	540	890	1,040	436	318	350
11		500	380	945	580	480	550	540	890	442	318	825
12		550	380	860	580	464	760	540	1,040	890	448	300
13		800	745	710	785	440	890	590	1,220	825	442	292
14		610	500	645	710	424	760	640	1,430	825	436	266
15		525	1,200	645	710	456	700	760	1,540	760	412	304
16	1,160	1,300	860	710	480	640	640	1,430	700	418	300	345
17	990	910	1,030	645	580	640	700	1,430	640	430	300	355
18	870	730	1,030	710	710	640	700	1,040	640	418	296	365
19		730	610	945	645	640	640	1,040	590	412	296	340
20		580	910	945	580	2,860	590	640	890	590	400	288
21		525	950	860	540	3,120	700	590	825	640	400	276
22		475	910	785	520	1,780	760	640	825	640	406	272
23		400	910	710	480	1,320	700	760	825	590	430	280
24		550	870	645	464	1,040	760	1,040	890	590	442	276
25		500	910	645	448	1,040	760	1,430	890	540	442	264
26		990	870	570	432	1,040	640	1,890	890	540	412	252
27		835	800	560	464	890	640	1,890	825	500	378	268
28		700	870	570	520	760	640	1,660	890	540	360	1,050
29		610	3,410	645	472	-----	640	1,220	890	540	356	260
30		525	2,030	945	440	-----	640	1,040	890	500	356	248
31		475	-----	860	440	-----	640	-----	890	-----	356	248

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acres-foot
October	1,160	400	675	5.77	6.65	41,500
November	3,410	325	808	6.91	7.71	48,100
December	1,810	560	858	7.33	8.45	52,800
January	1,600	440	717	6.13	7.07	44,100
February	3,120	424	966	8.26	8.60	53,600
March	890	640	681	5.82	6.71	41,900
April	1,890	540	820	7.01	7.82	48,800
May	1,540	825	988	8.44	9.73	60,800
June	1,430	500	795	6.79	7.58	47,300
July	500	356	429	3.67	4.23	26,400
August	367	248	300	2.56	2.95	18,400
September	2,550	271	514	4.39	4.90	30,600
The year	3,410	248	710	6.07	82.40	514,000

SANDY RIVER NEAR MARMOT, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 24, T. 2 S., R. 5 E., three-fourths mile southwest of Marmot, 2 miles above Sandy River Dam of Portland Electric Power Co., and 5 miles below mouth of Salmon River.

DRAINAGE AREA.—262 square miles at cable 1 mile below gage.

RECORDS AVAILABLE.—August, 1911, to December, 1915; July, 1919, to September, 1927. Combined discharge of Sandy River below dam and canal gives comparable results for the gap in record.

EXTREMES.—Maximum discharge during year, 9,960 second-feet November 29 and February 20 (gage height, 9.8 feet); minimum, 350 second-feet August 31 (gage height, 2.27 feet).

1911-1927; Maximum discharge, about 29,200 second-feet January 6, 1923 (gage height, 17.5 feet); minimum, 253 second-feet October 24, 1925 (gage height, 2.00 feet).

REMARKS.—Records good except those for October 1 to November 28, which are fair. No regulation or diversions above station. Gage-height record furnished by Portland Electric Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	740	740	3,530	2,090	3,410	1,720	1,150	1,960	1,910	772	480	680
2.....	1,040	680	2,980	4,290	4,500	1,680	1,150	1,720	1,960	772	490	508
3.....	1,680	642	2,380	3,770	2,980	1,500	1,190	2,280	1,910	772	476	449
4.....	1,400	615	1,910	2,980	2,380	1,400	1,190	2,230	1,910	772	467	449
5.....	1,150	600	1,630	2,580	1,960	1,270	1,190	1,960	1,910	740	444	526
6.....	990	1,250	1,450	2,180	1,680	1,230	1,150	1,820	2,140	710	440	630
7.....	1,360	1,400	1,320	1,960	1,400	1,270	1,320	1,720	2,880	710	428	772
8.....	1,500	950	1,190	1,720	1,270	1,270	1,230	1,680	2,880	680	428	669
9.....	1,270	805	1,070	1,500	1,150	1,190	1,150	1,680	2,480	680	428	521
10.....	912	740	990	1,360	990	1,150	1,070	1,790	2,140	664	420	900
11.....	1,030	680	1,680	1,230	950	1,190	1,070	1,820	1,910	652	428	2,880
12.....	1,190	669	1,580	1,230	912	1,630	1,110	2,000	1,720	647	432	2,050
13.....	1,960	950	1,320	1,790	840	1,960	1,190	2,330	1,580	636	400	1,540
14.....	1,360	1,030	1,190	1,680	840	1,820	1,270	2,780	1,500	615	400	1,270
15.....	1,230	1,780	1,230	1,580	912	1,540	1,540	3,090	1,360	585	412	990
16.....	2,090	2,580	1,820	1,400	950	1,400	1,450	2,980	1,270	566	420	805
17.....	1,910	1,860	2,280	1,320	1,400	1,500	1,580	2,880	1,230	562	420	680
18.....	1,450	1,450	2,180	1,580	2,480	1,400	1,720	2,330	1,110	566	420	630
19.....	1,190	1,230	2,000	1,500	2,230	1,270	1,500	2,180	1,070	562	420	600
20.....	990	1,580	1,910	1,230	7,320	1,230	1,320	1,960	1,030	552	408	585
21.....	875	1,630	1,790	1,030	6,040	1,580	1,320	1,960	1,030	548	392	570
22.....	772	1,680	1,540	950	4,020	1,540	1,360	1,910	1,030	552	388	548
23.....	740	1,720	1,190	912	3,090	1,540	1,720	1,820	990	562	392	516
24.....	875	1,630	1,270	950	2,480	1,910	2,330	1,860	950	575	400	516
25.....	912	1,910	1,270	875	2,180	1,580	2,880	2,000	912	590	380	508
26.....	1,960	1,820	1,110	840	2,180	1,360	3,420	1,960	840	552	368	490
27.....	1,580	1,630	1,110	912	1,860	1,320	3,530	1,820	840	512	376	652
28.....	1,230	1,820	1,190	1,150	1,630	1,230	3,310	1,790	840	503	376	1,580
29.....	1,030	6,380	1,540	1,030	-----	1,230	2,680	1,960	875	494	364	4,440
30.....	912	4,320	2,330	912	-----	1,270	2,230	1,860	840	485	364	3,090
31.....	805	-----	2,090	912	-----	1,230	-----	1,860	-----	485	360	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	2,090	740	1,230	4.69	5.41	75,600
November.....	6,380	600	1,560	5.95	6.64	92,800
December.....	3,530	990	1,680	6.41	7.39	103,000
January.....	4,290	840	1,590	6.07	7.00	97,800
February.....	7,320	840	2,290	8.74	9.10	127,000
March.....	1,960	1,150	1,430	5.46	6.30	87,900
April.....	3,530	1,070	1,680	6.41	7.15	100,000
May.....	3,090	1,680	2,060	7.86	9.06	127,000
June.....	2,880	840	1,480	5.65	6.30	88,100
July.....	772	485	615	2.35	2.71	37,800
August.....	490	360	413	1.58	1.82	25,400
September.....	4,440	449	1,030	3.93	4.38	61,300
The year.....	7,320	360	1,420	5.42	73.26	1,020,000

ZIGZAG RIVER AT TWIN BRIDGES, NEAR RHODODENDRON, OREG.

LOCATION.—Water-stage recorder probably in sec. 15, T. 3 S., R. 8 E. (unsurveyed), 200 feet above upper of Twin Bridges on Mount Hood Loop Highway and 5½ miles east of Rhododendron.

DRAINAGE AREA.—5.2 square miles.

RECORDS AVAILABLE.—March, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 144 second-feet November 29 (gage height, 1.53 feet); minimum, 18 second-feet February 14-16.

1926-27: Maximum discharge, that of November 29, 1926; minimum, about 10 second-feet August 10 and 11, 1926, supersedes figure previously published.

REMARKS.—Records fair. No regulation or diversions above station. Diurnal fluctuation in summer due to melting of glaciers.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....			56	34	33	33	26	36	47	60		
2.....			53	43	31	33	26	36	49	60	*32	
3.....		*28	49	36	25	31	26	38	51	58		
4.....			47	33	25	31	26	34	53	58		
5.....			47	33	22	31	26	34	64	56	29	*29
6.....	*26	33	43	33	22	29	26	34	89	56	28	
7.....		23	41	31	19	29	26	33	89	53	28	
8.....		22	40	29	19	28	26	33	87	53	28	
9.....		20	38	29	19	28	26	36	71	51	26	25
10.....		23	38	29	19	28	26	36	64	51	26	40
11.....		23	43	28	19	28	28	36	80	49	26	56
12.....	43	22	40	28	19	31	29	40	80	49	26	40
13.....	29	22	36	28	19	29	29	43	75	49	26	38
14.....	23	22	34	28	18	29	31	56	71	47	25	38
15.....	23	39	38	28	18	28	33	58		47	26	34
16.....	40	23	40	26	18	28	29	62	*65	47	26	33
17.....	*30	23	41	25	20	28	29	64		47	26	31
18.....	*28	23	40	26	23	28	28	56		45	26	31
19.....	26	22	38	25	23	28	28	53		45	26	31
20.....	26	31	36	23	77	28	28	47	64	43		31
21.....	26	33	34	23	60	29	29	45	68	41		31
22.....	25	33	33	25	58	29	33	45	71	43		29
23.....	25	33	33	23	34	31	36	45	71	41		26
24.....	29	34	31	23	34	29	43	47	71	41		28
25.....	28	34	31	22	36	28	49	49	71	41	*26	31
26.....	29	33	29	22	36	28	53	45	64	40		28
27.....	*26	33	28	22	36	28	51	43	64	38		31
28.....	26	36	28	22	34	28	49	43	64	38		56
29.....	28	79	31	22		28	43	43	64	36		68
30.....	*28	56	36	22		28	38	41	62	36		51
31.....	*28		33	20		26		43		35		

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acres-feet
October.....	43		27.5	5.29	6.10	1,690
November.....	79	20	30.5	5.87	6.55	1,810
December.....	56	28	38.2	7.35	8.47	2,350
January.....	43	20	27.1	5.21	6.01	1,670
February.....	77	18	29.1	5.60	5.88	1,620
March.....	33	26	29.0	5.58	6.43	1,780
April.....	53	26	32.5	6.25	6.97	1,990
May.....	64	33	43.7	8.40	9.08	2,600
June.....	89	47	67.6	13.0	14.50	4,020
July.....	60	35	46.9	9.02	10.40	2,880
August.....		25	27.0	5.19	5.98	1,660
September.....	68	25	34.6	6.65	7.42	2,060
The year.....	89	18	36.2	6.96	94.34	26,206

* Estimated.

ZIGZAG RIVER AT RHODODENDRON, OREG.

LOCATION.—Staff gage in NW. ¼ sec. 11, T. 3 S., R. 7 E., just below bridge on Vine Maple road and one-fourth mile south of Rhododendron post office.

DRAINAGE AREA.—31 square miles.

RECORDS AVAILABLE.—February, 1920, to September, 1921; March, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 1,130 second-feet November 29 (gage height, 4.0 feet); minimum, 72 second-feet August 22-24, 27, and 28 (gage height, 1.48 feet).

1926-27: Maximum discharge, that of November 29, 1926; minimum, 59 second-feet July 24, 27, 28, September 2, 12, and 13, 1926 (gage height, 1.32 feet).

REMARKS.—Records good. No regulation or diversions above station. Diurnal fluctuation in summer due to melting of glaciers.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	87	97	380	183	235	171	156	246	260	167	93	93
2-----	101	91	270	360	183	171	144	218	260	167	90	90
3-----	156	89	235	305	171	159	156	246	260	156	90	93
4-----	114	89	222	270	171	154	156	232	275	156	86	93
5-----	108	87	195	222	159	143	156	218	275	144	86	97
6-----	128	104	171	208	159	134	156	218	275	140	92	101
7-----	156	110	159	195	154	125	156	218	328	140	93	120
8-----	141	106	152	183	136	123	156	218	345	135	93	103
9-----	118	104	145	171	125	118	156	232	365	140	93	82
10-----	108	97	138	157	123	116	156	232	328	140	95	218
11-----	130	93	129	152	118	114	156	260	292	144	97	385
12-----	123	99	150	157	116	132	156	328	275	144	97	365
13-----	159	123	150	159	116	171	156	365	246	140	93	275
14-----	134	127	132	159	121	159	156	385	232	135	88	260
15-----	138	400	145	159	125	159	156	425	205	135	86	156
16-----	208	288	171	159	129	159	156	405	180	131	82	127
17-----	159	195	183	152	134	145	156	345	167	122	80	116
18-----	143	157	208	141	152	134	156	292	180	122	79	107
19-----	125	159	208	121	183	127	142	292	192	124	79	101
20-----	112	195	195	114	715	136	137	275	192	127	75	97
21-----	104	195	183	114	560	154	167	275	192	127	75	93
22-----	101	195	159	110	340	159	192	275	192	131	74	93
23-----	104	195	154	127	252	167	246	260	192	131	72	93
24-----	99	183	148	123	222	180	292	260	192	127	72	93
25-----	87	183	141	123	195	167	310	246	180	122	75	97
26-----	195	183	136	127	195	156	345	246	167	118	75	97
27-----	143	183	108	97	183	144	345	246	167	112	74	101
28-----	118	195	104	97	183	144	345	246	167	107	72	156
29-----	114	770	132	93	-----	144	345	246	167	103	75	448
30-----	108	442	195	123	-----	156	310	260	167	101	86	385
31-----	99	-----	195	270	-----	156	-----	246	-----	97	92	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October-----	208	87	126	4.06	4.68	7,750
November-----	770	87	184	5.94	6.63	10,900
December-----	380	104	174	5.61	6.47	10,700
January-----	360	93	166	5.35	6.17	10,200
February-----	715	116	202	6.52	6.79	11,200
March-----	180	114	148	4.77	5.50	9,100
April-----	345	137	199	6.42	7.16	11,800
May-----	425	218	273	8.81	10.16	16,800
June-----	365	167	230	7.42	8.28	13,700
July-----	167	97	132	4.26	4.91	8,120
August-----	97	72	84.2	2.72	3.14	5,180
September-----	448	82	158	5.10	5.69	9,400
The year-----	770	72	173	5.58	75.58	125,000

LITTLE ZIGZAG RIVER AT TWIN BRIDGES, NEAR RHODODENDRON, OREG.

LOCATION.—Water-stage recorder probably in sec. 15, T. 3 S., R. 8 E. (unsurveyed), 500 feet above upper of Twin Bridges on Mount Hood Loop Highway and 5½ miles east of Rhododendron.

DRAINAGE AREA.—3.7 square miles.

RECORDS AVAILABLE.—March, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 90 second-feet November 29 (gage height, 1.65 feet); minimum, 19 second-feet October 1 and 2.

1926-27: Maximum discharge, that of November 29, 1926; minimum, 18 second-feet several days in July and September, 1926.

REMARKS.—Records good except those for estimated periods, which are fair. No regulation or diversions above station. Diurnal fluctuation in summer due to melting of glaciers.

Daily and monthly discharge, in second-feet, 1926-27

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

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acro-feet
October.....	28	19	23.3	6.30	7.26	1,430
November.....	47	21	25.0	6.76	7.54	1,490
December.....	31	24	26.3	7.11	8.20	1,620
January.....	30	21	23.3	6.30	7.26	1,430
February.....	35	21	24.3	6.57	6.84	1,350
March.....	-----	-----	24.0	6.49	7.48	1,480
April.....	33	24	26.5	7.16	7.99	1,580
May.....	32	22	26.6	7.19	8.29	1,640
June.....	36	25	28.5	7.70	8.59	1,700
July.....	25	21	22.4	6.05	6.98	1,380
August.....	23	20	21.0	5.68	6.55	1,290
September.....	38	20	22.5	6.08	6.78	1,340
The year.....	47	19	24.5	6.62	89.76	17,700

STILL CREEK NEAR GOVERNMENT CAMP, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 25, T. 3 S., R. 8 $\frac{1}{2}$ E., 100 yards below mouth of Mineral Creek, half a mile northwest of Summit ranger station, and 2 miles southeast of Government Camp.

DRAINAGE AREA.—2.8 square miles.

RECORDS AVAILABLE.—May, 1910, to May, 1912; May, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 38 second-feet June 8 (gage height, 1.34 feet); minimum, 12 second-feet October 9, 10, 14-16, November 1-5, 9, and February 14.

1910-1912, 1926-27: Maximum discharge, that of June 8, 1927; minimum, 5.0 second-feet November 12, 1911.

REMARKS.—Records good except those for November 1-7, 10-15, 21-29, and December 11-31, which were estimated. Gage-height record fragmentary. Mean monthly discharge is mean of discharges on days gage was read. No regulation or diversion above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.			26		26		14	17	30	23	16	15
2.			21			15	14		28	22	16	14
3.			20		14				28	22	16	14
4.			18		13	14	14	20	26		16	14
5.			18				15			22	16	15
6.			18	17		14		19	32		15	16
7.			16				16	20	34	22	15	17
8.	13	14	17		13	14	16	22	38	20		
9.	12	12	17	16	13				35	20	16	15
10.	12		17					24	32		16	30
11.				15	13	16	14	26	29	20	16	
12.				16	13			31		19	16	18
13.	13						16	28	29		16	18
14.	12			16	12	14			28	19	15	16
15.	12						14	36	28	19	15	15
16.	12	17			13	14			28	19	15	14
17.		17				14			26		15	14
18.		17					15	25	26	18	15	14
19.		17			13		14	25		18	15	13
20.		16		21		15			25	18		13
21.			16	16		16	17		24	18		13
22.			15	15	14	16	17				15	13
23.								26	23	17	15	14
24.			16	15	15	15			23		14	
25.				17			16	29	23	18	14	
26.					16	13		25			14	13
27.				15	16		20	24	23	17	14	17
28.				16		15	22	25	23	17	14	
29.						14		26	22	17	14	20
30.						14		28	22	16		22
31.				18		14		26			14	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October			12.3	4.39	5.06	756
November	26	12	16.1	5.75	6.42	958
December	26		16.9	6.04	6.96	1,040
January	21	15	16.4	5.86	6.76	1,010
February	26	12	14.7	5.25	5.47	816
March	16	13	14.5	5.18	5.97	892
April	22	14	15.9	5.68	6.34	946
May	38	17	25.1	8.96	10.33	1,540
June	38	22	27.4	9.79	10.92	1,630
July	23	16	19.1	6.52	7.86	1,170
August	16	14	15.1	5.39	6.21	928
September	30	13	16.2	5.79	6.46	964
The year	38	12	17.5	6.25	84.76	12,600

STILL CREEK AT RHODODENDRON, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 2, T. 3 S., R. 7 E., 300 yards above mouth, 100 feet below Still Creek bridge on Mount Hood Loop Highway, and half a mile west of Rhododendron post office.

DRAINAGE AREA.—23 square miles.

RECORDS AVAILABLE.—February, 1920, to September, 1921, incomplete; March, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 1,550 second-feet November 29 (gage height, 4.50 feet); minimum discharge, 33 second-feet October 1; minimum gage height, 1.10 feet August 26 and 27.

1920-21, 1926-27: Maximum discharge, that of November 29, 1926; minimum, 16 second-feet September 12 and 14, 1926 (gage height, 1.06 feet).

REMARKS.—Records good except those below 50 second-feet, which are fair. No regulation and no diversions above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	34	63	318	145	355	118	92	200	215	65	37	38
2.....	64	58	248	399	156	113	96	169	215	68	36	38
3.....	93	53	186	355	128	109	88	186	215	68	36	39
4.....	70	52	158	318	125	109	88	186	230	68	36	39
5.....	62	46	142	215	120	96	94	186	230	65	35	40
6.....	69	56	122	172	120	94	94	172	230	63	36	40
7.....	86	69	100	140	116	88	98	172	265	62	36	61
8.....	99	66	109	118	92	87	98	172	300	61	36	59
9.....	88	61	113	109	83	83	94	186	282	59	36	40
10.....	75	54	94	94	76	85	98	186	215	57	37	71
11.....	76	56	75	92	72	83	90	215	186	55	38	169
12.....	83	53	98	92	69	105	96	265	158	55	38	158
13.....	130	81	105	98	68	135	105	335	140	53	37	130
14.....	109	86	96	98	71	132	128	395	132	51	37	107
15.....	103	332	102	100	75	113	140	415	125	50	37	92
16.....	142	285	116	98	98	100	128	415	116	48	37	75
17.....	142	216	148	94	140	92	120	335	100	46	38	64
18.....	120	142	169	88	161	88	116	248	92	46	38	63
19.....	101	130	169	83	158	83	109	230	88	46	37	62
20.....	86	130	164	79	560	88	98	230	83	46	37	61
21.....	73	120	142	78	438	98	107	215	79	46	37	59
22.....	66	120	120	76	265	105	128	215	83	46	37	57
23.....	63	120	113	73	248	111	172	200	87	45	36	52
24.....	59	130	105	71	200	116	282	200	83	43	36	50
25.....	58	130	98	71	172	111	318	200	71	42	35	51
26.....	109	166	98	73	158	102	395	186	66	41	34	51
27.....	120	166	94	71	142	98	395	186	69	40	35	53
28.....	103	166	90	68	132	94	375	186	68	39	35	109
29.....	86	1,100	107	65	-----	96	375	200	65	38	36	375
30.....	72	510	169	88	-----	98	265	215	65	38	36	318
31.....	67	-----	145	355	-----	94	-----	215	-----	37	37	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acres-feet
October.....	142	34	87.4	3.80	4.38	5,370
November.....	1,100	46	161	7.00	7.81	9,580
December.....	318	75	133	5.78	6.66	8,180
January.....	395	65	131	5.70	6.57	8,060
February.....	560	68	164	7.13	7.42	9,110
March.....	135	83	101	4.39	5.06	6,210
April.....	395	88	163	7.09	7.91	9,700
May.....	415	172	230	10.0	11.53	14,100
June.....	300	65	145	6.30	7.03	8,630
July.....	68	37	51.2	2.23	2.67	3,150
August.....	38	34	36.4	1.58	1.82	2,240
September.....	375	38	87.4	3.80	4.24	5,200
The year.....	1,100	34	124	5.39	73.00	89,500

SALMON RIVER NEAR GOVERNMENT CAMP, OREG.

LOCATION.—Water-stage recorder in sec. 31, T. 3 S., R. 9 E., near lower end of Red Top Meadows, 4 miles southeast of Government Camp.

DRAINAGE AREA.—8.0 square miles.

RECORDS AVAILABLE.—May, 1910, to May, 1912; April, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 350 second-feet November 29 (gage height, 3.43 feet); minimum, 18 second-feet September 4 (gage height, 0.73 foot).

1910-1912, 1926-27: Maximum discharge, that of November 29, 1926; minimum, 13 second-feet September 9, 1926.

REMARKS.—Records good, except those for October 1-12, December 13, 14, January 20-22, September 8-22, and 24, which were estimated. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....		20	90	34	55	30	27	62	77	57	33	37
2.....		20	67	59	53	30	27	59	80	55	32	24
3.....		20	56	46	36	28	27	73	81	56	31	20
4.....		19	49	39	30	27	27	65	85	55	31	20
5.....		22	45	36	27	27	25	61	93	51	30	21
6.....		59	41	33	27	27	27	60	104	49	30	27
7.....	25	32	38	33	26	28	27	56	115	48	28	41
8.....		24	35	31	26	30	24	60	160	45	28	
9.....		22	34	30	25	28	24	68	121	45	28	
10.....		22	33	28	25	27	22	68	110	43	28	
11.....		22	53	28	25	28	24	72	98	43	30	
12.....		24	38	29	24	36	27	89	93	42	30	
13.....	32	35	36	31	24	34	30	98	93	41	26	
14.....	27	30	35	30	23	29	33	115	93	41	26	
15.....	33	80	35	30	24	26	33	121	87	38	26	30
16.....	57	44	49	30	24	27	27	115	84	38	25	
17.....	36	34	50	28	25	28	26	110	83	37	25	
18.....	29	29	41	28	32	29	25	82	78	37	25	
19.....	26	25	41	28	27	30	24	77	75	36	25	
20.....	24	27	37		115	31	22	68	75	35	25	
21.....	23	28	38	28	71	40	24	68	76	34	24	
22.....	22	32	38		47	41	31	70	74	33	23	
23.....	21	39	43	28	39	47	42	70	74	35	24	
24.....	26	41	32	27	34	40	50	73	69	39	24	26
25.....	26	53	31	24	38	38	68	79	67	37	22	25
26.....	55	42	30	22	37	39	83	71	68	35	21	25
27.....	41	35	28	22	32	42	91	65	68	33	22	31
28.....	33	56	28	22	30	49	84	68	65	32	21	53
29.....	27	194	33	21		49	72	71	63	31	22	74
30.....	22	98	39	21		33	64	69	59	31	22	90
31.....	22		33	21		28		70		30	27	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	57	-----	28.5	3.56	4.10	1,750
November.....	194	19	40.9	5.11	5.70	2,430
December.....	90	28	41.2	5.15	5.94	2,530
January.....	59	21	29.8	3.72	4.29	1,830
February.....	115	23	35.8	4.48	4.66	1,990
March.....	49	26	33.1	4.14	4.77	2,040
April.....	91	22	37.9	4.74	5.29	2,260
May.....	121	56	75.9	9.49	10.94	4,670
June.....	160	59	85.6	10.7	11.94	5,090
July.....	57	30	40.7	5.09	5.87	2,500
August.....	33	21	26.3	3.29	3.79	1,620
September.....	90	20	33.0	4.12	4.60	1,960
The year.....	194	19	42.4	5.30	71.89	30,700

SALMON RIVER AT WELCHES, OREG.

LOCATION.—Staff gage in S. $\frac{1}{2}$ 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.

DRAINAGE AREA.—100 square miles.

RECORDS AVAILABLE.—July, 1920, to September, 1921; April, 1925, to September, 1927. August, 1913, to September, 1914, at station three-fourths mile downstream.

EXTREMES.—Maximum discharge, 5,680 second-feet November 29 (gage height, 5.3 feet); minimum discharge, 88 second-feet October 2; minimum gage height, —0.08 foot August 26.

1913-14, 1920-21, 1925-1927: Maximum discharge, that of November 29, 1926; minimum, 68 second-feet August 11-16, 1926 (gage height, —0.18 foot).

REMARKS.—Records excellent. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	177	1,400	595	2,030	565	422	855	690	255	124	183
2	88	177	1,000	1,810	1,400	565	422	755	658	275	124	143
3	143	171	788	1,220	855	505	450	1,040	625	255	119	119
4	138	171	658	925	690	478	450	925	625	255	119	124
5	132	165	595	788	595	450	422	855	658	255	115	133
6	148	295	505	658	478	450	422	788	690	236	115	168
7	345	625	450	595	422	450	395	755	755	218	115	236
8	395	395	422	478	395	450	422	722	820	218	115	211
9	286	295	370	422	345	422	422	690	890	211	115	143
10	211	250	345	422	295	422	422	755	722	200	110	236
11	268	230	788	370	295	450	395	755	658	190	110	855
12	345	204	535	345	275	625	422	820	505	183	110	505
13	370	395	422	535	275	690	478	890	565	183	110	395
14	320	345	595	478	255	625	505	1,080	535	177	106	320
15	295	722	370	422	275	565	625	1,220	505	171	106	255
16	722	1,120	722	395	275	478	535	1,180	478	168	102	211
17	505	722	855	370	275	478	565	1,220	450	165	102	153
18	395	505	722	478	1,000	450	625	1,000	422	165	102	148
19	295	422	625	422	690	422	535	890	395	159	102	143
20	242	422	565	370	4,470	422	478	788	370	153	99	133
21	211	422	535	320	2,270	565	450	755	345	148	99	128
22	191	478	478	295	1,400	535	505	722	345	148	95	128
23	171	535	422	275	1,080	505	658	690	345	143	95	124
24	177	565	395	275	788	690	855	722	320	138	95	128
25	197	625	370	255	722	625	1,220	755	320	143	95	124
26	820	722	320	236	755	565	1,400	690	295	138	92	119
27	450	690	320	236	658	505	1,400	658	295	138	97	177
28	295	722	395	320	565	450	1,400	658	275	133	95	395
29	250	4,160	505	275	-----	450	1,180	658	255	128	99	1,700
30	211	1,600	755	255	-----	478	1,000	625	255	128	99	960
31	101	-----	625	255	-----	450	-----	658	-----	124	99	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acro-feet
October	820	88	287	2.87	3.31	17,600
November	4,160	165	611	6.11	6.82	36,400
December	1,400	320	569	5.69	6.56	35,000
January	1,810	236	487	4.87	5.62	29,900
February	4,470	255	851	8.51	8.86	47,300
March	690	422	509	5.09	5.87	31,300
April	1,400	395	649	6.49	7.24	38,600
May	1,220	625	825	8.25	9.51	50,700
June	890	255	505	5.05	5.63	30,000
July	275	124	181	1.81	2.09	11,100
August	124	92	106	1.06	1.22	6,520
September	1,700	119	296	2.96	3.30	17,600
The year	4,470	88	496	4.86	66.03	352,000

SANDY RIVER BASIN

65

BULL RUN RIVER NEAR BULL RUN, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 25, T. 1 S., R. 5 E., $1\frac{1}{2}$ miles above intake of Portland water-supply pipe line and 5 miles east of Bull Run.

DRAINAGE AREA.—102 square miles.

RECORDS AVAILABLE.—January, 1895, to September, 1927.

EXTREMES.—Maximum discharge during year, 10,200 second-feet November 29 (gage height, 8.3 feet); minimum, 82 second-feet August 26 (gage height, 0.27 foot).

1895-1927: Maximum discharge, 20,300 second-feet November 20, 1921, at spillway of diversion dam; minimum, 63 second-feet August 13-16, 1926 (gage height, 0.17 foot).

REMARKS.—Records good except those above 3,000 second-feet, which are poor. No diversions above station. Flow is slightly regulated during summer by storage in Bull Run Lake.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	337	373	2,240	1,580	3,410	1,200	512	910	770	263	115	277
2.....	529	333	1,680	4,360	3,530	1,050	556	770	770	249	112	168
3.....	680	298	1,160	3,240	2,020	875	606	1,280	710	274	110	138
4.....	524	277	910	2,020	1,500	770	650	1,320	710	277	107	156
5.....	425	260	710	1,680	1,120	680	680	1,050	680	260	105	345
6.....	435	710	595	1,320	980	650	650	910	740	242	102	740
7.....	1,120	612	512	1,280	740	680	770	840	840	221	105	770
8.....	1,020	475	445	1,020	612	710	680	740	1,450	214	105	540
9.....	740	415	390	840	556	634	617	710	1,200	204	102	377
10.....	595	381	369	740	502	628	578	680	945	197	102	668
11.....	980	381	1,030	639	460	650	540	680	770	194	105	4,160
12.....	1,120	385	980	650	425	1,260	529	740	680	187	110	1,870
13.....	1,200	1,160	770	1,680	390	1,540	529	805	612	178	105	1,400
14.....	840	1,080	634	1,320	373	1,280	556	1,080	568	171	102	1,050
15.....	770	1,450	622	1,080	440	980	740	1,160	518	165	100	770
16.....	2,130	1,540	1,740	910	573	840	680	1,080	475	159	100	612
17.....	1,630	1,020	2,180	770	1,120	910	1,020	1,240	445	156	100	496
18.....	1,080	770	1,540	1,020	2,090	805	1,080	980	405	156	100	420
19.....	805	606	1,500	875	2,080	710	840	1,120	390	153	102	365
20.....	622	980	1,240	710	7,250	650	680	1,020	369	150	102	329
21.....	518	1,080	1,080	584	4,070	805	634	980	361	147	98	309
22.....	435	1,020	875	524	2,650	770	639	875	357	144	98	291
23.....	381	1,200	710	480	1,970	770	710	840	353	138	93	277
24.....	546	1,050	680	485	1,360	945	980	840	357	138	95	266
25.....	524	1,240	639	435	1,280	770	1,320	945	329	135	98	256
26.....	1,120	1,050	556	395	1,280	680	1,540	910	313	130	90	242
27.....	910	910	578	485	1,020	634	1,920	805	302	127	88	439
28.....	710	1,080	680	770	875	590	1,630	770	298	122	88	1,670
29.....	573	5,710	1,050	644	-----	573	1,160	910	291	120	88	4,200
30.....	480	2,550	1,920	556	-----	578	910	840	277	117	93	2,020
31.....	420	-----	1,540	546	-----	556	-----	770	-----	115	98	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	2,130	337	781	7.66	8.83	48,000
November.....	5,710	260	1,010	9.90	11.04	60,100
December.....	2,240	369	1,020	10.0	11.53	62,700
January.....	4,360	395	1,090	10.7	12.34	67,000
February.....	7,250	373	1,600	15.7	16.35	88,900
March.....	1,540	556	812	7.96	9.18	49,900
April.....	1,920	512	831	8.15	9.09	49,400
May.....	1,320	680	923	9.05	10.43	56,800
June.....	1,450	277	576	5.65	6.30	34,300
July.....	277	115	178	1.75	2.02	10,900
August.....	115	88	101	.990	1.14	6,210
September.....	4,200	138	854	8.37	9.34	50,800
The year.....	7,250	88	807	7.91	107.59	585,000

LITTLE SANDY RIVER NEAR BULL RUN, OREG.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 10, T. 2 S., R. 5 E., three-eighths mile above Portland Electric Power Co.'s dam and tunnel from Sandy River and 3 miles east of Bull Run.

DRAINAGE AREA.—23 square miles.

RECORDS AVAILABLE.—May, 1911, to April, 1913, fragmentary; July, 1919, to September, 1927.

EXTREMES.—Maximum discharge during year, 1,520 second-feet September 11 (gage height, 5.95 feet); minimum, 16 second-feet August 21–23 (gage height, 1.87 feet).

1911–1913, 1919–1927: Maximum discharge, 3,950 second-feet November 20, 1921 (gage height, 8.90 feet); minimum, 10 second-feet September 17, 1924.

REMARKS.—Records good. No regulation or diversions above station. Gage-height record furnished by Portland Electric Power Co.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	70	78	367	255	498	219	108	150	183	48	22	80
2.....	183	70	257	615	615	189	116	131	177	47	22	43
3.....	223	65	194	476	381	161	128	226	163	69	22	33
4.....	138	60	158	353	281	146	131	209	167	68	22	42
5.....	102	55	134	300	221	131	131	169	156	58	21	83
6.....	90	126	116	246	187	128	133	156	171	51	20	154
7.....	177	99	103	216	159	130	145	145	189	48	20	194
8.....	148	80	96	185	140	128	124	143	437	44	20	119
9.....	112	71	84	163	120	116	113	140	284	42	20	78
10.....	92	66	84	146	106	120	105	140	198	41	20	235
11.....	150	63	205	131	99	125	103	143	159	39	20	945
12.....	179	66	173	136	93	196	99	169	140	37	22	318
13.....	181	120	141	290	87	241	101	183	122	35	20	275
14.....	131	113	120	233	83	219	105	226	110	35	20	196
15.....	133	150	145	207	96	187	130	231	99	34	18	134
16.....	308	177	318	177	112	169	128	211	92	32	18	105
17.....	252	131	378	154	194	173	185	226	85	31	18	83
18.....	173	109	290	175	342	167	202	171	77	31	18	70
19.....	128	96	322	173	287	148	158	200	72	29	17	59
20.....	102	126	244	148	875	146	136	175	66	28	17	52
21.....	87	281	214	128	615	177	126	187	63	27	17	49
22.....	76	209	173	119	402	173	130	173	60	27	16	46
23.....	70	181	143	113	308	171	148	163	64	26	17	42
24.....	106	148	138	124	231	198	185	175	65	25	18	42
25.....	106	145	143	110	233	165	246	205	56	25	18	42
26.....	294	128	130	105	228	146	284	185	52	25	17	39
27.....	202	122	130	116	187	138	342	167	54	25	17	100
28.....	148	148	148	154	167	125	275	177	55	24	17	526
29.....	118	735	203	143	-----	122	211	228	57	24	18	900
30.....	98	430	336	134	-----	122	156	196	53	23	18	430
31.....	87	-----	269	131	-----	116	-----	187	-----	23	18	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	308	70	144	6.26	7.22	8,850
November.....	735	55	148	6.43	7.17	8,810
December.....	378	84	192	8.35	9.63	11,800
January.....	615	105	199	8.65	9.97	12,200
February.....	875	83	262	11.4	11.87	14,600
March.....	241	116	158	6.87	7.92	9,720
April.....	342	99	161	7.00	7.81	9,580
May.....	231	131	180	7.83	9.03	11,100
June.....	437	52	124	5.39	6.01	7,380
July.....	69	23	36.2	1.57	1.81	2,230
August.....	22	16	19.0	.826	.95	1,170
September.....	945	33	180	7.83	8.74	10,700
The year.....	945	16	150	6.52	88.13	108,000

WILLAMETTE RIVER BASIN

MIDDLE FORK OF WILLAMETTE RIVER AT EULA, OREG.

LOCATION.—Staff gage in sec. 18, T. 20 S., R. 2 E., one-fourth mile southwest of

Eula railroad station and post office and 8 miles below mouth of North Fork.

DRAINAGE AREA.—943 square miles.

RECORDS AVAILABLE.—July, 1923, to April, 1927.

EXTREMES.—Maximum discharge during year, 40,000 second-feet February 21 (gage height, 17.0 feet); minimum, 675 second-feet October 1 (gage height, 1.95 feet).

1923-1927: Maximum discharge, that of February 21, 1927; minimum, 480 second-feet August 6-17, 1926.

REMARKS.—Records good except those above 10,000 second-feet, which are fair. No diversions above station. Considerable diurnal fluctuation during low-water periods, caused by operation of logging dam 10 miles upstream. Gage-height record furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1	675	710	8,450	4,100	4,950	5,460	3,050
2	710	710	9,770	6,240	4,950	5,270	3,050
3	710	710	8,450	8,670	4,780	5,270	3,050
4	710	710	7,590	8,230	4,610	4,890	3,050
5	710	710	5,480	7,190	4,440	4,360	3,050
6	710	710	5,120	6,240	4,270	4,360	3,050
7	870	710	4,270	5,860	4,100	3,580	3,050
8	1,230	710	3,940	5,860	3,630	3,580	2,920
9	1,030	710	3,780	4,780	3,480	3,440	2,920
10	1,350	710	3,630	4,440	3,330	3,440	2,920
11	1,350	710	3,480	4,100	2,790	2,920	2,920
12	1,350	710	3,480	3,330	2,660	5,080	2,800
13	1,350	1,820	3,480	3,050	2,400	5,270	2,800
14	1,350	1,820	4,100	2,660	2,400	5,270	2,800
15	1,350	1,820	3,780	2,790	2,400	5,080	2,800
16	1,350	1,820	4,100	2,660	2,400	4,360	2,680
17	1,270	7,390	4,610	3,780	2,530	4,360	2,680
18	950	2,660	5,300	2,660	3,330	4,530	2,680
19	1,030	3,050	4,610	3,190	5,480	4,360	2,680
20	950	9,990	3,630	4,270	13,600	4,360	2,450
21	710	8,010	2,790	4,100	29,000	4,360	2,450
22	710	6,240	2,790	3,330	13,800	4,030	2,560
23	710	4,610	2,660	2,660	10,900	3,870	2,920
24	710	4,100	2,660	2,660	9,180	3,870	3,870
25	790	5,310	2,660	2,530	7,760	4,030	4,190
26	790	5,480	2,660	2,530	7,100	3,870	4,030
27	710	4,610	2,530	2,530	6,060	3,580	3,870
28	710	4,270	2,400	2,920	5,660	3,180	3,720
29	710	10,400	2,790	3,330	-----	3,180	3,440
30	710	12,900	2,920	4,100	-----	3,180	3,310
31	710	-----	3,330	3,330	-----	3,050	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,350	675	935	0.991	1.14	57,500
November	12,900	710	3,490	3.70	4.13	208,000
December	9,770	2,400	4,230	4.49	5.18	260,000
January	8,670	2,530	4,130	4.38	5.05	254,000
February	29,000	2,400	6,140	6.51	6.78	341,000
March	5,460	2,920	4,180	4.43	5.11	257,000
April	4,190	2,450	3,060	3.24	3.62	182,000
The period	-----	-----	-----	-----	-----	1,560,000

WILLAMETTE RIVER AT EUGENE, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 29, T. 17 S., R. 3 W., at highway bridge at Eugene. Zero of gage is 399.3 feet above mean sea level.

DRAINAGE AREA.—2,050 square miles.

RECORDS AVAILABLE.—June, 1919, to September, 1927. Record at Springfield, 4 miles upstream, November, 1911, to September, 1913.

EXTREMES.—Maximum discharge during year, 73,300 second-feet February 21 (gage height, 17.0 feet); minimum, 750 second-feet August 19–27, 29, 31, and September 1 (gage height, –1.0 foot).

1911–1913, 1919–1927: Maximum discharge, that of February 21, 1927; minimum, 500 second-feet August 11, 1926; minimum gage height, that of 1927.

Maximum stage in recent years, 21.5 feet November 23, 1909 (discharge, about 96,000 second-feet).

REMARKS.—Records good. No diversions above station. Slight diurnal fluctuation during low-water periods, caused by operation of logging dam on Middle Fork. Gage-height record furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	830	1,400	25,800	10,600	11,300	9,740	5,140	6,470	5,140	3,090	1,100	750
2-----	920	1,200	23,200	11,600	25,800	9,740	5,350	7,470	4,750	2,940	1,100	830
3-----	920	1,100	20,700	31,000	25,800	9,740	5,560	6,470	4,560	2,790	1,010	920
4-----	1,600	1,010	14,300	41,800	23,200	9,740	5,560	6,960	4,750	2,790	1,010	920
5-----	1,300	920	10,300	36,400	15,900	9,130	5,780	6,470	5,140	2,650	1,010	920
6-----	1,100	830	8,600	24,800	14,700	8,270	5,350	6,000	4,750	2,510	1,010	1,010
7-----	1,010	1,300	6,620	18,200	10,300	6,960	5,350	5,780	4,750	2,510	1,010	1,400
8-----	1,600	1,300	5,340	13,900	8,600	6,960	5,780	5,780	6,710	2,370	920	1,400
9-----	1,840	1,200	4,660	10,300	8,000	6,960	5,560	5,560	9,130	2,370	920	1,200
10-----	1,720	1,010	4,460	8,600	7,160	6,960	5,350	5,350	8,000	2,240	920	1,010
11-----	1,960	1,010	3,700	7,160	5,840	6,470	5,350	5,350	6,470	1,980	920	1,400
12-----	1,960	1,010	5,840	5,840	5,340	6,470	4,750	5,140	5,780	1,860	830	1,740
13-----	1,500	1,500	5,840	5,840	4,660	8,840	4,750	5,140	4,940	1,860	1,010	1,860
14-----	1,400	5,100	5,340	5,340	4,460	12,500	4,380	5,560	5,140	1,740	830	1,620
15-----	1,200	3,700	4,880	5,840	4,260	12,100	4,200	7,730	4,940	1,740	830	1,740
16-----	1,200	15,900	8,000	5,100	4,260	9,740	5,140	8,270	4,750	1,740	830	1,400
17-----	1,200	8,600	10,900	4,660	4,060	9,740	4,940	8,550	4,560	1,740	830	1,370
18-----	1,600	4,880	13,900	4,660	5,840	12,100	4,750	7,730	4,380	1,620	830	1,100
19-----	1,500	4,260	13,900	7,720	13,900	11,400	5,350	6,470	4,200	1,620	750	1,100
20-----	1,500	19,700	8,600	15,900	36,900	9,740	5,140	6,230	4,030	1,620	750	920
21-----	1,500	23,700	8,600	12,000	68,000	8,840	4,560	5,780	3,860	1,510	750	920
22-----	1,200	12,000	8,600	8,600	44,500	8,270	4,560	5,350	3,860	1,510	750	920
23-----	1,100	7,160	7,720	5,840	30,900	8,000	4,380	5,140	3,700	1,510	750	1,010
24-----	1,200	5,840	5,840	5,840	23,400	7,730	4,940	5,140	3,540	1,510	750	1,010
25-----	1,300	5,100	8,000	5,840	17,100	7,730	6,230	4,750	3,240	1,400	750	1,400
26-----	1,500	12,000	7,720	6,360	16,300	6,960	8,840	5,140	3,240	1,300	750	1,010
27-----	1,600	8,600	5,840	4,660	14,700	6,960	9,430	5,350	4,030	1,300	750	920
28-----	1,500	8,600	5,100	7,160	12,100	6,000	9,130	5,140	4,200	1,200	830	2,940
29-----	1,600	27,900	6,360	13,900	-----	5,560	8,550	6,470	4,030	1,200	750	3,390
30-----	1,500	43,400	9,920	12,000	-----	5,140	7,470	6,000	3,390	1,200	830	4,560
31-----	1,400	-----	10,600	9,580	-----	5,560	-----	5,560	-----	1,200	750	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,960	830	1,400	0.683	0.79	86,100
November	43,400	830	7,710	3.76	4.20	459,000
December	25,800	3,700	9,330	4.55	5.25	574,000
January	41,800	4,660	11,800	5.76	6.64	726,000
February	68,000	4,060	16,700	8.15	8.49	928,000
March	12,500	5,140	8,390	4.09	4.72	516,000
April	9,430	4,200	5,720	2.79	3.11	340,000
May	8,550	4,750	6,070	2.96	3.41	373,000
June	9,130	3,240	4,830	2.36	2.63	287,000
July	3,090	1,200	1,890	.922	1.06	116,000
August	1,100	750	865	.422	.49	53,200
September	4,560	750	1,420	.693	.77	84,500
The year	68,000	750	6,280	3.06	41.56	4,540,000

WILLAMETTE RIVER AT ALBANY, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 6, T. 11 S., R. 3 E., at end of Broadalbin Street and on highway bridge in Albany, just below mouth of Calapooya River. Zero of gage is 171.2 feet above mean sea level.

DRAINAGE AREA.—4,860 square miles.

RECORDS AVAILABLE.—November, 1878, to April, 1882; January, 1892, to September, 1927. Some fragmentary records 1883 to 1888.

EXTREMES.—Maximum discharge during year, 183,000 second-feet February 22 (gage height, 29.2 feet); minimum, 2,400 second-feet October 1, 6, and August 29 to September 2 (gage height, 0.6 foot).

1878-1882, 1892-1927: Maximum discharge, 229,000 second-feet January 14, 1881 (gage height, 32.8 feet); minimum, about 1,870 second-feet September 21-27, 1879 (gage height, 0.2 foot).

Maximum stage known, 36.0 feet December 8, 1861 (discharge, about 274,000 second-feet).

REMARKS.—Records good. Albany power canal diverts water from South Santiam River into Willamette River above station. No regulation. Gage-height record furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,400	3,680	82,100	26,800	34,800	33,500	13,100	16,900	13,100	7,380	3,920	2,400
2	2,600	3,680	74,600	29,300	53,000	30,100	12,800	15,700	12,800	7,380	3,920	2,400
3	2,600	3,440	52,700	42,700	65,700	30,100	12,400	16,900	12,100	7,080	3,920	2,600
4	2,600	3,440	46,000	62,000	64,100	27,600	13,900	15,300	11,700	7,080	3,680	2,800
5	2,600	3,440	35,200	74,600	51,300	24,700	14,600	16,900	11,700	7,080	3,680	2,800
6	2,400	3,440	27,600	76,500	41,400	22,300	14,600	16,500	13,100	6,800	3,680	3,000
7	3,000	3,440	22,300	64,100	34,800	20,800	13,900	15,700	13,500	6,800	3,440	3,000
8	3,220	3,220	19,200	49,800	29,300	19,200	14,600	14,900	15,300	6,520	3,440	3,220
9	3,220	3,220	17,200	39,100	27,600	20,000	14,900	14,200	18,400	6,240	3,440	3,220
10	4,160	3,220	14,900	31,400	24,300	20,000	14,900	13,500	20,800	5,960	3,440	3,440
11	4,160	3,220	13,100	26,400	21,500	19,600	13,900	12,400	18,000	5,400	3,440	3,440
12	4,160	3,440	13,100	23,100	19,200	19,600	13,100	12,100	16,500	5,140	3,440	4,160
13	4,160	3,680	17,200	20,400	17,200	20,400	12,400	12,100	14,600	4,880	3,220	4,160
14	3,920	5,680	16,500	18,400	15,700	27,200	11,700	13,100	13,100	4,880	3,220	4,640
15	3,680	10,700	15,300	18,400	14,900	31,800	11,400	14,900	12,100	4,880	3,220	4,880
16	3,220	10,700	15,300	18,000	14,900	29,300	11,700	18,000	11,400	4,880	3,000	4,640
17	3,680	26,000	23,500	18,000	15,700	26,400	11,700	19,200	11,400	4,640	3,000	4,400
18	3,920	18,800	26,400	18,800	19,600	27,200	11,700	19,200	11,100	4,640	3,000	4,160
19	3,680	13,900	29,700	24,300	26,800	28,500	11,700	18,000	10,400	4,640	2,800	3,920
20	3,680	14,900	28,500	36,500	37,400	26,800	12,100	16,500	10,100	4,640	2,800	3,920
21	3,680	31,800	30,100	43,200	68,500	24,300	11,700	15,700	9,480	4,640	2,800	3,680
22	3,440	43,700	28,900	34,800	161,000	23,900	11,400	15,300	8,880	4,400	2,800	3,680
23	3,440	30,100	28,000	27,600	147,000	23,100	11,100	14,900	8,880	4,400	2,800	3,680
24	3,440	23,100	24,300	23,100	107,000	22,300	10,700	14,600	8,580	4,400	2,600	3,440
25	3,680	20,000	21,900	23,500	71,500	20,000	10,700	13,900	8,580	4,400	2,600	3,440
26	3,920	23,900	20,800	23,900	51,800	19,200	14,900	12,800	8,280	4,400	2,600	3,440
27	3,920	32,200	23,900	22,300	43,700	17,200	18,400	12,100	7,980	4,160	2,600	3,440
28	3,920	28,000	21,100	25,600	37,800	15,700	20,800	12,400	7,680	4,160	2,600	3,680
29	3,920	31,900	20,400	37,400	-----	14,600	20,800	12,400	7,380	4,160	2,400	8,280
30	3,920	57,100	22,700	41,400	-----	13,900	19,200	12,100	7,380	4,160	2,400	10,700
31	3,920	-----	28,000	36,000	-----	13,500	-----	13,500	-----	3,920	2,400	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acres-feet
October	4,160	2,400	3,500	0.720	0.83	215,000
November	57,100	3,220	15,600	3.21	3.58	928,000
December	82,100	13,100	27,800	5.72	6.60	1,710,000
January	76,500	18,000	34,100	7.02	8.09	2,100,000
February	161,000	14,900	47,100	9.69	10.09	2,620,000
March	33,500	13,500	23,000	4.73	5.45	1,410,000
April	20,800	10,700	13,700	2.82	3.15	815,000
May	19,200	12,100	14,900	3.07	3.54	916,000
June	20,800	7,380	11,800	2.43	2.71	702,000
July	7,380	3,920	5,290	1.09	1.26	325,000
August	3,920	2,400	3,110	.640	.74	191,000
September	10,700	2,400	3,960	.815	.91	236,000
The year	161,000	2,400	16,800	3.46	46.95	12,200,000

SURFACE WATER SUPPLY, 1927, PART XII—C

COAST FORK OF WILLAMETTE RIVER AT SAGINAW, OREG.

LOCATION.—Chain gage in NW. $\frac{1}{4}$ sec. 15, T. 20 S., R. 3 W., at highway bridge at Saginaw, 1 mile below mouth of Row River.

DRAINAGE AREA.—529 square miles.

RECORDS AVAILABLE.—October, 1923, to April, 1927.

EXTREMES.—Maximum discharge during year, 28,600 second-feet during night of February 20 (gage height, 12.9 feet); minimum stage and discharge uncertain.

1923-1927: Maximum discharge, that of February 20, 1927; minimum, about 25 second-feet August 16, 1926.

REMARKS.—Records good except those for October 1 to November 12, which were estimated because of unsatisfactory gage-height record. No regulation or diversions above station. Gage-height record furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1.....	104		6,600	5,340	5,740	2,970	3,250
2.....			5,540	10,900	7,740	3,110	2,970
3.....			5,940	15,200	6,600	2,700	2,570
4.....			4,540	13,500	5,340	2,700	2,440
5.....		104	3,530	10,800	4,740	2,320	2,080
6.....	104		2,340	7,500	3,690	2,200	1,850
7.....			1,950	4,180	3,060	2,080	1,630
8.....			1,120	3,060	2,620	2,080	1,740
9.....			830	2,340	2,340	2,440	1,740
10.....			680	2,080	1,950	2,700	1,740
11.....	170		680	1,950	1,470	2,970	1,740
12.....			645	1,360	1,080	3,250	1,740
13.....		2,080	610	1,170	715	3,400	950
14.....		2,210	610	1,080	750	2,970	1,320
15.....		1,260	790	990	870	2,970	1,420
16.....	170	5,140	4,360	950	1,040	2,440	1,270
17.....		3,690	4,180	1,040	1,590	3,250	1,320
18.....		2,340	4,540	1,710	1,950	3,870	1,420
19.....		3,530	5,340	2,080	3,370	3,250	1,420
20.....		7,260	4,540	1,950	19,900	2,970	1,520
21.....		3,370	4,740	1,710	24,400	2,830	1,520
22.....		2,340	2,080	1,590	12,500	2,700	1,520
23.....		1,080	2,480	1,360	9,180	2,440	1,630
24.....		1,040	2,910	1,470	5,540	2,440	1,850
25.....		1,360	4,010	2,210	4,740	2,830	1,960
26.....		3,370	4,010	2,760	4,010	2,970	1,630
27.....		2,340	4,180	3,530	3,060	2,970	1,850
28.....		2,620	4,360	4,940	3,060	2,570	1,850
29.....		9,700	4,540	5,340	-----	2,700	1,850
30.....		7,260	4,180	3,690	-----	3,400	1,740
31.....			5,940	3,060	-----	3,870	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	-----	-----	170	0.321	0.37	10,500
November.....	9,700	-----	2,110	3.99	4.45	128,000
December.....	6,600	610	3,320	6.28	7.24	204,000
January.....	15,200	950	3,900	7.37	8.50	240,000
February.....	24,400	715	5,110	9.66	10.06	284,000
March.....	3,870	2,080	2,850	5.39	6.21	175,000
April.....	3,250	950	1,780	3.36	3.75	106,000
The period.....	-----	-----	-----	-----	-----	1,150,000

McKENZIE RIVER AT McKENZIE BRIDGE, OREG.

LOCATION.—Staff gage in sec. 14, T. 16 S., R. 5 E., at highway bridge at McKenzie Bridge. Measuring section at cable $2\frac{1}{2}$ miles upstream.

DRAINAGE AREA.—353 square miles.

RECORDS AVAILABLE.—August, 1910, to September, 1927, incomplete.

EXTREMES.—Maximum discharge during year, about 12,000 second-feet February 20 (gage height, 6.8 feet); minimum, 955 second-feet October 1, 2, 6, and 7 (gage height, 0.45 foot).

1910–1927: Maximum discharge, about 18,000 second-feet January 6, 1923 (gage height, 8.3 feet); minimum, 890 second-feet October 13–26, 1924.

REMARKS.—Records good except those for estimated periods and those above 3,000 second-feet, which are fair. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	955	976	3,240	2,680	1,750	2,310	1,510	2,110	1,930		1,350	1,130
2.....	955	976	3,090	2,810	1,930	2,310	1,510	2,210	1,930		1,350	*1,140
3.....	990	976	2,810	2,680	2,110	2,110	1,510	1,930	1,930	*1,710		1,160
4.....	1,000	976	2,430	2,430	2,310	2,020	1,510	1,840	2,020			1,200
5.....	976	976	2,210	2,310	2,110	1,930	1,510	1,840	2,020			1,200
6.....	955	976	1,980	2,210	1,930	1,840	1,510		2,110	1,670		1,200
7.....	955	976	1,880	2,110	1,840	1,840	1,510		2,310	1,670		1,200
8.....	990	976	1,750	2,110	1,750	1,750	1,510		2,810	1,590		1,160
9.....	1,060	976	1,710	2,020	1,670	1,750	1,510		2,550	1,690		1,160
10.....	1,060	976	1,670	1,930	1,670	1,750		*1,750	2,550	1,510		1,160
11.....	1,060	976		1,750	1,590	1,750			2,430	1,510	*1,240	1,200
12.....	1,050	990		1,750	1,590	1,670			2,430	1,510		1,270
13.....	1,020	1,050		1,750	1,590	1,670	*1,510	2,020	2,310	1,510		*1,270
14.....	1,020	*1,120		1,750	1,590	1,840		2,310	2,210	1,510		1,270
15.....	1,020	1,200		1,750	1,750	1,750		2,550	2,110	1,510		1,270
16.....	1,050	1,750		1,750	1,840	1,750		2,680	2,110	1,510		1,270
17.....	1,050	1,590		1,750	1,930	1,750	1,510	2,680	2,110	1,470		*1,270
18.....	1,050	1,350		1,750	1,930	1,750	1,510	2,310	2,020	1,470		1,200
19.....	1,030	1,430		1,670	1,930	1,750	1,430	2,310	2,020	1,470		*1,270
20.....	1,020	3,540		1,670	7,420	1,750	1,430	2,210	1,930	1,470		1,200
21.....	1,000	2,310	*1,950	1,670	6,370	1,670	1,430	2,110	1,930	1,470	1,130	*1,200
22.....	1,000	1,840		1,630	5,370	1,590	1,430	*2,060	1,840	1,430	1,130	*1,200
23.....	990	1,710		1,510	4,770	1,590	1,430	2,020	1,840		*1,130	1,206
24.....	990	1,670		1,510	4,770	1,590	1,510	2,020	1,840		*1,130	1,200
25.....	990	1,930		1,430	3,540	1,590	1,590	2,020	1,840		1,130	1,200
26.....	1,020	1,930		1,430	2,550	1,590	1,670	2,020	1,840	*1,390	*1,130	1,200
27.....	1,000	1,930		1,510	2,550	1,590	2,020	2,020	1,840		1,130	*1,400
28.....	990	1,930		1,510	2,310	1,590	2,020	1,930	1,750		1,130	*1,700
29.....	990	5,370		1,590	-----	1,510	2,020	1,930	1,750		*1,130	2,020
30.....	990	4,030		1,590	-----	1,510	2,020	1,930	1,750		*1,130	1,590
31.....	976	-----		1,590	-----	1,510	-----	1,930	-----		*1,130	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	1,060	955	1,010	2.86	3.30	62,100
November.....	5,370	976	1,650	4.67	5.21	98,200
December.....	-----	-----	2,060	5.84	6.73	127,000
January.....	2,810	1,430	1,860	5.27	6.08	114,000
February.....	7,420	1,590	2,660	7.54	7.85	148,000
March.....	2,310	1,510	1,750	4.96	5.72	108,000
April.....	2,020	1,430	1,570	4.45	4.96	93,400
May.....	2,680	-----	2,040	5.78	6.66	125,000
June.....	2,810	1,750	2,070	5.86	6.54	123,000
July.....	-----	-----	1,510	4.28	4.93	92,800
August.....	-----	1,130	1,210	3.43	3.95	74,400
September.....	2,020	1,130	1,270	3.60	4.02	75,600
The year.....	7,420	955	1,710	4.84	65.95	1,240,000

* Estimated.

MCKENZIE RIVER NEAR VIDA, OREG.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 5, T. 17 S., R. 3 E., at Rennie ranch and suspension bridge, 1 mile above head of Martin Rapids and 5 miles east of Vida. Zero of gage is 855.33 feet above mean sea level (Eugene Water Board levels).

DRAINAGE AREA.—930 square miles.

RECORDS AVAILABLE.—September, 1924, to September, 1927. At head of Martin Rapids, gage heights only, June, 1910, to March, 1911.

EXTREMES.—Maximum discharge during year, 47,200 second-feet February 20 (gage height, 14.2 feet); minimum, 1,540 second-feet November 4 and 5 (gage height, 0.55 foot).

1924-1927: Maximum discharge, that of February 20, 1927; minimum, 1,430 second-feet September 14 and 15, 1926 (gage height, 0.45 foot).

Flood of January 6, 1923, reached a stage of 17.25 feet.

REMARKS.—Records good below and fair above 20,000 second-feet. No regulation or diversion above station. Gage-height record furnished by Eugene Water Board.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,580	1,580	10,500	5,270	5,030	6,020	3,520	6,020	4,570	3,330	2,150	1,960
2.....	1,630	1,580	10,200	13,800	12,400	6,560	3,420	5,510	4,800	3,140	2,150	1,900
3.....	2,020	1,570	7,980	13,800	9,200	6,020	3,720	6,020	4,800	2,950	2,150	1,900
4.....	1,790	1,540	7,120	11,100	7,980	5,760	3,720	6,020	5,270	2,950	2,150	1,900
5.....	1,680	1,540	6,290	9,840	6,290	5,270	3,930	5,510	5,270	2,860	2,020	1,900
6.....	1,630	1,730	4,570	8,880	5,760	4,800	3,720	5,030	5,510	2,770	2,020	2,020
7.....	2,440	1,730	4,140	7,400	5,270	4,800	4,140	5,030	7,400	2,770	2,020	2,080
8.....	2,220	1,680	3,930	6,020	4,800	5,030	3,930	4,800	9,200	2,770	2,020	1,960
9.....	2,020	1,630	3,720	5,510	4,350	4,570	3,930	4,800	7,980	2,680	2,020	1,900
10.....	1,960	1,580	3,720	4,800	4,140	4,350	3,520	4,570	6,840	2,600	2,020	2,290
11.....	1,960	1,580	3,930	4,570	3,720	4,350	3,330	4,570	6,020	2,600	2,020	2,680
12.....	1,790	1,680	4,140	4,140	3,720	5,510	3,330	4,800	5,510	2,600	2,020	2,600
13.....	1,790	2,860	4,140	4,140	3,520	6,560	3,330	5,510	5,270	2,600	2,020	2,290
14.....	1,790	2,600	3,720	4,140	3,520	6,560	3,420	7,120	5,030	2,520	1,960	2,220
15.....	1,730	5,030	4,140	4,570	3,330	5,510	3,420	7,980	5,030	2,440	1,960	2,150
16.....	1,790	7,980	4,140	4,350	3,330	5,270	3,720	8,280	4,570	2,440	1,960	2,150
17.....	1,960	4,140	5,760	4,140	3,330	5,510	3,520	7,980	4,350	2,440	1,960	2,020
18.....	1,790	3,620	6,290	4,570	6,020	5,270	3,930	6,560	4,140	2,440	1,960	1,900
19.....	1,730	4,570	5,510	5,510	6,290	5,030	3,720	6,560	4,140	2,360	1,900	1,900
20.....	1,680	15,500	4,570	5,030	28,200	5,030	3,330	5,510	3,930	2,290	1,900	1,900
21.....	1,680	7,120	5,030	4,140	31,700	5,510	3,330	5,270	3,930	2,290	1,900	1,900
22.....	1,630	7,120	4,140	3,720	18,000	5,160	3,330	4,800	3,720	2,290	1,900	1,840
23.....	1,570	4,350	4,140	3,720	12,100	4,800	3,720	4,800	3,720	2,290	1,900	1,840
24.....	1,680	4,140	3,720	3,930	9,520	5,030	5,030	4,800	3,720	2,290	1,900	1,840
25.....	1,680	5,030	3,720	4,140	8,280	4,570	6,840	5,030	3,520	2,220	1,900	1,840
26.....	1,680	5,030	3,520	4,140	8,280	4,350	7,400	5,270	3,520	2,150	1,900	1,840
27.....	1,840	5,030	3,620	4,140	7,690	4,140	8,280	5,510	3,930	2,150	1,900	2,360
28.....	1,730	5,510	3,720	3,930	6,840	3,720	7,690	5,030	3,620	2,150	1,900	4,350
29.....	1,680	18,300	4,350	4,570	-----	3,720	6,560	5,030	3,420	2,150	1,900	7,120
30.....	1,630	14,900	5,510	4,140	-----	3,720	5,760	4,570	3,330	2,150	1,840	4,570
31.....	1,630	-----	5,510	3,930	-----	3,720	-----	4,570	-----	2,150	1,840	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acro-feet
October.....	2,440	1,580	1,790	1.92	2.21	110,600
November.....	18,300	1,540	4,740	5.10	5.69	282,000
December.....	10,500	3,520	5,020	5.40	6.23	309,000
January.....	13,800	3,720	5,680	6.11	7.04	349,000
February.....	31,700	3,330	8,310	8.94	9.31	462,000
March.....	6,560	3,720	5,040	5.42	6.25	310,000
April.....	8,280	3,330	4,140	4.68	5.22	259,000
May.....	8,280	4,570	5,580	6.00	6.92	343,000
June.....	9,200	3,330	4,870	5.24	5.85	290,000
July.....	3,330	2,150	2,510	2.70	3.11	154,000
August.....	2,150	1,840	1,970	2.12	2.44	121,000
September.....	7,120	1,840	2,370	2.55	2.84	141,000
The year.....	31,700	1,540	4,320	4.65	63.11	3,130,000

EUGENE POWER CANAL NEAR WALTERVILLE, OREG.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ sec. 23, T. 17 S., R. 1 W., 150 yards below intake, 2 miles east of Walterville.

RECORDS AVAILABLE.—July, 1926, to September, 1927. September, 1911, to March, 1915, at station 3 miles downstream.

EXTREMES.—Maximum discharge not ascertained (probably about 1,050 second-feet on a few days when stage was above 3.3 feet, top of gage); minimum, 589 second-feet December 19 (gage height, 2.18 feet).

1911-1915, 1926-27: Maximum discharge, that of 1927; canal probably dry at times.

REMARKS.—Records good. This canal diverts from McKenzie River in SE. $\frac{1}{4}$ sec. 23, T. 17 S., R. 1 W., and extends $3\frac{1}{2}$ miles to power plant of city of Eugene in NW. $\frac{1}{4}$ sec. 29; the tailrace discharges into Camp Creek 4 miles above its mouth.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	920	928	896	786	1,000	984	992	840	1,000	992	960	984
2	928	920	904	786	960	992	1,000	1,000	1,000	992	960	984
3	800	920	912	936	944	976	688	992	1,000	716	1,000	992
4	920	904	912	952	960	952	1,000	992	1,000	716	992	709
5	840	880	723	904	960	960	976	1,000	730	1,000	992	984
6	960	920	912	920	695	695	992	1,000	1,000	992	992	984
7	920	730	920	912	960	976	992	992	984	992	716	984
8	872	880	904	920	1,000	992	1,000	800	992	984	1,000	992
9	800	872	880	695	992	984	992	1,000	1,000	992	1,000	992
10	716	904	896	920	992	992	695	984	1,000	716	992	984
11	920	896	864	960	1,000	984	992	1,000	992	992	1,000	716
12	912	880	723	912	976	1,000	976	1,000	723	992	1,000	992
13	920	896	880	904	695	709	1,000	992	1,000	992	1,000	984
14	960	744	912	944	984	1,000	1,000	1,000	992	984	716	1,000
15	872	880	904	952	960	984	992	808	1,000	992	992	992
16	856	872	880	723	1,000	1,000	1,000	1,000	1,000	992	992	992
17	688	864	904	960	992	984	800	1,000	1,000	716	992	984
18	920	872	920	1,000	992	992	1,000	992	992	984	992	723
19	912	880	589	952	984	984	992	1,000	716	984	992	1,000
20	904	872	912	920	716	695	992	1,000	992	984	992	984
21	920	730	904	944	984	1,000	1,000	992	984	984	716	992
22	936	896	912	920	960	984	1,000	730	992	976	992	984
23	920	904	896	695	952	992	1,000	1,000	992	968	984	984
24	695	880	912	920	920	984	840	1,000	992	716	984	984
25	920	751	595	936	928	992	1,000	1,000	1,000	968	984	716
26	912	880	595	920	920	1,000	1,000	1,000	716	968	984	992
27	904	864	912	952	695	723	1,000	992	1,000	968	984	992
28	904	730	896	936	944	984	1,000	1,000	992	960	716	984
29	920	896	960	960	976	976	1,000	730	992	960	992	1,000
30	912	904	912	695	992	992	1,000	730	984	960	992	992
31	730	904	904	960	992	1,000	992	1,000	992	716	992	992

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	960	688	878	54,000
November	928	730	865	51,500
December	960	589	863	53,100
January	1,000	695	897	55,200
February	1,000	695	931	51,700
March	1,000	695	950	58,400
April	1,000	688	964	57,400
May	1,000	730	954	58,700
June	1,000	716	959	57,100
July	1,000	716	931	57,200
August	1,000	716	955	58,700
September	1,000	709	953	56,700
The year	1,000	589	925	670,000

LONG TOM RIVER NEAR MONROE, OREG.

LOCATION.—Staff gage in sec. 21, T. 14 S., R. 5 W., at highway bridge 1½ miles north of Monroe.

DRAINAGE AREA.—394 square miles (revised).

RECORDS AVAILABLE.—November, 1920, to May, 1927; incomplete.

EXTREMES.—Maximum discharge during year, 10,400 second-feet February 22 (gage height, 13.8 feet); minimum, 132 second-feet May 31 (gage height, 1.06 feet).

1920-1927: Maximum discharge, 18,600 second-feet January 7, 1923 (gage height, 14.4 feet); minimum, 8 second-feet September 5-19 and 23, 1924 (gage height, 0.26 foot).

REMARKS.—Records good except those for estimated periods and those above 2,000 second-feet, which are poor. No diversions above station. Some fluctuation at low stages owing to pondage at mill dam at Monroe. Gage-height record furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1926-27

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1		6, 770	1, 730	4, 590	2, 170		223
2		3, 860	2, 260	6, 270	1, 990		265
3		2, 830	4, 590	6, 270	1, 770		352
4		2, 540	5, 950	5, 370	1, 450	417	330
5		2, 260	5, 950	4, 590	1, 200		286
6		1, 570	5, 370	3, 590	1, 100		286
7		1, 340	4, 470	3, 110	996	580	265
8		1, 140	4, 150	2, 830	996	664	244
9		932	3, 430	2, 580	1, 030	780	228
10		636	2, 460	2, 240	981	840	212
11		580	2, 120	1, 900	932	664	202
12		636	1, 770	1, 570	901	580	181
13		693	1, 450	1, 340	901	472	181
14		751	1, 810	1, 170	996	398	181
15		810	1, 200	1, 060	1, 490	375	170
16		608	932	1, 130	1, 060	352	155
17		693	1, 130	1, 100	1, 270	1, 530	140
18		736	1, 310	1, 130	2, 170	1, 570	140
19		780	1, 770	2, 210	2, 760	1, 530	160
20		1, 310	1, 690	4, 590	4, 360	1, 450	181
21		2, 460	1, 900	4, 840	9, 500	1, 240	202
22		3, 040	2, 260	4, 590	10, 400	1, 060	212
23		2, 830	2, 700	3, 190	6, 110	932	244
24		2, 360	2, 640	2, 580	4, 590	693	234
25		1, 900	2, 360	2, 700	4, 360	693	218
26		2, 260	2, 460	2, 830	3, 510	636	202
27		2, 830	2, 260	2, 830	3, 190	608	202
28		3, 590	2, 030	2, 830	2, 520	552	192
29		3, 860	1, 900	4, 470	-----	498	192
30		5, 370	1, 810	4, 470	-----	472	192
31		-----	1, 770	4, 360	-----	425	132

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
November	5, 370	-----	1, 190	3. 02	8. 37	70, 800
December	6, 770	580	1, 880	4. 77	5. 50	116, 000
January	5, 950	1, 100	3, 160	8. 02	9. 25	194, 000
February	10, 400	1, 060	3, 720	9. 44	9. 83	207, 000
March	2, 170	425	1, 110	2. 82	3. 25	68, 200
April	840	192	389	. 987	1. 10	23, 100
May	352	132	200	. 508	. 59	12, 300
The period	-----	-----	-----	-----	-----	691, 000

* Estimated.

MUDDY CREEK NEAR CORVALLIS, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 29, T. 12 S., R. 5 W., at highway bridge $1\frac{1}{2}$ miles east of Independence School and 3 miles south of Corvallis.

DRAINAGE AREA.—114 square miles.

RECORDS AVAILABLE.—October, 1920, to April, 1923; December, 1925, to April, 1927, incomplete; discontinued.

EXTREMES.—Maximum discharge during year, 3,400 second-feet February 22 (gage height, 17.7 feet); minimum, 115 second-feet November 14 (gage height, 2.80 feet).

1920-1923, 1925-1927: Maximum discharge, 3,500 second-feet January 7, 1923 (gage height, 18.53 feet, present datum); minimum, 11 second-feet September 12-14, 1922 (gage height, 0.21 foot, present datum).

REMARKS.—Records poor. Discharge estimated February 2 and 21-23, when water was above top of gage. No regulation or diversion above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1		2,490	664	2,070	718	169	16	229	344	500	460	429	234
2		1,670	1,110	2,900	616	164	17	184	436	509	564	460	219
3		1,360	1,930	2,700	536	164	18	204	460	527	1,140	484	209
4		910	1,870	2,000	527	159	19	274	509	1,430	1,670	500	199
5		604	1,930	1,540	509	169	20	314	527	2,420	2,560	460	194
6		476	1,930	1,230	380	184	21	554	616	1,930	2,900	408	189
7		422	2,070	1,360	350	194	22	554	1,030	1,400	3,200	368	179
8		374	1,760	1,360	356	219	23	616	1,080	886	2,800	332	169
9		362	1,170	1,470	380	219	24	616	792	732	2,280	314	164
10		344	1,110	792	387	229	25	628	718	960	1,710	302	159
11		326	844	676	380	234	26	1,330	844	1,030	1,470	290	151
12		302	718	527	374	249	27	1,810	826	935	1,080	249	147
13		274	574	444	380	254	28	1,870	664	1,620	844	239	147
14	115	244	492	401	401	249	29	2,560	574	2,140		229	143
15	135	254	460	380	422	244	30	2,840	676	1,810		209	139
							31		690	1,260		179	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
November 14-30.	2,840	115	873	7.66	4.84	29,400
December	2,490	244	684	6.00	6.92	42,100
January	2,420	460	1,250	11.0	12.68	76,900
February	3,200	380	1,520	13.3	13.85	84,400
March	718	179	393	3.45	3.98	24,200
April	254	139	192	1.68	1.87	11,400
The period	-----	-----	-----	-----	-----	268,000

NORTH SANTIAM RIVER AT MEHAMA, OREG.

LOCATION.—Staff gage in NW. ¼ sec. 18, T. 9 S., R. 2 E., at Mehama, half a mile below mouth of Little North Santiam River.

DRAINAGE AREA.—665 square miles.

RECORDS AVAILABLE.—July, 1905, to March, 1907; October, 1910, to September, 1914; September, 1921, to September, 1927.

EXTREMES.—Maximum discharge during year, 48,000 second-feet February 20 (gage height, 14.8 feet); minimum, 740 second-feet August 21-29 and 31 (gage height, 1.6 feet).

1905-1907, 1910-1914, 1921-1927: Maximum discharge, 62,000 second-feet November 20, 1921, and January 6, 1923 (gage height, 17.5 feet); minimum, 420 second-feet September 18, 1924 (gage height, 1.45 feet).

REMARKS.—Records good except those for April 14-24, which are fair. No regulation or diversions for irrigation above station. Gage-height record October to May furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	960	1,370	10,500	5,780	6,040	5,040	2,790	4,560	3,510	2,250	930	830
2-----	960	1,260	10,500	14,000	16,800	5,520	2,630	4,340	3,700	2,250	930	980
3-----	2,790	1,160	7,600	15,600	9,900	5,040	2,630	4,120	3,900	2,090	930	880
4-----	2,160	1,160	6,040	10,800	8,160	4,120	2,790	5,520	4,120	1,930	930	830
5-----	1,370	1,060	4,800	9,900	6,560	3,700	2,960	4,800	4,340	1,780	930	1,030
6-----	1,260	1,060	4,120	8,720	5,280	3,510	2,790	4,120	5,280	1,710	930	1,140
7-----	1,490	2,310	3,510	7,600	4,560	3,140	3,320	3,900	6,820	1,780	880	1,310
8-----	2,630	1,740	3,140	6,800	3,700	3,510	3,320	3,700	11,100	1,710	830	1,250
9-----	2,010	1,490	2,470	5,040	3,510	3,140	2,960	3,700	9,600	1,640	830	1,080
10-----	1,740	1,370	2,470	4,560	3,140	3,140	2,790	3,510	7,440	1,570	830	1,030
11-----	1,610	1,260	3,700	4,120	2,960	3,140	2,630	3,510	6,420	1,570	830	2,420
12-----	1,740	4,120	3,320	3,700	2,630	3,700	2,470	3,700	5,460	1,500	830	3,460
13-----	1,870	5,040	2,790	4,120	2,470	6,560	2,310	4,560	5,220	1,500	830	2,250
14-----	1,610	3,700	2,630	4,800	2,470	6,040	2,310	6,560	5,000	1,440	830	1,930
15-----	1,490	12,900	2,630	4,560	2,310	5,040	2,470	7,880	4,790	1,370	830	1,640
16-----	1,740	9,000	5,040	4,800	2,310	4,340	2,790	7,340	4,400	1,370	830	1,440
17-----	2,960	7,080	5,780	4,120	3,510	4,340	2,470	7,600	4,020	1,370	830	1,250
18-----	2,160	5,040	7,080	4,340	5,040	4,340	3,320	5,780	3,830	1,310	830	1,140
19-----	1,740	4,120	5,520	5,040	6,820	3,700	2,790	5,520	3,460	1,250	785	1,030
20-----	1,490	7,600	4,800	4,560	30,000	3,510	2,310	4,800	3,280	1,200	785	1,030
21-----	1,370	10,800	4,560	3,510	33,000	3,700	2,310	4,120	3,460	1,140	740	930
22-----	1,260	7,340	3,900	3,140	14,800	3,700	2,310	3,900	3,280	1,140	740	930
23-----	1,160	6,040	3,320	2,960	11,100	3,700	3,900	3,510	3,100	1,140	740	930
24-----	1,060	5,280	3,140	2,960	8,440	4,340	4,800	3,320	3,100	1,250	740	930
25-----	1,490	8,160	3,140	2,960	6,820	3,900	6,560	3,700	2,930	1,250	740	930
26-----	3,140	8,160	2,790	2,790	7,080	3,320	8,440	4,340	2,760	1,140	740	880
27-----	3,700	6,560	2,630	2,790	5,780	3,140	8,720	3,900	2,590	1,080	740	930
28-----	2,630	6,560	2,790	5,040	5,040	2,960	8,440	3,700	2,590	1,030	740	5,000
29-----	2,010	30,000	3,510	4,120	-----	2,790	6,560	3,900	2,420	1,030	740	11,700
30-----	1,740	17,600	6,300	3,510	-----	2,790	5,040	3,510	2,420	980	785	6,180
31-----	1,490	-----	5,520	3,140	-----	2,960	-----	3,320	-----	930	740	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October-----	3,700	960	1,830	2.75	3.17	113,000
November-----	30,000	1,060	6,010	9.04	10.09	358,000
December-----	10,500	2,470	4,520	6.80	7.84	278,000
January-----	15,600	2,790	5,460	8.21	9.46	336,000
February-----	33,000	2,310	7,870	11.8	12.29	437,000
March-----	6,560	2,790	3,930	5.91	6.81	242,000
April-----	8,720	2,310	3,730	5.61	6.26	222,000
May-----	7,880	3,320	4,540	6.83	7.87	279,000
June-----	11,100	2,420	4,480	6.74	7.52	267,000
July-----	2,250	980	1,440	2.17	2.50	85,500
August-----	930	740	818	1.23	1.42	50,300
September-----	11,700	830	1,910	2.87	3.20	114,000
The year-----	33,000	740	3,840	5.77	78.43	2,780,000

SOUTH SANTIAM RIVER AT WATERLOO, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 28, T. 12 S., R. 1 W., 200 yards below highway bridge at Waterloo and 4 miles above Hamilton Creek.

DRAINAGE AREA.—640 square miles.

RECORDS AVAILABLE.—July, 1905, to March, 1907; October, 1910, to December, 1911; July, 1923, to September, 1927.

EXTREMES.—Maximum discharge during year, 60,000 second-feet February 21 (gage height, 19.4 feet); minimum, 185 second-feet August 26–29 (gage height, 2.4 feet).

1905–1907, 1910–11, 1923–1927: Maximum discharge, that of February 21, 1927; minimum, 100 second-feet on several days in September, October, and November, 1925.

REMARKS.—Records good below and fair above 5,000 second-feet; discharge estimated November 29, 30, and January 3. No regulation and no diversions for irrigation above station. Gage-height record furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	890	1,100	8,100	5,250	11,000	4,600	2,480	3,580	3,010	950	335	212
2.....	1,770	845	8,360	11,100	19,100	3,580	2,480	3,980	2,830	950	335	240
3.....	2,430	630	6,610	14,000	16,200	2,830	2,480	4,390	2,650	895	300	300
4.....	1,220	490	6,150	12,400	14,000	2,320	2,480	4,600	2,830	840	300	300
5.....	1,100	430	4,600	10,500	8,360	1,850	2,480	3,200	2,830	740	270	370
6.....	800	400	3,980	9,420	5,250	2,320	2,480	3,780	3,010	740	270	450
7.....	990	370	3,010	8,100	3,780	2,650	2,650	3,390	3,390	690	270	450
8.....	2,080	340	2,320	6,150	3,390	3,580	2,650	3,200	5,920	640	270	410
9.....	3,020	460	2,480	5,250	3,200	3,200	2,830	2,650	5,920	640	270	370
10.....	1,840	560	2,650	3,980	3,200	3,200	2,650	2,830	5,470	640	270	370
11.....	1,280	710	3,010	3,980	2,830	3,980	2,480	2,650	5,250	590	270	840
12.....	1,280	800	2,650	3,390	2,480	4,390	2,480	3,010	5,030	590	240	1,180
13.....	1,280	3,920	2,480	3,200	2,160	4,810	2,480	3,390	3,580	540	240	1,180
14.....	1,040	4,160	2,480	3,390	1,850	5,250	2,160	3,780	3,580	540	240	1,710
15.....	990	6,480	2,480	3,580	1,850	5,920	2,160	4,180	3,580	495	240	1,440
16.....	990	8,230	3,980	3,580	1,850	5,690	2,160	4,390	3,390	495	240	1,180
17.....	990	5,520	6,150	3,390	3,390	5,920	2,320	3,980	3,390	450	240	950
18.....	990	4,680	5,690	3,580	4,390	5,250	2,650	3,780	3,200	450	240	640
19.....	990	10,200	5,690	5,250	6,610	4,600	2,480	4,810	3,200	450	240	540
20.....	1,040	23,700	5,030	5,690	33,900	3,980	2,480	4,810	2,830	450	212	450
21.....	1,100	13,700	4,600	5,690	38,500	3,980	2,480	4,390	2,000	450	212	370
22.....	1,100	7,530	4,390	4,810	17,600	3,980	2,650	3,980	1,570	450	212	370
23.....	1,100	6,160	3,980	3,780	11,700	3,580	2,830	3,580	1,380	450	212	370
24.....	1,160	4,940	3,200	3,390	8,880	3,390	3,580	3,200	1,310	450	212	410
25.....	1,220	9,430	2,830	3,200	6,850	3,200	5,030	3,010	1,240	450	212	410
26.....	4,160	9,430	3,200	3,200	5,920	3,200	5,690	2,650	1,180	410	185	370
27.....	5,840	8,230	3,390	3,200	5,690	2,830	6,150	2,830	1,180	410	185	370
28.....	4,160	7,530	3,780	7,590	5,250	2,650	6,380	2,830	1,120	370	185	1,310
29.....	2,620	30,000	4,180	8,100	-----	2,480	5,690	3,200	1,060	370	185	8,100
30.....	2,080	18,000	4,390	5,690	-----	2,480	4,810	3,580	950	370	212	3,580
31.....	1,100	-----	4,600	3,780	-----	2,480	-----	3,390	-----	370	212	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acres-feet
October.....	5,840	800	1,700	2.66	3.07	105,000
November.....	30,000	340	6,300	9.84	10.98	375,000
December.....	8,360	2,320	4,210	6.58	7.59	259,000
January.....	14,000	3,200	5,730	8.95	10.32	352,000
February.....	38,500	1,850	8,900	13.9	14.47	494,000
March.....	5,920	1,850	3,680	5.75	6.63	226,000
April.....	6,380	2,160	3,160	4.94	5.51	188,000
May.....	4,810	2,650	3,620	5.66	6.52	223,000
June.....	5,920	950	2,980	4.53	5.11	174,000
July.....	950	370	559	.873	1.01	34,400
August.....	335	185	242	.378	.44	14,900
September.....	8,100	212	975	1.52	1.70	58,000
The year.....	38,500	185	3,460	5.41	73.35	2,500,000

ALBANY POWER CANAL NEAR LEBANON, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 2, T. 12 S., R. 2 W., one-eighth mile below spillway and 1 mile north of Lebanon.

RECORDS AVAILABLE.—April, 1926, to September, 1927. February to December, 1919, at station near Albany; records comparable.

EXTREMES.—Maximum discharge during year, 293 second-feet January 10, February 14, March 8, and 14 (gage height, 3.35 feet); minimum (estimated), 10 second-feet July 28-31.

1919, 1926-27: Maximum discharge, 295 second-feet March 2 and May 29-31, 1919.

REMARKS.—Records fair. Gage-height record fragmentary. Mean monthly discharge is mean of discharges on days gage was read. This canal diverts from South Santiam River at Lebanon and discharges into Calapooya River at mouth. Lebanon ditch discharges into canal just below canal intake. Water is used for power and water supply at Albany.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									200			
2		132								200		
3				265				188	188			
4										200	176	
5												
6			252									164
7	87				279				200			
8		188				293				194		
9								200			176	
10				293							176	
11	84											
12							142		199	188		176
13										176		
14					293	293				164		
15										164	164	
16		239	252					226		164		
17				239						164		
18							176					
19												
20			265									
21	84					213				158		
22					265	265		182				188
23								213			142	
24												
25										153	153	
26	84									148		
27			265	265			252		200	148		188
28					279	142				43		
29										10	164	
30		265								10		
31				279						24		

Month	Mean	Run-off in acre-feet	Month	Mean	Run-off in acre-feet	Month	Mean	Run-off in acre-feet
October	84.8	5,210	March	241	14,800	August	164	10,100
November	206	12,300	April	190	11,300	September	179	10,700
December	258	15,900	May	202	12,400			
January	268	16,500	June	200	11,900	The year	202	146,000
February	279	15,500	July	156	9,590			

* Estimated.

CLACKAMAS RIVER AT BIG BOTTOM, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 26, T. 6 S., R. 7 E., half a mile above proposed dam site, just below Pot Creek, and 28 miles southeast of Estacada.

DRAINAGE AREA.—132 square miles.

RECORDS AVAILABLE.—April, 1920, to September, 1927.

EXTREMES.—Maximum discharge during year, 4,430 second-feet November 29 (gage height, 6.73 feet); minimum, 226 second-feet October 1 (gage height, 1.38 feet).

1920-1927: Maximum discharge, 6,600 second-feet January 7, 1923 (gage height, 8.15 feet); minimum, 210 second-feet September 22, 1924.

REMARKS.—Records excellent. No regulation or diversions above station. Field data furnished by Portland Electric Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	228	242	1,460	465	405	710	405	785	665	390	278	268
2	232	240	1,360	964	1,000	710	405	710	688	375	280	265
3	236	238	970	1,090	785	665	405	785	710	369	275	262
4	232	236	760	940	688	620	425	785	735	363	270	265
5	228	234	665	860	620	575	425	735	785	354	268	272
6	230	275	575	735	552	552	425	688	910	348	265	280
7	260	270	530	665	508	552	445	665	1,150	342	265	280
8	260	248	485	588	485	530	425	620	1,500	336	265	290
9	248	246	445	552	445	508	425	620	1,180	330	262	272
10	242	246	405	508	425	485	405	642	1,030	324	262	302
11	244	244	465	485	405	465	390	642	910	318	265	308
12	248	258	445	465	405	508	390	688	860	312	268	298
13	248	372	405	485	390	575	390	785	810	310	262	288
14	244	340	375	485	375	552	390	940	785	308	260	282
15	246	525	375	485	375	530	425	1,120	760	302	260	278
16	282	722	425	465	375	508	425	1,210	710	300	258	272
17	278	480	508	465	375	485	425	1,270	688	298	258	270
18	255	400	485	445	530	485	425	1,060	642	295	258	265
19	248	376	445	445	575	445	405	940	588	290	258	265
20	242	390	425	405	2,310	485	390	835	575	288	255	265
21	240	382	425	363	2,560	425	390	735	575	285	255	262
22	236	420	405	375	1,260	425	390	688	552	285	255	262
23	236	480	375	390	1,210	425	425	665	530	282	255	262
24	238	565	375	369	970	465	485	688	508	285	258	265
25	242	1,010	369	354	860	465	588	760	465	290	258	265
26	324	872	351	348	835	445	760	760	445	282	260	262
27	285	700	345	354	760	445	910	710	445	280	260	290
28	262	722	342	375	688	425	940	665	425	278	260	405
29	255	2,900	375	354	-----	425	860	642	405	278	262	642
30	248	1,810	445	339	-----	425	810	620	390	278	260	445
31	246	-----	425	333	-----	425	-----	642	-----	275	260	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	324	228	250	1.89	2.18	15,400
November	2,900	234	548	4.15	4.63	32,600
December	1,460	342	524	3.97	4.58	32,200
January	1,090	353	515	3.90	4.50	31,700
February	2,560	375	769	5.83	6.07	42,700
March	710	425	508	3.85	4.44	31,200
April	940	390	493	3.73	4.16	29,300
May	1,270	620	777	5.89	6.79	47,800
June	1,500	390	714	5.41	6.04	45,500
July	390	275	311	2.36	2.72	19,100
August	280	255	262	1.98	2.28	16,100
September	642	262	297	2.25	2.51	17,700
The year	2,900	228	495	3.75	50.90	358,000

CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OREG.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 21, T. 5 S., R. 6 E., just below Oak Grove power plant, one-fourth mile above Three Lynx Creek, and 17 miles southeast of Estacada. Zero of gage is 1,098 feet above mean sea level.

DRAINAGE AREA.—488 square miles.

RECORDS AVAILABLE.—October, 1911, to December, 1913; October, 1921, to September, 1927.

EXTREMES.—Maximum discharge during year, 22,600 second-feet February 20 (gage height, 11.9 feet); minimum, 430 second-feet November 6 (gage height, 0.76 foot).

1911–1913, 1921–1927: Maximum discharge, 33,700 second-feet January 6, 1923 (gage height, 15.2 feet); minimum, 375 second-feet August 10 and 16, 1924.

REMARKS.—Records excellent. Water diverted from Oak Grove Fork is used in power plant on Clackamas River just above station. Field data furnished by Portland Electric Power Co.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	665	850	6,400	2,700	3,860	3,060	1,740	3,190	2,580	1,390	820	820
2.....	665	750	5,440	7,440	6,800	3,060	1,740	2,880	2,700	1,310	885	748
3.....	780	780	4,140	6,600	4,440	2,880	1,740	3,190	2,820	1,310	852	820
4.....	780	750	3,260	5,090	3,580	2,700	1,790	3,320	2,940	1,310	852	760
5.....	780	692	2,760	4,290	3,060	2,470	1,840	3,060	3,120	1,230	852	820
6.....	692	815	2,360	3,580	2,700	2,360	1,840	2,820	3,580	1,200	852	885
7.....	920	990	2,090	3,190	2,360	2,250	1,990	2,700	4,440	1,160	790	885
8.....	1,130	885	1,890	2,820	2,090	2,250	1,890	2,580	5,810	1,160	852	918
9.....	990	850	1,740	2,470	1,940	2,140	1,790	2,520	4,440	1,090	820	820
10.....	780	780	1,650	2,250	1,790	2,090	1,700	2,580	3,720	1,090	820	918
11.....	1,020	780	1,840	2,040	1,740	2,040	1,650	2,580	3,450	1,090	820	1,120
12.....	990	920	1,840	1,940	1,650	2,360	1,600	2,760	3,120	1,090	820	1,160
13.....	990	1,790	1,650	2,250	1,560	3,060	1,560	3,260	2,940	1,060	820	1,020
14.....	990	1,740	1,470	2,250	1,520	2,820	1,650	4,000	2,880	1,060	748	950
15.....	850	3,760	1,520	2,300	1,560	2,580	1,890	4,920	2,760	1,060	790	950
16.....	1,370	4,550	1,890	2,250	1,560	2,360	1,940	4,920	2,580	985	790	820
17.....	1,450	2,640	2,580	2,090	1,700	2,360	1,890	5,090	2,470	950	790	820
18.....	1,210	2,030	2,700	2,140	3,190	2,200	1,940	4,140	2,300	985	820	760
19.....	1,020	1,740	2,470	2,090	3,580	2,040	1,840	3,720	2,140	1,020	754	820
20.....	920	2,030	2,250	1,840	13,800	1,940	1,700	3,320	2,040	950	790	706
21.....	885	2,180	2,140	1,650	13,800	1,940	1,650	3,000	2,040	950	706	760
22.....	815	2,400	1,940	1,600	7,830	1,940	1,700	2,760	1,940	918	790	742
23.....	750	2,890	1,740	1,600	5,620	1,940	1,940	2,700	1,890	918	742	760
24.....	750	3,020	1,700	1,520	4,290	2,200	2,520	2,640	1,790	918	754	820
25.....	885	4,550	1,600	1,390	3,720	2,140	3,580	2,880	1,700	918	760	712
26.....	1,420	4,120	1,470	1,390	3,580	2,040	4,590	2,940	1,650	950	742	718
27.....	1,410	3,350	1,430	1,470	3,320	1,940	4,920	2,760	1,560	885	736	820
28.....	1,130	3,350	1,470	1,840	2,940	1,840	4,590	2,640	1,520	852	706	1,940
29.....	1,020	14,900	1,840	1,650	-----	1,790	3,960	2,580	1,470	885	790	3,860
30.....	955	8,730	2,880	1,470	-----	1,840	3,320	2,470	1,430	852	760	2,360
31.....	885	-----	2,580	1,560	-----	1,840	-----	2,470	-----	885	760	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acres-feet
October.....	1,450	665	964	1.98	2.28	59,300
November.....	14,900	692	2,650	5.43	6.06	158,000
December.....	6,400	1,430	2,350	4.82	5.56	144,000
January.....	7,440	1,390	2,540	5.20	6.00	156,000
February.....	13,800	1,520	3,910	8.01	8.34	217,000
March.....	3,060	1,790	2,270	4.65	5.36	140,000
April.....	4,920	1,560	2,250	4.67	5.21	136,000
May.....	5,090	2,470	3,140	6.43	7.41	193,000
June.....	5,810	1,430	2,660	6.45	6.68	158,000
July.....	1,390	852	1,050	2.15	2.48	64,600
August.....	885	706	793	1.62	1.87	48,800
September.....	3,860	706	1,030	2.11	2.35	61,300
The year.....	14,900	665	2,120	4.34	59.00	1,540,000

WILLAMETTE RIVER BASIN

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CLACKAMAS RIVER NEAR CAZADERO, OREG.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ 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. Zero of gage is 532.0 feet above mean sea level.

DRAINAGE AREA.—665 square miles.

RECORDS AVAILABLE.—January, 1909, to September, 1927.

EXTREMES.—Maximum discharge during year, 28,300 second-feet November 29 and February 20 (gage height, 547.90 feet); minimum, 622 second-feet September 4 (gage height, 532.63 feet).

1909-1927: Maximum discharge, 60,000 second-feet January 6, 1923 (gage height, 556.2 feet); minimum, 410 second-feet October 20, 1925, caused by shut-down at power plant at Three Lynx (gage height, 532.03 feet).

REMARKS.—Records excellent except those above 10,000 second-feet, which are fair. No diversions. Some diurnal fluctuation during low-water periods, caused by operation of Oak Grove power plant. Field data furnished by Portland Electric Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	860	1,140	7,890	4,000	5,760	4,010	2,330	4,130	3,540	1,660	995	1,020
2.....	870	1,080	6,900	9,700	9,700	4,130	2,330	3,770	3,540	1,580	995	940
3.....	1,050	1,020	5,470	9,100	6,770	3,770	2,330	4,130	3,650	1,580	995	940
4.....	1,020	970	4,480	7,180	5,470	3,430	2,330	4,250	3,770	1,580	968	880
5.....	945	945	3,760	6,380	4,600	3,100	2,420	4,010	3,890	1,510	940	995
6.....	920	1,050	3,320	5,470	4,000	3,000	2,330	3,650	4,500	1,480	940	1,110
7.....	1,200	1,410	2,900	4,840	3,430	2,900	2,700	3,430	5,280	1,400	885	1,110
8.....	1,520	1,140	2,600	4,240	3,100	2,900	2,600	3,320	6,850	1,400	968	1,140
9.....	1,300	1,110	2,310	3,650	2,800	2,700	2,420	3,100	5,670	1,370	912	968
10.....	1,110	1,050	2,220	3,210	2,600	2,700	2,330	3,210	4,890	1,340	912	1,050
11.....	1,270	1,020	2,800	3,000	2,400	2,700	2,240	3,210	4,250	1,260	940	1,740
12.....	1,410	1,080	2,900	2,800	2,220	3,210	2,150	3,430	3,890	1,260	940	1,980
13.....	1,480	2,260	2,500	3,100	2,180	4,250	2,150	3,890	3,650	1,230	912	1,660
14.....	1,380	2,310	2,220	3,320	2,080	4,130	2,240	3,650	3,540	1,230	885	1,510
15.....	1,200	4,200	2,310	3,210	2,130	3,650	2,510	5,930	3,430	1,200	885	1,340
16.....	1,830	6,510	3,000	3,210	2,180	3,320	2,600	5,930	3,100	1,170	885	1,200
17.....	2,040	4,000	4,000	3,000	2,500	3,320	2,510	6,190	3,000	1,140	885	1,080
18.....	1,640	2,900	4,480	3,100	4,800	3,100	2,800	5,280	2,800	1,170	885	1,020
19.....	1,410	2,400	4,000	3,320	5,080	2,900	2,600	4,760	2,600	1,170	880	1,050
20.....	1,240	2,900	3,650	2,800	15,800	2,700	2,420	4,250	2,510	1,110	875	940
21.....	1,140	3,210	3,430	2,400	16,500	3,000	2,330	3,890	2,420	1,080	840	995
22.....	1,080	3,320	3,000	2,310	9,400	3,000	2,330	3,650	2,330	1,050	940	885
23.....	920	3,760	2,700	2,260	7,410	2,900	2,600	3,540	2,240	1,050	850	940
24.....	1,050	3,880	2,500	2,220	6,060	3,320	3,320	3,430	2,240	1,050	885	995
25.....	1,200	5,600	2,500	2,040	5,280	3,100	4,760	3,650	2,060	1,050	870	940
26.....	2,530	5,600	2,310	1,960	5,020	2,900	6,060	3,890	1,980	1,080	875	880
27.....	2,310	4,600	2,220	2,000	4,500	2,700	6,450	3,650	1,940	1,020	840	1,050
28.....	1,760	4,300	2,260	2,900	5,150	2,510	6,060	3,540	1,860	995	835	2,240
29.....	1,560	17,500	2,800	2,700	-----	2,420	5,150	4,010	1,820	1,020	912	6,190
30.....	1,340	11,100	4,240	2,810	-----	2,420	4,370	3,650	1,740	995	875	4,010
31.....	1,240	-----	4,000	2,400	-----	2,420	-----	3,430	-----	995	850	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	2,530	860	1,350	2.03	2.34	63,000
November.....	17,500	945	3,450	5.19	5.79	205,000
December.....	7,890	2,220	3,410	5.13	5.91	210,000
January.....	9,700	1,960	3,680	5.53	6.38	228,000
February.....	16,500	2,080	5,310	7.98	8.31	295,000
March.....	4,250	2,420	3,120	4.69	5.41	192,000
April.....	6,450	2,150	3,060	4.60	5.13	182,000
May.....	6,190	3,100	4,000	6.02	6.94	246,000
June.....	6,850	1,740	3,300	4.06	5.53	196,000
July.....	1,660	995	1,230	1.85	2.13	75,600
August.....	995	835	905	1.36	1.57	55,600
September.....	6,190	880	1,430	2.15	2.40	85,100
The year.....	17,500	835	2,830	4.26	57.84	2,050,000

OAK GROVE FORK AT TIMOTHY MEADOWS, OREG.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 23, T. 5 S., R. 8 E., at Timothy Meadows, $11\frac{1}{4}$ miles above station at intake and 29 miles southeast of Estacada.

DRAINAGE AREA.—54 square miles.

RECORDS AVAILABLE.—February, 1913, to November, 1916; July, 1918, to September, 1927.

EXTREMES.—Maximum discharge during year, 498 second-feet November 29 (gage height, 1.83 feet); minimum, 90 second-feet October 18–25 and October 28 to November 5 (gage height, 0.46 foot).

1913–1916, 1918–1927: Maximum discharge, 970 second-feet January 7, 1923 (gage height, 3.20 feet); minimum, 90 second-feet October 18–25 and October 28 to November 5, 1926.

REMARKS.—Records excellent. No diversions above station. No regulation except natural storage in Clackamas Lake and in meadows. Field data furnished by Portland Electric Power Co.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	90	321	128	146	223	170	268	291	189	148	125
2	100	90	288	186	175	223	170	265	291	186	146	125
3	100	90	251	192	164	203	173	285	288	184	146	125
4	100	90	223	186	156	200	173	291	288	181	146	125
5	102	90	200	181	151	195	170	282	288	178	141	125
6	105	108	189	173	148	192	173	274	291	175	138	125
7	102	108	175	167	146	189	178	268	352	173	138	125
8	95	100	167	156	146	186	173	265	383	170	138	125
9	92	98	159	154	146	178	167	265	352	167	138	125
10	92	98	156	151	143	175	164	268	321	164	138	130
11	92	98	181	148	143	173	161	268	306	164	138	135
12	92	95	173	146	143	173	167	276	291	164	138	135
13	92	100	154	148	141	181	175	291	285	164	138	130
14	92	102	141	146	141	178	186	321	276	161	135	130
15	92	141	138	143	141	173	189	336	268	161	135	128
16	95	164	141	141	141	173	181	368	262	161	135	128
17	92	138	146	138	141	175	181	399	254	159	133	125
18	90	125	143	141	154	170	184	399	245	159	133	125
19	90	118	141	141	156	170	173	383	240	159	130	125
20	90	118	141	133	271	167	170	368	234	159	130	125
21	90	112	141	120	321	167	175	352	228	156	128	125
22	90	110	141	128	306	167	189	336	228	156	128	125
23	90	110	133	128	276	170	203	321	223	156	128	125
24	90	118	133	128	254	178	217	321	217	156	125	125
25	90	141	133	128	242	173	230	321	212	156	125	125
26	95	148	125	128	240	170	251	321	206	154	125	122
27	92	146	125	128	228	170	265	321	200	154	125	128
28	90	156	175	128	223	170	271	321	200	154	125	143
29	90	378	125	125	-----	170	274	306	198	151	125	170
30	90	368	130	122	-----	173	268	291	192	148	125	154
31	90	-----	128	122	-----	173	-----	291	-----	148	125	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	105	90	93.6	1.73	1.99	5,760
November	378	90	132	2.44	2.72	7,860
December	321	125	165	3.06	3.53	10,100
January	192	122	145	2.69	3.10	8,920
February	321	141	185	3.43	3.57	10,300
March	223	167	180	3.33	3.84	11,100
April	274	161	194	3.59	4.00	11,500
May	399	265	311	5.76	6.64	19,100
June	383	192	264	4.89	5.46	15,700
July	189	148	163	3.02	3.48	10,100
August	148	125	134	2.48	2.86	8,240
September	170	122	128	2.37	2.64	7,620
The year	399	90	174	3.22	43.83	126,000

OAK GROVE FORK AT PORTLAND ELECTRIC POWER CO.'S INTAKE, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 4, T. 6 S., R. 7 E., three-fourths mile above intake of Oak Grove power development of Portland Electric Power Co. and 24 miles southeast of Estacada.

DRAINAGE AREA.—126 square miles.

RECORDS AVAILABLE.—December, 1923, to September, 1927. At site below Kink Creek, half a mile downstream, May, 1909, to December, 1923; incomplete.

EXTREMES.—Maximum discharge during year, 1,800 second-feet November 29 (gage height, 3.76 feet); minimum, 286 second-feet October 4 and 5 (gage height, 1.46 feet).

1909-1927: Maximum discharge, 5,000 second-feet January 7, 1923 (gage height, 5.45 feet at old gage); minimum, 286 second-feet September 25-27, October 4 and 5, 1926.

REMARKS.—Records excellent. Low-water discharge between Timothy Meadows and this station is increased by inflow of several small springs. No diversions above station. Field data furnished by Portland Electric Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	295	300	1,040	433	513	668	483	795	760	488	380	368
2	300	295	900	695	668	635	483	760	760	483	380	360
3	295	295	760	695	587	605	493	830	760	478	376	360
4	286	295	668	668	539	587	493	830	760	458	372	356
5	286	295	605	635	513	565	488	760	760	453	368	356
6	291	360	565	587	488	549	488	760	830	443	368	364
7	327	327	523	554	473	549	513	728	1,000	428	368	372
8	309	304	498	523	463	539	493	728	1,200	423	368	364
9	300	300	478	503	453	523	478	728	1,000	428	368	352
10	295	300	463	488	438	518	468	728	935	428	368	380
11	313	300	528	478	433	508	463	728	865	423	368	428
12	322	313	493	478	428	513	463	760	830	414	368	389
13	327	365	453	493	423	544	478	830	795	410	364	389
14	313	341	419	478	419	533	493	900	760	410	364	372
15	318	496	423	473	423	513	518	1,000	728	406	364	364
16	350	548	438	458	419	513	508	1,040	695	406	360	360
17	327	455	488	443	423	513	518	1,120	695	406	360	356
18	313	415	453	458	513	488	523	1,040	668	402	360	352
19	304	395	453	448	508	483	498	970	629	402	360	348
20	304	390	448	419	1,170	473	488	935	611	397	360	348
21	300	365	453	410	1,280	483	488	865	599	397	356	348
22	295	370	438	406	1,040	473	503	830	587	393	356	348
23	295	395	410	406	900	483	539	830	587	393	356	348
24	309	430	410	402	795	513	599	795	565	393	352	348
25	309	548	410	393	728	498	695	830	549	393	352	348
26	375	560	393	393	728	488	795	830	533	384	352	344
27	327	530	393	397	668	483	865	795	523	384	352	372
28	318	584	393	402	635	483	865	795	518	384	352	414
29	309	1,420	414	393	-----	483	865	760	508	384	352	581
30	304	1,160	428	380	-----	488	795	760	498	380	352	498
31	304	-----	414	380	-----	483	-----	760	-----	380	356	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	375	286	310	2.46	2.84	19,100
November	1,420	295	448	3.56	3.97	26,700
December	1,040	393	505	4.01	4.62	31,100
January	695	380	476	3.78	4.36	29,300
February	1,280	419	610	4.84	5.04	33,900
March	668	473	522	4.14	4.77	32,100
April	865	463	561	4.45	4.96	33,400
May	1,120	728	833	6.61	7.62	51,200
June	1,200	498	717	5.69	6.35	42,700
July	488	380	415	3.29	3.79	25,600
August	380	352	362	2.87	3.31	22,300
September	581	344	376	2.98	3.32	22,400
The year	1,420	286	510	4.05	54.95	370,000

LEWIS RIVER BASIN

LEWIS RIVER ABOVE MUDDY RIVER, NEAR COUGAR, WASH.

LOCATION.—Water-stage recorder, installed September 13, 1927, in SW. $\frac{1}{4}$ sec. 30, T. 7 N., R. 7 E., 2 miles above mouth of Muddy River and 15 miles due east of Cougar. Staff gage at same site and datum used prior to September 13, 1927.

DRAINAGE AREA.—227 square miles.

RECORDS AVAILABLE.—August to September, 1927. August to October, 1909, at station 1 mile downstream.

EXTREMES.—Maximum discharge during year, 1,560 second-feet September 29 (gage height, 2.59 feet); minimum, 330 second-feet September 27 (gage height, 0.77 foot).

REMARKS.—Records good except those for August 16–23, 28, 31, September 2–6, and 11, which were estimated. No regulation or diversions above station. Most of field data furnished by Northwestern Electric Co.

Daily and monthly discharge, in second-feet, 1927

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1		460	11		503	21		384
2			12		581	22	382	372
3			13		500	23		352
4		480	14		480	24	372	344
5			15	392	430	25	360	352
6			16		404	26	352	344
7		475	17		388	27	348	564
8		450	18	382	380	28	346	1,040
9		445	19		372	29	344	1,340
10		425	20		372	30	348	1,120
						31	404	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
August 15-31	404	344	372	1.64	1.04	12,500
September	1,340	344	509	2.24	2.50	30,300

LEWIS RIVER NEAR COUGAR, WASH.

LOCATION.—Water-stage recorder in SE. ¼ sec. 29, T. 7 N., R. 5 E., three-quarters of a mile above Peterson ranch, 1 mile below Swift Creek, and 4 miles east of Cougar.

DRAINAGE AREA.—483 square miles.

RECORDS AVAILABLE.—July, 1910, to March, 1912; June, 1924, to September, 1927. July, 1909, to June, 1910, at site 1,000 feet above Swift Creek.

EXTREMES.—Maximum discharge during year, 14,800 second-feet October 16 (gage height, 7.5 feet); minimum, 792 second-feet October 2 (gage height, 9.66 foot).

1919–1912, 1924–1927: Maximum stage, 13.8 feet, on old gage, November 21, 1910 (discharge not determined); maximum discharge since 1924, 23,100 second-feet February 3, 1925 (gage height, 10.3 feet); minimum discharge, 500 second-feet September 22, 1924.

Maximum stage known, 14 feet, referred to present gage, during flood of December 17 or 18, 1917.

REMARKS.—Records excellent except those for estimated periods, which are good. No diversions.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.						
1	806	*1,100	*8,800	5,500	4,780	3,780	2,220	4,620	*4,400	2,480	*1,150	1,060						
2	869			12,200	7,950	3,440	2,220	2,420		*1,140								
3	1,090			12,200	6,450	3,200	2,280	2,420		*1,120								
4	986			9,720	5,290	3,040	2,420	2,350		*1,110								
5	898			7,950	4,680	2,960	2,320	*5,000		5,000	2,220	*1,090	1,060					
6	906	1,610	*3,200	6,450	4,090	2,820	2,420	*3,870	*6,700	2,160	*1,070	1,400						
7	1,280	1,720		5,730	3,720	2,750	2,220			2,100	1,060	1,170						
8	1,780	4,880		3,390	2,680	2,540	2,100			*1,050	1,040							
9	1,560	4,280		3,000	2,480	2,420	2,100			*1,040	980							
10	1,410	*1,300		3,900	2,780	2,420	2,350			5,820	1,980	*1,030	1,010					
11	1,960	*3,600	3,000	3,550	2,700	2,350	2,280	*4,600	5,400	1,920	1,020	1,550						
12	2,280			3,230	2,490	2,960	2,280	4,900	1,920	1,010								
13	3,000			2,860	3,550	2,350	3,440	2,350	4,720	1,870	988							
14	2,420			3,000	3,300	2,280	3,280	2,420	4,720	1,820	964							
15	2,280			*2,500	3,100	2,560	3,120	2,820	6,760	4,620	1,760	964						
16	10,400	*3,600	3,080	2,930	2,630	2,960	2,820	*4,200	*4,050	4,340	1,760	964						
17	7,950			2,560	2,960	2,890	4,140			1,700	956							
18	5,730			3,310	2,750	2,890	3,870			1,700	940							
19	4,780			2,630	3,550	2,610	2,750			3,600	1,650	924						
20				2,630	*2,600	7,530	2,480			2,540	3,600	1,600	924					
21	*2,400	3,080	2,630	2,080	5,400	2,420	3,120	*4,200	*3,520	3,780	1,550	908						
22										2,630	7,980	2,420	2,420	3,870	1,500	908		
23										2,490	6,520	2,420	2,610	3,520	1,450	900		
24										2,350	2,520	2,420	3,120	3,520	1,450	900		
25										*6,200	2,140	1,960	4,900	2,350	4,240	3,280	1,450	884
26	*1,600	7,700	2,280	2,140	3,600	2,220	6,040	*3,520	*2,750	3,120	1,400	884						
27										1,960	2,080	4,340	2,220	6,520	2,890	*1,350	884	
28										2,280	2,420	3,600	2,220	6,040	2,750	*1,300	884	
29										11,800	2,780	2,020	2,220	5,400	3,520	2,750	*1,250	852
30										9,000	1,840		2,220	4,620	3,500	2,610	*1,210	860
31	1,410	4,680	1,840		2,220		3,600		1,170	892								

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	10,400	806	2,430	5.08	5.80	149,000
November	11,800		3,730	7.72	8.61	222,000
December		1,960	3,700	7.66	8.83	228,000
January	12,200	1,840	4,060	8.41	9.70	250,000
February	9,290	2,280	4,430	9.17	9.55	246,000
March	3,780	2,220	2,710	5.61	6.47	167,000
April	6,520	2,220	3,100	6.42	7.16	184,000
May			4,890	10.1	11.64	301,000
June		2,610	4,370	9.05	10.10	260,000
July	2,480	1,170	1,780	3.69	4.25	109,000
August	1,150	852	976	2.02	2.33	60,000
September	2,960	844	1,220	2.53	2.82	72,600
The year	12,200	806	3,110	6.44	87.26	2,250,000

• Estimated.

LEWIS RIVER NEAR AMBOY, WASH.

LOCATION.—Staff gage in sec. 36, T. 6 N., R. 3 E., at former river crossing known as Cresap's ferry, 1 mile below bridge on county road between Amboy and Cougar and 5 miles northeast of Amboy.

DRAINAGE AREA.—665 square miles.

RECORDS AVAILABLE.—January, 1911, to September, 1927.

EXTREMES.—Maximum discharge during year, 23,900 second-feet October 16 (gage height, 8.0 feet); minimum, 1,020 second-feet August 27–31 (gage height, 0.35 foot).

1911–1927: Maximum discharge, about 60,000 second-feet December 18, 1917 (gage height, 16.4 feet); minimum, 660 second-feet September 5–14 and 19–22, 1924 (gage height, –0.20 foot).

REMARKS.—Records excellent. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,320	1,800	16,000	8,720	12,000	6,700	3,320	5,900	4,860	2,960	1,360	1,210
2.....	1,700	1,800	17,200	21,800	16,400	5,900	3,140	5,900	5,380	2,780	1,360	1,240
3.....	1,810	1,680	12,300	17,200	12,000	5,380	3,320	6,980	5,900	2,780	1,360	1,360
4.....	1,640	1,620	9,360	13,400	9,040	4,860	3,320	7,260	5,900	2,780	1,310	1,570
5.....	1,530	1,570	7,540	11,300	7,540	4,380	3,500	6,420	6,160	2,540	1,260	1,740
6.....	1,640	2,700	6,420	9,360	6,420	4,140	3,500	5,900	6,700	2,470	1,260	1,920
7.....	2,380	2,540	5,380	8,720	5,640	3,920	4,140	5,640	8,720	2,470	1,260	1,860
8.....	3,300	2,190	4,860	7,540	4,860	4,140	3,920	5,380	10,000	2,470	1,260	1,680
9.....	3,040	2,050	4,380	6,420	4,620	3,920	3,500	5,380	8,720	2,470	1,260	1,360
10.....	2,670	1,920	3,920	5,900	3,920	3,700	3,500	5,380	7,260	2,330	1,260	1,460
11.....	3,210	1,860	5,120	5,120	3,700	3,320	3,320	5,120	6,420	2,190	1,210	3,500
12.....	3,880	2,120	4,620	4,620	3,500	5,380	3,140	5,640	6,160	2,190	1,160	2,780
13.....	5,570	5,380	3,920	6,700	3,140	6,160	3,320	6,420	5,900	2,120	1,160	2,330
14.....	4,410	5,380	3,500	5,900	3,140	5,900	3,500	7,260	5,900	2,050	1,160	1,980
15.....	3,880	6,700	3,500	5,380	3,500	5,120	3,920	8,720	5,380	1,920	1,110	1,860
16.....	17,200	7,260	4,860	4,860	3,920	4,860	3,920	9,360	5,380	1,920	1,110	1,620
17.....	11,000	5,640	5,900	4,380	3,920	4,860	3,920	10,000	4,860	1,860	1,110	1,520
18.....	7,540	4,860	5,380	5,120	5,900	4,380	4,860	8,720	4,620	1,860	1,110	1,460
19.....	5,900	4,380	4,860	4,620	6,160	4,140	4,380	7,820	3,920	1,800	1,110	1,410
20.....	4,620	5,120	4,380	3,920	13,000	3,700	3,920	6,980	3,920	1,800	1,070	1,360
21.....	3,920	4,860	4,140	3,500	15,600	3,920	3,500	6,420	4,380	1,740	1,070	1,310
22.....	3,320	5,380	3,920	3,320	12,600	3,700	3,500	5,640	4,380	1,680	1,070	1,260
23.....	2,870	9,360	3,500	3,140	11,000	3,700	3,500	5,380	3,920	1,680	1,070	1,160
24.....	3,140	8,720	3,500	3,140	8,720	3,920	4,620	5,380	4,140	1,680	1,070	1,160
25.....	2,780	12,000	3,140	2,870	7,820	3,700	6,420	5,640	3,920	1,620	1,050	1,160
26.....	2,780	12,000	2,960	2,700	6,980	3,500	7,820	5,380	3,500	1,570	1,050	1,160
27.....	2,470	10,300	2,960	3,050	6,160	3,320	8,720	5,380	3,320	1,520	1,020	1,460
28.....	2,190	9,040	3,500	3,920	5,900	3,140	8,100	4,860	3,140	1,460	1,020	3,700
29.....	2,120	18,500	4,860	3,500	-----	3,140	6,980	4,620	3,140	1,460	1,020	5,900
30.....	2,050	14,100	8,410	3,140	-----	3,320	6,160	4,380	2,960	1,410	1,020	4,380
31.....	1,920	-----	6,980	3,140	-----	3,320	-----	4,620	-----	1,410	1,070	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	17,200	1,320	3,800	5.71	6.58	234,000
November.....	18,500	1,570	5,760	8.66	9.66	343,000
December.....	17,200	2,960	5,850	8.80	10.14	360,000
January.....	21,800	2,700	6,340	9.53	10.99	390,000
February.....	16,400	3,140	7,400	11.1	11.56	411,000
March.....	6,700	3,140	4,310	6.48	7.47	265,000
April.....	8,720	3,140	4,440	6.68	7.45	264,000
May.....	10,000	4,380	6,250	9.40	10.84	384,000
June.....	10,000	2,960	5,300	7.97	8.89	315,000
July.....	2,960	1,410	2,030	3.05	3.52	125,000
August.....	1,360	1,020	1,150	1.73	1.99	70,700
September.....	5,900	1,160	1,930	2.90	3.24	115,000
The year.....	21,800	1,020	4,520	6.80	92.33	3,280,000

LEWIS RIVER BASIN

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LEWIS RIVER NEAR ARIEL, WASH.

LOCATION.—Staff gage in SE. ¼ sec. 33, T. 6 N., R. 2 E., 1 mile below proposed Ariel Dam and 3½ miles southwest of Ariel post office.

DRAINAGE AREA.—733 square miles.

RECORDS AVAILABLE.—July, 1922, to September, 1927. July to November, 1909, for station at Ariel.

EXTREMES.—Maximum discharge during year, 27,800 second-feet November 29 (gage height, 10.3 feet); minimum, 1,050 second-feet August 24 and 25 (gage height, 0.83 foot).

1909, 1922–1927: Maximum discharge, 42,600 second-feet February 3, 1925 (gage height, 14.85 feet); minimum, 760 second-feet September 12, 13, and 18–22, 1924 (gage height, 0.60 foot).

REMARKS.—Records good. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,760	2,030	20,100	9,450	11,000	6,150	3,600	5,280	4,760	2,940	1,470	1,200
2.....	1,760	1,960	23,000	21,700	20,400	5,860	3,600	5,860	5,280	2,940	1,410	1,230
3.....	1,760	1,880	15,600	23,000	12,900	5,570	3,600	8,250	5,570	2,940	1,350	1,350
4.....	1,830	1,810	10,400	19,100	10,100	5,280	3,600	8,250	5,570	2,740	1,350	1,470
5.....	1,760	1,810	9,150	15,300	8,850	5,010	3,830	7,350	5,860	2,550	1,350	1,410
6.....	1,620	2,940	7,350	11,300	7,650	4,760	4,060	6,750	7,350	2,460	1,350	1,540
7.....	2,320	3,370	6,150	10,100	6,750	4,760	4,290	5,860	5,250	2,370	1,350	1,070
8.....	3,370	2,550	5,570	9,150	5,860	4,760	4,290	5,570	10,100	2,370	1,290	1,810
9.....	3,370	2,030	5,280	7,950	5,010	4,520	3,830	5,280	9,150	2,280	1,290	1,600
10.....	3,150	1,960	4,760	6,750	4,520	4,290	3,830	5,280	7,950	2,200	1,290	1,880
11.....	3,150	1,880	4,520	5,860	4,290	4,290	3,600	5,010	6,750	2,200	1,290	4,520
12.....	4,060	2,640	4,520	5,280	3,830	4,060	3,600	5,010	6,150	2,030	1,290	2,940
13.....	6,450	3,370	4,520	6,750	3,600	4,520	3,600	4,760	6,150	2,030	1,230	2,370
14.....	5,010	6,450	4,060	7,050	3,370	6,750	3,600	5,570	6,150	2,030	1,220	2,030
15.....	4,290	7,350	4,060	6,150	3,600	6,150	4,060	6,150	5,860	1,960	1,130	1,880
16.....	18,500	6,750	4,520	5,570	3,830	5,860	4,060	10,100	5,570	1,810	1,160	1,740
17.....	18,500	5,570	6,450	5,280	4,060	5,860	4,290	11,000	5,280	1,740	1,160	1,600
18.....	10,700	4,520	7,350	5,570	5,010	5,010	4,760	9,760	5,010	1,740	1,140	1,470
19.....	6,750	4,290	5,860	5,570	5,570	4,520	4,520	8,550	4,760	1,740	1,120	1,410
20.....	5,280	5,010	5,280	4,760	14,700	4,290	4,290	7,650	4,520	1,740	1,100	1,350
21.....	3,830	5,570	5,280	4,290	18,200	4,060	3,830	7,050	4,520	1,740	1,100	1,350
22.....	3,600	6,150	5,010	4,060	16,600	4,060	3,600	6,150	4,290	1,740	1,090	1,350
23.....	3,370	8,250	4,520	3,830	13,800	4,060	3,830	5,570	4,290	1,670	1,080	1,350
24.....	3,600	10,700	4,290	3,370	11,000	4,060	4,520	5,280	4,060	1,600	1,060	1,350
25.....	3,600	14,700	4,060	3,150	9,150	4,060	5,860	5,570	4,060	1,600	1,050	1,290
26.....	3,370	16,600	3,830	3,150	8,250	3,830	7,350	5,570	3,830	1,600	1,060	1,220
27.....	2,740	13,500	3,600	3,370	7,050	3,830	8,850	5,280	3,600	1,600	1,080	1,470
28.....	2,740	12,200	3,830	3,370	6,450	3,830	9,150	5,010	3,150	1,600	1,100	2,550
29.....	2,460	22,300	4,060	3,600	-----	3,600	7,650	4,760	3,150	1,600	1,090	7,050
30.....	2,370	21,000	8,250	3,600	-----	3,600	6,450	4,520	2,940	1,540	1,080	4,760
31.....	2,200	-----	9,150	4,760	-----	3,600	-----	5,010	-----	1,470	1,100	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acres-feet
October.....	18,500	1,620	4,490	6.13	7.04	276,000
November.....	22,300	1,810	6,700	9.14	10.20	399,000
December.....	23,000	3,600	6,920	9.44	10.88	425,000
January.....	23,000	3,150	7,490	10.2	11.76	461,000
February.....	20,400	3,600	8,410	11.5	11.98	467,000
March.....	6,750	3,600	4,670	6.37	7.34	287,000
April.....	9,150	3,600	4,670	6.37	7.11	278,000
May.....	11,000	4,520	6,360	8.68	10.01	391,000
June.....	10,100	2,940	5,460	7.45	8.31	325,000
July.....	2,940	1,470	2,020	2.76	3.18	124,000
August.....	1,470	1,050	1,200	1.64	1.89	73,800
September.....	7,050	1,200	2,010	2.74	3.06	120,000
The year.....	23,000	1,050	5,010	6.83	92.76	3,630,000

MUDDY RIVER NEAR COUGAR, WASH.

LOCATION.—Water-stage recorder, installed September 3, 1927, in SE. $\frac{1}{4}$ sec. 24, T. 7 N., R. 6 E., three-fourths mile above Lewis River and 14 miles east of Cougar. Prior to September 3, 1927, a staff gage 300 feet downstream was used.

DRAINAGE AREA.—136 square miles.

RECORDS AVAILABLE.—August to October, 1909; August to September, 1927.

EXTREMES.—Maximum discharge during year, 623 second-feet September 29 (gage height, 2.28 feet); minimum, 182 second-feet August 29 (gage height, 1.25 feet).

1909, 1927: Maximum discharge, that of September 29, 1927; minimum, 142 second-feet on a few days in September and October, 1909.

REMARKS.—Records good. Discharge interpolated August 21, 28, and 31. No regulation or diversions.

Daily and monthly discharge, in second-feet, 1927

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1		242	11		256	21	192	229
2		274	12	217	278	22	190	226
3		288	13	212	271	23	190	226
4		254	14	203	261	24	190	223
5		264	15	198	254	25	195	220
6		303	16	195	245	26	190	215
7		268	17	192	238	27	188	329
8		261	18	198	238	28	189	435
9		229	19	195	232	29	190	539
10		251	20	195	229	30	195	266
						31	218	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
August 12-31	218	188	197	1.45	1.08	7,810
September	539	220	269	1.98	2.21	16,000

SWIFT CREEK NEAR COUGAR, WASH.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 28, T. 7 N., R. 5 E., one-eighth mile above mouth, $1\frac{1}{2}$ miles east of Peterson ranch, and 5 miles east of Cougar.

DRAINAGE AREA.—26 square miles.

RECORDS AVAILABLE.—July to October, 1909; June, 1924, to September, 1927.

EXTREMES.—Maximum discharge during year, 1,380 second-feet October 16 (gage height, 3.10 feet); minimum, 116 second-feet September 25 and 26 (gage height, 0.80 foot).

1909, 1924-1927: Maximum discharge, 1,470 second-feet February 3, 1925; minimum, 80 second-feet September 17, 21, and October 7, 1924.

REMARKS.—Records good except those for October to February, which are fair. No diversions. Springs entering lower portion of stream sustain low-water flow.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	127	147	455	340	406	276	179	255	218	199	149	137
2	154	142	380	560	455	251	184	262	227	193	149	152
3	129	142	300	505	340	238	182	287	231	193	147	152
4	129	140	264	405	282	227	196	295	234	193	144	134
5	129	140	224	340	264	218	187	266	248	190	144	149
6	140	184	198	300	233	212	199	241	266	187	142	142
7	192	150	186	282	221	215	199	231	335	187	139	137
8	206	145	173	264	215	208	193	218	450	184	139	132
9	173	142	159	233	201	202	190	218	358	182	139	128
10	166	140	159	224	195	202	187	212	287	182	139	139
11	195	142	233	218	190	196	184	212	269	182	139	196
12	221	190	192	212	184	251	184	241	262	179	139	152
13	233	230	178	248	178	258	182	244	255	176	139	144
14	195	233	173	224	176	241	176	262	251	171	139	139
15	221	264	176	230	206	224	187	276	248	165	137	137
16	855	230	198	218	195	224	184	284	234	165	134	134
17	405	201	230	212	186	224	199	335	224	165	132	134
18	227	181	215	218	233	208	199	315	218	165	130	134
19	190	163	206	206	248	202	190	287	212	165	130	132
20	176	195	206	201	552	196	184	266	218	162	130	130
21	176	195	198	203	475	193	182	244	221	160	130	130
22	176	206	184	402	193	182	231	221	221	160	128	128
23	176	320	176	335	193	184	224	224	224	160	128	123
24	201	300	173	295	182	187	224	227	227	160	130	130
25	171	430	171	180	287	176	208	238	227	160	132	116
26	171	360	166	269	176	234	224	224	215	160	130	116
27	160	300	166	251	176	262	224	212	212	157	132	176
28	160	300	186	248	176	266	218	205	205	155	130	208
29	160	505	230	176	176	241	208	199	199	152	132	205
30	160	380	300	163	176	227	208	199	199	152	123	171
31	150	282	171	171	176	176	208	208	208	149	160	160

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	855	129	204	7.85	9.05	12,500
November	505	140	227	8.73	9.74	13,500
December	455	159	217	8.35	9.63	13,300
January	560	163	246	9.46	10.91	15,100
February	552	176	276	10.6	11.04	15,300
March	276	176	209	8.04	9.27	12,900
April	266	176	198	7.62	8.50	11,800
May	335	208	247	9.50	10.95	15,200
June	450	199	246	9.46	10.56	14,600
July	199	149	171	6.58	7.59	10,500
August	160	123	137	5.27	6.08	8,420
September	208	116	144	5.54	6.18	8,570
The year	855	116	210	8.08	109.50	152,000

CANYON CREEK NEAR AMBOY, WASH.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 4, T. 5 N., R. 4 E., at wagon bridge 2 miles above mouth and 6 miles northeast of Amboy.

DRAINAGE AREA.—64 square miles.

RECORDS AVAILABLE.—July, 1922, to September, 1927.

EXTREMES.—Maximum discharge during year, 7,600 second-feet February 1 (gage height, 8.55 feet); minimum, 30 second-feet August 29 (gage height, 0.28 foot).

1922-1927: Maximum discharge, 13,000 second-feet December 24, 1922 (gage height, 11.3 feet); minimum, 15 second-feet October 19-24, 1925 (gage height, 0.14 foot).

REMARKS.—Records excellent except those above 1,500 second-feet, which are fair. No diversions.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	187	180	1,630	1,370	3,940	735	252	385	340	129	49	82
2.....	301	172	1,400	4,000	3,600	668	262	415	346	123	48	50
3.....	379	158	980	2,680	1,760	545	265	625	334	120	47	76
4.....	292	150	735	1,670	1,190	450	304	605	337	116	45	102
5.....	238	144	585	1,250	880	415	295	485	334	111	45	92
6.....	221	313	468	955	690	400	304	415	385	105	44	103
7.....	385	295	400	980	545	432	370	373	468	100	43	105
8.....	505	255	343	805	432	468	343	346	645	95	43	88
9.....	468	231	301	645	379	400	307	328	545	92	42	55
10.....	385	214	282	545	337	400	288	307	450	90	42	62
11.....	468	203	625	450	301	385	270	290	400	85	42	682
12.....	585	290	545	415	275	725	252	319	355	84	41	545
13.....	805	980	450	955	250	930	248	340	325	79	41	415
14.....	605	955	379	855	235	780	255	432	301	78	40	334
15.....	505	1,250	364	668	325	625	298	485	278	76	36	270
16.....	2,620	1,310	805	545	432	545	307	468	265	72	35	221
17.....	1,470	830	1,130	505	432	545	335	485	240	72	35	287
18.....	880	605	980	735	830	485	485	415	221	68	34	161
19.....	605	468	780	645	855	450	385	485	205	67	34	156
20.....	468	625	690	505	2,760	415	331	545	194	67	34	132
21.....	373	690	645	415	2,340	468	290	468	187	65	33	125
22.....	307	645	545	373	1,800	450	265	415	180	63	32	116
23.....	265	955	450	325	1,440	450	288	385	172	62	31	111
24.....	349	855	400	285	1,040	468	331	382	176	60	32	105
25.....	295	1,400	373	250	855	415	468	415	161	59	33	98
26.....	313	1,220	331	226	735	370	565	400	150	58	32	93
27.....	285	980	319	343	605	331	625	379	150	55	32	234
28.....	262	1,040	450	625	525	298	565	361	146	54	31	488
29.....	238	3,070	780	435	-----	280	432	367	140	53	36	1,010
30.....	216	1,730	1,400	415	-----	278	349	352	132	50	42	668
31.....	196	-----	1,190	400	-----	275	-----	334	-----	50	40	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	2,620	187	499	7.80	8.99	30,700
November.....	3,070	144	740	11.6	12.94	44,000
December.....	1,630	282	670	10.5	12.11	41,200
January.....	4,000	226	817	12.8	14.76	50,200
February.....	3,940	235	1,060	16.6	17.29	58,900
March.....	930	275	490	7.50	8.65	29,500
April.....	625	248	345	5.39	6.01	20,500
May.....	625	290	413	6.45	7.44	25,400
June.....	645	132	285	4.45	4.96	17,000
July.....	129	50	79.3	1.24	1.43	4,880
August.....	49	31	38.5	.602	.69	2,370
September.....	1,010	50	236	3.69	4.12	14,000
The year.....	4,000	31	468	7.31	99.39	339,000

KALAMA RIVER BASIN

KALAMA RIVER NEAR KALAMA, WASH.

LOCATION.—Staff gage in sec. 7, T. 6 N., R. 1 E., 150 feet below power plant of Puget Sound Power & Light Co. and 6 miles east of Kalama.

DRAINAGE AREA.—184 square miles.

RECORDS AVAILABLE.—July, 1911, to September, 1913, incomplete; August, 1916, to September, 1927.

EXTREMES.—Maximum discharge during year, 6,580 second-feet February 1 (gage height, 7.42 feet); minimum, 246 second-feet August 23 and 28 (gage height, 0.82 foot).

1911–1913, 1916–1927: Maximum discharge, 12,300 second-feet January 8, 1923 (gage height, 10.6 feet); minimum, 158 second-feet September 17 and 22, 1924 (gage height, 0.50 foot).

REMARKS.—Records good. No diversions for irrigation. Slight fluctuations are caused by operations at power plant above gage.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	360	450	4,210	4,730	4,600	1,660	930	1,310	960	472	300	318
2.....	510	430	3,690	6,280	5,980	1,660	1,030	1,380	960	472	300	300
3.....	532	412	2,900	5,420	4,080	1,660	1,000	2,300	930	472	300	370
4.....	450	395	2,200	4,080	3,000	1,590	1,100	1,900	930	450	300	335
5.....	412	412	1,740	3,330	2,500	1,520	1,030	1,590	930	450	300	300
6.....	395	605	1,450	2,900	2,100	1,380	1,380	1,380	1,030	430	285	430
7.....	780	470	1,310	2,600	1,660	1,310	1,380	1,240	1,030	410	285	410
8.....	1,520	450	1,170	2,300	1,520	1,380	1,310	1,170	1,590	410	285	390
9.....	1,450	430	1,030	1,900	1,380	1,310	1,170	1,100	1,100	410	285	352
10.....	1,030	430	1,030	1,740	1,240	1,310	1,100	1,030	1,030	410	285	352
11.....	1,660	430	1,740	1,520	1,170	1,310	1,030	1,000	900	410	285	1,170
12.....	1,590	780	1,450	1,450	1,100	1,740	960	1,100	840	390	285	720
13.....	1,660	2,000	1,310	2,100	1,030	1,900	930	1,100	840	390	270	660
14.....	1,310	1,660	1,170	2,000	1,000	1,740	930	1,240	780	390	270	545
15.....	1,030	2,500	1,100	2,000	1,240	1,590	1,170	1,380	780	390	270	450
16.....	5,420	2,100	1,450	1,820	1,100	1,590	1,100	1,310	780	390	270	410
17.....	2,900	1,520	2,400	1,660	1,450	1,590	1,240	1,740	720	390	264	410
18.....	1,820	1,240	2,000	1,740	1,820	1,450	1,310	1,450	660	370	264	352
19.....	1,380	1,030	1,740	1,660	1,900	1,380	1,170	1,450	630	370	264	335
20.....	1,100	1,310	1,590	1,520	4,240	1,310	1,030	1,380	600	352	285	300
21.....	870	1,380	1,660	1,310	4,600	1,240	960	1,240	630	335	252	300
22.....	780	1,520	1,520	1,240	4,860	1,170	900	1,170	600	335	252	300
23.....	660	1,740	1,310	1,170	4,080	1,170	900	1,100	600	335	246	285
24.....	780	2,700	1,240	1,100	3,330	1,170	1,100	1,100	600	335	252	285
25.....	632	4,080	1,170	1,100	2,800	1,100	1,450	1,100	630	335	270	285
26.....	632	4,470	1,100	1,170	2,300	1,030	1,590	1,030	545	318	258	270
27.....	586	3,200	1,030	1,450	1,900	1,000	1,590	1,000	545	318	252	1,000
28.....	532	2,700	1,310	2,100	1,660	960	1,380	960	520	318	246	960
29.....	510	4,080	1,900	1,740	-----	930	1,170	960	520	318	270	1,660
30.....	470	3,210	3,200	1,520	-----	900	1,000	900	495	300	285	1,100
31.....	470	-----	2,700	1,450	-----	960	-----	900	-----	300	270	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	5,420	360	1,100	5.98	6.89	67,600
November.....	4,470	395	1,600	8.70	9.71	95,200
December.....	4,210	1,030	1,770	9.62	11.09	109,000
January.....	6,280	1,100	2,200	12.0	13.83	135,000
February.....	5,980	1,000	2,490	13.5	14.06	138,000
March.....	1,900	900	1,360	7.39	8.52	83,600
April.....	1,590	900	1,140	6.20	6.82	67,800
May.....	2,300	900	1,260	6.85	7.90	77,500
June.....	1,590	495	790	4.29	4.79	47,000
July.....	472	300	380	2.07	2.39	23,400
August.....	300	246	273	1.48	1.71	16,800
September.....	1,660	270	512	2.78	3.10	30,500
The year.....	6,280	246	1,230	6.68	90.91	891,000

COWLITZ RIVER BASIN

COWLITZ RIVER AT MOSSY ROCK, WASH.

LOCATION.—Staff gage in sec. 1, T. 12 N., R. 2 E., at county highway bridge 1 mile north of Mossy Rock and 2½ miles above mouth of Tilton River.

DRAINAGE AREA.—1,170 square miles.

RECORDS AVAILABLE.—January, 1912, to September, 1917 (fragmentary); March, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 21,700 second-feet December 2 (gage height, 13.5 feet); minimum, 1,350 second-feet October 1 and 2 (gage height, 2.00 feet).

1912-1917, 1926-27: Maximum discharge, 30,300 second-feet January 7 and 8, 1914 (gage height, 18.0 feet); minimum, 825 second-feet October 10-13, 1915 (gage height, 1.40 feet).

The flood of November, 1906, reached a stage corresponding to about 29.4 feet on present gage (discharge, about 51,000 second-feet).

REMARKS.—Records good. No diversions. Results of some discharge measurements furnished by Backus-Brooks Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,350	2,080	14,800	6,680	3,730	5,480	3,560	7,760	7,940	6,680	2,880	2,080
2.....	1,350	2,080	21,700	12,900	9,560	5,090	3,560	7,040	9,560	5,960	2,880	2,390
3.....	1,700	1,960	17,900	16,500	8,840	4,920	3,560	6,680	10,800	6,140	2,880	2,550
4.....	1,700	1,820	12,500	13,700	7,760	4,580	3,390	6,860	11,400	5,780	2,710	2,890
5.....	1,520	1,820	9,920	12,100	6,680	4,240	3,390	6,500	12,900	5,600	2,550	2,080
6.....	1,460	2,080	8,480	10,100	5,960	4,240	3,220	5,960	15,200	5,260	2,550	2,230
7.....	1,700	3,800	7,040	8,840	5,430	4,070	3,730	5,960	18,300	5,600	2,550	2,230
8.....	2,620	3,200	6,320	7,580	4,920	3,900	3,390	5,780	19,700	5,600	2,230	1,940
9.....	2,480	2,760	5,430	6,680	4,580	3,900	3,220	6,320	17,300	5,430	2,230	1,940
10.....	2,210	2,620	5,260	5,960	4,240	3,560	3,220	6,680	15,200	4,920	2,230	1,810
11.....	2,480	2,480	5,600	5,430	3,900	3,390	2,880	7,040	13,700	4,580	2,230	2,080
12.....	2,760	2,620	7,040	5,090	3,560	3,730	2,880	7,760	11,800	4,750	2,230	3,220
13.....	4,100	2,760	5,960	5,260	3,390	4,750	3,050	11,000	11,800	4,750	1,940	2,550
14.....	5,220	3,200	5,260	5,090	3,220	4,750	3,390	12,700	12,100	4,580	1,940	2,230
15.....	4,580	3,500	5,090	5,090	3,220	4,580	3,900	15,900	12,000	4,240	1,940	2,080
16.....	7,060	4,100	5,090	5,260	3,220	4,240	4,410	17,100	10,800	4,070	1,940	1,940
17.....	16,300	3,800	5,260	4,920	3,050	4,240	4,580	17,900	10,300	4,240	1,940	1,810
18.....	9,740	3,500	5,600	4,920	3,560	4,070	4,580	14,600	9,740	4,410	1,940	1,810
19.....	7,060	3,350	5,260	4,920	3,900	3,900	4,240	11,400	8,840	4,240	1,940	1,810
20.....	5,380	3,200	5,600	4,410	4,750	3,560	3,900	9,380	8,840	3,900	1,940	1,690
21.....	4,580	3,500	5,260	3,900	11,800	3,900	3,560	8,120	9,740	3,730	1,810	1,690
22.....	3,950	4,740	4,750	3,730	10,300	3,900	3,560	7,220	10,600	3,900	1,690	1,690
23.....	4,100	6,550	4,580	3,560	9,200	3,900	3,900	7,040	9,560	3,730	1,690	1,690
24.....	3,200	8,660	4,240	3,390	8,480	4,070	5,090	7,040	8,660	3,900	1,690	1,580
25.....	3,800	10,600	4,240	3,220	7,400	3,900	8,120	8,120	8,120	3,730	1,690	1,580
26.....	3,200	13,100	3,730	3,050	6,680	3,900	12,500	8,120	7,940	3,560	1,690	1,580
27.....	3,050	11,400	3,560	3,220	6,140	3,560	14,400	7,760	6,500	3,390	1,690	1,810
28.....	2,760	9,920	3,390	3,560	5,960	3,560	15,900	7,040	6,680	3,390	1,690	2,880
29.....	2,480	10,600	3,560	3,220	-----	3,560	12,300	6,680	6,680	2,880	1,580	4,240
30.....	2,340	15,200	4,580	3,050	-----	3,390	9,560	6,320	6,680	2,880	1,580	4,750
31.....	2,210	-----	6,140	2,880	-----	3,560	-----	6,680	-----	2,880	1,580	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acres-feet
October.....	16,300	1,350	3,820	3.26	3.76	235,000
November.....	15,200	1,820	5,030	4.30	4.80	299,000
December.....	21,700	3,390	6,880	5.88	6.78	423,000
January.....	16,500	2,880	6,070	5.19	5.98	373,000
February.....	11,800	3,050	5,840	4.99	5.20	324,000
March.....	5,430	3,390	4,080	3.49	4.02	251,000
April.....	14,400	2,880	5,290	4.52	5.04	315,000
May.....	17,900	5,780	8,720	7.45	8.59	536,000
June.....	19,700	6,500	11,000	9.40	10.49	655,000
July.....	6,680	2,880	4,470	3.82	4.40	275,000
August.....	2,880	1,580	2,070	1.77	2.04	127,000
September.....	4,750	1,580	2,210	1.89	2.11	132,000
The year.....	21,700	1,350	5,450	4.66	63.21	3,940,000

COWLITZ RIVER NEAR CASTLE ROCK, WASH.

LOCATION.—Staff gage in sec. 34, T. 10 N., R. 2 W., 2,000 feet below mouth of Toutle River, 2 miles above Castle Rock, and 16 miles above mouth.

DRAINAGE AREA.—2,210 square miles.

RECORDS AVAILABLE.—December, 1926, to September, 1927.

EXTREMES.—Maximum discharge during period, 41,600 second-feet January 3 (gage height, 10.15 feet); minimum 2,140 second-feet August 27, 28, 30, and 31 (gage height, 2.6 feet).

REMARKS.—Records good. No diversions.

Daily and monthly discharge, in second-feet, 1926-27

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		16,200	16,200	12,200	6,150	11,700	10,400	7,750	3,480	2,940
2		33,000	30,200	11,200	5,800	11,700	11,700	7,350	3,480	3,480
3		40,800	23,900	10,400	6,150	12,200	13,200	7,350	3,290	3,290
4		32,300	19,200	9,450	6,550	13,200	14,200	6,950	3,290	3,480
5		26,000	16,200	8,550	6,950	11,700	15,200	6,950	3,110	3,110
6		22,500	13,700	8,550	6,950	10,400	17,400	6,550	3,110	3,680
7		18,600	11,700	8,150	5,450	9,450	21,100	6,150	2,940	3,880
8		15,700	10,400	9,000	8,550	9,450	25,300	6,150	2,940	3,480
9		13,700	9,450	8,150	7,350	9,450	23,200	6,150	2,940	3,110
10	8,550	12,200	8,550	7,750	6,550	9,450	19,200	6,150	2,770	2,940
11	10,400	11,200	7,750	7,350	6,150	9,900	16,800	5,450	2,940	3,880
12	12,700	10,400	7,350	7,750	6,150	10,800	14,700	5,450	2,940	4,860
13	11,200	11,200	6,950	9,900	5,800	13,700	14,200	5,450	2,770	4,860
14	9,900	13,200	6,150	10,800	5,800	16,200	14,200	5,450	2,450	4,100
15	9,000	13,700	6,550	10,400	6,550	18,600	14,700	5,150	2,450	3,680
16	9,450	13,200	6,950	9,450	7,350	21,800	13,700	4,860	2,610	3,290
17	14,200	11,700	6,950	9,450	7,350	23,200	13,200	4,860	2,610	3,110
18	15,700	12,700	7,750	9,450	8,550	21,800	12,200	4,860	2,610	2,940
19	12,700	12,200	10,400	8,550	7,750	18,000	11,200	4,860	2,450	2,770
20	11,200	10,400	15,200	7,750	6,950	14,700	10,800	4,590	2,450	2,770
21	12,200	9,000	26,000	7,750	6,550	12,700	11,700	4,590	2,450	2,610
22	11,700	7,750	26,700	7,750	6,150	11,200	12,700	4,340	2,450	2,610
23	10,400	7,350	24,600	7,350	6,150	10,400	12,700	4,340	2,290	2,610
24	9,450	7,350	20,400	8,150	6,550	10,800	11,200	4,590	2,290	2,450
25	10,400	6,950	16,800	7,750	9,450	11,200	10,400	4,590	2,290	2,450
26	9,450	6,550	15,200	6,950	14,200	12,200	9,900	4,340	2,290	2,450
27	8,550	7,750	13,200	6,550	18,000	11,200	9,000	4,100	2,140	2,770
28	8,550	13,200	11,700	6,550	18,600	10,800	8,150	3,880	2,140	4,860
29	9,900	12,200		6,150	17,400	10,400	7,750	3,680	2,290	11,200
30	14,200	9,450		6,150	13,200	9,900	8,150	3,480	2,140	9,450
31	15,700	8,550		6,550		9,450		3,480	2,140	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
December 10-31	15,700	8,550	11,200	5.07	4.15	489,000
January	40,800	6,550	14,400	6.52	7.52	885,000
February	30,200	6,150	14,100	6.38	6.64	783,000
March	12,200	6,150	8,450	3.82	4.40	520,000
April	18,600	5,450	8,370	3.79	4.23	498,000
May	23,200	9,450	12,800	5.79	6.68	787,000
June	25,300	7,750	13,600	6.15	6.86	809,000
July	7,750	3,480	5,290	2.39	2.76	325,000
August	3,480	2,140	2,660	1.20	1.88	164,000
September	11,200	2,450	3,770	1.71	1.91	224,000
The period						5,480,000

STREAMS BETWEEN COLUMBIA RIVER AND KLAMATH RIVER

ROGUE RIVER BASIN

ROGUE RIVER ABOVE PROSPECT, OREG.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 19, T. 32 S., R. 3 E., $1\frac{1}{2}$ miles above intake of power flume of California Oregon Power Co., 3 miles above mouth of Mill Creek, and 2 miles northwest of Prospect.

DRAINAGE AREA.—315 square miles.

RECORDS AVAILABLE.—July, 1907, to February, 1912, incomplete; October, 1923, to September, 1927.

EXTREMES.—Maximum discharge during year, 9,030 second-feet February 20 (gage height, 6.97 feet); minimum, 283 second-feet November 1-5 (gage height, 1.32 feet).

1907-1912, 1923-1927: Maximum discharge, about 9,300 second-feet November 22, 1909 (gage height, 7.0 feet, very uncertain); minimum, 268 second-feet September 13 and 14, 1926 (gage height, 1.28 feet).

REMARKS.—Records good below and fair above 2,500 second-feet. No regulation or diversions above station. Gage-height record furnished by California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	307	283	2,060	562	762	1,030	838	1,720	1,220	845	495	440
2.	336	283	2,890	1,170	1,220	1,060	875	1,450	1,300	824	490	445
3.	358	283	2,340	1,260	1,220	1,000	845	1,400	1,400	796	485	450
4.	307	283	1,660	1,300	1,080	960	817	1,350	1,450	762	480	440
5.	291	283	1,300	1,300	944	898	796	1,300	1,550	723	475	445
6.	287	291	1,170	1,300	868	860	775	1,350	1,660	704	475	470
7.	336	315	1,010	1,120	803	831	768	1,300	1,820	692	470	435
8.	328	291	898	992	756	810	742	1,300	1,880	686	465	460
9.	345	287	817	898	710	782	698	1,300	1,720	668	465	450
10.	407	287	762	852	686	756	662	1,300	1,720	662	460	465
11.	389	299	803	810	668	730	644	1,350	1,660	650	460	470
12.	358	384	852	782	644	768	644	1,450	1,550	639	465	475
13.	336	407	789	768	612	984	650	1,720	1,500	634	460	465
14.	328	371	650	749	617	968	710	2,270	1,500	622	460	465
15.	319	434	730	831	617	890	796	2,640	1,450	612	460	455
16.	307	649	749	817	617	852	768	2,800	1,400	600	460	440
17.	420	434	838	749	644	824	723	2,480	1,350	590	455	435
18.	341	411	912	749	1,040	775	736	1,940	1,300	584	455	430
19.	324	841	817	749	984	742	710	1,660	1,220	568	455	430
20.	311	1,780	756	704	4,350	716	704	1,450	1,170	562	450	430
21.	307	1,090	749	556	5,390	723	723	1,300	1,170	556	450	430
22.	299	778	710	568	2,560	742	817	1,260	1,120	551	450	430
23.	295	678	584	556	1,770	762	1,060	1,260	1,080	540	450	435
24.	299	806	617	650	1,400	838	1,450	1,350	1,020	546	450	465
25.	311	1,140	656	606	1,300	852	1,940	1,500	976	530	450	440
26.	299	1,180	584	584	1,260	831	2,410	1,450	984	520	440	430
27.	299	970	595	600	1,170	831	2,410	1,350	1,020	515	440	450
28.	295	1,140	600	606	1,060	824	2,410	1,260	952	510	455	595
29.	291	3,420	584	584	-----	838	2,130	1,170	890	505	455	612
30.	287	3,410	578	556	-----	875	1,820	1,120	868	510	445	530
31.	287	-----	568	568	-----	875	-----	1,170	-----	500	440	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	420	287	325	1.03	1.19	20,000
November	3,420	283	734	2.49	2.78	46,700
December	2,880	568	956	3.03	3.49	58,800
January	1,300	556	806	2.56	2.95	49,600
February	5,390	612	1,280	4.06	4.23	71,100
March	1,060	716	846	2.69	3.10	52,000
April	2,410	644	1,070	3.40	3.79	63,700
May	2,800	1,120	1,540	4.89	5.64	94,700
June	1,880	568	1,330	4.22	4.71	79,100
July	845	600	620	1.97	2.27	38,100
August	495	440	460	1.46	1.68	28,300
September	612	430	462	1.47	1.64	27,500
The year	5,390	283	869	2.76	37.47	630,000

ROGUE RIVER BELOW PROSPECT, OREG.

LOCATION.—Staff gage 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 and 2 miles southwest of Prospect.

RECORDS AVAILABLE.—August, 1913, to September, 1927.

EXTREMES.—Maximum discharge during year, 10,300 second-feet February 20 (gage height, 7.4 feet); minimum, 288 second-feet November 5 and 10 (gage height, 2.08 feet).

1913-1927: Maximum discharge, that of February 20, 1927; minimum, 285 second-feet September 16-18, 20-22, October 13, 19, 20, 23, 24, and 25, 1924.

REMARKS.—Records good below and fair above 1,500 second-feet. California Oregon Power Co.'s flume diverts around station (see p. 97 for record of this diversion). Gage-height record furnished by California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	319	292	2,060	545	890	1,160	1,020	1,900	1,430	1,020	572	518
2	350	295	3,380	1,800	1,460	1,230	1,090	1,650	1,380	950	572	518
3	390	295	2,660	1,800	1,460	1,160	1,090	1,550	1,400	950	572	518
4	323	295	1,650	1,380	1,300	1,160	1,020	1,550	1,400	890	545	518
5	303	288	1,380	1,300	1,160	1,090	1,020	1,460	1,650	890	545	545
6	303	292	1,230	1,380	1,090	1,020	1,020	1,460	1,760	830	545	518
7	350	319	1,090	1,230	1,020	1,020	950	1,460	1,900	830	545	600
8	319	303	950	1,090	1,020	1,020	950	1,460	2,240	830	545	545
9	345	295	890	1,020	890	950	890	1,460	1,900	770	545	490
10	430	288	830	950	890	950	890	1,460	1,900	770	545	490
11	420	295	770	890	770	890	890	1,460	1,760	770	518	490
12	380	385	890	830	740	890	830	1,550	1,760	770	518	545
13	345	446	770	830	682	1,160	890	1,900	1,650	770	518	518
14	323	390	600	830	710	1,160	950	2,440	1,650	740	518	518
15	335	405	740	950	710	1,090	1,020	2,890	1,550	710	518	490
16	395	740	770	890	710	1,020	1,020	3,130	1,460	682	518	490
17	462	468	830	830	740	1,020	950	2,890	1,460	682	518	479
18	350	415	1,020	830	1,300	950	950	2,240	1,460	682	490	479
19	335	890	830	830	1,160	890	890	1,900	1,380	655	490	457
20	319	2,060	830	770	4,150	890	890	1,650	1,300	655	490	468
21	311	1,160	770	628	6,160	890	890	1,460	1,300	655	479	457
22	315	830	770	572	2,440	890	1,020	1,460	1,300	628	490	457
23	311	710	600	682	1,900	950	1,300	1,460	1,230	628	490	462
24	311	830	628	682	1,550	1,020	1,650	1,460	1,160	655	490	490
25	319	1,160	655	655	1,460	1,020	2,240	1,650	1,160	628	518	430
26	311	1,300	572	628	1,460	1,020	2,660	1,550	1,090	600	490	446
27	311	1,020	600	628	1,300	1,020	2,660	1,460	1,090	600	490	380
28	303	1,090	600	655	1,230	1,020	2,660	1,380	1,090	600	490	682
29	299	3,380	572	628	-----	1,020	2,440	1,230	1,020	600	518	655
30	303	3,380	572	600	-----	1,090	2,060	1,230	1,020	600	518	600
31	303	-----	545	600	-----	1,090	-----	1,300	-----	572	490	-----

Month	Rogue River above California Oregon Power Co.'s flume				Combined flow of Rogue River and California Oregon Power Co.'s flume			
	Discharge in second-feet			Run-off in acre-feet	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean		Maximum	Minimum	Mean	
October	462	299	338	20,800	636	479	517	31,800
November	3,380	288	811	48,300	3,570	468	991	59,000
December	3,380	545	1,000	61,500	3,560	721	1,180	72,600
January	1,380	545	869	53,400	1,560	732	1,050	64,600
February	6,160	682	1,440	80,000	6,310	857	1,600	88,900
March	1,230	890	1,020	62,700	1,400	1,050	1,190	73,200
April	2,660	830	1,290	76,800	2,830	994	1,460	86,900
May	3,130	1,230	1,710	105,000	3,290	1,400	1,880	116,000
June	2,240	1,020	1,470	87,500	2,410	1,190	1,630	97,000
July	1,020	572	729	44,800	1,200	753	911	56,000
August	572	479	519	31,900	751	663	700	43,000
September	682	390	508	30,200	867	562	684	40,700
The year	6,160	288	972	703,000	6,310	468	1,140	830,000

SURFACE WATER SUPPLY, 1927, PART XII—C

ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OREG.

LOCATION.—Water-stage recorder in sec. 18, T: 36 S., R. 2 W., at Raygold, just below dam and power house of California Oregon Power Co. and 6 miles northwest of Central Point. Staff gage at same site and datum used February 21 to September 18, 1927.

DRAINAGE AREA.—2,020 square miles.

RECORDS AVAILABLE.—August, 1905, to September, 1927.

EXTREMES.—Maximum discharge during year, about 91,500 second-feet February 21 (gage height, 24.8 feet); minimum, 585 second-feet October 7 (gage height, -0.03 foot). Discharge may have gone as low as 500 second-feet momentarily, because of sudden decrease in power load.

1905-1927: Maximum discharge, that of February 21, 1927; minimum stage indeterminate, as water goes below intake pipe of well during low stages, which are usually of short duration.

REMARKS.—Records good except those for November 20-24 and February 20-23, which are fair. Numerous diversions for irrigation above station. Diurnal fluctuation due to operation of power plant immediately above station. Gage-height record furnished by California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	903	918	8,940	2,830	4,310	4,660	3,680	5,400	3,400	2,230	1,370	1,230
2.....	934	896	16,900	10,600	6,920	6,450	9,200	4,660	3,400	2,110	1,370	1,140
3.....	918	908	18,900	8,420	7,640	5,000	7,400	4,310	3,400	2,110	1,370	1,180
4.....	896	908	8,160	6,680	6,450	4,660	5,600	4,150	3,400	2,000	1,320	1,280
5.....	847	910	5,400	5,100	5,210	4,480	4,840	3,990	3,830	2,000	1,140	1,230
6.....	840	910	5,600	6,020	5,210	4,150	4,310	4,150	3,990	1,830	1,230	1,180
7.....	875	942	4,480	5,210	5,810	3,680	4,310	4,310	4,310	1,830	1,420	1,280
8.....	990	934	3,680	4,150	4,480	3,680	3,830	4,310	4,310	1,780	1,320	1,370
9.....	1,030	934	3,140	3,680	3,830	3,680	3,680	4,150	4,310	1,720	1,180	1,320
10.....	1,280	934	2,830	3,400	3,540	3,680	3,680	3,990	3,990	1,670	1,180	1,230
11.....	1,190	990	2,710	3,200	3,270	3,400	3,540	4,150	3,990	1,670	1,230	1,230
12.....	1,030	1,070	3,080	3,010	3,080	3,400	3,540	3,990	3,830	1,670	1,140	1,230
13.....	1,030	1,280	3,010	2,830	2,830	4,660	3,400	4,310	3,680	1,620	1,140	1,230
14.....	1,030	1,280	2,650	2,710	2,710	5,020	3,400	5,020	3,680	1,570	1,140	1,320
15.....	990	1,230	2,530	3,010	2,650	4,310	3,540	5,600	3,540	1,570	1,140	1,320
16.....	990	1,720	3,010	3,080	2,710	3,990	3,540	5,600	3,540	1,570	1,020	1,280
17.....	1,280	1,520	3,540	2,830	3,140	4,660	3,400	5,810	3,400	1,570	1,180	1,280
18.....	1,110	1,320	6,020	2,710	9,770	4,660	3,400	5,600	4,000	1,520	1,180	1,280
19.....	1,070	3,990	4,480	3,830	9,200	4,150	3,200	4,660	3,270	1,520	1,140	1,230
20.....	990	5,810	3,680	4,310	39,700	3,990	3,010	4,660	3,080	1,470	1,140	1,230
21.....	950	3,990	3,830	3,200	48,900	3,830	3,010	3,830	3,010	1,470	1,370	1,230
22.....	974	2,650	3,400	2,650	12,700	3,990	3,010	3,830	2,830	1,420	1,180	1,180
23.....	942	2,290	3,010	2,590	14,200	3,680	3,400	3,830	2,710	1,370	1,140	1,230
24.....	896	2,530	2,650	2,650	8,940	3,680	3,990	3,680	2,590	1,470	1,230	1,280
25.....	942	5,400	2,770	2,580	8,160	3,540	5,210	3,830	2,470	1,420	1,140	1,280
26.....	942	6,450	2,710	2,410	7,160	3,680	6,020	3,830	2,350	1,470	1,140	1,280
27.....	950	4,150	2,410	2,590	6,680	3,680	6,230	3,680	2,470	1,470	1,140	1,230
28.....	942	3,680	2,410	6,450	5,400	3,680	6,230	3,540	2,470	1,420	1,140	1,470
29.....	910	13,100	2,530	5,400	-----	3,540	5,210	3,540	2,470	1,370	1,230	1,470
30.....	903	17,500	2,770	4,150	-----	3,680	5,400	3,400	2,350	1,370	1,280	1,620
31.....	910	-----	2,830	3,680	-----	3,680	-----	3,400	-----	1,420	1,180	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,280	840	963	60,400
November.....	17,500	896	3,040	181,000
December.....	18,900	2,410	4,650	286,000
January.....	10,600	2,410	4,080	251,000
February.....	48,900	2,650	8,740	485,000
March.....	6,450	3,400	4,120	253,000
April.....	9,200	3,010	4,430	264,000
May.....	5,810	3,400	4,300	264,000
June.....	4,310	2,350	3,320	198,000
July.....	2,230	1,370	1,640	101,000
August.....	1,420	1,020	1,210	74,400
September.....	1,620	1,140	1,290	76,200
The year.....	48,900	840	3,440	2,490,000

CALIFORNIA OREGON POWER CO.'S FLUME NEAR PROSPECT, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 32, T. 32 S., R. 3 E., half a mile below intake and half a mile northwest of Prospect.

RECORDS AVAILABLE.—August, 1913, to September, 1927.

EXTREMES.—Maximum discharge during year, 192 second-feet December 15 (gage height, 3.95 feet); minimum, 74 second-feet June 1 (gage height, 1.75 feet).

1913-1927: Maximum discharge, 212 second-feet April 25, 26, 30, May 1 and 2, 1916, and December 12, 1919 (gage height, 2.7 feet on old gage above forebay); flume dry at times.

REMARKS.—Records good. This flume diverts water from Rogue River in SW. $\frac{1}{4}$ sec. 30, T. 32 S., R. 3 E., and extends about 2 miles to power house in NW. $\frac{1}{4}$ sec. 6, T. 33 S., R. 3 E., where a head of about 500 feet is developed. Gage-height record furnished by California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	182	181	174	187	185	166	164	157	74	176	179	173
2.....	183	181	181	184	188	168	165	157	172	183	179	179
3.....	181	180	168	187	174	157	163	157	175	175	179	181
4.....	181	179	177	175	173	162	164	156	176	174	179	179
5.....	180	181	174	174	124	160	164	162	174	174	179	148
6.....	179	181	168	174	124	160	162	162	166	174	177	180
7.....	162	181	179	171	122	167	162	161	173	173	177	114
8.....	181	180	178	172	121	165	162	161	174	181	173	139
9.....	179	181	176	168	121	164	161	160	164	181	184	177
10.....	190	180	170	176	94	164	160	164	167	183	184	182
11.....	172	180	183	175	174	160	160	163	166	180	185	183
12.....	181	187	183	174	176	166	164	164	168	180	185	184
13.....	180	174	182	172	175	171	164	171	163	179	185	185
14.....	174	185	187	172	172	166	164	177	167	184	185	183
15.....	175	182	192	179	171	164	167	172	167	187	185	182
16.....	171	172	185	178	171	163	164	164	168	185	184	180
17.....	174	179	186	176	157	162	162	162	164	184	186	181
18.....	174	181	186	175	171	161	163	161	168	181	184	180
19.....	181	189	177	176	162	161	160	162	172	188	183	181
20.....	181	187	175	174	176	162	161	160	166	188	179	179
21.....	182	173	175	187	148	161	164	162	162	187	184	181
22.....	174	172	174	188	146	163	166	162	167	183	178	180
23.....	178	179	189	187	150	162	172	162	172	185	183	172
24.....	177	183	175	181	152	166	171	164	166	184	181	175
25.....	178	183	181	181	161	166	172	165	177	182	176	179
26.....	179	166	182	179	161	167	169	164	174	183	177	184
27.....	179	176	184	179	159	167	164	162	164	181	178	182
28.....	179	182	183	180	156	164	164	164	163	181	181	185
29.....	180	182	183	178	-----	164	157	166	169	180	178	182
30.....	180	186	182	178	-----	165	161	166	175	181	174	181
31.....	181	-----	176	180	-----	164	-----	165	-----	181	179	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	190	162	178	10, 900
November.....	189	166	180	10, 700
December.....	192	168	180	11, 100
January.....	188	168	178	10, 900
February.....	188	94	156	8, 660
March.....	171	157	164	10, 100
April.....	172	157	164	9, 760
May.....	177	156	163	10, 000
June.....	177	74	166	9, 880
July.....	188	173	181	11, 100
August.....	186	173	181	11, 100
September.....	185	114	176	10, 500
The year.....	192	74	172	125, 000

MILL CREEK NEAR PROSPECT, OREG.

LOCATION.—Staff gage in SE. ¼ sec. 28, T. 32 S., R. 3 E., 1 mile northeast of Prospect and 2 miles above mouth.

RECORDS AVAILABLE.—August to October, 1910; May, 1925, to September, 1927.

EXTREMES.—Maximum discharge during year, 200 second-feet February 20 (gage height, 3.93 feet); minimum, 39 second-feet October 18, 25, November 1 and 8.

1910, 1925-1927: Maximum discharge, that of February 20, 1927; minimum, that of October 18, 25, November 1 and 8, 1926.

REMARKS.—Records fair. Gage read once a week. No regulation or diversions above station. Gage-height record furnished by California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.		39						146			48	
2.												
3.				97			88			84		
4.									158			43
5.												
6.			74	112		92						
7.					74							
8.		39						112			46	
9.												
10.				84			84	128				
11.	42									58		
12.									158		46	48
13.			55		60							
14.						102						
15.		48						164			45	
16.												
17.				78			84					
18.	39									50		
19.									112			45
20.			72		200							
21.												
22.		72						128			43	
23.												
24.				60			134					
25.	39									49		
26.									88			46
27.					123	88						
28.			61									
29.		102						117			45	
30.												
31.				58								

Month	Mean	Run-off in acre-feet	Month	Mean	Run-off in acre-feet	Month	Mean	Run-off in acre-feet
October.....	37.6	2,310	March.....	94.0	5,780	August.....	45.5	2,800
November.....	45.0	2,680	April.....	113	6,720	September.....	45.5	2,710
December.....	75.3	4,630	May.....	132	8,120	The year.	78.5	56,800
January.....	81.5	5,010	June.....	129	7,680			
February.....	84.4	4,690	July.....	60.2	3,700			

NOTE.—Monthly mean discharge is mean of discharges on days gage was read, except for months of October, November, December, February, and April, for which a conversion factor was applied, based on comparison with Rogue River above Prospect.

MIDDLE FORK OF ROGUE RIVER NEAR PROSPECT, OREG.

LOCATION.—Water-stage recorder in NE. ¼ sec. 1, T. 33 S., R. 3 E., at intake of proposed diversion into Rogue River, 5 miles southeast of Prospect.

RECORDS AVAILABLE.—May, 1925, to September, 1927.

EXTREMES.—Maximum discharge during year, 890 second-feet February 20 (gauge height, 3.04 feet); minimum, 84 second-feet October 31 to November 5 (gauge height, 1.18 feet).

1925-1927: Maximum discharge, that of February 20, 1927; minimum, 83 second-feet September 6-9, 12, and 13, 1926.

REMARKS.—Records good except those for estimated periods. No regulation or diversions above station. Gauge-height record furnished by California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	94	84	416	132	157	* 225	197	300	246	232	149	125
2.....	96	84	349	250	166		218	264	272	232	146	125
3.....	100	84	354	208	169		214	250	292	228	143	125
4.....	92	84	292	218	160		208	250	336	222	143	125
5.....	92	84	246	232	160		200	253	362	214	140	122
6.....	96	88	211	228	160	* 197	197	264	408	211	138	138
7.....	104	88	184	214	160		190	242	426	211	138	135
8.....	104	88	169	204	154		187	239	505	211	138	127
9.....	115	88	160	194	154		181	242	426	208	138	125
10.....	108	86	154	184	152		175	242	430	200	138	130
11.....	100	92	169	172	146	* 225	172	268	416	197	138	130
12.....	96	98	157	169	146		166	296	390	194	138	127
13.....	94	100	149	166	143		166	354	380	194	138	130
14.....	94	98	152	166	138		172	435	376	190	138	130
15.....	94	100	149	169	138		175	485	367	187	135	125
16.....	104	* 110	172	160	138	* 210	169	500	349	184	132	122
17.....	102	* 110	184	160	* 138		160	435	344	181	132	122
18.....	92	* 110	184	163	* 200		160	344	328	178	132	120
19.....	90	* 480	169	166	* 250		154	308	312	178	130	120
20.....	90	480	163	157	* 530		194	154	272	312	172	130
21.....	88	253	160	149	* 600	197	154	250	316	169	130	* 120
22.....	88	218	157	149		197	166	242	312	169	130	
23.....	88	218	152	146		197	190	253	296	166	127	
24.....	88	246	152	135		200	236	272	280	169	127	
25.....	88	246	146	135		200	308	296	272	166	127	120
26.....	88	208	135	132	* 350	194	362	280	272	157	127	120
27.....	88	190	132	135		194	390	260	250	154	127	138
28.....	88	218	130	135		190	416	246	232	149	130	160
29.....	86	596	132	130		187	376	225	232	149	127	166
30.....	86	545	127	130		194	328	222	232	146	125	138
31.....	84	-----	127	135	-----	190	-----	228	-----	149	125	-----

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October.....	115	84	94.1	5,790
November.....	596	84	186	11,100
December.....	416	127	185	11,400
January.....	250	130	168	10,300
February.....	600	138	229	12,700
March.....	-----	187	203	12,500
April.....	416	154	218	13,000
May.....	500	222	291	17,900
June.....	505	232	332	19,800
July.....	232	146	186	11,400
August.....	149	125	134	8,240
September.....	166	120	128	7,620
The year.....	600	84	196	142,000

* Estimated.

RED BLANKET CREEK NEAR PROSPECT, OREG.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 34, T. 32 S., R. 3 E., $2\frac{1}{2}$ miles east of Prospect.

RECORDS AVAILABLE.—May, 1925, to September, 1927.

EXTREMES.—Maximum discharge during year, about 600 second-feet February 20 (gage height, 3.40 feet); minimum, 54 second-feet November 8 (gage height, 0.09 foot).

1925-1927: Maximum discharge, that of February 20, 1927; minimum, 42 second-feet August 16, 1926.

REMARKS.—Records fair. Gage read once a week. No regulation or diversions above station. Gage-height record furnished by California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		55						234			86	
2												
3				156			119					
4												
5									217	125		70
6			185			119						
7					137							
8		54						150			81	
9												
10				119			114					
11	66							156		114		
12									252		77	81
13			114		94							
14						156				108		
15		70						310			77	
16												
17				108			108					
18	60									99		
19									217			70
20			125		600							
21												
22		137						150			73	
23												
24				94			201					
25	56									94		
26									108			73
27			94		178	114						
28											77	
29		290						125				
30												
31				90								

Month	Mean	Run-off in acre-feet	Month	Mean	Run-off in acre-feet	Month	Mean	Run-off in acre-feet
October	57.1	3,510	March	130	7,990	August	78.5	4,830
November	90.8	5,400	April	158	9,400	September	73.5	4,370
December	150	9,220	May	188	11,600			
January	113	6,950	June	198	11,800	The year	127	92,000
February	186	10,300	July	108	6,640			

NOTE.—Monthly mean discharge is mean of discharges on days gage was read, except for months of October, November, December, February, and April, for which a conversion factor was applied, based on comparison with Rogue River above Prospect.

SOUTH FORK OF ROGUE RIVER NEAR PROSPECT, OREG.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 7, T. 33 S., R. 4 E., a quarter of a mile below mouth of Imnaha Creek and 6 miles southeast of Prospect.

RECORDS AVAILABLE.—April, 1924, to September, 1927.

EXTREMES.—Maximum discharge during year, 1,420 second-feet February 20 (gage height, 3.89 feet); minimum, 45 second-feet October 29 to November 2 (gage height, 0.31 foot).

1924-1927: Maximum discharge, 1,500 second-feet December 1, 1924 (gage height, 3.97 feet); minimum, 41 second-feet September 13-15, 1926 (gage height, 0.31 foot).

REMARKS.—Records good below and fair above 300 second-feet. Discharge estimated May 14 and September 27-30. No regulation or diversions above station. Gage-height record furnished by California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	53	45	445	122	146	289	205	370	262	205	120	103
2.....	55	45	468	205	160	289	227	319	275	196	120	103
3.....	62	46	445	196	153	262	227	319	303	196	120	103
4.....	51	46	308	196	146	250	216	319	335	186	120	102
5.....	48	46	250	205	146	238	216	335	370	177	120	101
6.....	48	47	216	205	146	227	205	352	388	177	119	112
7.....	60	48	196	196	140	227	205	319	405	168	119	113
8.....	58	47	177	177	140	216	205	303	490	160	115	107
9.....	62	46	160	177	134	216	196	303	425	160	115	104
10.....	67	46	153	168	134	205	186	303	405	153	115	106
11.....	58	54	160	168	134	196	186	319	405	153	115	106
12.....	54	57	177	160	134	205	186	352	388	153	117	106
13.....	52	60	153	160	127	250	186	405	388	153	117	104
14.....	50	58	146	153	127	238	186	514	370	146	114	106
15.....	53	76	146	160	126	216	186	612	352	146	110	104
16.....	63	110	160	160	126	216	186	640	335	146	109	102
17.....	71	77	177	153	124	205	177	560	335	140	109	101
18.....	58	85	168	153	153	205	177	468	303	140	109	98
19.....	54	303	153	153	160	196	168	405	289	140	108	97
20.....	52	303	153	146	695	186	168	352	289	134	109	97
21.....	51	196	153	140	1,000	186	177	335	289	134	109	96
22.....	50	153	146	140	612	186	186	319	275	134	109	96
23.....	48	140	140	140	490	186	205	319	262	134	109	97
24.....	48	160	140	140	388	186	238	335	250	140	109	100
25.....	47	186	140	134	370	186	303	352	238	134	109	98
26.....	47	177	134	134	352	186	370	335	238	127	109	
27.....	47	160	134	134	319	186	405	303	250	126	108	
28.....	46	168	127	134	303	186	425	289	227	124	108	
29.....	45	352	127	127	-----	186	425	275	216	123	107	
30.....	45	695	126	127	-----	196	388	275	205	123	104	110
31.....	45	-----	123	127	-----	196	-----	262	-----	23	103	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	71	45	53.2	3,270
November.....	695	45	134	7,970
December.....	468	123	190	11,700
January.....	205	122	158	9,720
February.....	1,000	124	257	14,300
March.....	289	186	213	13,100
April.....	425	168	234	13,900
May.....	640	262	363	22,300
June.....	490	205	319	19,000
July.....	205	123	150	9,220
August.....	120	103	112	6,890
September.....	-----	96	103	6,130
The year.....	1,000	45	190	138,000

SOUTH FORK OF BIG BUTTE CREEK NEAR BUTTE FALLS, OREG.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 11, T. 35 S., R. 2 E., just below Ginger Creek and 1 mile above Butte Falls.

RECORDS AVAILABLE.—September, 1910, to October, 1911; August to October, 1915; October, 1917, to September, 1922; March, 1925, to September, 1927. Comparable records at station at Butte Falls, August, 1922, to March, 1925.

EXTREMES.—Maximum discharge during year, about 2,470 second-feet February 20 (gage height, 4.05 feet); minimum, 70 second-feet October 5 (gage height, 0.58 foot).

1910-11, 1915, 1917-1927: Maximum discharge, that of February 20, 1927; minimum, 60 second-feet August 16, 1926.

REMARKS.—Records good. Diversions for irrigation above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	73	78	310	137	217	416	305	261	169	104	82	82
2.....	76	78	411	390	320	428	406	268	166	102	82	83
3.....	75	78	558	406	395	395	444	247	163	100	82	83
4.....	73	76	365	355	385	375	416	230	163	100	82	82
5.....	73	76	273	325	340	355	390	234	160	97	82	82
6.....	73	76	260	325	330	340	370	247	150	97	83	87
7.....	75	76	217	286	315	330	350	238	134	97	83	90
8.....	76	75	191	255	278	340	340	230	131	95	85	85
9.....	82	73	169	234	251	340	340	217	134	97	85	85
10.....	83	73	156	217	234	320	320		137	97	87	85
11.....	78	75	156	202	221	300	300			97	87	87
12.....	76	76	163	183	206	236	282			95	88	87
13.....	75	85	150	176	194	335	268			95	87	87
14.....	75	82	131	166	191	380	260			92	88	87
15.....	76	85	134	173	187	365	264	250	134	95	88	85
16.....	80	104	146	169	187	365	260			92	88	83
17.....	83	85	166	156	187	390	251			92	88	82
18.....	80	97	260	160	291	385	242		131	90	88	80
19.....	78	198	234	194	400	365	230	234	126	90	87	82
20.....	78	169	217	202	1,400	355	221	226	126	92	88	82
21.....	78	120	213	169	1,500	345	213	213	123	92	88	82
22.....	78	104	191	153	970	345	206	206	120	90	87	82
23.....	78	102	166	156	804	345	206	198	120	88	85	83
24.....	78	112	156	156	654	340	209	191	120	90	87	85
25.....	78	160	153	150	596	340	230	191	120	88	85	87
26.....	78	183	143	146	546	375	260	191	123	87	87	85
27.....	80	153	134	153	482	330	278	187	151	87	87	87
28.....	80	146	134	198	438	315	273	194	126	85	87	95
29.....	80	266	140	176	-----	291	268	191	114	83	87	95
30.....	80	416	143	166	-----	282	264	180	109	83	85	95
31.....	80	-----	146	173	-----	291	-----	173	-----	82	83	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	83	73	77.6	4,770
November.....	416	73	119	7,080
December.....	558	131	206	12,700
January.....	406	137	210	12,900
February.....	1,500	187	447	24,800
March.....	428	282	347	21,300
April.....	444	206	289	17,200
May.....	-----	173	227	14,000
June.....	169	109	135	8,030
July.....	104	82	92.6	5,690
August.....	88	82	85.7	5,270
September.....	95	82	85.4	5,080
The year.....	1,500	73	192	139,000

EAGLE POINT IRRIGATION DISTRICT CANAL AT BUTTE FALLS, OREG.

LOCATION.—Staff gage in NE. ¼ sec. 10, T. 35 S., R. 2 E., 1,200 feet below intake and half a mile north of Butte Falls.

RECORDS AVAILABLE.—Irrigation seasons, 1924–1927.

EXTREMES.—Maximum discharge during year, 57 second-feet September 7 (gage height, 2.70 feet); canal dry at times.

1924–1927: Maximum discharge, that of September 7, 1927; canal dry at times.

REMARKS.—Records good. This canal diverts from South Fork of Big Butte Creek in NE. ¼ sec. 10, T. 35 S., R. 2 E., for the irrigation of lands in the vicinity of Eagle Point.

Daily and monthly discharge, in second-feet, 1927

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1.....	0	* 18	41	43	47	50	16.....	0	* 13	44	47	49	28
2.....	0	18	42	44	47	50	17.....	0	0	44	47	49	28
3.....	0	* 19	40	41	47	51	18.....	0	28	42	47	49	28
4.....	0	* 19	44	40	47	51	19.....	0	36	32	47	49	28
5.....	0	* 28	* 16	43	47	51	20.....	0	41	41	47	49	28
6.....	0	* 20	3	47	47	52	21.....	0	40	30	47	49	37
7.....	0	21	28	46	47	57	22.....	0	40	42	47	49	37
8.....	0	21	28	44	49	28	23.....	0	40	42	47	48	37
9.....	0	21	36	48	49	38	24.....	0	42	44	47	49	37
10.....	0	26	34	47	49	38	25.....	0	* 14	44	46	50	23
11.....	0	26	35	47	49	38	26.....	0	0	43	* 42	51	23
12.....	0	28	41	47	49	38	27.....	0	20	43	47	51	23
13.....	0	31	38	46	49	38	28.....	0	41	43	47	51	23
14.....	0	31	41	47	49	38	29.....	* 11	43	43	47	51	* 23
15.....	0	41	43	47	49	28	30.....	* 18	42	43	47	51	* 23
							31.....		41		47	50	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April.....	18	0	1.0	60
May.....	49	0	27.1	1,670
June.....	44	3	37.5	2,238
July.....	48	40	45.9	2,820
August.....	51	47	48.9	3,010
September.....	57	23	35.7	2,120
The period.....				11,900

* Estimated.

SOUTH FORK OF LITTLE BUTTE CREEK AT BIG ELK RANGER STATION, NEAR LAKECREEK, OREG.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 21, T. 37 S., R. 4 E., 1 mile south of Big Elk ranger station and 15 miles southeast of Lakecreek.

RECORDS AVAILABLE.—October, 1926, to September, 1927; incomplete.

EXTREMES.—Maximum discharge during year, 111 second-feet during period of no record, April 10 to June 10 (gage height, 2.90 feet); minimum, 5.5 second-feet October 26 (gage height, 0.43 foot).

REMARKS.—Records fair, October to April; good, July to September. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	June	July	Aug.	Sept.
1		6.1	17	8.9	9.5	16	14			14	12
2		6.1	18	14	9.7	17	15			14	12
3		5.9	19	12	10	16	15			14	12
4		5.9	16	12	9.5	17	15			14	12
5		5.9	14	13	9.3	16	15		18	14	12
6		6.1	14	14	9.3	17	15			14	13
7		5.9	13	13	9.3	18	15			14	13
8		5.9	12	13	8.9	19	15		16	14	12
9		5.8	11	13	9.1	19	15		16	14	12
10		5.8	11	13	11	19			15	14	12
11	5.8	6.2	11	13	12	19		58	15	14	12
12		6.5	12	13	14	19		51	15	14	12
13		6.5	13	13	18	19			15	14	12
14		6.2	13	13	17	17			14	14	13
15		7.0	11	13	9.1	17			14	14	12
16		7.0	10	13	8.9	18			14	14	12
17		6.1	11	11	9.1	17			14	14	11
18		8.5	10	10	11	18			14	14	11
19		12	9.5	10	9.1	18			14	14	11
20		8.7	9.5	10	15	18			14	13	11
21		7.2	11	11	20	17			14	13	11
22	5.9	6.7	14	13	20				14	13	11
23	5.9	6.9	14	12	19				15	13	11
24	5.9	7.9	14	11	17				15	13	11
25	5.9	8.3	15	10	17	15			15	12	11
26	5.9	8.1	15	9.5	17				14	12	11
27	6.1	8.1	14	9.5	16				14	12	11
28	6.1	8.5	13	9.7	16	13			14	12	12
29	6.1	14	13	9.5		13			14	12	13
30	6.1	27	12	9.3		13			14	12	11
31	6.1		9.1	9.1		13			14	12	
Month	Maximum			Minimum			Mean			Run-off in acre-feet	
October									5.86		360
November						27		5.8	7.89		469
December						19		9.1	12.9		793
January						14		8.9	11.6		713
February						20		8.9	12.9		716
March						19		13	16.5		1,010
April 1-9						15		14	14.9		266
July								14	15.3		941
August						14		12	13.4		824
September						13		11	11.7		696

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

SOUTH FORK OF LITTLE BUTTE CREEK NEAR LAKECREEK, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 29, T. 36 S., R. 2 E., one-fourth mile above intake of Public Water Co.'s South Fork Canal and $1\frac{1}{2}$ miles southeast of Lakecreek.

RECORDS AVAILABLE.—April, 1921, to September, 1927. At station in sec. 11, T. 37 S., R. 2 E., 5 miles above Lakecreek, November, 1910, to April, 1913.

EXTREMES.—Maximum discharge during year, 2,700 second-feet February 20 (gage height, 6.10 feet); minimum, 13 second-feet October 6 (gage height, 1.20 feet).

1910-1913, 1921-1927: Maximum discharge, 3,000 second-feet December 30, 1924 (gage height, 5.25 feet); minimum, 5 second-feet December 8, 1911; both maximum and minimum very uncertain.

REMARKS.—Records good except those for estimated periods. Diversions for irrigation above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15		500	100		318		* 445	209	53	23	23
2	15		960	457		386		433	206	49	23	23
3	18		840	362		362	* 500	386	206	46	23	23
4	16		457	297		318			206	46	22	22
5	14	* 15	318	318		297			198	44	23	22
6	14		340	318		276			198	41	22	23
7	15		256	256		* 263			198	39	22	29
8	17		207	218		* 249			217	39	23	25
9	18		157			236		* 398	191	33	21	23
10	25	14	136		* 180				170	35	21	23
11	19	16	142				* 325		157	35	21	25
12	17	18	145						144	32	22	31
13	16	20	128						134	32	23	28
14	15	21	109						122	32	23	31
15	15	21	* 124					409	114	31	23	28
16	17	31	* 139					433	100	31	23	25
17	19	24	154					433	97	29	21	24
18	17	29	236		318	256		386	87	28	19	23
19	16	218	183		276	221		362	77	28	20	23
20		131	151	* 160	1,080	202	* 325	318	77	26	20	24
21		66	145		1,270	202		318	69	28	21	25
22		48	128		698	209		318	69	24	19	23
23		44	109		588	256		276	64	25	19	23
24		68			482	297		276	66	25	19	31
25		120			457	386		276	60	32	19	28
26		183			457		457	276	56	28	21	25
27		136	* 106		386			256	80	25	21	24
28		117			340			256	69	26	21	33
29		362						256	62	23	23	33
30		1,020						232	54	25	23	36
31			102					213		25	21	
Month						Maximum	Minimum	Mean	Run-off in acre-feet			
October						25	14	16.1	990			
November						1,020	14	94.7	5,640			
December						960		223	13,700			
January						457		194	11,900			
February						1,270		336	18,700			
March								318	19,600			
April								356	21,200			
May							213	353	21,700			
June						209	54	125	7,440			
July						53	23	32.8	2,020			
August						23	19	21.5	1,320			
September						36	22	26.0	1,550			
The year						1,270	14	174	126,000			

* Estimated.

FISH LAKE RESERVOIR NEAR LAKECREEK, OREG.

LOCATION.—Staff gage at dam of Fish Lake Reservoir in SW. $\frac{1}{4}$ sec. 3, T. 37 S., R. 4 E., 18 miles east of Lakecreek. Gage graduated to read sea-level elevation.

RECORDS AVAILABLE.—December, 1915, to September, 1927.

EXTREMES.—Maximum elevation during year, 4,825.17 feet July 8 and 9 (contents, 7,192 acre-feet); minimum, 4,802.68 feet October 1 (contents, 281 acre-feet).

1915-1927: Maximum elevation, that of July 8 and 9, 1927; minimum contents, practically zero.

REMARKS.—Gage-height record and capacity table furnished by Public Water Co.

Monthly elevation and contents of Fish Lake Reservoir near Lakecreek, Oreg., 1926-27

Date	Elevation (feet)	Contents (acre-feet)	Gain or loss during month (acre-feet)	Date	Elevation (feet)	Contents (acre-feet)	Gain or loss during month (acre-feet)
Sept. 30.....	4,802.56	264	-----	May 31.....	4,822.25	6,055	+1,773
Oct. 31.....	4,806.62	1,083	+819	June 30.....	4,824.89	7,080	+1,025
Nov. 30.....	4,809.83	1,935	+852	July 31.....	4,821.55	7,792	-1,288
Dec. 31.....	4,812.31	2,667	+732	Aug. 31.....	4,813.08	2,902	-2,890
Jan. 31.....	4,813.75	3,112	+445	Sept. 30.....	4,805.02	701	-2,201
Feb. 28.....	4,814.84	3,459	+347				
Mar. 31.....	4,815.84	3,786	+327	The year.....	-----	-----	+437
Apr. 30.....	4,817.32	4,282	+496				

NORTH FORK OF LITTLE BUTTE CREEK AT FISH LAKE, NEAR LAKECREEK, OREG.

LOCATION.—Water-stage recorder in SE. ¼ sec. 4, T. 37 S., R. 4 E., at outlet of Fish Lake, 18 miles east of Lakecreek.

DRAINAGE AREA.—18 square miles (revised).

RECORDS AVAILABLE.—October, 1914, to September, 1927; incomplete.

EXTREMES.—Maximum discharge during year, 153 second-feet August 25 (gage height, 3.64 feet); no flow October 9 to November 14, and November 21–24. 1914–1927: Maximum discharge, that of August 25, 1927; creek practically dry at times.

REMARKS.—Records fair, October to April; good, May to September. Cascade Canal diverts water from Fourmile Lake in Klamath River Basin into Fish Lake Basin; no diversions from creek above station. Flow regulated by storage in Fish Lake Reservoir. Gage-height record furnished by Public Water Co.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6	0	1	4	6	7	8	16	25	23	89	149
2	3	0	1	4	6	7	9	16	25	24	89	149
3	4	0	1	4	6	7	9	16	25	24	89	140
4	4	0	1	4	6	7	9	16	25	24	89	106
5	7	0	1	4	6	7	9	17	25	24	89	96
6	7	0	1	4	6	7	9	18	25	24	89	93
7	4	0	1	4	6	7	9	19	25	23	89	78
8	2	0	1	4	6	8	9	19	24	28	89	70
9	0	0	2	4	6	8	9	19	24	37	91	63
10	0	0	2	4	6	8	9	19	24	38	95	63
11	0	0	2	4	6	8	9	19	25	36	96	61
12	0	0	2	4	6	8	10	20	24	34	96	61
13	0	0	2	4	6	8	9	21	24	48	94	59
14	0	0	2	4	6	8	9	22	23	59	90	59
15	0	1	2	4	6	8	10	22	23	69	88	57
16	0	1	2	4	6	8	10	23	23	66	88	56
17	0	1	2	4	6	8	10	24	24	62	88	56
18	0	1	2	5	6	9	10	24	24	64	82	54
19	0	1	2	5	6	8	10	24	24	72	80	52
20	0	1	3	5	7	8	9	25	24	76	80	52
21	0	0	2	5	7	8	10	25	24	80	80	51
22	0	0	3	5	7	8	10	25	24	82	81	51
23	0	0	3	5	7	8	11	25	24	83	88	50
24	0	0	3	5	6	8	11	25	24	84	106	52
25	0	1	3	5	7	8		25	24	85	132	66
26	0	1	3	5	7	8	14	25	24	86	153	69
27	0	1	3	5	7	8		26	24	87	149	68
28	0	1	4	5	7	8		26	23	88	144	68
29	0	1	3	5		8		25	23	89	144	68
30	0	1	3	5		8	16	25	23	89	144	67
31	0		3	6		8		25		89	149	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	7	0	1.2	74
November	1	0	.4	24
December	4	1	2.1	129
January	6	4	4.5	277
February	7	6	6.3	350
March	9	7	7.8	480
April	16	8	10.4	619
May	26	16	21.8	1,340
June	25	23	24.1	1,430
July	89	23	58.0	3,570
August	153	80	102	6,270
September	149	50	72.8	4,330
The year	153	0	26.1	18,900

NORTH FORK OF LITTLE BUTTE CREEK ABOVE MEDFORD INTAKE, NEAR LAKECREEK, OREG.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 25, T. 36 S., R. 2 E., 200 yards above intake of city of Medford water-supply pipe and 5 miles above Lakecreek.

RECORDS AVAILABLE.—September, 1911, to March, 1913; May, 1922, to September, 1927, incomplete.

EXTREMES.—Maximum discharge during year, 182 second-feet August 26 (gage height, 2.36 feet); minimum, 59 second-feet July 7-9 (gage height, 1.74 feet).

1911-1913, 1922-1927: Maximum discharge, about 680 second-feet December, 30, 1924 (gage height, 3.30 feet); minimum, 15 second-feet October 12-14, 1924.

REMARKS.—Records good except those for estimated periods, which are fair. No record October 1 to April 30. Small irrigation diversions above station. Flow regulated by storage in Fish Lake Reservoir.

Daily and monthly discharge, in second-feet, 1927

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1.....	85	82	63	122	174	17.....	84	67	98	120	88
2.....	80	81	61	122	174	18.....		66	97	118	86
3.....	74	81	61	122	167	19.....		66	108	114	86
4.....	72	79	60	122	144	20.....	85	64	110	114	84
5.....	76	79	60	122	122	21.....		64	116	112	82
6.....	84	79	60	122	122	22.....		64	116	112	81
7.....	82	79	60	122	112	23.....	88	64	116	120	82
8.....	81	81	59	122	102	24.....		64	118	131	90
9.....	81	77	72	124	95	25.....		64	118	153	95
10.....	81	76	77	124	95	26.....	85	67	118	180	98
11.....	81	74	76	124	95	27.....		66	120	180	102
12.....		72	74	124	93	28.....		64	124	177	98
13.....		70	86	124	91	29.....		64	122	174	98
14.....	84	70	95	118	89	30.....	82	63	122	174	88
15.....		69	106	116	89	31.....	84		122	174	
16.....		67	102	116	88						

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May.....	88	72	83.1	5,110
June.....	82	63	70.8	4,210
July.....	124	59	93.5	5,750
August.....	180	112	132	8,120
September.....	174	81	104	6,190
The period.....				29,400

* Estimated.

NORTH FORK OF LITTLE BUTTE CREEK ABOVE INTAKE OF ROGUE RIVER VALLEY CANAL, NEAR LAKECREEK, OREG.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 21, T. 36 S., R. 2 E., one-eighth mile above intake of Rogue River Valley Canal and 1 mile above Lakecreek. RECORDS AVAILABLE.—April, 1916, to September, 1919, incomplete; April, 1921, to September, 1927.

EXTREMES.—Maximum discharge during year, 775 second-feet February 20 (gage height, 3.75 feet); minimum, 7.3 second-feet October 14 (gage height, 0.66 foot).

1916-1919, 1921-1927: Maximum discharge, 1,560 second-feet December 30, 1924 (gage height, 5.42 feet); minimum, that of October 14, 1926.

REMARKS.—Records good except those for estimated periods, December 8-10, 15-17, 22-25, and 29-31. Diversions for irrigation above gage. Flow regulated by storage in Fish Lake Reservoir.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	16	9	58	37	48	90	105	75	70	39	92	156
2.....	13	10	276	143	60	129	231	68	66	42	90	154
3.....	14	10	192	72	94	96	165	62	64	43	94	148
4.....	10	10	65	65	76	96	125	60	62	42	94	129
5.....	9	10	42	65	61	82	105	68	62	37	94	105
6.....	8	11	72	72	60	77	96	92	57	34	94	111
7.....	10	11	46	57	57	74	87	82	64	36	94	100
8.....	8	11	38	48	51	78	84	78	70	35	96	85
9.....	16	11	38	44	47	87	89	70	60	46	98	75
10.....	14	10	38	42	44	80	103	70	56	52	100	80
11.....	9	12	29	39	41	74	94	78	56	52	102	80
12.....	8	13	40	38	40	75	87	69	55	48	105	78
13.....	8	17	34	37	38	148	84	74	51	59	107	82
14.....	8	16	29	34	36	165	82	68	46	70	105	84
15.....	8	24	30	37	34	119	102	70	43	80	100	82
16.....	14	24	40	38	38	109	100	74	42	77	98	80
17.....	11	14	60	36	39	119	96	69	45	74	100	80
18.....	8	72	80	36	94	128	87	69	48	72	100	78
19.....	10	116	58	62	114	103	80	77	43	82	90	77
20.....	8	46	52	76	350	94	75	82	41	85	85	77
21.....	8	24	52	41	210	94	72	77	40	92	85	77
22.....	8	19	37	37	152	94	69	74	41	89	85	72
23.....	8	20	36	36	146	90	70	66	40	90	92	77
24.....	8	25	46	34	107	90	72	64	40	94	105	80
25.....	8	51	33	33	109	89	75	69	40	92	125	90
26.....	8	58	40	33	100	82	74	66	48	92	165	94
27.....	8	41	34	36	89	96	75	66	47	90	160	98
28.....	9	39	34	72	80	85	75	82	42	98	165	94
29.....	9	148	36	57	-----	77	72	75	39	98	158	96
30.....	9	141	36	46	-----	74	66	66	41	96	150	96
31.....	9	-----	36	45	-----	77	-----	72	-----	92	154	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	16	8	9.7	596
November.....	148	9	34.1	2,030
December.....	276	-----	57.1	3,510
January.....	143	33	49.9	3,070
February.....	350	34	86.2	4,790
March.....	165	74	95.8	5,890
April.....	231	66	93.2	5,550
May.....	92	60	72.0	4,430
June.....	70	39	50.6	3,010
July.....	98	34	68.6	4,220
August.....	165	85	109	6,700
September.....	156	72	93.8	5,580
The year.....	350	8	68.2	49,400

HOPKINS CANAL NEAR BROWNSBORO, OREG.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 8, T. 36 S., R. 1 E., at head of Bradshaw drop, 50 feet below intake of Medford Irrigation District Canal and 2 miles southwest of Brownsboro.

RECORDS AVAILABLE.—Irrigation seasons of 1913, 1915 to 1919, and 1921 to 1927.

EXTREMES.—Maximum discharge during year, 56 second-feet May 15 (gage height, 1.96 feet); canal dry at times.

1913, 1915-1919, 1921-1927: Maximum discharge, 77 second-feet June 1, 1925 (gage height, 2.31 feet).

REMARKS.—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 and South Forks of Little Butte Creek near Lakecreek, to irrigate about 4,500 acres in the basin of Bear Creek.

Daily and monthly discharge, in second-feet, 1927

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1.....		24	32	35	42	16.....	50	47	35	31	30
2.....		48	34	34	42	17.....	47	45	30	29	30
3.....		46	31	33	42	18.....	48	42	28	29	30
4.....		42	30	35	39	19.....	50	42	27	26	28
5.....		39	29	36	39	20.....	49	39	28	26	30
6.....		36	24	36	42	21.....	50	38	34	26	32
7.....		39	24	34	41	22.....	47	42	36	26	30
8.....		44	22	32	34	23.....	45	40	36	28	31
9.....		42	29	33	30	24.....	50	43	36	30	35
10.....		42	36	33	32	25.....	50	38	39	30	32
11.....		44	38	34	32	26.....	48	39	39	30	32
12.....		46	32	39	38	27.....	44	48	37	36	26
13.....		47	34	39	33	28.....	45	41	36	36	30
14.....	50	44	36	38	27	29.....	45	34	36	41	30
15.....	50	44	36	36	30	30.....	42	31	37	44	31
						31.....	40		34	42	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May 14-31.....	50	40	47.2	1,690
June.....	48	24	41.2	2,450
July.....	39	22	32.7	2,010
August.....	44	26	33.6	2,060
September.....	42	26	33.3	1,980

MEDFORD IRRIGATION DISTRICT CANAL NEAR BROWNSBORO, OREG.

LOCATION.—Water-stage recorder and staff gage in SW. $\frac{1}{4}$ sec. 8, T. 36 S., R. 1 E., 100 yards below diversion from Rogue River Valley Canal and 2 miles south-west of Brownsboro.

RECORDS AVAILABLE.—May, 1922, to September, 1927.

EXTREMES.—Maximum discharge during year, 74 second-feet September 7 (gage height, 3.32 feet); canal dry at times.

1922-1927: Maximum discharge, 91 second-feet November 18, 1923 (gage height, 2.95 feet).

REMARKS.—Records excellent. This canal diverts from Rogue River Valley Canal in SW. $\frac{1}{4}$ sec. 8. Water is used for irrigation of about 10,000 acres in the basin of Bear Creek.

Daily and monthly discharge, in second-feet, 1927

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1.....	0	24	42	61	68	16.....	23	38	57	67	37
2.....	0	39	42	61	68	17.....	29	41	58	72	36
3.....	0	38	42	59	70	18.....	30	47	54	72	35
4.....	0	36	42	59	72	19.....	29	47	55	70	36
5.....	0	36	41	59	70	20.....	34	46	58	60	32
6.....	0	35	40	60	71	21.....	34	45	58	56	30
7.....	0	36	40	60	74	22.....	36	46	58	53	30
8.....	0	37	37	58	68	23.....	36	46	58	54	30
9.....	0	37	31	58	61	24.....	37	44	60	66	30
10.....	0	37	30	58	58	25.....	36	43	60	68	30
11.....	0	38	30	58	58	26.....	37	44	60	66	30
12.....	0	37	30	60	60	27.....	37	49	58	68	29
13.....	0	38	33	63	60	28.....	37	50	58	68	31
14.....	7	38	44	65	40	29.....	38	45	61	69	31
15.....	19	38	53	66	38	30.....	37	41	61	68	31
						31.....	37	-----	60	68	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May.....	38	0	18.5	1,140
June.....	50	24	40.5	2,410
July.....	61	30	48.7	2,990
August.....	72	53	62.9	3,870
September.....	74	29	47.1	2,800
The year.....	74	0	18.3	13,200

NOTE.—No flow in months omitted.

EAGLE POINT CANAL NEAR EAGLE POINT, OREG.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ sec. 31, T. 35 S., R. 1 E., 200 feet below diversion, 100 feet above intake of Pelouze lateral, and $2\frac{1}{2}$ miles east of Eagle Point.

RECORDS AVAILABLE.—Irrigation seasons 1920 to 1927.

EXTREMES.—Maximum discharge during year, 23 second-feet June 27 and 28 (gage height, 1.76 feet); minimum (estimated), 9 second-feet September 28-30.

1920-1927: Maximum discharge, 31 second-feet August 23, 1925; canal dry at times.

REMARKS.—Records excellent. Discharge estimated June 1-8, 10-20, September 21-26, and 28-30. This canal diverts water from Little Butte Creek in sec. 31, T. 35 S., R. 1 E., for irrigation in vicinity of Eagle Point.

Daily and monthly discharge, in second-feet, 1927

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

Month	Maximum	Minimum	Mean	Run-off in acre-feet
June.....	23	14	18.0	1,070
July.....	18	11	14.6	898
August.....	21	11	15.3	941
September.....	17		13.1	780
The period.....				3,690

EMIGRANT GAP RESERVOIR NEAR ASHLAND, OREG.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ sec. 20, T. 39 S., R. 2 E., at Emigrant Gap Dam of Talent Irrigation District, 6 miles southeast of Ashland. Gage graduated to read sea-level elevation.

RECORDS AVAILABLE.—December, 1924, to September, 1927.

EXTREMES.—Maximum elevation during year, 2,175.2 feet February 20 (contents, 8,748 acre-feet); reservoir practically dry early in October.

REMARKS.—This reservoir was completed in 1924 by the Talent Irrigation District to provide water for lands under East and Talent laterals in vicinity of Talent, Oreg.

Monthly elevation and contents, 1926-27

Date	Elevation (feet)	Contents (acre-feet)	Gain or loss during month (acre-feet)	Date	Elevation (feet)	Contents (acre-feet)	Gain or loss during month (acre-feet)
Sept. 30.....		0		May 31.....	2,173.3	8,294	+208
Oct. 31.....		*100	+100	June 30.....	2,169.8	7,502	-792
Nov. 30.....	2,143.8	3,294	+3,194	July 31.....	2,152.8	4,458	-3,044
Dec. 31.....	2,165.4	6,586	+3,292	Aug. 31.....	2,123.0	1,400	-3,058
Jan. 31.....	2,170.0	7,546	+960	Sept. 30.....		*950	-450
Feb. 28.....	2,170.2	7,590	+44				
Mar. 31.....	2,172.0	7,994	+404	The year.....			+950
Apr. 30.....	2,172.4	8,086	+92				

* Estimated.

EMIGRANT CREEK NEAR ASHLAND, OREG.

LOCATION.—Water-stage recorders and staff gage in SE. ¼ sec. 20, T. 39 S., R. 2 E., 500 feet below Emigrant Gap Reservoir Dam and 6 miles southeast of Ashland. First recorder destroyed February 20; new recorder installed July 8. Gage datum raised 3.38 feet October 1, 1926.

RECORDS AVAILABLE.—January, 1920, to September, 1927, incomplete.

EXTREMES.—Maximum discharge during year (computed flow over dam), 5,260 second-feet February 20 (gage height, 7.02 feet); creek practically dry October 1 to November 30.

1920-1927: Maximum discharge, that of February 20, 1927; creek dry at times.

REMARKS.—Records fair except those for estimated periods. Diversions for irrigation above station; principal canals are Ashland Lateral and East Lateral. Keene Creek Canal diverts water into Emigrant Creek from Klammath River Basin. Flow regulated by storage in Emigrant Gap Reservoir.

Daily and monthly discharge, in second-feet, 1926-27

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....		45	•10	235	89	86	19	0.6	20	4.6
2.....		106	•50	235	518	19	19	.5	17	4.8
3.....		160	•100	235	518	86	19	.3	17	4.8
4.....		149		235	425	39	19	.3	17	5.1
5.....		235		275	425	30	19	.6	18	4.8
6.....	•0.5	•250	•150	275	275	120	3.8	.6	18	4.0
7.....				79	129	85	8.5	6.4	18	1.7
8.....				86	129	85	2.6	21	18	.2
9.....				86	129	34	2.6	13	20	
10.....		•60	•70	86	129	39	1.7	8.9	23	
11.....				75	129	65	.8	8.9	23	
12.....				75	142	52	.6	9.2	23	
13.....				92	142	30	.6	11	23	
14.....				86	131	30	.6	19	23	
15.....		•30	•20	86	120	31	.6	26	22	
16.....										
17.....				99	106	31	.5	22	22	
18.....				75	102	31	.6	18	22	
19.....	•150	•10		•150	75	89	31	.6	20	22
20.....				182	75	89	31	.4	25	22
21.....		•100	•2,360	72	79	33	.5	29	23	•.1
22.....				•650	72	60	.6	29	23	
23.....				•350	72	60	.6	30	24	
24.....		91	•1.0	145	72	86	.6	30	18	
25.....		84		107	82	181	.8	31	16	
26.....		71		275	82	181	.8	30	12	
27.....				275	82	181	.6	27	13	
28.....				235	72	142	.3	27	12	
29.....				188	72	120	.3	23	9.2	
30.....			•70	72	94	19	.6	21	8.1	
31.....				86	94	19	.6	21	7.0	
				86		19		21	4.6	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....			43.4	2,670
January.....		1.0	62.9	3,870
February.....	2,360		217	12,100
March.....	275	72	112	6,890
April.....	518	60	170	10,100
May.....	120	19	39.7	2,440
June.....	19	.3	4.03	240
July.....	31	.3	17.1	1,050
August.....	24	4.6	18.0	1,110
September.....	5.1		1.07	64
The year.....	2,360	0	56.0	40,500

• Estimated.

NOTE.—No flow in months omitted.

BEAR CREEK NEAR ASHLAND, OREG.

LOCATION.—Water-stage recorder in sec. 31, T. 38 S., R. 1 E., 300 yards below mouth of Butler Creek and 3 miles northwest of Ashland.

RECORDS AVAILABLE.—Irrigation seasons, 1923 to 1927.

EXTREMES.—Maximum stage, 9.40 feet, determined from high-water mark, occurred February 20, 1927 (discharge not determined); minimum discharge, 1.8 second-feet August 6 (gage height, 0.38 foot).

1923-1927: Maximum stage, that of February 20, 1927; minimum discharge, 0.4 second-foot August 24, 1923, and August 2, 1926.

REMARKS.—Records fair prior to June 5 and good thereafter. Diversions for irrigation above station. Flow regulated by storage in Emigrant Gap Reservoir.

Daily and monthly discharge, in second-feet, 1927

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1.....	*270	131	26	6.6	5.2	16.....	*197	76	16	1.9	11
2.....		126	27	4.4	4.8	17.....	198	70	16	2.0	11
3.....		*114	26	4.0	10	18.....	*196	63	11	2.0	11
4.....		101	24	3.6	7.2	19.....	195	61	11	2.4	14
5.....		*101	22	2.8	5.2	20.....	*192	58	14	2.4	13
6.....	288	101	18	2.4	7.8	21.....	189	53	16	2.8	10
7.....	274	96	16	2.0	7.8	22.....	*176	52	13	3.2	10
8.....	232	108	19	2.4	9.6	23.....	*162	47	12	4.8	11
9.....	207	106	20	2.0	6.0	24.....	148	44	18	4.4	17
10.....	204	96	17	2.0	5.2	25.....	*142	41	33	5.6	16
11.....	*202	94	15	2.0	5.6	26.....	137	46	18	5.2	14
12.....	*200	92	14	2.0	10	27.....	132	47	11	4.8	13
13.....	*198	87	18	2.8	11	28.....	137	40	9.0	11	16
14.....	195	83	16	2.8	13	29.....	*133	35	6.6	13	18
15.....	*196	81	16	3.2	12	30.....	*130	29	7.8	10	22
						31.....	126	-----	7.8	5.6	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May.....		126	196	12, 100
June.....	131	29	76.0	4, 520
July.....	33	6.6	16.6	1, 020
August.....	13	1.9	4.07	250
September.....	22	4.8	10.9	649
The period.....				18, 500

Estimated.

BEAR CREEK BELOW PHOENIX CANAL, NEAR TALENT, OREG.

LOCATION.—Water-stage recorder in sec. 23, T. 38 S., R. 1 W., 500 feet below intake of Phoenix Canal and 1 mile north of Talent. Gage datum lowered 1.00 foot October 1, 1926.

RECORDS AVAILABLE.—May, 1923, to September, 1927, incomplete.

EXTREMES.—Maximum discharge during year, about 8,880 second-feet February 20 (gage height, 8.30 feet); creek dry July 29 to August 3 and August 5–28.

1923–1927: Maximum discharge, that of February 20, 1927; creek practically dry at times each season.

REMARKS.—Records good except those for extremely high stages and for estimated periods, which are fair. Diversions for irrigation above station. Flow partly regulated by storage in Emigrant Gap Reservoir.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1.0	0.3	300	110	151	287	246	369	126	15	0	8.4
2.....	3.7	.3	450	610	227	411	745	302	116	14	0	8.9
3.....	4.0	.3	710	430	398	369	870	252	99	14	0	14
4.....	4.0	.3	279	366	374	330	585	278	99	14	.8	9.9
5.....	3.4	.3	190	414	297	311		252	96	11	0	8.4
6.....	3.0	.3	227	450	255	302		317	92	6.1	0	14
7.....	2.7	.3	164	350	193	269	* 420	317	91	2.0	0	14
8.....	5.2	.3	130	190	117	299		275	91	.7	0	17
9.....	7.7	.3	105	160	143	314		232	91	1.2	0	14
10.....	12	.3	95	153	160	269		218	82	.5	0	10
11.....	8.4	.3	90	145	130	198	408	238	81	.4	0	10
12.....	7.0	5.4	92	132	97	243	432	202	75	.4	0	16
13.....	7.0	18	125	97	88	299	422	185	70	.7	0	16
14.....	7.7	* 16	188	89	77	344	372	185	62	.6	0	17
15.....	* 8.8	13	128	98	76	308	333	178	58	.8	0	19
16.....	10	28	110	92	77	281	366	200	53	.8	0	16
17.....	12	19	132	82	78	284	317	192	* 43	1.1	0	11
18.....	9.3	27	350	77	500	272	308	173	33	1.8	0	11
19.....	8.1	112	272	74	504	238	272	180	35	.2	0	11
20.....	7.4	105	242	78	3,720	243	263	180	33	.2	0	12
21.....	6.6	62	183	58	2,080	252	246	180	29	.2	0	10
22.....	6.6	46	151	52	1,010	240	238	168	25	.2	0	7.8
23.....	6.3	40	160	55	745	190	311	150	24	.2	0	13
24.....	5.2	78	151	53	585	139		143	22	.3	0	21
25.....	5.0	95	145	49	540	170		139	21	11	0	20
26.....	5.0	138	123	45	520	227	* 350	146	25	.7	0	17
27.....	1.0	116	71	48	464	238		131	36	.3	0	16
28.....	.4	88	105	151	411	224		131	29	.2	0	19
29.....	.3	250	112	183	-----	213		139	24	0	1.1	21
30.....	.3	660	110	178	-----	202	355	126	19	0	6.4	25
31.....	.2	-----	110	128	-----	198		120	-----	0	8.9	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	12	0.2	5.46	336
November.....	660	.3	64.0	3,810
December.....	710	71	187	11,500
January.....	610	45	163	10,300
February.....	3,720	76	501	27,800
March.....	411	139	263	16,200
April.....	870	238	392	23,300
May.....	369	120	203	12,500
June.....	126	19	59.3	3,530
July.....	15	0	8.18	196
August.....	8.9	0	55	34
September.....	25	7.8	14.2	845
The year.....	3,720	0	152	110,000

* Estimated.

BEAR CREEK AT MEDFORD, OREG.

LOCATION.—Water-stage recorder in NW. ¼ sec. 30, T. 37 S., R. 1 W., just above Main Street Bridge in Medford.

RECORDS AVAILABLE.—March, 1915, to September, 1927, incomplete.

EXTREMES.—Maximum discharge during year (estimated), 10,200 second-feet February 20 (gage height, 10.15 feet); minimum, 7.4 second-feet August 21 (gage height, 0.25 foot).

1915-1927: Maximum discharge, that of February 20, 1927; creek practically dry at times.

REMARKS.—Records poor in May, fair in June, and good July to September. Diversions for irrigation above station. Flow partly regulated by storage in Emigrant Gap Reservoir.

Daily and monthly discharge, in second-feet, 1927

Day	Feb.	Apr.	May	June	July	Aug.	Sept.
1.				• 140	26	16	18
2.				• 130	20	14	19
3.				• 110	23	12	22
4.			• 300	107	26	11	24
5.				111	28	9.8	22
6.				107	21	9.4	25
7.			338	100	20	11	32
8.			• 290	102	16	11	34
9.			• 245	107	19	9.4	35
10.			• 230	99	18	9.4	32
11.			• 250	90	17	10	36
12.			• 220	87	17	11	42
13.			• 200	84	14	11	46
14.			195	• 78	12	11	43
15.			• 196	72	12	12	44
16.			197	69	12	11	42
17.			• 195	67	13	9.4	31
18.			193	• 60	16	11	30
19.			199	• 50	12	9.4	28
20.			199	• 45	12	9.4	27
21.			209	• 40	12	10	24
22.		1,530	• 185	• 35	10	11	21
23.			• 175	33	9.8	11	22
24.			• 170	34	12	12	30
25.		660	• 165	30	20	15	35
26.			• 170	34	14	14	31
27.			• 155	52	14	14	37
28.			155	50	14	16	51
29.			• 160	44	16	16	47
30.			365	• 145	15	16	47
31.			• 140		18	18	
Month	Maximum	Minimum	Mean	Run-off in acre-feet			
May			219	13,500			
June		30	73.4	4,370			
July	28	9.8	16.4	1,010			
August	18	9.4	12.0	738			
September	51	18	32.6	1,940			
The period				21,800			

• Estimated.

ASHLAND LATERAL NEAR ASHLAND, OREG.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 33, T. 39 S., R. 2 E., at divide separating Emigrant Creek and Hill Creek Basins, 9 miles southeast of Ashland.

RECORDS AVAILABLE.—May, 1925, to September, 1927.

EXTREMES.—Maximum discharge during year, 22 second-feet July 22–24 (gage height, 2.13 feet); canal dry at times.

1925–1927: Maximum discharge, 27 second-feet July 1, 1926; canal dry at times.

REMARKS.—Records good. Ashland lateral of Talent Irrigation District diverts from Sampson Creek in SW. $\frac{1}{4}$ sec. 26, T. 39 S., R. 2 E. Water is used to irrigate about 1,400 acres in and near Ashland. Practically all flow at this station is contributed from Klamath River Basin through Keene Creek Canal; record of this canal published in Water-Supply Paper 651.

Daily and monthly discharge, in second-feet, of Ashland lateral near Ashland, Oreg., 1926–27

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1.....	0	2.1	7.1	13	9.4	16.....	0	9.0	13	15	4.0
2.....	0	2.0	7.2	14	9.1	17.....	0	11	14	15	4.0
3.....	0	1.9	7.1	18	8.5	18.....	0	12	16	15	3.1
4.....	0	1.8	7.0	18	8.4	19.....	2.4	12	17	15	2.6
5.....	0	1.7	7.2	18	8.4	20.....	4.9	12	18	15	2.4
6.....	0	1.5	9.5	16	8.7	21.....	4.5	12	20	15	2.4
7.....	0	1.5	9.4	13	9.1	22.....	4.4	15	22	15	2.3
8.....	0	2.1	10	13	8.4	23.....	3.1	16	22	18	2.5
9.....	0	2.5	13	14	7.1	24.....	2.0	15	22	18	3.2
10.....	0	1.6	9.1	15	6.7	25.....	1.9	15	16	18	2.9
11.....	0	1.3	8.7	15	6.8	26.....	1.9	14	16	18	2.5
12.....	0	1.6	8.7	15	7.1	27.....	1.9	13	15	18	2.9
13.....	0	3.0	8.5	15	5.2	28.....	2.1	10	15	18	3.4
14.....	0	3.0	8.4	15	5.0	29.....	2.2	9.9	14	17	3.5
15.....	0	4.3	11	15	4.3	30.....	2.1	10	13	13	3.7
						31.....	2.0		13	10	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May.....	4.9	0	1.14	70
June.....	16	1.3	7.26	432
July.....	22	7.0	12.8	787
August.....	18	10	15.5	953
September.....	9.4	2.3	5.25	312
The year.....	22	0	3.53	2,550

NOTE.—No flow in months omitted.

EAST LATERAL NEAR ASHLAND, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 20, T. 39 S., R. 2 E., 500 feet below Emigrant Gap Dam and 6 miles southeast of Ashland.

RECORDS AVAILABLE.—Irrigation seasons, 1923 to 1927.

EXTREMES.—Maximum discharge during year, 44 second-feet July 7 (gage height, 2.41 feet); canal dry at times.

1923-1927: Maximum discharge, 52 second-feet July 20-22, 1925; canal dry at times.

REMARKS.—Records fair. Discharge interpolated September 7. East lateral of Talent Irrigation District diverts water from Emigrant Creek in SE. $\frac{1}{4}$ sec 20, for the irrigation of about 3,500 acres of land on both sides of Bear Creek.

Daily and monthly discharge, in second-feet, 1926-27

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1.....	0	15	24	37	19	16.....	15	23	38	27	3.0
2.....	0	15	24	34	19	17.....	15	23	37	25	1.6
3.....	19	15	21	33	19	18.....	14	23	39	26	0
4.....	9.3	15	21	33	19	19.....	14	24	41	27	0
5.....	14	15	31	33	19	20.....	15	30	41	28	0
6.....	6.0	17	38	32	19	21.....	15	33	42	29	0
7.....	0	19	38	34	19	22.....	15	33	41	29	0
8.....	0	18	38	36	18	23.....	14	33	41	29	0
9.....	9.0	18	38	36	15	24.....	14	33	40	29	0
10.....	19	15	38	37	12	25.....	14	34	40	27	0
11.....	0	16	37	37	10	26.....	14	34	42	29	0
12.....	0	22	37	36	8.7	27.....	15	33	41	29	0
13.....	0	22	39	35	6.8	28.....	15	29	40	29	0
14.....	3.6	22	39	32	6.0	29.....	15	27	40	26	0
15.....	15	22	38	29	3.5	30.....	15	26	40	22	0
						31.....	15		39	20	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May.....	19	0	10.6	652
June.....	34	15	23.5	1,400
July.....	42	21	36.9	2,270
August.....	37	20	30.5	1,880
September.....	19	0	7.25	431
The year.....	42	0	9.15	6,630

NOTE.—No flow in months omitted.

TALENT LATERAL NEAR ASHLAND, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 32, T. 38 S., R. 1 E., three-fourths mile below intake and 1 mile north of Ashland.

RECORDS AVAILABLE.—Irrigation seasons, 1920 to 1927.

EXTREMES.—Maximum discharge during year, 43 second-feet August 10 (gage height, 2.85 feet); canal dry at times.

1920-1927: Maximum discharge, that of August 10, 1927; canal dry at times.

REMARKS.—Records good. Discharge estimated September 30. Talent lateral diverts water from Bear Creek in SW. $\frac{1}{4}$ sec. 33, above mouth of Ashland Creek, but Ashland Creek may be diverted to enter Bear Creek above Talent lateral. Water is used for irrigation of about 2,600 acres of Bear Creek Valley land.

Daily and monthly discharge, in second-feet, 1926-27

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1.....	0	4.6	26	30	15	16.....	5.4	24	32	26	8.7
2.....	0	4.8	22	24	14	17.....	6.0	29	29	24	3.8
3.....	0	11	24	23	9.2	18.....	6.0	31	30	25	.9
4.....	0	14	23	25	11	19.....	5.1	29	31	28	.7
5.....	0	13	25	23	11	20.....	2.9	27	33	27	.7
6.....	0	13	26	33	14	21.....	1.5	31	33	29	1.1
7.....	0	14	26	34	17	22.....	1.2	31	32	30	1.9
8.....	0	14	34	36	14	23.....	1.7	31	33	28	1.5
9.....	0	15	33	34	11	24.....	1.9	31	32	23	1.5
10.....	0	19	31	39	9.8	25.....	1.8	30	35	20	1.6
11.....	0	19	29	29	9.7	26.....	1.9	32	41	20	1.4
12.....	2.8	21	28	29	9.7	27.....	1.9	33	40	21	1.2
13.....	3.1	22	21	27	8.4	28.....	1.6	32	37	22	1.1
14.....	2.9	22	25	29	8.4	29.....	2.0	28	32	19	.7
15.....	4.1	20	34	28	8.7	30.....	3.0	30	33	19	.4
						31.....	4.4	-----	32	18	-----
Month						Maximum	Minimum	Mean	Run-off in acre-feet		
May.....						6.0	0	1.97	121		
June.....						33	4.6	22.5	1,340		
July.....						41	21	30.4	1,870		
August.....						39	18	26.5	1,630		
September.....						17	.4	6.60	393		
The year.....						41	0	7.39	5,350		

NOTE.—No flow in months omitted.

WEST FORK OF ASHLAND CREEK NEAR ASHLAND, OREG.

LOCATION.—Water-stage recorder in sec. 32, T. 39 S., R. 1 E., three-fourths mile above confluence with East Fork and 4 miles south of Ashland.

DRAINAGE AREA.—9.4 square miles.

RECORDS AVAILABLE.—September, 1924, to September, 1927.

EXTREMES.—Maximum discharge during year, 281 second-feet February 20 (gage height, 3.15 feet); minimum, 1.9 second-feet October 6 (gage height, 0.49 foot).

1924-1927: Maximum discharge, that of February 20, 1927; minimum, 1.4 second-feet September 12, 1924, and August 1, 1926.

REMARKS.—Records good except those for February 20 and 21 and estimated periods (November 1-4, 21-25, and December 31). No regulation or diversions above station. Gage-height record furnished by city of Ashland.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	2.0	40	7.5	10	21	14	32	29	20	7.6	4.0
2	2.6		44	32	12	20	16	30	29	20	7.3	4.0
3	2.6		48	25	16	19	17	30	28	19	7.0	4.0
4	2.2		31	21	16	18	18	29	28	19	6.5	4.0
5	2.0	2.0	24	21	15	17	18	31	30	18	6.0	4.0
6	2.0	2.3	20	19	14	16	18	32	32	18	5.8	5.4
7	3.7	2.3	16	17	13	16	17	29	35	17	5.6	5.4
8	2.8	2.3	14	16	12	16	17	28	36	17	5.4	4.6
9	5.2	2.2	13	15	12	15	16	28	38	16	5.4	4.2
10	4.1	2.2	12	14	11	14	16	27	38	16	5.2	4.2
11	3.2	3.7	11	13	11	14	16	27	39	15	5.0	5.2
12	3.2	3.9	10	12	10	15	16	28	38	15	5.2	5.2
13	3.2	3.9	9.7	12	9.7	16	16	32	38	14	5.2	5.2
14	3.0	3.2	8.9	13	9.7	15	17	39	38	14	5.2	5.6
15	3.2	5.0	8.6	14	9.4	15	18	42	39	13	5.0	4.6
16	3.9	6.1	8.9	13	9.4	14	17	43	39	12	4.8	3.8
17	3.9	3.7	10	13	10	14	17	41	38	12	4.6	3.7
18	3.2	8.6	10	13	18	14	17	39	36	11	4.4	4.4
19	2.9	15	9.4	12	18	14	17	37	35	11	4.0	5.2
20	2.6	14	9.4	12	110	14	17	35	34	11	4.0	4.0
21	2.4	10	9.2	11	112	14	17	33	33	10	4.4	4.0
22	2.3		9.2	11	62	14	19	32	32	9.9	4.4	3.8
23	2.3		8.6	10	43	14	20	32	30	9.9	4.2	4.4
24	2.3		8.6	10	34	14	24	32	29	10	4.2	5.6
25	2.3		8.6	9.7	30	14	33	32	27	9.9	4.2	4.6
26	2.3	17	8.0	9.4	26	14	37	32	27	9.2	4.0	4.2
27	2.3	14	7.5	9.2	24	14	40	30	26	8.9	4.8	4.8
28	2.3	12	7.5	8.9	22	14	40	29	24	8.3	5.2	5.2
29	2.3	37	7.2	8.3	-----	14	38	30	23	8.1	5.0	5.8
30	2.3	71	7.2	7.7	-----	14	34	30	22	7.8	4.6	5.6
31	2.3	-----	7.2	8.0	-----	14	-----	29	-----	7.8	4.2	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	5.2	2.0	2.82	0.300	0.35	173
November	71	2.0	9.65	1.03	1.15	574
December	48	7.2	14.4	1.53	1.76	885
January	32	7.5	13.5	1.44	1.66	830
February	112	9.4	25.0	2.66	2.77	1,390
March	21	14	15.2	1.62	1.87	935
April	40	14	21.2	2.26	2.52	1,260
May	43	27	32.3	3.44	3.97	1,990
June	39	22	32.3	3.44	3.84	1,920
July	20	7.8	13.2	1.40	1.61	812
August	7.6	4.0	5.11	.544	.63	314
September	5.8	3.7	4.62	.491	.55	275
The year	112	2.0	15.7	1.67	22.68	11,400

EAST FORK OF ASHLAND CREEK NEAR ASHLAND, OREG.

LOCATION.—Water-stage recorder 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 $3\frac{1}{2}$ miles south of Ashland.

DRAINAGE AREA.—7.8 square miles.

RECORDS AVAILABLE.—September, 1924, to September, 1927.

EXTREMES.—Maximum discharge during year, about 292 second-feet February 20 (gage height, 3.50 feet); minimum, 2.0 second-feet October 5 and 6 (gage height, 0.68 foot).

1924-1927: Maximum discharge, that of February 20, 1927; minimum, 1.3 second-feet August 25, 1926.

REMARKS.—Records good. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.9	2.2	55	9.0	11	20	15	35	27	27	11	4.0
2.....	2.6		62	29	13	20	17	32	28	26	10	3.8
3.....	2.6		56	22	15	19	18	31	28	24	10	3.8
4.....	2.1		41	20	14	18	18	30	30	23	9.1	4.0
5.....	2.0	2.2	30	20	13	17	17	30	32	22	9.1	4.0
6.....	2.0	2.4	25	18	13	17	17	31	37	22	8.3	4.7
7.....	2.9	2.6	21	16	12	17	16	29	42	21	8.7	5.3
8.....	2.6	2.4	18	15	12	17	16	28	43	21	7.5	4.7
9.....	4.8	2.4	16	15	11	16	16	28	45	20	7.5	4.2
10.....	4.2	2.4	16	14	11	16	15	28	46	19	7.2	4.0
11.....	3.5	3.6	15	13	10	16	15	28	47	19	6.6	5.0
12.....	3.5	4.2	14	13	9.6	16	14	30	49	19	6.6	5.3
13.....	4.0	3.5	13	12	9.3	16	14	36	51	19	6.0	5.0
14.....	4.5	3.5	14	13	9.3	16	15	45	55	18	5.6	5.3
15.....	4.2	5.0	12	13	9.0	16	15	50	55	17	5.6	4.4
16.....	5.0	7.1	12	12	9.0	16	14	52	54	16	5.6	3.8
17.....	4.8	4.0	13	12	9.3	16	14	50	54	16	5.3	3.6
18.....	3.6	8.0	13	12	13	14	14	46	51	16	5.6	3.6
19.....	2.9	17	13	12	13	14	14	43	50	16	5.3	4.4
20.....	2.7	20	12	12	113	14	14	38	49	15	5.0	3.8
21.....	2.6	12	12	12	105	14	15	36	48	15	5.0	3.6
22.....	2.4	11	11	12	56	14	16	34	45	15	5.0	3.4
23.....	2.2		10	12	37	14	17	32	43	14	5.0	3.6
24.....	2.2		10	11	29	14	20	32	42	15	5.0	4.7
25.....	2.2		9.6	11	26	14	27	32	41	15	5.0	4.0
26.....	2.4	16	9.3	10	23	14	33	30	40	14	4.4	3.6
27.....	2.4	13	9.3	10	22	14	37	30	37	14	4.7	3.8
28.....	2.4	13	9.0	9.6	21	14	38	28	34	13	5.3	4.7
29.....	2.2	42	9.0	9.6	-----	14	36	28	32	13	5.3	5.0
30.....	2.2	97	9.0	9.0	-----	14	34	28	28	12	4.7	5.0
31.....	2.2	-----	9.0	9.3	-----	14	-----	27	-----	12	4.2	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	5.0	2.0	2.99	0.383	0.44	184
November.....	97	2.2	11.2	1.44	1.61	666
December.....	62	9.0	18.7	2.40	2.77	1,150
January.....	29	9.0	13.5	1.73	1.99	890
February.....	113	9.0	23.2	2.97	3.09	1,290
March.....	20	14	15.6	2.00	2.31	959
April.....	38	14	19.4	2.49	2.78	1,150
May.....	52	27	34.1	4.37	5.04	2,100
June.....	55	27	42.1	5.40	6.02	2,510
July.....	27	12	17.7	2.27	2.62	1,090
August.....	11	4.2	6.43	.824	.95	395
September.....	5.3	3.4	4.27	.547	.61	254
The year.....	113	2.0	17.4	2.23	30.23	12,600

PHOENIX CANAL AT TALENT, OREG.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 23, T. 38 S., R. 1 W., at Southern Oregon Experiment Station, three-eighths mile below intake and 1 mile north of Talent.

RECORDS AVAILABLE.—Irrigation seasons, 1916 to 1927.

EXTREMES.—Maximum discharge during year, 44 second-feet July 25 (gage height, 2.34 feet); canal dry at times.

1916-1927: Maximum discharge, 48 second-feet May 28, 1921 (gage height, 3.14 feet); canal dry at times.

REMARKS.—Records good except those for May 6, 8-11, June 16 and 17, which were estimated. This canal diverts water from Bear Creek in NW. $\frac{1}{4}$ sec. 23, T. 38 S., R. 1 W., for irrigation of Medford Irrigation District lands west of Bear Creek.

Daily and monthly discharge, in second-feet, 1926-27

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1.....	0	23	23	13	3.0	16.....	25	28	21	7.5	2.5
2.....	0	19	25	7.8	2.5	17.....	26	32	17	8.0	5.8
3.....	0	22	22	7.2	2.4	18.....	26	36	15	8.6	5.6
4.....	3.8	20	21	4.3	2.2	19.....	26	38	15	8.3	5.6
5.....	9.2	19	21	4.5	2.0	20.....	26	38	19	8.8	5.6
6.....	9.5	20	20	4.6	2.0	21.....	27	37	22	9.6	5.5
7.....	9.8	22	18	4.5	1.9	22.....	26	38	21	7.5	5.4
8.....	10	27	23	4.8	1.8	23.....	24	38	17	8.6	2.3
9.....	13	27	25	4.7	1.8	24.....	19	37	21	8.3	1.1
10.....	18	25	22	6.0	1.6	25.....	23	34	34	9.8	1.1
11.....	14	23	20	6.4	1.7	26.....	14	35	26	10	1.0
12.....	18	22	20	7.8	1.8	27.....	14	30	17	8.8	1.0
13.....	20	21	22	7.0	1.6	28.....	24	28	13	14	1.0
14.....	25	23	21	6.4	1.6	29.....	23	28	13	20	1.0
15.....	24	25	22	7.2	1.6	30.....	23	26	14	9.4	1.0
						31.....	23		12	3.3	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May.....	27	0	17.5	1,080
June.....	38	19	28.0	1,670
July.....	34	12	20.1	1,240
August.....	20	3.3	7.96	489
September.....	5.8	1.0	2.50	149
The year.....	38	0	6.38	4,630

NOTE.—No flow in months omitted.

EVANS CREEK NEAR ROGUE RIVER, OREG.

LOCATION.—Staff gage in sec. 26, T. 34 S., R. 3 W., at Bybee Springs, 1 mile below junction of East and West Forks of Evans Creek and 11 miles northeast of Rogue River.

RECORDS AVAILABLE.—October, 1925, to October, 1927. Discontinued.

EXTREMES.—Maximum discharge during year, about 11,100 second-feet February 20 (gage height, 12.5 feet); minimum, 7 second-feet August 27 and 28 (gage height, 0.58 foot).

1925-1927: Maximum discharge, that of February 20, 1927; minimum, 4 second-feet August 10-16, 1926 (gage height, 0.54 foot).

REMARKS.—Records fair. Diversions for irrigation above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	12	12	380	210	600	450	171	149	52	28	11	8	20 ³
2	20	12	2,150	1,810	1,210	442	442	124	49	26	11	8	22 ³
3	17	12	750	700	1,020	380	365	113	47	25	11	8	19 ³
4	13	12	380	650	700	350	275	99	45	25	10	8	22 ³
5	12	12	290	450	520	305	248	96	45	23	9	8	23 ³
6	11	12	320	380	450	290	222	92	45	23	9	9	19 ³
7	10	12	235	335	450	260	210	89	45	22	8	12	17 ³
8	11	12	185	305	468	260	210	83	43	22	8	12	16 ³
9	54	12	167	260	415	248	200	83	43	20	8	11	16 ³
10	77	12	144	235	365	235	190	83	41	20	9	11	16 ³
11	39	16	128	205	350	235	176	86	41	19	9	11	14 ³
12	24	39	144	185	305	222	167	80	39	17	8	12	14 ³
13	17	68	149	171	290	235	162	75	37	17	8	16	14 ³
14	14	60	120	158	260	260	158	72	35	17	8	16	14 ³
15	13	30	113	200	260	248	153	67	33	17	8	14	14 ³
16	22	49	185	176	275	235	149	64	32	16	8	13	14 ³
17	24	39	235	158	365	275	140	64	32	16	8	12	16 ³
18	20	28	750	149	1,890	320	136	64	30	16	8	12	16 ³
19	16	113	485	260	1,280	290	132	67	28	16	8	11	15 ³
20	14	650	320	290	7,950	290	128	72	28	14	8	11	14 ³
21	13	210	290	235	3,400	275	124	69	26	14	8	11	13 ³
22	13	96	235	180	1,730	260	115	67	26	13	8	10	13 ³
23	13	71	210	171	1,280	248	116	62	26	13	8	10	13 ³
24	13	86	190	167	900	235	116	59	28	47	8	11	13 ³
25	13	520	180	162	800	222	116	59	26	20	8	16	13 ³
26	13	485	180	158	700	200	116	59	26	16	8	13	13 ³
27	13	260	171	195	520	210	113	57	33	14	7	13	13 ³
28	13	185	158	900	450	190	109	59	32	14	7	19	13 ³
29	13	2,600	162	502	180	106	59	59	30	13	8	19	13 ³
30	12	750	235	415	176	99	59	28	13	8	8	23	13 ³
31	12	235	365	180	180	57	57	57	12	8	8	23	13 ³

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1926-27				
October	77	10	18.7	1,150 ⁰
November	2,600	12	216	12,900 ⁰
December	2,150	113	319	19,600 ⁰
January	1,810	158	346	21,300 ⁰
February	7,950	260	1,040	57,800 ⁰
March	450	176	265	16,300 ⁰
April	442	99	172	10,200 ⁰
May	149	57	77.0	4,730 ⁰
June	52	26	35.7	2,120 ⁰
July	47	12	19.0	1,170 ⁰
August	11	7	8.4	516 ⁰
September	23	8	12.3	732 ⁰
The year	7,950	7	205	149,000 ⁰
1927				
October 1-22	23	13	16.5	720 ⁰

PLEASANT CREEK NEAR ROGUE RIVER, OREG.

LOCATION.—Staff gage in sec. 28, T. 34 S., R. 4 W., $1\frac{1}{2}$ miles above confluence of Pleasant Creek and Ditch Creek and 9 miles north of Rogue River.

RECORDS AVAILABLE.—November, 1925, to June, 1927; discontinued.

EXTREMES.—Maximum discharge during year, about 2,070 second-feet February 20 (gage height, 8.2 feet); creek practically dry October 1-8.
1925-1927: Maximum discharge, that of February 20, 1927; minimum, that of October 1-8, 1926.

REMARKS.—Records fair. No gage readings on Sundays or holidays; discharge estimated. Diversions for irrigation above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0	1.4	168	60	159	77	28	20	5.7
2	0	1.4	441	300	197	77	55	17	5.7
3	0	1.4	330	150	197	68	51	17	4.4
4	0	1.1	85	150	142	50	47	14	4.4
5	0	1.1	45	102	125	37	43	14	4.2
6	0	1.1	57	66	125	37	37	14	4.1
7	0	1.2	45	55	125	37	40	14	4.1
8	0	1.4	31	50	125	43	37	13	4.1
9	7.0	1.4	26	44	125	43	37	12	4.1
10	10	1.4	22	37	110	37	35	9.1	4.1
11	8.5	2.2	22	35	95	37	33	9.1	4.1
12	2.2	7.0	30	30	78	37	31	9.1	3.6
13	1.9	12	33	27	71	42	28	8.2	3.0
14	1.6	10	22	20	64	47	26	7.4	3.0
15	1.4	7.0	22	39	70	42	26	7.0	3.4
16	3.2	7.8	42	31	78	47	24	6.5	3.4
17	3.0	4.8	82	23	81	57	28	8.2	3.0
18	2.7	4.3	133	30	418	63	33	7.4	3.0
19	2.2	26	100	95	374	52	31	10	2.9
20	1.6	132	71	64	1,200	51	31	10	2.8
21	1.6	50	74	48	510	50	19	9.1	2.5
22	1.4	15	68	39	340	48	19	8.6	2.5
23	1.4	10	50	39	267	42	17	8.2	2.5
24	1.5	19	45	39	102	40	16	7.4	2.3
25	1.6	100	40	32	133	37	15	7.4	2.3
26	1.6	100	35	30	110	35	14	6.5	2.3
27	1.6	60	27	51	90	40	14	6.5	2.3
28	1.4	35	27	217	77	31	14	6.5	2.0
29	1.4	885	56	197	-----	26	13	6.2	2.0
30	1.4	227	59	197	-----	26	13	6.0	2.0
31	1.4	-----	64	197	-----	26	-----	5.7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	-----	-----	1.99	122
November	885	1.1	57.6	3,430
December	441	22	75.9	4,670
January	-----	20	80.5	4,960
February	-----	-----	200	11,100
March	77	26	44.6	2,740
April	56	13	28.5	1,700
May	-----	5.7	9.84	605
June	5.7	2.0	3.33	198
The period	-----	-----	-----	29,500

APPLEGATE RIVER NEAR RUCH, OREG.

LOCATION.—Water-stage recorder in sec. 15, T. 39 S., R. 3 W., at Cameron Bridge, 1½ miles above mouth of Little Applegate River and 4½ miles south of Ruch. High water February 20 destroyed recorder and gage record subsequent to January 22.

RECORDS AVAILABLE.—June, 1911, to September, 1914; September, 1925, to January, 1927.

EXTREMES.—Maximum discharge during year, estimated 20,000 second-feet February 20 (gage height, 16.0 feet); minimum, 12 second-feet October 1 (gage height, 0.36 foot).

1911-1914, 1925-1927: Maximum discharge, that of February 20, 1927; minimum, 7.6 second-feet September 16, 17, 25, and 26, 1926.

REMARKS.—Records good. Diversions for irrigation above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Day	Oct.	Nov.	Dec.	Jan.
1.....	15	43	3,050	380	16.....	370	322	458	677
2.....	34	40	4,290	1,970	17.....	294	233	677	606
3.....	25	38	3,590	1,720	18.....	144	343	767	566
4.....	23	40	2,220	1,490	19.....	101	1,990	651	612
5.....	25	40	1,580	1,450	20.....	82	2,510	612	606
6.....	27	40	1,330	1,330	21.....	72	1,160	586	548
7.....	26	40	1,040	1,080	22.....	66	935	518	506
8.....	26	40	900	935	23.....	59	900	470	-----
9.....	88	40	788	844	24.....	55	1,990	434	-----
10.....	229	40	690	774	25.....	54	2,080	418	-----
11.....	138	64	638	690	26.....	52	1,810	385	-----
12.....	98	180	586	632	27.....	51	1,290	365	-----
13.....	88	198	530	580	28.....	51	1,200	350	-----
14.....	94	150	464	566	29.....	49	4,890	350	-----
15.....	124	131	434	767	30.....	47	6,580	350	-----
					31.....	44	-----	365	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	370	15	85.5	5,260
November.....	6,580	38	979	58,300
December.....	4,290	350	964	59,300
January 1-22.....	1,970	380	879	38,400
The period.....	-----	-----	-----	161,000

MCDONALD CREEK CANAL NEAR TALENT, OREG.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 34, T. 39 S., R. 1 W., 7 miles south of Talent.
 RECORDS AVAILABLE.—Irrigation seasons, 1923 to 1927.

EXTREMES.—Maximum discharge during year, 19 second-feet June 27 (gage height, 1.36 feet); canal dry at times.

1923-1927: Maximum discharge, 24 second-feet July 6, 1923 (gage height, 1.45 feet); canal dry at times.

REMARKS.—Records good. This canal diverts water from McDonald Creek, tributary to Little Applegate River, practically on line between SE. $\frac{1}{4}$ sec. 10 and SW. $\frac{1}{4}$ 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.

Daily and monthly discharge, in second-feet, 1926-27

Day	May	June	July	Aug.	Day	May	June	July	Aug.
1	(a)	11	17	4.7	16	3.0	13	10	3.2
2	(a)	11	16	4.7	17	4.6	12	9.5	3.1
3	(a)	11	17	4.6	18	4.7	12	9.1	3.0
4	(a)	11	16	4.4	19	5.0	12	8.6	1.5
5	(a)	12	16	4.1	20	5.0	12	8.2	0
6	(a)	12	16	4.0	21	5.2	13	7.8	0
7	(a)	13	16	3.9	22	5.7	14	7.6	0
8	(a)	13	15	3.3	23	5.0	16	7.4	0
9	(a)	13	15	3.3	24	7.1	17	6.9	0
10	(a)	13	14	3.4	25	9.5	17	6.3	0
11	(a)	13	13	3.3	26	9.5	18	6.0	0
12	(a)	13	12	3.3	27	9.5	19	5.7	0
13	(a)	13	12	3.3	28	10	18	5.5	0
14	(a)	13	11	3.3	29	10	18	5.3	0
15	(a)	13	11	3.3	30	10	17	4.9	0
					31	11	-----	4.9	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May	11	0	3.70	228
June	19	11	13.8	821
July	17	4.9	10.7	658
August	4.7	0	2.18	134
The year	19	0	2.54	1,840

* No record May 1-15; probably very little discharge. No flow in months omitted.

NOTE.—Possible slight flow May 1-15 not included in above table.]

ILLINOIS RIVER AT KERBY, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 9, T. 39 S., R. 8 W., at Kerby. Gage datum lowered 0.64 foot during flood of February 20.

RECORDS AVAILABLE.—March, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, estimated 50,000 second-feet February 20 (gage height, 19.6 feet); minimum discharge, 34 second-feet August 10 to September 7; minimum gage height, 2.18 feet October 7 and 8. 1926-27: Maximum discharge, that of February 20, 1927; minimum, 18 second-feet August 12 and 13, 1926 (gage height, 2.00 feet).

REMARKS.—Records fair except those for estimated periods, November 19, 20, November 23 to December 5, December 18, and February 19-22. Diversions for irrigation above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	153	7,000	2,520	6,610	2,550	1,620	1,620	690	215	47	34
2	48	146	10,000	16,300	9,100	2,430	5,100	1,520	610	166	47	34
3	48	134	12,000	8,100	8,600	2,190	3,470	1,320	690	166	47	34
4	48	129	7,000	6,390	6,170	1,950	2,700	1,220	690	166	40	34
5	48	129	3,500	4,710	3,350	1,840	2,310	1,320	690	166	40	34
6	48	123	3,200	4,510	4,160	1,620	1,950	1,220	690	166	40	34
7	45	123	2,400	3,990	5,110	1,620	1,950	1,220	690	166	40	34
8	45	117	1,970	2,900	3,200	1,620	1,840	1,130	690	166	40	47
9	1,250	117	1,590	2,170	2,400	1,520	1,620	1,040	690	124	40	47
10	1,250	117	1,500	1,970	1,970	1,420	1,420	950	690	124	34	47
11	825	117	1,410	1,590	1,770	1,320	1,220	950	610	124	34	47
12	584	617	1,410	1,500	1,500	1,520	1,220	1,040	610	124	34	47
13	362	2,640	1,410	1,410	1,410	1,730	1,220	1,130	535	124	34	47
14	310	1,410	1,250	1,330	1,330	2,070	1,220	1,420	535	124	34	47
15	362	1,040	1,250	3,500	1,500	1,840	1,220	1,520	535	90	34	47
16	1,250	1,250	2,900	2,280	1,680	1,840	1,130	1,320	465	90	34	56
17	1,410	965	2,640	1,770	2,170	2,430	1,080	1,220	465	90	34	46
18	895	895	5,000	1,590	8,850	2,190	950	1,220	395	78	34	47
19	584	3,000	2,900	6,390	11,000	1,950	950	1,220	395	78	34	47
20	420	5,000	2,900	4,160	30,000	1,730	860	1,130	330	78	34	47
21	352	3,820	2,520	2,520	25,000	1,620	860	1,040	330	78	34	47
22	300	2,640	2,170	1,870	14,000	1,730	950	950	300	124	34	47
23	260	1,970	1,590	9,080	1,620	1,040	860	300	66	34	47	47
24	218	1,870	1,500	5,760	1,520	1,320	860	300	66	34	47	47
25	300	1,770	1,590	5,100	1,420	1,420	950	300	107	34	47	47
26	280	6,160	1,770	1,410	4,150	1,320	1,620	860	270	66	34	47
27	218	1,590	1,500	3,300	1,320	1,620	860	270	56	34	47	47
28	208	1,410	7,100	2,550	1,220	1,520	770	215	56	34	56	56
29	180	5,310	4,910	-----	-----	1,220	1,320	690	215	47	34	56
30	166	2,900	2,900	-----	-----	1,220	1,220	610	215	47	34	66
31	153	-----	2,640	2,640	-----	1,320	-----	610	-----	47	34	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,250	45	404	24,800
November	-----	117	2,470	147,000
December	-----	1,250	3,200	197,000
January	16,300	1,330	3,510	216,000
February	30,000	1,330	6,460	359,000
March	2,550	1,220	1,710	105,000
April	5,100	860	1,600	95,200
May	1,620	610	1,090	67,000
June	690	215	480	28,600
July	215	47	109	6,700
August	47	34	36.4	2,240
September	66	34	45.5	2,710
The year	30,000	34	1,730	1,250,000

UMPQUA RIVER BASIN

UMPQUA RIVER NEAR ELKTON, OREG.

LOCATION.—Staff gage in sec. 8, T. 23 S., R. 7 W., at ferry crossing 4 miles south of Elkton.

DRAINAGE AREA.—3,680 square miles.

RECORDS AVAILABLE.—October, 1905, to September, 1927, incomplete.

EXTREMES.—Maximum discharge during year, 172,000 second-feet February 21 (gage height, 40.0 feet); minimum, 920 second-feet October 1 (gage height, 0.00 foot).

1905-1927: Maximum discharge, that of February 21, 1927; minimum, 640 second-feet July 18, 1926.

REMARKS.—Records good below and fair above 20,000 second-feet. Some diversions for irrigation in South Umpqua Basin, but low-water flow probably only slightly affected. No regulation.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	920	1,080	33,100	17,400	18,800	13,800	7,060	7,730	4,770	2,850	1,330	1,050
2.....	1,000	1,040	28,300	23,400	36,700	13,500	7,280	7,730	4,940	2,590	1,330	1,100
3.....	1,040	1,080	36,300	49,900	37,900	13,500	9,200	7,500	4,940	2,340	1,230	1,100
4.....	1,080	1,000	25,500	44,700	31,500	12,600	9,730	7,280	4,600	2,220	1,230	1,100
5.....	1,320	1,000	17,800	39,500	26,200	11,700	9,200	7,060	4,600	2,100	1,230	1,050
6.....	1,170	1,000	12,600	31,500	20,600	10,300	8,440	6,850	4,770	2,220	1,230	1,100
7.....	1,170	1,000	10,200	24,400	18,500	9,200	7,730	6,440	5,120	2,220	1,230	1,140
8.....	1,080	1,040	8,120	20,600	18,500	8,940	7,730	6,440	5,480	2,100	1,230	1,330
9.....	1,320	1,080	6,800	14,400	16,400	8,690	7,500	6,050	6,050	1,980	1,230	1,430
10.....	1,480	1,080	6,400	12,000	13,800	8,690	6,850	6,050	5,670	2,100	1,230	1,330
11.....	2,720	1,040	5,630	10,500	11,400	8,200	6,440	5,670	5,670	1,980	1,140	1,330
12.....	3,290	1,080	6,010	9,100	9,900	8,200	6,050	5,670	5,300	1,860	1,100	1,330
13.....	2,310	1,270	8,600	8,120	8,600	9,730	5,670	6,240	5,300	1,640	1,140	1,430
14.....	1,810	3,910	9,600	7,220	7,660	15,700	5,480	6,850	4,600	1,640	1,140	1,330
15.....	1,480	5,260	7,660	6,800	7,220	17,400	5,670	7,730	4,280	1,530	1,140	1,330
16.....	1,370	9,100	10,200	7,220	6,800	13,800	6,050	8,200	3,960	1,530	1,100	1,230
17.....	1,370	9,350	15,700	7,220	7,010	13,800	6,050	8,200	3,960	1,640	1,100	1,230
18.....	1,760	5,630	20,200	7,220	11,400	17,100	5,860	7,500	3,660	1,530	1,100	1,230
19.....	2,180	4,070	27,600	11,700	38,700	17,100	6,050	6,850	3,660	1,530	1,100	1,230
20.....	1,640	5,630	17,800	22,000	82,700	14,700	5,670	6,850	3,380	1,430	1,050	1,230
21.....	1,370	24,800	16,400	18,200	157,000	12,600	5,300	6,440	3,380	1,530	1,100	1,230
22.....	1,270	12,300	17,100	13,200	83,800	12,600	3,300	6,240	3,240	1,530	1,100	1,140
23.....	1,220	7,660	16,400	10,200	49,000	11,700	5,120	6,050	2,850	1,530	1,050	1,140
24.....	1,170	5,820	15,000	8,600	39,500	10,800	5,670	5,670	2,850	1,530	1,100	1,230
25.....	1,120	6,010	13,800	7,890	27,900	10,800	7,280	5,480	2,720	1,530	1,100	1,230
26.....	1,120	17,300	14,700	7,660	24,300	9,460	9,730	5,480	2,590	1,430	1,050	1,230
27.....	1,170	17,800	12,000	7,220	19,900	8,200	10,500	5,300	2,970	1,430	1,100	1,230
28.....	1,170	12,000	10,200	11,400	16,400	7,730	10,300	5,120	3,380	1,430	1,100	1,230
29.....	1,170	32,600	9,600	28,000	-----	7,060	9,460	4,940	3,660	1,330	1,100	1,780
30.....	1,120	69,500	14,400	25,500	-----	6,850	8,690	5,120	3,380	1,330	1,050	2,220
31.....	1,080	-----	18,500	18,800	-----	6,850	-----	4,940	-----	1,330	1,100	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	3,290	920	1,440	0.391	0.45	88,500
November.....	69,500	1,000	8,750	2.38	2.66	521,000
December.....	36,300	5,630	15,200	4.13	4.76	935,000
January.....	49,900	6,800	17,100	4.65	5.36	1,050,000
February.....	157,000	6,800	30,300	8.23	8.67	1,680,000
March.....	17,400	6,850	11,300	3.07	3.54	695,000
April.....	10,500	5,120	7,240	1.97	2.20	431,000
May.....	8,200	4,940	6,440	1.75	2.02	396,000
June.....	6,050	2,590	4,190	1.14	1.27	249,000
July.....	2,850	1,330	1,770	.481	.55	109,000
August.....	1,330	1,050	1,150	.312	.36	70,700
September.....	2,220	1,050	1,280	.348	.39	76,200
The year.....	157,000	920	8,720	2.37	32.13	6,300,000

UMPQUA RIVER BASIN

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COW CREEK NEAR AZALEA, OREG.

LOCATION.—Staff gage in sec. 33, T. 31 S., R. 4 W., 3 miles northwest of Azalea.

RECORDS AVAILABLE.—April, 1926, to September, 1927, incomplete.

EXTREMES.—Maximum discharge during year, 284 second-feet April 2 (gage height, 2.94 feet); minimum, 9 second-feet August 19–23 (gage height, 1.57 feet).

1926–27: Maximum discharge, that of April 2, 1927; minimum, 4.5 second-feet August 16, 1926 (gage height, 0.80 foot).

REMARKS.—Records good. Discharge interpolated April 23 and June 11. Minor diversions for irrigation above station. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1927

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		267	168	48	24	14	10
2		284	165	45	24	13	10
3		235	123	44	23	12	10
4		220	113	44	22	12	10
5		186	104	42	22	12	10
6		180	113	40	22	12	11
7		177	104	40	22	12	19
8		174	102	39	21	12	19
9		160	91	38	21	12	18
10		157	94	40	20	12	17
11		148	91	38	20	11	16
12		148	86	35	19	11	17
13		145	84	33	19	11	18
14		145	77	32	18	10	19
15		148	68	31	18	9	17
16		145	66	30	18	10	15
17		140	64	30	17	10	13
18		140	63	29	17	10	13
19		137	61	28	17	9	12
20		134	70	27	16	9	12
21	251	129	68	26	16	9	12
22		126	64	25	15	9	12
23		138	61	25	15	9	12
24		151	61	27	18	10	22
25		168	57	26	17	10	17
26		162	55	27	16	10	14
27		154	54	34	15	11	14
28		151	59	32	15	11	19
29		126	57	28	15	11	21
30		126	52	26	14	10	22
31			50		14	10	
Month	Maximum	Minimum	Mean	Run-off in acre-feet			
April	284	126	163	9,700			
May	168	50	82.1	5,050			
June	48	25	33.6	2,000			
July	24	14	18.4	1,130			
August	14	9	10.7	658			
September	22	10	15.0	893			
The period				19,400			

NORTH UMPQUA RIVER AT TOKETEE FALLS, OREG.

LOCATION.—Water-stage recorder 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.

DRAINAGE AREA.—337 square miles.

RECORDS AVAILABLE.—February, 1908, to July, 1909; December, 1914, to November, 1917, incomplete; July, 1924, to September, 1927.

EXTREMES.—Maximum discharge during year, 4,000 second-feet February 20 (gage height, 4.65 feet); minimum, 525 second-feet November 4 (gage height, 0.89 foot).

1908–9, 1914–1917, 1924–1927: Maximum discharge, that of February 20, 1927; minimum, 525 second-feet October 21, 1924, and November 4, 1926.

REMARKS.—Records good, except those for January 23 to March 12, which were estimated. No regulation or diversions above station.

Daily and monthly discharge, in second-feet, 1926–27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	540	530	1,310	790			978	1,560	1,310	1,080	790	688
2.....	546	530	1,390	1,110			978	1,390	1,350	1,040	790	688
3.....	558	530	1,350	1,190			978	1,390	1,390	1,040	790	688
4.....	552	530	1,150	1,190			945	1,390	1,430	1,010	760	688
5.....	535	530	1,040	1,190			945	1,390	1,520	978	760	682
6.....	530	540	1,040	1,190		1,010	945	1,390	1,600	978	760	706
7.....	564	545	945	1,120			912	1,350	1,740	978	760	706
8.....	540	535	912	1,040			912	1,350	1,830	945	760	694
9.....	576	535	880	978			912	1,310	1,740	945	754	682
10.....	576	535	850	945			880	1,310	1,700	945	754	712
11.....	540	535	880	912			880	1,350	1,650	912	748	706
12.....	552	540	880	880			850	1,390	1,600	912	748	706
13.....	550	570	850	880		1,080	880	1,560	1,560	912	742	706
14.....	550	555	790	880		1,040	880	1,780	1,560	880	742	700
15.....	545	700	820	880	1,350	1,010	912	2,020	1,520	880	736	688
16.....	565	790	850	880		1,010	912	2,170	1,520	880	730	682
17.....	570	628	912	850		978	880	2,120	1,470	880	730	676
18.....	550	592	945	850		978	880	1,920	1,430	880	724	670
19.....	545	730	912	880		945	880	1,740	1,390	850	718	664
20.....	545	1,230	850	850		945	880	1,600	1,350	850	718	664
21.....	545	945	850	790		945	880	1,470	1,350	850	718	658
22.....	540	790	820	700		945	912	1,390	1,310	850	718	658
23.....	540	748	760			945	1,010	1,350	1,270	850	712	664
24.....	545	760	790			978	1,190	1,390	1,230	850	712	670
25.....	545	850	820			978	1,520	1,430	1,190	820	706	658
26.....	545	880	760	770		945	1,650	1,430	1,230	820	700	652
27.....	545	820	760			945	1,740	1,430	1,230	820	700	700
28.....	540	912	760			945	1,740	1,390	1,150	820	706	748
29.....	540	1,760	790			945	1,700	1,310	1,120	790	706	790
30.....	530	1,650	790			945	1,650	1,310	1,010	790	700	724
31.....	530		790			978		1,270		790	688	---

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	576	530	548	1.63	1.88	33,700
November.....	1,760	530	744	2.21	2.47	44,300
December.....	1,390	760	911	2.70	3.11	56,000
January.....	1,190	---	902	2.68	3.09	55,500
February.....	---	---	1,350	4.01	4.18	75,000
March.....	---	---	987	2.93	3.38	60,700
April.....	1,740	850	1,070	3.18	3.55	63,700
May.....	2,170	1,270	1,500	4.45	5.13	92,200
June.....	1,830	1,010	1,420	4.21	4.70	84,500
July.....	1,080	790	898	2.66	3.07	55,200
August.....	790	688	735	2.18	2.51	45,200
September.....	790	652	691	2.05	2.29	41,100
The year.....	---	530	975	2.89	39.36	707,000

NORTH UMPQUA RIVER ABOVE ROCK CREEK, NEAR GLIDE, OREG.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 12, T. 26 S., R. 3 W., half a mile above mouth of Rock Creek and 5 miles northeast of Glide.

DRAINAGE AREA.—886 square miles.

RECORDS AVAILABLE.—June, 1924, to September, 1927.

EXTREMES.—Maximum discharge during year, 61,000 second-feet February 20 (gage height, 20.18 feet); minimum, 710 second-feet October 1, 6, and November 2-5.

1924-1927: Maximum discharge, that of February 20, 1927; minimum, 645 second-feet August 16, 1926.

REMARKS.—Records good except those for estimated periods, which are fair. No regulation or diversions for irrigation above station.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	710	730	7,010	4,330	7,440	4,240	2,630	4,240	2,630	1,740	*1,050	
2	750	710	10,800	11,800	11,200	4,670	2,900	3,900	2,700	1,690	*1,050	
3	865	710	8,110	10,200	8,340	4,330	3,330	3,820	2,760	1,640	*1,050	
4	840	710	5,600	9,900	6,800	3,900	3,260	3,990	2,900	1,600	1,030	
5	750	710	4,160	7,660	5,210	3,410	3,040	3,740	3,110	1,560	1,030	
6	710	730	3,410	6,600	4,240	3,110	2,760	3,650	3,330	1,510		
7	772	772	2,830	5,210	3,990	3,110	2,830	3,490	3,740	1,470		
8	915	750	2,560	4,080	3,820	3,040	2,830	3,260	4,240	1,430		
9	915	730		3,330	3,260	2,900	2,630	3,110	3,900	1,430		
10	1,390	730		2,970	2,830	2,830	2,440	3,040	3,570			
11	1,100	730	*2,000	2,700	2,500	2,760	2,270	3,040	3,330			
12	940	840		2,500	2,380	3,260	2,160	3,110	3,110		*980	
13	865	2,110	2,380	2,320	2,160	5,400	2,110	3,570	2,900			
14	818	1,780	2,110	2,220	2,060	5,400	2,160	4,500	2,830			
15	772	3,110	2,320	2,320	1,960	4,500	2,500	5,210	2,760	*1,300		*920
16	795	5,210	5,210	2,440	2,060	3,990	2,560	5,400	2,630			
17	1,200	2,110	5,600	2,160	2,440	4,330	2,380	5,210	2,500			
18	940	1,510	6,600	2,160	6,200	4,670	2,380	4,240	2,380		940	
19	840	1,960	4,850	3,820	7,440	4,160	2,270	4,080	2,270		940	
20	795	9,700	3,570	4,500	42,400	3,740	2,110	3,740	2,160		940	
21	772	4,850	2,260	3,180	30,600	3,900	2,110	3,410	2,160			
22	750	2,700	2,830	2,440	13,100	3,990	2,320	3,180	2,110			
23	750	2,060	2,380	2,220	9,320	3,820	2,830	2,970	2,010			
24	730	1,920	2,110	2,060	7,010	3,990	3,820	2,970	1,960			
25	772	3,900	2,160	1,960	6,200	3,650	5,210	3,110	1,870			
26	772	6,200	2,060	1,960	6,200	3,180	6,000	3,110	1,870	*1,200	*920	
27	795	3,900	1,920	1,960	5,210	2,900	6,000	2,900	2,380			
28	772	4,850	1,920	4,160	4,330	2,760	6,000	2,760	2,060			1,640
29	750	19,600	2,700	3,740		2,700	5,210	2,700	1,920			1,740
30	730	11,800	4,850	3,040		2,760	4,330	2,560	1,820			1,690
31	730		4,670	2,760		2,830		2,500				

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,390	710	839	0.947	1.09	51,600
November	19,600	710	3,270	3.69	4.12	195,000
December	10,800	1,920	3,740	4.22	4.86	230,000
January	11,800	1,960	3,960	4.47	5.15	243,000
February	42,400	1,960	7,520	8.49	8.84	413,000
March	5,400	2,700	3,680	4.15	4.78	226,000
April	6,000	2,110	3,180	3.59	4.00	189,000
May	5,400	2,500	3,560	4.02	4.64	219,000
June	4,240	1,820	2,660	3.00	3.35	158,000
July	1,740		1,340	1.51	1.74	82,400
August	1,050		965	1.09	1.26	59,300
September	1,740		997	1.13	1.26	59,300
The year	42,400	710	2,950	3.33	45.09	2,130,000

*Estimated.

NORTH UMPQUA RIVER AT WINCHESTER, OREG.

LOCATION.—Staff gage in NE. ¼ sec. 25, T. 26 S., R. 6 W., at Southern Pacific Railroad bridge in Winchester, 300 yards below plant of California Oregon Power Co.

DRAINAGE AREA.—1,290 square miles.

RECORDS AVAILABLE.—November, 1908, to December, 1913; October, 1923, to September, 1927.

EXTREMES.—Maximum discharge during year, 78,200 second-feet February 20 (gage height, 24.2 feet); minimum, 700 second-feet November 6 (gage height, 0.50 foot).

1908-1913, 1923-1927: Maximum discharge, 92,000 second-feet November 23, 1909 (gage height, 28.1 feet); minimum, 590 second-feet October 22 and 23, 1925.

Flood of November, 1909, was probably highest in 60 years.

REMARKS.—Records fair. No irrigation diversions above station. Slight regulation of flow by power plant 300 yards upstream.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	795	760	10,100	6,850	10,100	6,410	3,330	5,140	2,880	1,800	1,060	905
2.....	795	730	18,200	19,900	18,500	5,550	3,830	5,140	3,030	1,800	1,050	905
3.....	1,000	730	13,300	16,600	13,000	5,970	4,370	4,010	3,030	1,800	1,010	905
4.....	1,000	830	6,630	17,600	10,700	5,140	4,370	4,560	3,030	1,800	1,010	872
5.....	900	795	5,340	12,700	7,790	4,370	4,010	4,750	3,330	1,680	1,010	905
6.....	865	700	4,560	9,870	5,970	4,010	3,650	4,010	3,330	1,680	1,010	940
7.....	900	795	3,510	7,300	5,970	3,830	3,650	4,010	3,650	1,580	1,050	1,220
8.....	1,200	830	3,350	5,970	5,550	4,010	3,650	3,830	4,370	1,680	1,010	1,180
9.....	1,560	865	3,350	5,340	4,750	4,010	3,490	3,650	3,830	1,490	1,010	1,010
10.....	2,000	865	2,500	4,190	4,010	3,650	3,180	3,490	3,650	1,490	1,010	940
11.....	2,000	935	2,370	4,010	3,830	3,650	3,180	3,490	3,650	1,490	1,010	1,010
12.....	1,880	900	3,510	3,510	3,350	4,010	2,880	3,490	3,330	1,490	1,010	1,050
13.....	1,560	3,350	3,830	3,350	3,050	7,300	2,730	3,830	3,180	1,400	1,010	1,090
14.....	900	3,050	3,350	3,050	2,910	7,300	2,730	4,560	3,030	1,400	1,010	1,090
15.....	795	2,240	2,770	3,050	2,770	6,630	3,030	5,550	2,880	1,400	1,010	1,090
16.....	865	10,700	7,790	3,200	2,770	5,760	3,330	5,550	2,730	1,310	975	1,010
17.....	1,000	5,140	8,820	3,050	3,050	6,190	3,180	5,550	2,730	1,310	975	940
18.....	935	2,630	13,000	2,770	8,300	7,540	3,180	4,750	2,580	1,310	975	940
19.....	830	2,000	8,300	5,970	9,870	6,190	3,030	4,190	2,430	1,310	975	905
20.....	830	14,500	5,550	7,540	49,400	5,550	2,880	4,190	2,290	1,310	975	872
21.....	760	7,070	5,140	5,140	51,400	5,340	2,730	4,010	2,290	1,310	940	905
22.....	865	3,670	4,940	3,830	21,900	5,550	2,730	3,650	2,290	1,310	905	872
23.....	795	2,770	3,670	3,550	15,200	5,340	3,330	3,490	2,160	1,220	905	872
24.....	865	2,500	3,510	3,050	11,500	5,140	3,830	3,330	2,160	1,220	905	905
25.....	760	2,770	4,190	2,910	8,820	4,940	5,970	3,490	2,040	1,310	905	940
26.....	730	11,800	3,830	2,500	9,340	4,010	6,850	3,490	2,160	1,220	905	905
27.....	795	5,550	3,830	2,770	6,630	4,010	6,630	3,490	2,730	1,180	905	840
28.....	830	8,820	3,200	5,550	7,070	3,830	6,630	3,330	2,430	1,180	905	1,490
29.....	795	25,100	3,350	6,410	-----	3,490	5,760	3,180	2,290	1,310	905	1,800
30.....	830	21,200	7,300	5,140	-----	3,490	5,140	3,030	2,040	1,180	905	2,160
31.....	795	-----	6,850	4,560	-----	3,650	-----	2,880	-----	1,130	905	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October.....	2,000	730	1,010	0.783	0.90	62,100
November.....	25,100	700	4,820	3.74	4.17	287,000
December.....	18,200	2,370	5,800	4.50	5.19	357,000
January.....	19,900	2,500	6,160	4.78	5.51	379,000
February.....	51,400	2,770	11,000	8.53	8.88	611,000
March.....	7,540	3,490	5,030	3.90	4.50	309,000
April.....	6,850	2,730	3,910	3.03	3.38	233,000
May.....	5,550	2,880	4,040	3.13	3.61	248,000
June.....	4,370	2,040	2,850	2.21	2.47	170,000
July.....	1,800	1,130	1,420	1.10	1.27	87,300
August.....	1,090	905	973	.754	.87	59,800
September.....	2,160	840	1,050	.814	.91	62,500
The year.....	51,400	700	3,960	3.07	41.66	2,870,000

LAKE CREEK AT DIAMOND LAKE, NEAR FORT KLAMATH, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 30, T. 27 S., R. 6 E., 150 yards below outlet of Diamond Lake and 35 miles north of Fort Klamath.

RECORDS AVAILABLE.—May, 1922, to September, 1925, incomplete; October, 1926, to September, 1927.

EXTREMES.—Maximum discharge during year, 137 second-feet February 23 (gage height, 2.08 feet); probably somewhat higher February 20, when no record was obtained; minimum (estimated), 1.0 second-foot October 1 and 2 (gage height, 0.42 foot).

1922-1925, 1927: Maximum discharge, 146 second-feet June 1, 1925 (gage height, 2.13 feet); minimum, that of October 1 and 2, 1926.

REMARKS.—Records good, March 16 to July 16; fair, October 1 to March 15; poor, July 17 to September 30. No diversions for irrigation above station. Flow regulated by operation of fish racks at lake outlet, and at times by collection of moss on racks.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	° 1	° 17	86	74			69	52	76		
2	1	° 17	° 92				74	51	76		
3		° 18	98			° 104	74	51	76		
4		18	98				71	51	65		
5			101	° 74		102	69	51	71	° 83	
6		° 16			° 74		71	51	86		
7			108				64	52	74		
8			92	74			62	52	79		
9	16	° 16	° 89	° 74		° 90	62	52	79	80	39
10	° 17		86	74			62	51	79	79	
11	° 17		92	° 72			62	49	86	76	37
12	18			° 69	74		60	51	84	72	
13	° 17	14		° 66		° 79	58	52	84	70	
14	16	° 16	° 92	64		° 79	58	52	84	66	
15	° 16	° 19		° 65	° 74	° 79	58	54	84	65	
16	15	21	92	66		79	58	54	84		64
17	° 16	° 22	86	68		79	56	58	84		
18	° 17	° 23	92			98	54	60	84		
19	° 19	24				92	54	64	84		
20	° 20	43			° 110	89	54	66	84		
21	21	° 48		° 71		86	51	66	86		
22	° 20	° 53				84	51	69	89		
23	20	58			137	81	51	69	92		
24	° 20	° 57		74		79	49	69	86	° 55	
25	° 20	56	° 83		° 120	76	49	69	84		
26	° 21	56		° 74		74	49	69	84		
27	21	50			108	71	48	69	84		
28	° 18	° 60			° 107	69	48	69	84		
29	16	° 70		74		69	48	71	84		
30	° 16	79		° 74		66	48	74	84		
31	° 17			° 74		66		76			

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	21	1.0	16.5	0.289	0.33	1,010
November	79		32.2	.565	.63	1,920
December	108		88.7	1.56	1.80	5,450
January			71.9	1.26	1.45	4,420
February	137	74	91.3	1.60	1.67	5,070
March		66	85.3	1.50	1.73	5,240
April	74	48	58.1	1.02	1.14	3,460
May	76	49	59.5	1.04	1.20	3,660
June	92	65	82.0	1.44	1.61	4,880
July			66.5	1.17	1.35	4,090
August			° 35.0	.614	.71	2,150
September			° 37.0	.649	.72	2,200
The year	137	1.0	60.2	1.06	14.34	43,600

° Estimated.

SILETZ RIVER BASIN

SILETZ RIVER AT SILETZ, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 9, T. 10 S., R. 10 W., three-eighths mile above county road to Toledo and three-eighths mile southwest of Siletz.

DRAINAGE AREA.—204 square miles.

RECORDS AVAILABLE.—November, 1905, to May, 1912; January, 1924, to September, 1927, incomplete.

EXTREMES.—Maximum discharge during year, 19,500 second-feet January 31 (gage height, 15.8 feet); minimum, 88 second-feet August 28 and 29 (gage height, -1.18 feet).

1905-1912, 1924-1927: Maximum discharge, about 34,600 second-feet November 22, 1909 (gage height, 24.6 feet); minimum, 53 second-feet October 25, 1925.

Maximum known flood, about 40,800 second-feet November 20, 1921 (gage height, 28.2 feet at present gage).

REMARKS.—Records fair. No diversions for irrigation above station. Flow regulated slightly at low and medium stages by operation of logging pond at Valsetz.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,020	4,770	7,940	5,780	14,100	3,120	670	1,160	775	270	128	210
2	1,090	4,770	7,700	6,740	12,300	2,700	740	1,320	775	250	122	250
3	1,160	4,220	6,980	5,900	7,940	2,150	670	1,320	740	250	122	290
4	1,160	4,330	6,500	5,320	6,860	1,800	670	1,240	740	250	116	485
5	1,160	5,320	6,780	4,330	4,660	1,400	635	1,240	740	250	116	485
6	1,480	6,500	5,320	4,440	3,120	1,400	600	1,240	670	250	116	485
7	1,480	5,320	4,220	5,780	2,150	1,720	640	1,160	635	250	110	485
8	1,480	5,320	3,230	5,780	1,970	2,150	1,020	1,160	600	250	110	485
9	1,400	4,220	2,420	5,320	1,640	3,120	1,160	1,160	570	250	110	485
10	1,640	4,770	1,880	4,660	1,320	2,510	950	1,090	540	234	116	485
11	2,150	4,880	1,320	3,450	1,020	2,420	740	1,090	485	234	116	485
12	2,900	4,660	1,320	2,700	880	2,700	670	1,020	460	226	110	385
13	3,120	5,100	1,480	2,150	740	2,150	810	1,020	435	226	110	312
14	3,450	5,100	2,330	1,970	880	1,970	880	950	410	218	116	250
15	6,740	5,540	2,600	2,420	1,020	1,970	880	880	435	218	116	140
16	13,100	5,320	3,120	2,150	1,320	1,880	1,020	810	435	210	116	140
17	7,940	5,320	3,670	1,970	1,480	1,800	1,240	810	435	210	110	110
18	6,500	5,780	3,890	1,970	1,480	1,800	1,480	775	410	203	110	140
19	5,320	5,660	4,220	1,640	2,420	1,640	1,320	810	410	203	105	140
20	4,770	5,780	4,220	2,150	11,400	1,480	1,160	775	410	196	105	110
21	4,220	5,900	3,890	2,330	11,500	1,320	1,020	775	410	196	105	175
22	4,220	5,780	3,670	3,120	7,940	1,160	950	775	385	189	99	210
23	5,320	5,900	4,220	4,220	5,320	1,020	880	775	385	175	99	175
24	4,770	8,420	4,440	4,000	3,120	1,020	950	775	335	175	99	210
25	4,220	5,780	4,220	3,780	4,330	880	880	775	312	140	94	210
26	3,120	6,860	4,440	4,220	4,220	600	810	775	312	140	94	140
27	2,150	6,740	4,220	4,440	4,000	600	740	775	335	134	94	140
28	1,400	6,500	4,000	4,990	3,670	600	740	775	335	134	88	3,670
29	1,160	11,200	4,220	4,660	-----	540	880	775	312	128	88	4,220
30	1,020	7,530	4,440	6,740	-----	540	880	740	290	128	99	3,560
31	5,100	-----	5,100	13,600	-----	600	-----	775	-----	128	110	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	13,100	1,020	3,410	16.7	19.25	210,000
November	11,200	4,220	5,780	28.3	31.57	344,000
December	7,940	1,320	4,130	20.2	23.29	254,000
January	13,600	1,640	4,280	21.0	24.21	263,000
February	14,100	740	4,390	21.5	22.39	244,000
March	3,120	540	1,640	8.04	9.27	101,000
April	1,480	600	890	4.36	4.86	53,000
May	1,320	740	952	4.67	5.38	58,500
June	775	290	484	2.37	2.64	28,800
July	270	128	204	1.00	1.15	12,500
August	128	88	108	.529	.61	6,640
September	4,220	110	636	3.12	3.48	37,800
The year	14,100	88	2,230	10.9	148.10	1,610,000

NEHALEM RIVER BASIN

ROCK CREEK NEAR KEASEY, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 6, T. 4 N., R. 5 W., one-third mile above diversion dam of Vernonia Light & Power Co. and $\frac{1}{4}$ miles above post office and railroad station at Keasey.

DRAINAGE AREA.—39 square miles.

RECORDS AVAILABLE.—September, 1925, to September, 1927.

EXTREMES.—Maximum discharge during year, about 5,880 second-feet February 1 (gage height, 7.9 feet); minimum, 18 second-feet August 6-10 and 17-24 (gage height, 0.85 foot).

1925-1927: Maximum discharge, that of February 1, 1927; minimum, 9 second-feet November 8, 1925 (gage height, 0.64 foot).

REMARKS.—Records fair except those for high-water periods in February, which are poor. No diversions for irrigation above station. Slight regulation during low-water periods from operation of logging pond upstream.

Daily and monthly discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	55	1,100	950	700	480	210	142	97	48	23	43
2	33	55	950	1,860	3,250	370	210	162	97	48	23	43
3	33	55	640	1,170	2,890	330	195	210	93	46	23	35
4	31	55	505	700	2,150	330	181	272	89	43	23	26
5	29	55	320	415	1,700	330	162	310	89	43	20	36
6	43	62	305	275	1,380	330	154	290	89	39	18	59
7	51	85	275	180	1,240	350	195	240	87	36	18	40
8	168	75	230	156	965	370	240	225	87	35	18	28
9	180	75	218	180	780	350	225	210	85	34	18	26
10	180	75	192	180	505	370	225	195	81	33	18	22
11	192	89	192	205	390	390	210	181	81	35	19	66
12	192	205	230	230	290	390	195	167	77	35	20	57
13	230	230	245	230	290	390	195	162	73	35	20	49
14	230	320	168	275	290	370	195	162	66	35	19	38
15	260	670	156	395	272	370	195	142	66	35	19	26
16	558	1,310	156	375	480	370	195	130	72	34	19	26
17	480	1,100	180	375	840	410	195	130	68	34	18	26
18	415	885	275	375	1,240	370	210	160	68	34	18	24
19	375	640	205	395	1,380	310	210	154	64	34	18	23
20	230	505	180	375	1,240	290	210	150	64	33	18	21
21	156	480	180	355	1,170	290	210	150	54	33	18	20
22	127	730	168	355	1,310	290	210	137	40	31	18	21
23	96	820	156	320	1,310	272	195	137	51	29	18	21
24	89	950	143	320	1,030	255	167	133	51	27	18	21
25	78	1,100	156	355	965	255	167	130	59	26	19	21
26	65	1,380	168	355	665	240	157	124	56	24	19	21
27	65	1,170	168	355	780	240	154	115	51	23	19	38
28	59	760	245	820	665	240	154	110	51	23	20	59
29	59	480	355	820	-----	225	147	108	51	22	20	195
30	55	395	505	700	-----	225	142	108	51	22	21	157
31	55	-----	612	640	-----	225	-----	101	-----	23	26	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	558	28	156	4.00	4.61	9,590
November	1,380	55	496	12.7	14.17	29,500
December	1,100	143	309	7.92	9.13	19,000
January	1,860	156	474	12.2	14.07	29,100
February	3,250	272	1,080	27.7	28.84	60,000
March	480	225	323	8.28	9.55	19,900
April	240	142	190	4.87	5.43	11,300
May	310	101	166	4.26	4.91	10,200
June	97	40	70.3	1.80	2.01	4,180
July	48	22	33.3	.854	.98	2,050
August	26	18	19.5	.500	.58	1,200
September	195	20	42.9	1.10	1.23	2,550
The year	3,250	18	274	7.03	95.51	199,000

MISCELLANEOUS DISCHARGE MEASUREMENTS

In addition to 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, 1927

Wind River Basin, Wash.

Date	Stream	Tributary to—	Locality	Gage-height	Dis-charge
				Feet	Sec.-ft.
Aug. 24	Wind River.....	Columbia River.....	Below Bear Creek in sec. 17, T. 3 N., R. 8 E.	-----	210

Deschutes River Basin, Oreg.

Aug. 13	Crooked River.....	Deschutes River.....	Trail crossing, sec. 23, T. 13 S., R. 13 E.	-----	25.6
Aug. 14	do.....	do.....	SW. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 24, T. 13 S., R. 12 E., at site of dam proposed by H. V. Gates.	-----	67

Sandy River Basin, Oreg.

Nov. 10	Little Zigzag River....	Zigzag River.....	Proposed diversion dam at elevation 4,100 feet near Government camp.	-----	* 13.1
Nov. 11	Zigzag River.....	Sandy River.....	do.....	-----	* 16.5
Aug. 19	Bull Run River.....	do.....	Just below Bear Creek and Bear Creek Dam being built for city of Portland.	-----	75
Sept. 8	do.....	do.....	do.....	-----	392

Willamette River Basin, Oreg.

Oct. 1	Willamette River.....	Columbia River.....	Oregon City.....	b-0.07	5,050
Oct. 23	do.....	do.....	do.....	2.35	9,050
Nov. 1	do.....	do.....	do.....	2.35	8,080
Dec. 1	do.....	do.....	do.....	20.50	*132,000
Dec. 2	do.....	do.....	do.....	21.10	*144,000
Dec. 4	do.....	do.....	do.....	18.00	*113,000
Dec. 7	do.....	do.....	do.....	11.80	*56,700
Dec. 16	do.....	do.....	do.....	8.62	36,300
Feb. 5	do.....	do.....	do.....	20.2	*139,000
Feb. 24	do.....	do.....	do.....	29.4	*238,000
Feb. 26	do.....	do.....	do.....	23.6	*180,000
Mar. 2	do.....	do.....	do.....	13.8	*69,200
Mar. 7	do.....	do.....	do.....	10.5	*46,000
Mar. 28	do.....	do.....	do.....	8.6	*31,100
May 4	do.....	do.....	do.....	9.74	30,200
June 30	do.....	do.....	do.....	15.8	13,300
Nov. 6	McKenzie River.....	Willamette River.....	Hendricks Bridge, at former gaging station near Springfield.	1.31	723
Mar. 17	do.....	do.....	do.....	5.52	6,070
Dec. 1	Clackamas River.....	do.....	Road bridge at Park Place, 1 mile above mouth.	-----	12,200
Dec. 3	do.....	do.....	do.....	-----	8,350
Dec. 8	do.....	do.....	do.....	-----	3,260
Feb. 5	do.....	do.....	do.....	-----	6,760
Feb. 25	do.....	do.....	do.....	-----	7,460
May 4	do.....	do.....	do.....	-----	5,750

* Includes flow of three small tributaries at elevation 4,100 feet.

* All gage heights at Oregon City are from gage at lower end of locks.

* Measured flow at Sellwood Bridge at Portland less that of Clackamas River.

* Measured flow at railroad bridge at Oswego less that of Clackamas River.

Miscellaneous discharge measurements in Pacific slope drainage basins in Oregon and in lower Columbia River Basin, during the year ending September 30, 1927—Continued

Rogue River Basin, Oreg.

Date	Stream	Tributary to—	Locality	Gage-height	Dis-charge
July 14	Rogue River.....	Pacific Ocean.....	Below Union Creek, in sec. 4, T. 31 S., R. 3 E.	<i>Feet</i>	<i>Sec.-ft.</i>
Aug. 11	do.....	do.....	do.....		585
July 14	do.....	do.....	Woodruff Bridge, above Woodruff Creek, in sec. 19, T. 31 S., R. 3 E.		430
Aug. 11	do.....	do.....	do.....		575
Jan. 7	Cool Creek.....	Mill Creek.....	Prospect, in sec. 32, T. 32 S., R. 3 E.		428
May 11	do.....	do.....	do.....		*2.0
Mar. 24	Big Butte Springs Channel No. 1.	South Fork of Big Butte Creek.	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T. 35 S., R. 3 E.		12.6
June 28	do.....	do.....	do.....		17.9
Sept. 12	do.....	do.....	do.....		17.6
July 9	Spill from Medford pipeline.	do.....	do.....		22.9
May 19	West Fork of Ginger Creek.	do.....	Sec. 15, T. 35 S., R. 2 E.		6.2
Do....	East Fork of Ginger Creek.	do.....	do.....		.61
June 11	Tunnel leak.....	North Fork of Little Butte Creek.	Fish Lake Reservoir, in SW $\frac{1}{4}$ sec. 3, T. 37 S., R. 4 E.	*4823.60	8.8
June 14	do.....	do.....	do.....	*4823.77	9.3
July 9	do.....	do.....	do.....	*4825.17	9.3
July 26	do.....	do.....	do.....	*4822.48	6.9
July 23	Little Butte Creek.....	Rogue River.....	Discontinued gaging station above Eagle Point, in sec. 5, T. 36 S., R. 1 E.	.82	15.5
July 27	Cascade Canal.....	Diversion from Four-mile Lake.	Billie Creek-Dry Creek divide, in sec. 17, T. 36 S., R. 5 E.	.75	25.6
Do....	do.....	do.....	Above Fish Lake lava beds, $\frac{3}{4}$ mile below Cascade divide.		21.6
Aug. 24	T. I. D. Wagner Unit lateral.	Diversion from East Talent lateral.	Below Billings siphon, in sec. 36, T. 38 S., R. 1 E.		8.9

Umpqua River Basin, Oreg.

Aug. 9	North Umpqua River.	Umpqua River.....	Kelsay Valley, above Lake Creek, probably in sec. 18, T. 26 S., R. 6 E.		302
Aug. 19	do.....	do.....	Former gaging station below Glide.	1.31	992
Sept. 28	do.....	do.....	do.....	2.32	2,150
Aug. 9	Spring River.....	North Umpqua River.	Trail crossing near southeast corner sec. 18, T. 26 S., R. 6 E.		195
June 25	Silent Creek.....	Diamond Lake.....	Road crossing $\frac{1}{4}$ mile above mouth, in sec. 18, T. 28 S., R. 6 E.		24.1
Aug. 11	do.....	do.....	do.....		22.3
June 25	Short Creek.....	do.....	Mouth.....		10.5
Aug. 9	do.....	do.....	do.....		8.0
Aug. 10	Fish Creek.....	North Umpqua River.	Road crossing above Camas Creek, in sec. 9, T. 27 S., R. 3 E.		86
Nov. 4	Rock Creek.....	do.....	Mouth, in sec. 1, T. 26 S., R. 3 W.		*20
Do....	Little River.....	do.....	Mouth, in sec. 19, T. 26 S., R. 3 W.		24.6

Siletz River Basin, Oreg.

May 24	South Fork of Siletz River.	Siletz River.....	Below dam at Valsetz, in NE $\frac{1}{4}$ sec. 28, T. 8 S., R. 8 W.	1.74	67
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* Estimated.

† Discharge increased by construction of intercepting tunnel between June 28 and Sept. 12.

* Stage of Fish Lake Reservoir.



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