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

Water-Supply Paper 769

SURFACE WATER SUPPLY *of the* UNITED STATES

1934

PART 12

NORTH PACIFIC SLOPE BASINS

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

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Prepared in cooperation with the States of
OREGON and WASHINGTON

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SURFACE WATER SUPPLY OF PACIFIC SLOPE BASINS IN OREGON AND LOWER COLUMBIA RIVER BASIN, 1934

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, 1934.

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

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

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

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

Annual appropriations for the fiscal years ending June 30, 1895–1934

1895	$12,500.00	1911–17	$150,000.00	1928	$147,000.00
1896	24,500.00	1918	175,000.00	1929	270,500.00
1897–99	50,000.00	1919	148,244.10	1930	275,000.00
1900	70,000.00	1920	175,000.00	1931	565,000.00
1901–2	100,000.00	1921–23	180,000.00	1932	711,000.00
1903–6	200,000.00	1924–25	170,000.00	1933	600,000.00
1907	150,000.00	1926	165,000.00	1934	[1] 540,000.00
1908–10	100,000.00	1927	151,000.00		

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

Measurements of stream flow have been made at about 6,900 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July 1934, 2,940 gaging stations were being

[1] Only $340,000 available for expenditure.

maintained by the Geological Survey and the cooperating organizations. Many miscellaneous discharge measurements were made at other points. In connection with this work data were also collected in regard to precipitation, evaporation, storage reservoirs, river profiles, and water power in many sections of the country and will be made available in water-supply papers from time to time.

DEFINITION OF TERMS

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

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

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

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

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

The following terms not in common use are here defined:

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

"Control", a term used to designate the natural 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, 1933, and ending September 30, 1934. At the beginning of January in most parts of the United States much of the precipitation in the

preceding 3 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.

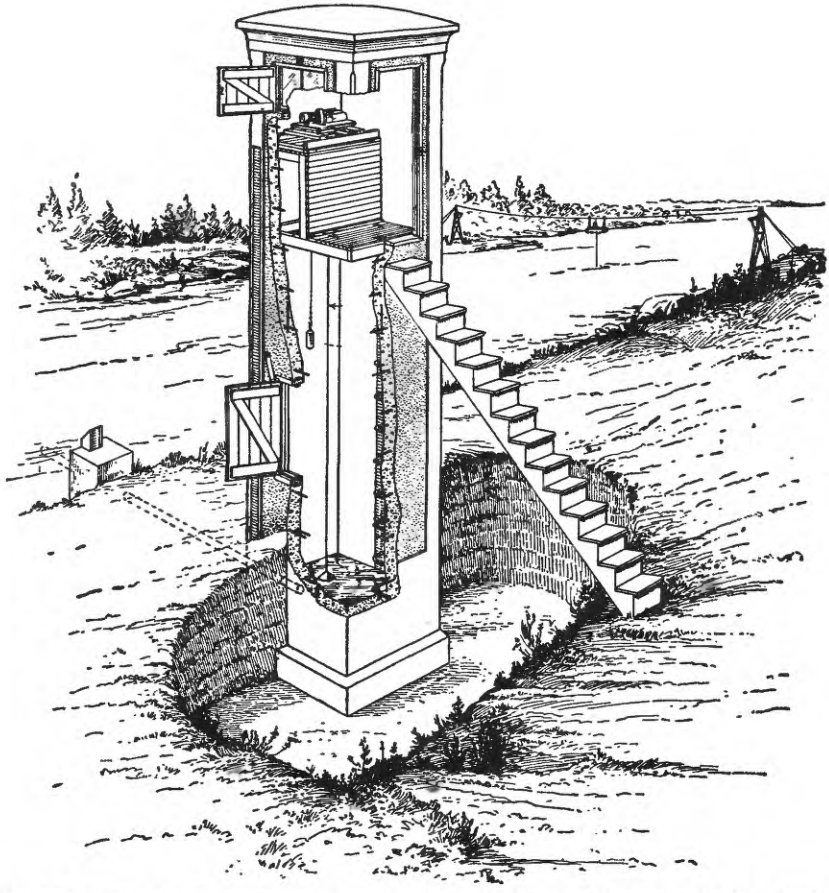

FIGURE 1.—Typical river measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car.

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 direct readings on a nonrecording gage, or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods outlined

in standard textbooks on the measurement of river discharge. A typical gaging station, equipped with water-stage recorder and measuring cable and car, is shown in figure 1.

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

The data presented for each gaging station in the area covered by this report usually 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 information in regard to the location and type of gage, diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Under "Average discharge" is given the average discharge for the number of years indicated. It is given only for stations for which there are 10 or more complete years of record. Information under "Extremes" gives the maximum discharge and gage height; the minimum discharge, if there is little or no regulation; the minimum daily discharge, if there is extensive regulation, and also the minimum discharge, if useful; and the minimum gage height except when it is of no importance. Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder or a nonrecording gage read at the time of the crest. Likewise the minimum represents the lowest discharge unless otherwise qualified.

The table of daily discharge gives, for stations equipped with nonrecording gages, the discharge in second-feet corresponding to once-daily or the mean of twice-daily readings of the gage. For stations equipped with water-stage recorders the table gives the discharge corresponding to the mean daily gage height except for stations on streams subject to sudden or rapid fluctuation. For stations subject to such fluctuation the mean daily gage height may not indicate the true mean daily discharge, which must be obtained by averaging the discharge for intervals of the day or by using the discharge integrator, an instrument for obtaining the mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

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 in cubic feet per second during the month.

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 observations of stage, measurements of flow, and interpretation of records.

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

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.

The table of monthly discharge gives a general idea of the flow at the station. The table of daily discharge allows more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on data previously published, and that greater degrees of refinement in computations and records may be warranted with increased data and use of improved equipment.

In order to permit greater refinement in analysis and comparison of records for adjacent stations, the following changes have been made in the computation procedure; (*a*) Mean monthly discharge above 1,000 second-feet and monthly run-off above 10,000 acre-feet are expressed to four significant figures instead of three significant figures as formerly; (*b*) monthly run-off in acre-feet is computed from the total second-foot-days for the month and not from the mean discharge for the month; (*c*) drainage areas above 1,000 square miles, if measured on topographic maps or if otherwise warranted, are expressed to four significant figures instead of three as formerly. Some of the records in the series of reports for 1934 have been computed in accordance with the modified procedure.

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 power, 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, monographs, and annual reports.

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

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

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

Augusta, Maine, Statehouse.
Boston, Mass., 945 Post Office Building.
Hartford, Conn., 203 Federal Building.
Albany, N. Y., 526 Federal Building.
Trenton, N. J., 228 Federal Building.
Harrisburg, Pa., 490 Education Building.
Charlottesville, Va., University of Virginia.
South Charleston, W. Va., Naval Ordnance Plant.

Asheville, N. C., 220 Post Office Building.
Columbia, S. C., 801 National Loan & Exchange Bank Building.
Ocala, Fla., Post Office Building.
Montgomery, Ala., Post Office Building.
Chattanooga, Tenn., 217 Post Office Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Indianapolis, Ind., 319 Federal Building.
Urbana, Ill., 302 University New Agricultural Building.
Madison, Wis., 337N State Capitol.
St. Paul, Minn., 808 New Post Office Building.
Iowa City, Iowa, 402 Hydraulic Laboratory, University of Iowa.
St. Louis, Mo., Customhouse, Eighth and Olive Streets.
Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines and Metallurgy.
Topeka, Kans., 305 Federal Building.
Fort Smith, Ark., Post Office Building.
Austin, Tex., State Highway Building.
Santa Fe, N. Mex., State Capitol.
Tucson, Ariz., 210 Post Office Building.
Denver, Colo., 403 Post Office Building.
Salt Lake City, Utah, 303 Federal Building.
Idaho Falls, Idaho, 228 Federal Building.
Boise, Idaho, 429 Federal Building.
Helena, Mont., 421 Federal Building.
Tacoma, Wash., 406 Federal Building.
Portland, Oreg., 606 Post Office Building.
San Francisco, Calif., 303 Customhouse.
Los Angeles, Calif., 510 Eighth and Figueroa Building.
Honolulu, Hawaii, 225 Federal Building.

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

Stream-flow records have been obtained at about 6,900 points in the United States, and the data obtained have been published in the reports tabulated as follows:

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	do	1884 to Dec. 31, 1892
14th A, pt. 2	Monthly discharge (long-time records, 1871–93)	1888 to Dec. 31, 1893
B 131	Descriptions, measurements gage heights, and ratings	1893–94.
16th A, pt. 2	Descriptive information only.	
B 140	Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years).	1895.
W 11	Gage heights (also gage heights for earlier years)	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years).	1895–96.
W 15	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas River.	1897.
W 16	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte Rivers, and western United States.	1897.

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

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

Report	Character of data	Year
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.
W 661 to 674	do	1928.
W 681 to 694	do	1929.
W 696 to 709	do	1930.
W 711 to 724	do	1931.
W 726 to 739	do	1932.
W 741 to 754	do	1933.
W 756 to 769	do	1934.

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 numbers of the papers on surface-water supply published from 1899 to 1934. The data for any particular station will, as a rule, be found in the reports covering the years during which the station was maintained. For example, data from 1910 to 1920 for any station in the area covered by part 3 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.

Numbers of water-supply papers containing results of stream measurements, 1899–1934

[For basins included, see p. 6]

Year	1	2	3	4	5	6	7	8	9	10	11	12–A	12–B	12–C
1899 [1]	35	[3] 35, 36	36	36	36	[3] 36, 37	37	37	[4] 37, 38	38, [5] 39	38, [6] 39	38	38	38
1900 [7]	47, [8] 48	48	48, [9] 49	49	49	49, [10] 50	50	50	50	51	51	51	51	51
1901	65, 75	65, 75	65, 75	65, 75	[11] 65, 66, 75	66, 75	[11] 65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82	[3] 82, 83	83	[12] 82, 83	[11] 83, 85	84	[11] 83, 84	84	85	85	85	85	85	85
1903	97	[3] 97, 98	98	97	[11] 98, 99, [13] 100	99	[11] 98, 99	99	100	100	100	100	100	100
1904	[14]124, [15]125, [16]126	[16] 126, 127	128	129	[11] 128, 130	130, [17] 131	[11] 128, 131	132	133	133, [18] 134	134	135	135	135
1905	[14]165, [15]166, [16]167	[16] 167, 168	169	170	171	172	[11] 169, 173	174	175, [19] 177	176, [18] 177	177	178	178	[20] 177, 178
1906	[14]201, [15]202, [16]203	[16] 203, 204	205	206	207	208	[11] 205, 209	210	211, [19] 213	212, [18] 213	213	214	214	214
1907–8	241	242	243	244	245	246	247	248	249	250, [18] 251	251	252	252	252
1909	261	262	263	264	265	266	267	268	269	270, [18] 271	271	272	272	272
1910	281	282	283	284	285	286	287	288	289	290	291	292	292	292
1911	301	302	303	304	305	306	307	308	309	310	311	312	312	312
1912	321	322	323	324	325	326	327	328	329	330	331	332–A	332–B	332–C
1913	351	352	353	354	355	356	357	358	359	360	361	362–A	362–B	362–C
1914	381	382	383	384	385	386	387	388	389	390	391	392	393	394
1915	401	402	403	404	405	406	407	408	409	410	411	412	413	414
1916	431	432	433	434	435	436	437	438	439	440	441	442	443	444
1917	451	452	453	454	455	456	457	458	459	460	461	462	463	464
1918	471	472	473	474	475	476	477	478	479	480	481	482	483	484
1919–20	501	502	503	504	505	506	507	508	509	510	511	512	513	514
1921	521	522	523	524	525	526	527	528	529	530	531	532	533	534
1922	541	542	543	544	545	546	547	548	549	550	551	552	553	554
1923	561	562	563	564	565	566	567	568	569	570	571	572	573	574
1924	581	582	583	584	585	586	587	588	589	590	591	592	593	594
1925	601	602	603	604	605	606	607	608	609	610	611	612	613	614
1926	621	622	623	624	625	626	627	628	629	630	631	632	633	634
1927	641	642	643	644	645	646	647	648	649	650	651	652	653	654
1928	661	662	663	664	665	666	667	668	669	670	671	672	673	674
1929	681	682	683	684	685	686	687	688	689	690	691	692	693	694
1930	696	697	698	699	700	701	702	703	704	705	706	707	708	709
1931	711	712	713	714	715	716	717	718	719	720	721	722	723	724
1932	726	727	728	729	730	731	732	733	734	735	736	737	738	739
1933	741	742	743	744	745	746	747	748	749	750	751	752	753	754
1934	756	757	758	759	760	761	762	763	764	765	766	767	768	769

[1] Rating tables and index to Water-Supply Papers 35–39 contained in Water-Supply Paper 39. Monthly discharge for 1899 in 21st Annual Report, part 4.
[3] James River only.
[5] Gallatin River.
[4] Green and Gunnison Rivers and Colorado River above Gunnison River.
[5] Mojave River only.
[6] Kings and Kern Rivers and south Pacific slope basins.
[7] Rating tables and index to Water-Supply Papers 47–52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52. Monthly discharge for 1900 in 22d Annual Report, part 4.
[8] Wissahickon and Schuylkill Rivers to James River.
[9] Scioto River.
[10] Loup, Platte, and Elkhorn Rivers and tributaries below Platte River.
[11] Tributaries of Mississippi River from east.
[12] Lake Ontario and tributaries to St. Lawrence River proper.
[13] Hudson Bay only.
[14] New England rivers only.
[15] Hudson River to Delaware River, inclusive.
[16] Susquehanna River to Yadkin River, inclusive.
[17] Platte and Kansas Rivers.
[18] The Great Basin in California, except Truckee and Carson River Basins.
[19] Below junction with Gila River.
[20] Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

The work was done in cooperation with the States as follows: In Oregon with Charles E. Stricklin, State engineer; and in Washington with the Department of Conservation and Development, E. F. Banker, director, and Charles J. Bartholet, supervisor of hydraulics.

Acknowledgments are also due to the United States Weather Bureau and to the Corps of Engineers, United States Army, for financial assistance in collecting records published herein.

Assistance in collecting records was also rendered by the following municipalities, organizations, corporations, and individuals: In Oregon by Deschutes, Jackson, Josephine, and Umatilla Counties; cities of Eugene, McMinnville, and Portland; The California Oregon Power Co., Columbia Valley Power Co., Pacific Power & Light Co., and Portland General Electric Co.; and in Washington by Inland Power & Light Co., Puget Sound Power & Light Co., and E. W. Backus.

Funds for the rehabilitation of gaging stations, repairs, replacement of equipment, and improvement of records were allocated by the Public Works Administration from funds made available by the National Industrial Recovery Act.

DIVISION OF WORK

The data for stations in Oregon were collected and prepared for publication under the supervision of G. H. Canfield, district engineer, the work being done in collaboration with Charles E. Stricklin, State engineer; in Washington under the supervision of G. L. Parker, district engineer.

COLUMBIA RIVER

Columbia River at The Dalles, Oreg.

Location.- Staff gages at The Dalles and 13 miles upstream, above Celilo Falls. Zero of gages is 46.86 feet and 37.59 feet respectively above mean sea level by general adjustment of 1929. Discharge measurements made at The Dalles.

Drainage area.- 237,000 square miles (above measuring section).

Records available.- June 1878 to September 1934; maximum stages 1858 to 1877.

Average discharge.- 56 years, 201,100 second-feet.

Extremes.- Maximum discharge recorded during year, 453,000 second-feet May 2, 3 (gage height, 27.8 feet on gage at The Dalles and 103.1 feet on gage above Celilo Falls); minimum, 86,400 second-feet Sept. 30 (gage height, 91.8 feet on gage above Celilo Falls).

1858-1934: Maximum discharge recorded, 1,170,000 second-feet June 6, 1894 (gage height, 59.6 feet on gage at The Dalles and 122.5 feet on gage above Celilo Falls); minimum, 40,000 second-feet Jan. 18, 21, 1930, Feb. 3, 4, 1932 (gage height, 88.8 feet on gage above Celilo Falls).

Remarks.- Records excellent. Storage and diversions for irrigation are only a small part of total run-off. Gage-height records furnished by U. S. Weather Bureau and Corps of Engineers, U. S. Army.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110,000	147,000	126,000	257,000	181,000	128,000	233,000	450,000	427,000	275,000	175,000	121,000
2	110,000	145,000	126,000	254,000	181,000	128,000	250,000	453,000	442,000	268,000	170,000	118,000
3	108,000	150,000	123,000	254,000	181,000	128,000	243,000	450,000	442,000	261,000	170,000	116,000
4	108,000	156,000	121,000	250,000	181,000	153,000	240,000	446,000	442,000	257,000	175,000	116,000
5	105,000	170,000	118,000	257,000	173,000	167,000	233,000	446,000	442,000	254,000	175,000	113,000
6	105,000	181,000	118,000	268,000	170,000	158,000	230,000	442,000	438,000	247,000	175,000	113,000
7	103,000	170,000	121,000	261,000	170,000	164,000	226,000	442,000	435,000	243,000	175,000	113,000
8	103,000	164,000	121,000	247,000	164,000	170,000	223,000	450,000	427,000	240,000	175,000	110,000
9	100,000	164,000	126,000	240,000	164,000	164,000	226,000	450,000	420,000	236,000	170,000	110,000
10	100,000	161,000	123,000	226,000	164,000	164,000	236,000	450,000	420,000	230,000	170,000	106,000
11	100,000	158,000	134,000	219,000	164,000	153,000	247,000	442,000	416,000	226,000	164,000	105,000
12	98,000	156,000	164,000	212,000	161,000	150,000	254,000	431,000	405,000	223,000	158,000	105,000
13	95,600	156,000	184,000	206,000	161,000	147,000	261,000	420,000	398,000	223,000	156,000	105,000
14	95,600	153,000	184,000	200,000	158,000	145,000	261,000	413,000	398,000	223,000	153,000	105,000
15	95,600	150,000	184,000	193,000	156,000	145,000	275,000	409,000	390,000	223,000	153,000	108,000
16	95,600	150,000	184,000	187,000	156,000	147,000	289,000	405,000	390,000	219,000	150,000	105,000
17	91,000	147,000	178,000	187,000	150,000	153,000	297,000	409,000	383,000	212,000	147,000	105,000
18	91,000	147,000	170,000	181,000	147,000	158,000	300,000	413,000	376,000	206,000	139,000	100,000
19	91,000	142,000	170,000	176,000	147,000	158,000	297,000	416,000	368,000	200,000	136,000	100,000
20	91,000	136,000	170,000	175,000	145,000	156,000	297,000	416,000	361,000	200,000	134,000	95,600
21	95,600	131,000	187,000	173,000	145,000	156,000	297,000	413,000	354,000	196,000	131,000	95,600
22	100,000	131,000	216,000	175,000	142,000	156,000	311,000	413,000	347,000	193,000	128,000	93,300
23	105,000	131,000	230,000	175,000	139,000	156,000	332,000	405,000	340,000	193,000	126,000	95,600
24	100,000	128,000	329,000	167,000	139,000	156,000	347,000	398,000	325,000	193,000	126,000	93,300
25	98,000	128,000	368,000	240,000	136,000	156,000	376,000	394,000	325,000	190,000	126,000	91,000
26	100,000	128,000	325,000	236,000	134,000	158,000	398,000	398,000	314,000	187,000	126,000	91,000
27	113,000	131,000	282,000	223,000	134,000	158,000	413,000	398,000	304,000	187,000	123,000	91,000
28	118,000	126,000	268,000	209,000	131,000	156,000	420,000	401,000	297,000	184,000	123,000	88,700
29	123,000	128,000	261,000	200,000		158,000	427,000	405,000	289,000	181,000	121,000	88,700
30	123,000	126,000	257,000	200,000		176,000	438,000	413,000	282,000	178,000	121,000	86,400
31	128,000		257,000	193,000		212,000		420,000		175,000	121,000	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	128,000	91,000	103,200	0.435	0.50	6,347,000
November	181,000	126,000	146,400	.618	.69	8,713,000
December	368,000	118,000	191,300	.807	.93	11,760,000
January	268,000	173,000	214,900	.907	1.05	13,220,000
February	181,000	131,000	156,200	.659	.69	8,676,000
March	212,000	128,000	156,100	.659	.76	9,600,000
April	438,000	223,000	295,900	1.25	1.40	17,610,000
May	453,000	394,000	422,900	1.78	2.05	26,010,000
June	442,000	282,000	379,900	1.60	1.79	22,610,000
July	275,000	175,000	216,900	.915	1.05	13,330,000
August	175,000	121,000	148,300	.626	.72	9,116,000
September	121,000	86,400	102,900	.434	.48	6,121,000
The year	453,000	86,400	211,500	.892	12.11	153,100,000

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WALLA WALLA RIVER BASIN

South Fork of Walla Walla River near Milton, Oreg.

Location.- Water-stage recorder in NE¼ sec. 15, T. 4 N., R. 37 E., 1 mile above Pacific Power & Light Co.'s penstock intake and 13 miles southeast of Milton. Zero of gage is about 2,050 feet above mean sea level determined from U. S. Geological Survey river profile. Prior to Mar. 23, 1934, gage was at site three-quarters of a mile downstream.

Drainage area.- 67 square miles.

Records available.- February to October 1903 (gage heights only); August 1906 to November 1917 (incomplete); May 1931 to September 1934. At station 7 miles downstream November 1903 to May 1906.

Average discharge.- 11 years (1904-5, 1908-15, 1931-34), 171 second-feet.

Extremes.- Maximum discharge during year, 1,500 second-feet Dec. 22 (gage height, 5.25 feet, at former gage); minimum discharge recorded, 97 second-feet Sept. 17 (gage height, 0.96 foot).

1903-17, 1931-34: Maximum discharge recorded, 1,650 second-feet Apr. 14, 1904 (flood of May 30-31, 1906, which washed out gage, was probably much higher); minimum, 72 second-feet Feb. 14, 1932.

Maximum stage known, about 6 feet, referred to present gage, Mar. 31, 1931.

Remarks.- Records good except those estimated, which are fair, and those for December to March, which are poor. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	106	125	124	309	*197	*160	269	145	117	110	100	
2	106	196	127	292	*193	*375	257	141	116	108	100	
3	106	313	137	334	*190	*325	249	137	119	107	103	
4	109	196	133	323	*185	*300	243	*135	131	107	103	
5	111	155	135	298	*180	*350	232	*132	116	107	101	
6	110	142	199	267	176	407	222	*130	119	107	101	
7	111	133	236	242	179	*360	217	*129	164	107	101	
8	111	131	191	227	185	*290	214	*150	147	107	101	
9	111	127	183	216	176	*265	207	135	135	107	101	98
10	111	125	293	212	170	*250	205	131	129	105	101	
11	111	124	270	197	165	*240	205	127	121	103	100	
12	111	122	316	188	165	*230	207	123	119	103	100	
13	111	120	316	188	162	*227	207	123	116	103	100	
14	111	116	293	206	162	*226	202	123	114	103	100	
15	110	118	261	194	158	*225	198	121	112	103	100	
16	113	116	219	194	158	215	246	119	110	103	100	
17	*112	116	199	194	155	207	212	119	110	103	100	97
18	*111	114	273	194	155	*202	205	117	110	101	100	*98
19	*110	114	366	197	155	198	196	117	*112	101	100	100
20	*111	114	330	215	160	196	193	116	114	103	100	100
21	*111	113	379	215	160	198	189	114	114	107	98	100
22	*111	113	1,110	264	158	195	184	114	114	105	96	100
23	*111	113	630	323	*154	191	177	114	116	103	98	101
24	*112	113	382	295	*154	189	180	114	114	103	96	103
25	*112	111	312	260	*153	184	166	112	110	101	96	103
26	*112	111	276	242	*151	180	156	114	139	101	*98	103
27	*113	127	278	227	*164	207	160	112	121	100	98	103
28	*115	124	267	221	*164	263	154	110	116	100	*98	103
29	*125	120	358	*215		291	149	112	112	100	*98	103
30	*125	122	370	*210		282	154	112	110	100	*98	103
31	140		346	*205		279		112		100	*98	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	140	106	113	1.69	1.25	6,920
November	313	111	133	1.99	2.22	7,910
December	1,110	124	300	4.48	5.16	18,470
January	334	188	236	3.55	4.09	14,610
February	197	151	167	2.49	2.59	9,290
March	407	160	249	3.72	4.29	15,290
April	269	149	202	3.01	3.36	12,010
May	150	110	123	1.84	2.12	7,560
June	164	110	121	1.81	2.02	7,170
July	110	100	104	1.55	1.79	6,380
August	103	98	99.7	1.49	1.72	6,130
September	103	97	99.5	1.49	1.66	5,920
The year	1,110	97	163	2.43	32.97	117,700

*Estimated.

Umatilla River above Meacham Creek, near Gibbon, Oreg.

Location.- Water-stage recorder in sec. 21, T. 3 N., R. 36 E., at highway bridge 2½ miles above Meacham Creek and 3 miles northeast of Gibbon.

Records available.- April 1933 to September 1934.

Extremes.- 1933: Maximum discharge during period, 1,760 second-feet Apr. 27 (gage height, 2.29 feet); minimum, 38 second-feet Aug. 30, 31, Sept. 1, 2, 16, 17 (gage height, -0.10 feet).
1933-34: Maximum discharge during year, 1,930 second-feet Dec. 22 (gage height, 2.82 feet); minimum, 33 second-feet Aug. 28, 29.

Remarks.- Records good except those estimated and those for September and December 1933, which are fair.

Discharge, in second-feet, 1933

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							*620	748	715	142	50	40
2							*600	988	660	*130	50	40
3							*700	988	704	*120	48	40
4							818	946	682	*115	48	42
5							*700	842	632	*110	48	44
6							*640	682	565	*103	48	44
7							*580	611	510	*100	48	48
8							*520	540	540	96	48	50
9							*450	481	693	*90	46	54
10							*350	449	682	85	46	52
11							*320	439	584	81	44	50
12							*350	493	552	77	44	50
13							*400	632	533	73	42	48
14							*600	818	504	71	42	44
15							693	890	476	68	42	42
16							653	842	434	68	42	38
17							540	818	380	66	42	40
18							454	1,160	333	64	42	44
19							439	1,000	293	62	42	42
20							546	854	276	60	42	44
21							682	818	252	60	42	50
22							1,020	770	229	58	40	54
23							1,300	794	208	58	40	54
24							1,460	878	186	56	40	56
25							1,500	1,120	*180	54	*40	58
26							1,270	1,270	*170	52	*41	52
27							1,480	988	*160	52	*42	52
28							1,560	854	*170	52	42	50
29							1,270	890	*175	52	40	46
30							890	1,000	*160	50	38	44
31								866		50	40	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October				
November				
December				
January				
February				
March				
April	1,560	320	780	46,420
May	1,270	439	822	50,520
June	715	160	421	25,070
July	142	50	76.6	4,710
August	50	38	43.5	2,680
September	58	38	47.1	2,800
The period				132,200

*Estimated.

Umatilla River above Meacham Creek, near Gibbon, Oreg.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	83	81	578	236	162	341	108	54	*46	38	35
2	44	96	85	479	224	1,010	355	98	54	44	38	35
3	44	189	115	727	220	905	376	95	56	44	40	37
4	44	155	120	775	208	613	381	89	65	44	38	37
5	44	115	113	613	196	869	355	87	56	44	*38	37
6	44	98	174	473	196	1,320	326	78	54	42	38	37
7	44	90	306	376	200	950	298	78	151	42	38	37
8	42	83	256	316	220	680	268	87	137	42	38	38
9	42	77	195	276	208	524	256	84	104	40	38	38
10	44	73	215	244	200	457	236	76	87	38	38	40
11	44	68	240	232	188	376	216	70	76	38	38	38
12	44	64	*290	212	177	350	204	68	68	38	38	38
13	44	62	*325	208	169	321	196	63	65	37	37	38
14	44	62	*350	350	162	298	188	60	60	37	37	38
15	42	62	*330	336	154	290	173	60	58	37	38	38
16	44	64	*315	308	148	276	252	60	56	37	38	40
17	44	64	*300	316	140	252	224	60	54	37	37	38
18	44	64	315	321	140	232	200	58	51	37	37	38
19	46	*63	356	321	137	220	185	58	51	37	38	38
20	52	62	342	414	140	212	169	58	49	38	37	38
21	48	62	399	431	144	204	158	56	47	40	37	38
22	48	64	1,320	635	140	200	148	56	44	40	37	40
23	50	64	980	1,010	137	188	137	54	47	40	37	40
24	50	64	613	775	137	177	134	54	47	38	37	44
25	50	64	467	564	134	169	126	54	47	38	37	42
26	54	62	392	431	130	158	117	54	60	38	37	40
27	58	77	437	370	151	166	114	51	60	38	37	40
28	66	94	473	326	154	236	114	51	54	38	35	40
29	75	87	578	298		365	*112	51	51	38	35	38
30	66	83	869	272		331	111	51	49	38	35	38
31	94		767	256		331		51		38	35	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	94	42	49.8	3,060
November	189	62	80.5	4,790
December	1,320	81	390	24,000
January	1,010	208	427	26,270
February	236	130	171	9,500
March	1,320	158	414	25,430
April	381	111	216	12,830
May	108	51	67.0	4,120
June	151	44	63.7	3,790
July	46	37	39.5	2,430
August	40	35	37.3	2,290
September	44	35	38.4	2,290
The year	1,320	35	167	120,800

*Estimated.

Umatilla River above McKay Creek, near Pendleton, Oreg.

Location.- Water-stage recorder in NE¼ sec. 8, T. 2 N., R. 32 E., a quarter of a mile above mouth of McKay Creek and 2 miles west of Pendleton.

Records available.- May 1921 to September 1934. Comparable records at Pendleton February 1891 to July 1892, May 1903 to March 1906.

Average discharge.- 11 years (1923-1934), 451 second-feet.

Extremes.- Maximum discharge during year, 3,790 second-feet Dec. 22, Mar. 6 (gage height, 8.08 feet); minimum, 10 second-feet Aug. 21, Sept. 19 (gage height, 2.78 feet).
1891-92, 1903-6, 1921-34: Maximum discharge (estimated), 13,500 second-feet Apr. 1, 1931 (gage height, 10.7 feet); minimum, 7 second-feet Aug. 14, 1924 (gage height, 1.87 feet).
The flood of May 30, 31, 1906 (not within period of records available), was somewhat greater than that of Apr. 1, 1931.

Remarks.- Records good. Discharge estimated Nov. 28-30. Small diversions for irrigation above station. Considerable regulation at low stages caused by operation of mills at Pendleton.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	96	115	1,540	573	330	769	179	49	37	16	16
2	38	109	126	1,250	537	1,090	858	173	51	29	16	16
3	43	138	146	1,540	514	2,170	935	160	52	28	19	16
4	43	217	186	1,970	492	1,590	972	151	74	28	23	16
5	43	183	192	1,640	470	1,770	900	145	66	25	24	16
6	41	153	214	1,290	445	3,340	788	140	57	26	21	16
7	41	131	415	1,010	445	2,680	698	132	111	24	18	18
8	43	120	481	838	476	1,820	617	129	231	26	19	20
9	45	120	420	702	476	1,370	550	143	182	25	19	22
10	47	118	392	618	450	1,130	500	134	151	24	18	23
11	45	109	476	555	425	935	450	126	124	25	19	21
12	45	103	543	503	406	823	410	119	104	21	19	21
13	39	100	604	470	383	736	385	119	76	21	17	27
14	41	89	637	637	361	659	369	109	70	17	18	26
15	43	89	598	743	339	605	345	102	65	19	18	27
16	47	90	525	689	322	561	361	99	59	18	16	28
17	44	94	450	682	314	515	410	91	54	18	15	26
18	43	92	460	696	297	465	357	89	46	18	15	25
19	47	86	515	708	289	423	325	86	43	18	18	25
20	50	89	771	1,010	285	401	302	82	38	17	17	22
21	56	86	890	1,090	301	381	282	82	38	27	14	22
22	57	82	2,320	1,330	301	369	260	80	40	31	16	25
23	56	86	2,790	2,320	297	349	245	78	37	29	16	32
24	57	86	1,680	2,170	297	329	235	76	34	25	17	46
25	54	87	1,330	1,540	289	313	238	65	31	22	16	49
26	54	87	1,170	1,250	285	294	217	65	37	18	16	44
27	54	87	1,210	1,010	289	290	203	57	55	19	16	41
28	59	95	1,250	875	326	321	206	57	52	16	15	38
29	69	110	1,970	764		540	193	55	49	16	16	36
30	84	110	2,220	689		594	182	54	40	16	16	36
31	86		2,070	624		676		49		16	18	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	86	38	50.4	3,100
November	217	82	108	6,430
December	2,790	115	886	54,480
January	2,320	470	1,057	64,960
February	573	285	382	21,190
March	3,340	290	899	55,290
April	972	182	452	26,900
May	179	49	104	6,400
June	231	31	70.5	4,200
July	37	16	22.5	1,390
August	24	14	17.5	1,070
September	49	16	26.5	1,580
The year	3,340	14	341	247,000

Umatilla River above Furnish Reservoir, near Yoakum, Oreg.

Location.- Water-stage recorder in NW¼ sec. 17, T. 2 N., R. 31 E., at Oregon-Washington Railroad & Navigation Co.'s bridge a quarter of a mile above Campbell and 5 miles above Yoakum.

Drainage area.- 1,220 square miles.

Records available.- June 1915 to September 1934.

Average discharge.- 18 years (1916-34), 671 second-feet.

Extremes.- Maximum discharge during year, 3,980 second-feet Mar. 6 (gage height, 6.1 feet); minimum, 14 second-feet Aug. 28 (gage height, -0.36 foot).
1915-34: Maximum discharge, 15,200 second-feet Mar. 19, 1932 (gage height, 12.2 feet); minimum, 14 second-feet Aug. 17, 1926, Aug. 28, 1934.

Remarks.- Records excellent except those for period January to April, and September, which are good. Diversions for irrigation above station. Flow regulated to some extent by operation of mills at Pendleton, and since 1927 by storage in McKay Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	105	128	1,020	620	331	790	266	331	269	254	18
2	57	110	137	1,440	576	900	900	262	335	262	251	18
3	55	124	149	1,620	549	2,280	990	251	331	269	258	18
4	53	214	193	2,100	531	1,740	1,020	240	360	266	262	17
5	50	193	202	1,820	508	1,780	960	230	292	269	266	17
6	47	159	208	1,480	486	3,460	872	262	296	269	262	18
7	46	144	362	1,170	482	2,980	790	262	327	277	254	18
8	48	130	448	960	504	2,100	710	269	441	277	254	19
9	48	121	405	818	504	1,620	635	277	393	273	254	22
10	47	115	369	710	477	1,340	562	262	339	269	247	22
11	46	108	430	625	446	1,110	508	254	292	269	244	24
12	47	103	485	544	424	960	468	268	307	269	251	20
13	43	103	545	508	393	845	486	258	292	266	247	24
14	42	93	565	635	372	762	513	277	269	262	244	25
15	44	93	545	790	348	685	508	304	273	262	240	25
16	47	96	505	735	319	635	518	331	273	266	236	26
17	46	99	457	710	307	576	576	327	273	266	236	25
18	45	96	412	710	300	522	504	311	280	269	74	24
19	48	90	725	735	292	482	468	311	288	262	34	23
20	51	94	725	990	292	441	432	315	307	262	30	25
21	56	91	800	1,080	319	415	398	319	344	269	26	23
22	57	86	2,020	1,300	331	402	364	315	307	280	22	24
23	56	84	2,980	2,190	319	406	339	304	307	273	21	30
24	56	86	1,940	2,280	315	398	335	300	304	258	19	40
25	53	90	1,520	1,740	311	381	319	300	300	251	19	45
26	52	86	1,340	1,380	304	364	300	292	300	254	19	42
27	54	89	1,410	1,110	300	402	284	277	311	258	16	41
28	59	110	1,480	960	335	477	352	277	292	254	16	39
29	69	126	2,060	845		630	292	319	280	258	16	38
30	82	126	2,370	762		660	277	319	273	254	17	37
31	93		2,240	665		710		323		254	17	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	93	42	53.6	3,290
November	214	84	112	6,670
December	2,980	128	908	55,800
January	2,280	508	1,137	69,920
February	620	292	402	22,340
March	3,460	331	993	61,080
April	1,020	277	549	32,670
May	331	230	286	17,600
June	441	269	311	18,480
July	280	251	265	16,300
August	266	16	149	9,140
September	45	17	26.2	1,560
The year	3,460	16	435	314,800

Umatilla River near Umatilla, Oreg.

Location.- Water-stage recorder in NW¼ sec. 21, T. 5 N., R. 28 E., 1½ miles below West Division Main Canal of Umatilla project and 2 miles above Umatilla and mouth of river.

Drainage area.- 2,280 square miles.

Records available.- October 1903 to September 1934.

Average discharge.- 30 years (1904-34), 524 second-feet.

Extremes.- Maximum discharge during year, 3,390 second-feet Mar. 7 (gage height, 5.28 feet); minimum, 0.2 second-foot Mar. 24-30.
1903-34: Maximum discharge, 19,600 second-feet May 31, 1906 (gage height, 11.0 feet); no flow at times.

Remarks.- Records good except those for June 15 to July 15, which are fair. Discharge estimated Jan. 1, 2, 6-9, Mar. 28-29, Apr. 24, 25. Several diversions for irrigation above station; Brownell Canal diverts below. Flow regulated by storage in McKay, Furnish, and Cold Springs Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	113	155	1,840	630	124	159	12	7.4	7.4	13	12
2	71	128	150	1,460	524	120	178	12	8.6	6.6	13	20
3	78	143	159	1,600	484	750	238	12	9.6	6.6	13	22
4	71	146	164	2,100	453	1,640	288	11	10	6.6	12	23
5	59	120	159	1,770	439	1,340	334	11	12	5.4	13	22
6	49	102	150	1,450	418	2,100	341	10	20	5.4	12	20
7	49	102	150	1,150	404	3,060	307	10	24	4.8	12	18
8	47	102	232	1,030	390	2,160	268	11	22	3.6	11	17
9	41	102	341	*900	404	1,550	192	11	47	3.6	12	17
10	39	102	294	*820	397	1,180	85	11	28	4.2	12	17
11	28	105	274	*740	376	953	18	11	16	4.8	14	16
12	25	99	341	*576	355	820	14	9.0	13	4.8	11	16
13	25	99	397	492	327	780	13	7.0	11	4.2	11	16
14	23	102	453	460	300	730	13	7.0	11	4.2	13	14
15	21	91	476	621	281	659	12	29	11	4.8	14	14
16	21	88	439	666	249	516	12	32	10	4.8	12	13
17	20	85	404	659	238	348	12	9.0	9.6	5.4	11	13
18	25	83	376	612	232	238	12	8.6	9.6	6.0	10	13
19	35	86	397	621	220	150	11	8.6	9.6	7.2	16	13
20	30	73	612	648	209	85	7.8	8.6	10	7.2	13	13
21	36	78	630	770	214	47	8.6	8.6	11	7.2	11	13
22	41	78	693	830	226	21	8.2	9.0	11	7.8	10	13
23	49	76	2,040	1,280	203	15	7.0	9.0	11	8.4	9.0	13
24	73	73	2,050	2,160	197	9.4	7.9	8.6	11	8.4	7.8	13
25	80	78	1,490	1,770	188	.2	8.8	8.6	11	7.8	7.2	13
26	83	75	1,240	1,360	135	.2	9.6	8.6	11	8.4	7.2	13
27	75	73	1,140	1,090	85	.2	10	7.8	28	10	7.2	12
28	80	107	1,280	942	91	.2	11	7.4	14	11	7.8	11
29	85	150	1,450	900		.2	11	7.4	9.0	11	7.8	11
30	80	150	2,160	850		.2	12	7.4	8.2	11	7.8	11
31	107		2,140	760		10		7.4		13	7.8	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	107	20	51.9	3,190
November	150	73	100	5,960
December	2,160	150	724	44,500
January	2,160	460	1,062	65,270
February	630	85	310	17,190
March	3,080	.2	626	38,490
April	341	7.0	87.0	5,170
May	32	7.0	10.7	656
June	47	7.4	14.2	842
July	13	3.6	6.83	420
August	16	7.2	10.9	672
September	23	11	15.1	897
The year	3,080	.2	253	183,300

McKay Creek near Pilot Rock, Oreg.

Location.- Water-stage recorder in SE¼ sec. 23, T. 1 N., R. 32 E., 1 mile above backwater from McKay Dam and 6 miles northeast of Pilot Rock.

Records available.- May to August 1921, October 1926 to September 1934.

Extremes.- Maximum discharge during year, 605 second-feet Dec. 29 (gage height, 3.30 feet); no flow at times.
1921, 1926-34: Maximum discharge, 6,000 second-feet Apr. 1, 1931 (gage height, 10.4 feet); no flow at times during summer.

Remarks.- Records good except those estimated Oct. 30, 31, Nov. 1-4, 7-10, Apr. 25-27, July 8-15, which are fair. Numerous small diversions for irrigation above station; none between station and McKay Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	8.0	47	291	112	70	104	20	0.9	1.2		
2	0	10	43	240	102	86	152	20	.9	1.2		
3	0	12	73	333	91	114	210	18	1.0	1.0		
4	0	15	98	324	82	116	210	15	1.7	.9		
5	0	17	84	272	76	210	188	14	1.9	.8		
6	0	16	91	222	72	432	168	14	2.5	.8		
7	0	15	147	183	68	364	147	13	13	.6		
8	0	13	125	154	74	287	127	13	38			
9	0	11	108	131	73	231	110	14	27			
10	0	10	102	118	72	195	94	14	22			
11	0	9.4	94	106	68	171	79	12	18	.3		
12	0	9.0	88	93	66	150	70	12	16			
13	0	8.2	82	88	63	129	56	12	14			
14	0	7.8	79	94	59	112	49	11	12			
15	0	7.4	73	96	56	96	44	9.4	9.4			
16	0	7.0	67	93	52	86	50	7.8	6.7	0		
17	0	7.8	56	94	51	76	51	5.3	5.3	0		
18	0	7.4	60	100	48	67	43	5.3	5.3	0		
19	0	8.2	98	102	47	60	38	5.0	5.0	0		
20	0	8.2	100	180	48	55	34	4.6	5.0	0		
21	0	8.2	106	185	59	50	24	3.3	5.0	0		
22	0	8.2	145	279	72	47	21	2.2	5.0	0		
23	0	7.8	163	364	76	41	20	1.3	4.6	0		
24	0	7.8	156	324	79	35	23	1.5	4.3	0		
25	0	7.8	175	264	78	32	24	3.9	3.3	0		
26	0	7.8	247	228	74	29	23	3.3	2.0	0		
27	0	9.8	291	195	74	28	22	1.3	1.7	0		
28	0	30	272	173	73	34	22	1.1	1.9	0		
29	0	44	545	152		64	21	1.0	1.9	0		
30	2	46	470	136		64	21	1.0	1.5	0		
31	5		392	123		93		.9		0		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5	0	0.2	14
November	46	7.0	12.8	763
December	545	43	151	9,280
January	364	88	185	11,380
February	112	47	70.2	3,900
March	432	28	117	7,190
April	210	20	74.8	4,450
May	20	.9	8.39	516
June	38	.9	7.89	470
July	1.2	0	.29	18
August	0	0	0	0
September	0	0	0	0
The year	545	0	52.5	37,980

Note.- No flow during months left blank.

McKay Reservoir near Pendleton, Oreg.

Location.- Staff gage at reservoir dam in SE¼ sec. 34, T. 2 N., R. 32 E., 4 miles south of Pendleton. Gage readings are elevations above mean sea level.

Records available.- October 1930 to September 1934.

Extremes.- Maximum contents recorded during year, 51,220 acre-feet May 1 (elevation, 1,301.5 feet); minimum, 3,427 acre-feet Sept. 1 (elevation, 1,219.0 feet).
1930-34: Maximum contents, 69,920 acre-feet Mar. 22, 1932 (gage height, 1,318.85 feet); minimum, 3,427 acre-feet Oct. 1, 1930, Sept. 1, 1934 (gage height, 1,219.0 feet).

Remarks.- Records fair. Gage usually read to nearest half-foot at beginning of each month. Summer flow above reservoir entirely diverted for irrigation. McKay Reservoir, completed in 1927 by the U. S. Bureau of Reclamation, has a capacity of 67,700 acre-feet at elevation 1,317.0 feet and stores water for irrigation of lands along Umatilla River near Echo, Stanfield, and Hermiston. Gage-height records furnished by U. S. Bureau of Reclamation.

Elevation and contents, 1933-34

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	1,256.0	19,770	
Nov. 1	1,257.5	19,470	-300
Dec. 1	1,257.0	19,220	-250
Jan. 1	1,275.0	30,110	+10,890
Feb. 1	1,288.0	39,530	+9,420
Mar. 1	1,294.5	44,890	+5,360
Apr. 1	1,300.3	50,110	+5,220
May 1	1,301.5	51,220	+1,110
June 1	1,294.5	44,890	-6,330
July 1	1,271.0	27,490	-17,400
Aug. 1	1,244.0	12,800	-14,690
Sept.1	1,219.0	3,427	- 9,373
Oct. 1	1,219.0	3,427	0
The year			-16,343

McKay Creek near Pendleton, Oreg.

Location.- Water-stage recorder in sec. 34, T. 2 N., R. 32 E., just above irrigation diversion dam, a quarter of a mile below McKay Dam, and 4 miles south of Pendleton.

Records available.- November 1918 to September 1923, October 1924 to September 1934.

Average discharge.- 13 years (1919-23, 1924-27, 1928-34), 97.1 second-feet.

Extremes.- Maximum discharge during year, 314 second-feet June 21 (gage height, 1.33 feet); no flow at times.
1918-34: Maximum discharge, 3,250 second-feet Feb. 10, 1921; no flow at times.

Remarks.- Records good. Discharge records include flow diverted by irrigation canal at gage. Diversions for irrigation above McKay Reservoir use total summer flow. Flow completely regulated by storage in McKay Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	0	64	280	230	238	
2						0	0	64	280	238	234	
3						0	0	64	280	247	230	
4						0	0	64	242	242	234	
5						0	0	72	183	242	247	
6						0	0	114	201	242	242	
7						0	0	114	172	251	238	
8						0	0	119	74	247	234	
9						0	0	125	119	247	234	
10						0	4	99	119	242	230	
11						0	11	109	128	242	230	
12						0	44	112	172	236	238	
13						0	106	130	183	238	234	
14						0	125	153	197	238	230	
15						0	119	197	208	238	225	
16						0	119	225	204	242	230	
17						0	114	221	208	242	197	
18						0	114	197	221	242	0	
19						0	114	204	230	242	0	
20						0	106	212	270	242	0	
21						0	96	206	289	247	0	
22						27	83	204	251	247	0	
23						54	85	208	261	242	0	
24						54	68	206	261	238	0	
25						54	57	212	261	238	0	
26						135	57	217	261	242	0	
27						114	78	221	234	247	0	
28						30	106	242	221	256	0	
29						0	72	270	225	256	0	
30						0	70	270	230	247	0	
31						0		275		242	0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
January	0	0	0	0
February	0	0	0	0
March	135	0	15.1	928
April	125	0	58.3	3,470
May	275	64	168	10,300
June	289	74	216	12,820
July	256	230	243	14,940
August	247	0	127	7,820
September	0	0	0	0
The year	289	0	69.5	50,280

Note.- No flow during months left blank.

Birch Creek at Rieth, Oreg.

Location.- Water-stage recorder in SE¼ sec. 13, T. 2 N., R. 31 E., a quarter of a mile above mouth and half a mile southwest of Rieth.

Records available.- May 1921 to September 1923, April 1927 to August 1929 (incomplete); October 1929 to September 1934.

Extremes.- Maximum discharge during year, 201 second-feet June 8 (gage height, 2.44 feet); no flow at times.
1921-23, 1927-34: Maximum discharge, 1,640 second-feet Jan. 29, 1928 (gage height, 6.00 feet at former gage); no flow at times.

Remarks.- Records good except those estimated for November, Dec. 1, Apr. 7-11, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			5	100	50	40	8	3	0			
2			5	86	48	41	11	4	0			
3			6	86	47	65	8	1	0			
4			6	90	44	76	9	0	0			
5			8	89	44	92	6	0	0			
6			8	83	42	130	6	1	0			
7			8	74	40	135		.5	12			
8			10	66	36	112		0	170			
9			10	57	38	95		0	107			
10			10	51	37	83	2	1	62			
11			11	47	37	74		2	39			
12			12	44	35	63	1	2	32			
13			12	40	33	51	1	2	12			
14			12	39	31	49	2	2	.5			
15			13	37	30	41	3	1	0			
16			13	38	25	35	3	1	0			
17			13	36	25	32	1	1	0			
18			12	35	28	31	0	2	0			
19			14	35	29	27	0	2	0			
20			14	42	29	16	0	2	0			
21			13	45	36	11	0	1	0			
22			14	47	44	6	0	.8	0			
23			20	57	50	4	0	.7	0			
24			27	71	54	2	0	.8	0			
25			30	71	52	.7	0	.4	0			
26			42	70	51	.6	1	.3	0			
27			112	68	48	4	6	.3	0			
28			123	66	44	6	7	.3	.6			
29			142	62		6	8	.3	0			
30			138	58		13	8	.4	0			
31			118	54		12		.2				

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November			2	119
December	142	5	31.6	1,950
January	100	35	59.5	3,660
February	54	25	39.5	2,200
March	135	.4	43.7	2,690
April	11	0	3.3	196
May	4	0	1.06	65
June	170	0	14.5	863
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
The year	170	0	16.2	11,740

Note.- No flow during October, July to September.

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. Taylor Ditch diverts from left bank of Umatilla River near Nolin; no record in 1934. Wilson and Ramos Ditches divert from right bank of Umatilla River half a mile above intake of Umatilla project feed canal, which diverts water from right bank of Umatilla River in SW¼ sec. 22, T. 3 N., R. 29 E., to feed Cold Springs Reservoir of U. S. Bureau of Reclamation. Western Land & Irrigation Co.'s canal diverts from left bank of Umatilla River in NE¼ 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 of that canal. 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 SW¼ sec. 28, T. 4 N., R. 28 E., and also at times receives water from Cold Springs Reservoir. West Division Main Canal diverts from left bank of Umatilla River in SW¼ sec. 28, T. 5 N., R. 28 E. Brownell Canal diverts from right bank of Umatilla River 2 miles below West Division Main Canal diversion and 1½ 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 supplied to lands along Columbia River in vicinity of Irrigon.

Records are available from March 1926 to September 1934; records for some of the canals published separately prior to 1926.

Diversions, in acre-feet, 1933-34

Month	Furnish Canal	Crayne-Lisle Canal	*Wilson Ditch	Umatilla project feed canal	Western Land & Irrigation Co.'s canal	Allen Canal	Dillon Canal	Maxwell Canal	West Division Main Canal	Brownell Canal
October	0			0	40	1,630	99	1,520	7,810	0
November	0			4,290	0	†662		†458	3,570	0
December	0			13,150	0				0	0
January	0			14,650	0				0	0
February	0			13,750	551				119	0
March	774	†397	†83	14,140	4,830	†611	†52	†1,110	4,880	0
April	5,950	689	501	7,290	11,820	1,080	529	3,760	7,180	883
May	6,050	223	155	80	8,890	992	471	3,170	7,780	793
June	5,570	297	285	383	9,880	1,090	474	2,580	8,930	850
July	5,310	268	131	0	8,510	920	291	2,300	8,990	692
August	3,130	†134	59	0	4,710	698	161	1,980	6,610	456
September	119			0	0	10	3	986	6,310	821
The year or period	26,900	2,010	1,190	67,710	49,230				64,180	4,500

*Also some flow in Ramos Canal; record not obtained.
†Part of month only; record incomplete.

Note.- Little or no flow during months left blank.

John Day River at Prairie City, Oreg.

Location.- Staff gage in NE¼ sec. 10, T. 13 S., R. 33 E., above outlet of Prairie power canal at power plant three-quarters of a mile southwest of Prairie City. Zero of gage is 3,492.55 feet above sea level by general adjustment of 1929.

Records available.- October 1926 to September 1934. At station below outlet of Prairie power canal October 1916 to September 1917, March 1925 to September 1926.

Extremes.- Maximum discharge recorded during year, 236 second-feet June 26 (gage height, 1.54 feet); minimum, 2 second-feet Aug. 10.
1926-34: Maximum discharge (estimated), 1,550 second-feet Mar. 19, 1932 (gage height, 4.7 feet); minimum, 2 second-feet Dec. 8, 21, 22, 1932, Aug. 10, 1934.

Remarks.- Records good except those below 10 second-feet, which are fair. Diversions above station for irrigation and for power. (See record for Prairie power canal.) Gage readings furnished by West Coast Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	10	9	23	12	11	37	26	37	11	4	12
2	36	12	8	22	12	14	40	21	62	9	4	11
3	30	12	12	44	13	15	35	23	123	8	4	11
4	30	12	9	28	12	15	37	21	64	8	4	10
5	28	11	9	25	13	30	30	19	30	8	4	9
6	31	11	13	25	14	30	25	18	60	9	5	9
7	32	11	12	14	12	28	16	20	202	9	5	9
8	16	11	10	12	14	25	12	30	114	9	4	9
9	14	10	9	11	15	25	12	32	71	9	4	9
10	25	9	9	12	12	24	9	24	49	8	4	9
11	31	9	9	11	12	23	7	22	38	8	4	9
12	29	8	20	10	12	22	6	16	32	8	4	16
13	31	8	23	12	12	22	6	16	22	8	5	22
14	14	8	11	12	11	21	9	14	16	9	5	24
15	34	8	9	14	12	22	12	13	13	10	5	22
16	34	8	8	12	12	20	16	11	14	10	5	23
17	34	8	8	11	12	19	22	9	11	10	5	28
18	34	8	10	11	12	19	20	8	12	10	6	29
19	34	8	9	22	11	17	12	9	12	12	6	29
20	38	7	9	26	11	16	9	8	12	13	8	29
21	14	7	10	12	11	15	9	9	12	14	12	32
22	14	11	10	13	11	13	9	8	11	24	14	32
23	12	8	11	22	11	9	13	7	9	35	12	40
24	11	8	10	25	12	9	19	7	9	8	8	49
25	10	7	12	21	11	8	32	8	11	6	8	51
26	9	7	44	15	11	7	24	13	125	6	8	49
27	9	8	41	15	11	8	23	14	64	6	8	48
28	8	8	26	14	11	16	24	12	29	5	8	48
29	11	7	23	14		29	22	14	21	4	9	48
30	10	8	29	14		25	24	37	15	4	9	46
31	9		25	14		38		30		5	9	

Month	River only				River and Prairie power canal			
	Maximum	Minimum	Mean	Run-off in acre-feet	Maximum	Minimum	Mean	Run-off in acre-feet
October	36	8	22.8	1,400	74	44	52.5	3,230
November	12	7	8.9	532	75	64	67.9	4,040
December	44	8	14.7	906	107	66	76.7	4,720
January	44	10	17.3	1,060	110	74	82.8	5,090
February	15	11	12.0	664	83	74	76.5	4,250
March	38	7	19.2	1,180	104	67	85.4	5,250
April	40	6	19.0	1,130	109	42	70.4	4,190
May	37	7	16.7	1,030	88	16	48.9	3,010
June	202	9	43.3	2,580	265	13	84.0	5,000
July	35	4	9.8	601	68	21	32.8	2,020
August	14	4	6.5	397	22	5	11.3	694
September	51	9	25.7	1,530	51	11	26.7	1,590
The year	202	4	18.0	13,010	265	5	59.5	43,080

John Day River at Picture Gorge, near Dayville, Oreg.

Location.- Water-stage recorder 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. Zero of gage is 2,232.10 feet above mean sea level by general adjustment of 1929.

Records available.- April 1926 to September 1934.

Extremes.- Maximum discharge during year, 685 second-feet May 29 (gage height, 4.93 feet); minimum recorded, 1.2 second-feet Sept. 9, 10.
1926-34: Maximum discharge, 4,800 second-feet Mar. 19, 1932 (gage height, 14.0 feet); minimum, 1 second-foot several days in August, September 1930.

Remarks.- Records good except those interpolated, Aug. 10-31, which are poor. Numerous diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	87	125	137	264	255	229	246	166	28	62	4.4	2.4
2	84	128	148	255	246	229	264	166	28	54	4.0	2.0
3	79	131	162	282	246	256	264	158	38	42	5.0	1.6
4	84	138	168	332	246	273	258	148	129	31	4.8	1.6
5	81	139	163	311	246	282	221	137	153	26	4.8	1.6
6	74	140	159	282	255	301	198	131	159	17	4.8	1.4
7	64	137	168	264	264	311	178	117	250	12	4.2	1.4
8	54	138	167	255	273	301	162	114	555	12	3.8	1.4
9	58	139	162	238	282	292	157	118	464	12	4.8	1.2
10	58	139	153	229	273	292	152	131	363	12		1.2
11	56	139	157	229	255	282	126	120	301	11		1.6
12	53	139	162	213	255	273	111	109	246	9.0		1.6
13	55	135	166	213	246	273	102	98	198	7.3		1.8
14	60	134	161	213	246	273	93	88	154	5.6		2.0
15	65	134	167	221	238	264	95	79	125	5.8		2.0
16	65	135	170	213	238	264	96	70	100	5.4		2.2
17	66	134	157	206	238	256	100	63	76	4.8		2.2
18	68	135	162	206	238	229	102	54	59	4.8		2.2
19	69	137	171	206	229	221	96	45	48	5.6		2.6
20	71	136	171	213	229	213	88	35	38	5.0	3.6	2.6
21	74	135	170	229	229	198	81	31	28	5.0		2.6
22	80	138	171	221	229	178	75	29	19	5.0		2.6
23	92	138	178	246	221	171	70	19	16	4.6		3.6
24	93	138	191	311	229	161	68	19	14	4.6		4.2
25	90	143	198	282	229	146	149	17	15	5.4		4.2
26	91	143	213	292	229	129	198	15	16	4.6		4.5
27	96	145	273	282	229	132	178	15	118	4.4		4.8
28	107	150	273	273	229	126	166	15	121	4.6		4.5
29	113	150	256	264		166	153	67	90	4.0		4.5
30	126	134	246	255		213	158	43	71	4.2		4.5
31	126		264	255		238		33		4.8		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	126	53	78.7	4,840
November	150	125	138	8,180
December	273	137	183	11,230
January	332	206	250	15,380
February	282	221	244	13,530
March	311	126	231	14,220
April	264	68	146	8,700
May	166	15	79.0	4,860
June	565	14	134	7,990
July	62	4.0	12.8	784
August	5.0		3.86	238
September	4.8	1.2	2.55	152
The year	565	1.2	124	90,100

John Day River at Service Creek, Oreg.

Location.- Water-stage recorder in NE¼ sec. 18, T. 9 S., R. 23 E., a quarter of a mile below Service Creek and three-quarters of a mile southwest of Service Creek post office. Zero of gage is 1,635.83 feet above mean sea level by general adjustment of 1929.

Records available.- October 1929 to September 1934.

Extremes.- Maximum discharge during year, 4,000 second-feet Dec. 27 (gage height, 6.85 feet); minimum, 32 second-feet Sept. 9.
1929-34: Maximum discharge, 28,900 second-feet Mar. 19, 1932 (gage height, 16.75 feet); minimum, 20 second-feet Sept. 6, 1931.

Remarks.- Records good except those estimated, Aug. 15-20, 22-29, 31, which are fair. Many diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	187	325	260	1,740	1,200	855	1,940	805	250	447	71	34
2	185	340	232	1,540	1,170	830	1,860	805	255	380	60	34
3	163	337	225	1,540	1,110	1,050	1,780	755	275	331	54	35
4	173	328	355	2,150	1,110	1,440	1,660	730	618	292	56	36
5	171	405	419	1,940	1,080	1,370	1,580	685	780	268	56	37
6	177	380	391	1,660	1,110	1,660	1,510	662	805	245	52	37
7	169	334	398	1,340	1,170	2,060	1,440	640	946	215	51	36
8	163	304	436	1,200	1,200	1,940	1,400	640	2,500	203	50	34
9	150	316	447	1,080	1,340	1,740	1,400	662	2,150	190	48	33
10	149	316	433	960	1,340	1,660	1,370	708	1,510	179	48	33
11	149	310	405	990	1,170	1,680	1,340	662	1,200	163	46	35
12	145	304	408	880	1,110	1,510	1,300	595	960	152	45	37
13	143	301	419	805	1,110	1,510	1,340	555	855	142	45	39
14	145	289	483	830	1,080	1,510	1,400	535	730	129	45	40
15	149	278	515	930	1,020	1,540	1,340	495	595	118	43	40
16	154	278	499	880	960	1,580	1,230	458	515	120	41	41
17	154	292	444	830	960	1,620	1,230	430	468	113	39	43
18	156	301	388	805	960	1,510	1,170	408	416	101	38	43
19	154	307	391	805	930	1,400	1,050	394	367	99	37	43
20	159	292	511	830	905	1,370	990	370	343	97	37	43
21	163	278	535	1,140	905	1,340	960	346	310	99	37	42
22	173	292	555	1,050	905	1,300	930	325	280	99	36	39
23	185	313	662	1,170	880	1,260	930	301	260	100	35	46
24	192	322	930	2,240	880	1,200	930	278	235	100	35	49
25	190	340	880	1,940	880	1,110	960	280	220	101	34	49
26	187	328	1,750	1,700	855	1,080	1,110	265	212	95	34	53
27	194	340	3,760	1,620	830	1,020	1,020	255	232	91	33	58
28	201	352	2,600	1,480	830	1,110	930	250	780	90	33	60
29	212	352	1,900	1,370		1,510	930	280	662	87	34	65
30	238	349	1,780	1,260		1,980	855	361	535	79	34	66
31	292		1,780	1,230		1,940		272		76	34	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	292	143	176	10,790
November	405	278	320	19,050
December	3,760	225	813	49,970
January	2,240	805	1,288	79,210
February	1,340	830	1,036	57,520
March	2,060	630	1,438	88,430
April	1,940	855	1,263	75,140
May	805	250	491	30,160
June	2,500	212	675	40,190
July	447	76	161	9,920
August	71	33	43.3	2,660
September	66	33	42.7	2,540
The year	3,760	33	643	465,600

John Day River at McDonald Ferry, Oreg.

Location.- Water-stage recorder in NW¼ sec. 11, T. 1 N., R. 19 E., at McDonald Ferry, half a mile below mouth of Rock Creek and 10 miles east of Klondike. Zero of gage is 392.02 feet above mean sea level.

Drainage area.- 7,580 square miles (revised).

Records available.- December 1904 to September 1934.

Average discharge.- 29 years (1905-34), 1,970 second-feet.

Extremes.- Maximum discharge during year, 3,760 second-feet Dec. 28 (gage height, 4.37 feet); minimum, 12 second-feet Sept. 5-9 (gage height, 0.92 foot).
1904-34: Maximum discharge, 24,900 second-feet Mar. 20, 1932 (gage height, 10.6 feet); minimum, 4 second-feet Aug. 31, 1931 (gage height, 0.68 foot).
Maximum stage known, 12.8 feet, probably in 1894 (estimated discharge, 33,000 second-feet).

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

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	165	263	362	1,670	1,260	851	1,890	933	263	600	66	15
2	185	280	374	1,710	1,230	870	1,960	851	350	512	66	14
3	195	314	350	1,590	1,190	870	1,860	813	274	432	74	14
4	190	338	292	1,490	1,160	851	1,780	804	269	380	77	14
5	190	344	258	1,860	1,130	1,250	1,680	757	303	338	74	13
6	185	338	263	1,960	1,110	1,370	1,630	721	438	297	64	14
7	180	362	393	1,700	1,110	1,430	1,520	712	748	269	56	13
8	170	400	406	1,460	1,160	1,890	1,430	676	784	252	54	13
9	165	368	393	1,260	1,220	1,960	1,380	668	1,620	231	48	13
10	160	338	406	1,200	1,260	1,780	1,370	651	2,280	210	48	13
11	156	320	432	1,060	1,370	1,700	1,360	660	1,670	195	46	14
12	156	338	432	1,010	1,270	1,600	1,330	694	1,280	180	45	15
13	147	332	419	975	1,150	1,530	1,290	660	1,060	165	41	18
14	143	332	406	880	1,130	1,490	1,290	608	891	156	41	16
15	138	320	406	822	1,090	1,490	1,330	568	794	143	37	15
16	138	320	432	870	1,070	1,500	1,330	536	703	143	34	16
17	138	309	505	944	1,020	1,540	1,270	498	600	126	28	16
18	143	303	498	880	986	1,600	1,190	460	520	121	26	17
19	147	303	468	842	998	1,560	1,220	452	475	114	26	17
20	156	320	412	842	986	1,450	1,100	412	426	100	26	18
21	151	326	380	860	954	1,370	1,010	400	380	96	28	23
22	156	332	468	998	933	1,340	964	374	344	92	28	28
23	156	314	520	1,130	944	1,310	954	362	320	92	24	32
24	160	303	552	1,060	933	1,280	933	338	292	92	20	46
25	170	326	642	1,740	891	1,260	944	314	269	92	18	48
26	185	332	891	2,040	880	1,200	944	292	258	86	18	46
27	200	356	870	1,730	891	1,150	1,010	274	236	79	18	50
28	205	362	3,460	1,610	860	1,130	1,080	274	226	77	18	50
29	205	356	2,700	1,520		1,070	975	263	210	72	17	46
30	215	362	1,960	1,410		1,270	933	252	486	74	16	46
31	252		1,710	1,320		1,780		269		69	15	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	252	138	171	10,520
November	400	263	330	19,660
December	3,460	258	712	43,760
January	2,040	822	1,305	80,220
February	1,370	860	1,078	59,870
March	1,960	861	1,378	84,760
April	1,960	933	1,299	77,270
May	933	252	533	32,780
June	2,280	210	626	37,250
July	600	69	190	11,670
August	77	15	38.5	2,370
September	50	13	23.8	1,410
The year	3,460	13	637	461,500

Strawberry Creek above South Fork, near Prairie City, Oreg.

Location.- Water-stage recorder in SW¼ sec. 20, T. 14 S., R. 34 E., 100 feet above mouth of South Fork of Strawberry Creek and 8½ miles south of Prairie City.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge during year, 33 second-feet Apr. 24 (gage height, 1.75 feet); minimum, 1.6 second-feet Sept. 29, 30.
1930-34: Maximum discharge, 150 second-feet June 9, 1933; minimum, 1.4 second-feet Jan. 8, 19, Oct. 7-21, 23, 24, 26-28, 1931.

Remarks.- Records fair. No diversions above station. Some natural regulation by Strawberry Lake.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	2.9	2.9	4.5	3.6	3.8	13	24	14	10	6.4	3.2
2	3.6	3.2	3.0	4.5	3.6	4.7	13	23	13	10	6.2	3.2
3	3.6	3.4	3.0	4.5	3.8	4.9	13	21	13	9.7	6.2	3.2
4	3.6	3.0	3.0	4.3	3.8	5.3	13	20	13	9.7	6.0	3.0
5	3.4	2.9	3.0	4.3	4.0	5.5	14	20	13	9.5	6.0	2.9
6	3.4	2.9	3.0	4.0	4.2	5.8	14	22	13	9.5	5.8	2.9
7	3.2	2.9	3.0	4.2	4.2	5.8	15	23	17	9.2	5.8	2.7
8	3.2	2.9	3.0	4.0	4.3	5.8	15	25	20	9.2	5.8	2.7
9	3.2	2.9	3.0	3.8	4.2	5.8	15	25	27	9.0	5.8	2.7
10	3.2	2.9	3.0	3.8	4.0	5.8	16	25	30	9.0	5.5	2.6
11	3.2	2.9	3.0	3.6	4.2	5.8	16	24	29	8.7	5.3	2.6
12	3.0	2.9	3.4	3.6	4.2	5.8	18	24	27	8.5	5.3	2.4
13	3.0	2.9	3.2	3.6	4.2	6.0	20	23	24	8.5	5.1	2.2
14	3.0	2.9	3.0	3.6	4.2	6.2	23	23	23	8.3	5.1	2.2
15	3.0	2.9	3.0	3.4	4.2	6.6	25	22	20	8.3	4.9	2.2
16	3.0	2.9	3.0	3.4	4.2	6.9	28	20	18	8.0	4.7	2.1
17	3.0	2.9	3.0	3.4	4.0	7.1	28	20	17	8.0	4.7	2.1
18	2.9	2.9	3.0	3.4	4.0	7.1	28	20	16	8.0	4.7	2.1
19	3.0	3.0	3.0	3.4	3.8	7.3	28	20	15	7.8	4.5	2.1
20	3.0	3.0	3.0	3.4	4.0	7.3	28	19	14	7.8	4.5	1.9
21	2.9	3.0	3.2	3.2	3.8	7.8	29	18	13	7.5	4.3	1.9
22	2.9	3.0	3.8	3.4	3.8	8.0	31	17	13	7.5	4.2	1.9
23	2.9	3.0	4.0	3.8	3.8	8.0	32	17	12	7.3	4.2	1.9
24	2.9	3.0	3.8	3.4	3.8	8.3	33	16	12	7.3	4.0	1.8
25	2.9	3.0	3.8	3.6	3.6	8.3	32	16	11	7.1	4.0	1.9
26	2.9	3.0	4.3	3.6	3.6	8.3	30	15	12	7.1	3.8	1.8
27	2.9	3.0	4.3	3.6	3.6	9.2	28	15	11	7.1	3.8	1.8
28	2.9	2.9	4.3	3.6	3.6	12	27	15	11	7.1	3.8	1.8
29	3.2	2.9	4.5	3.6		14	25	15	11	6.9	3.8	1.6
30	3.2	2.9	4.7	3.6		14	24	15	11	6.6	3.6	1.6
31	3.0		4.5	3.6		13		14		6.4	3.4	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.6	2.9	3.12	192
November	3.4	2.9	2.96	176
December	4.7	2.9	3.41	210
January	4.5	3.2	3.73	229
February	4.3	3.6	3.94	219
March	14	3.8	7.43	457
April	33	13	22.5	1,340
May	25	14	19.9	1,220
June	30	11	16.4	976
July	10	6.4	8.21	505
August	6.4	3.4	4.88	300
September	3.2	1.6	2.30	137
The year	33	1.6	8.23	5,960

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Prairie power canal at Prairie City, Oreg.

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

Records available.- May 1925 to September 1934.

Extremes.- Maximum discharge recorded during year, 69 second-feet for several days (gage height, 2.90 feet); no flow at times.
1925-34: Maximum discharge recorded, 71 second-feet Dec. 10, 1929; no flow at times.

Remarks.- Records fair except those for August and September, which are poor. Canal diverts from John Day River in SE¼ sec. 7, T. 13 S., R. 34 E. Water is used by power plant at Prairie City and is returned to river below gaging station on John Day River at Prairie City. Gage-height record furnished by West Coast Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	58	58	66	63	63	69	56	43	25	18	2
2	20	63	60	63	63	63	69	53	58	18	18	2
3	20	63	63	66	63	66	69	53	69	15	15	2
4	20	60	58	66	66	69	66	48	63	16	15	2
5	18	63	58	66	66	66	63	50	60	16	12	3
6	18	60	60	69	66	66	63	53	58	14	10	2
7	18	58	63	63	66	69	66	50	63	15	8	2
8	33	58	60	66	69	66	69	48	63	14	8	2
9	31	58	63	69	66	66	66	56	66	13	6	4
10	19	58	63	66	66	66	56	58	69	14	4	4
11	18	60	63	66	63	69	48	58	63	15	4	3
12	18	58	63	66	63	66	43	48	58	14	1	1
13	18	58	60	66	63	66	38	50	48	13	2	0
14	33	60	63	63	63	66	36	46	33	17	2	0
15	16	58	63	63	66	66	38	33	33	17	2	0
16	16	58	58	63	63	69	36	25	29	12	2	0
17	16	60	63	63	63	66	38	18	25	14	2	0
18	16	58	63	63	63	69	36	18	21	16	2	0
19	16	60	63	69	66	69	33	18	10	21	2	0
20	16	58	63	66	66	66	36	15	4	23	1	0
21	33	60	63	66	66	63	33	16	5	23	1	0
22	33	60	66	66	63	69	43	16	4	25	1	0
23	38	60	63	63	63	66	48	14	5	33	1	0
24	38	58	63	69	69	63	53	14	4	43	2	0
25	38	58	66	69	63	63	56	8	5	48	2	0
26	36	58	63	66	63	60	58	9	58	46	2	0
27	58	58	60	66	63	66	48	12	48	48	1	0
28	60	56	60	66	63	69	58	12	53	43	1	0
29	63	58	63	63		66	53	11	50	40	2	0
30	60	56	63	63		69	53	10	53	25	1	0
31	63		63	66		66		21		18	2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	63	16	29.7	1,820
November	63	56	59.0	3,510
December	66	58	62.0	3,810
January	69	63	65.5	4,030
February	69	63	64.5	3,580
March	69	60	66.2	4,070
April	69	33	51.4	3,060
May	58	8	32.2	1,980
June	69	4	40.7	2,420
July	48	12	23.0	1,420
August	18	1	4.8	298
September	4	0	1.0	58
The year	69	0	41.5	30,060

North Fork of John Day River near Dale, Oreg.

Location.- Water-stage recorder in SE¼ sec. 35, T. 6 S., R. 31 E., three-eighths of a mile below Desolation Creek and 1⅛ miles northeast of Dale. Zero of gage is 2,775.85 feet above mean sea level by general adjustment of 1929.

Records available.- October 1929 to September 1934.

Extremes.- Maximum discharge during year, 1,120 second-feet June 7 (gage height, 4.62 feet); minimum, 17 second-feet Nov. 30 (gage height, 1.66 feet).
1929-34: Maximum discharge, 4,990 second-feet May 14, 1932 (gage height, 6.4 feet); minimum, 10 second-feet Dec. 11, 12, 1932.

Remarks.- Records good except those estimated, Dec. 2, 3, Sept. 18-30, which are fair. Some small diversions for irrigation above station; no regulation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	97	51	270	216	188	850	402	162	228	49	29
2	52	95	90	249	207	330	760	366	188	199	45	29
3	55	148	100	277	210	490	702	364	234	162	45	27
4	55	132	89	277	207	425	675	344	336	170	47	22
5	54	88	86	255	219	456	648	340	291	150	49	25
6	52	70	97	193	237	702	636	340	246	148	42	28
7	52	88	113	188	243	648	653	340	755	136	40	27
8	51	86	103	164	264	570	675	364	820	130	44	29
9	46	80	93	164	261	545	675	384	585	119	42	29
10	49	79	95	182	213	520	664	340	461	119	39	28
11	51	77	91	164	219	510	675	312	394	113	38	26
12	50	70	107	134	228	520	730	294	376	105	38	30
13	51	62	128	167	231	565	790	270	330	101	35	31
14	49	84	117	172	219	631	730	252	294	97	33	31
15	47	93	103	146	210	675	675	243	258	91	35	31
16	44	77	79	141	228	675	702	234	240	84	35	30
17	50	60	65	146	222	636	636	231	222	86	35	29
18	51	64	84	139	213	605	570	219	204	84	33	29
19	56	59	109	134	207	585	555	204	196	79	30	28
20	65	60	113	160	216	585	555	190	185	77	30	26
21	64	64	109	143	210	595	555	174	174	80	27	29
22	56	91	136	170	204	590	560	174	162	64	30	30
23	54	97	222	308	204	570	560	167	152	72	30	33
24	59	88	190	294	204	530	580	167	146	72	30	35
25	59	88	210	261	199	520	590	162	139	73	30	36
26	61	79	452	261	188	475	520	172	360	77	30	38
27	61	79	505	228	202	535	470	162	470	67	28	40
28	62	101	348	213	193	760	495	160	407	59	26	40
29	88	51	298	204		1,050	434	148	316	51	28	42
30	99	25	308	219		980	412	152	261	45	30	40
31	103		312	207		910		152		45	30	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	103	44	58.1	3,570
November	148	25	83.1	4,940
December	505	51	161	9,920
January	308	134	201	12,360
February	264	188	217	12,050
March	1,050	188	593	36,450
April	850	412	624	37,150
May	402	148	253	15,560
June	755	139	312	18,570
July	228	45	104	6,390
August	49	26	35.6	2,190
September	42	22	31.0	1,840
The year	1,050	22	222	161,000

North Fork of John Day River at Monument, Oreg.

Location.- Water-stage recorder in E½ sec. 1, T. 9 S., R. 27 E., just below entrance to canyon three-quarters of a mile west of Monument.

Records available.- March 1925 to September 1934.

Extremes.- Maximum discharge during year, 3,640 second-feet Dec. 26 (gage height, 5.94 feet); minimum, 27 second-feet Dec. 2 (gage height, 1.29 feet).
1925-34: Maximum discharge, 22,000 second-feet Mar. 18, 1932 (gage height, 14.8 feet); minimum, 7 second-feet Nov. 24, 1931 (gage height, 0.78 foot).

Remarks.- Records good. Several small diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99	185	60	1,180	816	581	1,520	614	214	313	58	38
2	96	185	43	1,080	802	641	1,470	588	220	277	58	39
3	96	179	179	1,420	772	1,140	1,370	549	301	248	58	38
4	92	230	214	1,570	750	1,090	1,320	543	473	230	58	38
5	92	223	188	1,270	735	1,140	1,220	513	549	217	57	38
6	92	170	197	1,030	802	1,620	1,180	495	435	197	57	32
7	90	139	223	840	840	1,670	1,140	490	1,040	185	55	33
8	90	159	234	765	868	1,520	1,180	501	1,920	173	48	38
9	90	150	227	627	1,000	1,370	1,180	555	1,220	164	48	38
10	90	150	210	620	896	1,270	1,140	543	912	153	46	40
11	86	147	217	581	795	1,220	1,140	484	735	147	44	44
12	92	145	223	513	795	1,180	1,180	446	634	136	43	43
13	92	132	273	490	772	1,180	1,220	420	574	126	42	39
14	92	126	329	581	735	1,220	1,220	390	484	119	40	43
15	92	124	301	600	698	1,270	1,140	368	420	114	39	44
16	92	134	254	537	676	1,320	1,070	345	376	112	39	46
17	90	145	200	525	690	1,270	1,140	333	345	105	39	48
18	88	153	200	525	669	1,180	976	326	317	103	39	46
19	92	132	309	531	641	1,090	896	309	285	103	39	42
20	96	119	333	780	634	1,070	872	297	265	99	36	40
21	103	139	354	765	648	1,070	856	277	248	99	34	43
22	112	156	395	720	634	1,040	848	258	227	101	34	43
23	105	164	662	1,370	620	1,030	840	251	207	105	32	44
24	105	176	669	1,720	607	960	825	237	197	103	35	50
25	103	167	676	1,320	607	928	928	230	191	92	35	54
26	105	164	2,880	1,220	574	880	856	223	188	90	35	57
27	103	164	2,760	1,140	588	888	758	227	581	92	34	64
28	105	179	1,720	1,010	607	1,180	735	265	519	86	34	64
29	114	179	1,370	928		1,570	690	230	451	78	34	64
30	136	99	1,370	872		1,670	620	210	363	69	32	67
31	182		1,370	848		1,670		210		64	35	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	182	86	100	6,170
November	230	99	157	9,350
December	2,880	43	601	36,970
January	1,720	490	903	55,490
February	1,000	574	725	40,250
March	1,670	581	1,191	73,250
April	1,520	620	1,051	62,540
May	614	210	378	23,260
June	1,920	188	496	29,540
July	313	64	139	8,530
August	58	32	42.5	2,610
September	67	32	45.2	2,690
The year	2,880	32	484	350,600

Middle Fork of John Day River at Ritter, Oreg.

Location.- Water-stage recorder in NW¼ sec. 8, T. 8 S., R. 30 E., at bridge half a mile south of Ritter.

Records available.- October 1929 to September 1934.

Extremes.- Maximum discharge during year, 690 second-feet June 7 (gage height, 4.25 feet); minimum, 2 second-feet Nov. 30 (gage height, 1.36 feet).
1929-34: Maximum discharge, 4,000 second-feet Mar. 19, 1932 (gage height, 7.78 feet); minimum, 1.0 second-foot Dec. 10, 1932.

Remarks.- Records good except those estimated June 15, 16, 30, July 1, 2, 7-9, July 14 to Aug. 3, and those below 10 second-feet, which are fair. A few small diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	51	21	208	150	115	294	144	41	60	12	7
2	29	45	43	190	146	134	279	136	57	54	11	7
3	28	62	57	249	140	198	261	126	90	49	10	7
4	26	61	52	258	140	188	249	123	132	46	10	7
5	26	49	49	218	142	223	238	117	97	44	10	7
6	26	42	51	178	158	288	232	111	97	40	e	7
7	25	39	55	161	158	270	232	110	378	38	7	7
8	24	39	52	144	161	249	240	113	343	36	e	8
9	25	39	51	126	190	235	238	124	221	33	7	10
10	25	39	49	126	163	221	232	113	165	31	6	10
11	25	41	50	119	150	213	240	99	134	26	5	10
12	25	40	53	97	150	208	255	88	121	23	5	10
13	25	40	74	101	146	210	279	83	104	22	7	11
14	26	38	72	117	148	221	267	78	86	21	7	11
15	26	38	60	119	134	229	255	71	60	20	4	12
16	26	39	45	102	132	235	243	66	70	19	4	13
17	26	41	24	97	138	226	238	65	62	19	4	11
18	27	40	49	95	130	210	218	62	56	19	3	10
19	28	38	78	99	126	208	210	61	50	19	3	11
20	29	36	65	148	130	205	205	57	44	17	3	10
21	30	40	64	128	132	205	203	52	41	17	5	11
22	29	42	72	142	126	205	200	50	38	19	4	11
23	29	52	106	210	123	205	195	48	36	20	4	12
24	29	48	101	249	124	198	193	45	35	20	3	16
26	29	46	123	205	123	193	195	43	34	18	3	18
26	29	45	420	203	121	188	181	43	58	18	3	19
27	30	46	388	195	121	195	165	50	165	17	3	20
28	31	55	238	176	121	240	161	51	110	16	3	20
29	36	34	188	169		315	148	42	83	15	4	20
30	44	7	229	161		309	140	39	70	13	6	19
31	48		246	152		315		44		12	7	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	48	24	28.7	1,770
November	62	7	42.4	2,520
December	420	21	104	6,390
January	258	95	159	9,810
February	190	121	141	7,820
March	315	115	221	13,590
April	294	140	223	13,260
May	144	39	79.2	4,870
June	378	34	103	6,150
July	60	12	26.5	1,630
August	12	3	5.8	355
September	20	7	11.7	698
The year	420	3	95.1	68,860

Fox Creek at gorge near Fox, Oreg.

(The lower portion of this stream is named Cottonwood Creek.)

Location.- Water-stage recorder in NW¼ sec. 17, T. 11 S., R. 29 E., at head of gorge 6 miles southwest of Fox.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge during year, 42 second-feet June 7 (gage height, 1.54 feet); no flow at times.
1930-34: Maximum discharge, 800 second-feet Mar. 18, 1932 (gage height, 4.55 feet); no flow at times.

Remarks.- Records fair. Discharge estimated Oct. 1-20, Jan. 8-18, 24-31, Feb. 1-3. Several diversions for irrigation in valley above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		1.1	0.3	5.0	4.2	3.1	5.2	0.6	0	0.4		
2		1.2	.3	4.8	4.1	4.2	4.4	.6	.1	.2		
3		1.1	.5	6.4	4.0	3.6	4.2	.5	.2	.2		
4		1.0	.4	6.4	4.2	3.8	3.6	.5	.4	.1		
5		.8	.5	6.1	4.8	5.2	3.2	.4	1.2	.1		
6		.7	.9	5.0	6.4	5.2	3.2	.3	3.5	.1		
7		.8	1.4	4.2	5.6	5.4	2.9	.3	30	.1		
8		.8	1.3		7.3	5.2	2.6	.4	23	.1		
9		.7	1.0		6.4	4.4	2.3	.9	19	.1		
10		.7	1.1		5.6	4.2	2.3	.6	12	.1		
11	0.1	.7	1.0		4.8	4.2	1.6	.4	6.7	0		
12		.7	1.3		4.8	4.0	1.3	.3	5.0	0		
13		.6	1.4	4	4.8	3.6	1.3	.2	3.8	0		
14		.6	1.6		4.8	3.4	1.1	.2	2.6	0		
15		.7	1.2		4.6	3.1	1.0	.2	1.6	0		
16		.6	.9		4.6	3.1	1.0	.2	1.1	0		
17		.4	.6		5.0	2.9	1.0	.1	.7	0		
18		.6	.8		4.6	3.1	.8	.1	.6	0		
19		.6	1.3	4.2	4.4	3.2	.7	.1	.5	0		
20		.6	1.7	4.4	4.6	3.4	.6	.1	.4	0		
21	.2	.7	1.7	4.2	4.6	3.4	.6	.1	.3	0		
22	.4	.7	1.6	4.2	5.4	3.2	.6	.1	.2	0		
23	.3	.7	1.9	5.6	4.4	2.5	.6	.1	.2	0		
24	.3	.7	2.0		3.8	2.0	.7	.1	.2	0		
25	.5	.7	3.2		3.2	2.8	1.9	.1	.1	0		
26	.5	.5	7.6		3.2	2.6	1.3	.1	.3	0		
27	.5	.4	5.6	5	3.2	3.4	.9	.1	.8	0		
28	.6	.6	5.4		3.2	4.4	.9	.1	.9	0		
29	.7	.6	5.0			4.8	.7	0	.9	0		
30	.7	.4	4.6			5.0	.7	.1	.6	0		
31	1.1		4.4			6.4		.1		0		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.1		0.25	15
November	1.2	.4	.69	41
December	7.6	.3	2.02	124
January			4.66	287
February	7.3	3.2	4.66	259
March	6.4	2.0	3.83	236
April	5.2	.6	1.77	106
May	.9	0	.26	16
June	30	0	3.90	232
July	.4	0	.05	3.0
August	0	0	0	0
September	0	0	0	0
The year	30	0	1.82	1,320

Note.- No flow during months left blank.

Crane Prairie Reservoir near Lapine, Oreg.

Location.- Staff gage at reservoir dam in NW¼ sec. 16, T. 21 S., R. 8 E., 15 miles northwest of Lapine. Zero of gage is 4,400.0 feet above mean sea level.

Records available.- November 1922 to September 1934.

Extremes.- Maximum contents during year, 41,480 acre-feet May 14 (gage height, 42.08 feet); no storage Sept. 23-30.
1922-34: Maximum contents, 50,830 acre-feet Jan. 10-13, 1924 (gage height, 44.10 feet); no storage at times.

Remarks.- Records good. Reservoir was completed by North Canal Co. in 1922; gates were first closed Nov. 4, 1922. Capacity of reservoir is 55,200 acre-feet at spillway crest at gage height 45 feet. Stored water is used for irrigation of lands near Bend and Redmond.

Stage and contents, 1933-34

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	38.82	27,780	
Oct. 31	38.86	27,940	+160
Nov. 30	38.94	28,260	+320
Dec. 31	39.90	32,130	+3,870
Jan. 31	40.68	35,390	+3,260
Feb. 28	41.18	37,530	+2,140
Mar. 31	42.02	41,210	+3,680
Apr. 30	42.00	41,120	-90
May 31	41.58	39,270	-1,850
June 30	40.24	33,540	-5,730
July 31	36.60	19,460	-14,080
Aug. 31	31.60	4,374	-15,086
Sept. 30	28.20	0	- 4,374
The year			-27,780

Deschutes River at Crane Prairie, near Lapine, Oreg.

Location.- Water-stage recorder in NW¼ 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 1934.

Average discharge.- 13 years (1914-15, 1922-34), 210 second-feet.

Extremes.- Maximum discharge during year, 490 second-feet July 20; maximum gage height, 2.19 feet July 31; minimum discharge, 80 second-feet Feb. 11 to Mar. 7 (gage height, 0.90 foot).
1914-17, 1922-34: Maximum discharge, 604 second-feet Apr. 18, 1924 (gage height, 2.40 feet); minimum, 2.5 second-feet Apr. 24, 1923, caused by closing of dam (gage height, 0.05 foot).

Remarks.- Records good. Flow partly regulated since Nov. 4, 1922, by storage in Crane Prairie Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	339	274	225	160	151	80	172	119	254	344	476	408
2	339	274	209	143	151	80	234	119	271	352	476	396
3	343	274	199	140	151	80	251	119	271	376	476	388
4	343	274	199	140	151	80	251	119	271	376	472	380
5	343	274	199	140	151	80	251	121	271	392	449	364
6	343	274	199	140	151	80	241	121	238	416	440	356
7	343	277	199	140	151	80	231	124	199	420	440	344
8	322	277	199	140	149	82	231	124	196	420	440	328
9	306	274	202	140	149	82	228	124	206	420	440	316
10	302	274	184	143	140	82	190	124	238	420	432	313
11	290	274	166	143	98	85	181	124	248	416	432	302
12	290	274	166	143	80	85	161	124	248	420	424	288
13	290	261	166	143	80	85	181	124	265	432	424	282
14	290	255	166	143	80	85	181	187	265	432	432	286
15	293	255	169	143	80	85	184	265	271	432	449	261
16	293	252	169	143	80	85	184	265	292	432	449	248
17	277	252	169	143	80	85	178	265	344	432	449	236
18	271	252	169	143	80	85	184	261	344	436	449	231
19	268	252	172	143	80	85	172	258	344	456	449	225
20	271	252	169	143	80	85	126	254	344	490	449	212
21	271	234	169	143	80	82	111	254	344	485	449	209
22	268	228	169	143	80	82	111	254	344	480	449	202
23	268	226	169	149	80	82	111	251	344	476	449	199
24	260	225	169	149	80	82	111	248	344	472	449	193
25	264	225	172	149	80	85	111	248	340	462	454	187
26	268	221	172	149	80	85	111	244	340	454	449	181
27	268	218	172	151	80	87	116	244	340	458	440	178
28	268	218	172	151	80	101	116	241	340	467	432	175
29	271	221	172	151		116	116	241	340	467	424	151
30	271	221	172	151		129	119	241	344	467	424	151
31	274		172	151		135		241		476	416	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	343	264	294	18,080
November	277	218	252	15,000
December	225	166	180	11,060
January	160	140	145	8,910
February	151	80	105	5,860
March	135	80	87.8	5,400
April	251	111	172	10,240
May	265	119	195	12,000
June	344	196	293	17,450
July	490	344	435	26,740
August	476	416	445	27,340
September	408	151	266	15,820
The year	490	80	240	173,900

Deschutes River at Pringle Falls, near Lapine, Oreg.

Location.- Water-stage recorder in SW¼ sec. 23, T. 21 S., R. 9 E., half a mile above bridge at Pringle Falls and 7 miles northwest of Lapine.

Records available.- December 1915 to June 1917, June 1922 to September 1934.

Average discharge.- 11 years (1923-34), 717 second-feet.

Extremes.- Maximum discharge during year, 995 second-feet July 21 (gage height, 2.40 feet); minimum, 658 second-feet Mar. 8-15 (gage height, 1.67 feet).
1915-17, 1922-34: Maximum discharge, 1,170 second-feet June 21-27, 29, 30, 1917; minimum, 341 second-feet during period when recorder was stopped, Feb. 1-14, 1932.

Remarks.- Records good. No diversions above station. Flow regulated to small extent since 1922 by storage in Crane Prairie Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	915	850	796	760	728	662	733	692	774	864	990	930
2	915	850	796	733	728	666	787	692	796	864	985	915
3	915	850	778	746	728	662	818	692	800	877	990	905
4	915	850	774	733	728	662	818	692	796	886	985	900
5	915	846	774	728	728	662	814	692	796	886	975	890
6	915	846	792	724	728	662	814	692	796	910	960	882
7	915	846	787	720	733	662	800	692	742	920	960	872
8	910	846	774	720	736	662	796	692	736	920	955	864
9	882	846	774	720	733	658	796	692	733	920	950	850
10	882	846	769	724	728	658	787	692	760	915	945	836
11	864	846	746	724	692	658	756	692	774	910	940	828
12	864	841	751	724	666	662	760	692	778	910	935	814
13	864	836	751	728	662	662	760	692	787	925	930	805
14	864	818	751	733	662	658	760	697	792	935	930	792
15	864	818	751	728	662	658	760	796	792	940	940	782
16	864	818	746	724	662	662	760	800	796	940	955	774
17	864	818	756	728	662	662	760	796	818	940	955	769
18	846	823	756	728	662	662	760	796	841	945	955	760
19	846	823	756	728	666	662	760	792	841	945	955	751
20	846	823	751	733	666	662	724	792	841	980	960	742
21	846	818	760	728	666	662	697	792	850	990	955	733
22	846	796	760	728	666	662	697	792	850	985	960	733
23	846	796	756	742	666	662	702	792	850	985	960	738
24	846	796	756	728	666	662	692	792	854	980	965	728
25	846	796	751	728	662	666	692	792	854	975	970	720
26	846	796	751	724	666	666	692	792	859	970	960	715
27	850	796	756	724	666	679	692	787	864	970	965	710
28	854	796	756	728	662	692	688	787	864	980	945	706
29	859	796	760	728		692	688	787	859	980	950	697
30	864	796	760	728		710	697	782	859	980	945	684
31	864		756	728		715		782		985	935	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	915	846	871	53,580
November	850	796	824	49,040
December	796	746	763	46,910
January	760	720	729	44,830
February	738	662	669	38,250
March	715	658	667	41,040
April	818	688	749	44,550
May	800	692	747	45,900
June	864	733	812	48,310
July	990	864	939	57,740
August	990	930	957	58,830
September	930	684	794	47,260
The year	990	658	796	576,200

Deschutes River at Benham Falls, near Bend, Oreg.

Location.- Water-stage recorder in SE¼ sec. 9, T. 19 S., R. 11 E., 50 yards above head of Benham Falls, 1½ miles below dam site for proposed Benham Falls Reservoir, and 10 miles southwest of Bend.

Records available.- March 1909 to September 1914, August 1920 to September 1921, February 1924 to September 1934.

Average discharge.- 18 years (1905-13, 1924-34), 1,406 second-feet.

Extremes.- Maximum discharge during year, 1,500 second-feet July 24, 25 (gage height, 1.88 feet); minimum, 977 second-feet Sept. 30 (gage height, 0.67 foot).
1909-13, 1920-21, 1924-34: Maximum discharge (estimated), 5,000 second-feet Nov. 27, 1909 (gage height not determined); minimum, 690 second-feet Feb. 8, 9, 1933 (gage height, -0.14 foot).

Remarks.- Records good. Minor diversions for irrigation above station. Some regulation since 1922 caused by storage in Crane Prairie and Crescent Lake Reservoirs.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,320	1,290	1,160	1,220	1,240	1,120	1,260	1,140	1,190	1,360	1,470	1,240
2	1,320	1,290	1,190	1,220	1,220	1,120	1,320	1,140	1,190	1,360	1,470	1,240
3	1,320	1,290	1,190	1,220	1,220	1,120	1,360	1,140	1,240	1,340	1,470	1,240
4	1,320	1,290	1,160	1,220	1,220	1,120	1,390	1,140	1,240	1,340	1,470	1,220
5	1,320	1,260	1,160	1,240	1,220	1,140	1,390	1,140	1,260	1,360	1,470	1,220
6	1,320	1,260	1,190	1,240	1,190	1,140	1,390	1,120	1,320	1,360	1,470	1,220
7	1,320	1,260	1,220	1,240	1,190	1,140	1,360	1,120	1,320	1,390	1,440	1,190
8	1,320	1,260	1,190	1,220	1,190	1,140	1,340	1,120	1,260	1,390	1,440	1,160
9	1,320	1,260	1,220	1,190	1,190	1,160	1,340	1,120	1,260	1,390	1,440	1,160
10	1,290	1,240	1,240	1,160	1,190	1,160	1,320	1,120	1,260	1,390	1,440	1,160
11	1,260	1,240	1,240	1,160	1,190	1,140	1,290	1,120	1,260	1,390	1,440	1,140
12	1,260	1,240	1,220	1,160	1,140	1,140	1,260	1,090	1,290	1,390	1,420	1,140
13	1,260	1,240	1,220	1,220	1,120	1,140	1,260	1,090	1,290	1,390	1,420	1,120
14	1,260	1,240	1,220	1,220	1,120	1,140	1,240	1,090	1,290	1,390	1,420	1,120
15	1,260	1,240	1,190	1,220	1,120	1,140	1,240	1,120	1,290	1,390	1,420	1,090
16	1,260	1,220	1,160	1,220	1,120	1,120	1,240	1,190	1,290	1,420	1,420	1,090
17	1,260	1,220	1,140	1,190	1,120	1,120	1,240	1,220	1,290	1,390	1,420	1,090
18	1,260	1,220	1,160	1,190	1,120	1,120	1,240	1,220	1,320	1,390	1,390	1,060
19	1,240	1,220	1,160	1,220	1,120	1,120	1,220	1,220	1,340	1,420	1,340	1,060
20	1,240	1,220	1,190	1,220	1,120	1,120	1,220	1,190	1,340	1,420	1,320	1,040
21	1,240	1,220	1,220	1,220	1,120	1,120	1,190	1,190	1,340	1,440	1,320	1,040
22	1,240	1,220	1,240	1,240	1,120	1,120	1,160	1,190	1,340	1,470	1,290	1,040
23	1,240	1,220	1,240	1,240	1,120	1,120	1,160	1,190	1,340	1,470	1,290	1,040
24	1,240	1,190	1,290	1,260	1,120	1,120	1,160	1,190	1,360	1,470	1,290	1,020
25	1,240	1,190	1,290	1,290	1,120	1,120	1,160	1,190	1,360	1,470	1,290	1,020
26	1,240	1,190	1,290	1,290	1,120	1,120	1,140	1,190	1,360	1,470	1,290	1,020
27	1,240	1,190	1,260	1,290	1,120	1,120	1,140	1,190	1,360	1,470	1,290	990
28	1,260	1,190	1,240	1,260	1,120	1,160	1,140	1,220	1,360	1,470	1,290	990
29	1,260	1,160	1,220	1,260		1,160	1,140	1,220	1,360	1,470	1,260	990
30	1,290	1,160	1,220	1,240		1,220	1,140	1,220	1,360	1,470	1,260	986
31	1,290		1,190	1,240		1,240		1,190		1,470	1,260	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,320	1,240	1,275	78,370
November	1,290	1,160	1,229	73,150
December	1,290	1,140	1,210	74,420
January	1,290	1,160	1,226	75,410
February	1,240	1,120	1,540	64,110
March	1,240	1,120	1,138	69,980
April	1,390	1,140	1,248	74,280
May	1,220	1,090	1,162	71,460
June	1,360	1,190	1,303	77,510
July	1,470	1,340	1,413	86,900
August	1,470	1,260	1,378	84,750
September	1,240	986	1,105	65,720
The year	1,470	986	1,238	896,000

Deschutes River below Lava Island, near Bend, Oreg.

Location.- Water-stage recorder in SW¼ sec. 23, T. 18 S., R. 11 E., three-quarters of a mile below Lava Island, 1 mile below intake of Arnold Canal, and 6 miles southwest of Bend.

Records available.- March 1926 to September 1934.

Extremes.- Maximum discharge during year, 1,360 second-feet Aug. 2 (gage height, 1.15 feet); minimum, 890 second-feet Sept. 30 (gage height, 0.60 foot).
1926-34: Maximum discharge, 1,780 second-feet Jan. 3, 1928 (gage height, 1.55 feet); minimum, 612 second-feet Feb. 9, 1933 (gage height, 0.16 foot).

Remarks.- Records good. Discharge estimated Nov. 22, 23, Feb. 18, Apr. 7. Arnold Canal diverts water for irrigation above station. Flow regulated by storage in Crescent Lake and Crane Prairie Reservoirs.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,160	1,170	1,080	1,110	1,130	1,030	1,180	978	1,050	1,220	1,330	1,120
2	1,160	1,200	1,090	1,130	1,120	1,030	1,210	978	1,050	1,220	1,340	1,120
3	1,160	1,200	1,100	1,130	1,110	1,030	1,260	978	1,090	1,210	1,350	1,110
4	1,160	1,200	1,080	1,150	1,110	1,020	1,280	986	1,100	1,230	1,350	1,100
5	1,160	1,190	1,090	1,150	1,110	1,040	1,280	978	1,100	1,240	1,360	1,100
6	1,160	1,190	1,100	1,170	1,100	1,040	1,260	970	1,160	1,230	1,350	1,090
7	1,160	1,180	1,120	1,140	1,100	1,030	1,260	962	1,170	1,250	1,320	1,070
8	1,160	1,180	1,100	1,110	1,100	1,040	1,220	962	1,130	1,260	1,310	1,060
9	1,160	1,180	1,110	1,100	1,100	1,050	1,180	954	1,120	1,280	1,300	1,060
10	1,130	1,170	1,140	1,080	1,100	1,050	1,160	954	1,110	1,270	1,300	1,040
11	1,120	1,170	1,160	1,070	1,100	1,050	1,140	954	1,120	1,270	1,290	1,030
12	1,110	1,160	1,100	1,070	1,080	1,040	1,100	946	1,140	1,260	1,280	1,020
13	1,100	1,160	1,080	1,100	1,030	1,030	1,090	938	1,190	1,260	1,280	1,010
14	1,100	1,160	1,080	1,110	1,030	1,000	1,080	938	1,140	1,270	1,270	1,000
15	1,100	1,140	1,110	1,120	1,030	976	1,080	938	1,130	1,270	1,260	994
16	1,100	1,140	1,090	1,110	1,030	978	1,070	1,030	1,120	1,270	1,270	986
17	1,100	1,130	1,080	1,100	1,030	1,000	1,060	1,060	1,120	1,270	1,280	970
18	1,100	1,130	1,080	1,100	1,030	1,030	1,050	1,050	1,160	1,260	1,260	954
19	1,090	1,130	1,100	1,100	994	1,030	1,050	1,050	1,180	1,270	1,210	946
20	1,080	1,130	1,110	1,110	970	1,030	1,050	1,050	1,180	1,280	1,200	938
21	1,070	1,120	1,120	1,120	970	1,030	1,020	1,040	1,170	1,310	1,180	930
22	1,080	1,080	1,160	1,110	1,000	1,030	994	1,050	1,190	1,330	1,170	922
23	1,080	1,060	1,160	1,100	1,030	1,030	986	1,050	1,200	1,340	1,170	922
24	1,090	1,060	1,180	1,130	1,030	1,030	986	1,050	1,200	1,340	1,160	922
25	1,090	1,070	1,210	1,180	1,030	1,030	994	1,050	1,210	1,340	1,160	914
26	1,080	1,100	1,210	1,190	1,030	1,030	986	1,050	1,210	1,330	1,160	906
27	1,080	1,100	1,190	1,190	1,030	1,030	986	1,060	1,210	1,330	1,160	898
28	1,100	1,100	1,150	1,170	1,030	1,070	978	1,060	1,210	1,320	1,160	898
29	1,100	1,090	1,100	1,160		1,090	970	1,060	1,230	1,320	1,150	898
30	1,100	1,080	1,100	1,150		1,110	978	1,060	1,220	1,320	1,140	898
31	1,120		1,090	1,140		1,150		1,050		1,320	1,140	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,160	1,070	1,115	68,550
November	1,200	1,060	1,139	67,780
December	1,210	1,080	1,118	68,770
January	1,190	1,070	1,126	69,220
February	1,130	970	1,055	58,580
March	1,150	978	1,037	63,780
April	1,280	970	1,098	65,330
May	1,060	938	1,008	61,950
June	1,230	1,050	1,154	68,650
July	1,340	1,210	1,280	76,720
August	1,350	1,140	1,247	76,660
September	1,120	898	894	59,160
The year	1,350	898	1,115	807,200

Deschutes River below Bend, Oreg.

Location.- Water-stage recorder in SE¼ sec. 20, T. 17 S., R. 12 E., half a mile below North Canal Dam and 2 miles north of Bend.

Records available.- October 1914 to September 1934.

Average discharge.- 20 years, 728 second-feet.

Extremes.- Maximum discharge during year, 1,230 second-feet Dec. 25 (gage height, 3.11 feet); minimum, 25 second-feet May 3 (gage height, 0.98 foot).
1914-34: Maximum discharge, 2,500 second-feet Dec. 7, 1921 (gage height, 3.9 feet); minimum, 1 second-foot Aug. 25, 1930.
Maximum discharge of river in this vicinity since 1905, 4,820 second-feet Nov. 27, 1909.

Remarks.- Records good except those for Oct. 9-25, which are fair. Six large canals divert above station. Flow regulated by hydroelectric plant at Bend and since 1922 by storage in Crescent Lake and Crane Prairie Reservoirs.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	248	1,030	1,060	1,090	1,100	913	344	110	90	93	105	102
2	250	1,130	1,100	1,120	1,080	913	404	128	93	95	128	95
3	240	1,130	1,110	1,120	1,080	913	502	150	168	98	168	98
4	221	1,080	1,100	1,130	1,080	904	523	179	213	93	137	95
5	197	1,040	1,080	1,130	1,080	913	461	150	179	100	118	102
6	161	1,040	1,090	1,150	994	922	446	78	183	93	115	98
7	157	1,050	1,100	1,140	949	913	377	51	208	98	102	100
8	150	1,060	1,090	1,110	949	922	303	32	187	107	100	100
9	137	1,050	1,080	1,090	949	931	259	36	175	110	100	105
10	95	1,030	1,110	1,080	728	736	200	61	175	102	100	105
11	76	1,030	1,130	1,070	390	370	231	84	143	98	98	105
12	78	1,010	1,110	913	370	314	157	82	112	90	88	102
13	90	1,000	1,090	530	336	280	84	78	107	95	93	105
14	121	1,000	1,090	642	291	204	84	78	78	100	95	105
15	105	976	1,110	642	280	161	116	72	88	107	98	95
16	76	976	1,110	672	255	196	107	102	86	105	98	118
17	78	967	1,090	904	280	192	98	112	93	100	105	98
18	100	958	1,080	949	297	161	95	102	95	100	102	95
19	107	956	720	1,010	425	161	95	100	100	102	105	95
20	140	958	672	1,080	832	259	95	98	100	100	105	88
21	134	931	665	1,120	650	502	84	98	100	115	107	98
22	131	976	680	1,080	868	495	61	96	100	128	100	98
23	131	940	677	985	913	495	95	102	105	115	100	110
24	137	940	1,180	994	913	509	93	98	102	110	100	121
25	196	877	1,200	1,030	913	536	96	98	100	102	96	137
26	259	568	1,200	1,040	913	530	95	98	105	98	105	137
27	235	605	1,180	1,100	922	568	93	100	105	98	107	134
28	235	552	1,140	1,150	913	598	88	105	110	98	107	134
29	240	628	1,100	1,140		628	84	105	105	100	95	128
30	259	859	1,090	1,130		650	102	100	98	100	100	128
31	269		1,080	1,110		628		100		100	100	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	269	76	163	10,000
November	1,130	552	945	56,230
December	1,200	665	1,049	64,490
January	1,150	530	1,015	62,380
February	1,100	255	748	41,560
March	931	161	562	34,550
April	523	61	197	11,690
May	179	32	96.3	5,920
June	213	78	123	7,340
July	128	90	102	6,250
August	166	88	106	6,500
September	137	88	108	6,410
The year	1,200	32	433	313,300

Deschutes River near Madras, Oreg.

Location.- Water-stage recorder in NE¼ sec. 13, T. 10 S., R. 12 E., 1 mile below Pelton dam site, 4 miles above mouth of Shitike Creek, and 9 miles northwest of Madras. Zero of gage is about 1,404 feet above mean sea level, from river profile.

Records available.- October 1923 to September 1934.

Average discharge.- 11 years, 4,126 second-feet.

Extremes.- Maximum discharge during year, 7,820 second-feet May 29 (gage height, 4.44 feet); minimum, 3,240 second-feet Oct. 14, 18 (gage height, 1.58 feet).
1923-34: Maximum discharge, 10,700 second-feet Feb. 6, 1925 (gage height, 6.54 feet at former gage); minimum, 2,960 second-feet Aug. 15, 1931.

Remarks.- Records excellent. Diversions for irrigation in upper river basin. Gage-height record furnished by Columbia Valley Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,510	3,620	4,130	4,750	4,910	4,430	4,360	3,540	3,620	3,540	3,480	3,400
2	3,510	4,510	4,280	4,830	4,830	4,590	4,080	3,510	3,620	3,540	3,490	3,400
3	3,510	4,510	4,280	4,990	4,830	4,590	4,130	3,550	3,620	3,520	3,510	3,370
4	3,480	4,360	4,360	4,910	4,830	4,510	4,200	3,550	3,760	3,520	3,510	3,390
5	3,450	4,280	4,360	4,910	4,750	4,670	4,130	3,690	3,830	3,520	3,520	3,400
6	3,420	4,280	4,590	4,910	4,750	4,910	4,060	3,690	3,760	3,520	3,490	3,400
7	3,380	4,280	4,670	4,830	4,670	4,670	3,980	3,620	3,830	3,540	3,480	3,400
8	3,400	4,280	4,510	4,750	4,670	4,590	3,900	3,540	3,830	3,520	3,480	3,400
9	3,370	4,280	4,430	4,750	4,670	4,590	3,830	3,490	3,760	3,520	3,470	3,400
10	3,340	4,200	4,430	4,750	4,590	4,590	3,760	3,480	3,760	3,520	3,470	3,410
11	3,300	4,280	4,430	4,670	4,280	4,200	3,690	3,480	3,760	3,510	3,470	3,400
12	3,270	4,280	4,510	4,670	4,060	3,900	3,760	3,470	3,690	3,510	3,470	3,400
13	3,260	4,280	4,430	4,360	4,060	3,830	3,690	3,420	3,690	3,510	3,470	3,400
14	3,270	4,280	4,510	4,280	3,980	3,830	3,620	3,420	3,629	3,510	3,470	3,400
15	3,330	4,200	4,510	4,280	3,900	3,760	3,550	3,420	3,550	3,510	3,470	3,400
16	3,310	4,200	4,430	4,280	3,830	3,690	3,620	3,420	3,550	3,540	3,470	3,410
17	3,310	4,200	4,510	4,430	3,830	3,690	3,540	3,410	3,550	3,550	3,470	3,410
18	3,280	4,200	4,670	4,590	3,830	3,690	3,510	3,420	3,540	3,520	3,470	3,410
19	3,370	4,200	4,510	4,670	3,900	3,620	3,490	3,400	3,540	3,510	3,450	3,380
20	3,380	4,200	4,280	4,750	4,060	3,620	3,490	3,390	3,540	3,510	3,450	3,400
21	3,370	4,200	4,360	4,830	4,360	3,760	3,510	3,370	3,520	3,510	3,450	3,400
22	3,370	4,200	5,070	5,070	4,360	3,900	3,540	3,370	3,520	3,490	3,450	3,400
23	3,410	4,200	5,240	5,410	4,360	3,900	3,540	3,370	3,520	3,510	3,450	3,450
24	3,370	4,130	5,240	5,240	4,360	3,900	3,540	3,400	3,520	3,520	3,440	3,420
25	3,340	4,130	5,240	5,240	4,360	3,830	3,540	3,410	3,540	3,520	3,440	3,450
26	3,370	3,980	5,410	5,240	4,430	3,900	3,540	3,410	3,550	3,520	3,420	3,480
27	3,480	3,830	5,410	5,070	4,430	3,980	3,550	3,400	3,540	3,520	3,420	3,490
28	3,490	3,830	5,070	5,070	4,360	4,510	3,520	3,410	3,540	3,510	3,420	3,480
29	3,550	3,760	4,990	5,070		4,910	3,520	3,910	3,540	3,490	3,420	3,480
30	3,520	3,900	4,910	4,990		4,750	3,520	3,620	3,540	3,490	3,410	3,470
31	3,510		4,830	4,910		4,430		3,620		3,480	3,400	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,550	3,260	3,395	208,700
November	4,510	3,620	4,169	248,100
December	5,410	4,130	4,665	286,800
January	5,410	4,280	4,823	296,500
February	4,910	3,830	4,366	242,500
March	4,910	3,620	4,185	257,300
April	4,360	3,490	3,723	221,500
May	3,910	3,370	3,490	214,600
June	3,830	3,520	3,625	215,700
July	3,550	3,480	3,516	216,200
August	3,520	3,400	3,461	212,800
September	3,490	3,370	3,417	203,300
The year	5,410	3,260	3,901	2,824,000

Deschutes River at Moody, near Biggs, Oreg.

Location.- Water-stage recorder in SE¼ sec. 26, T. 2 N., R. 15 E., at Moody, 1½ miles above mouth and 5 miles southwest of Biggs. Zero of gage is 167.43 feet above mean sea level by general adjustment of 1929.

Drainage area.- 10,500 square miles.

Records available.- July 1906 to September 1934. October 1897 to December 1899 at station near Moro, 10 miles above mouth.

Average discharge.- 29 years (1898-99, 1906-34), 5,935 second-feet.

Extremes.- Maximum discharge during year, 13,300 second-feet Dec. 23 (gage height, 4.76 feet); minimum, 3,620 second-feet Sept. 6-9, 20 (gage height, 2.16 feet). 1897-99, 1906-34: Maximum discharge, 43,600 second-feet Jan. 7, 1923 (gage height, 10.2 feet); minimum, 3,380 second-feet Sept. 16-19, 1931 (gage height, 2.06 feet).

Remarks.- Records excellent. Diversions for irrigation in upper river basin. Gage-height record furnished by Eastern Oregon Land Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,080	4,210	4,490	6,900	6,720	5,230	5,860	4,350	3,980	3,780	3,710	3,670
2	4,050	4,640	4,640	6,900	6,540	5,540	5,700	4,210	3,980	3,780	3,730	3,670
3	4,030	5,540	4,930	7,260	6,370	6,030	5,380	4,210	3,980	3,780	3,780	3,640
4	4,000	5,540	4,930	8,020	6,200	5,860	5,380	4,350	4,000	3,760	3,780	3,640
5	4,000	5,230	4,780	7,640	6,200	5,860	5,540	4,350	4,130	3,760	3,810	3,670
6	3,980	5,080	5,230	7,260	6,030	6,370	5,380	4,490	4,110	3,760	3,780	3,640
7	3,950	4,930	6,900	6,900	6,030	6,540	5,230	4,490	4,080	3,760	3,780	3,620
8	3,900	4,930	6,200	6,720	6,030	6,200	5,230	4,350	4,160	3,780	3,760	3,620
9	3,880	4,930	5,700	6,720	6,030	6,200	5,080	4,210	4,160	3,780	3,730	3,620
10	3,880	4,930	5,700	6,370	5,860	6,030	4,930	4,210	4,110	3,780	3,730	3,640
11	3,850	4,930	5,700	6,370	5,860	5,860	4,780	4,180	4,050	3,810	3,710	3,640
12	3,810	4,780	5,700	6,200	5,230	5,380	4,780	4,160	4,050	3,780	3,690	3,640
13	3,810	4,780	5,700	6,030	5,230	5,230	4,780	4,130	4,000	3,780	3,690	3,640
14	3,780	4,780	5,540	5,860	5,080	5,080	4,640	4,080	3,950	3,780	3,690	3,670
15	3,810	4,780	5,540	6,030	5,080	4,930	4,490	4,080	3,900	3,780	3,670	3,670
16	3,830	4,780	5,380	5,860	4,930	4,780	4,490	4,050	3,900	3,780	3,670	3,670
17	3,830	4,780	5,380	6,030	4,780	4,780	4,490	4,050	3,880	3,780	3,670	3,670
18	3,830	4,780	5,860	6,370	4,780	4,780	4,350	4,030	3,880	3,780	3,670	3,670
19	3,830	4,780	6,370	6,370	4,780	4,640	4,350	4,030	3,850	3,780	3,670	3,670
20	3,930	4,780	6,200	6,720	4,930	4,640	4,350	4,000	3,850	3,760	3,690	3,640
21	3,950	4,780	6,720	6,720	5,230	4,490	4,350	3,980	3,850	3,760	3,690	3,640
22	3,930	4,780	9,400	7,640	5,230	4,780	4,350	3,950	3,850	3,760	3,710	3,670
23	3,950	4,780	12,400	9,600	5,230	4,780	4,350	3,950	3,830	3,760	3,710	3,730
24	4,030	4,640	10,200	10,200	5,230	4,780	4,350	3,950	3,810	3,760	3,690	3,610
25	3,950	4,640	9,200	8,800	5,230	4,780	4,350	4,000	3,810	3,760	3,690	3,710
26	3,930	4,640	9,200	8,400	5,230	4,640	4,350	4,000	3,810	3,760	3,690	3,730
27	3,950	4,350	8,800	7,830	5,230	4,780	4,350	3,980	3,810	3,760	3,690	3,730
28	4,080	4,490	8,020	7,450	5,230	5,230	4,350	3,980	3,780	3,730	3,690	3,760
29	4,180	4,350	7,640	7,260		6,540	4,350	4,000	3,780	3,730	3,690	3,730
30	4,350	4,350	7,450	7,080		6,720	4,350	4,600	3,780	3,730	3,690	3,730
31	4,350		7,260	6,720		6,370		4,050		3,710	3,670	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,350	3,780	3,958	243,400
November	5,540	4,210	4,790	285,000
December	12,400	4,490	6,683	410,900
January	10,200	5,860	7,104	436,800
February	6,720	4,780	6,519	306,500
March	6,720	4,490	5,415	332,900
April	5,860	4,350	4,757	283,100
May	4,600	3,950	4,144	254,800
June	4,160	3,780	3,937	234,300
July	3,810	3,710	3,766	231,600
August	3,810	3,670	3,710	228,100
September	3,810	3,620	3,675	218,700
The year	12,400	3,620	4,788	3,466,000

Odell Creek near Crescent, Oreg.

Location.- Water-stage recorder in SW¼ sec. 25, T. 23 S., R. 6 E., at outlet of Odell Lake, 3½ miles north of Crescent Lake and 14 miles northwest of Crescent.

Drainage area.- 39 square miles.

Records available.- August 1911 to August 1914 (incomplete), December 1923 to June 1924, May 1933 to September 1934.

Extremes.- Maximum discharge during year, 169 second-feet Apr. 2 (gage height, 1.02 feet): minimum, 8 second-feet during period when recorder was not operating, Sept. 7-30 (gage height, 0.19 foot).
1911-14, 1923-24, 1933-34: Maximum discharge, 402 second-feet June 11, 1933 (gage height, 1.51 feet); minimum, that of September 1934.

Remarks.- Records fair except those estimated Sept. 7-30, which are poor. No diversions above station. Discharge regulated at times by debris collecting on fish racks or by boards used to change lake level at summer resort docks, at outlet of Odell Lake.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	64	53	64	81	60	66	74	55	45	29	19
2	52	55	53	86	78	64	111	71	53	43	28	19
3	47	90	58	105	76	67	158	71	53	43	27	19
4	43	114	57	105	74	66	144	69	53	42	26	20
5	35	105	57	96	71	71	126	69	53	42	26	20
6	37	96	67	96	71	76	120	69	57	42	26	19
7	34	91	78	91	69	81	117	67	57	40	25	
8	25	86	76	88	69	81	114	67	57	39	24	
9	23	81	71	86	71	78	102	67	55	39	24	
10	24	76	69	84	69	76	99	66	55	39	23	
11	22	74	69	86	67	74	94	64	55	38	23	
12	22	71	74	86	66	74	91	62	53	37	22	
13	31	69	78	84	66	74	88	60	52	37	22	
14	29	67	84	91	64	71	86	58	50	37	21	
15	28	67	94	86	62	71	86	58	50	35	21	
16	36	64	66	84	60	69	86	57	49	35	21	
17	42	62	88	81	60	67	84	57	49	35	20	
18	33	60	96	81	60	67	84	55	49	34	20	
19	39	60	96	81	60	67	81	55	47	34	19	17
20	25	58	96	86	60	60	61	55	46	33	19	
21	56	58	94	91	58	50	81	55	46	32	19	
22	62	58	94	94	58	43	81	53	45	32	20	
23	38	57	94	111	60	37	81	53	43	32	20	
24	32	57	91	120	58	46	81	53	43	32	19	
25	29	53	91	114	58	55	81	55	43	32	19	
26	27	55	88	105	60	49	78	55	43	32	19	
27	29	55	86	102	62	52	76	57	43	32	19	
28	28	60	84	96	62	66	76	55	45	32	20	
29	81	57	86	94		74	74	57	45	31	19	
30	99	55	86	88		84	74	58	45	31	20	
31	61		64	84		74		57		29	20	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	99	22	40.0	1.03	1.19	2,460
November	114	53	69.2	1.77	1.98	4,120
December	96	53	79.9	2.05	2.36	4,920
January	120	81	92.5	2.37	2.73	5,680
February	81	58	65.4	1.68	1.75	3,630
March	84	37	66.0	1.69	1.95	4,060
April	158	66	93.4	2.39	2.67	5,560
May	74	53	60.6	1.55	1.79	3,730
June	57	43	49.6	1.27	1.42	2,950
July	45	29	36.0	.923	1.06	2,210
August	29	19	21.9	.562	.65	1,350
September	20		17.5	.449	.50	1,040
The year	158		57.6	1.48	20.05	41,710

Little Deschutes River near Lapine, Oreg.

Location.- Water-stage recorder in SW¼ sec. 2, T. 22S., R. 10 E., at bridge at former town of Rosland, 1¼ miles north of Lapine (revised). Zero of gage is 4,192.81 feet above mean sea level by general adjustment of 1929.

Records available.- September 1910 to October 1913 (incomplete), June to November 1918, August to October 1920, May 1924 to September 1934.

Average discharge.- 10 years (1924-34), 141 second-feet.

Extremes.- Maximum discharge during year, 251 second-feet Apr. 2 (gage height, 3.03 feet); minimum discharge, 16 second-feet Aug. 3-7 (gage height, 0.95 foot).
1910-13, 1918, 1920, 1924-34: Maximum discharge, 792 second-feet June 13, 1933 (gage height, 6.43 feet); minimum, 8 second-feet Sept. 2, 3, 1931 (gage height, 0.71 foot).

Remarks.- Records good except those estimated Oct. 1-15, 21-23, 28, Nov. 21, 22, 29, 30, Dec. 1-6, 17, 18, which are poor. Small diversions for irrigation above station. Flow regulated since August 1922 by storage in Crescent Lake Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		101	50	108	149	117	237	117	78	176	189	19
2		96	57	106	144	108	244	122	76	170	196	18
3		92	63	127	140	111	244	116	79	170	196	16
4		89	66	182	137	129	244	113	138	163	189	16
5		87	69	196	133	129	230	107	176	160	196	17
6		79	74	170	130	130	216	101	182	159	196	17
7		75	95	140	129	149	196	98	189	170	189	17
8	65	72	127	125	133	156	182	96	196	170	196	18
9		70	170	116	145	149	170	94	196	170	196	18
10		68	137	128	138	142	163	92	178	170	196	18
11		66	112	122	120	137	156	89	159	170	196	18
12		65	105	116	120	130	150	85	162	163	196	18
13		63	102	116	122	125	145	81	163	163	196	18
14		62	108	125	120	123	140	79	156	162	189	18
15		62	106	123	114	120	136	77	150	158	189	19
16	56	62	79	124	116	119	134	76	149	159	182	20
17	55	61	77	118	113	118	132	74	158	159	108	20
18	56	59	79	119	112	117	129	74	159	176	66	20
19	59	55	79	124	113	117	126	73	156	182	47	20
20	59	52	85	141	114	114	124	73	151	182	34	20
21	59	58	116	155	111	113	120	73	163	189	29	22
22	60	60	144	149	110	110	118	73	170	202	24	23
23	61	60	189	176	111	110	122	71	176	202	23	23
24	61	59	223	230	114	107	129	70	182	202	23	24
25	61	57	196	237	114	107	133	71	182	196	21	23
26	60	57	170	223	111	107	130	76	182	196	21	24
27	59	57	144	209	110	114	123	79	189	189	19	24
28	68	58	125	196	117	140	117	74	189	189	18	23
29	70	57	112	182		182	112	74	189	196	19	23
30	86	50	110	170		209	111	72	182	189	18	23
31	100		112	159		216		76		189	20	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	100	55	64.7	3,980
November	101	50	67.0	3,980
December	223	50	112	6,900
January	237	106	152	9,350
February	149	110	123	6,820
March	216	107	131	8,040
April	244	111	157	9,350
May	122	70	85.4	5,250
June	196	76	162	9,630
July	202	158	177	10,890
August	196	18	115	7,090
September	24	16	19.9	1,180
The year	244	16	114	82,460

Crescent Lake Reservoir near Crescent, Oreg.

Location.- Staff gage 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 1934.

Extremes.- Maximum contents during year, 46,850 acre-feet May 26 to June 2 (gage height, 12.90 feet); minimum, 23,060 acre-feet Aug. 15-17, Sept. 7-9, 24-30 (gage height, 6.50 feet).
1922-34: Maximum contents, 72,460 acre-feet July 15, 1923 (gage height, 19.55 feet); minimum, 9,640 acre-feet Oct. 21, 1931 (gage height, 2.75 feet).

Remarks.- Records good. Contents given are those above zero of gage and elevation of gate sill. Water stored in Crescent Lake Reservoir, completed in 1922, is used by Deschutes County Municipal Improvement District through its canal diverting from Deschutes River at Bend for irrigation of lands near Tumalo. Capacity of reservoir is 86,050 acre-feet at spillway crest at gage height 23.0 feet.

Stage and contents, 1933-34

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	6.74	31,260	
Oct. 31	6.45	30,180	-1,080
Nov. 30	6.73	31,220	+1,040
Dec. 31	9.60	34,440	+3,220
Jan. 31	10.50	37,800	+3,360
Feb. 28	10.80	38,920	+1,120
Mar. 31	11.90	43,060	+4,140
Apr. 30	12.65	45,900	+2,840
May 31	12.90	46,850	+950
June 30		*38,830	-8,020
July 31		*27,080	-11,750
Aug. 31	6.60	23,420	-3,660
Sept. 30	6.50	23,060	-360
The year			-6,200

*Estimated.

Crescent Creek at Crescent Lake, near Crescent, Oreg.

Location.- Water-stage recorder 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.- January 1911 to July 1915, July 1927 to September 1928 (incomplete), October 1928 to September 1934.

Extremes.- Maximum discharge during year, 186 second-feet July 20 (gage height, 2.16 feet); no flow most of year.
1911-15, 1927-34: Maximum discharge, 313 second-feet July 9, 1929; no flow at times.

Remarks.- Records good. No flow Oct. 1 to June 1, Aug. 16 to Sept. 30. Flow regulated since 1922 by storage in Crescent Lake Reservoir, this storage being released June 2 to Aug. 17 for Deschutes County Municipal Improvement District Canal near Bend.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									0	143	176	
2									44	142	173	
3									127	140	173	
4									126	138	176	
5									126	142	173	
6									124	148	173	
7									124	148	161	
8									118	148	179	
9									100	148	176	
10									112	147	174	
11									112	146	172	
12									111	144	170	
13									109	143	168	
14									109	146	166	
15									114	147	102	
16									122	153	14	
17									122	176	6	
18									121	176	0	
19									127	174	0	
20									138	176	0	
21									139	179	0	
22									139	176	0	
23									139	173	0	
24									142	178	0	
25									144	176	0	
26									146	173	0	
27									146	174	0	
28									144	174	0	
29									144	172	0	
30									143	172	0	
31										176		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	0	0	0	0
June	146	0	120	7,160
July	179	138	160	9,810
August	181	0	82.3	5,060
September	0	0	0	0
The year	181	0	30.4	22,030

Note.- No flow during months left blank.

Diversions from Deschutes River near Bend, Oreg.

The following canals divert from Deschutes River between gaging station at Benham Falls and station below Bend: Arnold Canal diverts from right bank of Deschutes River at head of Lava Island, in SW¼ 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 NE¼ sec. 13, T. 18 S., R. 11 E.; water used for irrigation of lands east of Bend. Beginning Oct. 1, 1932, record of flow of Central Oregon Canal obtained above intake of Pilot Butte Canal. Deschutes County Municipal Improvement District Canal diverts from left bank in NE¼ 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 NE¼ sec. 29, T. 17 S., R. 12 E.; water used to irrigate lands north of Bend, mostly near Redmond. No other diversions between gaging stations at Benham Falls and below Bend.

Records are available from October 1926 to September 1934; records for each of these canals published separately prior to 1926.

Diversions, in acre-feet, 1933-34

Month	Arnold Canal	Central Oregon Canal	Deschutes County Municipal Improvement District Canal	North Canal	Swalley Canal	Total
October	4,870	23,770	6,650	22,120	4,180	61,590
November	547	2,130	6,120	1,970	1,980	12,547
December	504	2,240	0	1,980	813	5,537
January	204	3,210	1,450	1,480	761	7,125
February	264	5,020	6,240	4,530	734	16,788
March	262	6,500	5,930	14,630	593	27,915
April	3,820	22,420	3,170	21,300	3,760	54,470
May	4,150	23,610	1,450	22,210	5,480	57,100
June	3,360	23,240	5,560	23,280	5,670	61,310
July	3,680	28,050	7,880	27,700	6,690	74,000
August	3,670	29,630	5,510	27,960	6,670	73,440
September	3,900	24,020	943	21,840	5,250	55,953
The year	29,031	194,040	50,903	191,000	42,801	507,775

Tumalo Creek near Bend, Oreg.

Location.- Water-stage recorder in SE¼ sec. 23, T. 17 S., R. 11 E., a quarter of a mile above diversion dam of feed canal of Tumalo project, 4 miles above mouth, and 4 miles northwest of Bend.

Drainage area.- 57 square miles.

Records available.- November 1913 to September 1934; also during winters from October 1908 to April 1913, except 1909 and 1910.

Average discharge.- 19 years (1913-21, 1923-34), 82.5 second-feet.

Extremes.- Maximum discharge during year, 276 second-feet Mar. 29 (gage height, 2.32 feet); minimum, 14 second-feet Feb. 28, Mar. 1 (gage height, 0.88 foot).
1908-8, 1911-34: Maximum discharge, 1,420 second-feet about Jan. 6, 1923 (gage height, 4.55 feet); minimum, 4.0 second-feet Oct. 28, 1922 (gage height, 0.55 foot).

Remarks.- Records fair. Columbia Southern Canal diverts above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81	77	67	20	20	14	168	*107	107	84	70	*54
2	79	139	67	20	20	47	148	*110	99	79	72	54
3	79	119	67	22	19	32	139	*121	99	70	74	54
4	76	94	67	21	19	*26	130	*142	94	82	69	55
5	76	84	67	20	*19	*26	128	*177	97	82	69	55
6	74	81	84	19	*19	*27	119	*165	148	86	70	56
7	74	79	81	19	*19	*28	111	*147	128	90	69	55
8	72	79	74	18	*19	*34	117	*123	113	86	64	52
9	70	79	72	19	*18	*34	117	*110	123	84	64	52
10	67	79	74	19	*20	*32	117	*116	125	*83	66	54
11	64	77	66	19	20	*30	123	*139	123	*81	66	52
12	66	76	44	17	20	32	134	*134	109	*77	64	52
13	66	76	52	17	18	35	144	*129	86	76	66	54
14	66	77	61	17	17	37	139	*136	86	77	64	52
15	64	77	33	16	17	42	134	*145	103	76	64	51
16	67		81	17	16	40	130	*140	99	74	66	52
17	66		103	17	16	33	119	*122	99	70	*66	52
18	66		36	17	16	30	*32	*112	105	72	66	51
19	67		35	18	16	34	158	*117	95	74	64	51
20	76	70	34	19	16	35	170	*115	94	74	64	51
21	67		42	18	16	35	170	*115	90	72	64	51
22	70		117	27	16	34	182	*127	97	69	64	55
23	72		182	46	16	34	178	127	92	66	*64	56
24	69		148	28	15	32	153	128	88	64	*62	56
25	70	66	141	24	15	32	137	128	88	70	*62	55
26	67	67	141	23	15	33	134	126	82	70	*64	54
27	74	67	144	22	15	64	146	170	81	70	*63	54
28	66	66	132	21	15	202	134	182	82	70	*63	54
29	90	*65	95	20		222	132	165	61	72	*60	52
30	84	*60	26	19		240	*112	151	82	74	*60	51
31	79		22	19		192		121		72	*60	

Month	Tumalo Creek				Columbia Southern Canal (acre-feet)	Combined run-off in acre-feet
	Discharge in second-feet			Run-off in acre-feet		
	Maximum	Minimum	Mean			
October	90	64	72.4	4,450	0	4,450
November	139	60	77.1	4,590	0	4,590
December	182	22	79.3	4,870	1,620	6,490
January	46	16	20.6	1,270	4,360	5,630
February	20	15	17.4	966	3,630	4,596
March	240	14	57.0	3,510	5,590	9,100
April	182	111	139	8,250	627	8,877
May	182	107	134	8,230	0	8,230
June	148	81	99.8	5,940	224	6,164
July	90	64	76.1	4,680	0	4,680
August	74	60	65.3	4,010	0	4,010
September	56	51	53.2	3,170	0	3,170
The year	240	14	74.5	53,936	16,051	69,987

*Estimated.

Squaw Creek near Sisters, Oreg.

Location.- Water-stage recorder in NW¼ sec. 32, T. 15 S., R. 10 E., immediately above intake of McCallister Ditch and 4 miles south of Sisters.

Drainage area.- 63 square miles.

Records available.- Irrigation seasons, 1913-25; October 1925 to September 1934. July 1906 to May 1913 at station below intake of McCallister Ditch and 700 feet downstream.

Average discharge.- 23 years (1906-18, 1919-20, 1925-34), 105 second-feet.

Extremes.- Maximum discharge during year, 375 second-feet Mar. 28 (gage height, 2.05 feet); minimum, 43 second-feet Nov. 28 (gage height, 0.96 foot).
1906-34: Maximum discharge (estimated), 1,940 second-feet Nov. 22, 1909 (gage height, 7.5 feet at former station); minimum, 19 second-feet Dec. 6, 1922.

Remarks.- Records good except those estimated Nov. 31 to Dec. 2, Feb. 8-14, Sept. 17-26, which are fair. Pole Creek, a tributary above station, has been entirely diverted from its natural channel near mouth through a canal for irrigation of lands near Sisters.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78	71	46	98	105	73	138	107	129	129	94	84
2	76	107	48	98	102	163	127	105	117	132	107	80
3	80	88	49	117	100	117	119	105	110	129	100	88
4	82	73	49	100	100	107	117	124	102	122	88	94
5	80	69	54	94	96	181	114	169	102	127	94	90
6	80	66	96	88	94	169	114	148	138	135	98	76
7	80	66	80	86	94	132	117	135	127	129	94	67
8	80	64	64	84		119	119	119	122	117	94	62
9	75	64	64	84		112	119	110	135	117	92	67
10	73	62	62	82		105	119	114	151	119	90	66
11	71	60	67	84	87	102	124	127	160	114	86	54
12	71	59	69	80		102	132	127	163	114	88	48
13	69	59	64	80		102	143	127	157	119	90	46
14	67	59	57	80		107	140	140	151	124	94	51
15	62	59	57	76	80	102	140	151	143	124	96	54
16	66	57	56	78	80	96	138	151	138	124	100	59
17	66	57	82	80	80	90	127	135	140	127	96	58
18	66	54	84	76	80	92	135	124	143	122	86	56
19	71	59	78	84	78	96	140	122	132	124	86	56
20	75	59	76	82	76	98	148	110	124	112	90	59
21	62	57	119	88	76	98	151	112	124	92	90	54
22	69	56	216	124	76	100	160	124	127	84	90	48
23	84	56	209	163	76	102	166	143	119	92	90	47
24	75	54	154	119	75	96	146	151	114	100	90	45
25	75	52	135	110	75	98	138	151	107	114	96	44
26	69	52	146	107	75	98	135	154	107	117	94	44
27	88	54	135	102	73	160	140	172	102	119	90	45
28	96	46	119	98	71	315	132	181	105	122	86	51
29	78	45	114	94		240	122	188	110	117	92	59
30	73	45	107	92		175	117	172	119	105	86	60
31	66		100	92		151		143		94	84	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	96	62	74.3	4,570
November	107	45	61.0	3,630
December	216	46	92.1	5,660
January	163	76	94.2	5,790
February	105	71	84.7	4,700
March	315	73	126	7,730
April	166	114	133	7,890
May	188	105	137	8,410
June	163	102	127	7,570
July	135	84	117	7,170
August	107	84	92.0	5,650
September	94	44	60.5	3,600
The year	315	44	100	72,370

Crooked River near Culver, Oreg.

Location.- Staff gage in SW¼ sec. 11, T. 12 S., R. 12 E., just below Cove power plant and 3 miles northwest of Culver.

Records available.- October 1917 to September 1934.

Average discharge.- 17 years, 1,371 second-feet.

Extremes.- Maximum discharge recorded during year, 1,560 second-feet Jan. 25 (gage height, 1.08 feet); minimum, 1,180 second-feet May 14-31, June 1-4, June 25 to Sept. 30 (gage height, 0.46 foot).
1917-34: Maximum discharge, 7,320 second-feet Feb. 6, 1925 (gage height, 5.6 feet); minimum, 970 second-feet July 12 to Sept. 5, 1921.

Remarks.- Records good. Flow regulated slightly by storage in Ochoco Reservoir. Summer flow above Prineville diverted for irrigation. Springs increase flow about 1,000 second-feet in a few miles above station. Gage-height record furnished by Pacific Power & Light Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,220	1,250	1,250	1,280	1,370	1,310	1,200	1,200	1,180	1,180	1,180	1,180
2	1,220	1,250	1,250	1,280	1,370	1,310	1,200	1,200	1,180	1,180	1,180	1,180
3	1,220	1,250	1,250	1,310	1,370	1,310	1,210	1,200	1,180	1,180	1,180	1,180
4	1,220	1,250	1,250	1,310	1,340	1,310	1,220	1,200	1,180	1,180	1,180	1,180
5	1,220	1,250	1,250	1,430	1,310	1,310	1,220	1,200	1,310	1,180	1,180	1,180
6	1,220	1,250	1,250	1,370	1,310	1,310	1,220	1,200	1,200	1,180	1,180	1,180
7	1,220	1,250	1,250	1,370	1,310	1,310	1,220	1,200	1,190	1,180	1,180	1,180
8	1,220	1,250	1,280	1,340	1,310	1,340	1,210	1,200	1,190	1,180	1,180	1,180
9	1,220	1,250	1,280	1,310	1,310	1,370	1,210	1,200	1,190	1,180	1,180	1,180
10	1,220	1,250	1,280	1,310	1,310	1,370	1,200	1,200	1,190	1,180	1,180	1,180
11	1,220	1,250	1,280	1,310	1,310	1,370	1,200	1,200	1,190	1,180	1,180	1,180
12	1,220	1,250	1,280	1,310	1,310	1,370	1,200	1,200	1,190	1,180	1,180	1,180
13	1,220	1,250	1,280	1,310	1,310	1,370	1,200	1,200	1,190	1,180	1,180	1,180
14	1,220	1,250	1,280	1,310	1,310	1,370	1,200	1,180	1,190	1,180	1,180	1,180
15	1,220	1,250	1,280	1,310	1,310	1,370	1,200	1,180	1,190	1,180	1,180	1,180
16	1,220	1,250	1,280	1,310	1,310	1,370	1,200	1,180	1,190	1,180	1,180	1,180
17	1,220	1,250	1,280	1,310	1,310	1,370	1,200	1,180	1,190	1,180	1,180	1,180
18	1,220	1,250	1,280	1,310	1,310	1,310	1,200	1,180	1,190	1,180	1,180	1,180
19	1,220	1,250	1,280	1,340	1,310	1,310	1,200	1,180	1,190	1,180	1,180	1,180
20	1,220	1,250	1,280	1,340	1,310	1,310	1,200	1,180	1,190	1,180	1,180	1,180
21	1,220	1,250	1,280	1,340	1,310	1,250	1,200	1,180	1,190	1,180	1,180	1,180
22	1,220	1,250	1,280	1,340	1,310	1,250	1,200	1,180	1,190	1,180	1,180	1,180
23	1,220	1,250	1,280	1,340	1,310	1,250	1,200	1,180	1,190	1,180	1,180	1,180
24	1,220	1,250	1,280	1,340	1,310	1,200	1,200	1,180	1,190	1,180	1,180	1,180
25	1,230	1,250	1,280	1,560	1,310	1,200	1,200	1,180	1,180	1,180	1,180	1,180
26	1,230	1,250	1,280	1,490	1,310	1,200	1,200	1,180	1,180	1,180	1,180	1,180
27	1,250	1,250	1,280	1,490	1,310	1,200	1,200	1,180	1,180	1,180	1,180	1,180
28	1,250	1,250	1,280	1,370	1,310	1,200	1,200	1,180	1,180	1,180	1,180	1,180
29	1,250	1,250	1,280	1,370		1,200	1,200	1,180	1,180	1,180	1,180	1,180
30	1,250	1,250	1,280	1,370		1,200	1,200	1,180	1,180	1,180	1,180	1,180
31	1,250		1,280	1,370		1,200		1,180		1,180	1,180	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,250	1,220	1,225	75,350
November	1,250	1,250	1,250	74,380
December	1,280	1,250	1,273	78,290
January	1,560	1,280	1,350	83,010
February	1,370	1,310	1,318	73,170
March	1,370	1,200	1,294	79,580
April	1,220	1,200	1,204	71,620
May	1,200	1,180	1,188	73,070
June	1,310	1,180	1,191	70,870
July	1,180	1,180	1,180	72,560
August	1,180	1,180	1,180	72,560
September	1,180	1,180	1,180	70,210
The year	1,560	1,180	1,236	894,700

Metolius River near Grandview, Oreg.

Location.- Staff gage in NE¼ sec. 19, T. 11 S., R. 11 E., at Montgomery ranch, 8 miles northwest of Grandview.

Records available.- October 1921 to September 1934.

Average discharge.- 13 years, 1,459 second-feet.

Extremes.- Maximum discharge recorded during year, 2,630 second-feet Dec. 22, Jan. 23; maximum gage height, 1.38 feet Dec. 22; minimum discharge, 1,260 second-feet Nov. 20 to Dec. 5, Sept. 12-30 (gage height, 0.30 foot).
1921-34: Maximum discharge, about 5,780 second-feet Jan. 7, 1923 (gage height, 3.32 feet); minimum, 1,080 second-feet Feb. 17, 1932 (gage height, 0.14 foot).

Remarks.- Records good. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,370	1,350	1,260	1,700	1,700	1,440	1,700	1,480	1,440	1,370	1,350	1,300
2	1,350	1,540	1,260	1,590	1,640	1,640	1,640	1,480	1,410	1,370	1,350	1,300
3	1,350	1,390	1,260	1,880	1,640	1,540	1,640	1,480	1,410	1,370	1,350	1,300
4	1,330	1,350	1,260	1,760	1,590	1,480	1,640	1,480	1,410	1,370	1,350	1,300
5	1,330	1,330	1,260	1,700	1,590	1,640	1,590	1,590	1,410	1,370	1,350	1,300
6	1,330	1,300	1,760	1,640	1,590	1,590	1,590	1,590	1,440	1,370	1,350	1,300
7	1,330	1,300	1,480	1,590	1,590	1,590	1,590	1,540	1,440	1,370	1,330	1,300
8	1,330	1,300	1,370	1,590	1,590	1,590	1,590	1,540	1,440	1,370	1,330	1,300
9	1,300	1,300	1,370	1,590	1,590	1,540	1,590	1,480	1,410	1,370	1,330	1,300
10	1,300	1,280	1,370	1,590	1,590	1,540	1,590	1,480	1,410	1,370	1,330	1,280
11	1,300	1,280	1,370	1,590	1,540	1,540	1,590	1,480	1,410	1,370	1,330	1,280
12	1,280	1,280	1,390	1,640	1,540	1,540	1,590	1,480	1,410	1,370	1,330	1,260
13	1,280	1,280	1,370	1,590	1,540	1,540	1,590	1,480	1,410	1,370	1,330	1,260
14	1,280	1,280	1,370	1,640	1,480	1,540	1,590	1,480	1,410	1,370	1,300	1,260
15	1,280	1,280	1,350	1,590	1,480	1,540	1,590	1,480	1,410	1,370	1,300	1,260
16	1,280	1,280	1,330	1,590	1,480	1,480	1,590	1,480	1,410	1,370	1,300	1,260
17	1,280	1,280	1,330	1,590	1,480	1,480	1,540	1,480	1,410	1,370	1,300	1,260
18	1,280	1,280	1,590	1,590	1,480	1,480	1,540	1,460	1,410	1,370	1,300	1,260
19	1,280	1,280	1,540	1,590	1,480	1,480	1,540	1,460	1,410	1,370	1,300	1,260
20	1,300	1,260	1,540	1,640	1,480	1,480	1,540	1,440	1,390	1,370	1,330	1,260
21	1,330	1,260	1,760	1,700	1,460	1,480	1,540	1,440	1,390	1,350	1,330	1,260
22	1,330	1,260	2,630	2,000	1,460	1,480	1,540	1,440	1,390	1,350	1,330	1,260
23	1,350	1,260	2,340	2,630	1,460	1,460	1,540	1,440	1,390	1,350	1,330	1,260
24	1,350	1,260	1,940	2,070	1,460	1,460	1,540	1,440	1,390	1,350	1,330	1,260
25	1,330	1,260	1,940	1,940	1,460	1,460	1,540	1,440	1,370	1,350	1,330	1,260
26	1,330	1,260	2,070	1,880	1,440	1,460	1,540	1,440	1,370	1,350	1,330	1,260
27	1,370	1,260	1,940	1,820	1,440	1,460	1,540	1,440	1,370	1,350	1,330	1,260
28	1,410	1,260	1,820	1,820	1,440	2,070	1,540	1,460	1,370	1,350	1,330	1,260
29	1,390	1,260	1,820	1,760		2,200	1,540	1,460	1,370	1,350	1,330	1,260
30	1,370	1,260	1,700	1,700		1,820	1,540	1,480	1,370	1,350	1,300	1,260
31	1,350		1,700	1,700		1,700		1,460		1,350	1,300	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,410	1,280	1,325	81,460
November	1,540	1,260	1,294	77,000
December	2,630	1,260	1,596	98,160
January	2,630	1,540	1,729	106,300
February	1,700	1,440	1,525	84,710
March	2,200	1,440	1,572	96,670
April	1,700	1,540	1,575	93,740
May	1,590	1,440	1,477	90,840
June	1,440	1,370	1,403	83,460
July	1,370	1,350	1,363	83,800
August	1,350	1,300	1,326	81,540
September	1,300	1,260	1,273	75,770
The year	2,630	1,260	1,455	1,053,000

Lake Creek near Sisters, Oreg.

Location.- Water-stage recorder in SE¼ sec. 24, T. 13 S., R. 8 E., a quarter of a mile below Suttle Lake, 6 miles above mouth, and 13 miles northwest of Sisters.

Drainage area.- 20.5 square miles.

Records available.- April 1915 to September 1934. Occasional readings during summers of 1911 to 1913.

Average discharge.- 18 years (1915-18, 1919-34), 52.6 second-feet.

Extremes.- Maximum discharge during year, 200 second-feet Dec. 25 (gage height, 2.59 feet); minimum (regulated), 14 second-feet Oct. 17 (gage height, 0.65 foot). 1911-13, 1915-34: Maximum discharge, 302 second-feet Jan. 10, 1923 (gage height, 2.58 feet); minimum, that of Oct. 17, 1933; minimum daily discharge, 15 second-feet July 29, 30, 1932.

Remarks.- Records excellent except those for Apr. 3 to May 1, June 10-17, Sept. 3-30, which are good, and those for Oct. 2 to Nov. 1, which are fair. Discharge estimated May 18-20. No diversions above station. Occasional regulation by storage in Suttle Lake.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	34	28	118	98	49	78	45	34	30	29	28
2	30	31	28	110	91	59	82	43	34	30	28	28
3	29	34	29	110	85	66	78	43	35	30	29	28
4	29	33	28	108	80	55	74	43	35	30	30	28
5	31	33	30	112	76	61	68	42	35	29	29	28
6	25	31	35	104	72	63	66	42	34	27	28	27
7	22	30	38	96	71	63	66	42	34	28	28	27
8	33	29	35	92	71	66	66	45	34	30	28	27
9	26	28	35	88	68	68	65	45	32	29	27	27
10	22	28	35	91	66	67	63	43	32	29	26	27
11	28	28	35	83	65	65	63	42	34	29	26	26
12	31	28	37	78	58	63	61	39	35	29	26	27
13	28	28	37	74	58	60	60	37	35	28	28	28
14	28	29	39	80	58	58	59	37	31	28	28	27
15	27	28	42	78	49	56	58	37	31	28	28	27
16	27	27	41	78	51	56	56	37	31	27	28	27
17	24	29	45	78	55	54	56	36	31	30	28	27
18	26	28	50	77	55	52	54	36	31	28	30	26
19	27	28	72	60	55	51	47	36	31	26	31	25
20	28	28	79	79	56	47	47	35	30	26	32	24
21	28	28	76	89	54	52	49	35	30	28	28	26
22	27	28	83	97	52	49	49	36	28	28	29	30
23	28	28	110	117	51	49	49	36	28	28	30	31
24	27	26	158	149	50	48	49	35	29	28	29	30
25	28	26	185	160	49	47	48	35	29	28	28	30
26	28	28	192	151	49	46	46	34	29	28	28	29
27	28	28	174	144	49	49	47	34	30	26	28	28
28	30	28	160	135	49	56	45	34	31	28	27	28
29	33	29	147	124		54	45	34	30	26	28	28
30	33	28	136	114		55	45	34	30	28	28	28
31	35		126	104		63		34		30	28	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	35	22	28.3	1,740
November	34	26	29.0	1,720
December	192	28	75.6	4,650
January	160	74	103	6,340
February	98	49	62.2	3,450
March	68	46	56.4	3,470
April	82	45	58.0	3,450
May	45	34	38.3	2,350
June	35	28	31.8	1,890
July	30	26	28.3	1,740
August	32	26	28.3	1,740
September	31	24	27.6	1,640
The year	192	22	47.2	34,180

White River below Tygh Valley, Oreg.

Location.- Water-stage recorder in NW¼ sec. 8, T. 4 S., R. 14 E., just below Pacific Power & Light Co.'s plant at White River Falls and 4½ miles below Tygh Valley.

Drainage area.- 393 square miles.

Records available.- October 1917 to September 1934.

Average discharge.- 17 years, 430 second-feet.

Extremes.- Maximum discharge during year, 5,450 second-feet Dec. 22 (gage height, 7.9 feet); minimum, 41 second-feet Dec. 5 (gage height, 0.2 foot).
1917-34: Maximum discharge, 13,300 second-feet Jan. 6, 1923 (gage height, about 13.3 feet); minimum, 10 second-feet Dec. 11-14, 1919, Aug. 9, 1931.

Remarks.- Records fair. Discharge estimated July 10-14. Diversions for irrigation above station. Low-water flow regulated to some extent by operation of power plant. Water-stage recorder graph furnished by Pacific Power & Light Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	162	262	176	1,200	820	364	720	265	158	134	104	93
2	158	540	182	1,200	770	796	670	254	157	133	106	94
3	158	670	196	1,850	720	820	625	257	158	130	117	92
4	155	500	186	1,760	670	695	602	241	155	130	109	94
5	153	376	188	1,580	670	795	602	236	147	129	106	93
6	150	319	924	1,300	695	1,140	560	236	147	130	105	89
7	150	294	1,170	1,200	670	990	540	236	148	129	104	88
8	148	273	720	1,050	695	902	520	246	155	130	103	89
9	147	255	670	960	602	820	482	238	151	131	103	89
10	144	242	720	930	560	720	465	233	147	131	102	94
11	142	233	625	820	560	695	448	228	145	130	102	92
12	142	224	625	745	520	670	423	219	144	130	103	89
13	141	219	602	770	500	625	402	212	143	130	103	95
14	140	210	540	990	500	580	388	203	141	131	103	94
15	138	210	482	848	482	560	367	192	140	130	103	89
16	136	206	430	820	465	540	378	188	140	124	102	90
17	146	208	430	1,050	465	500	360	187	138	129	102	90
18	142	194	795	990	448	482	342	185	137	126	103	92
19	171	190	875	990	448	465	322	179	137	121	102	91
20	202	204	1,140	1,170	448	448	307	179	137	121	101	95
21	176	194	1,620	1,340	423	430	307	178	133	120	97	96
22	173	206	4,340	2,000	409	416	298	172	131	118	96	97
23	247	198	4,340	2,940	398	398	307	172	136	113	95	137
24	233	194	2,720	2,350	392	388	292	174	134	113	94	125
25	210	190	2,500	1,800	360	381	286	171	134	116	93	117
26	204	188	2,450	1,490	342	350	271	163	141	115	95	116
27	196	188	2,050	1,300	378	381	310	160	143	115	94	115
28	240	188	1,620	1,200	395	648	280	158	140	115	95	113
29	300	180	1,580	1,110		820	271	161	138	112	95	112
30	278	180	1,450	1,020		770	271	161	136	106	92	112
31	275		1,300	930		770		168		104	90	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	300	136	179	11,020
November	670	180	258	15,350
December	4,340	178	1,214	74,670
January	2,940	745	1,281	78,750
February	820	342	529	29,400
March	1,140	350	625	38,400
April	720	271	414	24,630
May	265	158	202	12,400
June	158	131	143	8,510
July	134	104	123	7,590
August	117	90	101	6,190
September	137	88	99.1	5,890
The year	4,340	88	432	312,800

Klickitat River near Glenwood, Wash.

Location.- Water-stage recorder in SE¼ 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 September 1934; incomplete. October 1909 to December 1910 at a point 1 mile upstream.

Average discharge.- 17 years (1909-20, 1928-34), 857 second-feet.

Extremes.- Maximum discharge during year, 9,870 second-feet Dec. 22 (gage height, 6.9 feet); minimum daily discharge, 396 second-feet Sept. 27, 28 (gage height, -0.14 foot).

1909-34: Maximum discharge, that of Dec. 22, 1933; minimum discharge, 204 second-feet Nov. 28, 1931; minimum gage height, that of Sept. 27, 28, 1934.

Remarks.- Records good. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	504	724	490	1,830	1,680	1,040	2,030	1,320	696	690	540	490
2	499	1,040	490	1,830	1,680	1,500	1,830	1,280	829	690	624	495
3	499	1,230	486	2,180	1,640	1,370	1,640	1,240	815	584	584	500
4	494	968	468	2,080	1,550	1,240	1,600	1,240	815	672	530	515
5	490	820	530	2,030	1,500	1,420	1,550	1,460	801	690	535	510
6	481	747	1,190	1,880	1,420	1,730	1,550	1,420	858	696	535	490
7	476	702	1,000	1,730	1,460	1,550	1,640	1,320	922	676	520	464
8	476	656	820	1,600	1,500	1,460	1,730	1,240	914	642	510	450
9	458	634	1,590	1,500	1,370	1,370	1,730	1,150	930	648	520	454
10	454	612	3,580	1,550	1,320	1,320	1,680	1,100	906	654	515	468
11	450	584	2,920	1,460	1,280	1,280	1,680	1,110	930	636	530	446
12	441	571	2,920	1,420	1,240	1,280	1,730	1,110	922	630	515	450
13	450	548	2,220	1,420	1,190	1,320	1,830	1,100	866	630	520	459
14	441	535	1,640	1,320	1,170	1,370	1,930	1,120	843	648	530	442
15	414	530	1,360	1,240	1,130	1,460	1,880	1,160	829	648	530	430
16	428	526	1,150	1,320	1,120	1,420	1,830	1,160	787	702	540	426
17	445	522	1,310	1,420	1,120	1,370	1,730	1,090	780	654	520	426
18	454	508	1,950	1,280	1,110	1,370	1,680	1,030	766	612	500	426
19	589	508	1,700	1,640	1,110	1,320	1,680	986	744	606	495	422
20	724	512	2,280	1,880	1,110	1,370	1,780	970	732	578	500	418
21	612	512	4,420	1,780	1,120	1,420	1,830	914	732	545	500	410
22	724	544	8,790	2,360	1,110	1,370	1,930	898	720	530	495	414
23	905	556	6,340	3,620	1,100	1,370	1,980	922	702	535	490	426
24	795	548	3,980	2,900	1,090	1,320	1,880	994	684	556	495	410
25	724	544	3,020	2,520	1,060	1,320	1,780	1,050	684	584	490	403
26	634	530	2,520	2,300	1,050	1,280	1,680	1,060	696	612	505	403
27	679	530	2,240	2,080	1,040	1,420	1,640	1,090	678	624	505	396
28	848	508	2,030	1,880	1,030	2,080	1,550	1,110	660	624	515	396
29	1,000	494	2,180	1,780		2,520	1,460	1,140	660	594	490	400
30	905	494	2,060	1,730		2,460	1,420	1,140	684	556	482	403
31	770		1,980	1,680		2,240		986		535	477	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,000	414	589	1.65	1.90	36,220
November	1,230	494	625	1.76	1.96	37,170
December	8,790	468	2,248	6.31	7.28	138,200
January	3,620	1,240	1,846	5.19	5.98	113,500
February	1,680	1,030	1,261	3.54	3.69	70,020
March	2,520	1,040	1,495	4.20	4.84	91,950
April	2,030	1,420	1,729	4.86	5.42	102,900
May	1,460	898	1,126	3.16	3.64	69,240
June	930	660	793	2.23	2.49	47,180
July	702	530	625	1.76	2.03	38,450
August	624	477	517	1.45	1.67	31,810
September	515	396	441	1.24	1.38	26,270
The year	8,790	396	1,109	3.12	42.28	802,900

Klickitat River at Pitt, Wash.

Location.- Staff gage in NE¼ sec. 32, T. 4 N., R. 13 E., at Pitt, 3 miles southwest of Klickitat and 10½ miles above mouth.

Drainage area.- 1,160 square miles.

Records available.- October 1928 to September 1934. Comparable records at former stations at Klickitat and near Lysle, May 1907 to December 1912.

Extremes.- Maximum discharge recorded during year, 21,000 second-feet Dec. 22 (gage height, 12.50 feet); minimum daily discharge, 685 second-feet Oct. 13, 15, 16; minimum gage height, 1.24 feet Oct. 16.
1907-12, 1928-34: Maximum discharge recorded, that of Dec. 22, 1933; minimum, 485 second-feet Dec. 28-31, 1930 (gage height, 0.88 foot).

Remarks.- Records good except those above 4,000 second-feet, which are fair. Minor diversions for irrigation above station; no regulation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	790	1,150	755	5,760	4,190	2,060	3,540	2,060	1,370	1,090	940	845
2	755	1,490	755	5,940	4,020	3,070	3,220	1,930	1,310	1,090	990	845
3	755	2,090	755	11,700	4,020	2,770	3,070	1,930	1,310	1,090	1,140	800
4	755	1,730	755	10,500	3,700	2,620	2,770	1,930	1,260	1,090	940	845
5	755	1,380	790	8,280	3,540	2,620	2,770	2,200	1,310	1,090	890	845
6	755	1,190	4,530	6,660	3,380	3,540	2,620	2,200	1,310	1,090	940	800
7	755	1,110	2,770	5,760	3,380	3,220	2,770	1,930	1,430	1,090	940	800
8	755	1,030	1,970	5,040	3,700	3,070	2,770	1,930	1,370	1,040	890	800
9	755	1,030	1,850	4,700	3,220	2,770	2,770	1,800	1,430	990	890	800
10	720	990	6,120	4,700	3,070	2,770	2,770	1,670	1,370	1,040	890	845
11	720	950	4,700	4,360	2,920	2,620	2,770	1,670	1,370	990	890	845
12	720	950	5,040	4,360	2,770	2,620	2,770	1,670	1,370	990	890	760
13	685	910	4,360	4,530	2,620	2,620	2,920	1,670	1,310	1,040	890	800
14	720	870	3,540	4,700	2,620	2,620	3,070	1,670	1,260	990	890	800
15	685	870	2,920	4,020	2,480	2,770	2,920	1,670	1,310	1,040	940	890
16	685	830	2,480	4,360	2,480	2,620	2,920	1,800	1,260	1,040	940	760
17	720	830	2,480	5,580	2,340	2,620	2,770	1,670	1,200	1,040	940	760
18	720	830	6,300	4,530	2,540	2,480	2,620	1,550	1,200	990	890	760
19	755	830	7,920	5,220	2,340	2,480	2,620	1,550	1,140	990	890	760
20	1,110	830	8,460	6,300	2,340	2,480	2,620	1,550	1,140	990	845	760
21	950	830	12,100	6,120	2,200	2,480	2,770	1,430	1,140	940	890	760
22	910	830	19,600	6,480	2,200	2,340	2,770	1,370	1,140	890	890	760
23	1,330	870	17,800	12,500	2,200	2,340	2,920	1,430	1,090	890	890	800
24	1,280	830	14,100	9,590	2,200	2,340	2,770	1,430	1,090	940	890	760
25	1,110	870	10,900	7,920	2,060	2,200	2,770	1,550	1,040	940	890	720
26	990	830	8,640	6,660	1,930	2,200	2,620	1,550	1,090	940	890	720
27	990	830	7,380	6,120	2,060	2,340	2,480	1,550	1,090	1,040	890	720
28	1,150	790	6,300	5,400	2,060	3,540	2,340	1,550	1,040	1,090	890	720
29	1,850	790	6,660	4,870		4,360	2,340	1,550	1,040	1,040	890	720
30	1,850	790	6,480	4,530		4,020	2,200	1,670	1,090	990	845	720
31	1,380		6,120	4,360		4,020		1,490		940	845	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,850	685	931	0.803	0.93	57,240
November	2,090	790	1,005	.866	.97	59,800
December	19,600	755	5,978	5.15	5.94	367,600
January	12,500	4,020	6,179	5.33	6.14	379,900
February	4,190	1,930	2,799	2.41	2.51	155,500
March	4,360	2,060	2,794	2.41	2.78	171,800
April	3,540	2,200	2,768	2.39	2.67	164,700
May	2,200	1,370	1,697	1.46	1.68	104,400
June	1,430	1,040	1,220	1.06	1.18	73,150
July	1,090	890	1,014	.874	1.01	62,360
August	1,140	845	908	.783	.90	55,840
September	890	720	784	.676	.75	46,650
The year	19,600	685	2,347	2.02	27.46	1,699,000

Hood River near Hood River, Oreg.

Location.- Water-stage recorder in SE¼ sec. 36, T. 3 N., R. 10 E., at Powerdale, a quarter of a mile above Pacific Power & Light Co.'s plant and three-quarters of a mile south of Hood River. Zero of gage is 106.23 feet above mean sea level by general adjustment of 1929.

Drainage area.- 329 square miles.

Records available.- March 1913 to September 1934.

Average discharge.- 21 years, 1,087 second-feet (including flow of Pacific Power & Light Co.'s conduit).

Extremes.- Maximum discharge during year, 21,400 second-feet Dec. 22 (gage height, 10.74 feet); minimum recorded, 22 second-feet July 31 (gage height, 1.39 feet).
1913-34: Maximum discharge, 34,000 second-feet Jan. 6, 1923 (gage height, 11.1 feet); minimum, 3 second-feet Aug. 9, 1926 (gage height, 1.45 feet).

Remarks.- Records poor. Diversions for irrigation above station. Pacific Power & Light Co.'s conduit diverts water around gage. Low-water flow regulated by pondage at sawmill at Dee. Gage-height record furnished by Pacific Power & Light Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	411	1,000	311	2,600	1,720	786	2,210	403	535	408	60	36
2	349	2,900	333	2,940	1,590	3,370	1,780	367	508	412	88	36
3	296	2,740	514	5,020	1,530	1,990	1,590	435	513	396	65	38
4	288	1,680	372	4,020	1,450	1,720	1,460	367	480	376	31	40
5	310	1,330	877	3,550	1,320	2,480	1,360	553	470	367	43	38
6	530	974	12,300	2,940	1,260	3,100	1,240	541	465	385	48	40
7	640	798	5,110	2,600	1,300	2,280	1,160	486	470	376	41	40
8	619	696	2,990	2,210	1,360	1,920	1,090	416	486	372	41	45
9	415	626	3,080	1,920	1,220	1,590	981	358	502	372	59	40
10	200	564	2,990	1,990	1,170	1,430	936	622	491	340	50	60
11	178	584	2,410	1,780	1,110	1,470	900	681	508	93	31	53
12	147	550	2,260	1,920	1,030	1,230	990	628	513	84	39	60
13	133	446	2,030	2,520	981	1,130	628	306	475	88	43	53
14	194	424	1,820	3,020	927	1,060	794	244	445	84	54	53
15	302	416	1,680	2,210	891	1,000	738	212	445	69	50	36
16	207	414	1,410	2,440	873	963	778	203	426	82	59	38
17	200	391	4,130	3,920	837	900	667	173	385	93	40	40
18	176	384	7,380	2,760	909	1,000	628	148	403	78	39	40
19	446	531	7,590	3,190	802	828	571	127	394	73	35	38
20	711	438	8,200	3,460	837	778	559	165	394	88	35	36
21	408	380	10,400	4,910	723	738	559	116	416	88	29	36
22	758	397	18,900	6,760	709	716	553	91	403	208	40	38
23	1,390	376	10,400	7,890	688	681	541	223	385	110	38	260
24	906	351	6,270	4,910	654	660	496	535	376	91	38	109
25	675	356	5,910	3,730	640	667	530	524	376	79	39	30
26	626	473	4,800	3,100	654	621	470	508	380	73	244	40
27	694	325	3,920	2,680	655	900	502	524	394	71	358	43
28	1,580	318	3,280	2,520	770	2,600	445	524	403	173	89	46
29	2,020	311	3,190	2,140		2,850	445	547	390	64	68	41
30	1,320	422	3,020	1,990		2,360	445	608	390	29	40	183
31	1,210		3,100	1,850		2,280		559		27	40	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,020	133	598	36,770
November	2,900	311	720	42,830
December	18,900	311	4,544	279,400
January	7,890	1,780	3,210	197,400
February	1,720	640	1,029	57,140
March	3,370	621	1,487	91,430
April	2,210	445	875	52,060
May	681	91	393	24,190
June	535	376	441	26,220
July	412	27	183	11,250
August	358	29	63.7	3,920
September	260	30	56.2	3,340
The year	18,900	27	1,141	826,000

Combined discharge, in second-feet, of Hood River and Pacific Power & Light Co.'s conduit near Hood River, Oreg., 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	744	1,330	564	2,880	2,020	1,150	2,510	833	535	408	308	286
2	694	3,220	601	3,230	1,890	3,720	2,160	794	508	412	363	308
3	661	3,070	665	5,310	1,800	2,300	1,970	865	513	398	412	316
4	660	1,920	644	4,310	1,710	1,930	1,850	797	480	376	335	347
5	639	1,470	1,170	3,820	1,630	2,800	1,750	982	470	367	321	351
6	628	1,280	12,600	3,220	1,570	3,420	1,640	951	465	385	322	340
7	640	1,100	5,380	2,740	1,620	2,610	1,560	894	470	376	309	337
8	619	998	3,280	2,490	1,680	2,250	1,460	841	486	372	291	327
9	614	930	3,370	2,250	1,540	1,920	1,340	783	502	372	293	299
10	574	861	3,130	2,340	1,470	1,770	1,330	685	491	365	292	358
11	570	818	2,700	2,090	1,390	1,660	1,280	681	508	343	282	339
12	547	772	2,550	2,220	1,350	1,550	1,240	628	513	342	258	374
13	536	742	2,320	2,830	1,330	1,470	1,220	676	475	365	288	401
14	552	722	2,100	3,190	1,300	1,400	1,190	660	445	374	287	376
15	525	714	1,960	2,520	1,240	1,330	1,120	642	445	408	295	355
16	556	707	1,670	2,760	1,220	1,290	1,150	633	426	411	340	358
17	615	680	4,370	4,230	1,170	1,220	1,070	603	385	510	318	354
18	572	668	7,680	3,080	1,150	1,180	1,040	576	403	449	302	380
19	846	666	7,890	3,510	1,160	1,160	987	556	394	395	283	360
20	1,090	726	8,480	3,810	1,140	1,140	973	594	394	390	293	351
21	766	674	10,700	5,080	1,110	1,090	967	539	416	370	285	361
22	965	690	19,200	7,090	1,080	1,070	952	510	403	352	290	375
23	1,700	671	10,700	8,170	1,060	1,040	933	506	385	352	288	657
24	1,240	653	6,420	5,200	1,040	1,030	908	535	376	339	297	507
25	1,230	647	6,230	4,010	978	999	935	524	376	357	296	427
26	1,020	620	5,140	3,400	1,020	992	885	508	380	378	330	435
27	1,090	618	4,140	2,930	1,220	1,290	921	524	394	390	358	448
28	1,980	611	3,630	2,680	1,130	2,980	870	524	403	451	373	445
29	2,330	580	3,580	2,410		3,210	851	547	390	407	372	441
30	1,680	685	3,360	2,260		2,690	862	608	390	343	312	451
31	1,540		3,240	2,140		2,640		559		303	274	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,330	525	917	56,380
November	3,220	580	991	58,990
December	19,200	564	4,821	296,400
January	8,170	2,090	3,490	214,600
February	2,020	978	1,358	75,410
March	3,720	992	1,816	111,700
April	2,610	851	1,264	75,220
May	982	506	663	40,780
June	535	376	441	26,220
July	510	303	383	23,520
August	412	274	312	19,170
September	657	286	382	22,720
The year	19,200	274	1,410	1,021,000

West Fork of Hood River near Dee, Oreg.

Location.- Water-stage recorder in SE¼ sec. 1, T. 1 N., R. 9 E., a quarter of a mile above Dead Point Creek, half a mile above junction with Hood River, and 1 mile northwest of Dee. Zero of gage is 864.11 feet above mean sea level.

Drainage area.- 96 square miles.

Records available.- August 1913 to September 1915 (incomplete); June 1932 to September 1934.

Extremes.- Maximum discharge during year, 12,900 second-feet Dec. 22 (gage height, 12.4 feet); minimum, 115 second-feet Sept. 20 (gage height, 1.57 feet).
1913-15, 1932-34: Maximum discharge, that of Dec. 22, 1933; minimum, 100 second-feet Sept. 29, 30, 1915.

Remarks.- Records good except those above 5,500 second-feet, which are fair. Diversions for irrigation above station; no regulation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	332	870	226	1,180	740	576	1,320	344	248	179	144	126
2	295	2,140	252	1,560	715	2,000	1,060	340	239	179	155	130
3	265	1,880	310	2,930	665	1,180	940	379	239	172	164	130
4	249	1,140	299	2,190	620	940	850	358	228	169	144	134
5	235	870	947	1,870	590	1,710	795	514	219	169	142	132
6	226	698	8,220	1,380	572	1,950	740	473	217	169	149	126
7	218	604	3,340	1,150	595	1,380	690	431	214	169	144	124
8	205	514	1,910	970	630	1,120	620	403	214	167	138	122
9	195	458	1,990	880	590	910	568	372	214	164	140	122
10	193	415	1,790	940	554	795	532	347	219	164	138	128
11	188	372	1,460	850	532	715	500	330	219	160	136	120
12	184	340	1,380	970	509	665	478	312	217	158	136	142
13	179	320	1,210	1,580	496	610	460	298	208	162	138	144
14	179	306	1,090	1,630	482	572	451	291	201	167	136	134
15	173	288	970	1,210	468	536	431	288	198	164	138	120
16	193	299	822	1,500	460	514	451	288	196	176	142	122
17	205	285	2,710	2,280	447	482	411	280	191	196	140	120
18	218	268	4,620	1,520	435	460	395	270	191	172	136	120
19	442	281	4,900	1,950	431	443	383	277	186	160	134	118
20	505	310	4,900	3,110	423	431	379	288	184	160	134	116
21	340	285	6,130	3,440	415	419	375	258	184	158	134	118
22	567	292	10,600	4,480	403	403	375	248	191	164	134	134
23	1,020	278	5,310	4,320	395	391	372	245	181	162	134	214
24	674	272	2,830	2,370	387	383	354	245	174	153	134	158
25	674	265	2,730	1,710	379	375	387	245	174	160	132	149
26	540	252	2,190	1,380	383	368	350	245	176	164	136	142
27	604	255	1,710	1,150	522	545	375	248	181	169	138	138
28	1,410	252	1,380	1,000	478	1,560	358	251	186	162	140	136
29	1,470	240	1,350	940		1,670	350	248	179	158	136	136
30	1,040	235	1,350	850		1,460	350	294	179	149	132	138
31	945		1,320	795		1,380		270		142	128	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,470	173	457	28,090
November	2,140	235	509	30,320
December	10,600	226	2,589	159,200
January	4,480	795	1,745	107,300
February	740	379	511	28,400
March	2,000	368	869	53,440
April	1,320	350	537	31,930
May	514	245	312	19,200
June	248	174	202	11,990
July	196	142	165	10,150
August	164	128	139	8,540
September	214	116	133	7,920
The year	10,600	116	686	496,500

Pacific Power & Light Co.'s conduit near Hood River, Oreg.

Location.- Venturi meter in NE¼ 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.- October 1922 to September 1934. At station on tailrace of old plant October 1913 to September 1914, January 1916 to July 1922.

Average discharge.- 12 years (1922-34), 337 second-feet.

Extremes.- Maximum discharge during year, 460 second-feet Dec. 6; no flow when power plant was occasionally shut down.
1913-14, 1916-34: Maximum discharge, 510 second-feet Dec. 30, 1932.

Remarks.- Records good. Discharge determined from hourly readings of Venturi meter checked by occasional discharge measurements, except that for May 13, 14, July 10, 11, which was computed from power plant output. This conduit diverts from Hood River in SE¼ sec. 11, T. 2 N., R. 10 E., immediately below mouth of Neal Creek. Water is returned to river in NE¼ sec. 36, T. 3 N., R. 10 E., being diverted around gage on Hood River near Hood River. Meter readings furnished by Pacific Power & Light Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	333	329	253	278	295	365	299	430		0	248	250
2	345	321	268	286	299	350	383	427		0	276	272
3	365	331	151	293	266	306	376	430		0	347	278
4	372	245	272	288	258	211	388	430		0	304	307
5	329	144	289	272	306	315	394	429		0	278	313
6	98	311	265	284	314	319	404	410		0	274	300
7	0	306	275	136	318	328	396	408		0	268	297
8	0	302	285	282	325	332	372	425		0	250	282
9	199	304	294	334	324	334	363	425		0	234	259
10	374	297	141	347	300	337	390	63		25	242	298
11	392	234	286	311	284	188	384	0		250	251	286
12	400	222	292	301	318	321	254	0		258	219	314
13	403	296	285	311	347	344	389	370		277	245	348
14	358	298	275	167	369	340	394	416		290	233	323
15	223	298	269	312	345	328	381	430		319	245	319
16	349	293	263	317	345	330	375	430		329	281	330
17	415	289	241	312	335	325	407	430		417	278	314
18	396	284	303	315	237	180	406	428		371	263	340
19	400	135	300	324	359	333	416	429		322	248	322
20	380	288	285	353	302	358	414	429		302	258	315
21	358	294	270	165	386	355	408	423		282	256	325
22	207	293	271	307	375	356	399	419		144	250	337
23	315	295	337	283	377	361	392	283		242	250	397
24	336	302	150	285	382	373	412	0		248	259	398
25	353	291	317	276	338	332	405	0		278	257	397
26	391	147	336	302	363	371	415	0		305	86	395
27	398	293	319	246	370	391	419	0		319	0	405
28	396	293	347	163	360	383	425	0		278	284	399
29	312	269	386	274		361	406	0		343	304	400
30	358	163	336	275		332	417	0		314	272	248
31	334		135	285		355		0		276	234	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	415	0	319	19,610
November	331	135	272	16,200
December	386	135	274	16,850
January	353	136	280	17,220
February	386	237	328	18,240
March	391	180	330	20,260
April	425	254	390	23,180
May	430	0	270	16,590
June	0	0	0	0
July	417	0	200	12,280
August	347	0	248	15,260
September	405	248	326	19,370
The year	430	0	269	195,100

Note.- No flow during June.

White Salmon River at Husum, Wash.

Location.- Water-stage recorder in SW¼ sec. 30, T. 4 N., R. 11 E., 500 feet above mouth of Rattlesnake Creek, at Husum.

Records available.- September 1909 to October 1919, October 1929 to September 1934.

Average discharge.- 14 years (1909-18, 1929-34), 994 second-feet.

Extremes.- Maximum discharge during year, 10,800 second-feet Dec. 22 (gage height, 11.0 feet); minimum, 540 second-feet Sept. 8, 9 (gage height, 1.52 feet).
1909-19, 1929-34: Maximum discharge, that of Dec. 22, 1933; minimum, 340 second-feet Dec. 30, 1930 (gage height, 0.64 foot).

Remarks.- Records good. Numerous diversions for irrigation near Trout Lake. Springs increase flow by a large amount in a few miles above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	775	1,130	630	2,410	2,410	1,660	2,090	1,130	835	755	635	571
2	755	1,270	630	2,590	2,330	2,090	1,930	1,130	835	735	667	571
3	735	1,580	630	3,880	2,330	2,170	1,810	1,130	855	735	684	571
4	735	1,420	630	4,000	2,250	2,010	1,730	1,130	855	735	667	556
5	718	1,210	679	3,520	2,170	2,010	1,660	1,180	855	735	651	571
6	700	1,080	2,170	3,180	2,090	2,410	1,620	1,200	855	718	667	556
7	700	1,010	2,940	2,970	2,090	2,250	1,550	1,160	878	718	667	556
8	682	940	1,910	2,680	2,170	2,090	1,550	1,130	878	718	651	556
9	682	875	2,170	2,590	2,090	1,930	1,480	1,060	876	718	635	556
10	665	855	4,120	2,590	2,010	1,850	1,440	1,010	855	718	635	556
11	665	815	3,220	2,590	1,970	1,770	1,410	1,010	855	718	635	571
12	648	795	3,440	2,500	1,890	1,730	1,410	990	855	718	635	587
13	648	775	2,920	2,590	1,850	1,690	1,380	968	835	718	635	619
14	649	755	2,280	2,590	1,810	1,690	1,350	946	815	700	619	619
15	630	735	1,910	2,500	1,770	1,660	1,320	922	815	700	635	619
16	630	718	1,640	2,500	1,730	1,660	1,290	922	815	684	635	619
17	648	718	1,800	2,680	1,690	1,620	1,260	900	815	700	619	619
18	648	700	3,120	2,590	1,690	1,550	1,230	900	795	684	619	619
19	682	682	3,660	2,880	1,660	1,550	1,200	900	795	667	619	603
20	835	682	4,300	3,400	1,660	1,520	1,180	900	795	667	619	587
21	755	682	6,920	3,400	1,620	1,520	1,180	900	775	667	619	603
22	735	682	10,300	3,960	1,580	1,480	1,180	900	775	651	619	587
23	835	700	7,860	6,030	1,550	1,440	1,200	900	775	651	603	587
24	835	682	5,100	4,600	1,550	1,410	1,180	900	775	651	603	587
25	815	665	4,120	3,880	1,520	1,380	1,180	900	775	651	603	603
26	795	648	3,520	3,400	1,480	1,350	1,180	922	775	667	603	603
27	775	648	2,970	3,070	1,580	1,440	1,160	900	755	684	603	587
28	958	648	2,680	2,770	1,620	1,950	1,160	900	735	684	603	587
29	1,480	630	2,680	2,590		2,330	1,160	900	735	667	587	587
30	1,580	630	2,680	2,500		2,250	1,160	878	755	651	587	603
31	1,330		2,590	2,410		2,170		865		635	571	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,580	630	797	49,040
November	1,580	630	845	50,300
December	10,300	630	3,101	190,600
January	6,030	2,410	3,088	189,900
February	2,410	1,480	1,863	103,500
March	2,410	1,350	1,795	110,300
April	2,090	1,160	1,388	82,570
May	1,200	855	983	60,440
June	878	735	813	48,390
July	755	635	694	42,640
August	684	571	627	38,540
September	619	556	587	34,940
The year	10,300	556	1,383	1,001,000

Sandy River near Marmot, Oreg.

Location.- Water-stage recorder in NE¼ sec. 24, T. 2 S., R. 5 E., 1 mile southwest of Marmot, 1⅞ miles above Sandy River Dam of Portland General Electric Co., and 5 miles below mouth of Salmon River. Prior to Oct. 20, 1933, water-stage recorder half a mile upstream.

Drainage area.- 282 square miles.

Records available.- August 1911 to December 1915, July 1919 to September 1934. Combined discharge of Sandy River below dam and canal gives same results January 1916 to June 1919.

Average discharge.- 23 years (1911-34), 1,347 second-feet.

Extremes.- Maximum discharge during year, 17,000 second-feet Dec. 22 (gage height, 13.6 feet); minimum, 224 second-feet Sept. 30 (gage height, 1.87 feet).
1911-34: Maximum discharge, about 29,200 second-feet Jan. 6, 1923 (gage height, 17.5 feet); minimum, 210 second-feet Oct. 14, 15, 1931.

Remarks.- Records good. No diversions or regulation above station. Gage-height record furnished by Portland General Electric Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	674	2,330	668	2,130	1,640	810	3,160	810	656	426	310	270
2	586	6,670	736	2,160	1,510	4,740	2,710	782	650	422	364	278
3	530	6,390	960	3,310	1,380	2,880	2,330	985	656	400	413	274
4	506	3,860	960	2,940	1,300	2,130	2,280	895	601	400	334	286
5	475	2,560	1,600	3,000	1,220	2,940	2,180	1,260	560	404	314	286
6	457	1,910	12,000	2,540	1,190	4,860	2,030	1,220	560	400	330	270
7	448	1,580	7,350	2,230	1,190	3,570	1,780	1,060	601	390	314	266
8	426	1,350	4,420	1,980	1,260	2,660	1,560	1,080	645	395	306	256
9	412	1,190	4,000	1,780	1,160	2,160	1,380	985	640	386	310	256
10	394	1,070	3,580	1,780	1,080	1,830	1,260	895	612	386	310	270
11	381	960	3,050	1,640	1,020	1,640	1,190	865	612	372	306	256
12	377	890	2,800	1,830	985	1,460	1,120	810	601	372	302	266
13	369	834	2,620	2,600	955	1,300	1,060	755	560	372	302	302
14	373	778	2,500	3,310	925	1,220	1,020	755	535	390	302	260
15	357	736	2,280	2,440	895	1,160	955	728	520	390	306	246
16	377	785	1,960	2,490	895	1,120	1,020	755	490	390	314	249
17	412	771	2,630	4,730	895	1,020	925	728	485	450	306	246
18	463	694	6,470	3,310	838	985	865	700	485	400	306	246
19	870	694	6,710	3,440	838	925	838	700	465	368	294	242
20	1,110	820	7,990	3,990	810	895	838	728	460	359	294	238
21	750	750	8,970	6,460	810	865	810	650	450	342	298	246
22	1,050	655	14,500	9,010	782	838	838	618	450	334	294	274
23	1,530	782	9,080	7,840	755	810	838	612	440	330	294	431
24	1,150	764	5,990	5,030	755	782	782	618	418	338	294	314
25	1,110	750	6,150	3,710	728	755	895	612	418	359	290	263
26	925	680	7,670	3,060	700	755	810	612	490	390	302	252
27	1,190	729	5,670	2,600	810	1,020	865	618	485	408	318	242
28	2,780	743	4,130	2,280	782	3,540	810	618	490	390	318	232
29	3,380	668	3,310	2,030		4,130	782	616	436	368	298	228
30	2,440	650	2,710	1,880		3,180	838	728	426	330	278	228
31	2,440		2,380	1,740		3,310		667		310	266	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	3,380	357	927	3.54	4.08	57,010
November	6,870	650	1,482	5.66	6.32	88,170
December	14,500	668	4,672	17.8	20.52	287,300
January	9,010	1,640	3,170	12.1	13.95	194,900
February	1,640	700	1,004	3.83	3.99	55,750
March	4,880	755	1,946	7.43	8.57	119,700
April	3,180	782	1,293	4.94	5.51	76,920
May	1,260	612	790	3.02	3.48	48,570
June	656	418	530	2.02	2.25	31,530
July	450	310	380	1.45	1.67	23,350
August	413	266	309	1.18	1.36	19,020
September	431	228	266	1.02	1.14	15,810
The year	14,500	228	1,406	5.37	72.84	1,018,000

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Sandy River below Bull Run River, near Bull Run, Oreg.

Location.- Water-stage recorder in NW¼ sec. 30, T. 1 S., R. 5 E., 1 mile below Bull Run River and 2 miles northwest of Bull Run. Zero of gage is about 202 feet above mean sea level by U. S. Geological Survey river profile.

Drainage area.- 440 square miles.

Records available.- April 1910 to September 1914 (three-quarters of a mile upstream from present site); October 1929 to September 1934.

Extremes.- Maximum discharge during year, 41,000 second-feet Dec. 22 (gage height, 16.78 feet); minimum, 79 second-feet Aug. 2 (gage height, 0.72 foot); minimum daily discharge, 242 second-feet Aug. 19.

1910-14, 1929-34: Maximum discharge, 58,000 second-feet Mar. 31, 1931 (gage height, 20.6 feet); minimum, 53 second-feet Oct. 4, 1931 (gage height, 0.53 foot); minimum daily discharge, 129 second-feet Oct. 4, 1931.

Remarks.- Records good except those estimated Feb. 6-16, July 18-23 and those above 15,000 second-feet, which are fair. No diversions for irrigation above station; about 50,000 acre-feet annually diverted from Bull Run River by Portland Water Bureau. Flow regulated by Bull Run power plant of Portland General Electric Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,360	4,630	1,210	3,790	2,610	1,300	6,400	1,370	896	356	378	432
2	1,340	13,900	1,470	4,110	2,480	12,400	5,250	1,000	910	608	388	373
3	1,030	12,400	1,470	7,260	2,260	5,580	4,400	1,460	892	560	607	265
4	951	7,260	1,820	6,190	2,090	4,030	3,910	1,440	914	403	518	368
5	877	4,450	3,760	6,190	1,960	6,580	3,660	2,680	802	529	265	413
6	847	3,350	30,500	5,080	1,900	9,130	3,360	2,620	818	555	438	390
7	848	2,690	14,700	3,850	1,800	6,400	2,920	2,110	784	558	379	336
8	612	2,240	7,940	3,370	2,000	4,580	2,520	1,950	988	478	360	364
9	750	2,040	7,260	3,120	1,800	3,650	2,240	1,680	866	461	395	320
10	543	1,800	6,190	3,160	1,700	3,010	2,040	1,490	706	480	415	303
11	480	1,390	5,030	2,950	1,600	2,500	1,870	1,420	835	551	526	332
12	522	1,250	4,670	3,700	1,540	2,280	1,750	1,240	784	553	283	418
13	620	1,420	4,160	5,860	1,500	2,120	1,520	997	815	451	409	406
14	615	1,250	4,050	6,610	1,450	1,880	1,500	1,230	602	566	413	336
15	580	1,160	3,760	4,450	1,400	1,780	1,380	1,010	738	390	360	363
16	620	1,170	3,230	5,370	1,330	1,610	1,620	1,150	784	498	372	355
17	720	1,180	3,780	9,370	1,260	1,600	1,410	1,060	538	665	428	308
18	720	1,150	9,850	6,400	1,140	1,410	1,370	1,090	678		578	315
19	1,580	920	13,900	8,410	1,340	1,390	1,330	1,070	577		242	391
20	2,570	1,530	17,800	8,890	1,150	1,430	1,100	819	565		362	341
21	1,670	1,040	18,700	16,000	1,230	1,250	1,010	1,060	577	440	387	339
22	2,200	1,490	33,900	18,100	1,170	1,160	1,120	879	580		316	400
23	3,490	1,340	19,500	15,700	1,100	1,290	1,400	896	692		348	578
24	2,520	1,350	11,400	9,370	1,060	1,100	1,090	874	530	428	323	488
25	2,190	1,270	12,600	7,040	1,040	712	1,240	914	474	378	470	312
26	1,800	988	16,100	5,780	1,070	1,190	1,220	978	658	465	383	290
27	2,000	1,400	10,800	4,850	1,240	1,450	1,170	640	704	460	414	360
28	6,560	1,390	7,710	3,970	1,350	6,380	1,010	802	648	574	384	337
29	8,170	1,350	6,190	3,550		7,940	1,140	894	736	380	394	304
30	5,580	1,030	5,000	3,110		5,980	1,370	900	618	413	366	334
31	5,380		4,280	2,900		6,610		1,040		398	342	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	8,170	480	1,927	4.38	5.05	118,500
November	13,900	920	2,661	6.05	6.75	158,300
December	33,900	1,210	9,443	21.5	24.79	580,600
January	18,100	2,900	6,403	14.6	16.83	395,700
February	2,610	1,040	1,556	3.54	3.69	86,420
March	12,400	712	3,539	8.04	9.27	217,300
April	6,400	1,010	2,111	4.80	5.36	125,600
May	2,580	640	1,250	2.84	3.27	76,890
June	988	474	724	1.65	1.84	43,060
July			477	1.08	1.24	29,350
August	607	242	395	.898	1.04	24,280
September	578	265	362	.825	.92	21,560
The year	33,900	242	2,591	5.89	80.05	1,876,000

Little Zigzag River at Twin Bridges, near Rhododendron, Oreg.

Location.- Water-stage recorder probably in sec. 15 of unsurveyed T. 3 S., R. 8 E., 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 1934.

Extremes.- Maximum discharge during year, 120 second-feet Dec. 22 (gage height, 2.68 feet); minimum, 20 second-feet Oct. 11-15, 17, Aug. 19-31, Sept. 1-5, 29, 30.
1926-34: Maximum discharge (estimated), 250 second-feet Mar. 31, 1931 (gage height, about 3.5 feet); minimum, 15 second-feet Feb. 1-13, 16-18, 1932.

Remarks.- Records good except those estimated, Dec. 23 to Jan. 16, which are poor. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	32	22	41	36	30	38	26	27	26	22	20
2	22	44	22	43	36	45	37	26	28	26	22	20
3	21	41	22	45	35	36	36	26	28	26	22	20
4	22	31	22	43	34	34	36	25	28	25	22	20
5	22	28	30	43	33	42	37	26	27	25	22	20
6	22	26	74	42	33	42	37	25	27	25	22	21
7	21	25	36	42	34	38	36	25	28	25	22	21
8	21	24	31	42	34	36	36	24	28	24	22	21
9	21	24	36	42	32	36	35	25	28	24	22	22
10	21	24	34	41	31	36	34	25	26	23	22	22
11	20	24	33	42	31	36	34	24	26	23	22	22
12	20	24	34	42	31	35	33	25	26	23	22	22
13	20	24	33	44	30	35	33	24	26	23	21	22
14	20	24	31	40	30	34	33	24	26	23	21	22
15	20	24	31	36	29	34	33	24	26	23	21	21
16	21	24	29	37	30	35	34	24	26	22	21	21
17	20	24	41	39	28	34	32	24	26	23	21	21
18	22	24	46	36	28	34	31	24	26	22	21	21
19	25	24	46	34	28	34	30	24	26	22	20	21
20	24	24	59	31	28	33	29	24	25	22	20	21
21	22	24	73	50	28	32	28	25	25	22	20	21
22	26	24	97	58	28	32	28	25	25	22	20	24
23	25	24	70	59	28	32	28	25	25	22	20	23
24	23	23	55	45	28	32	27	25	25	22	20	22
25	24	22	65	43	28	32	28	25	26	22	20	21
26	22	22	60	42	27	31	27	26	27	22	20	21
27	25	22	52	40	28	36	27	26	27	22	20	21
28	31	22	48	39	28	48	26	25	27	22	20	21
29	28	22	44	38		43	26	25	26	22	20	20
30	26	22	42	37		43	26	28	26	22	20	20
31	28		41	36		41		27		22	20	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	31	20	22.8	6.16	7.10	1,400
November	44	22	25.5	6.89	7.69	1,520
December	97	22	43.8	11.8	13.60	2,700
January	59	31	41.7	11.3	13.03	2,560
February	36	27	30.5	8.24	8.58	1,690
March	48	30	36.2	9.78	11.28	2,220
April	38	26	31.8	8.59	9.58	1,890
May	28	24	25.0	6.76	7.79	1,540
June	28	25	26.4	7.14	7.97	1,570
July	26	22	23.1	6.24	7.19	1,420
August	22	20	21.0	5.68	6.55	1,290
September	24	20	21.2	5.73	6.39	1,260
The year	97	20	29.1	7.86	106.75	21,060

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 and 4 miles southeast of Government Camp. Prior to Oct. 1, 1933, gage was located a quarter of a mile upstream at different datum.

Drainage area.- 8.7 square miles (revised).

Records available.- May 1910 to May 1912, April 1926 to September 1934.

Extremes.- Maximum discharge during year, 650 second-feet Dec. 22 (gage height, 3.61 feet); minimum, 14 second-feet Sept. 28-30.
1910-12, 1926-34: Maximum discharge, that of Dec. 22, 1933; minimum, 12 second-feet Nov. 21, 1929, Oct. 19, 1930.

Remarks.- Records fair except those for Oct. 1 to Dec. 5, which are poor. Discharge estimated Nov. 30, Dec. 2-5. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	74	28	90	77	66	80	43	36	24	17	15
2	28	176	29	109	76	130	72	43	29	23	16	15
3	26	172	30	135	72	72	72	44	32	22	19	15
4	27	87	29	109	69	72	75	41	29	22	18	15
5	27	69	60	113	67	116	74	43	26	22	17	15
6	26	56	185	93	67	101	72	40	28	22	17	15
7	26	50	99	85	72	84	68	41	33	22	17	15
8	25	46	72	80	71	79	64	40	30	22	17	15
9	24	42	100	77	66	75	60	38	29	22	17	15
10	23	38	91	79	63	71	57	36	29	22	17	16
11	23	35	81	73	61	68	55	36	30	21	17	15
12	22	33	86	74	59	66	54	35	29	20	17	17
13	22	32	77	85	58	63	52	34	28	22	17	18
14	24	31	67	80	57	61	50	34	28	22	17	16
15	21	30	61	70	56	58	50	34	27	21	17	16
16	27	36	54	75	58	60	57	34	26	21	17	16
17	28	32	85	101	56	56	49	35	26	21	17	16
18	44	29	106	78	56	54	47	33	26	19	16	16
19	67	33	96	96	56	52	46	35	25	18	16	15
20	54	32	150	93	54	51	45	34	24	18	16	15
21	35	30	254	129	52	50	44	31	24	18	16	15
22	65	36	493	180	50	50	46	30	25	18	16	23
23	66	32	216	182	50	48	48	30	22	18	16	25
24	44	31	150	116	49	46	46	31	21	18	16	18
25	52	29	193	106	48	46	56	31	24	20	16	17
26	40	28	174	102	48	46	47	32	26	20	16	16
27	59	30	132	91	54	78	49	33	24	20	16	15
28	80	28	115	86	49	128	44	34	24	19	15	14
29	74	29	111	83		98	43	34	22	18	16	14
30	46	28	99	81		92	46	46	22	17	15	14
31	53		91	78		87		36		17	15	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	80	21	38.9	4.47	5.15	2,390
November	176	28	48.1	5.53	6.17	2,860
December	493	28	117	13.4	15.45	7,170
January	182	70	97.7	11.2	12.91	6,010
February	77	48	59.7	6.86	7.14	3,310
March	130	46	71.0	8.25	9.51	4,420
April	80	43	55.6	6.39	7.13	3,310
May	46	30	36.2	4.16	4.80	2,220
June	36	21	26.9	3.09	3.45	1,600
July	24	17	20.3	2.33	2.69	1,250
August	19	15	16.6	1.91	2.20	1,020
September	25	14	16.1	1.85	2.06	956
The year	493	14	50.4	5.79	78.66	36,520

Salmon River below Linney Creek, Oreg.

Location.- Water-stage recorder 200 feet below Linney Creek, 9 miles southeast of Welches, and 11 miles downstream from gaging station on Salmon River near Government Camp.

Drainage area.- 54 square miles.

Records available.- October 1927 to September 1934.

Extremes.- Maximum discharge during year ending Sept. 30, 1928 (revised), 2,220 second-feet Nov. 25 (gage height, 4.30 feet); minimum, 49 second-feet Sept. 30 (gage height, 0.27 foot). Maximum discharge during year ending Sept. 30, 1934, 3,010 second-feet Dec. 22 (gage height, 5.02 feet); minimum, 50 second-feet Sept. 1-7, 21, 30 (gage height, 0.28 foot).

1927-34: Maximum discharge, 4,070 second-feet (revised) Mar. 31, 1931 (gage height, 5.81 feet); minimum, 44 second-feet Nov. 21, 1929 (gage height, 0.27 foot).

Remarks.- Records good except those estimated Oct. 1-27, 29, 1927, Apr. 27 to May 3, June 22 to July 7, July 15-18, 1928, which are fair. No diversions or regulation above station.

Discharge, in second-feet, 1927-28

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		148	1,020	205	213	131	396	450	176	125	79	63
2		210	920	272	205	129	356	400	173	120	78	63
3		159	730	288	200	129	325	360	168	115	76	63
4		150	600	294	194	141	297	367	164	135	76	63
5		141	530	268	192	164	288	374	156	130	74	63
6		144	464	360	189	189	272	393	154	120	73	63
7		141	408	328	189	200	262	404	150	115	73	63
8		154	420	297	183	205	259	412	146	110	73	63
9		166	382	291	178	325	288	416	144	108	72	63
10		152	335	284	176	610	265	404	148	103	72	63
11		141	314	291	176	760	268	396	148	101	72	64
12		144	304	342	171	534	356	374	144	100	70	92
13		150	298	626	166	424	376	360	139	96	70	78
14	257	210	272	484	161	356	385	356	146	95	70	70
15		328	268	412	156	318	376	342	186	94	70	67
16		538	288	363	154	308	389	325	154	92	68	64
17		374	253	328	152	332	412	308	148	92	68	63
18		321	238	297	152	352	370	291	137	90	67	63
19		288	229	275	150	382	342	284	161	88	67	63
20		314	221	259	150	404	318	276	159	88	67	63
21		284	213	244	152	460	314	272	144	88	67	66
22		250	205	229	166	530	367	259	140	87	67	64
23		262	200	218	161	520	385	244	130	87	67	63
24		790	194	208	150	480	396	235	120	85	67	59
25		1,920	189	200	148	428	393	232	115	85	67	54
26		1,080	183	189	144	424	404	221	112	84	66	54
27		920	183	183	141	412	460	213	110	84	66	53
28	148	1,330	181	181	139	363	430	205	110	82	66	52
29	160	985	173	236	135	374	420	210	120	80	64	50
30	154	952	156	275		476	480	205	125	79	64	52
31	137		135	241		464		183		78	63	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October			243	4.50	5.19	14,950
November	1,920	141	438	8.11	9.05	26,070
December	1,020	135	339	6.28	7.24	20,820
January	626	161	289	5.35	6.17	17,790
February	213	135	167	3.09	3.33	9,610
March	760	129	365	6.76	7.79	22,460
April	480	259	354	6.56	7.32	21,070
May	450	183	316	5.85	6.74	19,420
June	186	110	144	2.67	2.98	8,580
July	135	76	97.9	1.81	2.09	6,020
August	79	63	69.6	1.29	1.49	4,280
September	92	50	62.8	1.16	1.29	3,740
The year	1,920	50	241	4.46	60.68	174,800

Note.- Revised records for 1927-28 supersede those published in Water-Supply Paper 674.

Salmon River below Linney Creek, Oreg.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	229	110	472	352	197	352	154	108	74	57	50
2	92	575	113	498	335	548	332	148	105	73	57	50
3	88	675	119	626	321	335	328	164	106	72	61	50
4	87	404	113	525	304	294	335	148	98	70	59	50
5	87	311	163	530	288	408	332	161	93	72	56	50
6	85	259	1,070	456	281	525	321	152	92	70	56	50
7	84	221	670	420	291	440	301	148	96	70	56	50
8	82	200	460	389	297	393	278	148	100	70	54	52
9	82	181	489	367	265	356	262	141	96	70	54	52
10	80	168	472	374	250	328	247	135	92	68	54	52
11	80	159	416	342	241	304	238	131	92	67	54	52
12	79	150	444	346	232	288	227	129	90	66	54	54
13	79	144	416	428	224	268	218	126	85	67	54	60
14	80	141	360	464	218	253	208	122	82	67	54	54
15	79	139	328	374	216	244	202	119	82	66	53	54
16	82	141	294	382	210	244	213	119	79	64	53	53
17	82	137	385	534	205	229	192	119	79	67	53	53
18	88	131	580	432	200	218	178	117	79	64	54	53
19	122	133	626	490	200	210	173	115	78	61	53	53
20	148	144	855	534	194	202	166	120	76	61	52	52
21	110	139	1,220	825	189	194	164	110	76	60	53	50
22	126	146	2,650	1,050	183	189	159	105	76	60	52	61
23	148	133	1,700	1,220	178	183	166	103	76	60	52	92
24	117	128	1,120	822	176	178	161	105	76	59	52	64
25	117	122	1,160	675	171	176	186	105	80	60	52	59
26	108	119	1,190	600	168	171	166	103	90	60	52	56
27	131	120	920	525	200	235	189	103	84	60	52	54
28	208	120	760	468	186	484	161	101	82	60	50	53
29	256	115	675	432		404	156	101	76	57	52	52
30	200	112	570	404		356	159	112	74	56	52	50
31	216		507	378		370		112		57	52	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	256	79	114	2.11	2.43	6,980
November	675	112	197	3.65	4.07	11,690
December	2,650	110	676	12.5	14.41	41,560
January	1,220	342	528	9.78	11.28	32,470
February	352	168	235	4.35	4.53	13,040
March	548	171	298	5.52	6.36	18,300
April	352	156	226	4.19	4.68	13,430
May	164	101	125	2.31	2.66	7,690
June	108	74	86.6	1.60	1.78	5,150
July	74	56	64.8	1.20	1.38	3,990
August	61	50	53.8	.996	1.15	3,310
September	92	50	54.5	1.01	1.13	3,240
The year	2,650	50	222	4.11	55.86	160,800

Salmon River at Welches, Oreg.

Location.- Staff gage in S½ sec. 9, T. 3 S., R. 7 E., just below Sheeny Creek and three-quarters of a mile southeast of Welches.

Drainage area.- 100 square miles.

Records available.- August 1913 to September 1914, July 1920 to September 1921, April 1925 to September 1934.

Average discharge.- 11 years (1913-14, 1920-21, 1925-34), 439 second-feet.

Extremes.- Maximum discharge recorded during year, 5,930 second-feet Dec. 22 (gage height, 6.8 feet); minimum, 68 second-feet Aug. 21-28, Sept. 1-6, 9-11, 15-21, 30 (gage height, 0.55 foot).
1913-14, 1920-21, 1925-34: Maximum discharge (estimated), 13,000 second-feet Mar. 31, 1931 (gage height, 9.80 feet at former gage 500 feet downstream); minimum, 65 second-feet Dec. 3-6, 1929, Aug. 31 to Sept. 3, 1931.

Remarks.- Records fair. Discharge estimated Mar. 1. No diversion or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	216	1,310	204	740	595	350	890	295	215	117	80	68
2	175	2,370	216	640	572	1,590	790	275	215	110	75	68
3	148	3,000	306	1,280	528	950	740	375	198	110	104	68
4	126	1,150	297	1,010	505	690	740	315	180	110	95	68
5	119	620	618	1,010	482	840	740	375	180	104	86	68
6	112	645	3,690	840	460	1,430	640	415	173	104	86	68
7	106	535	2,070	790	460	1,210	618	355	180	95	80	70
8	102	455	1,140	690	482	840	550	355	198	104	80	70
9	99	405	1,070	618	438	740	505	335	180	110	80	68
10	99	355	950	640	415	640	460	295	180	104	75	68
11	99	330	840	595	415	572	438	275	162	95	75	68
12	93	292	640	740	375	528	415	255	152	95	75	75
13	93	260	790	1,010	375	482	395	247	152	95	75	86
14	93	238	740	1,140	355	460	375	235	145	92	75	75
15	93	229	740	790	355	438	355	223	145	95	75	68
16	102	247	595	740	335	415	395	223	138	92	70	68
17	106	238	740	1,510	355	395	355	223	138	104	70	68
18	106	216	1,970	690	335	375	335	215	138	92	70	68
19	216	238	2,400	950	335	355	315	208	138	92	70	68
20	330	283	3,000	1,140	335	335	295	247	128	92	70	68
21	216	238	4,210	1,870	315	335	295	247	128	86	68	68
22	283	283	5,270	2,760	295	335	287	198	128	92	68	66
23	405	247	3,650	3,000	295	315	295	194	128	86	68	215
24	263	238	2,290	1,510	287	295	287	187	124	86	66	110
25	283	229	2,520	1,210	275	295	355	187	124	86	68	92
26	238	204	3,260	1,070	263	287	295	187	162	66	68	66
27	562	216	1,970	840	315	287	335	180	145	66	68	75
28	880	216	1,430	840	315	1,140	295	180	152	86	68	75
29	1,150	204	1,070	740		1,010	287	173	128	80	70	70
30	730	195	950	640		790	335	208	117	80	70	66
31	820		840	618		950		215		80	70	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,150	93	274	2.74	3.16	16,830
November	3,000	195	530	5.30	5.91	31,510
December	5,270	204	1,641	16.4	18.91	100,900
January	3,000	595	1,066	10.7	12.34	65,580
February	595	263	387	3.87	4.03	21,510
March	1,590	287	635	6.35	7.32	39,020
April	890	287	447	4.47	4.99	26,600
May	415	173	255	2.55	2.94	15,660
June	215	117	156	1.56	1.74	9,260
July	117	80	95.0	.950	1.10	5,840
August	104	68	74.8	.748	.86	4,600
September	215	68	78.0	.780	.87	4,640
The year	5,270	68	472	4.72	64.17	342,000

Bull Run Reservoir near Bull Run, Oreg.

Location.- Water-stage recorder in SW¼ sec. 16, T. 1 S., R. 6 E., at Bear Creek Dam of City of Portland, 8⅛ miles northeast of Bull Run. Gage readings are elevations above mean sea level.

Records available.- October 1928 to September 1934.

Extremes.- Maximum contents during year, 30,990 acre-feet Dec. 22 (gage height, 1,045.98 feet); minimum, 22,890 acre-feet Sept. 30 (gage height, 1,024.97 feet). 1928-34: Maximum contents, 31,600 acre-feet Mar. 31, 1931 (gage height, 1,047.40 feet); minimum, 20,530 acre-feet Oct. 4, 1931.

Remarks.- Records good. Bear Creek Dam on Bull Run Reservoir was completed in March 1929 and stores water in Bull Run Reservoir for water supply of City of Portland. Capacity of reservoir at crest of spillway, gage height, 1,036 feet, is 28,930 acre-feet and at center line of outlet valves, gage height 890 feet, is 213 acre-feet, which is dead storage. Gage-height record furnished by Portland Water Bureau.

Stage and contents, 1933-34

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	1,037.46	27,500	-----
Oct. 31	1,038.48	27,900	+400
Nov. 30	1,036.85	27,260	-640
Dec. 31	1,037.68	27,590	+330
Jan. 31	1,037.30	27,440	-150
Feb. 28	1,036.88	27,270	-170
Mar. 31	1,038.61	27,950	+680
Apr. 30	1,036.76	27,230	-720
May 31	1,036.66	27,190	-40
June 30	1,036.45	27,110	-80
July 31	1,033.72	26,060	-1,050
Aug. 31	1,028.87	24,270	-1,790
Sept. 30	1,025.07	22,920	-1,350
The year			4,580

Bull Run River below Bull Run Reservoir, Oreg.

Location.- Water-stage recorder in SE¼ sec. 17, T. 1 S., R. 6 E., half a mile below Bull Run Reservoir and 8 miles northeast of Bull Run.

Drainage area.- 77 square miles.

Records available.- October 1929 to September 1934.

Extremes.- Maximum discharge during year, 12,800 second-feet Dec. 22 (gage height, 8.9 feet); minimum, 72 second-feet Sept. 14-16, 22-24 (gage height, -0.05 foot).
1929-34: Maximum discharge, 15,700 second-feet Mar. 31, 1931 (gage height, 10.85 feet); minimum (estimated), 5 second-feet Oct. 10, 11, 1930.

Remarks.- Records good. No diversions above station. Flow regulated by storage in Bull Run Lake and Bull Run Reservoir. Gage-height record furnished by Portland Water Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	498	1,380	336	731	508	384	1,620	273	190	94	91	89
2	399	3,830	388	960	472	3,290	1,210	273	192	91	93	89
3	336	2,850	590	2,020	413	1,560	960	388	190	87	82	89
4	284	1,590	580	1,620	365	1,120	827	360	178	85	77	89
5	257	1,020	1,460	1,560	338	2,260	737	890	168	84	77	91
6	222	762	9,920	1,120	321	2,380	656	814	161	82	82	80
7	197	625	3,740	890	326	1,510	570	602	166	80	84	80
8	180	520	1,840	719	365	1,000	486	499	173	85	80	80
9	163	451	1,960	634	407	768	429	425	171	87	89	80
10	153	403	1,510	656	348	612	380	366	161	122	87	80
11	145	367	1,260	656	346	517	349	328	152	164	87	80
12	136	336	1,260	827	332	454	321	300	146	96	87	85
13	134	311	1,080	1,460	310	405	297	273	169	91	87	85
14	132	294	1,040	1,840	297	370	279	252	96	91	87	77
15	127	266	925	1,160	285	338	264	234	118	93	87	72
16	140	308	755	1,080	279	328	276	231	120	93	91	76
17	161	314	1,060	2,260	279	304	261	234	118	89	85	78
18	180	275	3,610	1,410	258	282	237	222	112	82	85	78
19	523	281	4,640	2,040	252	267	222	219	110	89	85	87
20	960	346	5,770	2,520	252	252	208	261	104	89	85	85
21	570	325	5,960	4,530	252	240	200	222	104	91	85	80
22	828	378	10,600	5,770	252	228	192	198	102	91	91	72
23	1,540	360	5,390	4,370	234	219	195	185	108	91	102	72
24	1,030	356	2,520	2,200	219	205	190	178	100	104	110	72
25	815	367	3,140	1,460	219	200	228	175	96	110	100	74
26	650	336	3,530	1,160	213	195	225	173	104	100	89	77
27	845	353	2,200	1,000	279	316	208	168	120	89	89	74
28	2,670	367	1,460	834	297	2,010	249	161	128	89	87	74
29	2,920	336	1,160	707		2,020	234	157	112	89	89	74
30	1,880	339	960	629		1,510	261	202	100	89	89	74
31	1,640		869	570		1,680		216		91	89	

Month	Observed				Change in contents, Bull Run Reservoir, in acre-feet	Corrected for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October....	2,920	127	668	41,090	+400	41,490	675	8.77	10.11
November...	3,830	266	668	39,760	-640	39,120	657	8.53	9.52
December...	10,600	336	2,629	161,700	+330	162,030	2,635	34.2	39.43
January....	5,770	570	1,593	97,970	-150	97,820	1,591	20.7	23.86
February...	508	213	311	17,290	-170	17,120	308	4.00	4.16
March.....	3,290	195	878	54,000	+680	54,680	889	11.5	13.26
April.....	1,620	190	426	25,330	-720	24,610	414	5.38	6.00
May.....	890	157	306	18,800	-40	18,760	305	3.96	4.56
June.....	192	96	136	8,070	-80	7,990	134	1.74	1.94
July.....	164	80	93.8	5,770	-1,050	4,720	76.8	.997	1.15
August.....	110	77	88.0	5,410	-1,790	3,620	58.9	.765	.88
September..	91	72	79.8	4,750	-1,350	3,400	57.1	.742	.83
The year...	10,600	72	663	479,940	-4,580	475,360	657	8.53	115.70

Bull Run River near Bull Run, Oreg.

Location.- Water-stage recorder in SE¼ sec. 25, T. 1 S., R. 5 E., 1⅛ 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 1934.

Extremes.- Maximum discharge during year, 14,700 second-feet Dec. 22 (gage height, 11.2 feet); minimum, 69 second-feet Sept. 16 (gage height, 0.58 foot).
1895-1934: Maximum discharge, 20,600 second-feet Mar. 31, 1931 (gage height, 13.8 feet); minimum, 63 second-feet Aug. 13-16, 1926.

Remarks.- Records good. Discharge estimated Apr. 5, 7-9, 26, 27. No diversions above station. Flow regulated by storage in Bull Run Lake and Bull Run Reservoir. Gage-height record furnished by Portland Water Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	685	1,740	420	1,000	670	412	2,150	322	210	114	98	102
2	555	4,640	445	1,220	616	3,970	1,650	316	210	109	107	102
3	470	3,700	685	2,710	575	2,040	1,260	494	207	105	102	102
4	410	2,040	710	2,200	516	1,420	1,100	440	194	103	91	102
5	365	1,340	1,200	2,100	476	2,890	960	1,080	185	102	91	102
6	328	970	11,100	1,560	449	3,010	890	1,070	179	98	96	93
7	302	790	5,220	1,220	431	1,940	760	798	188	98	98	93
8	279	660	2,710	970	503	1,300	640	670	194	98	98	93
9	257	570	2,710	852	534	970	560	566	197	105	113	93
10	244	500	2,100	880	485	798	490	476	194	113	113	93
11	218	465	1,700	880	444	670	449	418	188	179	103	93
12	205	425	1,650	1,040	413	584	386	372	179	116	102	107
13	197	385	1,420	1,890	390	516	364	334	218	111	103	109
14	201	370	1,380	2,540	368	467	334	298	122	111	105	91
15	197	333	1,220	1,560	350	426	314	278	143	114	105	80
16	205	370	970	1,470	338	404	334	274	143	114	105	80
17	230	380	1,260	3,190	338	368	314	274	145	114	102	90
18	257	333	4,110	1,990	306	350	278	260	141	100	102	90
19	658	338	5,860	2,830	294	310	260	252	139	105	100	100
20	1,220	435	6,660	3,440	294	286	242	314	132	107	100	100
21	735	395	6,290	5,490	294	270	232	260	130	107	100	95
22	1,040	460	12,300	6,660	294	252	221	224	128	109	102	91
23	1,740	440	6,290	5,220	274	242	218	214	130	107	109	105
24	1,140	435	3,570	2,950	252	232	218	200	120	109	116	93
25	970	450	4,250	1,940	252	228	260	194	116	116	113	91
26	790	415	4,690	1,560	246	218	250	194	120	113	103	95
27	1,040	430	3,310	1,300	322	322	230	191	132	102	103	95
28	3,260	465	2,040	1,070	359	2,280	282	182	145	102	103	93
29	3,570	430	1,560	.910		2,710	266	179	132	102	103	90
30	2,320	410	1,300	825		1,940	298	228	120	100	103	91
31	2,040		1,140	745		2,200		258		98	103	

Month	Observed				Change in contents, Bull Run Reservoir, in acre-feet	Corrected for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October....	3,570	197	843	51,820	+400	52,220	849	8.32	9.59
November...	4,640	333	837	49,810	-640	49,170	826	8.10	9.04
December...	12,300	420	3,235	198,900	+330	199,230	3,240	31.8	36.66
January....	6,660	745	2,071	127,400	-150	127,250	2,070	20.3	23.40
February...	670	246	396	21,960	-170	21,810	393	3.85	4.01
March.....	3,970	218	1,097	67,450	+680	68,130	1,108	10.9	12.57
April.....	2,150	218	540	32,150	-720	31,430	528	5.18	5.78
May.....	1,080	179	375	23,030	-40	22,990	374	3.67	4.23
June.....	218	116	159	9,480	-80	9,400	158	1.55	1.73
July.....	179	98	110	6,750	-1,050	5,700	92.7	.909	1.05
August.....	116	91	103	6,330	-1,790	4,540	73.8	.724	.83
September..	109	80	95.1	5,660	-1,350	4,310	72.4	.710	.79
The year	12,300	80	830	600,760	-4,580	596,180	823	8.07	109.68

Little Sandy River near Bull Run, Oreg.

Location.- Water-stage recorder in NE¼ sec. 10, T. 2 S., R. 5 E., three-eighths of a mile above Portland General Electric Co.'s dam and tunnel from Sandy River and 3 miles east of Bull Run. Zero of gage is 710.51 feet above mean sea level, by surveys of Portland General Electric Co. referred to adjustment of 1924.

Drainage area.- 23 square miles.

Records available.- May 1911 to April 1913, fragmentary; July 1919 to September 1934.

Average discharge.- 15 years (1919-34), 141 second-feet.

Extremes.- Maximum discharge during year, 3,000 second-feet Dec. 6 (gage height, 7.50 feet); minimum, 11 second-feet Sept. 5, 6.
1911-13, 1919-34: Maximum discharge, 3,950 second-feet Nov. 20, 1921 (gage height, 9.18 feet); minimum, 10 second-feet Sept. 17, 1924, Sept. 2-5, 1931, Sept. 30, Oct. 1-11, 1932.

Remarks.- Records good. No diversions or regulation above station. Water-stage recorder operated by Portland General Electric Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	412	89	178	117	96	356	74	53	29	16	12
2	88	963	106	202	112	845	270	70	63	28	22	12
3	75	780	149	346	105	328	230	114	57	27	34	12
4	65	398	127	300	94	228	208	92	50	26	26	12
5	59	260	298	352	89	382	195	225	46	25	21	11
6	53	198	2,050	235	86	410	176	185	46	24	20	11
7	47	157	810	188	86	279	146	141	49	25	18	12
8	44	129	430	156	97	200	120	132	56	29	17	12
9	41	112	414	139	95	152	102	111	50	26	16	12
10	39	97	285	148	83	125	92	92	45	24	16	14
11	37	86	238	135	77	106	83	81	43	22	16	14
12	35	79	208	183	73	93	76	74	40	21	16	18
13	33	73	181	294	70	84	70	67	38	21	16	23
14	33	67	178	310	67	76	65	62	36	21	16	16
15	31	62	163	218	64	71	61	59	35	20	15	14
16	39	94	141	302	69	73	74	72	34	21	15	13
17	53	88	188	675	68	66	64	69	33	30	15	12
18	75	71	410	370	62	62	58	63	31	24	15	12
19	183	76	845	553	60	58	52	65	31	21	14	12
20	185	104	970	571	60	55	49	74	30	21	14	12
21	114	94	938	829	57	54	46	61	29	21	14	12
22	185	115	1,700	1,000	57	51	45	56	29	21	14	18
23	185	96	872	840	54	49	50	52	30	20	14	37
24	134	96	580	490	52	47	50	48	28	19	13	22
25	136	102	725	349	50	44	65	46	28	19	13	16
26	111	85	905	291	51	43	53	46	36	19	12	14
27	208	97	548	235	75	84	64	43	46	19	12	14
28	618	98	378	198	70	425	63	41	50	18	12	13
29	535	86	282	167		370	56	39	36	18	12	12
30	387	85	225	146		349	72	68	31	18	12	12
31	452		200	132		402		59		17	12	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	618	31	141	6.13	7.07	8,670
November	963	62	175	7.61	8.49	10,430
December	2,050	89	504	21.9	25.25	31,010
January	1,000	132	340	14.8	17.06	20,890
February	117	50	74.9	3.26	3.40	4,160
March	845	43	184	8.00	9.22	11,320
April	356	45	104	4.52	5.04	6,170
May	225	39	80.0	3.48	4.01	4,920
June	63	28	40.3	1.75	1.95	2,400
July	30	17	22.4	.974	1.12	1,380
August	34	12	16.1	.700	.81	988
September	37	11	14.5	.630	.70	865
The year	2,050	11	143	6.22	84.12	103,200

Middle Fork of Willamette River at Eula, Oreg.

Location.- Staff gage in sec. 18, T. 20 S., R. 2 E., a quarter of a mile southwest of Eula and 8 miles below mouth of North Fork.

Drainage area.- 950 square miles. Prior to October 1931, 943 square miles at gaging cable a mile above gage; discharge measurements now made at gage.

Records available.- July 1923 to September 1934.

Average discharge.- 10 years (1923-26, 1927-34), 2,284 second-feet.

Extremes.- Maximum discharge during year, 18,200 second-feet Jan. 23 (gage height, 10.2 feet); minimum, 517 second-feet Sept. 20, 21 (gage height, 1.06 feet).
1923-34: Maximum discharge, 55,100 second-feet Feb. 21, 1927 (gage height, 17.0 feet); minimum, 450 second-feet Nov. 24, 25, Dec. 5, 6, 1929, Sept. 4-6, 16, 17, 1931.

Remarks.- Records good except those estimated Oct. 30, Nov. 1, Dec. 4, 5, 19-22, Feb. 6, 15-22, which are fair. No diversions above station. Considerable diurnal fluctuation during low water, owing to logging operations upstream. Gage-height record October to April furnished by U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	820	1,460	755	2,510	2,860	1,510	5,640	1,420	1,100	607	607	555
2	820	1,420	960	2,400	2,620	2,400	6,160	1,420	1,180	781	607	545
3	807	1,690	1,180	5,980	2,180	3,230	4,980	1,510	1,260	768	684	535
4	794	1,340	1,300	6,900	1,980	2,860	4,500	1,510	1,180	755	662	535
5	781	1,100	1,400	4,980	1,980	4,350	4,200	1,510	1,100	743	629	535
6	781	1,030	2,080	3,910	1,980	6,340	4,050	1,600	1,420	743	618	526
7	781	960	4,350	3,490	1,980	4,820	3,910	1,510	1,780	731	607	526
8	755	890	2,860	2,860	2,510	4,050	3,490	1,690	1,600	719	607	526
9	755	883	1,980	2,510	2,510	5,360	3,100	1,780	1,510	707	596	535
10	755	890	1,690	2,400	2,400	2,980	2,620	1,600	1,420	707	596	535
11	755	820	1,780	2,400	2,180	2,740	2,400	1,510	1,260	707	596	535
12	743	820	1,880	2,290	1,980	2,400	2,290	1,420	1,180	707	596	535
13	743	820	2,510	2,860	1,880	2,290	1,980	1,340	1,100	695	596	555
14	731	755	2,400	6,710	1,780	2,180	1,980	1,260	1,100	695	596	545
15	695	755	2,400	5,140	1,750	2,080	1,980	1,260	1,030	684	585	545
16	695	755	1,880	3,910	1,690	1,980	1,880	1,180	960	719	585	545
17	695	755	1,880	3,360	1,630	1,880	1,880	1,180	960	707	585	535
18	695	755	6,520	3,250	1,600	1,780	1,690	1,180	960	684	585	526
19	695	755	6,800	3,910	1,570	1,690	1,600	1,100	960	673	585	526
20	695	755	7,000	6,160	1,530	1,600	1,510	1,100	960	662	575	517
21	755	755	6,000	5,470	1,490	1,690	1,510	1,100	890	675	575	517
22	755	755	6,500	9,900	1,460	1,510	1,510	1,100	890	695	575	526
23	695	755	6,900	16,500	1,420	1,600	1,510	1,030	890	673	575	684
24	755	695	5,640	11,800	1,420	1,510	1,510	1,050	890	662	565	618
25	695	695	5,140	7,880	1,420	1,510	1,510	1,030	876	651	565	585
26	695	755	4,350	6,160	1,420	1,420	1,420	1,030	820	640	565	575
27	695	755	3,630	5,300	1,510	1,780	1,420	1,030	960	640	555	565
28	890	820	3,100	4,500	1,510	3,100	1,420	1,030	925	640	565	555
29	1,780	820	2,980	3,770		4,980	1,420	1,030	876	640	575	555
30	1,640	755	2,860	3,490		3,910	1,420	1,260	834	640	565	526
31	1,510		2,510	3,100		5,980		1,180		629	555	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,780	695	834	0.878	1.01	51,280
November	1,690	695	899	.946	1.06	53,490
December	7,000	755	3,330	3.51	4.05	204,700
January	16,500	2,290	5,025	5.29	6.10	309,000
February	2,860	1,420	1,866	1.96	2.04	103,600
March	6,340	1,420	2,788	2.90	3.34	169,600
April	6,160	1,420	2,550	2.68	2.99	151,700
May	1,780	1,030	1,288	1.36	1.57	79,200
June	1,780	820	1,096	1.15	1.28	65,200
July	807	629	696	.733	.85	42,800
August	684	555	591	.622	.72	36,360
September	684	517	547	.576	.64	32,530
The year	16,500	517	1,795	1.89	25.65	1,299,000

Willamette River at Springfield, Oreg.

Location.- Water-stage recorder in SE¼ sec. 34, T. 17 S., R. 3 W., at highway bridge at Springfield. Zero of gage is 424.16 feet above mean sea level by general adjustment of 1929.

Drainage area.- 2,030 square miles.

Records available.- November 1911 to September 1913, October 1928 to September 1934. At Eugene, 4 miles downstream, June 1919 to September 1928.

Average discharge.- 16 years (1912-13, 1919-34), 4,926 second-feet.

Extremes.- Maximum discharge during year, 38,200 second-feet Jan. 23 (gage height, 12.92 feet); minimum, 582 second-feet Sept. 10, 13, 14, 22 (gage height, 1.41 feet). 1911-13, 1919-34: Maximum discharge, 73,300 second-feet Feb. 21, 1927 (gage height at Eugene, 17.0 feet); minimum, 500 second-feet Aug. 11, 1926. Maximum stage known, 22.0 feet, at Eugene, Jan. 25, 1903, supersedes that previously published.

Remarks.- Records good. Slight diurnal fluctuation during low water, owing to logging operations in Middle Fork of Willamette River Basin. No diversions above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,180	2,180	1,160	4,210	5,390	2,420	11,900	2,130	1,600	1,010	666	605
2	1,100	2,040	1,180	4,100	4,660	3,380	14,800	2,200	1,600	981	682	598
3	1,040	2,250	1,270	7,410	4,200	6,040	11,600	2,280	1,720	952	682	598
4	994	2,560	1,780	12,800	3,980	5,140	9,270	2,350	1,720	924	738	598
5	976	2,180	1,900	9,450	3,670	5,780	8,110	2,350	1,660	887	730	598
6	958	1,840	2,640	7,410	3,480	9,560	7,270	2,830	1,720	878	706	590
7	940	1,640	12,100	6,180	3,280	9,560	6,580	2,830	2,200	878	666	590
8	931	1,470	7,130	5,270	3,770	7,270	5,910	2,740	2,500	869	650	590
9	922	1,330	4,440	4,550	4,900	5,910	5,140	3,010	2,350	869	650	590
10	913	1,220	3,360	4,320	4,320	5,020	4,540	2,920	2,200	860	642	582
11	886	1,170	2,890	4,550	3,880	4,430	3,980	2,660	1,990	842	635	590
12	886	1,130	2,890	4,430	3,570	3,980	3,670	2,420	1,790	824	628	590
13	859	1,090	4,320	5,620	3,280	3,570	3,380	2,280	1,660	815	628	582
14	850	1,080	5,650	13,400	3,100	3,380	3,190	2,060	1,540	798	620	582
15	850	1,020	6,990	13,400	2,920	3,190	3,010	1,920	1,440	790	620	590
16	850	1,010	6,040	9,660	2,830	3,010	2,740	1,860	1,390	781	620	598
17	841	976	4,780	7,830	2,740	2,830	2,660	1,790	1,330	781	620	598
18	832	958	14,300	7,270	2,580	2,660	2,500	1,790	1,270	790	620	598
19	832	976	14,700	7,560	2,500	2,500	2,350	1,720	1,210	781	620	598
20	886	1,020	14,700	14,100	2,420	2,350	2,280	1,660	1,170	764	612	598
21	1,050	1,080	11,400	14,400	2,350	2,350	2,200	1,660	1,140	756	612	598
22	967	1,050	12,500	20,800	2,280	2,280	2,130	1,600	1,120	756	612	590
23	922	1,000	12,500	28,700	2,200	2,200	2,130	1,540	1,090	790	612	682
24	886	976	11,400	31,000	2,130	2,200	2,200	1,480	1,080	764	612	790
25	868	958	9,760	19,200	2,130	2,130	2,280	1,470	1,060	738	612	722
26	850	958	8,260	13,400	2,060	2,060	2,200	1,470	1,130	730	605	674
27	868	985	7,130	10,500	2,200	2,060	2,060	1,460	1,190	722	598	650
28	1,090	1,070	6,040	8,690	2,420	3,480	2,060	1,440	1,150	714	598	620
29	1,840	1,200	5,400	7,550		6,850	1,990	1,460	1,120	714	605	612
30	2,320	1,210	4,900	6,440		6,580	1,920	1,460	1,040	698	612	605
31	2,250		4,440	5,650		10,900		1,600		690	612	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	2,320	832	1,046	0.515	0.59	64,340
November	2,560	958	1,320	.650	.73	78,540
December	14,700	1,180	6,709	3.30	3.80	412,500
January	31,000	4,100	10,310	5.08	5.86	634,000
February	5,390	2,060	3,187	1.57	1.64	177,000
March	10,900	2,060	4,357	2.15	2.48	267,900
April	14,800	1,920	4,535	2.23	2.49	269,900
May	3,010	1,440	2,014	.992	1.14	123,800
June	2,500	1,040	1,506	.742	.83	89,610
July	1,010	690	811	.400	.46	49,880
August	738	598	636	.313	.36	39,120
September	790	582	614	.302	.34	36,510
The year	31,000	582	3,098	1.53	20.72	2,243,000

Willamette River at Albany, Oreg.

Location.- Staff gage in SW¼ sec. 6, T. 11 S., R. 3 W., at Albany, just below mouth of Calapooya River. Zero of gage is 171.70 feet above mean sea level by general adjustment of 1929.

Drainage area.- 4,840 square miles.

Records available.- November 1878 to April 1882, January 1892 to September 1934; some fragmentary records 1883 to 1888.

Average discharge.- 39 years (1895-1934), 13,740 second-feet.

Extremes.- Maximum discharge recorded during year, 70,200 second-feet Jan. 25 (gage height, 17.2 feet); minimum discharge, 2,210 second-feet Aug. 23-31, Sept. 1-23, 27-30; minimum gage height, 0.28 foot Sept. 5.

1878-82, 1892-1934: Maximum discharge recorded, 229,000 second-feet Jan. 14, 1881 (gage height, 32.8 feet); minimum, about 1,870 second-feet Sept. 21-27, 1879 (gage height, 0.2 foot). Minimum discharge in recent years, 1,890 second-feet Sept. 5, 1931 (gage height, 0.26 foot).

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

Remarks.- Records good. Discharge estimated Oct. 20-29. No regulation. Albany power canal diverts water from South Santiam River into Willamette River above station. Gage-height record furnished by U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,200	6,180	3,740	20,400	18,200	8,070	26,300	6,440	4,680	3,740	2,630	2,210
2	4,200	6,700	3,970	18,600	16,500	8,360	30,700	6,180	4,680	3,510	2,630	2,210
3	3,970	6,440	4,200	18,600	15,100	11,300	34,800	6,440	4,680	3,510	2,630	2,210
4	3,970	6,970	4,440	24,300	14,000	15,100	29,100	6,700	4,920	3,290	2,630	2,210
5	3,970	7,240	4,440	32,700	13,000	14,400	24,300	6,700	4,920	3,290	2,630	2,210
6	3,970	6,700	7,240	28,700	12,300	15,500	21,100	6,970	4,680	3,290	2,630	2,210
7	3,740	6,440	13,300	23,900	11,300	25,100	19,000	8,070	4,680	3,290	2,630	2,210
8	3,740	5,920	30,700	20,400	11,600	23,900	17,500	7,790	4,680	3,070	2,630	2,210
9	3,510	5,410	21,900	17,900	13,000	19,700	15,800	7,790	5,660	3,070	2,630	2,210
10	3,510	4,920	15,800	16,100	14,400	16,500	14,000	7,790	5,410	3,070	2,630	2,210
11	3,290	4,680	12,600	15,800	12,600	14,700	12,600	7,510	5,160	3,070	2,630	2,210
12	3,290	4,440	11,300	16,100	11,600	13,000	11,300	7,240	4,680	3,070	2,630	2,210
13	3,290	4,200	12,300	16,800	10,700	12,000	10,700	6,440	4,440	3,070	2,630	2,210
14	3,070	3,970	14,000	20,800	10,100	11,000	9,840	6,180	4,440	2,850	2,630	2,210
15	3,070	3,970	17,200	32,700	9,540	10,100	8,940	5,920	4,440	2,850	2,630	2,210
16	3,070	3,970	20,400	33,100	9,240	9,540	8,650	5,660	4,440	2,850	2,630	2,210
17	3,070	3,740	18,600	28,300	8,940	8,940	8,360	5,660	4,440	2,850	2,420	2,210
18	3,070	3,740	23,500	25,100	8,650	8,360	8,070	5,410	4,200	2,850	2,420	2,210
19	3,070	3,740	44,200	23,500	8,360	8,070	7,790	5,410	4,200	2,850	2,420	2,210
20	3,300	3,740	53,100	25,100	8,360	7,790	7,240	5,410	3,970	2,850	2,420	2,210
21	3,500	3,740	55,700	33,100	8,070	7,510	6,700	5,160	3,970	2,850	2,420	2,210
22	3,600	3,970	57,300	39,000	8,070	7,240	6,700	5,160	3,740	2,850	2,420	2,210
23	3,500	3,970	63,200	49,200	7,790	6,970	6,700	5,160	3,740	2,850	2,210	2,210
24	3,400	3,740	60,500	57,300	7,510	6,700	6,700	4,920	3,740	2,850	2,210	2,420
25	3,300	3,740	52,600	70,200	7,510	6,700	6,970	4,920	3,740	2,630	2,210	2,630
26	3,300	3,740	43,300	62,100	7,240	6,700	6,970	4,680	3,510	2,630	2,210	2,420
27	3,500	3,510	36,900	42,400	7,240	6,700	6,700	4,680	3,740	2,630	2,210	2,210
28	3,800	3,510	31,900	32,700	7,510	7,510	6,440	4,680	3,970	2,630	2,210	2,210
29	4,500	3,970	29,100	27,100		12,000	6,440	4,680	3,970	2,630	2,210	2,210
30	5,660	3,970	25,900	23,100		18,200	6,180	4,680	3,740	2,630	2,210	2,210
31	6,180		22,700	20,400		17,500		4,680		2,630	2,210	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	6,180	3,070	3,697	0.764	0.88	227,300
November	7,240	3,510	4,689	.971	1.08	279,600
December	63,200	3,740	26,320	5.44	6.27	1,619,000
January	70,200	15,800	29,530	6.10	7.03	1,816,000
February	18,200	7,240	10,660	2.20	2.29	591,900
March	25,100	6,700	11,810	2.44	2.81	726,300
April	34,800	6,180	13,090	2.70	3.01	778,700
May	8,070	4,680	5,971	1.23	1.42	367,200
June	5,660	3,510	4,375	.904	1.01	260,400
July	3,740	2,630	2,971	.614	.71	182,700
August	2,630	2,210	2,467	.510	.59	151,700
September	2,630	2,210	2,238	.462	.52	133,200
The year	70,200	2,210	9,853	27.62	27.62	7,134,000

Willamette River at Salem, Oreg.

Location.- Staff gage in SW¼ sec. 22, T. 7 S., R. 3 W., at highway bridge at Salem. Zero of gage is 113.59 feet above mean sea level by general adjustment of 1929.

Drainage area.- 7,280 square miles.

Records available.- October 1909 to December 1916, October 1927 to September 1934.

Average discharge.- 14 years (1909-16, 1927-34), 21,980 second-feet.

Extremes.- Maximum discharge recorded during year, 175,000 second-feet Dec. 23 (gage height, 20.8 feet); minimum, 2,760 second-feet Sept. 22 (gage height, -3.83 feet). 1909-16, 1927-34: Maximum discharge recorded, 315,000 second-feet Nov. 25, 1909 (gage height, 30.5 feet); minimum discharge, 2,500 second-feet Sept. 5-8, 1931 (gage height, -3.5 feet); minimum gage height, that of Sept. 22, 1934. Maximum known discharge (estimated), 500,000 second-feet Dec. 4, 1861 (gage height. about 39 feet). Flood of Feb. 5, 1890, reached a stage of 37.1 feet.

Remarks.- Records good. A few small irrigation diversions above station; part of flow of Salem Canal diverted from North Santiam River returns to Willamette River below gage. No regulation. Gage-height record furnished by U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,080	20,000	6,950	37,100	27,300	13,100	42,800	10,500	6,820	4,790	3,460	3,010
2	7,510	17,100	7,510	34,000	26,400	13,700	55,700	11,100	6,820	4,570	3,460	2,870
3	6,410	20,700	7,510	36,000	23,100	31,000	55,700	11,100	7,100	4,570	3,460	2,870
4	5,880	23,100	8,660	50,400	22,300	26,200	49,100	11,800	7,380	4,360	3,460	2,870
5	5,880	20,000	9,260	56,700	19,300	26,000	40,400	12,400	7,380	4,360	3,620	2,870
6	5,360	16,400	16,700	50,400	19,300	34,000	36,000	16,400	6,820	4,160	3,460	2,870
7	5,360	13,700	68,100	42,800	18,500	42,800	31,000	17,800	6,820	4,160	3,460	2,870
8	4,870	11,800	73,700	36,000	17,800	41,600	27,300	15,700	7,100	4,160	3,460	2,870
9	4,440	11,100	55,700	31,000	20,000	33,000	25,600	15,700	7,960	4,160	3,310	2,870
10	4,440	9,260	38,200	27,300	20,700	27,300	22,300	15,000	7,960	4,160	3,310	2,870
11	4,050	8,660	31,000	27,300	18,500	23,100	20,700	12,400	7,380	3,970	3,310	2,870
12	4,050	8,080	28,200	28,200	18,500	21,500	19,300	11,800	7,100	3,970	3,160	2,870
13	3,700	6,950	31,000	27,300	17,100	19,300	17,800	11,800	6,550	3,970	3,160	2,870
14	4,050	6,950	32,000	37,100	15,700	18,500	15,700	11,100	6,280	3,970	3,160	2,870
15	3,700	6,950	34,000	53,000	15,700	17,100	15,700	9,870	6,020	3,970	3,160	3,010
16	3,700	6,410	38,200	55,700	15,000	15,700	15,000	9,260	5,760	3,970	3,160	2,870
17	3,700	6,410	37,100	49,100	14,400	15,000	14,400	9,260	5,510	3,780	3,160	2,870
18	3,700	6,410	40,400	46,500	13,700	14,400	13,700	9,260	5,510	3,780	3,160	2,870
19	3,700	5,880	93,000	41,600	12,400	13,700	12,400	9,260	5,260	3,780	3,160	2,870
20	3,700	5,880	112,000	46,500	12,400	12,400	11,800	9,260	5,020	3,780	3,160	2,800
21	4,440	6,410	114,000	57,000	12,400	12,400	11,100	9,260	5,020	3,780	3,160	2,800
22	5,360	6,410	125,000	76,700	11,800	11,800	11,100	8,660	4,790	3,780	3,010	2,760
23	5,360	6,410	165,000	93,000	11,100	11,100	10,500	8,080	4,790	3,780	3,010	2,870
24	4,870	5,880	151,000	121,000	11,100	11,100	11,100	7,510	4,790	3,780	3,010	3,010
25	4,870	5,360	110,000	110,000	11,100	10,500	11,800	7,510	4,790	3,620	3,010	3,460
26	4,870	5,360	91,200	100,000	11,100	10,500	12,400	6,950	4,790	3,620	3,010	3,400
27	5,360	4,870	73,700	75,100	11,100	9,870	11,800	7,510	4,790	3,620	3,010	3,310
28	5,360	5,880	68,100	54,300	12,400	13,700	11,100	6,950	5,260	3,620	3,010	3,160
29	8,660	6,410	57,000	42,800		30,000	11,100	6,950	5,020	3,620	3,010	3,010
30	17,800	6,950	53,000	37,100		38,200	10,500	6,410	5,020	3,620	3,010	3,010
31	19,300		42,800	32,000		37,100		6,410		3,460	3,010	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	19,300	3,700	5,888	0.809	0.93	362,000
November	23,100	4,870	9,723	1.34	1.50	578,500
December	165,000	6,950	58,710	8.06	9.29	3,610,000
January	121,000	27,300	52,000	7.14	8.23	3,197,000
February	27,300	11,100	16,440	2.26	2.35	912,800
March	42,800	9,870	21,220	2.91	3.36	1,304,000
April	55,700	10,500	21,830	3.00	3.35	1,299,000
May	17,800	6,410	10,420	1.43	1.65	640,600
June	7,960	4,790	6,054	.832	.93	360,200
July	4,790	3,460	3,958	.544	.63	243,400
August	3,620	3,010	3,209	.441	.51	197,300
September	3,460	2,760	2,947	.405	.45	175,300
The year	165,000	2,760	17,790	2.44	33.18	12,880,000

Salt Creek near Oakridge, Oreg.

Location.- Water-stage recorder in SW¼ sec. 23, T. 21 S., R. 3 E., 0.7 mile above mouth and 2 miles southeast of Oakridge.

Drainage area.- 113 square miles.

Records available.- July 1913 to September 1914, October 1933 to September 1934.

Extremes.- Maximum discharge during year, 1,280 second-feet Jan. 23 (gage height, 4.75 feet); minimum, 77 second-feet July 17; minimum daily discharge, 82 second-feet Sept. 20, 21.
1913-14, 1933-34: Maximum discharge, that of Jan. 23, 1934; minimum daily discharge, that of Sept. 20, 21, 1934.

Remarks.- Records good except those estimated Oct. 1-9, 14, 15, 21, 22, June 8, and those above 600 second-feet, which are fair. No diversions above station; slight regulation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	130	164	124	246	304	182	510	193	158	120	94	85
2	130	186	129	261	289	275	492	184	178	115	95	85
3	129	204	151	492	275	280	440	195	186	110	102	83
4	127	176	140	475	264	277	416	184	178	110	98	83
5	125	156	136	394	253	388	388	206	172	108	94	83
6	124	145	247	346	246	530	377	209	218	107	92	83
7	123	140	355	310	246	440	374	200	280	106	91	83
8	122	136	246	280	286	388	355	228	270	107	91	85
9	121	134	209	258	264	343	328	228	243	106	91	85
10	121	131	193	253	248	316	304	211	218	106	90	86
11	120	129	184	240	238	295	286	197	202	102	90	86
12	118	128	216	236	230	283	272	189	186	101	91	86
13	118	126	240	261	218	275	261	178	176	101	91	90
14	117	126	233	377	209	269	248	170	168	100	91	87
15	116	124	228	334	204	264	238	162	160	101	90	86
16	115	124	204	295	204	253	228	158	154	101	90	85
17	113	124	233	280	200	240	216	164	149	101	90	85
18	113	123	358	277	195	233	206	162	143	106	90	83
19	113	124	355	328	193	228	195	154	141	104	88	83
20	118	131	355	402	191	223	191	162	136	102	88	82
21	120	128	346	475	186	216	186	151	134	107	87	82
22	120	126	384	745	182	211	191	143	131	107	86	88
23	118	123	426	1,100	182	214	191	140	128	102	87	96
24	118	121	377	848	180	209	200	138	128	101	86	92
25	116	120	352	610	176	204	193	143	126	100	86	88
26	116	123	325	510	178	202	182	145	134	100	86	87
27	121	126	298	458	191	258	182	141	134	98	87	87
28	134	129	272	408	189	492	184	141	138	95	87	86
29	189	124	292	374		530	176	143	129	95	88	85
30	176	124	275	346		475	193	174	123	95	87	85
31	160		253	322		510		156		94	86	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	189	113	126	1.12	1.29	7,740
November	204	120	136	1.20	1.34	8,080
December	426	124	262	2.32	2.68	16,140
January	1,100	236	405	3.58	4.13	24,870
February	304	176	222	1.96	2.04	12,340
March	530	182	307	2.72	3.14	18,850
April	510	176	273	2.42	2.70	16,270
May	228	138	173	1.53	1.76	10,610
June	280	123	167	1.48	1.65	9,960
July	120	94	103	.912	1.05	6,360
August	102	86	90.0	.796	.92	5,530
September	98	82	85.7	.758	.85	5,100
The year	1,100	82	196	1.73	23.55	141,800

Salmon Creek near Oakridge, Oreg.

Location.- Water-stage recorder in SW¼ sec. 7, T. 21 S., R. 4 E., a quarter of a mile above Slide Creek and 4 miles east of Oakridge.

Drainage area.- 116 square miles.

Records available.- October 1933 to September 1934. At station 2 miles downstream below Flat Creek, February 1913 to September 1914. At station 1 mile below present gage, October 1914 to October 1919.

Extremes.- Maximum discharge during year, 1,900 second-feet Jan. 23 (gage height, 4.72 feet); minimum, 111 second-feet Sept. 21, 22 (gage height, 1.16 feet).
1913-19, 1933-34: Maximum discharge (estimated), 6,400 second-feet Jan. 12, 1918; minimum, 98 second-feet Oct. 30, 1915.

Remarks.- Records good except those above 1,000 second-feet and those estimated, Oct. 1, 6-22, 24, 27-30, Aug. 18-28, which are fair. No regulation or diversions above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	145	199	140	313	438	229	722	234	196	170	130	114
2	145	229	149	338	403	492	722	226	220	165	132	116
3	145	282	184	645	375	492	645	246	223	162	140	114
4	140	229	172	645	353	469	595	234	215	160	134	114
5	138	194	167	550	338	805	595	252	209	158	130	114
6	137	182	306	478	320	1,010	595	259	252	158	128	114
7	136	172	478	415	316	805	572	249	235	156	128	114
8	135	162	327	368	356	645	523	268	262	156	126	116
9	135	156	275	334	334	550	474	288	262	153	126	116
10	134	151	246	334	313	482	424	252	243	151	124	114
11	133	149	234	313	299	428	387	243	229	149	124	114
12	133	142	256	316	288	387	356	231	217	147	124	116
13	132	140	278	391	278	360	334	223	209	147	124	118
14	132	138	275	645	268	338	316	215	202	145	122	116
15	132	136	268	550	259	316	299	209	196	142	122	114
16	131	134	237	478	259	302	288	204	192	142	118	113
17	130	134	295	451	249	288	275	206	186	142	120	113
18	129	132	478	451	240	278	265	204	179	142	119	113
19	129	136	500	572	237	265	252	196	177	140	118	113
20	135	147	505	750	231	256	240	199	174	138	117	111
21	140	138	541	955	226	246	234	189	177	142	117	111
22	145	134	670	1,480	220	240	234	186	179	145	116	122
23	142	130	778	1,720	220	234	234	182	177	149	116	142
24	140	128	695	1,340	217	226	246	177	177	136	115	124
25	138	128	670	1,040	212	223	234	182	179	136	115	118
26	134	128	572	860	215	223	220	182	199	134	116	116
27	140	138	505	722	234	271	220	182	192	132	116	114
28	180	145	433	645	237	420	217	192	192	132	117	114
29	260	138	399	572		546	215	182	179	132	118	114
30	230	138	360	523		550	240	202	174	130	116	113
31	209		327	478		722		192		130	116	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	260	129	147	1.27	1.46	9,050
November	282	128	156	1.34	1.50	9,300
December	778	140	378	3.26	3.76	23,250
January	1,720	313	635	5.47	6.31	39,020
February	438	212	283	2.44	2.54	15,740
March	1,010	223	423	3.65	4.21	25,980
April	722	215	372	3.21	3.58	22,160
May	268	177	215	1.85	2.13	13,220
June	285	174	206	1.78	1.99	12,240
July	170	130	146	1.26	1.45	8,970
August	140	115	122	1.05	1.21	7,510
September	142	111	116	1.00	1.12	6,890
The year	1,720	111	267	2.30	31.26	193,300

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Coast Fork of Willamette River at Saginaw, Oreg.

Location.- Chain gage in NW¼ sec. 15, T. 20 S., R. 3 W., at Saginaw, 1 mile below mouth of Row River. Zero of gage is 595.47 feet above mean sea level by general adjustment of 1929.

Drainage area.- 529 square miles.

Records available.- October 1923 to September 1934 (incomplete, 1924-27).

Extremes.- Maximum discharge during year, 12,400 second-feet Jan. 23 (gage height, 8.9 feet, from graph based on gage readings); minimum, 31 second-feet Aug. 24 (gage height, 0.74 foot).
1923-34: Maximum discharge recorded, 28,600 second-feet Feb. 20, 1927 (gage height, 12.9 feet); minimum, 7 second-feet July 31, 1928.

Remarks.- Records fair except those estimated, Dec. 13, 26, 27, Jan. 28, Feb. 5-14, and those for October and July to September, which are poor. No diversions or regulation above station. Gage-height record October to April furnished by U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	364	158	625	1,280	296	3,480	329	217	109	52	34
2	103	285	182	545	1,030	845	3,480	364	255	97	52	34
3	97	285	226	2,150	800	980	2,270	508	255	103	56	34
4	91	470	318	2,650	800	245	2,150	364	265	85	56	37
5	85	245	318	1,700	750	428	1,280	456	275	80	56	37
6	85	217	388	1,280	700	3,340	1,230	625	400	85	56	37
7	80	174	3,930	845	700	1,810	1,080	585	400	80	56	37
8	80	150	1,480	800	1,100	1,180	800	625	400	80	52	37
9	80	143	800	668	1,040	935	710	755	352	80	56	40
10	80	126	625	585	900	800	625	625	318	80	56	40
11	80	122	428	800	800	668	585	625	307	75	52	40
12	75	109	585	845	700	226	508	400	235	70	52	40
13	75	103	800	2,390	620	226	442	388	199	60	52	40
14	75	97	2,270	3,930	550	208	428	340	182	65	52	44
15	75	109	2,270	2,920	508	208	400	318	166	65	52	44
16	75	97	1,590	2,150	470	212	364	285	158	65	52	40
17	75	97	1,180	1,810	470	226	340	275	150	65	52	37
18	75	97	5,700	1,700	442	166	318	275	143	60	48	37
19	75	97	4,550	2,270	400	190	296	265	136	65	48	37
20	75	109	3,780	4,230	364	174	275	255	129	60	48	37
21	85	129	2,780	3,630	340	182	265	235	122	60	44	40
22	91	109	2,780	5,190	352	166	265	275	122	60	44	40
23	85	97	2,390	9,750	376	166	329	226	115	60	40	40
24	85	91	1,810	6,580	364	182	414	217	115	60	32	48
25	85	97	1,380	3,930	340	226	340	208	150	56	40	48
26	91	85	1,200	2,520	307	235	329	208	143	56	40	44
27	91	103	1,000	2,030	352	275	318	226	136	56	40	44
28	109	109	845	1,700	296	625	307	208	136	56	37	40
29	625	143	755	1,380		1,380	307	208	109	52	37	40
30	470	174	625	1,280		980	265	208	103	56	37	40
31	296		625	1,280		3,340		217		56	37	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	625	75	121	0.229	0.26	7,450
November	470	85	154	.291	.32	9,190
December	5,700	158	1,541	2.91	3.36	94,750
January	9,750	545	2,392	4.52	5.21	147,100
February	1,280	296	613	1.16	1.21	34,020
March	3,340	166	681	1.29	1.49	41,890
April	3,480	265	807	1.53	1.71	48,000
May	755	208	358	.677	.78	22,010
June	400	103	206	.389	.43	12,280
July	109	52	69.6	.132	.15	4,280
August	56	32	47.9	.091	.10	2,940
September	48	34	39.6	.075	.08	2,350
The year	9,750	32	589	1.11	15.10	426,300

McKenzie River at McKenzie Bridge, Oreg.

Location.- Water-stage recorder in NE¼ sec. 18, T. 16 S., R. 6 E., 1.7 miles east of McKenzie Bridge. Zero of gage is 1,418.92 feet above mean sea level by general adjustment of 1929.

Drainage area.- 353 square miles (at measuring section three-quarters of a mile above gage).

Records available.- August 1910 to September 1934.

Average discharge.- 15 years (1913-14, 1915-16, 1918-21, 1923-25, 1926-34), 1,646 second-feet.

Extremes.- Maximum discharge during year, 7,350 second-feet Jan. 23 (gage height, 5.01 feet); minimum, 960 second-feet Sept. 28-30 (gage height, 0.95 foot).
1910-34: Maximum discharge, 18,000 second-feet Jan. 6, 1923 (gage height, 8.3 feet, from high-water marks at former gage at highway bridge); minimum, 805 second-feet Oct. 20, 1931.

Remarks.- Records excellent. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,250	1,360	1,120	2,610	2,300	1,470	2,300	1,380	1,230	1,120	1,050	984
2	1,230	1,420	1,130	2,690	2,220	1,860	2,220	1,370	1,230	1,120	1,060	984
3	1,230	1,540	1,150	3,730	2,070	1,740	2,140	1,380	1,230	1,120	1,050	964
4	1,220	1,420	1,140	3,460	2,000	1,740	2,070	1,370	1,230	1,120	1,030	984
5	1,210	1,350	1,210	3,120	1,930	2,220	2,070	1,420	1,210	1,110	1,030	984
6	1,200	1,310	3,060	2,780	1,860	2,690	2,070	1,420	1,220	1,120	1,030	978
7	1,190	1,290	2,530	2,530	1,860	2,370	2,000	1,420	1,230	1,110	1,030	978
8	1,190	1,270	1,800	2,370	1,860	2,140	1,930	1,420	1,230	1,100	1,030	978
9	1,190	1,270	1,680	2,220	1,800	2,000	1,860	1,380	1,220	1,100	1,020	976
10	1,180	1,250	1,620	2,140	1,740	1,860	1,800	1,380	1,310	1,100	1,020	978
11	1,170	1,240	1,620	2,070	1,740	1,800	1,740	1,360	1,210	1,100	1,020	978
12	1,170	1,230	1,740	2,070	1,680	1,740	1,680	1,350	1,200	1,100	1,020	978
13	1,160	1,230	1,740	2,370	1,620	1,680	1,620	1,340	1,190	1,100	1,020	978
14	1,160	1,220	1,740	2,940	1,620	1,680	1,620	1,340	1,190	1,100	1,020	978
15	1,150	1,210	1,680	2,530	1,620	1,620	1,570	1,330	1,190	1,100	1,020	972
16	1,150	1,190	1,570	2,370	1,570	1,570	1,570	1,330	1,190	1,090	1,020	972
17	1,150	1,190	1,930	2,530	1,570	1,570	1,520	1,330	1,180	1,090	1,010	972
18	1,140	1,180	3,120	2,530	1,520	1,520	1,520	1,310	1,180	1,090	1,010	972
19	1,150	1,180	3,730	2,690	1,520	1,520	1,470	1,300	1,170	1,090	1,010	966
20	1,150	1,170	3,820	2,940	1,520	1,470	1,470	1,290	1,160	1,080	1,000	966
21	1,140	1,150	4,540	3,460	1,520	1,470	1,470	1,270	1,160	1,080	1,000	966
22	1,140	1,150	6,160	4,830	1,470	1,420	1,420	1,270	1,150	1,070	1,000	984
23	1,150	1,140	5,400	6,550	1,470	1,420	1,470	1,260	1,150	1,070	1,000	978
24	1,140	1,130	4,640	4,830	1,470	1,420	1,470	1,260	1,150	1,070	1,000	966
25	1,140	1,120	4,270	3,910	1,470	1,380	1,420	1,260	1,150	1,070	1,000	966
26	1,120	1,120	4,360	3,370	1,470	1,380	1,420	1,250	1,150	1,070	1,000	966
27	1,150	1,140	3,820	3,030	1,520	1,520	1,380	1,260	1,140	1,070	1,000	966
28	1,230	1,140	3,460	2,860	1,470	1,930	1,380	1,270	1,130	1,060	997	960
29	1,320	1,120	3,200	2,690		2,140	1,380	1,250	1,130	1,060	997	960
30	1,320	1,120	2,940	2,530		2,140	1,380	1,250	1,120	1,060	997	960
31	1,380		2,780	2,370		2,300		1,230		1,050	990	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,380	1,120	1,189	3.37	3.88	73,130
November	1,520	1,120	1,228	3.48	3.88	73,050
December	6,160	1,120	2,732	7.74	8.92	168,000
January	6,550	2,070	3,004	8.51	9.81	184,700
February	2,300	1,470	1,696	4.80	5.00	94,180
March	2,690	1,380	1,767	5.01	5.78	108,700
April	2,300	1,380	1,691	4.76	5.31	100,000
May	1,420	1,230	1,324	3.75	4.32	81,420
June	1,230	1,120	1,184	3.35	3.74	70,470
July	1,120	1,050	1,090	3.09	3.56	67,020
August	1,060	990	1,016	2.88	3.32	62,440
September	984	960	974	2.76	3.08	57,930
The year	6,550	960	1,576	4.46	60.60	1,141,000

McKenzie River near Vida, Oreg.

Location.- Water-stage recorder in NE¼ sec. 5, T. 17 S., R. 3 E., 1 mile above head of Martin Rapids and 5 miles east of Vida. Zero of gage is 855.56 feet above mean sea level by general adjustment of 1929.

Drainage area.- 930 square miles.

Records available.- September 1924 to September 1934. At Martin Rapids (gage heights only) June 1910 to March 1911.

Average discharge.- 10 years (1924-34), 3,614 second-feet.

Extremes.- Maximum discharge during year, 25,600 second-feet Jan. 23 (gage height, 8.80 feet); minimum, 1,410 second-feet about Sept. 30 (gage height, 0.50 foot). 1924-34: Maximum discharge, 47,200 second-feet Feb. 20, 1927 (gage height, 14.2 feet); minimum, 1,260 second-feet Nov. 7, 1930, Sept. 17, Oct. 4, 8, 9, 1931 (gage height, 0.36 foot).
Flood of Jan. 6, 1923, reached a stage of 17.25 feet (estimated discharge, 60,000 second-feet).

Remarks.- Records good. Discharge estimated Oct. 29-31, Sept. 9-30. No diversions or regulation above station. Gage-height record furnished by Eugene Water Board.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,080	3,020	1,870	5,320	4,620	2,860	7,240	2,780	2,230	1,870	1,600	1,490
2	2,010	3,280	1,870	5,450	4,400	4,960	6,720	2,700	2,300	1,870	1,630	1,490
3	1,940	3,630	2,230	9,170	4,200	4,620	5,820	2,780	2,380	1,800	1,670	1,490
4	1,940	3,190	2,230	8,880	4,000	4,200	5,580	2,700	2,300	1,800	1,630	1,490
5	1,940	2,780	2,380	7,510	3,820	6,460	5,320	3,020	2,230	1,790	1,620	1,490
6	1,870	2,540	8,320	6,460	3,720	8,880	5,200	3,100	2,300	1,770	1,620	1,480
7	1,870	2,360	9,260	5,700	3,630	6,980	4,960	2,940	2,460	1,770	1,600	1,480
8	1,870	2,300	5,320	5,080	4,000	5,700	4,620	3,020	2,460	1,760	1,580	1,480
9	1,870	2,230	4,200	4,620	3,910	4,940	4,200	3,020	2,300	1,760	1,580	1,470
10	1,800	2,160	3,820	4,620	3,630	4,400	3,910	2,860	2,230	1,750	1,580	1,460
11	1,800	2,080	3,630	4,400	3,540	4,000	3,720	2,780	2,230	1,740	1,570	1,460
12	1,800	2,010	4,000	4,620	3,360	3,820	3,540	2,700	2,160	1,740	1,570	1,450
13	1,800	2,010	4,200	5,950	3,280	3,630	3,450	2,620	2,160	1,720	1,550	1,440
14	1,800	2,010	4,400	9,770	3,190	3,450	3,280	2,540	2,080	1,720	1,540	1,440
15	1,800	1,940	4,300	7,240	3,100	3,360	3,190	2,540	2,080	1,720	1,540	1,440
16	1,790	1,940	3,720	6,080	3,100	3,190	3,100	2,460	2,080	1,720	1,540	1,430
17	1,790	1,870	5,570	6,080	3,100	3,100	3,020	2,460	2,010	1,720	1,540	1,430
18	1,770	1,870	13,600	5,950	3,020	3,020	2,940	2,460	2,010	1,710	1,530	1,420
19	1,790	1,870	11,900	6,980	2,940	2,940	2,860	2,380	2,010	1,700	1,530	1,420
20	1,940	2,010	11,900	8,600	2,940	2,660	2,780	2,460	1,940	1,680	1,530	1,410
21	1,800	1,870	12,600	10,400	2,860	2,860	2,780	2.380	1,940	1,700	1,530	1,410
22	1,790	1,870	17,300	14,700	2,780	2,780	2,780	2,300	1,940	1,700	1,530	1,500
23	1,800	1,800	16,200	21,500	2,780	2,700	2,860	2,230	1,940	1,670	1,530	1,650
24	1,790	1,800	12,600	14,300	2,780	2,700	2,860	2,230	1,940	1,670	1,530	1,550
25	1,790	1,800	11,000	10,100	2,700	2,620	2,860	2,230	1,940	1,670	1,530	1,500
26	1,770	1,770	10,400	8,050	2,780	2,620	2,700	2,230	2,010	1,670	1,530	1,470
27	1,870	1,870	9,170	6,980	2,940	2,940	2,700	2,230	2,010	1,660	1,510	1,450
28	2,160	1,940	7,510	6,330	2,940	4,730	2,700	2,230	1,940	1,660	1,510	1,440
29	2,700	1,870	6,720	5,700		6,200	2,620	2,230	1,940	1,630	1,510	1,430
30	2,900	1,800	6,200	5,320		5,700	2,780	2,300	1,870	1,630	1,510	1,420
31	3,000		5,700	4,960		7,510		2,230		1,600	1,500	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	3,000	1,770	1,956	2.10	2.42	120,300
November	3,630	1,770	2,184	2.35	2.62	129,900
December	17,300	1,870	7,262	7.81	9.00	446,500
January	21,500	4,400	7,639	8.21	9.46	469,700
February	4,620	2,700	3,359	3.61	3.76	186,600
March	8,880	2,620	4,217	4.53	5.22	259,300
April	7,240	2,620	3,770	4.05	4.52	224,300
May	3,100	2,230	2,553	2.75	3.17	157,000
June	2,460	1,870	2,114	2.27	2.53	125,800
July	1,870	1,600	1,722	1.85	2.13	105,900
August	1,670	1,500	1,557	1.67	1.92	95,740
September	1,650	1,410	1,466	1.58	1.76	87,230
The year	21,500	1,410	3,326	3.58	48.51	2,408,000

Long Tom River at Monroe, Oreg.

Location.- Staff gage in NE¼ sec. 33, T. 14 S., R. 5 W., at Monroe, a quarter of a mile below mouth of Shafer Creek. Zero of gage is 261.97 feet above mean sea level.

Drainage area.- 391 square miles.

Records available.- November 1920 to September 1934; incomplete prior to 1928.

Average discharge.- 11 years (1921-25, 1927-34), 673 second-feet.

Extremes.- Maximum discharge recorded during year, 7,390 second-feet Dec. 22 (gage height, 13.7 feet); minimum, 12 second-feet Sept. 6, 7, 19-22.
1920-34: Maximum discharge, about 18,600 second-feet Jan. 7, 1923; minimum, 8 second-feet Sept. 5-19, 23, 1924.
Maximum stage known, about 19.5 feet in February 1890.

Remarks.- Records fair. No diversions above station. Some fluctuation at low stages owing to pondage at milldam at Monroe.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	105	70	1,580	985	463	985	166	81	40	23	16
2	38	105	66	1,430	860	535	1,430	166	81	36	23	14
3	37	93	61	1,490	760	710	1,790	174	81	36	22	14
4	36	93	68	1,610	710	785	1,640	174	81	33	20	14
5	34	93	76	1,640	660	760	1,220	166	70	32	20	13
6	33	93	183	1,550	585	735	910	174	68	31	21	12
7	31	81	660	1,370	585	710	735	174	70	31	20	12
8	31	68	685	1,160	610	660	560	182	69	30	20	13
9	30	59	960	1,010	760	585	510	174	68	30	20	13
10	30	51	985	910	810	535	440	159	66	30	19	14
11	31	49	635	910	735	486	375	145	63	30	18	13
12	30	49	535	1,040	610	418	354	131	59	30	18	13
13	25	45	660	1,250	535	396	314	131	57	29	18	13
14	28	43	810	1,670	498	354	294	118	55	28	17	13
15	31	42	1,250	1,920	463	334	256	112	51	28	16	13
16	28	43	1,490	2,120	463	314	256	112	49	27	16	13
17	30	41	1,760	2,040	418	294	238	112	47	27	16	13
18	31	41	2,990	1,850	396	275	221	112	47	27	16	13
19	31	39	4,210	1,760	375	256	205	112	47	27	16	12
20	31	41	6,100	1,920	375	256	197	112	47	27	16	12
21	30	44	6,300	2,520	354	238	189	105	45	25	16	12
22	31	43	7,390	2,800	354	238	174	105	43	24	16	12
23	34	47	6,510	3,280	334	221	174	99	43	23	14	14
24	45	45	5,900	3,740	334	205	189	93	42	23	14	14
25	36	45	4,500	3,960	314	205	221	93	37	23	14	14
26	34	44	3,360	3,540	314	189	205	112	39	22	14	16
27	34	43	2,570	2,680	354	197	197	105	41	22	14	18
28	36	47	2,000	1,960	440	334	174	105	41	22	14	17
29	31	59	2,040	1,640		486	159	93	43	23	14	16
30	67	53	1,880	1,340		710	159	87	43	22	14	16
31	93		1,700	1,160		835		81		22	14	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	93	25	35.7	0.091	0.10	2,190
November	105	39	58.1	.149	.17	3,460
December	7,390	61	2,207	5.64	6.50	135,700
January	3,960	910	1,898	4.85	5.59	116,700
February	985	314	535	1.37	1.43	29,710
March	835	189	443	1.13	1.30	27,210
April	1,790	159	492	1.26	1.41	29,300
May	182	81	129	.330	.38	7,900
June	81	37	55.8	.143	.16	3,320
July	40	22	27.7	.071	.08	1,710
August	23	14	17.2	.044	.05	1,060
September	18	12	13.7	.035	.04	817
The year	7,390	12	496	1.27	17.21	359,100

North Santiam River at Detroit, Oreg.

Location.- Water-stage recorder in NE¼ sec. 12, T. 10 S., R. 5 E., 1 mile east of Detroit. Zero of gage is 1,475.4 feet above mean sea level.

Drainage area.- 226 square miles.

Records available.- January 1907 to October 1909, October 1928 to September 1934. Comparable records at gage above Boulder Creek near Hoover, August 1910 to October 1913.

Extremes.- Maximum discharge during year, 10,500 second-feet Dec. 22 (gage height, 8.48 feet); minimum, 340 second-feet Sept. 20 (gage height, 0.55 foot).
1907-9, 1928-34: Maximum discharge, 15,000 second-feet Mar. 31, 1931 (gage height, about 12.0 feet); minimum, 295 second-feet Oct. 9-12, 14-16, 20, 21, 1931.

Remarks.- Records good. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	540	830	480	1,630	1,340	780	2,130	755	600	492	414	380
2	540	1,020	500	1,670	1,270	1,340	1,830	732	600	488	428	380
3	520	1,170	540	2,640	1,200	1,200	1,670	755	620	476	439	380
4	520	965	540	2,420	1,140	1,170	1,590	732	600	472	414	383
5	500	830	620	2,130	1,080	1,550	1,550	855	580	464	416	380
6	500	755	3,130	1,830	1,050	2,000	550	855	600	468	416	366
7	496	688	2,700	1,630	1,050	1,710	1,520	830	620	460	411	369
8	488	642	1,790	1,480	1,200	1,480	1,410	882	600	456	408	366
9	476	620	1,550	1,340	1,110	1,340	1,300	882	600	456	406	369
10	464	600	1,440	1,380	1,050	1,200	1,170	830	580	456	406	372
11	464	580	1,340	1,270	992	1,110	1,140	805	580	450	404	358
12	460	560	1,480	1,340	965	1,050	1,080	780	560	450	397	362
13	456	540	1,440	1,630	910	992	1,020	732	560	450	394	366
14	456	540	1,340	2,180	910	965	965	732	540	453	397	358
15	450	520	1,240	1,790	882	910	910	710	540	450	400	355
16	456	520	1,080	1,710	855	882	910	710	520	450	400	358
17	460	500	1,340	1,950	855	855	855	710	520	464	400	355
18	456	500	2,750	1,870	830	830	830	688	520	450	390	355
19	488	500	3,240	2,000	805	805	805	665	520	442	386	349
20	520	540	3,500	2,180	805	780	805	665	500	436	390	346
21	464	500	5,300	2,580	780	755	780	642	500	442	390	349
22	476	500	9,800	4,380	755	755	780	620	500	439	386	380
23	500	488	7,090	6,500	755	732	805	620	496	428	386	432
24	472	484	4,700	4,070	732	710	780	620	488	436	386	380
25	472	476	3,780	2,870	710	710	830	620	496	442	390	362
26	460	468	4,220	2,270	732	688	780	600	520	453	390	358
27	500	500	3,370	1,950	830	938	830	600	500	450	394	355
28	642	520	2,580	1,750	805	2,140	805	600	500	446	394	352
29	910	492	2,270	1,590		3,050	780	600	492	436	386	355
30	655	484	1,950	1,480		2,420	780	620	492	422	380	352
31	855		1,750	1,410		2,320		600		414	372	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	910	450	526	2.33	2.69	32,360
November	1,170	468	611	2.70	3.01	36,360
December	9,800	480	2,544	11.3	13.03	156,400
January	6,500	1,270	2,159	9.55	11.01	132,700
February	1,340	710	943	4.17	4.34	52,360
March	3,050	688	1,231	5.45	6.28	75,700
April	2,130	780	1,100	4.87	5.43	65,430
May	882	600	711	3.15	3.63	43,730
June	620	488	545	2.41	2.69	32,420
July	492	414	451	2.00	2.31	27,750
August	439	372	399	1.77	2.04	24,550
September	432	346	366	1.62	1.81	21,780
The year	9,800	346	969	4.29	56.27	701,500

North Santiam River at Mehama, Oreg.

Location.- Water-stage recorder in NW¼ sec. 18, T. 9 S., R. 2 E., at Mehama, half a mile below Little North Santiam River. Zero of gage is 601.78 feet above mean sea level by general adjustment of 1929.

Drainage area.- 665 square miles.

Records available.- July 1905 to March 1907, October 1910 to September 1914, September 1921 to September 1934.

Average discharge.- 17 years (1905-6, 1911-14, 1921-34), 3,299 second-feet.

Extremes.- Maximum discharge during year, 39,200 second-feet Dec. 22 (gage height, 12.70 feet); minimum, 400 second-feet Sept. 29 (gage height, 1.36 feet); minimum daily discharge, 525 second-feet Sept. 6-9, 18, 21.
1905-7, 1910-14, 1921-34: Maximum discharge, 62,900 second-feet Nov. 20, 1921, Jan. 6, 1923 (gage height, 17.5 feet); minimum, that of Sept. 29, 1934; minimum daily discharge, 420 second-feet Sept. 18, 1924.

Remarks.- Records good except those above 10,000 second-feet, which are fair. Slight regulation of low-water by milldam at Mill City. No diversions for irrigation above station. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,560	4,220	1,180	4,320	3,230	1,810	8,080	2,150	1,240	847	623	546
2	1,380	5,970	1,260	4,540	3,050	7,370	6,780	2,080	1,330	820	644	546
3	1,250	6,370	1,810	9,640	2,780	5,340	5,720	2,370	1,380	796	680	546
4	1,200	4,540	1,880	8,690	2,620	4,220	5,460	2,300	1,300	788	672	539
5	1,120	3,420	2,920	7,200	2,450	6,100	5,100	4,010	1,240	772	637	539
6	1,090	2,780	21,500	5,720	2,300	9,320	4,670	3,910	1,220	772	637	525
7	1,040	2,300	14,700	4,760	2,300	6,920	4,540	3,140	1,320	772	630	525
8	1,010	2,080	8,080	4,120	2,870	5,340	4,010	3,050	1,330	772	616	525
9	970	1,880	6,240	3,520	2,780	4,430	3,520	2,780	1,320	764	616	525
10	950	1,680	5,340	3,610	2,530	3,810	3,230	2,530	1,240	756	609	532
11	930	1,560	4,650	3,420	2,300	3,320	2,960	2,300	1,210	740	609	532
12	920	1,500	5,460	3,710	2,150	3,050	2,780	2,150	1,130	718	602	546
13	910	1,440	5,590	5,590	2,080	2,700	2,530	1,940	1,100	718	602	574
14	901	1,380	5,340	9,320	2,150	2,530	2,370	1,880	1,050	718	595	553
15	883	1,310	4,650	6,240	1,940	2,370	2,200	1,810	1,040	718	595	546
16	874	1,280	3,910	5,220	1,880	2,220	2,150	1,680	1,000	726	595	539
17	901	1,250	6,070	6,920	1,810	2,080	2,080	1,680	990	756	595	532
18	874	1,200	16,600	6,100	1,740	2,010	1,940	1,620	960	740	588	525
19	960	1,210	16,600	6,500	1,680	1,880	1,810	1,560	930	702	567	532
20	1,440	1,320	16,200	9,000	1,680	1,810	1,810	1,680	920	695	574	532
21	1,210	1,220	20,100	11,400	1,620	1,740	1,740	1,560	920	702	567	525
22	1,120	1,180	34,100	18,300	1,620	1,680	1,740	1,500	901	718	560	560
23	1,380	1,140	21,400	24,700	1,560	1,680	1,680	1,440	883	695	560	820
24	1,260	1,110	14,200	13,400	1,560	1,620	1,810	1,380	865	688	567	658
25	1,290	1,100	12,200	9,000	1,500	1,620	2,220	1,330	883	680	560	602
26	1,320	1,070	14,200	6,780	1,500	1,620	2,220	1,300	960	680	560	567
27	1,440	1,140	11,000	5,590	1,310	2,150	2,220	1,280	980	680	560	560
28	3,300	1,260	8,080	4,760	1,940	7,490	2,220	1,250	940	672	574	560
29	6,780	1,190	6,640	4,220		11,000	2,150	1,240	883	665	567	560
30	5,340	1,150	5,590	3,810		8,690	2,150	1,280	856	644	553	553
31	4,980		4,870	3,520		8,380		1,280		630	546	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	6,780	874	1,632	2.45	2.82	100,300
November	6,370	1,070	2,006	3.02	3.37	119,500
December	34,100	1,180	9,754	14.7	16.95	599,700
January	24,700	3,420	7,214	10.8	12.45	443,600
February	3,230	1,500	2,122	3.19	3.32	117,900
March	11,000	1,620	4,074	6.13	7.07	250,500
April	8,080	1,740	3,144	4.73	5.28	187,100
May	4,010	1,240	1,983	2.98	3.44	121,900
June	1,380	856	1,077	1.62	1.81	64,110
July	847	630	727	1.09	1.26	44,710
August	680	546	595	.895	1.03	36,610
September	820	525	557	.838	.94	33,170
The year	34,100	525	2,927	4.40	59.74	2,119,000

Breitenbush River above French Creek, near Detroit, Oreg.

Location.- Water-stage recorder in NE¼ sec. 36, T. 9 S., R. 5 E., a tenth of a mile below Canyon Creek, 1⅛ miles above French Creek, and 2 miles east of Detroit. Zero of gage is 1,559.4 feet above mean sea level.

Drainage area.- 108 square miles.

Records available.- June 1932 to September 1934. October 1910 to October 1913, fragmentary record below French Creek, comparable except for inflow from French Creek.

Extremes.- Maximum discharge during year, 8,100 second-feet Dec. 22 (gage height, 9.08 feet); minimum, 93 second-feet Sept. 27 (gage height, 0.42 foot).
1932-34: Maximum discharge, that of Dec. 22, 1933; minimum, that of Sept. 27, 1934.

Remarks.- Records good except those below 700 second-feet, which are fair. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	259	650	196	910	678	369	1,330	366	241	161	124	102
2	239	1,120	216	1,060	625	1,680	1,090	352	241	157	128	100
3	219	1,090	265	2,270	578	1,090	1,000	402	244	155	134	99
4	209	760	259	1,760	550	850	970	390	230	152	130	98
5	199	578	406	1,440	514	1,490	910	578	226	150	126	96
6	192	483	3,570	1,120	490	1,860	880	524	244	148	124	98
7	187	421	2,270	940	502	1,300	820	482	249	148	123	99
8	183	369	1,300	820	600	970	732	486	241	148	122	100
9	179	334	1,120	732	555	790	650	442	230	148	120	99
10	176	307	1,030	732	524	678	578	414	220	146	118	99
11	172	284	940	705	490	578	555	402	218	143	117	99
12	168	265	1,090	760	458	532	555	386	208	142	117	107
13	166	253	1,030	1,120	446	498	524	362	204	142	116	109
14	164	239	910	1,580	430	470	490	355	197	140	116	102
15	162	233	820	1,120	410	446	454	338	195	140	114	100
16	164	225	705	1,000	402	418	442	324	190	140	113	99
17	164	216	1,080	1,260	383	390	410	314	188	142	113	98
18	164	209	2,520	1,120	369	366	390	299	184	138	113	96
19	209	212	3,160	1,330	358	348	386	296	182	135	111	96
20	277	230	2,940	1,660	352	338	398	296	178	135	111	95
21	212	214	3,990	2,170	338	327	394	275	174	143	110	95
22	222	212	7,500	4,230	330	327	402	269	174	143	109	123
23	262	204	4,620	5,270	324	320	402	269	172	137	107	146
24	227	196	2,720	2,620	314	305	358	269	170	132	107	117
25	230	194	2,470	1,700	305	293	406	263	180	130	106	110
26	219	190	3,050	1,300	311	287	386	255	184	129	106	107
27	264	206	2,220	1,060	383	680	478	255	184	129	106	104
28	569	212	1,530	910	366	2,420	426	255	178	128	107	104
29	1,030	204	1,360	820		2,830	394	249	170	126	106	104
30	850	199	1,120	760		1,860	386	255	164	124	104	103
31	760		1,000	705		1,500		244		124	103	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,030	162	281	2.60	3.00	17,250
November	1,120	190	350	3.24	3.62	20,840
December	7,500	196	1,854	17.2	19.83	114,000
January	5,270	705	1,452	13.4	15.45	89,260
February	678	305	442	4.09	4.26	24,570
March	2,830	287	858	7.94	9.15	52,780
April	1,330	358	587	5.44	6.07	34,900
May	578	244	344	3.19	3.68	21,160
June	249	164	202	1.87	2.09	12,020
July	161	124	140	1.30	1.50	8,640
August	134	103	115	1.06	1.22	7,060
September	148	95	104	.963	1.07	6,160
The year	7,500	95	564	5.22	70.94	408,600

Little North Santiam River near Mehama, Oreg.

Location.- Staff and wire-weight gages in NW¼ sec. 16, T. 9 S., R. 2 E., 2 miles east of Mehama and mouth of river. Zero of gage is 655.41 feet above mean sea level by general adjustment of 1929.

Drainage area.- 110 square miles.

Records available.- October 1931 to September 1934. Comparable records at station 4 miles upstream July to September 1924, July to September 1931.

Extremes.- Maximum discharge during year, 18,900 second-feet Dec. 22 (gage height, 14.7 feet, from flood marks); minimum recorded, 21 second-feet Sept. 11 (gage height, 2.08 feet).

1924, 1931-34: Maximum discharge, that of Dec. 22, 1933; minimum, that of Sept. 11, 1934.

Remarks.- Records good except those below 30 second-feet, which are fair. Discharge estimated May 25, 26. No regulation or diversions above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	455	1,210	210	950	580	212	1,920	445	156	83	36	24
2	350	2,890	235	1,010	512	4,940	1,440	405	199	72	37	22
3	280	2,620	432	3,560	468	1,620	1,210	630	199	70	56	22
4	250	1,710	575	2,270	445	1,140	1,140	535	176	66	55	22
5	222	1,140	890	1,810	385	2,270	1,140	1,810	166	63	45	23
6	198	770	7,570	1,440	345	2,940	1,010	1,210	156	61	38	24
7	172	628	4,300	1,070	325	1,710	840	895	156	59	38	25
8	160	525	2,130	895	535	1,280	680	785	176	61	35	24
9	150	432	1,620	730	535	950	580	630	166	61	34	25
10	140	370	1,370	785	490	785	490	558	156	59	34	25
11	131	330	1,210	785	406	630	405	468	138	55	34	21
12	122	295	1,450	895	345	558	385	405	138	51	34	28
13	114	265	1,530	1,710	308	490	325	365	130	49	32	32
14	108	235	1,450	2,660	290	425	290	308	122	45	32	39
15	107	222	1,210	1,440	272	385	255	290	115	41	30	29
16	105	210	1,010	1,210	255	345	272	255	108	51	30	28
17	108	210	1,710	2,400	680	308	255	240	102	52	30	27
18	99	198	6,360	1,530	405	272	212	225	102	61	31	25
19	122	185	4,830	1,810	212	240	199	188	95	50	30	25
20	478	235	4,130	2,940	199	225	188	255	89	47	29	24
21	250	198	7,160	5,120	199	212	188	240	89	49	28	24
22	222	185	12,400	7,190	188	199	176	212	89	54	28	36
23	410	172	5,670	7,590	176	188	199	188	83	51	27	147
24	312	160	3,400	2,940	176	188	199	166	83	45	27	66
25	390	160	3,400	1,710	166	176	425	163	83	43	26	45
26	222	150	5,480	1,280	166	156	365	159	108	41	26	38
27	390	172	2,940	1,140	199	255	345	156	115	41	26	35
28	1,370	210	2,030	950	240	2,270	385	147	102	41	28	34
29	2,620	210	1,440	840		2,400	365	147	89	40	27	33
30	2,250	198	1,210	730		1,810	405	156	83	39	26	32
31	2,490		1,010	630		1,810		156		37	25	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	2,620	99	477	4.34	5.00	29,350
November	2,890	150	550	5.00	5.58	32,720
December	12,400	210	2,915	26.5	30.55	179,200
January	7,590	630	2,001	18.2	20.98	123,000
February	680	166	339	3.08	3.21	18,840
March	4,940	156	1,013	9.21	10.62	62,260
April	1,920	176	543	4.94	5.51	32,310
May	1,810	147	413	3.75	4.32	25,370
June	199	83	126	1.15	1.28	7,480
July	83	37	52.8	.480	.55	3,250
August	56	25	32.7	.297	.34	2,010
September	147	21	33.5	.305	.34	1,990
The year	12,400	21	715	6.50	88.28	517,800

South Santiam River at Waterloo, Oreg.

Location.- Staff gage in NW¼ sec. 28, T. 12 S., R. 1 W., 200 yards below highway bridge at Waterloo and 4 miles above Hamilton Creek. Zero of gage is 370.2 feet above mean sea level.

Drainage area.- 640 square miles.

Records available.- July 1905 to March 1907, October 1910 to December 1911, July 1923 to September 1934.

Average discharge.- 12 years (1905-6, 1923-34), 2,739 second-feet.

Extremes.- Maximum discharge recorded during year, 24,600 second-feet Dec. 22 (gage height, 11.8 feet); minimum, 126 second-feet Sept. 9-11, 18-21 (gage height, 2.05 feet).

1905-7, 1910-11, 1923-34: Maximum discharge recorded, 70,000 second-feet Mar. 31, 1931 (gage height, 22.0 feet); minimum, 100 second-feet several days in September, October, November 1925.

Remarks.- Records fair. Discharge estimated Oct. 21, Jan. 13-15, May 7, Aug. 6-18, Sept. 12-17, 22, 23. No diversions or regulation above station. Gage-height record October to April furnished by U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	890	3,380	680	3,970	2,660	1,240	9,200	1,360	680	420	187	141
2	730	4,830	780	5,060	2,340	8,900	7,780	1,180	760	345	178	141
3	585	3,380	690	7,250	2,040	5,060	5,520	1,620	760	345	167	141
4	565	3,770	1,490	8,610	2,040	5,060	5,290	2,040	780	345	215	141
5	420	2,340	2,040	6,490	1,900	5,290	4,830	3,380	680	345	224	141
6	382	2,040	12,800	4,830	1,760	10,400	4,180	3,190	660	345	205	141
7	382	1,760	13,500	4,390	1,620	6,490	3,770	2,000	660	345	190	141
8	362	1,490	7,510	3,770	2,190	5,060	3,380	1,760	780	345	180	141
9	382	1,240	5,290	3,380	2,190	3,770	2,830	1,760	780	345	175	126
10	345	1,120	3,970	3,010	2,040	3,190	2,500	1,620	780	345	170	126
11	345	1,000	3,380	2,830	1,760	2,660	2,190	1,490	780	280	167	126
12	332	890	4,390	3,190	1,620	2,340	1,900	1,490	680	280	163	130
13	312	780	4,830	6,000	1,360	2,040	1,760	1,490	680	224	160	170
14	280	780	5,060	11,000	1,360	1,900	1,620	1,240	585	224	158	150
15	312	680	5,290	6,200	1,360	1,760	1,490	1,240	585	224	155	140
16	312	680	3,970	3,570	1,360	1,560	1,360	1,240	500	280	153	135
17	280	680	4,610	4,180	1,240	1,490	1,240	1,120	500	280	150	130
18	280	585	17,500	6,000	1,240	1,360	1,240	1,120	500	293	150	126
19	280	585	16,800	5,760	1,120	1,240	1,120	1,000	500	280	148	126
20	345	585	15,100	9,500	1,120	1,240	1,120	1,000	500	252	160	126
21	550	680	15,100	8,610	1,000	1,120	1,000	1,000	420	224	141	126
22	345	585	22,300	17,100	1,000	1,120	1,000	890	420	252	141	170
23	345	585	17,800	20,900	1,000	1,000	1,120	890	420	235	141	300
24	420	542	14,200	14,800	1,000	1,000	1,240	780	420	235	141	224
25	500	500	11,600	9,200	890	1,000	1,240	780	420	224	141	201
26	500	500	12,500	5,520	890	890	1,240	780	500	224	141	178
27	500	500	10,700	4,390	1,120	945	1,120	780	500	224	141	160
28	1,240	780	8,330	3,570	1,490	3,970	1,120	780	500	224	141	141
29	2,190	780	6,490	3,380		8,330	1,120	780	420	201	141	141
30	3,770	730	5,290	3,010		6,000	1,240	680	420	215	141	141
31	3,380		4,180	2,830		9,800		680		178	141	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	3,770	280	706	1.10	1.27	43,440
November	4,830	500	1,293	2.02	2.25	76,910
December	22,300	680	8,335	13.0	14.99	512,500
January	20,900	2,830	6,526	10.2	11.76	401,300
February	2,660	890	1,525	2.38	2.48	84,710
March	10,400	890	3,459	5.40	6.23	212,700
April	9,200	1,000	2,525	3.95	4.41	150,300
May	3,380	680	1,328	2.08	2.40	81,640
June	780	420	588	.919	1.03	35,010
July	420	178	277	.433	.50	17,010
August	224	141	162	.253	.29	9,970
September	300	126	151	.236	.26	8,970
The year	22,300	126	2,257	3.53	47.87	1,634,000

Middle Santiam River near Foster, Oreg.

Location.- Water-stage recorder in SE¼ sec. 2, T. 13 S., R. 2 E., half a mile above mouth of Green Peter Creek and 8 miles northeast of Foster. Zero of gage is 733.44 feet above mean sea level.

Drainage area.- 271 square miles.

Records available.- August 1931 to September 1934.

Extremes.- Maximum discharge during year, 26,100 second-feet Dec. 22 (gage height, 16.7 feet); minimum, 64 second-feet Sept. 21 (gage height, 1.33 feet).
1931-34: Maximum discharge, 29,500 second-feet Mar. 18, 1932 (gage height, 17.84 feet); minimum, 62 second-feet Oct. 9, 1932.

Remarks.- Records excellent except those estimated, July 14-23, which are fair. No regulation or diversions above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	486	2,300	356	2,120	1,340	645	4,340	622	341	185	104	71
2	387	3,140	412	2,350	1,200	4,910	3,380	596	380	177	105	70
3	338	3,260	835	5,120	1,090	2,810	2,700	745	377	169	130	69
4	296	2,260	805	4,490	1,000	2,210	2,500	670	350	164	126	68
5	270	1,610	2,120	3,510	940	3,700	2,350	1,570	324	164	113	66
6	250	1,230	15,100	2,810	882	5,280	2,160	1,530	332	158	107	66
7	232	988	7,610	2,260	882	3,510	1,940	1,090	386	158	104	69
8	223	805	4,020	1,940	1,160	2,600	1,650	1,030	380	162	100	71
9	208	695	2,920	1,690	1,120	2,030	1,410	940	365	162	97	70
10	200	620	2,450	1,690	970	1,650	1,230	828	341	156	93	70
11	190	562	2,210	1,610	882	1,370	1,090	720	318	151	90	69
12	184	506	2,600	2,030	828	1,200	970	645	298	146	90	74
13	178	458	2,700	3,700	772	1,060	882	600	285	141	92	97
14	174	426	2,700	6,670	720	970	828	551	272	126	90	87
15	169	408	2,500	3,770	670	882	772	515	262	115	89	77
16	167	384	1,940	2,920	645	826	745	491	252	135	89	74
17	171	362	5,200	3,510	622	746	670	499	245	150	87	71
18	165	341	12,600	3,140	600	695	622	461	235	160	85	69
19	186	362	10,900	3,640	573	645	591	472	226	140	84	66
20	341	422	9,850	5,120	560	622	560	507	217	130	84	65
21	245	356	14,400	9,660	531	582	539	440	215	140	82	64
22	219	329	19,700	13,100	515	555	511	411	210	150	80	97
23	247	316	11,700	15,000	531	527	543	392	204	130	78	238
24	236	296	7,780	7,590	495	495	539	371	204	123	76	136
25	263	290	6,670	4,640	468	475	622	368	202	118	76	101
26	286	273	7,400	3,260	491	461	691	353	245	117	74	89
27	412	317	5,620	2,600	670	855	543	335	252	116	74	83
28	1,360	380	3,910	2,210	695	4,180	527	344	222	114	74	80
29	2,700	341	3,030	1,900		5,120	519	327	204	111	76	77
30	2,400	329	2,600	1,690		3,910	600	356	193	109	73	74
31	2,810		2,260	1,490		4,490		335		106	71	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	2,810	165	516	1.90	2.19	31,720
November	3,260	273	812	3.00	3.35	48,330
December	19,700	356	5,642	20.8	23.98	346,900
January	15,000	1,490	4,104	15.1	17.41	252,400
February	1,340	468	780	2.88	3.00	43,340
March	5,280	461	1,936	7.14	8.23	119,000
April	4,340	511	1,231	4.54	5.07	73,240
May	1,570	327	617	2.28	2.63	37,910
June	386	193	278	1.03	1.15	16,540
July	185	106	141	.520	.60	8,690
August	130	71	90.1	.332	.38	5,540
September	236	64	82.6	.305	.34	4,920
The year	19,700	64	1,365	5.04	68.33	988,500

Albany power canal near Lebanon, Oreg.

Location.- Staff gage in SW¼ sec. 2, T. 12 S., R. 2 W., an eighth of a mile below spillway and 1 mile north of Lebanon.

Records available.- April 1926 to September 1934. February to December 1919 at station near Albany.

Extremes.- Maximum discharge recorded during year, 290 second-feet frequently during year (gage height, 3.35 feet); no flow part of each day Feb. 20, 21, May 23. 1919, 1926-34: Maximum discharge recorded, 302 second-feet Jan. 10, 1932 (gage height, 3.52 feet); no flow at times.

Remarks.- Records good. Discharge estimated June 1 to July 7 from output of hydroelectric plant at Albany; for other periods gage read about three times a week, and 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. Gage-height record and electric output record furnished by Mountain States Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		13	256	278						163	139	
2	278				278		290	290				
3		25		278		290				173	139	98
4	278		267				290	290				
5				290	290	290				160		93
6	290	25	256				278				139	
7	172				290	290		290		184		98
8		120	267	278							129	
9	55				290	290	290	290		179		
10		267		290							129	93
11	85	276	276				290	290		179		
12				290	290	290						93
13	25	267	290				278			179	120	
14					278			278				89
15		256	290			290					120	
16	25			278	290		278	278		169		
17		245				290					111	85
18	25		278	278			278	267		169		
19					290	278				159		85
20	25	245	290	290	208		278				102	
21					162	278		267				85
22		245	290	256							98	
23	25					278	278	145				
24		234		267						159	98	179
25	25						278	267		159		
26			278	267	278	278						159
27	25	245					290			159	96	
28			290		278	156		267				139
29		245		290							98	
30	25		290			278	290	267		149		
31				278							96	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			97.0	5,960
November			194	11,540
December			278	17,090
January			279	17,160
February			268	14,880
March			275	16,910
April			284	16,900
May			268	16,480
June			216	12,850
July			167	10,270
August			116	7,130
September			108	6,430
The year			212	153,600

Luckiamute River near Hoskins, Oreg.

Location.- Water-stage recorder in NE¼ sec. 11, T. 10 S., R. 7 W., a quarter of a mile below Benton County line and 3½ miles northwest of Hoskins. Zero of gage is 378.7 feet above mean sea level by river profile survey.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 55 second-feet May 19 (gage height, 1.40 feet); minimum, 7 second-feet Sept. 2-5, 10, 21, 22.

Remarks.- Records excellent. Discharge estimated May 20, 27, 30. No regulation or diversions above station.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									35	17	11	8
2									34	16	12	7
3									31	16	13	7
4									30	16	12	7
5									30	16	12	8
6									29	15	12	8
7									29	16	11	8
8									29	17	11	8
9									28	16	10	e
10									27	15	10	8
11									26	14	10	8
12									25	14	10	14
13									24	13	10	14
14									24	13	10	10
15									23	14	9	9
16									23	18	9	8
17									22	19	9	e
18									22	15	9	8
19								55	22	13	9	e
20								52	21	13	9	e
21								48	21	13	9	e
22								45	23	13	9	9
23								46	20	12	8	12
24								46	19	12	8	9
25								47	19	12	8	9
26								48	19	13	9	8
27								46	22	13	8	8
28								44	22	13	8	8
29								42	19	12	8	8
30								39	18	12	e	8
31								36		11	e	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October						
November						
December						
January						
February						
March						
April						
May 19-31	55	36	45.7	1.34	0.65	1,180
June	35	18	24.5	.721	.80	1,460
July	19	11	14.3	.421	.49	877
August	13	8	9.65	.284	.33	593
September	14	7	8.63	.254	.28	514
The period						4,620

South Yamhill River near Willamina, Oreg.

Location.- Water-stage recorder in sec. 14, T. 6 S., R. 7 W., a third of a mile above Wallace Bridge, 2 miles above Willamina Creek, and 2 miles southwest of Willamina. Zero of gage is 235.01 feet above mean sea level by general adjustment of 1929.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 185 second-feet Apr. 20 (gage height, 1.51 feet); minimum, 10 second-feet Sept. 2 (gage height, 0.58 foot).

Remarks.- Records good except those estimated, May 1-13, 20, 26, 27, 30, June 3, July 20-25, and those below 25 second-feet, which are fair. No regulation or diversions above gage.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									69	29	18	12
2									75	27	18	11
3									70	26	21	12
4									64	26	21	12
5									60	26	19	12
6									55	26	18	12
7								220	59	26	19	12
8									62	27	18	14
9									59	27	17	14
10									55	26	16	15
11									50	25	15	14
12									48	21	15	19
13									46	22	16	38
14								148	46	22	16	24
15								139	44	22	14	19
16								125	43	25	15	17
17								117	42	40	14	16
18								111	40	27	15	14
19								117	38	24	15	14
20							185	112	39	24	14	13
21								106	36	23	14	14
22								95	38	23	13	17
23								91	38	23	12	26
24								86	35	23	12	23
25								86	34	22	11	18
26								81	34	22	12	17
27								76	36	22	12	17
28								71	38	21	12	17
29								68	35	21	12	17
30								74	32	19	12	17
31								80		18	12	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October						
November						
December						
January						
February						
March						
April						
May		68	150	1.10	1.27	9,210
June	75	32	47.3	.348	.39	2,820
July	40	18	24.4	.179	.21	1,500
August	21	11	15.1	.111	.13	928
September	38	11	16.6	.122	.14	986
The period						15,440

Willamina Creek near Willamina, Oreg.

Location.- Water-stage recorder in N½ sec. 13, T. 5 S., R. 7 W., 4 miles north of Willamina. Zero of gage is 316.1 feet above mean sea level by river profile survey.

Records available.- June to September 1934.

Extremes.- Maximum discharge during period, 45 second-feet June 2 (gage height, 0.90 foot); minimum, 9 second-feet Sept. 3, 4 (gage height, 0.14 foot).

Remarks.- Records good except those estimated, June, 1, 3, 6, 7, 10, 15, 17, 19, 20 and those for September, which are fair. No diversions or regulation above station.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									45	22	14	10
2									45	21	16	10
3									44	21	17	9
4									42	21	16	9
5									40	20	15	10
6									41	20	15	11
7									43	21	14	12
8									44	23	14	12
9									44	21	13	12
10									42	20	13	11
11									39	19	12	12
12									31	18	13	18
13									31	17	13	22
14									30	17	12	15
15									30	17	12	12
16									31	19	12	11
17									30	19	12	11
18									29	17	13	11
19									29	16	12	11
20									28	16	11	11
21									28	17	11	10
22									30	17	11	13
23									28	16	10	19
24									27	16	10	15
25									26	16	10	14
26									34	17	10	13
27									32	17	11	13
28									31	17	11	13
29									28	16	12	13
30									25	15	12	12
31										14	11	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October						
November						
December						
January						
February						
March						
April						
May						
June	45	25	34.2	0.534	0.60	2,040
July	23	14	18.2	.284	.33	1,120
August	17	10	12.5	.195	.22	770
September	22	9	12.5	.195	.22	744
The period						4,670

Haskins Creek above Idlewild Creek, near McMinnville, Oreg.

Location.- Water-stage recorder in SW¼ sec. 2, T. 3 S., R. 6 W., 2 miles above Idlewild Creek and 13 miles northwest of McMinnville.

Records available.- October 1933 to September 1934.

Extremes.- Maximum discharge during year, about 315 second-feet Dec. 21 (gage height, 3.41 feet); minimum, 0.7 second-foot Sept. 2, 3.

Remarks.- Records good Oct. 1-18, Aug. 10 to Sept. 30; others poor. Discharge estimated Nov. 2 to Dec. 11, Feb. 2-6, May 6-23, May 25 to Aug. 7, and Aug. 9. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	13		21	13	20	16	5.5				0.8
2	1.8			22	12	28	15	6.2				.7
3	1.7			36	12	17	15	6.0				.7
4	1.6			32	12	15	14	7.5				.8
5	1.6			24	11	16	13	8.4			0.9	.9
6	1.4		43	19	11	19	13					.8
7	1.3			17	12	17	12					.8
8	1.3			15	13	15	11				.9	.8
9	1.3			14	13	14	11				.9	.8
10	1.2			14	12	14	10				.8	.9
11	1.3			14	12	13	9.8				1.0	1.0
12	1.3		88	15	11	12	9.3				1.0	1.9
13	1.3		70	24	11	12	8.9				1.0	1.5
14	1.3		57	26	11	11	8.4				1.0	1.1
15	1.2		48	20	10	11	8.0	4.5	1.7	1.1	1.0	1.0
16	1.7	8.0	39	21	10	10	7.7				1.0	1.0
17	1.6		57	21	9.8	9.8	7.5				1.0	.9
18	1.5		140	19	9.1	9.3	7.0				.9	.9
19	6.4		165	30	8.9	8.9	6.8				.9	.9
20	3.8		176	52	8.9	8.6	6.2				.8	.9
21	2.0		240	101	8.6	8.2	6.0				.8	.9
22	6.4		240	105	8.4	8.0	6.2				.8	2.1
23	12		144	111	8.0	7.7	7.0				.8	1.8
24	7.2		94	70	8.0	7.2	6.2	3.0			.8	1.2
25	7.5		70	42	7.7	7.0	6.2				.8	1.1
26	5.3		73	27	7.7	7.0	5.8				.8	1.1
27	4.9		56	20	10	11	5.5				.8	1.1
28	19		45	17	8.9	14	5.5	2.8			.9	1.1
29	24		48	15		14	5.5				.9	1.1
30	18		39	14		14	6.0				.9	1.0
31	12		27	14		14					.8	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	24	1.2	5.01	2.18	2.51	308
November			8.17	3.55	3.96	486
December	240		77.1	33.5	38.62	4,740
January	111	14	32.0	13.9	16.03	1,970
February	13	7.7	10.4	4.52	4.71	575
March	28	7.0	12.7	5.52	6.36	779
April	16	5.5	8.98	3.90	4.35	535
May			4.43	1.93	2.22	272
June			1.7	.739	.82	101
July			1.1	.478	.55	68
August			.89	.387	.45	55
September	2.1	.7	1.05	.457	.51	62
The year	240	.7	13.7	5.96	81.09	9,950

Haskins Creek near McMinnville, Oreg.

Location.- Water-stage recorder in NE¼ sec. 13, T. 3 S., R. 6 W., 300 feet above flow line of McMinnville water-supply reservoir and 11 miles northwest of McMinnville.

Drainage area.- 5.7 square miles.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge during year, 486 second-feet Dec. 22 (gage height, 3.75 feet); minimum, 1.2 second-feet Sept. 18-21 (gage height, 0.59 foot).
1928-34: Maximum discharge, 610 second-feet Mar. 31, 1931 (gage height, 4.00 feet); minimum, 1.0 second-foot Oct. 8, 1932 (gage height, 0.55 foot).

Remarks.- Records fair. Discharge estimated July 14, 15, Aug. 14. No diversions or regulation above station. Gage-height record furnished by city of McMinnville.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	23	5.8	88	38	50	50	11	4.8	3.0	1.8	1.5
2	3.5	62	12	83	36	88	47	11	4.8	2.9	2.2	1.4
3	3.2	69	12	103	34	55	41	11	4.8	2.9	2.1	1.4
4	3.0	45	12	91	32	46	36	12	4.5	2.7	2.1	1.4
5	2.9	32	88	77	30	53	32	14	4.5	2.7	1.8	1.5
6	2.7	25	258	65	28	60	28	13	4.3	2.7	2.0	1.6
7	2.6	21	140	62	30	51	27	12	4.3	2.7	2.0	1.4
8	2.7	18	87	61	36	44	24	11	4.5	2.7	2.0	1.5
9	2.7	16	80	60	32	38	23	11	4.3	2.6	1.8	1.5
10	2.7	14	77	53	29	34	21	9.7	4.0	2.6	1.8	1.5
11	2.7	13	94	46	27	29	20	9.2	3.8	2.7	1.8	1.5
12	2.6	11	138	58	25	26	19	8.8	3.7	2.4	1.8	2.6
13	2.7	11	114	88	24	24	18	8.4	3.7	2.4	1.8	2.2
14	2.6	9.7	99	96	23	22	17	7.9	3.7	2.4	1.8	1.5
15	2.4	9.0	85	77	22	20	16	7.9	3.7	2.5	1.8	1.4
16	3.0	8.7	68	86	21	20	16	7.5	3.7	2.9	1.8	1.3
17	3.0	8.3	106	83	20	20	14	7.5	3.7	2.6	1.8	1.3
18	2.9	8.3	258	72	20	19	14	7.0	3.5	2.3	1.7	1.3
19	9.2	9.0	323	113	19	18	12	8.4	3.7	2.2	1.7	1.3
20	7.0	8.7	331	137	19	18	12	7.9	3.5	2.3	1.7	1.3
21	4.7	8.3	381	189	18	17	12	7.0	3.5	2.4	1.6	1.4
22	12	8.0	372	191	18	17	12	6.6	3.8	2.3	1.5	3.0
23	16	7.7	224	185	18	17	14	6.6	3.7	2.2	1.5	3.0
24	11	7.7	162	148	16	16	12	6.3	3.5	2.2	1.5	2.2
25	12	7.3	144	117	16	15	12	7.0	3.4	2.3	1.6	2.0
26	9.7	7.0	140	96	16	15	11	6.6	3.7	2.3	1.6	1.8
27	9.7	7.0	120	78	24	27	11	6.8	3.7	2.2	1.6	1.8
28	28	7.0	113	65	20	47	10	5.6	3.8	2.2	1.6	1.7
29	35	6.3	124	56		42	10	5.0	3.4	2.1	1.6	1.8
30	28	6.1	110	48		37	12	6.6	3.2	2.0	1.6	1.8
31	22		94	42		36		5.0		2.0	1.5	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	35	2.4	8.26	1.45	1.67	508
November	69	6.1	16.5	2.89	3.22	980
December	381	5.8	141	24.7	28.48	8,670
January	191	42	90.8	15.9	18.33	5,580
February	38	16	24.7	4.33	4.51	1,370
March	88	15	32.9	5.77	6.65	2,030
April	50	10	20.1	3.53	3.94	1,190
May	14	5.0	8.49	1.49	1.72	522
June	4.8	3.2	3.91	.686	.77	232
July	3.0	2.0	2.46	.432	.50	152
August	2.2	1.5	1.76	.309	.36	108
September	3.0	1.3	1.70	.298	.33	101
The year	381	1.3	29.6	5.19	70.48	21,440

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Molalla River near Canby, Oreg.

Location.- Water-stage recorder in NE¼ sec. 9, T. 4 S., R. 1 E., at bridge 1½ miles south of Canby. Zero of gage is 104.56 feet above mean sea level by general adjustment of 1929. Prior to Oct. 24, 1933, staff gage at same location and datum.

Drainage area.- 323 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge during year, 15,000 second-feet Dec. 22 (gage height, 11.74 feet); minimum, 40 second-feet Aug. 26, Sept. 2, 3, 5-7 (gage height, 1.44 feet).

1928-34: Maximum discharge, 22,300 second-feet Mar. 31, 1931 (gage height, 14.7 feet); minimum, 40 second-feet Oct. 6, 7, 10, 1932, Aug. 26, Sept. 2, 3, 5-7, 1934.

Remarks.- Records good. Discharge estimated Oct. 22, 23. A few small irrigation diversions above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	301	1,860	306	1,910	1,130	447	2,960	695	292	144	76	53
2	256	2,300	315	1,860	1,010	1,800	2,830	650	353	144	90	51
3	238	3,400	500	3,490	930	1,810	2,230	740	360	139	106	48
4	220	2,420	562	3,630	858	1,430	1,910	732	340	126	122	56
5	203	1,660	628	2,830	794	1,610	1,710	1,700	304	134	102	53
6	177	1,290	9,630	2,230	748	3,090	1,520	2,120	286	126	96	53
7	153	990	8,440	1,860	725	2,520	1,340	1,610	286	122	90	48
8	145	800	4,790	1,560	858	1,960	1,170	1,380	334	114	83	59
9	145	695	3,350	1,380	842	1,560	1,010	1,170	346	122	76	51
10	145	595	2,700	1,340	762	1,300	898	1,010	316	122	73	63
11	137	530	2,180	1,300	710	1,130	818	882	286	106	70	66
12	134	470	2,340	1,450	688	994	748	786	269	106	63	80
13	130	415	2,460	2,230	635	874	680	695	242	106	76	76
14	130	388	2,520	3,630	605	786	612	628	220	102	70	66
15	123	360	2,460	2,640	575	710	568	560	210	90	66	70
16	126	345	2,060	2,180	545	672	545	517	205	106	66	63
17	130	330	2,370	4,050	517	612	524	524	195	110	66	66
18	130	315	7,430	3,490	482	560	475	496	185	130	66	63
19	130	310	7,960	3,090	475	538	447	454	175	98	59	59
20	169	388	8,320	3,910	468	489	405	552	166	94	73	53
21	177	340	8,500	3,910	440	468	398	475	166	90	70	53
22	191	315	13,100	4,790	419	440	379	419	162	90	63	63
23	206	306	9,970	6,750	405	412	405	392	162	94	59	98
24	220	292	6,750	5,260	392	398	366	360	152	90	63	148
25	198	292	5,740	3,630	379	372	620	346	157	83	56	110
26	247	270	7,780	2,700	372	360	702	340	162	80	48	83
27	242	278	6,240	2,180	433	426	612	328	236	90	59	83
28	763	315	4,190	1,860	510	1,840	628	298	190	90	56	70
29	2,680	310	3,350	1,610		2,960	820	280	180	90	59	66
30	2,300	288	2,640	1,380		2,340	680	280	162	94	63	66
31	2,180		2,230	1,250		2,640		292		83	56	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	2,680	123	411	1.27	1.46	25,240
November	3,400	270	762	2.36	2.63	45,360
December	13,100	306	4,575	14.2	16.37	281,300
January	6,750	1,250	2,754	8.53	9.83	169,300
February	1,130	372	632	1.96	2.04	35,120
March	3,090	360	1,211	3.75	4.32	74,490
April	2,960	366	960	2.97	3.31	57,140
May	2,120	280	700	2.17	2.50	43,060
June	360	152	237	.734	.82	14,080
July	144	80	107	.331	.38	6,560
August	122	48	72.4	.224	.26	4,450
September	148	48	67.9	.210	.23	4,040
The year	13,100	48	1,050	3.25	44.15	760,100

Pudding River at Aurora, Oreg.

Location.- Staff gage in SE¼ sec. 12, T. 4 S., R. 1 W., at highway bridge at Aurora, half a mile above mouth of Mill Creek. Zero of gage is 76.79 feet above mean sea level by general adjustment of 1929.

Drainage area.- 493 square miles.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 10,200 second-feet Dec. 23 (gage height, 21.64 feet); minimum, 47 second-feet Sept. 7, 8 (gage height, 0.38 foot).
1928-34: Maximum discharge, that of Dec. 23, 1933; minimum, that of Sept. 7, 8, 1934.
Maximum known stage, 25.0 feet Jan. 9, 1923 (discharge, about 14,500 second-feet).

Remarks.- Records good. No diversions above station. Slight regulation at times in summer by mills on tributaries.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	360	1,880	380	4,860	1,660	688	2,980	666	303	143	86	56
2	303	1,690	380	4,080	1,420	913	3,310	645	322	135	86	56
3	258	1,890	420	3,780	1,270	1,880	3,150	698	322	127	82	54
4	232	1,840	561	4,040	1,160	1,750	2,820	776	322	121	80	54
5	206	1,660	688	3,730	1,110	1,690	2,090	821	284	111	83	53
6	182	1,330	2,230	3,730	1,010	2,300	1,750	1,540	265	106	98	53
7	174	985	5,570	3,270	890	2,820	1,510	1,540	256	106	94	50
8	166	867	6,070	2,620	821	2,380	1,330	1,360	256	108	86	47
9	150	710	5,570	2,120	1,010	1,880	1,160	1,240	256	105	77	47
10	147	645	5,080	1,880	1,180	1,570	1,040	1,110	247	105	74	50
11	144	561	4,570	1,840	1,080	1,390	936	985	238	103	72	52
12	140	500	3,520	1,920	936	1,180	867	867	220	100	76	54
13	136	480	3,270	2,260	890	1,060	798	798	194	94	70	56
14	132	440	2,820	3,060	821	960	732	688	177	90	68	68
15	130	420	2,980	3,600	798	890	688	645	177	89	65	62
16	129	380	3,350	3,430	754	821	645	603	177	90	65	64
17	126	360	2,820	3,430	732	776	624	561	177	94	62	65
18	126	341	3,390	4,170	710	732	582	561	168	95	64	70
19	129	322	6,390	4,170	710	688	561	561	160	105	63	62
20	141	360	8,090	4,260	666	645	520	540	152	108	62	60
21	158	480	7,320	4,390	624	603	480	561	152	94	60	56
22	158	420	8,690	4,660	582	582	480	500	152	89	62	54
23	158	360	10,100	5,080	582	540	480	440	143	98	58	58
24	158	341	9,300	5,440	540	520	540	420	143	98	56	65
25	166	322	8,280	5,440	520	500	624	380	143	94	53	76
26	158	312	8,280	5,200	520	480	844	380	143	92	54	78
27	190	303	7,890	4,710	520	480	798	360	143	90	53	95
28	232	312	7,050	4,170	688	1,210	732	360	186	90	50	84
29	710	341	6,470	3,120		3,100	688	341	177	90	50	80
30	1,750	360	6,070	2,230		2,980	666	322	160	94	52	68
31	1,810		5,500	1,880		3,060		303		92	53	72

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,810	126	295	0.598	0.69	18,170
November	1,880	303	700	1.42	1.58	41,640
December	10,100	380	4,939	10.0	11.53	303,700
January	5,440	1,840	3,633	7.37	8.50	223,400
February	1,660	520	864	1.75	1.82	48,010
March	3,100	480	1,325	2.69	3.10	81,460
April	3,310	480	1,142	2.32	2.59	67,940
May	1,540	303	696	1.41	1.63	42,770
June	322	143	207	.420	.47	12,330
July	143	89	102	.207	.24	6,260
August	98	50	68.2	.138	.16	4,190
September	95	47	62.2	.126	.14	3,700
The year	10,100	47	1,179	2.39	32.45	853,600

Tualatin River near Willamette, Oreg.

Location.- Staff gage in SW¼ sec. 34, T. 2 S., R. 1 E., 300 feet above county bridge and 1 mile northwest of Willamette.

Drainage area.- 710 square miles.

Records available.- July 1928 to September 1934.

Extremes.- Maximum discharge during year, 23,300 second-feet Dec. 23 (gage height, 16.7 feet); minimum, 10 second-feet Aug. 29, 30 (gage height, 0.53 foot).
1928-34: Maximum discharge, that of Dec. 23, 1933; minimum, 2 second-feet Aug. 14-21, 1928 (gage height, 0.25 foot).

Remarks.- Records good October to June; poor July to September. Oswego Canal diverts from Tualatin River above station and returns water to Willamette River below station. Some regulation in low-water season by flash-boards on crest of Oswego Canal diversion dam.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	145	870	208	7,440	4,180	1,050	1,990	760	235	94	76	14
2	145	760	208	6,930	3,490	1,230	1,830	930	235	79	48	17
3	135	815	235	6,450	3,090	1,490	1,830	1,110	235	71	13	20
4	113	1,050	265	6,130	2,730	1,830	1,830	1,170	235	65	13	21
5	105	1,230	760	5,680	2,310	1,910	1,760	1,170	235	56	13	19
6	99	1,110	2,910	5,380	2,070	1,990	1,690	1,230	220	55	16	17
7	97	815	3,820	4,960	1,990	1,910	1,690	1,050	220	54	16	15
8	94	655	4,060	4,820	1,990	1,910	1,410	815	208	54	23	15
9	90	538	4,060	4,300	1,910	1,760	1,170	705	208	54	22	15
10	90	450	4,180	3,820	1,830	1,690	1,110	705	208	48	24	14
11	88	390	4,300	3,600	1,760	1,490	1,050	655	182	47	24	17
12	90	350	4,300	3,390	1,620	1,350	990	605	158	44	19	19
13	90	315	4,180	3,290	1,550	1,290	930	560	158	40	17	28
14	88	298	4,180	3,390	1,410	1,230	815	515	158	29	17	31
15	88	280	4,300	3,490	1,410	1,050	815	492	145	40	17	38
16	90	265	4,430	3,600	1,290	990	760	450	145	40	16	39
17	88	265	4,690	4,060	1,230	930	655	430	135	40	14	38
18	83	250	6,130	4,180	1,170	870	605	410	135	38	14	36
19	86	235	7,440	4,300	1,110	815	560	430	69	36	14	31
20	92	235	9,260	4,960	930	615	560	410	96	31	15	27
21	105	235	13,900	5,380	870	760	538	410	99	31	14	24
22	170	235	19,700	5,680	930	705	515	390	103	36	16	25
23	182	235	23,300	6,610	930	705	515	390	107	36	14	28
24	208	220	22,300	7,270	870	655	605	370	107	36	14	28
25	250	220	17,100	7,780	815	655	655	350	107	36	13	33
26	265	208	15,700	8,140	815	605	655	315	109	36	12	47
27	280	220	13,700	7,960	815	705	605	315	113	36	11	48
28	298	220	11,500	7,270	870	1,050	605	298	107	35	11	44
29	350	220	10,100	6,770		1,830	605	298	107	35	10	39
30	560	208	9,070	5,830		2,070	605	280	107	74	11	35
31	870		7,960	4,820		2,070		250		123	12	

Month	River only				River and Oswego Canal (combined)					
	Maximum	Minimum	Mean	Run-off in acre-feet	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	870	83	179	10,980	919	117	215	0.300	0.35	13,110
November	1,230	208	447	26,570	1,280	240	482	.679	.76	28,700
December	23,300	208	7,686	472,600	23,300	240	8,301	11.7	13.49	510,400
January	8,140	3,290	5,409	332,600	8,160	3,300	5,474	7.71	8.89	336,600
February	4,180	615	1,642	91,210	4,180	850	1,668	2.35	2.45	92,620
March	2,070	605	1,271	78,130	2,140	636	1,517	1.85	2.13	80,960
April	1,990	515	998	59,410	1,990	540	1,011	1.42	1.58	60,150
May	1,230	250	589	36,230	1,260	292	615	.866	1.00	37,840
June	235	69	156	9,290	279	127	208	.293	.33	12,370
July	123	29	49.3	3,030	165	77	106	.149	.17	6,510
August	76	10	18.4	1,130	118	59	71.2	.100	.12	4,380
September	48	14	27.4	1,630	106	65	83.1	.117	.13	4,940
The year	23,300	10	1,551	1,123,000	28,300	59	1,642	2.31	31.40	1,189,000

Oswego Canal near Oswego, Oreg.

Location.- Staff gage in SW¼ sec. 17, T. 2 S., R. 1 E., 3 miles southwest of Oswego.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge during year, about 6,000 second-feet Dec. 23 (gage height, 16.1 feet, from flood marks); no flow Mar. 31 to Apr. 15.
1928-34: Maximum discharge, that of Dec. 23, 1933; no flow at times.

Remarks.- Records poor. Discharge estimated Dec. 21-27, Jan. 10-21, Feb. 1-5, 15-23, Mar. 7, 13, 31, Apr. 16. Oswego Canal diverts from Tualatin River in NW¼ sec. 20, three-quarters of a mile above gage; diversion dam is in NE¼ sec. 33, about 3 miles below head of canal.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	45	32	214		40	0	25	42	62	42	55
2	35	45	32	219		46	0	27	44	62	42	55
3	33	43	32	201	2	53	0	27	44	60	46	53
4	33	47	33	201		62	0	27	44	58	46	53
5	32	51	36	196		123	0	28	44	58	46	55
6	32	47	116	171	32	123	0	30	44	58	48	53
7	32	41	119	163	47	50	0	30	42	58	53	53
8	29	38	123	151	66	44	0	30	42	58	53	53
9	29	38	126	133	70	40	0	28	42	58	53	53
10	29	36	130		70	40	0	28	42	58	55	51
11	29	36	130		66	36	0	27	48	58	55	55
12	29	33	133		63	44	0	25	48	58	53	55
13	30	33	130		61	43	0	25	51	58	55	55
14	30	38	133		41	42	0	25	51	58	55	55
15	30	32	137			40	0	23	51	58	55	58
16	32	32	151	6		38	10	23	51	58	55	58
17	33	32	180			38	28	23	51	58	55	58
18	33	32	180			36	27	23	53	58	55	55
19	35	32	219		1	36	27	23	58	58	55	55
20	36	32	264			35	25	23	58	58	55	55
21	36	32	500			35	25	23	58	58	55	55
22	38	32	2,000	41		33	25	23	58	58	55	58
23	38	32	5,000	61		33	25	22	58	58	55	58
24	38	32	4,500	55	35	33	25	23	58	58	55	58
25	38	30	2,000	51	35	31	27	24	62	58	55	58
26	38	32	1,000	19	35	31	27	24	62	55	55	58
27	38	32	500	15	35	33	27	23	62	58	55	58
28	39	32	309	14	36	51	27	23	62	55	55	58
29	41	30	309	13		67	25	23	60	42	55	58
30	45	32	292	10		73	25	40	60	40	55	58
31	49		253	6		0		42		42	55	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	49	29	34.6	2,130
November	51	30	35.8	2,130
December	5,000	32	616	37,880
January	219		64.7	3,980
February	70		25.4	1,410
March	123	0	46.1	2,830
April	28	0	12.5	744
May	42	22	26.1	1,610
June	62	42	51.7	3,070
July	62	40	56.5	3,480
August	55	42	52.8	3,250
September	58	51	55.7	3,310
The year	5,000	0	90.9	65,820

Clackamas River at Big Bottom, Oreg.

Location.- Water-stage recorder in SW¼ sec. 26, T. 6 S., R. 7 E., just below Pot Creek at lower end of Big Bottom, half a mile above proposed dam site, and 28 miles southeast of Estacada.

Drainage area.- 132 square miles.

Records available.- April 1920 to September 1934.

Average discharge.- 14 years, 448 second-feet.

Extremes.- Maximum discharge during year, 5,410 second-feet Dec. 22 (gage height, 7.35 feet); minimum, 246 second-feet Sept. 2-9, 17-22 (gage height, 1.52 feet). 1920-34: Maximum discharge, 6,750 second-feet Mar. 31, 1931 (gage height, 8.28 feet); minimum, 190 second-feet several days in August and September 1931 (gage height, 1.25 feet).

Remarks.- Records fair. Discharge estimated Dec. 28 to Jan. 1. No regulation or diversions above station. Field data furnished by Portland General Electric Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	285	379	273	925	695	421	822	393	315	282	261	249
2	279	410	282	905	645	720	745	386	315	279	264	249
3	276	511	300	1,460	622	622	695	390	315	279	267	249
4	276	432	291	1,240	600	578	670	379	309	279	264	246
5	273	390	339	1,050	578	695	670	410	309	279	264	246
6	270	365	1,810	932	555	878	670	407	315	279	261	249
7	270	348	1,460	822	555	745	622	400	315	279	258	249
8	267	334	878	745	645	670	600	414	312	279	258	249
9	264	324	822	695	578	622	555	400	306	279	258	249
10	264	318	745	745	535	578	535	386	303	276	258	249
11	264	312	695	670	515	555	515	376	300	273	258	249
12	264	306	795	695	507	535	495	365	297	273	258	258
13	264	303	745	822	491	507	479	356	297	273	258	261
14	264	300	670	1,050	479	491	467	351	294	273	255	252
15	264	297	600	850	467	475	455	348	294	273	255	249
16	261	294	555	822	459	463	447	348	291	273	255	249
17	261	291	696	1,080	451	451	432	348	291	273	255	249
18	261	291	1,580	960	443	435	418	344	291	270	255	249
19	267	291	1,830	960	439	424	407	344	288	270	255	249
20	288	297	2,060	1,080	435	418	400	348	288	270	252	246
21	273	288	2,810	1,110	424	407	396	337	285	273	252	246
22	270	285	4,850	1,700	418	404	393	330	285	276	252	264
23	270	285	3,430	2,920	414	393	404	327	285	267	252	306
24	270	282	2,200	1,880	407	390	400	324	285	264	252	267
25	273	282	1,830	1,420	400	382	435	324	294	264	252	258
26	270	279	2,060	1,180	404	376	414	324	300	264	252	255
27	276	282	1,660	1,020	463	463	443	321	294	264	252	255
28	327	282	1,400	905	435	905	418	318	291	261	252	255
29	499	279	1,220	822		1,110	404	315	285	261	252	252
30	439	276	1,100	770		905	400	318	285	261	249	252
31	414		980	720		850		318		261	249	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	499	261	289	2.19	2.52	17,780
November	511	276	320	2.42	2.70	19,070
December	4,850	273	1,321	10.0	11.53	81,250
January	2,920	670	1,063	8.05	9.28	65,370
February	695	400	502	3.80	3.96	27,890
March	1,110	376	576	4.36	5.03	35,440
April	822	393	507	3.84	4.28	30,160
May	414	315	356	2.70	3.11	21,920
June	315	285	298	2.26	2.52	17,720
July	282	261	272	2.06	2.38	16,710
August	267	249	256	1.94	2.24	15,740
September	306	246	254	1.92	2.14	15,080
The year	4,850	246	503	3.81	51.69	364,100

Clackamas River above Three Lynx Creek, Oreg.

Location.- Water-stage recorder in NE¼ sec. 21, T. 5 S., R. 6 E., 500 feet 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 1934.

Average discharge.- 15 years (1911-13, 1921-34), 1,853 second-feet.

Extremes.- Maximum discharge during year, 26,200 second-feet Dec. 22 (gage height, 12.98 feet); minimum not recorded; minimum daily discharge (estimated), 570 second-feet Sept. 3.

1911-13, 1921-34: Maximum discharge, 34,800 second-feet Mar. 31, 1931 (gage height, 15.5 feet); minimum, 375 second-feet Aug. 10, 16, 1924; minimum daily discharge, 536 second-feet Oct. 22, 1930.

Remarks.- Records fair except those estimated, which are poor. Water diverted from Oak Grove Fork is used in power plant on Clackamas River just above station. Field data furnished by Portland General Electric Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	890	1,860	*860	3,490	2,430	1,500	4,030	1,310		*800	750	
2	890	2,360	*900	3,500	2,320	3,620	3,620	1,280		*800	765	
3	890	3,030	1,010	6,600	2,210	2,940	3,120	1,310		*790	785	
4	890	2,360	*1,050	5,620	2,100	2,540	2,880	1,310		780	770	
5	890	1,770	*1,300	4,470	2,000	3,240	*2,720	1,580			710	
6	830	1,590	*13,000	3,750	1,900	4,620	*2,600	1,660				
7	830	1,390	8,500	3,240	1,950	3,750	*2,400	1,660		*775		
8	805	1,280	4,590	2,880	2,260	3,120	*2,220	1,620				
9	805	1,160	3,670	2,650	2,050	2,760	*2,060	1,540				
10	780	1,100	3,270	2,700	1,900	2,430	*1,850	1,420				
11	830	1,070	3,030	2,480	1,800	2,260	*1,760	1,310	*954	770		*597
12	770	980	3,530	2,700	1,760	2,210	*1,680	*1,280				
13	780	1,040	3,530	3,620	1,710	2,100	*1,580	*1,250				
14	750	950	3,030	4,780	1,620	1,950	*1,500	*1,240				
15	770	920	2,740	3,620	1,580	1,900	*1,460	1,200		*766		
16	770	950	2,310	3,490	1,580	1,760	*1,520	*1,160				
17	765	890	4,680	5,110	1,500	1,710	*1,400	*1,160				
18	765	890	10,200	4,170	1,500	1,660	*1,340	*1,140			*634	
19	830	890	10,700	4,470	1,540	1,660	*1,230	*1,120		755		
20	980	950	11,000	5,280	1,460	1,540	*1,240	*1,170		770		
21	920	890	15,600	6,010	1,420	*1,460	*1,170	*1,100		785		
22	*900	890	24,200	8,730	1,380	*1,370	*1,150	*1,060		760		
23	*920	890	14,200	13,100	1,380	1,310	*1,250	*1,030	855	765		882
24	*900	830	8,730	7,410	1,340	1,310	*1,220	1,000	855	765		
25	*900	860	7,410	5,460	1,310	1,310	*1,450	1,030	822	785		
26	*880	860	8,970	4,320	1,420	1,310	*1,350	1,030	*900	780		
27	*980	*880	6,800	3,750	1,580	1,620	*1,400	*1,010	882	780		*636
28	*1,700	*920	5,280	3,360	1,540	3,720	1,280	1,000	882	828		
29	2,910	*840	4,620	3,000		4,780	1,280	*1,010	*840	770		
30	2,460	*860	4,170	2,760		4,030	1,420	*1,030	*820	750		
31	2,110		3,750	2,600		4,170		*1,050		755		

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	2,910	750	1,035	2.12	2.44	63,650
November	3,030	830	1,206	2.47	2.76	71,740
December	24,200	860	6,343	13.0	14.99	390,000
January	13,100	2,480	4,494	9.21	10.62	276,300
February	2,430	1,310	1,734	3.55	3.70	96,280
March	4,780	1,310	2,441	5.00	5.76	150,100
April	4,030	1,150	1,839	3.77	4.21	109,400
May	1,660	1,000	1,228	2.52	2.90	75,510
June		820	928	1.90	2.12	55,230
July	828	750	774	1.59	1.83	47,600
August	785		654	1.34	1.54	40,190
September	882		616	1.26	1.41	36,630
The year	24,200		1,951	4.00	54.28	1,413,000

*Estimated.

Clackamas River near Cazadero, Oreg.

Location.- Water-stage recorder in NE¼ sec. 11, T. 4 S., R. 4 E., half a mile above backwater from Cazadero Dam of Portland General Electric Co. and 3 miles southeast of Cazadero. Zero of gage is 532.0 feet above mean sea level; published gage readings have been reduced to mean sea level datum.

Drainage area.- 665 square miles.

Records available.- January 1909 to September 1934.

Average discharge.- 25 years, 2,617 second-feet.

Extremes.- Maximum discharge during year, 38,700 second-feet Dec. 22 (gage height, 550.85 feet); minimum, 551 second-feet Sept. 3 (gage height, 532.27 feet); minimum daily discharge, 616 second-feet Sept. 3.

1909-34: Maximum discharge, 60,800 second-feet Mar. 31, 1931 (gage height, 556.5 feet); minimum, 410 second-feet Oct. 20, 1925, Sept. 28, 1930, caused by shutdown in power plant at Three Lynx (gage height, 532.03 feet); minimum daily discharge, 587 second-feet Aug. 17, 1930.

Remarks.- Records good except those from June 1 to Aug. 5, which are fair. Some diurnal fluctuation during low water owing to operation of Oak Grove power plant. Field data furnished by Portland General Electric Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,150	3,130	1,120	4,510	3,170	1,600	5,350	1,720	1,260	938	835	697
2	1,150	4,920	1,150	4,510	3,060	5,070	4,920	1,600	1,290	938	882	666
3	1,090	5,860	1,390	7,840	2,850	4,250	4,250	1,840	1,230	938	938	616
4	1,060	4,080	1,420	7,530	2,650	3,390	3,990	1,760	1,260	910	855	679
5	1,030	3,030	1,720	6,130	2,550	4,310	3,750	2,550	1,200	910	782	664
6	1,000	2,460	19,100	5,060	2,450	6,810	3,630	2,650	1,230	910	751	654
7	975	2,070	12,900	4,380	2,450	5,500	3,390	2,450	1,230	910	742	658
8	975	1,820	7,350	3,870	2,350	4,380	3,060	2,220	1,230	910	733	679
9	948	1,640	5,810	3,390	2,650	3,750	2,850	2,090	1,200	910	738	670
10	920	1,550	5,060	3,510	2,450	3,170	2,550	1,920	1,140	910	746	679
11	948	1,420	4,380	3,280	2,360	2,650	2,360	1,760	1,140	882	720	666
12	948	1,330	5,060	3,510	2,270	2,750	2,220	1,680	1,110	882	720	692
13	920	1,360	4,920	4,770	2,160	2,450	2,090	1,560	1,080	882	715	724
14	892	1,270	4,640	7,170	2,090	2,360	1,960	1,560	1,080	882	756	684
15	892	1,240	4,120	5,350	2,040	2,180	1,920	1,500	1,050	910	728	670
16	920	1,240	3,390	4,640	1,960	2,140	2,000	1,460	1,050	882	724	666
17	892	1,210	5,070	7,350	1,920	1,960	1,800	1,460	1,020	910	724	642
18	692	1,180	13,300	6,130	1,840	1,880	1,760	1,420	1,050	882	733	634
19	1,030	1,180	14,000	5,970	1,880	1,920	1,600	1,390	1,020	882	702	658
20	1,270	1,270	14,200	7,170	1,840	1,800	1,640	1,460	1,020	882	728	638
21	1,090	1,210	17,800	8,080	1,760	1,720	1,530	1,360	992	910	720	634
22	1,090	1,210	34,800	10,800	1,680	1,680	1,500	1,320	992	882	706	728
23	1,150	1,180	22,000	17,100	1,680	1,640	1,680	1,290	992	882	720	992
24	1,120	1,150	14,000	10,600	1,600	1,600	1,600	1,260	965	855	710	774
25	1,120	1,150	11,000	7,910	1,560	1,530	1,920	1,260	992	850	706	710
26	1,090	1,120	13,000	6,300	1,640	1,530	1,760	1,290	1,080	855	684	710
27	1,210	1,150	10,600	5,350	1,840	1,670	1,840	1,230	1,080	855	728	688
28	2,350	1,210	8,100	4,640	1,920	5,050	1,720	1,200	1,080	882	697	664
29	4,550	1,090	6,810	4,120		6,640	1,680	1,200	1,020	855	688	702
30	3,860	1,120	5,650	3,750		5,200	1,840	1,230	992	810	684	706
31	3,550		5,060	3,390		5,500		1,260		835	688	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	4,550	692	1,357	2.04	2.35	83,430
November	5,860	1,090	1,828	2.75	3.07	108,800
December	34,800	1,120	8,997	13.5	15.56	553,200
January	17,100	3,280	6,068	9.12	10.51	373,100
February	3,170	1,560	2,165	3.29	3.43	121,400
March	6,810	1,530	3,183	4.79	5.52	195,700
April	5,350	1,500	2,472	3.72	4.15	147,100
May	2,650	1,200	1,611	2.42	2.79	99,070
June	1,290	965	1,102	1.66	1.85	65,600
July	938	810	888	1.34	1.54	54,610
August	938	684	741	1.11	1.28	45,590
September	992	616	688	1.03	1.15	40,970
The year	34,800	616	2,609	3.92	53.20	1,889,000

Oak Grove Fork above power plant intake, Oreg.

Location.- Water-stage recorder in SW¼ sec. 3, T. 6 S., R. 7 E., two-thirds of a mile above Kink Creek, 1 mile above intake of Oak Grove power development of Portland General Electric Co., and 24 miles southeast of Estacada.

Drainage area.- 126 square miles.

Records available.- December 1923 to September 1934. At site 1 mile downstream, below Kink Creek, May 1909 to December 1923 (incomplete). Records comparable except for slight inflow from springs and Kink Creek.

Average discharge.- 10 years (1924-34), 463 second-feet.

Extremes.- Maximum discharge during year, 2,840 second-feet Dec. 22 (gage height, 4.83 feet); minimum discharge, 277 second-feet Sept. 28-30; minimum gage height, 1.64 feet Oct. 4, 5, 9, 10, 13-15.
1909-34: Maximum discharge, 5,000 second-feet Jan. 7, 1923 (gage height, 5.45 feet); minimum, 236 second-feet Oct. 15, 16, 18, 1931 (gage height, 1.42 feet).

Remarks.- Records fair. Discharge includes flow of Spring Creek, just below gage. No diversions or regulation above station. Field data furnished by Portland General Electric Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	313	416	313	930	764	486	660	436	354	323	309	290
2	310	451	317	930	732	725	642	430	354	323	309	286
3	310	530	329	1,160	706	630	624	430	354	323	304	286
4	306	433	321	1,080	680	600	618	425	349	323	300	286
5	306	392	379	1,000	660	686	618	458	349	323	300	286
6	310	366	1,000	895	648	758	618	430	349	323	300	286
7	310	354	850	839	642	712	606	426	349	318	300	286
8	310	345	637	790	673	656	588	426	349	318	300	286
9	306	337	632	758	630	636	570	414	349	318	300	286
10	306	329	593	777	606	612	558	408	349	318	300	286
11	310	325	566	732	588	594	540	398	344	318	300	286
12	310	317	593	738	570	576	534	392	344	318	300	290
13	306	313	576	818	564	564	522	386	344	318	300	290
14	306	310	545	895	552	546	516	381	344	318	300	286
15	306	310	515	797	546	534	504	381	339	318	300	286
16	310	317	475	790	528	534	504	376	339	318	300	286
17	310	313	566	965	516	522	492	381	339	318	300	286
18	313	310	885	860	510	510	480	376	339	318	300	286
19	329	310	1,200	895	504	504	469	376	339	313	300	286
20	329	321	1,430	965	504	492	464	381	334	313	300	281
21	313	321	1,760	1,120	492	486	458	370	334	313	300	281
22	317	329	2,730	1,380	486	480	452	365	334	313	300	304
23	325	321	2,310	1,860	480	469	458	360	334	313	300	323
24	313	321	1,810	1,480	469	464	452	360	334	313	300	295
25	310	313	1,660	1,250	464	458	469	360	344	313	295	281
26	310	313	1,760	1,120	464	458	452	360	349	309	290	281
27	329	317	1,520	1,040	486	510	464	354	339	309	290	281
28	384	313	1,300	965	474	725	447	354	334	309	290	277
29	424	313	1,200	895		712	447	349	328	309	290	277
30	388	313	1,080	846		660	442	354	323	309	290	277
31	379		1,000	804		654		354		309	290	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	424	306	323	2.56	2.95	19,850
November	530	310	342	2.71	3.02	20,370
December	2,730	313	995	7.90	9.11	61,190
January	1,860	732	980	7.78	8.97	60,250
February	764	464	569	4.52	4.71	31,610
March	758	458	579	4.60	5.30	35,630
April	660	442	522	4.14	4.62	31,080
May	436	349	389	3.09	3.56	23,900
June	354	323	342	2.71	3.02	20,360
July	323	309	316	2.51	2.89	19,440
August	309	290	299	2.37	2.73	18,360
September	323	277	287	2.28	2.54	17,070
The year	2,730	277	496	3.94	53.42	359,100

Lewis River above Muddy River, near Cougar, Wash.

Location.- Water-stage recorder in SW¼ sec. 30, T. 7 N., R. 7 E., 2 miles above mouth of Muddy River and 15 miles due east of Cougar.

Drainage area.- 227 square miles.

Records available.- August to October 1909, August 1927 to September 1934 (discontinued).

Extremes.- Maximum discharge during year, about 27,000 second-feet Dec. 21 (gage height, about 13.2 feet, from high-water marks); minimum daily discharge, 229 second-feet Sept. 28, 29 (gage height, -0.13 foot).
1927-34: Maximum discharge, that of Dec. 21, 1933; minimum discharge. 175 second-feet Nov. 21, 1929; minimum gage height, that of Sept. 28, 29, 1934.

Remarks.- Records good except those estimated Nov. 16-23, Dec. 10 to Feb. 5, Mar. 27 to Apr. 4, Sept. 30, which are fair. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	778	2,340	571	2,700	2,000	1,570	4,800	820	494	391	307	265
2	706	3,910	632	3,600	2,000	3,810	3,900	794	487	391	323	268
3	664	5,550	632	6,900	2,000	3,040	3,000	827	479	364	342	265
4	632	3,450	615	5,700	1,800	2,450	2,000	1,010	471	378	304	266
5	598	2,570	1,120	4,500	1,700	3,220	1,850	1,700	468	381	296	265
6	571	2,080	7,490	3,600	1,600	3,990	1,800	1,320	471	364	307	262
7	550	1,730	5,380	3,000	1,600	3,120	1,750	1,150	464	381	295	257
8	530	1,500	3,560	2,400	1,750	2,520	1,700	1,030	453	376	292	245
9	510	1,320	9,380	2,100	1,600	2,200	1,600	960	460	371	289	251
10	495	1,190	12,000	2,400	1,500	1,900	1,460	883	456	371	292	271
11	475	1,070	9,500	1,500	1,420	1,750	1,420	855	464	361	286	257
12	465	995	9,700	2,100	1,320	1,650	1,420	814	464	361	283	306
13	450	925	7,800	2,700	1,280	1,650	1,420	788	456	358	280	340
14	440	876	5,700	2,800	1,190	1,650	1,370	768	446	365	280	277
15	425	829	4,500	2,200	1,150	1,600	1,320	756	439	365	269	257
16	480	810	3,600	2,700	1,070	1,500	1,240	731	425	394	295	248
17	480	780	4,700	3,300	1,030	1,320	1,150	695	418	405	301	245
18	520	740	9,200	3,000	1,030	1,240	1,070	662	418	371	286	245
19	1,070	740	9,000	4,800	995	1,190	1,110	701	415	355	280	243
20	1,290	750	12,000	6,500	995	1,150	1,150	695	406	352	280	240
21	925	780	22,000	5,600	960	1,110	1,150	614	408	345	283	240
22	1,240	750	22,500	7,700	960	1,070	1,150	587	405	336	286	248
23	1,680	730	15,000	10,000	925	1,030	1,150	587	396	323	289	268
24	1,540	706	7,800	6,000	883	995	1,030	592	388	326	286	245
25	1,680	676	6,600	4,300	862	925	1,150	582	394	326	283	240
26	1,410	648	6,000	3,500	841	925	995	576	388	342	263	234
27	1,500	648	4,800	2,900	1,170	1,800	960	573	388	348	292	232
28	3,740	626	3,300	2,500	1,150	3,600	960	566	408	352	301	229
29	5,240	598	3,600	2,300		3,900	925	573	398	342	283	229
30	3,930	562	3,600	2,200		3,600	883	559	391	323	271	230
31	2,070		3,300	2,100		3,900		527		310	265	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	5,240	425	1,222	5.36	6.20	75,140
November	5,550	562	1,363	6.00	6.69	81,120
December	22,500	571	6,954	30.6	35.28	427,600
January	10,000	1,500	3,794	16.7	19.25	233,300
February	2,000	841	1,314	5.79	6.03	72,950
March	3,990	925	2,109	9.29	10.71	129,700
April	4,800	883	1,563	6.89	7.69	92,990
May	1,700	527	764	3.45	3.98	48,190
June	494	388	434	1.91	2.13	25,830
July	405	310	360	1.59	1.83	22,160
August	342	265	291	1.28	1.48	17,910
September	340	229	256	1.13	1.26	15,220
The year	22,500	229	1,716	7.56	102.53	1,242,000

Lewis River near Cougar, Wash.

Location.- Water-stage recorder in SE¼ sec. 29, T. 7 N., R. 5 E., 1 mile below Swift Creek and 4 miles east of Cougar.

Drainage area.- 483 square miles.

Records available.- July 1910 to March 1912 (gage heights only), June 1924 to September 1934. July 1909 to June 1910 at site 1,000 feet above Swift Creek.

Average discharge.- 10 years (1924-34), 2,799 second-feet.

Extremes.- Maximum discharge during year, 54,400 second-feet Dec. 21 (gage height, 15.7 feet, from high-water marks); minimum daily discharge, 625 second-feet Sept. 27-29 (gage height, 0.90 foot).

1910-12, 1924-34: Maximum discharge, that of Dec. 21, 1933; minimum, 454 second-feet Oct. 21, 1931 (gage height, 0.01 foot).

Remarks.- Records good except those estimated Dec. 22 to Jan. 16, Mar. 19 to Apr. 3, Aug. 2-21, which are fair. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,840	5,680	1,480	5,600	5,120	4,140	7,000	1,880	1,320	1,010	824	690
2	1,680	8,480	1,630	7,400	5,010	6,330	6,400	1,820	1,320	1,010	860	690
3	1,680	11,000	1,730	14,000	4,900	6,770	5,600	1,830	1,260	1,000	890	684
4	1,480	8,100	1,680	12,000	4,690	5,870	4,800	2,150	1,280	983	820	690
5	1,430	6,310	3,100	9,600	4,390	7,180	4,490	3,790	1,280	983	810	690
6	1,340	5,160	14,900	7,600	4,090	8,500	4,190	3,050	1,280	983	820	684
7	1,300	4,280	12,000	6,200	4,090	7,240	3,990	2,640	1,280	983	810	677
8	1,250	3,770	8,720	4,900	4,490	6,310	3,790	2,410	1,240	974	790	664
9	1,250	3,540	16,800	4,600	4,190	5,540	3,600	2,270	1,240	947	770	677
10	1,200	3,020	21,600	4,800	3,990	5,010	3,320	2,130	1,240	936	770	711
11	1,160	2,700	17,000	3,500	3,790	4,490	3,140	2,000	1,240	920	760	697
12	1,160	2,490	17,800	4,300	3,600	4,190	3,050	1,940	1,240	920	740	864
13	1,120	2,350	14,100	5,800	3,410	4,090	3,050	1,880	1,190	912	730	965
14	1,120	2,210	10,400	6,200	3,230	3,990	2,960	1,820	1,180	920	730	776
15	1,080	2,080	8,350	5,000	3,050	3,890	2,880	1,820	1,170	912	740	711
16	1,160	2,020	6,730	5,800	2,960	3,600	2,720	1,770	1,140	1,050	760	684
17	1,160	1,960	8,760	7,480	2,800	3,410	2,560	1,770	1,120	1,060	750	677
18	1,200	1,840	17,400	6,770	2,720	3,140	2,410	1,660	1,110	947	730	677
19	2,580	1,840	17,000	11,000	2,640	3,000	2,340	1,770	1,100	912	730	664
20	3,080	1,840	22,700	14,800	2,640	2,900	2,410	1,770	1,090	904	720	644
21	2,140	1,900	41,800	13,000	2,560	2,800	2,340	1,610	1,090	896	730	644
22	2,980	1,840	45,000	18,000	2,480	2,700	2,340	1,560	1,080	880	746	704
23	4,280	1,780	28,000	24,200	2,410	2,600	2,340	1,510	1,070	848	746	739
24	3,770	1,730	15,000	14,400	2,340	2,400	2,270	1,510	1,040	848	746	684
25	3,860	1,680	13,000	10,200	2,340	2,300	2,340	1,460	1,040	856	725	658
26	3,260	1,630	12,000	8,240	2,270	2,300	2,130	1,460	1,020	880	725	638
27	3,340	1,630	9,200	7,000	3,100	3,100	2,060	1,460	1,020	904	739	625
28	7,250	1,580	6,400	6,090	2,880	6,000	2,000	1,420	1,060	912	746	625
29	10,200	1,530	7,000	5,650		6,200	2,000	1,420	1,040	888	732	625
30	8,600	1,530	7,200	5,430		5,600	2,000	1,420	1,020	856	711	632
31	6,730		6,600	5,220		6,000		1,370		840	690	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	10,200	1,080	2,761	5.72	6.60	169,700
November	11,000	1,530	3,245	6.71	7.49	193,000
December	45,000	1,480	13,390	27.7	31.94	823,300
January	24,200	3,500	8,541	17.7	20.41	525,200
February	5,120	2,270	3,451	7.10	7.39	190,600
March	8,500	2,300	4,632	9.59	11.06	284,800
April	7,000	2,000	3,217	6.66	7.43	191,400
May	3,790	1,370	1,885	3.90	4.50	115,900
June	1,320	1,020	1,161	2.40	2.66	69,060
July	1,060	840	951	1.93	2.22	57,270
August	890	690	761	1.58	1.82	46,770
September	965	625	693	1.43	1.60	41,240
The year	45,000	625	3,741	7.75	105.14	2,708,000

Lewis River at Ariel, Wash.

Location.- Water-stage recorder in NW¼NE¼ sec. 4, T. 5 N., R. 2 E., at Ariel, half a mile below Ariel Dam and power plant. Zero of gage is 44.00 feet above mean sea level.

Drainage area.- 733 square miles.

Records available.- July 1922 to September 1934. July to November 1909 for station 3 miles upstream.

Average discharge.- 11 years (1923-34), 4,576 second-feet.

Extremes.- Maximum discharge during year, 129,000 second-feet Dec. 22 (gage height, 35.0 feet, from high-water marks); minimum, 135 second-feet Oct. 8 (gage height, 0.70 foot); minimum daily discharge, 333 second-feet Sept. 3.
1909, 1922-34: Maximum discharge, that of Dec. 22, 1933; no flow at times June 30, July 1-3, 6-9, 1931 (caused by regulation during construction of Ariel Dam); minimum daily discharge, 1 second-foot July 6, 1931.

Remarks.- Records excellent except those estimated Dec. 18 to Jan. 4, which are good. No diversions above station. Regulation caused by operation of power plant and storage in Lake Merwin Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,180	9,310	2,070	10,900	7,290	5,800	11,100	9,360	2,650	531	1,720	1,210
2	2,920	16,700	2,800	12,700	7,280	16,000	10,800	2,710	2,230	959	1,800	594
3	2,480	22,100	2,870	28,500	7,000	12,000	7,540	2,000	1,260	1,180	1,590	333
4	2,160	14,000	3,110	24,500	6,310	9,400	7,480	2,140	2,110	518	866	1,990
5	2,590	9,980	6,650	19,500	6,330	11,400	6,390	6,070	2,760	858	432	2,530
6	2,680	7,720	39,100	16,700	5,260	16,800	5,400	4,790	2,770	1,200	1,060	2,470
7	3,010	5,460	25,600	13,300	6,120	12,200	5,830	4,060	2,700	1,110	1,740	2,870
8	1,770	4,700	14,800	10,100	6,230	10,200	4,980	3,510	2,170	629	1,780	1,560
9	1,980	5,190	33,500	9,060	6,400	8,760	5,070	3,220	1,420	1,070	2,010	819
10	2,060	4,700	52,600	10,300	5,890	7,210	4,290	3,110	732	1,440	1,940	2,520
11	2,070	4,070	32,100	7,110	5,050	6,350	4,150	3,120	1,670	1,180	1,270	2,980
12	2,170	3,570	32,700	8,860	5,280	5,980	4,210	2,570	2,100	1,170	847	3,200
13	2,070	3,260	23,400	12,200	4,610	5,680	3,820	2,720	2,160	1,180	2,170	3,190
14	1,900	2,750	18,000	12,900	4,730	5,260	4,020	2,400	2,140	872	2,800	3,420
15	1,460	2,950	12,900	10,400	4,670	5,200	3,350	2,700	1,920	566	2,590	2,760
16	1,990	3,270	10,100	11,700	3,980	4,900	3,580	2,630	1,730	1,050	2,720	1,620
17	2,060	2,960	17,200	15,700	3,810	4,310	3,370	2,520	946	1,610	2,750	2,980
18	2,060	2,700	46,600	12,800	4,130	4,070	3,480	2,200	1,420	1,600	2,170	3,540
19	3,870	3,040	40,200	23,400	3,690	4,410	2,070	2,220	1,500	1,620	1,300	3,490
20	8,300	2,520	44,600	30,400	3,480	3,450	1,660	2,240	1,450	1,740	1,990	3,390
21	4,560	2,490	84,600	32,100	3,940	3,670	1,560	2,650	1,540	1,440	2,000	3,430
22	5,910	2,780	114,000	35,700	3,510	3,000	2,810	3,190	1,620	859	2,080	3,090
23	10,200	2,960	58,100	41,100	3,090	2,960	2,920	2,910	1,030	1,800	2,070	2,080
24	8,260	2,810	29,000	25,500	3,570	2,730	2,800	2,920	528	1,970	2,070	2,850
25	7,420	2,540	27,900	20,900	2,710	2,180	2,930	2,850	1,280	1,900	1,390	3,190
26	5,610	2,360	26,100	16,800	3,600	2,810	3,180	2,010	1,560	1,760	696	3,390
27	6,660	2,920	20,200	11,300	4,270	3,280	2,650	972	1,480	1,650	2,010	3,300
28	14,600	2,160	13,100	9,680	3,620	9,100	2,140	2,780	2,210	1,310	2,170	3,360
29	24,100	2,230	15,100	8,530		11,400	1,050	3,380	2,080	629	2,060	3,270
30	16,500	2,420	15,200	7,280		10,200	2,700	2,250	1,000	1,470	2,090	1,930
31	12,300		14,500	8,660		10,600		2,920		1,720	2,030	

Month	Observed				Gain or loss in storage in Lake Merwin Reservoir (acre-feet)	Corrected for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October...	24,100	1,460	5,448	335,000	-11,500	323,500	5,261	7.18	8.28
November..	22,100	2,160	5,221	310,700	+4,700	315,400	5,300	7.23	8.07
December..	114,000	2,070	28,350	1,743,000	-3,500	1,740,000	28,300	38.6	44.50
January...	41,100	7,110	16,730	1,029,000	-3,900	1,025,000	16,670	22.7	26.17
February..	7,290	2,710	4,638	268,700	-400	268,300	4,831	6.59	6.86
March.....	16,800	2,180	7,139	439,000	+6,600	445,600	7,247	9.89	11.40
April.....	11,100	1,050	4,244	252,600	+11,400	264,000	4,457	6.05	6.75
May.....	6,070	972	2,842	174,700	-7,900	166,800	2,713	3.70	4.27
June.....	2,850	528	1,746	103,900	-17,900	86,000	1,445	1.97	2.20
July.....	1,970	518	1,245	76,540	-4,600	71,940	1,170	1.60	1.84
August....	2,800	432	1,813	111,500	-51,200	60,300	981	1.34	1.54
September.	3,540	333	2,579	153,400	-98,700	54,700	919	1.25	1.40
The year	114,000	333	6,903	4,998,000	-177,000	4,822,000	6,660	9.09	123.28

Muddy River near Cougar, Wash.

Location.- Water-stage recorder in SE¼ sec. 24, T. 7 N., R. 6 E., three-quarters of a mile above mouth and 14 miles east of Cougar.

Drainage area.- 136 square miles.

Records available.- August to October 1909, August 1927 to September 1934 (discontinued).

Extremes.- Maximum discharge during year, about 17,500 second-feet Dec. 21 (gage height, 14.0 feet, from high-water marks); minimum recorded discharge, 109 second-feet Sept. 29 (gage height, 0.15 foot), may have been less some time during Sept. 17-28, when water-stage recorder was not operating.
1909, 1927-34: Maximum discharge, that of Dec. 21, 1933; minimum discharge, 94 second-feet Dec. 5-7, 1929; minimum gage height, that of Sept. 29, 1934.

Remarks.- Records good except those estimated Oct. 1 to Nov. 2, Nov. 9 to Feb. 6, Feb. 10-28, Mar. 7 to Apr. 4, Sept. 17-28, 30, which are fair. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		1,800				1,100	940	396	286	184	136	116
2		2,400				2,020	1,100	386	281	182	136	116
3		3,490				1,840	1,100	393	275	179	138	116
4		2,780			1,300	1,660	1,200	566	270	177	138	116
5		2,130				1,960	1,100	922	264	174	136	116
6		1,660				2,060	1,060	722	267	172	136	116
7		1,340			1,130	1,900	956	630	269	172	134	116
8		1,120			1,210	1,800	920	570	259	172	130	116
9		1,100			1,100	1,600	866	521	266	170	128	114
10		930				1,400	806	485	251	167	126	114
11		880				1,300	758	465	246	165	126	116
12		810				1,200	728	445	241	162	124	183
13		780			980	1,100	698	424	236	160	124	185
14		730				1,100	670	414	233	160	124	156
15		690				1,000	650	403	228	160	124	122
16		680				970	625	393	228	192	122	116
17		660				940	575	390	226	189	120	
18		620				860	540	376	220	167	120	
19		630				810	521	407	218	160	120	
20		620			760	790	503	386	213	158	118	
21		640				760	490	354	210	168	116	
22		630				730	481	344	208	166	116	120
23		610				710	473	338	206	149	116	
24		590				620	457	329	201	147	116	
25		590				610	465	323	201	145	118	
26		580			740	610	438	317	201	142	118	
27		680				570	438	308	201	142	116	
28		570				1,100	414	300	198	142	116	
29		560				1,000	434	292	194	140	116	109
30		580				880	420	297	189	138	116	110
31						920		292		138	116	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October			750	5.51	6.36	46,120
November	3,490	560	1,059	7.79	8.69	63,030
December			4,200	30.9	35.62	258,200
January			2,600	19.1	22.02	159,900
February			968	7.12	7.41	53,750
March	2,060	570	1,159	8.52	9.82	71,250
April	1,200	414	694	5.10	5.69	41,310
May	922	292	425	3.12	3.60	26,160
June	286	189	232	1.71	1.91	13,820
July	192	138	162	1.19	1.37	9,960
August	138	116	124	.912	1.05	7,620
September	185		122	.897	1.00	7,290
The year			1,048	7.71	104.53	758,400

Canyon Creek near Amboy, Wash.

Location.- Water-stage recorder in SW¼ sec. 4, T. 5 N., R. 4 E., at wagon bridge 2 miles above mouth and 6 miles northeast of Amboy.

Drainage area.- 62 square miles.

Records available.- July 1922 to September 1934 (discontinued).

Average discharge.- 12 years, 424 second-feet.

Extremes.- Maximum discharge during year, 11,700 second-feet Dec. 21 (gage height, 12.6 feet); minimum daily discharge, 12 second-feet Sept. 8 (gage height, 0.17 foot). 1922-34: Maximum discharge, that of Dec. 21, 1933; minimum daily discharge, that of Sept. 8, 1934; minimum gage height, 0.14 foot Oct. 19-24, 1925, Oct. 8, 9, 1932.

Remarks.- Records good except those estimated Nov. 29 to Dec. 21, Mar. 28 to Apr. 1, Sept. 28-30, which are fair. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	324	1,020		840	466	391	1,640	135	95	45	27	16
2	264	2,490		1,230	432	1,960	990	136	91	44	26	15
3	226	2,310	640	2,720	393	1,050	774	199	87	41	28	14
4	196	1,320		2,020	359	796	666	218	82	38	32	13
5	175	863		1,560	323	1,410	560	644	77	37	27	13
6	157	644		1,140	298	1,740	474	581	76	36	26	13
7	139	507		863	307	1,200	407	421	74	36	26	13
8	125	407	3,150	687	425	840	359	339	71	36	25	12
9	114	347		602	443	666	310	292	69	36	24	15
10	108	302		644	410	540	280	254	66	34	23	20
11	103	272		623	372	447	257	225	63	33	21	17
12	98	241		796	333	389	237	209	58	32	21	31
13	95	220	1,600	1,310	304	346	217	186	53	31	21	43
14	90	206		1,440	277	307	209	168	50	30	21	27
15	87	191		937	257	274	194	161	48	30	21	21
16	99	194		1,090	237	251	186	154	47	44	21	19
17	101	177		1,530	220	225	174	147	44	51	20	18
18	103	163		1,080	204	207	164	138	42	41	20	17
19	602	182	5,200	2,670	191	188	149	172	42	38	21	17
20	898	196		2,980	164	174	140	179	44	37	21	17
21	498	189		4,180	168	164	135	140	42	35	20	16
22	948	208	9,280	4,750	159	152	127	127	45	34	20	24
23	1,640	210	4,400	4,350	149	142	124	120	47	33	20	46
24	1,050	216	2,310	2,020	142	138	122	118	45	31	20	33
25	796	208	2,670	1,360	135	129	142	127	44	30	19	26
26	644	198	2,670	1,080	124	129	124	120	46	31	19	24
27	687	203	1,820	863	136	217	118	114	47	30	19	23
28	2,290	196	1,320	708	156	1,550	114	106	50	30	20	22
29	2,970	180	1,140	602		1,470	114	100	48	29	19	21
30	2,020	180	1,080	540		1,200	124	108	46	28	18	20
31	1,260		1,020	519		1,240		98		27	17	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	2,970	87	610	9.84	11.34	37,500
November	2,490	163	475	7.66	8.55	28,240
December	9,280		2,770	44.7	51.53	170,300
January	4,750	519	1,537	24.8	28.59	94,480
February	466	124	273	4.40	4.58	15,180
March	1,960	129	643	10.4	11.99	39,630
April	1,640	114	321	5.18	5.78	19,100
May	644	98	201	3.24	3.74	12,370
June	95	42	58.0	.935	1.04	3,450
July	51	27	35.1	.566	.65	2,160
August	32	17	22.0	.355	.41	1,350
September	46	12	20.9	.337	.38	1,240
The year	9,280	12	587	9.47	128.58	424,900

East Fork of Lewis River near Heisson, Wash.

Location.- Water-stage recorder in N½ sec. 17, T. 4 N., R. 3 E., just above Basket Creek and 1½ miles northeast of Heisson.

Drainage area.- 124 square miles.

Records available.- September 1929 to September 1934.

Extremes.- Maximum discharge during year, 15,600 second-feet Dec. 22 (gage height, 12.3 feet); minimum, 33 second-feet Sept. 3 (gage height, 0.09 foot).
1929-34: Maximum discharge, that of Dec. 22, 1933; minimum, that of Sept. 3, 1934.

Remarks.- Records good except those estimated Dec. 19-21, which are fair. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	420	1,900	364	1,340	750	547	2,120	298	157	86	53	40
2	364	4,170	461	1,750	675	2,530	1,730	308	161	85	56	38
3	315	3,830	530	3,240	605	1,600	1,380	399	148	84	71	35
4	284	2,390	550	2,700	545	1,180	1,150	401	140	82	63	35
5	257	1,690	3,260	2,210	490	1,790	938	972	130	76	56	36
6	230	1,280	9,410	1,690	458	2,160	800	856	138	76	56	40
7	209	1,010	3,700	1,380	474	1,620	675	628	138	77	55	40
8	196	820	2,420	1,120	585	1,250	585	525	146	86	52	41
9	212	685	3,680	938	605	965	525	443	140	79	51	41
10	180	592	3,880	965	545	800	474	399	128	71	50	65
11	170	530	3,000	938	508	675	428	356	118	69	50	51
12	161	480	2,790	1,180	458	585	399	327	113	65	51	94
13	155	434	2,440	1,890	428	525	367	303	110	64	52	107
14	151	405	2,240	2,160	399	474	342	283	105	63	50	63
15	139	377	1,890	1,520	384	428	322	271	103	66	46	52
16	165	391	1,520	1,760	370	414	317	269	105	102	47	50
17	163	364	4,290	2,330	353	370	298	255	100	105	48	47
18	174	336	7,880	1,730	330	350	279	241	96	76	50	45
19	653	384	6,690	2,920	317	327	262	287	95	69	47	45
20	964	391	8,290	3,600	312	315	246	297	94	67	43	44
21	530	391	11,600	5,400	298	298	239	239	91	66	43	43
22	1,130	420	13,500	5,950	286	288	234	214	95	65	42	53
23	1,870	434	6,280	5,190	274	271	251	200	94	63	41	227
24	1,320	449	3,600	3,020	264	262	241	193	87	59	41	80
25	930	420	3,940	2,350	255	253	297	193	85	59	41	63
26	710	391	4,000	1,850	251	248	246	167	94	60	41	58
27	1,080	420	2,910	1,550	349	357	269	178	100	61	40	55
28	4,620	420	2,260	1,280	310	1,950	258	161	99	63	42	53
29	5,180	391	1,940	1,080		1,890	253	157	95	63	43	52
30	3,310	377	1,770	938		1,480	291	180	90	58	41	51
31	2,240		1,580	855		1,520		163		56	40	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	5,180	139	925	7.46	8.60	56,890
November	4,170	336	886	7.15	7.98	52,700
December	13,500	364	3,957	31.9	36.78	243,300
January	5,950	855	2,158	17.4	20.06	132,500
February	750	251	424	3.42	3.56	23,560
March	2,530	248	894	7.21	8.31	54,990
April	2,120	234	541	4.36	4.86	32,160
May	972	157	328	2.65	3.06	20,200
June	161	85	113	.911	1.02	6,730
July	105	56	71.7	.578	.67	4,410
August	71	40	48.5	.391	.45	2,980
September	227	35	58.1	.469	.52	3,460
The year	13,500	35	876	7.06	95.87	633,900

Cowlitz River at Packwood, Wash.

Location.- Water-stage recorder in SE¼ sec. 16, T. 13 N., R. 9 E., half a mile above Skate Creek and half a mile northwest of Packwood.

Drainage area.- 287 square miles.

Records available.- September 1929 to September 1934. July 1911 to December 1919, 1 mile upstream.

Average discharge.- 13 years, 1,639 second-feet.

Extremes.- Maximum discharge during year, 36,600 second-feet Dec. 21 (gage height, 13.0 feet); minimum, 235 second-feet Sept. 26, 27 (gage height, 2.48 feet).
1911-19, 1929-34: Maximum discharge, that of Dec. 21, 1933; minimum, 160 second-feet Nov. 21, 1929 (gage height, 2.10 feet).

Remarks.- Records good. No diversions or regulation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,260	2,820	795	2,950	2,670	1,830	3,820	2,200	1,960	1,040	615	510
2	1,070	8,730	784	2,740	2,550	6,570	3,180	2,200	1,780	1,040	716	524
3	958	7,310	762	4,400	2,400	4,000	2,740	2,270	1,780	980	680	531
4	886	4,440	720	4,400	2,140	3,100	2,530	3,200	1,780	970	601	552
5	806	3,240	998	4,000	1,960	4,060	2,340	5,280	1,840	1,030	567	545
6	751	2,480	4,140	3,180	1,840	5,390	2,400	3,560	1,900	1,050	636	510
7	740	2,050	3,560	2,670	1,840	3,730	2,820	3,020	1,840	980	573	458
8	710	1,740	2,520	2,270	1,840	3,020	3,100	2,740	1,780	864	559	390
9	822	1,500	11,100	2,020	1,780	2,530	2,810	2,460	1,840	848	580	390
10	586	1,360	18,600	2,020	1,660	2,340	2,600	2,540	1,900	864	594	385
11	550	1,200	10,700	1,840	1,540	2,200	2,740	2,600	2,020	856	587	341
12	518	1,090	8,240	1,780	1,460	2,340	3,180	2,530	2,020	856	587	532
13	496	970	5,900	1,840	1,380	2,530	3,640	2,670	1,840	848	601	672
14	456	898	3,990	1,840	1,320	2,800	3,640	2,950	1,660	872	608	531
15	421	839	2,930	1,660	1,250	2,600	3,400	3,180	1,530	880	629	421
16	1,230	828	2,260	1,920	1,220	2,400	3,250	3,020	1,310	1,180	672	415
17	1,290	773	2,700	2,340	1,180	2,140	2,880	2,600	1,310	1,120	650	397
18	2,470	720	5,390	2,080	1,150	2,020	2,810	2,270	1,360	840	601	385
19	4,420	720	4,670	3,690	1,150	1,960	3,250	2,200	1,110	792	587	363
20	4,640	730	6,800	4,620	1,140	1,960	3,730	2,080	1,050	748	601	336
21	2,620	1,450	21,500	4,100	1,100	1,960	4,100	1,960	1,110	658	622	330
22	6,350	2,010	24,200	9,670	1,060	1,960	4,400	2,080	1,160	594	622	325
23	9,440	1,920	11,700	11,800	1,050	1,960	4,400	2,530	977	594	636	310
24	5,390	1,640	5,640	4,940	1,040	1,840	3,640	2,880	898	636	636	270
25	4,320	1,420	4,200	3,560	990	1,720	3,480	2,810	916	718	650	255
26	3,140	1,270	3,730	3,100	961	1,660	3,160	2,950	907	848	658	240
27	3,350	1,190	3,400	2,670	1,110	2,490	3,250	3,180	848	896	665	240
28	6,220	1,050	3,180	2,460	1,200	5,530	3,100	3,250	872	889	686	245
29	6,570	934	3,910	2,400		8,400	2,740	3,400	864	792	622	255
30	4,560	850	4,200	2,400		6,300	2,400	3,020	952	695	559	280
31	3,350		3,560	2,460		4,720		2,340		622	524	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	9,440	421	2,586	9.01	10.39	159,000
November	8,730	720	1,939	6.76	7.54	115,400
December	24,200	720	6,025	21.0	24.21	370,500
January	11,800	1,660	3,349	11.7	13.49	205,900
February	2,670	961	1,499	5.22	5.44	83,230
March	8,400	1,660	3,157	11.0	12.68	194,100
April	4,400	2,340	3,185	11.1	12.38	189,500
May	5,280	1,960	2,767	9.64	11.11	170,100
June	2,020	848	1,437	5.01	5.59	85,520
July	1,180	594	858	2.99	3.45	52,760
August	718	524	618	2.15	2.48	37,980
September	672	240	397	1.38	1.54	23,640
The year	24,200	240	2,331	8.12	110.30	1,688,000

Cowlitz River at Mossy Rock, Wash.

Location.- Wire-weight gage in sec. 1, T. 12 N., R. 2 E., at Harmony Bridge, 1 mile north of Mossy Rock and 2½ miles above Tilton River. Prior to Mar. 9, 1934, staff gage at same location and datum.

Drainage area.- 1,170 square miles.

Records available.- January 1912 to September 1917 (incomplete); March 1926 to September 1934.

Average discharge.- 10 years (1913-17, 1926-31, 1933-34), 4,901 second-feet.

Extremes.- Maximum discharge recorded during period March to September 1933, 23,400 second-feet June 9 (gage height, 14.3 feet); minimum, 1,600 second-feet Sept. 11 (gage height, 2.75 feet).

Maximum discharge recorded during year ending Sept. 30, 1934, 81,000 second-feet Dec. 22 (gage height, 36.55 feet); minimum discharge, 857 second-feet Sept. 26-30; minimum gage height, 2.13 feet Sept. 29, 30.

1912-17, 1926-34: Maximum discharge, that of Dec. 22, 1933; minimum, 630 second-feet Nov. 21-24, Dec. 3, 5-8, 1929.

Remarks.- Records fair. Records from Mar. 1 to Sept. 30, 1933 supersede those published in Water-Supply Paper 754. Discharge estimated Mar. 1-10, 1933. No diversions above station.

Discharge, in second-feet, 1933

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							4,990	9,080	11,700	9,020	4,240	2,060
2							4,830	8,570	10,500	9,020	4,240	1,930
3							5,470	8,060	11,700	9,200	4,240	1,930
4							5,790	7,390	13,900	8,840	4,070	1,930
5							5,790	7,230	14,500	8,660	4,580	1,930
6						3,000	5,630	6,750	13,900	9,200	4,750	2,190
7							5,470	6,430	12,500	9,380	4,070	2,190
8							5,150	5,950	13,700	10,100	4,070	1,930
9							4,830	5,630	22,700	9,380	4,070	1,800
10							4,510	5,310	19,000	8,320	3,750	1,800
11						4,670	4,190	5,150	15,200	7,810	3,590	1,670
12						5,630	4,350	5,790	14,300	8,490	3,590	1,800
13						6,110	4,040	6,270	18,700	8,840	3,430	1,670
14						5,790	4,190	7,070	21,800	9,380	3,280	1,800
15						5,470	4,350	7,390	22,700	9,740	3,280	1,930
15						5,470	4,510	7,070	21,600	10,500	3,140	2,190
17						5,470	4,350	6,910	18,300	8,840	3,140	2,320
18						5,310	4,190	6,910	14,900	8,490	3,140	2,060
19						5,150	4,040	6,750	12,500	7,300	3,000	1,930
20						5,470	4,040	6,750	11,300	6,960	2,860	1,930
21						5,470	4,350	6,910	11,100	6,280	2,580	2,190
22						5,310	4,830	7,070	10,900	5,940	2,450	2,860
23						4,990	5,950	7,390	10,700	5,600	2,450	3,280
24						4,670	7,070	8,060	10,500	5,940	2,450	3,140
25						4,510	7,890	11,100	10,900	5,940	2,450	2,860
26						4,190	7,550	15,400	11,900	5,770	2,450	2,720
27						4,190	8,400	13,100	11,700	5,600	2,320	2,860
28						4,350	10,500	9,610	11,100	5,090	2,190	3,000
29						4,350	11,300	12,100	10,500	4,750	2,190	4,580
30						4,510	10,300	14,900	9,560	5,430	2,320	4,070
31						5,150		14,300		4,580	2,190	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October						
November						
December						
January						
February						
March	6,110		4,395	3.76	4.34	270,200
April	11,300	4,040	5,762	4.92	5.49	342,600
May	15,400	5,150	8,271	7.07	8.15	508,600
June	22,700	9,560	14,140	12.1	13.50	841,100
July	10,500	4,580	7,690	6.57	7.57	472,800
August	4,750	2,190	3,244	2.77	3.19	199,500
September	4,580	1,670	2,352	2.01	2.24	139,900
The period						2,775,000

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Cowlitz River at Mossy Rock, Wash.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,590	9,740	3,140	15,400	12,100	4,250	11,400	4,850	3,660	2,090	1,550	1,130
2	3,140	11,700	3,000	13,300	11,700	5,300	9,670	4,550	3,380	1,970	1,490	1,190
3	3,140	22,700	3,140	17,700	11,400	12,900	8,310	4,700	3,100	1,850	1,730	1,190
4	2,720	19,600	3,000	20,900	10,400	10,600	7,970	4,400	2,840	1,730	1,610	1,130
5	2,580	14,100	3,000	16,800	9,670	9,670	7,290	7,630	2,970	2,330	1,490	1,080
6	2,450	10,500	12,300	16,300	9,160	12,900	6,950	8,140	3,240	2,090	1,490	1,190
7	2,450	8,320	20,900	13,100	8,480	14,100	6,780	6,780	3,380	2,210	1,430	1,130
8	2,190	6,960	13,900	11,000	7,120	11,400	7,120	5,940	3,380	1,970	1,370	1,190
9	2,190	6,110	17,500	9,850	6,780	9,550	7,120	5,620	3,380	1,850	1,310	1,130
10	2,060	5,430	45,100	9,500	6,440	8,650	6,610	5,000	3,380	1,850	1,310	1,130
11	1,930	4,920	54,500	8,820	6,270	7,630	6,270	5,000	3,380	1,730	1,310	1,130
12	1,930	4,560	40,800	8,310	5,780	7,460	6,440	4,850	3,380	1,730	1,310	1,130
13	1,930	4,240	32,300	8,310	5,620	7,460	7,120	4,850	3,520	1,730	1,370	1,430
14	1,800	3,910	23,200	8,650	5,300	7,460	7,290	4,850	3,240	1,730	1,250	1,370
15	1,800	3,590	17,000	8,140	5,150	7,630	7,460	5,000	3,100	1,850	1,250	1,310
16	1,800	3,590	13,100	8,310	4,850	7,460	7,120	5,000	2,970	1,850	1,370	1,130
17	2,720	3,430	11,500	10,000	4,550	6,610	6,610	5,000	2,550	2,090	1,430	1,130
18	2,720	3,280	21,400	10,000	4,550	6,100	6,270	4,400	2,710	2,090	1,430	1,080
19	4,580	3,140	23,400	11,700	4,250	5,620	6,100	4,100	2,580	1,850	1,310	1,080
20	9,920	3,140	25,500	22,800	4,250	5,300	6,610	3,660	2,450	1,850	1,250	1,020
21	6,960	3,280	39,500	21,400	4,250	5,460	7,120	3,520	2,450	1,730	1,250	965
22	5,770	4,240	66,400	22,800	4,100	5,150	7,460	3,660	2,450	1,550	1,250	1,130
23	14,300	4,750	71,300	39,000	3,950	5,150	7,630	3,800	2,450	1,310	1,250	1,080
24	15,400	4,410	45,600	40,800	3,950	5,000	7,460	3,950	2,330	1,430	1,250	1,020
25	10,300	4,240	31,000	24,900	3,660	4,850	6,950	4,550	1,970	1,370	1,190	910
26	8,150	3,910	25,900	19,800	3,660	4,550	6,610	4,250	2,210	1,490	1,250	857
27	6,790	3,750	20,900	17,000	3,660	4,850	6,270	4,400	2,090	1,550	1,370	857
28	8,660	3,590	18,600	14,600	4,100	7,800	6,100	4,550	1,970	1,850	1,430	857
29	18,500	3,280	17,900	13,500		13,900	5,780	4,700	1,970	1,850	1,370	857
30	16,200	3,280	17,700	12,700		14,600	5,300	4,700	1,730	1,730	1,250	857
31	12,500		17,700	12,300		12,900		4,250		1,490	1,250	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	18,500	1,800	5,844	4.99	5.75	359,300
November	22,700	3,140	6,390	5.46	6.09	380,300
December	71,300	3,000	24,520	21.0	24.21	1,508,000
January	40,800	8,140	15,800	13.5	15.56	971,300
February	12,100	3,660	6,255	5.35	5.57	347,400
March	14,600	4,250	8,147	6.96	8.02	500,900
April	11,400	5,300	7,106	6.07	6.77	422,900
May	8,140	3,520	4,860	4.15	4.78	298,800
June	3,660	1,730	2,808	2.40	2.68	167,100
July	2,330	1,310	1,809	1.55	1.79	111,300
August	1,730	1,190	1,360	1.16	1.34	83,640
September	1,430	857	1,090	.932	1.04	64,840
The year	71,300	857	7,204	6.16	83.60	5,216,000

Cowlitz River near Mayfield, Wash.

Location.- Water-stage recorder in NE¼ sec. 24, T. 12 N., R. 1 E., 1 mile above Mill Creek and 2½ miles west of Mayfield.

Drainage area.- 1,400 square miles.

Records available.- April to September 1934. August 1910 to November 1911 at site 2½ miles upstream.

Extremes.- Maximum discharge during period April to September 1934 not determined; minimum daily discharge, 960 second-feet Sept. 29, 30 (gage height, 7.61 feet). 1910-11, 1934: Maximum recorded discharge, 35,000 second-feet Nov. 19, 1911 (gage height, 35.0 feet, former datum); minimum daily discharge, that of Sept. 29, 30, 1934. Discharge known to have been greater during December 1933.

Remarks.- Records fair April to June, good July to September. Discharge estimated Apr. 1-26, 28, 29, May 6, 13, 19, 20, 27, June 3, 10, 17, 24, July 1. No diversions above station.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							12,000	5,280	4,010	2,600	1,630	1,310
2							10,000	4,910	3,650	2,190	1,600	1,270
3							8,700	5,280	3,470	2,260	1,770	1,280
4							8,300	5,090	3,290	2,190	1,770	1,280
5							7,600	8,870	3,290	2,190	1,610	1,320
6							7,200	9,500	3,560	2,260	1,590	1,320
7							7,100	7,910	3,650	2,260	1,600	1,270
8							7,400	7,240	3,740	2,190	1,520	1,220
9							7,400	6,420	3,650	2,120	1,490	1,160
10							6,900	5,850	3,600	2,050	1,460	1,170
11							6,500	5,470	3,560	2,050	1,470	1,230
12							6,700	5,470	3,560	1,980	1,450	1,330
13							7,400	5,470	3,470	1,910	1,440	1,700
14							7,600	5,470	3,380	1,910	1,430	1,840
15							7,800	5,660	3,290	1,980	1,430	1,540
16							7,400	5,850	3,200	2,050	1,460	1,310
17							6,900	5,660	2,900	2,330	1,500	1,240
18							6,500	5,660	3,120	2,330	1,510	1,180
19							6,400	5,350	3,120	1,980	1,410	1,150
20							6,900	5,040	2,950	1,910	1,400	1,120
21							7,400	4,730	2,950	1,840	1,390	1,100
22							7,800	4,730	2,790	1,700	1,410	1,160
23							8,000	4,550	2,710	1,630	1,430	1,190
24							7,800	4,010	2,670	1,600	1,430	1,140
25							7,200	4,910	2,630	1,630	1,430	1,050
26							6,900	4,550	2,630	1,700	1,430	1,020
27							6,620	4,500	2,630	1,840	1,450	980
28							6,300	4,460	2,560	1,840	1,490	970
29							5,980	4,730	2,560	1,980	1,540	960
30							5,660	4,730	2,480	1,840	1,460	960
31								5,090		1,700	1,380	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October						
November						
December						
January						
February						
March						
April	12,000	5,660	7,412	5.29	5.90	441,000
May	9,500	4,010	5,563	3.97	4.58	342,000
June	4,010	2,480	3,169	2.26	2.52	188,600
July	2,600	1,600	2,001	1.43	1.65	123,100
August	1,770	1,380	1,496	1.07	1.23	91,990
September	1,840	960	1,226	.876	.98	72,930
The period						1,260,000

Cowlitz River at Castle Rock, Wash.

(Formerly published as Cowlitz River near Castle Rock, Wash.)

Location.- Water-stage recorder in SE¼ sec. 10, T. 9 N., R. 2 W., at highway bridge at Castle Rock, 2⅛ miles below mouth of Toutle River and 14 miles above mouth. From Dec. 10, 1933, to June 13, 1934, wire-weight gage was used at same location and datum. Prior to Dec. 10, 1933, staff gage was used 2 miles upstream.

Drainage area.- 2,210 square miles.

Records available.- December 1926 to September 1934.

Extremes.- Maximum discharge recorded during year, 139,000 second-feet Dec. 23 (gage height, 26.6 feet, present datum); minimum, 1,260 second-feet Sept. 30 (gage height, 1.24 feet, present datum).

1926-34: Maximum recorded discharge, that of Dec. 23, 1933; minimum discharge, 1,230 second-feet Nov. 23, 1929; minimum gage height, that of Sept. 30, 1934.

Remarks.- Records good except those estimated Dec. 11-17, 25, 26, June 12, which are fair. No diversions.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,650	15,700	4,780	26,500	17,600	7,660	21,400	6,970	5,600	2,780	2,150	1,660
2	5,050	19,200	4,780	23,200	16,000	21,000	20,100	6,510	5,160	2,870	2,130	1,630
3	4,530	41,300	5,650	32,900	15,700	25,500	16,000	6,970	4,720	2,870	2,240	1,630
4	4,300	35,000	5,650	30,900	14,600	19,700	13,600	6,740	4,500	2,870	2,410	1,640
5	4,080	23,600	7,000	32,400	13,200	16,800	12,200	9,040	4,400	2,780	2,240	1,630
6	3,860	16,800	47,000	27,400	12,200	24,100	10,900	14,200	4,500	2,780	2,130	1,640
7	3,700	13,000	47,000	22,300	11,600	26,900	10,300	11,200	4,610	2,760	2,120	1,630
8	3,700	11,300	31,600	18,700	12,500	21,800	10,100	9,790	4,720	2,870	2,010	1,580
9	3,540	10,100	46,200	16,100	12,200	17,600	10,600	8,810	4,720	2,680	1,950	1,520
10	3,380	8,940	102,000	16,400	11,200	14,600	9,790	7,890	4,610	2,590	1,930	1,530
11	3,380	7,770		16,100	10,300	12,900	9,040	7,430	4,610	2,590	1,930	1,630
12	3,220	7,000	80,000	16,100	9,530	11,600	8,810	7,200	4,560	2,500	1,920	1,840
13	3,220	6,300		18,300	9,040	10,900	9,040	6,970	4,500	2,500	1,880	2,410
14	3,070	5,970		19,900	8,580	10,600	9,530	6,740	4,400	2,500	1,870	2,500
15	3,070	5,650	30,000	16,100	8,120	10,300	9,530	6,970	4,180	2,500	1,840	2,240
16	3,070	5,340		17,200	7,890	10,300	9,280	6,970	4,080	2,590	1,820	1,670
17	3,700	5,340		20,700	7,660	9,790	9,280	6,970	3,770	2,780	1,850	1,680
18	4,060	4,780	72,400	19,100	7,430	9,040	8,580	6,510	3,670	2,970	1,880	1,600
19	6,300	4,530	69,600	22,600	7,200	8,350	8,120	6,050	3,670	2,680	1,800	1,520
20	14,300	4,780	62,600	46,600	6,970	8,120	8,120	6,280	3,470	2,500	1,770	1,470
21	12,100	4,760	95,500	47,400	6,740	7,660	8,580	6,050	3,370	2,410	1,760	1,420
22	9,720	6,300	123,000	46,100	6,510	7,660	8,810	5,490	3,370	2,320	1,760	1,480
23	19,200	7,330	134,000	71,700	6,510	7,430	9,040	5,380	3,470	2,240	1,760	1,760
24	22,400	7,000	104,000	64,600	6,280	7,200	9,530	5,490	3,270	2,120	1,760	1,630
25	15,200	6,300	75,000	43,100	6,050	6,970	8,810	6,050	3,070	2,120	1,770	1,470
26	12,500	5,970	60,000	31,600	6,050	6,740	8,580	6,050	2,970	2,150	1,770	1,410
27	10,900	5,650	44,300	26,400	6,050	6,970	8,120	5,820	2,970	2,240	1,770	1,340
28	12,100	5,650	35,500	22,700	7,660	8,580	8,120	6,050	2,970	2,410	1,800	1,300
29	29,500	5,340	31,900	20,100		21,400	8,120	6,050	2,870	2,500	1,850	1,290
30	28,200	5,050	31,900	18,400		22,300	7,430	6,280	2,870	2,410	1,840	1,290
31	21,100		30,900	18,000		21,400		6,510		2,240	1,790	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	29,500	3,070	9,101	4.12	4.75	559,600
November	41,300	4,530	10,390	4.70	5.24	618,500
December	134,000	4,780	52,660	23.8	27.44	3,238,000
January	71,700	16,100	23,070	12.7	14.64	1,726,000
February	17,600	6,050	9,720	4.40	4.58	539,800
March	26,900	6,740	13,610	6.16	7.10	836,000
April	21,400	7,430	10,320	4.67	5.21	613,900
May	14,200	5,360	7,143	3.23	3.72	439,200
June	5,600	2,870	3,988	1.80	2.01	237,300
July	2,970	2,120	2,553	1.16	1.34	157,000
August	2,410	1,760	1,919	.868	1.00	118,000
September	2,500	1,290	1,641	.743	.83	97,670
The year	134,000	1,290	12,680	5.74	77.86	9,182,000

Clear Fork of Cowlitz River near Packwood, Wash.

Location.- Water-stage recorder in NE¼ sec. 29, T. 14 N., R. 10 E., three-quarters of a mile above mouth and 7 miles northeast of Packwood.

Drainage area.- 56 square miles.

Records available.- August 1907 to September 1917, August 1930 to September 1934.

Extremes.- Maximum discharge during year, 8,030 second-feet Dec. 22 (gage height, 11.7 feet); minimum, 40 second-feet Sept. 30 (gage height, 2.55 feet).
1907-17, 1930-34: Maximum discharge, that of Dec. 22, 1933; minimum (estimated), 35 second-feet Oct. 20, 1931.

Remarks.- Records good except those estimated Nov. 9, 10, 26-30, Dec. 4-7, which are fair. No regulation. Small diversion a few hundred feet above gage to accommodate fish hatchery.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	195	421	221	580	492	363	544	293	224	155	84	49
2	173	1,090	219	560	471	1,080	455	290	206	153	86	49
3	163	1,180	217	896	443	726	398	293	202	143	88	47
4	149	756	190	792	398	544	359	358	219	141	84	47
5	140	580	210	765	359	798	336	630	248	145	76	47
6	131	468	430	602	333	1,000	345	459	273	145	74	47
7	124	402	550	522	320	668	398	390	276	141	73	47
8	116	356	468	451	323	518	443	348	276	126	72	47
9	112	331	2,330	418	305	432	401	314	276	123	70	50
10	107	307	3,560	402	284	376	376	299	281	123	70	54
11	100	282	2,000	390	270	348	366	317	290	121	70	51
12	96	264	1,540	377	253	352	443	311	287	116	72	97
13	94	252	1,070	380	242	386	496	320	264	118	70	130
14	94	243	792	368	232	416	500	348	248	119	70	91
15	91	234	648	342	224	416	476	383	232	119	69	69
16	160	237	560	398	222	386	505	362	209	119	67	59
17	188	223	663	468	214	345	428	302	206	118	69	56
18	305	217	1,140	416	209	314	401	262	204	109	66	51
19	788	217	880	679	209	302	455	282	161	104	63	50
20	749	221	1,300	792	204	296	522	253	179	104	62	47
21	397	289	4,040	715	202	306	544	234	183	96	60	47
22	763	482	5,700	1,620	197	302	576	248	181	93	59	56
23	1,140	418	2,990	2,280	192	290	572	293	161	90	58	52
24	721	348	1,180	1,050	188	276	476	342	151	90	56	47
25	615	299	940	696	183	262	476	326	153	98	55	45
26	428	280	792	572	183	253	428	339	153	101	54	44
27	468	270	715	484	209	352	416	362	145	101	54	42
28	1,050	260	648	447	224	766	409	383	149	98	54	41
29	1,100	240	692	432		1,040	352	412	145	88	52	41
30	715	230	765	443		815	314	352	155	85	51	41
31	510		692	492		657		282		84	49	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,140	91	387	6.91	7.97	23,770
November	1,180	217	380	6.79	7.58	22,610
December	5,700	190	1,230	22.0	25.36	75,650
January	2,280	342	646	11.5	13.26	39,730
February	492	183	271	4.84	5.04	15,040
March	1,080	253	496	8.86	10.22	30,520
April	576	314	441	7.88	8.79	26,240
May	530	234	334	5.96	6.87	20,520
June	290	145	212	3.79	4.23	12,620
July	155	84	115	2.05	2.36	7,070
August	68	49	66.4	1.19	1.37	4,080
September	130	41	54.7	.977	1.09	3,250
The year	5,700	41	388	6.93	94.14	281,100

Lake Creek near Packwood, Wash.

Location.- Water-stage recorder in sec. 21, T. 13 N., R. 10 E., 500 feet below outlet of Packwood Lake and 6 miles east of Packwood.

Drainage area.- 18.8 square miles.

Records available.- September 1911 to September 1924, September 1930 to September 1934.

Average discharge.- 17 years, 104 second-feet.

Extremes.- Maximum discharge during year, 1,400 second-feet Dec. 22 (gage height, 5.9 feet); minimum daily discharge, 33 second-feet Sept. 29, 30 (gage height, 1.70 feet).

1911-24, 1930-34: Maximum discharge, that of Dec. 22, 1933; minimum, 29 second-feet Nov. 8, 1930 (gage height, 1.50 feet).

Maximum stage recorded, 6.0 feet (former datum) Dec. 18, 1917 (discharge not determined).

Remarks.- Records good except those estimated June 7-9, which are fair. No diversions; natural regulation in Packwood Lake.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	103	207	82	211	147	76	200	130	130	71	56	42
2	100	230	76	193	147	139	167	118	106	75	57	41
3	91	303	74	238	143	170	141	115	91	75	61	39
4	83	295	70	235	133	161	124	115	85	75	60	39
5	78	250	76	230	120	174	113	176	83	79	56	38
6	75	211	164	225	111	218	104	184	97	82	53	38
7	74	180	216	191	104	200	106	170	110	79	52	37
8	70	153	193	163	100	172	115	153	110	73	50	36
9	67	133	277	145	99	143	116	133	120	70	49	36
10	64	117	901	139	94	122	115	118	122	67	48	38
11	60	103	820	124	86	111	115	111	133	66	46	38
12	57	96	550	118	85	104	122	109	143	61	45	43
13	55	88	391	116	82	104	143	111	141	60	45	51
14	53	83	281	115	76	106	157	118	137	64	45	52
15	51	77	220	104	72	109	161	133	126	65	46	49
16	55	76	190	106	70	113	172	147	113	65	45	45
17	76	74	178	116	67	106	159	137	104	68	46	43
18	103	68	271	111	65	99	143	126	102	67	45	42
19	157	68	268	156	62	91	143	111	94	62	45	39
20	230	68	280	248	61	86	167	107	86	59	43	38
21	204	75	598	258	60	83	182	96	83	58	43	38
22	204	112	1,300	379	59	82	202	91	85	56	43	39
23	292	155	1,080	590	58	80	218	94	82	53	44	37
24	314	147	650	427	57	78	209	118	73	53	44	36
25	284	139	440	298	56	75	198	131	70	55	44	35
26	245	124	351	225	54	73	182	139	67	59	44	34
27	214	117	298	184	59	85	172	153	64	68	45	34
28	253	105	260	161	67	137	170	167	65	71	45	34
29	311	94	255	149		218	157	180	66	70	45	33
30	295	87	258	143		238	141	187	68	66	45	33
31	250		242	141		223		163		60	44	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	314	51	147	7.82	9.02	9,060
November	303	68	134	7.13	7.96	8,000
December	1,300	70	365	19.4	22.37	22,410
January	590	104	201	10.7	12.34	12,370
February	147	54	85.5	4.55	4.74	4,750
March	238	73	128	6.81	7.85	7,890
April	218	104	154	8.19	9.14	9,150
May	187	91	134	7.13	8.22	8,210
June	143	64	98.5	5.24	5.85	5,860
July	82	53	66.2	3.52	4.06	4,070
August	61	43	47.7	2.54	2.93	2,930
September	52	33	39.2	2.09	2.33	2,330
The year	1,300	33	134	7.13	96.81	97,030

Cispus River near Randle, Wash.

Location.- Water-stage recorder in NW¼ sec. 18, T. 11 N., R. 8 E. (unsurveyed), 500 feet above suspension bridge at Tower Rock ranger station and 8 miles southeast of Randle.

Drainage area.- 323 square miles.

Records available.- October 1910 to February 1912, September 1929 to September 1934.

Extremes.- Maximum discharge during year, 20,000 second-feet Dec. 22 (gage height, 12.7 feet); minimum daily discharge, 230 second-feet Sept. 28; minimum gage height, 2.46 feet Oct. 15.
1910-12, 1929-34: Maximum discharge, that of Dec. 22, 1933; minimum daily discharge, that of Sept. 28, 1934.

Remarks.- Records good except those estimated Oct. 7, 10-14, which are fair. No diversions or regulation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	659	2,300	752	4,040	2,410	1,430	3,720	1,290	1,060	860	416	424
2	645	3,340	760	3,940	2,370	3,380	3,000	1,230	940	850	464	344
3	612	4,860	768	6,140	2,260	2,900	2,600	1,230	860	860	525	344
4	586	3,790	752	5,720	2,150	2,410	2,360	1,350	660	850	432	365
5	568	2,900	961	4,880	2,010	2,860	2,140	2,700	670	850	400	344
6	568	2,370	4,380	4,040	1,840	4,250	2,060	2,300	930	670	400	323
7	562	1,950	4,100	3,300	1,860	3,620	2,090	1,960	930	880	393	316
8	556	1,720	2,970	2,700	1,990	3,000	2,160	1,730	940	670	386	281
9	544	1,560	5,670	2,360	1,860	2,600	2,110	1,570	970	790	386	295
10	528	1,390	11,000	2,360	1,700	2,340	1,960	1,450	970	700	393	337
11	513	1,260	8,500	1,960	1,610	2,160	1,920	1,440	1,000	620	379	288
12	497	1,160	9,040	1,810	1,540	2,090	2,040	1,390	1,020	534	372	330
13	481	1,080	6,640	1,870	1,430	2,130	2,230	1,380	992	534	379	358
14	466	1,030	4,600	1,760	1,360	2,200	2,280	1,390	981	552	386	309
15	450	980	3,370	1,600	1,310	2,200	2,230	1,430	970	561	393	281
16	487	964	2,600	1,970	1,320	2,110	2,180	1,410	940	590	408	274
17	526	918	2,830	2,600	1,320	1,910	1,990	1,300	950	630	424	260
18	614	872	5,260	2,280	1,300	1,760	1,790	1,200	940	543	379	274
19	1,050	842	5,260	4,930	1,290	1,680	1,840	1,180	890	516	372	254
20	1,530	842	7,470	6,980	1,270	1,620	1,990	1,190	880	498	372	248
21	1,140	850	13,500	5,720	1,250	1,610	2,040	1,140	880	464	379	260
22	1,480	956	19,000	7,210	1,230	1,610	2,200	1,120	890	432	379	274
23	2,370	1,020	13,300	10,400	1,200	1,520	2,210	1,190	850	424	379	260
24	2,150	940	7,410	7,190	1,170	1,440	1,980	1,310	810	440	386	242
25	1,890	910	5,510	5,300	1,140	1,380	1,980	1,320	790	472	372	236
26	1,560	865	4,670	4,250	1,100	1,310	1,730	1,340	820	507	400	236
27	1,560	850	3,940	3,620	1,230	1,510	1,680	1,360	820	543	400	236
28	3,050	820	3,520	3,100	1,240	2,140	1,670	1,300	840	525	386	230
29	4,600	790	5,090	2,700		4,460	1,520	1,320	850	489	393	236
30	3,620	775	5,510	2,600		4,360	1,410	1,340	860	448	432	242
31	2,820		4,980	2,410		4,140		1,210		408	416	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	4,600	450	1,248	3.86	4.45	76,720
November	4,880	775	1,497	4.63	5.17	89,110
December	19,000	752	5,623	17.4	20.06	345,700
January	10,400	1,600	3,928	12.2	14.07	241,500
February	2,410	1,100	1,564	4.84	5.04	86,840
March	4,460	1,310	2,391	7.40	8.53	147,000
April	3,720	1,410	2,104	6.51	7.26	125,200
May	2,700	1,120	1,422	4.40	5.07	87,410
June	1,060	790	910	2.82	3.15	54,150
July	880	408	616	1.91	2.20	37,900
August	525	372	399	1.24	1.43	24,560
September	424	230	290	.898	1.00	17,260
The year	19,000	230	1,842	5.70	77.43	1,333,000

Toutle River near Silver Lake, Wash.

Location.- Water-stage recorder in SE¼ sec. 19, T. 10 N., R. 1 E., under highway bridge half a mile below junction of North and South Forks, 5 miles northeast of Silver Lake, and 9 miles northeast of Castle Rock.

Drainage area.- 472 square miles.

Records available.- October 1919 to December 1923, September 1929 to September 1934. September 1909 to August 1912 at site 2 miles downstream.

Average discharge.- 10 years (1909-11, 1919-21, 1922-23, 1929-34), 2,112 second-feet.

Extremes.- Maximum discharge during year, 34,300 second-feet Dec. 23 (gage height, 22.7 feet, from high-water marks); minimum, 300 second-feet Sept. 7 (gage height, 1.74 feet).

1910-12, 1920-23, 1929-34: Maximum discharge, 35,600 second-feet Mar. 2, 1910; maximum gage height, that of Dec. 23, 1933; minimum discharge, 240 second-feet Nov. 21, 1929 (gage height, 1.67 feet).

Remarks.- Records good except those estimated Dec. 21-26, which are fair. No diversions or regulation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,260	3,490	1,130	5,350	3,650	2,070	4,060	1,120	885	605	390	315
2	1,140	5,370	1,380	5,350	3,490	4,790	3,730	1,130	899	587	420	310
3	1,060	10,700	1,560	8,260	3,330	3,730	3,250	1,250	857	569	485	310
4	995	6,400	1,520	7,490	3,090	3,250	2,850	1,380	857	551	485	310
5	935	4,600	3,260	6,360	2,930	3,610	2,530	2,930	824	533	430	310
6	892	3,650	17,000	5,350	2,770	4,700	2,370	2,690	844	515	452	305
7	844	3,090	11,800	4,700	2,690	4,230	2,210	2,210	830	497	425	305
8	796	2,690	7,000	4,140	3,010	3,730	2,060	1,910	830	485	405	305
9	773	2,370	15,800	3,610	2,850	3,250	1,910	1,690	804	468	390	310
10	755	2,060	23,700	4,060	2,610	2,930	1,810	1,520	773	458	385	360
11	731	1,910	14,700	3,890	2,450	2,610	1,690	1,400	749	446	385	360
12	707	1,700	13,200	3,980	2,290	2,370	1,620	1,330	737	441	380	651
13	701	1,570	10,500	4,700	2,130	2,210	1,570	1,250	725	436	380	704
14	713	1,450	7,310	5,170	2,060	2,060	1,520	1,200	695	436	375	545
15	689	1,360	5,700	4,320	1,910	1,980	1,460	1,160	701	436	370	446
16	707	1,360	4,500	4,700	1,780	1,910	1,530	1,140	701	527	370	458
17	837	1,320	6,960	5,170	1,640	1,740	1,430	1,140	669	569	365	385
18	898	1,200	17,000	4,410	1,530	1,600	1,350	1,130	683	485	365	360
19	1,980	1,220	17,500	6,990	1,470	1,500	1,290	1,160	677	458	355	345
20	3,130	1,280	18,800	13,200	1,430	1,420	1,270	1,260	671	468	350	345
21	2,060	1,320	28,000	11,300	1,400	1,350	1,260	1,070	659	458	345	335
22	2,210	1,600	29,000	13,800	1,350	1,320	1,240	1,010	677	446	345	365
23	2,930	1,510	31,000	16,000	1,300	1,280	1,220	958	695	436	340	485
24	2,770	1,450	28,000	11,000	1,270	1,230	1,260	928	665	425	335	415
25	2,370	1,400	20,000	7,650	1,230	1,200	1,340	913	641	420	335	390
26	1,980	1,290	15,000	6,360	1,210	1,170	1,270	885	623	420	340	355
27	2,210	1,290	9,860	5,530	1,710	1,580	1,260	871	641	425	345	340
28	4,610	1,310	7,630	4,790	1,610	2,700	1,200	844	647	430	350	340
29	6,680	1,200	7,220	4,320		3,570	1,150	824	641	415	345	335
30	6,040	1,170	6,830	3,980		3,410	1,160	920	617	410	330	330
31	4,320		6,360	3,890		3,330		972		400	320	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	6,680	669	1,891	4.01	4.62	116,300
November	10,700	1,170	2,411	5.11	5.70	143,500
December	31,000	1,130	12,560	26.6	30.67	772,000
January	18,000	3,810	6,561	13.9	16.03	404,600
February	3,650	1,210	2,150	4.56	4.75	119,400
March	4,790	1,170	2,504	5.31	6.12	154,000
April	4,060	1,150	1,796	3.81	4.25	106,800
May	2,930	624	1,297	2.75	3.17	79,730
June	699	617	731	1.55	1.73	43,510
July	605	400	473	1.00	1.15	29,070
August	485	320	377	.799	.92	23,190
September	704	305	382	.809	.90	22,710
The year	31,000	305	2,783	5.90	80.01	2,015,000

Youngs River near Astoria, Oreg.

Location.- Water-stage recorder in NW¼ sec. 27, T. 7 N., R. 9 W., 50 feet above crest of Youngs River Falls, 2½ miles southwest of Olney, and 9 miles southeast of Astoria. Zero of gage is 62.64 feet above mean sea level by general adjustment of 1929. Prior to Dec. 22, 1933, water-stage recorder at site 1 mile upstream (destroyed by flood of Dec. 22).

Drainage area.- 32 square miles at present site and 30 square miles at former site.

Records available.- January to September 1934; August 1927 to December 1933 at site 1 mile upstream; March 1916 to September 1917 (stage only) at site 3 miles upstream.

Extremes.- Maximum discharge during year, 3,890 second-feet Dec. 22 (gage height, 12.8 feet at present gage and 6.6 feet at gage 1 mile upstream); minimum, 5.9 second-feet Sept. 3-5.

1927-34: Maximum discharge (formerly published in error), about 6,300 second-feet Nov. 24, 1927 (gage height, 6.52 feet, at former gage); minimum, 4 second-feet Aug. 31 to Sept. 2, 1931.

Remarks.- Records good Mar. 12-31, Apr. 2-12, 30, May 1-22, June 16 to Sept. 30; others poor. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	245	77				*450	71		13	8.7	6.7
2	49	970	142				341	69		12	12	6.5
3	42	980	164				248	92		12	19	6.1
4	38	435	242			440	190	300		12	15	5.9
5	33	262	1,680				146	364		12	13	6.1
6	30	192	2,240				124	230		12	13	6.2
7	28	151	*1,000			298	109	166		12	11	6.2
8		134	462			*250	95	129	*25	12	10	6.5
9		114	1,250			*200	85	109		11	9.4	6.7
10		100				*165	79	92		11	9.2	7.1
11		88				*135	74	84		11	9.0	7.6
12		80				115	68	76		10	9.0	51
13		73				105		66		9.9	8.9	70
14		67				95		60		9.6	8.5	41
15		62				88		56		9.6	8.0	28
16		66	*1,290			90		56	21	36	8.2	20
17		65				84		57	19	28	8.7	16
18	*99	56				*78		50	18	16	8.9	14
19		66				72		98	18	13	8.4	13
20		77				66		83	18	13	7.8	12
21		87				61	*64	63	18	12	7.5	12
22		103	3,650			58		54	24	11	7.0	16
23		87				56			22	11	6.6	33
24		65				52			18	10	6.6	25
25		82				*50			16	10	6.6	19
26		74				48			15	11	6.6	15
27		79	*1,060			109		*36	15	11	6.8	14
28		106				267			15	10	6.8	13
29	510	88				204			15	10	7.1	13
30	425	62				187	76		14	9.4	7.1	12
31	256					185				9.0	6.9	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	510		115	3.88	4.42	7,040
November	980	56	172	5.73	6.39	10,230
December		77	1,159	38.6	44.50	71,260
January			*550	17.2	19.83	33,820
February			*100	3.12	3.25	5,550
March		48	186	5.81	6.70	11,420
April	450		106	3.31	3.69	6,290
May	364		89.5	2.80	3.23	5,510
June		14	21.4	.669	.75	1,270
July	36	9.0	12.6	.394	.45	773
August	19	6.6	9.07	.283	.33	558
September	70	5.9	17.0	.531	.59	1,010
The year		5.9	214	6.93	94.13	154,700

*Estimated.

WILSON RIVER BASIN

Wilson River near Tillamook, Oreg.

Location.- Staff gage in NW¼ sec. 18, T. 1 S., R. 8 W., 1 mile above North Fork and 7 miles east of Tillamook.

Drainage area.- 162 square miles.

Records available.- July 1931 to September 1934. December 1914 to November 1916 (incomplete) at station three-quarters of a mile downstream.

Extremes.- Maximum discharge during year, 30,000 second-feet Dec. 21 (gage height, 19.28 feet); minimum, 78 second-feet Sept. 3-6 (gage height, 0.76 foot).
1914-16, 1931-34: Maximum discharge, that of Dec. 21, 1933; minimum, 62 second-feet Oct. 6, 9, 10, 1932 (gage height, 0.38 foot).

Remarks.- Records good except those estimated Dec. 31, Jan. 7, 8, 20, 28, Feb. 2, 26-28, Apr. 1, 2, 5, 28, July 5, 6, which are fair. No diversions or regulation above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	630	2,440	405	2,340	1,050	2,030	3,700	520	269	161	106	83
2	600	5,410	405	2,030	940	5,790	3,000	680	260	150	130	82
3	455	6,060	482	7,210	880	4,510	2,340	1,530	236	140	125	78
4	405	3,320	830	4,150	800	3,220	1,830	2,340	228	135	120	78
5	382	1,830	5,960	3,440	760	2,780	1,530	2,780	220	132	120	78
6	360	1,430	17,000	2,560	685	4,030	1,330	2,450	213	131	116	78
7	315	1,250	8,300	2,100	840	3,110	1,140	1,630	213	130	111	82
8	295	1,120	5,150	1,800	1,140	2,340	1,050	1,050	206	140	106	82
9	295	990	5,410	1,530	1,330	1,830	880	880	206	130	106	85
10	275	830	7,160	1,730	1,050	1,630	800	720	192	130	102	85
11	258	760	6,880	1,730	960	1,330	720	650	185	125	102	98
12	240	690	7,720	2,030	960	1,140	685	520	185	120	98	296
13	240	660	5,020	3,330	800	960	580	520	185	120	98	305
14	233	570	3,670	4,880	720	840	550	490	179	120	98	179
15	226	510	3,100	3,000	650	720	520	460	179	120	93	155
16	258	482	2,440	4,510	580	650	490	460	179	220	93	135
17	275	455	7,860	4,030	550	650	460	460	179	185	93	130
18	295	430	16,800	3,000	520	580	405	432	173	130	93	125
19	382	540	14,100	4,510	490	550	405	432	173	130	93	125
20	1,630	510	15,800	6,000	490	520	380	380	173	130	89	116
21	870	482	21,200	9,530	460	490	355	380	179	130	89	102
22	1,160	455	27,500	9,850	432	460	355	355	173	125	89	116
23	3,210	430	15,400	9,050	405	432	650	330	170	120	89	155
24	2,330	405	11,900	5,660	405	405	580	330	167	120	89	145
25	2,330	405	9,050	4,150	380	355	550	330	173	120	89	130
26	1,730	382	6,210	3,000	390	490	432	305	173	116	85	120
27	1,730	382	5,270	2,340	750	1,730	355	296	170	116	85	120
28	3,790	455	3,910	1,900	700	2,560	350	287	167	111	85	120
29	5,410	405	5,140	1,530		3,110	520	287	167	106	85	111
30	3,670	382	4,270	1,330		2,560	490	296	164	106	85	111
31	2,660		3,300	1,140		2,890		269		106	85	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	5,410	226	1,192	7.35	8.47	73,270
November	6,060	382	1,149	7.09	7.91	68,370
December	27,500	405	7,988	49.3	56.84	491,200
January	9,850	1,140	3,722	23.0	26.52	228,900
February	1,330	380	718	4.43	4.61	39,900
March	5,790	355	1,764	10.9	12.57	108,500
April	3,700	350	914	5.64	6.29	54,410
May	2,780	269	744	4.59	5.29	45,720
June	269	164	191	1.18	1.32	11,380
July	220	106	131	.809	.93	8,040
August	130	85	98.3	.607	.70	6,040
September	305	78	124	.765	.85	7,350
The year	27,500	78	1,579	9.75	132.30	1,143,000

Trask River near Tillamook, Oreg.

Location.- Water-stage recorder in NW¼ sec. 30, T. 1 S., R. 8 W., half a mile above Gold Creek and 6 miles east of Tillamook.

Drainage area.- 152 square miles.

Records available.- July 1931 to September 1934.

Extremes.- Maximum discharge during year, 20,000 second-feet Dec. 22 (gage height, 13.00 feet); minimum, 79 second-feet Sept. 1-3 (gage height, 0.56 foot).
1931-34: Maximum discharge, that of Dec. 22, 1933; minimum, 64 second-feet Oct. 3-9, 1932 (gage height, 0.50 foot).
Maximum stage known, about 17 feet, probably occurred during floods of November 1921 or Mar. 31, 1931 (discharge, about 30,000 second-feet).

Remarks.- Records good. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	432	1,810	335	1,870	908	1,120	2,060	404	254	145	105	79
2	382	4,850	490	1,990	838	3,950	1,810	422	250	140	119	79
3	339	5,360	562	4,190	760	2,120	1,480	480	240	135	117	79
4	307	3,180	661	3,400	703	1,480	1,240	655	230	132	109	80
5	291	2,060	3,690	2,730	671	1,850	1,030	1,030	222	130	107	82
6	268	1,530	13,100	2,120	616	3,020	908	845	219	128	113	84
7	258	1,200	6,580	1,750	644	2,380	806	709	219	130	105	84
8	244	982	3,710	1,480	873	1,750	722	628	216	132	103	85
9	233	845	3,710	1,280	786	1,380	661	550	208	130	101	84
10	222	760	4,510	1,430	697	1,150	611	505	199	125	97	87
11	219	691	4,510	1,380	655	968	572	470	187	123	95	101
12	208	628	4,190	1,810	616	859	525	445	181	121	91	184
13	199	578	4,190	3,250	578	760	495	414	181	121	91	165
14	193	535	3,320	3,870	545	697	475	400	175	119	91	121
15	190	510	2,800	2,520	520	644	450	378	172	119	91	107
16	244	490	2,250	2,880	500	589	445	368	165	152	89	99
17	268	465	5,300	3,480	475	556	414	364	160	150	89	95
18	335	427	11,300	2,660	455	520	391	347	155	125	89	91
19	679	445	10,900	4,030	436	485	378	391	155	121	89	89
20	1,030	436	11,100	5,020	427	470	355	368	155	121	85	87
21	661	427	13,700	8,570	414	445	339	331	158	121	85	86
22	1,100	418	18,600	7,660	391	422	343	315	175	121	85	138
23	2,250	391	9,730	8,020	378	404	427	299	162	115	85	187
24	1,640	386	5,360	5,020	364	382	396	295	152	111	84	125
25	1,530	364	4,350	3,400	351	368	378	291	150	109	84	111
26	1,200	347	5,020	2,450	360	364	351	287	160	109	84	105
27	1,280	364	3,950	1,870	633	685	339	275	162	107	84	103
28	2,740	418	3,100	1,530	572	1,810	327	261	160	107	82	99
29	3,870	378	3,710	1,280		1,870	347	258	155	105	82	97
30	2,730	360	3,100	1,150		1,480	382	283	148	105	80	97
31	1,990		2,380	990		1,330		264		103	80	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	3,870	190	888	5.84	6.73	54,610
November	5,360	347	1,054	6.93	7.73	62,750
December	18,600	335	5,491	36.1	41.62	337,600
January	8,020	990	3,067	20.2	23.29	188,600
February	908	351	577	3.80	3.96	32,060
March	3,950	364	1,171	7.70	8.88	72,020
April	2,060	327	649	4.27	4.76	38,590
May	1,030	258	430	2.83	3.26	26,440
June	254	148	184	1.21	1.35	10,960
July	152	103	123	.809	.93	7,560
August	119	80	93.3	.614	.71	5,730
September	187	79	104	.684	.76	6,170
The year	18,600	79	1,165	7.66	103.98	843,100

Nestucca River near McMinnville, Oreg.

Location.- Water-stage recorder in SW¼ sec. 8, T. 3 S., R. 6 W., half a mile below dam at outlet of Meadow Lake and 13 miles northwest of McMinnville.

Drainage area.- 12 square miles.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge during year, 1,850 second-feet Dec. 22 (gage height, 5.10 feet); minimum, 1.5 second-feet Sept. 7-11 (gage height, 0.35 foot).
1928-34: Maximum discharge, that of Dec. 22, 1933; minimum, 1.0 second-foot Oct. 11, 1929.

Remarks.- Records fair. No diversions above gage. Flow regulated to a small extent by dam at outlet of Meadow Lake.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	57	14	110	43	42	89	16	7.2	4.6	2.7	1.8
2	9.8	116	15	103	44	153	89	17	7.2	4.6	2.8	1.8
3	8.8	156	22	157	44	114	76	18	7.0	4.1	2.8	1.7
4	7.9	105	24	165	41	85	63	20	7.0	3.8	2.8	1.7
5	7.2	76	60	136	40	83	53	24	6.8	3.6	2.8	1.6
6	6.4	57	628	107	38	98	46	23	6.4	3.5	2.8	1.6
7	6.1	47	345	88	38	85	41	21	6.1	3.4	2.7	1.5
8	5.7	40	160	75	51	74	36	18	6.1	3.4	2.6	1.5
9	5.3	36	125	66	51	62	33	17	6.1	3.4	2.6	1.5
10	5.0	32	111	68	46	51	35	16	5.9	3.4	2.5	1.5
11	5.0	29	122	67	42	46	36	14	5.8	3.3	2.4	1.5
12	4.8	26	247	78	39	41	30	13	5.5	3.2	2.4	1.7
13	4.7	24	217	119	37	38	27	12	5.4	3.2	2.4	1.9
14	4.7	22	165	161	35	34	25	12	5.2	3.1	2.4	2.0
15	4.6	20	136	128	33	32	22	11	5.1	3.0	2.4	2.0
16	4.7	19	102	119	31	30	18	11	4.9	3.2	2.3	2.0
17	4.8	18	140	129	30	28	15	10	4.8	3.3	2.2	2.0
18	5.2	18	667	112	28	26	15	10	4.8	3.3	2.1	2.0
19	7.0	17	1,130	131	28	25	16	10	4.7	3.2	2.1	2.0
20	11	18	938	195	27	25	15	11	4.6	3.1	2.1	1.9
21	12	17	938	400	28	23	15	10	4.6	3.1	2.0	1.9
22	15	16	1,600	360	25	22	14	9.6	4.8	3.1	2.0	2.1
23	28	16	788	310	24	20	16	9.0	5.6	3.1	2.0	2.4
24	32	15	325	188	22	15	16	8.7	5.4	3.1	2.0	2.4
25	32	15	221	142	22	12	16	8.1	5.1	3.0	2.0	2.4
26	29	14	224	108	22	12	16	8.4	4.9	3.0	2.0	2.4
27	26	14	190	86	30	22	15	8.1	4.9	3.0	1.9	2.4
28	36	15	161	70	34	79	14	7.9	5.1	3.0	1.9	2.4
29	85	14	188	60		100	14	7.5	4.9	2.9	1.8	2.3
30	82	14	171	54		80	15	7.3	4.8	2.9	2.0	2.2
31	66		140	48		70		7.3		2.8	1.9	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	85	4.6	18.5	1.54	1.78	1,140
November	156	14	36.1	3.01	3.36	2,150
December	1,600	14	333	27.8	32.05	20,450
January	400	48	134	11.2	12.91	8,210
February	51	22	34.7	2.89	3.01	1,930
March	153	12	52.5	4.38	5.05	3,230
April	89	14	31.0	2.58	2.88	1,850
May	24	7.3	12.8	1.07	1.23	785
June	7.2	4.6	5.56	.463	.52	331
July	4.6	2.8	3.30	.275	.32	203
August	2.8	1.8	2.30	.192	.22	142
September	2.4	1.5	1.94	.162	.18	115
The year	1,600	1.5	56.0	4.67	63.51	40,540

Siletz River at Siletz, Oreg.

Location.- Wire-weight gage in SW¼ sec. 9, T. 10 S., R. 10 W., at highway bridge three-quarters of a mile southwest of Siletz.

Drainage area.- 204 square miles.

Records available.- November 1905 to May 1912, January 1924 to September 1934.

Average discharge.- 14 years (1906-11, 1925-34), 1,750 second-feet.

Extremes.- Maximum discharge recorded during year, 28,700 second-feet Dec. 6 (gage height, 23.8 feet); minimum, 56 second-feet July 14 (gage height, 0.52 foot).
1905-12, 1924-34: Maximum discharge, 34,600 second-feet Nov. 22, 1909; minimum, 51 second-feet Dec. 6, 7, 1929.
Maximum discharge known, 40,800 second-feet Nov. 20, 1921 (gage height, 31.6 feet at present gage).

Remarks.- Records good except those above 15,000 second-feet and those for periods of rapidly changing discharge, which are poor. Discharge estimated Oct. 20, 21. No diversions for irrigation above station. Flow regulated occasionally at low and medium stages by operation of logging pond at Valsetz.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	910	3,050	480	3,060	1,330	560	4,910	450	245	134	101	81
2	660	5,300	480	3,060	1,080	8,300	4,650	430	230	138	108	80
3	525	7,740	480	5,820	1,020	3,930	3,260	370	215	134	115	81
4	480	5,040	1,210	5,170	1,020	2,960	2,670	492	215	131	107	82
5	440	3,370	1,420	4,290	900	2,310	2,070	1,330	215	124	102	81
6	420	2,550	28,700	4,410	650	3,930	1,540	850	215	120	101	80
7	420	1,940	16,800	3,370	900	3,370	1,020	850	215	113	101	81
8	360	1,560	5,430	2,230	1,400	3,590	960	582	202	107	100	80
9	325	1,350	3,810	1,990	1,260	1,990	960	560	202	101	96	80
10	308	1,150	4,290	2,230	1,020	1,750	900	538	185	92	95	81
11	308	1,030	4,530	2,150	900	1,610	850	492	180	75	94	82
12	308	970	7,180	2,230	850	1,540	700	430	170	64	92	91
13	308	910	5,170	2,960	800	1,260	605	390	161	61	91	143
14	308	760	5,300	5,170	750	1,080	390	350	153	56	90	100
15	308	710	4,910	2,580	560	900	275	390	149	58	91	87
16	290	710	3,930	3,590	390	700	515	330	145	113	90	86
17	290	660	2,960	4,290	492	582	430	370	145	141	88	85
18	272	615	12,800	3,480	560	515	410	370	141	136	88	82
19	325	660	15,400	4,650	700	515	390	390	141	131	87	81
20	750	710	16,400	8,720	650	450	370	370	141	122	86	79
21	400	615	15,400	11,000	560	370	350	350	141	117	85	80
22	615	525	24,200	11,900	450	245	350	310	153	113	83	107
23	1,630	480	13,100	12,200	410	157	492	260	149	112	83	115
24	1,350	440	8,160	7,740	370	170	370	215	145	117	82	90
25	2,460	440	6,080	6,480	350	180	260	215	145	113	82	81
26	1,780	440	7,320	4,050	370	185	260	202	153	112	83	80
27	1,700	440	6,080	2,960	1,020	275	275	180	145	108	85	79
28	3,480	548	4,650	2,310	450	6,480	275	190	141	107	87	79
29	7,460	480	6,760	1,910		5,300	350	202	138	110	86	78
30	5,560	480	5,300	1,830		3,590	290	215	138	107	85	78
31	4,170		3,930	1,540		3,260		245		106	82	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	7,460	272	1,255	6.15	7.09	77,200
November	7,740	440	1,522	7.46	8.32	90,590
December	28,700	480	7,828	38.4	44.27	481,300
January	12,200	1,540	4,496	22.0	25.36	276,400
February	1,400	350	758	3.72	3.87	42,070
March	8,300	157	2,002	9.81	11.31	123,100
April	4,910	260	1,042	5.11	5.70	61,980
May	1,330	180	417	2.04	2.35	25,620
June	245	138	170	.833	.93	10,140
July	141	56	109	.534	.62	6,690
August	115	82	91.8	.450	.52	5,640
September	143	78	86.3	.423	.47	5,140
The year	28,700	56	1,666	8.17	110.61	1,206,000

Siuslaw River above Wildcat Creek, at Austa, Oreg.

Location.- Staff gage in SE¼ sec. 16, T. 18 S., R. 8 W., a quarter of a mile above Wildcat Creek and Austa.

Drainage area.- 267 square miles.

Records available.- September 1931 to September 1934

Extremes.- Maximum discharge recorded during year, 6,890 second-feet Dec. 22 (gage height, 10.50 feet); minimum, 22 second-feet Sept. 22 (gage height, 1.06 feet). 1931-34: Maximum discharge recorded, 10,800 second-feet Jan. 2, 1933 (gage height, 13.90 feet); minimum, 22 second-feet Sept. 4, 5, 1931, Sept. 22, 1934.

Remarks.- Records good. No diversions or regulation above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	194	107	990	760	420	1,360	215	109	64	38	25
2	61	187	123	870	710	930	1,570	201	109	61	38	25
3	59	290	204	1,500	660	870	1,230	215	105	59	42	24
4	56	232	232	1,500	610	815	930	215	100	54	42	24
5	56	156	290	1,290	585	710	760	250	100	54	40	24
6	54	123	3,410	1,050	560	930	660	290	100	51	40	24
7	54	102	2,170	930	510	870	560	270	100	51	40	24
8	51	88	1,170	815	610	760	510	232	100	54	38	23
9	51	78	760	710	760	660	465	215	96	54	36	24
10	51	74	535	710	760	560	420	208	96	54	36	24
11	52	69	465	760	660	510	398	180	84	51	35	24
12	54	67	1,290	815	585	465	352	180	84	51	31	24
13	54	64	1,570	1,170	535	442	330	168	80	49	31	28
14	54	63	1,930	2,330	510	398	330	156	80	49	31	30
15	51	61	2,170	2,090	465	375	290	150	77	47	30	28
16	50	61	2,170	2,250	465	352	290	145	74	47	30	27
17	49	60	2,330	1,360	420	330	290	150	74	49	30	25
18	49	59	6,180	1,230	420	330	250	150	74	51	31	25
19	47	66	6,080	1,290	398	290	250	145	74	49	30	24
20	59	70	3,680	2,490	375	290	232	150	70	44	30	23
21	55	70	4,580	3,050	375	290	232	145	67	42	30	23
22	51	67	6,180	3,680	352	290	215	128	67	42	30	22
23	54	64	3,860	4,400	330	270	232	123	64	42	30	30
24	54	63	2,330	4,130	330	250	250	118	64	44	28	35
25	50	61	1,780	2,650	330	250	250	118	64	42	25	35
26	50	59	1,430	1,850	330	250	232	134	64	42	25	33
27	51	64	1,230	1,430	420	310	208	139	67	44	27	30
28	105	116	1,050	1,230	420	710	187	123	77	42	25	28
29	250	126	1,430	1,050		930	201	118	74	42	27	27
30	250	116	1,430	930		815	215	109	67	42	27	25
31	208		1,110	870		930		105		40	25	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	250	47	72.8	0.273	0.31	4,470
November	290	59	99.0	.371	.41	5,890
December	6,180	107	2,041	7.64	8.81	125,500
January	4,400	710	1,659	6.21	7.16	102,000
February	760	330	509	1.91	1.99	28,250
March	930	250	536	2.01	2.32	32,930
April	1,570	187	457	1.71	1.91	27,170
May	290	105	169	.633	.73	10,400
June	109	64	82.0	.307	.34	4,880
July	64	40	48.6	.182	.21	2,990
August	42	25	32.2	.121	.14	1,980
September	35	22	26.2	.098	.11	1,560
The year	6,180	22	481	1.80	24.44	348,000

Lake Creek at Triangle Lake, Oreg.

Location.- Water-stage recorder in NW¼ sec. 29, T. 16 S., R. 7 W., 500 feet below outlet of Triangle Lake.

Drainage area.- 50 square miles.

Records available.- August 1931 to September 1934.

Extremes.- Maximum discharge during year, 3,960 second-feet Dec. 22 (gage height, 8.14 feet); minimum, 8 second-feet Sept. 6-12 (gage height, 0.49 foot).
1931-34: Maximum discharge, that of Dec. 22, 1934; minimum, 8 second-feet Aug. 27 to Sept. 8, Oct. 3-12, 1931, Sept. 6-12, 1934.

Remarks.- Records good. No diversions above gage. Flow regulated by natural storage in Triangle Lake.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	138	40	515	262	129	383	86	41	23	15	9
2	30	128	41	460	250	163	484	65	40	22	15	9
3	28	140	47	495	230	244	460	85	40	22	15	9
4	27	155	55	620	215	230	390	83	39	21	15	8
5	25	141	77	645	200	212	319	92	36	20	15	8
6	24	117	414	575	188	225	267	110	35	20	15	8
7	24	97	958	495	195	244	228	113	35	20	15	8
8	22	83	930	436	210	230	202	111	35	19	14	8
9	22	79	630	386	210	207	181	104	35	19	14	8
10	21	66	433	355	197	183	160	95	34	19	14	8
11	21	60	335	342	183	165	145	86	33	19	13	8
12	21	54	349	342	169	152	141	80	32	19	13	8
13	21	50	449	380	158	139	137	74	32	18	13	9
14	21	47	497	495	150	131	129	70	30	18	13	11
15	20	44	525	575	143	121	121	67	29	18	12	11
16	20	42	545	535	137	115	117	63	29	17	12	11
17	20	40	565	495	129	110	113	60	28	17	12	11
18	20	39	1,400	484	123	104	110	59	27	17	12	11
19	20	39	2,350	478	121	82	104	56	26	17	11	10
20	21	39	2,000	555	117	74	98	56	25	17	11	10
21	21	39	2,350	695	113	80	97	54	25	17	11	10
22	21	38	3,780	870	110	82	92	53	24	17	11	10
23	21	36	2,830	1,090	108	83	88	51	24	17	10	11
24	21	35	1,740	1,120	104	82	97	48	23	16	10	12
25	22	35	1,200	952	100	80	102	48	23	16	10	12
26	22	34	952	745	102	77	98	48	23	16	9	11
27	24	34	770	575	113	88	86	48	23	16	9	11
28	31	36	645	484	123	165	83	47	23	16	9	11
29	55	40	620	418		294	85	44	23	16	9	11
30	109	40	620	362		300	86	43	23	15	9	10
31	141		575	319		297		42		15	9	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	141	20	30.6	0.612	0.71	1,880
November	155	34	65.5	1.31	1.46	3,900
December	3,780	40	927	18.5	21.33	56,970
January	1,120	319	558	11.2	12.91	34,300
February	282	100	160	3.20	3.33	8,890
March	300	74	158	3.16	3.64	9,730
April	484	83	173	3.46	3.86	10,320
May	113	42	69.7	1.39	1.60	4,290
June	41	23	29.8	.596	.67	1,780
July	23	15	18.0	.360	.42	1,110
August	15	9	12.1	.242	.28	744
September	12	8	9.73	.195	.22	579
The year	3,780	8	186	3.72	50.43	134,500

Umpqua River near Elkton, Oreg.

Location.- Staff gage in sec. 8, T. 23 S., R. 7 W., 4 miles south of Elkton. Zero of gage is approximately 95 feet above mean sea level by U. S. Geological Survey river profile.

Drainage area.- 3,680 square miles.

Records available.- October 1905 to September 1934, incomplete prior to November 1908.

Average discharge.- 29 years, 7,068 second-feet.

Extremes.- Maximum discharge during year, 53,200 second-feet Jan. 24 (gage height, 18.1 feet from flood marks); minimum, 754 second-feet Sept. 13, 14 (gage height, 0.98 foot).

1905-34: Maximum discharge recorded, 172,000 second-feet Feb. 21, 1927 (gage height, 41.0 feet); minimum, 640 second-feet July 18, 1926 (gage height, 0.71 foot).

A flood in 1861 is said to have reached a stage of 45 feet above low water, 20 miles downstream, at Scottsburg.

Remarks.- Records good. Some diversions for irrigation in South Umpqua River Basin, but low-water flow probably only slightly affected. No regulation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,180	1,950	1,220	4,340	5,740	2,800	9,300	2,060	1,620	1,170	868	770
2	1,160	1,900	1,220	4,030	5,370	2,860	14,200	2,300	1,570	1,140	868	770
3	1,140	1,840	1,200	6,330	4,840	3,320	13,900	2,540	1,520	1,110	850	770
4	1,120	1,730	1,520	10,100	4,500	4,500	10,600	2,500	1,520	1,080	850	762
5	1,100	1,620	1,900	13,300	4,030	5,010	8,790	2,670	1,520	1,060	850	762
6	1,080	1,520	2,180	9,820	3,880	5,740	7,600	2,600	1,470	1,040	850	762
7	1,070	1,420	5,550	7,160	3,740	6,950	6,530	2,480	1,320	1,050	850	762
8	1,050	1,320	6,740	5,930	3,880	6,740	5,930	2,420	2,600	1,030	834	762
9	1,050	1,270	4,840	5,190	5,370	5,550	5,190	2,360	2,360	1,010	834	762
10	1,050	1,200	3,060	4,670	5,370	4,840	4,670	2,300	2,180	994	834	762
11	1,030	1,150	2,420	4,180	5,010	4,340	4,180	2,240	1,950	976	818	762
12	1,030	1,110	2,740	4,030	4,500	3,880	3,880	2,120	1,840	976	818	762
13	1,010	1,100	5,550	4,030	4,030	3,600	3,600	2,060	1,680	976	818	754
14	1,010	1,100	10,400	9,040	3,740	3,460	3,460	2,000	1,570	958	818	754
15	1,010	1,100	10,900	21,000	3,600	3,190	3,190	1,900	1,470	940	818	762
16	1,010	1,100	8,790	14,500	3,320	3,060	2,930	1,840	1,420	940	818	762
17	1,010	1,100	6,530	10,100	3,190	2,860	2,800	1,780	1,370	922	818	762
18	1,010	1,080	7,380	9,040	3,190	2,670	2,670	1,680	1,320	922	802	762
19	1,010	1,080	17,000	9,040	3,060	2,540	2,480	1,620	1,270	922	802	762
20	1,040	1,070	17,300	16,400	2,930	2,480	2,360	1,620	1,270	922	802	762
21	1,080	1,070	14,200	22,400	2,860	2,360	2,500	1,570	1,220	922	794	762
22	1,110	1,100	12,400	23,100	2,800	2,300	2,180	1,520	1,200	904	794	762
23	1,080	1,100	10,600	29,900	2,740	2,300	2,240	1,520	1,180	904	786	762
24	1,040	1,080	8,790	45,300	2,600	2,300	2,480	1,520	1,180	904	786	778
25	1,030	1,080	6,950	26,800	2,480	2,240	2,600	1,470	1,180	904	770	877
26	1,010	1,070	5,930	17,000	2,420	2,240	2,480	1,470	1,180	886	770	859
27	1,010	1,070	5,190	13,000	2,600	2,180	2,360	1,520	1,180	886	770	834
28	1,050	1,050	4,670	10,400	2,670	2,600	2,180	1,570	1,270	886	770	626
29	1,140	1,080	4,180	8,540		4,670	2,120	1,470	1,270	868	770	818
30	1,320	1,140	4,340	7,160		6,330	2,060	1,520	1,210	868	770	818
31	1,730		4,840	6,130		6,950		1,620		868	770	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,730	1,010	1,089	0.296	0.34	66,950
November	1,950	1,050	1,253	.340	.38	74,580
December	17,300	1,200	6,469	1.76	2.03	397,700
January	45,300	4,030	12,320	3.35	3.86	757,600
February	5,740	2,420	5,731	1.01	1.05	207,200
March	6,950	2,180	5,770	1.02	1.18	231,800
April	14,200	2,060	4,709	1.28	1.43	280,200
May	2,670	1,470	1,934	.526	.61	118,900
June	2,600	1,160	1,497	.407	.45	89,080
July	1,170	868	966	.262	.30	59,380
August	868	770	612	.221	.25	49,920
September	877	754	778	.211	.24	46,300
The year	45,300	754	3,287	.893	12.12	2,380,000

Cow Creek near Azalea, Oreg.

Location.- Staff gage in sec. 33, T. 31 S., R. 4 W., 4 miles northeast of Azalea.

Records available.- April 1926 to September 1934 (incomplete).

Extremes.- Maximum discharge during year, 755 second-feet Jan. 23 (gage height, 4.2 feet, from flood marks); minimum, 4 second-feet Aug. 21 to Sept. 6.
1926-34: Maximum discharge (estimated), 4,000 second-feet Jan. 2, 1933 (gage height, 7.8 feet); minimum, 4 second-feet Sept. 9-19, 1929, Aug. 26-28, 1931, Aug. 21 to Sept. 6, 1934.

Remarks.- Records good except those above 400 second-feet and those Aug. 18 to Sept. 30, which are fair. Minor diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	18	24	55	64	35	146	34	18	11	7	4
2	12	17	30	64	60	34	175	31	18	11	7	4
3	12	17	36	136	55	34	105	30	17	10	8	4
4	12	16	25	101	54	35	90	28	17	10	9	4
5	11	16	23	92	49	37	80	25	16	9	9	4
6	11	16	25	80	46	38	70	25	34	9	8	4
7	11	15	146	69	49	34	62	29	37	8	8	5
8	11	14	34	55	67	32	55	34	32	9	8	5
9	12	14	23	52	61	32	51	29	28	10	8	5
10	12	14	19	49	56	30	46	26	21	10	8	5
11	12	14	23	45	51	30	42	25	19	10	8	5
12	11	14	172	45	48	28	39	25	19	10	7	5
13	11	14	105	49	45	27	37	22	18	10	7	5
14	11	14	90	455	42	25	35	21	17	9	7	6
15	12	14	70	178	41	24	34	20	16	9	7	6
16	12	14	52	114	39	24	31	20	16	9	7	6
17	12	15	41	88	39	23	30	19	15	9	7	5
18	13	15	46	88	36	23	29	18	15	9	6	5
19	13	15	286	132	35	23	27	18	14	9	6	5
20	13	15	129	195	35	23	26	18	13	10	5	5
21	15	16	118	149	34	22	24	17	13	10	4	6
22	15	16	94	122	32	22	26	16	13	10	4	6
23	15	15	80	580	32	22	28	16	12	10	4	7
24	14	15	64	313	31	23	34	16	12	10	4	12
25	14	15	58	186	30	25	45	17	13	9	4	10
26	15	14	54	139	32	27	38	18	18	8	4	8
27	16	16	48	118	36	36	27	18	16	8	4	8
28	16	17	55	96	36	114	26	17	14	8	4	7
29	44	19	69	83		67	25	17	13	8	4	7
30	36	22	55	77		64	36	18	12	8	4	7
31	25		49	69		73		20		8	4	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	44	11	15.0	0.197	0.23	920
November	22	14	15.5	.204	.23	924
December	285	19	69.0	.908	1.05	4,240
January	580	45	131	1.72	1.98	8,080
February	67	30	44.1	.580	.60	2,450
March	114	22	35.0	.461	.53	2,150
April	175	24	50.6	.666	.74	3,010
May	34	16	22.2	.292	.34	1,360
June	37	12	17.9	.236	.26	1,060
July	11	8	9.3	.122	.14	571
August	9	4	6.2	.082	.09	379
September	12	4	5.8	.076	.08	347
The year	580	4	35.2	.463	6.27	25,490

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North Umpqua River below Lake Creek, Oreg.

Location.- Water-stage recorder in NW¼ sec. 13, T. 26 S., R. 5 E., 200 yards below mouth of Lake Creek and 30 miles southwest of Crescent. Zero of gage is about 4,090 feet above mean sea level by U. S. Geological Survey river profile.

Drainage area.- 175 square miles.

Records available.- October 1927 to September 1934.

Extremes.- Maximum discharge during year, 497 second-feet Jan. 23 (gage height, 1.26 feet); minimum, 279 second-feet Sept. 30 (gage height, 0.80 foot).
1927-34: Maximum discharge, 1,190 second-feet June 9, 1933 (gage height, 2.34 feet); minimum, 206 second-feet Dec. 9, 1931.

Remarks.- Records good. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	363	372	345	368	396	377	421	368	329	304	295	291
2	363	372	342	377	396	415	415	368	329	304	295	291
3	363	377	346	426	396	401	410	372	324	304	291	291
4	359	372	346	401	391	405	415	372	324	304	291	291
5	359	372	346	391	391	436	396	372	333	304	295	291
6	359	368	363	386	391	458	396	372	337	304	300	287
7	354	368	368	382	396	452	396	368	329	304	295	287
8	350	363	354	377	401	426	396	372	329	300	295	287
9	350	359	354	377	391	421	396	368	329	300	295	287
10	350	350	359	377	391	415	396	363	324	300	295	283
11	346	359	359	372	386	421	396	359	324	300	291	283
12	346	359	368	372	386	421	401	354	324	300	291	283
13	342	359	363	377	382	415	401	354	320	300	291	283
14	342	354	342	382	382	401	401	346	320	295	291	283
15	346	354	350	382	382	377	396	346	320	295	291	283
16	359	350	346	382	382	372	391	346	316	295	287	283
17	359	350	350	377	377	368	386	346	316	295	287	283
18	359	346	368	382	377	359	382	342	312	295	287	283
19	359	357	372	396	377	372	382	342	308	295	287	283
20	368	357	372	386	377	377	382	342	308	291	287	283
21	359	357	377	391	377	377	382	342	308	295	287	283
22	359	357	382	421	377	372	377	337	304	300	287	283
23	354	357	386	463	377	377	377	337	304	295	287	283
24	350	357	382	426	372	363	377	333	304	295	287	283
25	350	357	377	421	372	363	377	337	304	295	287	283
26	350	333	372	415	372	363	372	333	308	295	287	283
27	354	337	368	410	372	382	368	333	308	295	287	283
28	368	346	363	405	372	436	368	333	308	295	287	283
29	391	346	377	401		442	363	333	304	295	291	283
30	377	346	372	401		436	372	333	300	295	291	279
31	372		368	396		431		329		295	291	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	391	342	357	2.04	2.35	21,980
November	377	333	352	2.01	2.24	20,970
December	386	342	363	2.07	2.39	22,290
January	463	368	394	2.25	2.59	24,240
February	401	372	384	2.19	2.28	21,300
March	458	359	401	2.29	2.64	24,660
April	421	363	390	2.23	2.49	23,180
May	372	329	350	2.00	2.31	21,520
June	337	300	317	1.81	2.02	18,860
July	304	291	298	1.70	1.96	18,330
August	300	287	291	1.66	1.91	17,860
September	291	279	285	1.63	1.82	16,940
The year	463	279	348	1.99	27.00	252,100

North Umpqua River at Toketee Falls, Oreg.

Location.- Water-stage recorder in T. 26 S., R. 3 E. (unsurveyed), an eighth of a mile below mouth of Clearwater River, half a mile above Toketee Falls, and 30 miles east of Hoaglin. Zero of gage is 2,373 feet above mean sea level.

Drainage area.- 337 square miles.

Records available.- February 1908 to July 1909, December 1914 to November 1917 (incomplete), July 1924 to September 1934.

Extremes.- Maximum discharge during year, 2,250 second-feet Jan. 23 (gage height, 3.07 feet); minimum, 560 second-feet Sept. 30 (gage height, 0.79 foot).
1908-9, 1914-17, 1924-34: Maximum discharge, 3,600 second-feet Feb. 20, 1927 (gage height, 4.65 feet); minimum recorded, 475 second-feet Nov. 27-29, Dec. 12, 14, 1931.

Remarks.- Records good except those estimated, Dec. 16 to Jan. 19, May 1-29, June 1 to Aug. 5, which are poor. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	728	734	668	720	1,010	812	1,070	810	690	650	595	576
2	722	740	680	780	1,000	1,020	1,040	810	700	650	595	576
3	716	753	680	1,280	975	968	1,030	e10	700	640	600	576
4	710	716	668	1,140	961	962	1,040	810	690	640	600	570
6	710	704	668	1,000	947	1,120	1,040	810	690	640	595	570
6	704	698	798	900	940	1,180	1,050	e10	750	640	592	570
7	698	692	786	820	940	1,140	1,040	810	740	640	592	570
8	698	686	710	780	989	1,080	1,020	810	730	640	592	570
9	692	680	698	750	940	1,020	1,000	810	720	630	592	565
10	692	668	692	740	919	1,000	962	800	710	630	592	565
11	692	680	698	730	905	996	961	780	710	630	592	565
12	686	680	746	730	884	989	947	760	700	630	592	565
13	692	674	760	850	884	968	933	750	700	630	592	565
14	680	674	716	1,200	864	940	919	740	690	620	592	565
15	680	674	710	1,060	857	905	898	740	690	620	592	565
16	704	674	690	960	857	891	884	730	680	620	592	565
17	704	668	700	910	850	870	864	730	680	620	592	565
18	698	668	1,100	900	844	850	857	720	680	620	587	565
19	704	662	1,020	1,000	838	864	844	720	670	620	587	565
20	722	668	1,000	1,180	838	870	838	710	670	610	587	570
21	704	662	1,020	1,180	824	864	e38	710	670	620	587	570
22	698	662	1,050	1,490	824	850	831	710	660	620	582	676
23	692	662	1,100	2,010	818	850	831	705	660	610	582	592
24	686	656	980	1,690	812	831	838	705	660	610	582	582
25	680	656	890	1,450	805	831	824	705	670	610	582	576
26	680	650	840	1,290	812	824	805	700	680	610	582	570
27	698	662	800	1,180	824	940	798	700	680	610	582	565
28	740	674	780	1,140	812	1,070	753	705	670	600	582	565
29	805	668	800	1,100		1,080	779	705	660	600	582	565
30	753	668	760	1,070		1,070	812	704	650	600	582	560
31	740		740	1,030		1,050		686		595	576	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	805	680	707	2.10	2.42	43,450
November	753	650	680	2.02	2.25	40,490
December	1,100	668	805	2.39	2.76	49,480
January	2,010	720	1,066	3.16	3.64	65,570
February	1,010	805	885	2.63	2.74	49,140
March	1,180	812	959	2.85	3.29	58,960
April	1,070	753	912	2.71	3.02	54,280
May	810	686	749	2.22	2.56	46,030
June	750	650	688	2.04	2.28	40,960
July	650	595	623	1.85	2.13	38,290
August	600	576	589	1.75	2.02	36,200
September	592	560	569	1.69	1.89	33,890
The year	2,010	560	769	2.28	31.00	556,700

North Umpqua River above Rock Creek, near Glide, Oreg.

Location.- Water-stage recorder in NW¼ sec. 12, T. 26 S., R. 3 W., half a mile above mouth of Rock Creek and 5 miles northeast of Glide. Zero of gage is about 770 feet above mean sea level by U. S. Geological Survey river profile.

Drainage area.- 886 square miles.

Records available.- June 1924 to September 1934.

Average discharge.- 10 years, 2,176 second-feet.

Extremes.- Maximum discharge during year, 18,700 second-feet Jan. 23 (gage height, 11.65 feet); minimum, 640 second-feet Sept. 20-22 (gage height, 2.12 feet).
1924-34: Maximum discharge, 55,000 second-feet (revised) Feb. 20, 1927 (gage height, 20.18 feet); minimum, 521 second-feet Oct. 16, 1931 (gage height, 1.86 feet).

Remarks.- Records good except those above 15,000 second-feet, which are fair. No irrigation diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	680	1,030	822	1,600	2,160	1,360	5,040	1,400	1,030	824	715	665
2	850	1,100	850	1,760	2,060	2,360	5,220	1,360	1,060	818	715	665
3	850	1,170	1,100	7,520	1,960	2,580	4,220	1,400	1,060	813	730	660
4	650	1,100	1,030	5,920	1,880	2,210	3,760	1,400	1,030	808	735	660
5	650	940	940	3,760	1,780	3,370	3,370	1,400	1,030	808	720	660
6	822	910	2,550	2,820	1,740	4,690	3,110	1,480	1,480	808	715	660
7	822	880	4,000	2,300	1,700	3,640	2,750	1,400	1,440	802	715	660
8	822	650	1,760	2,000	1,920	2,870	2,410	1,480	1,320	808	710	660
9	822	822	1,320	1,810	1,880	2,410	2,210	1,480	1,200	802	705	660
10	822	822	1,170	1,760	1,740	2,160	2,010	1,400	1,140	802	705	660
11	822	795	1,100	1,720	1,700	1,960	1,920	1,320	1,100	796	700	660
12	795	822	1,440	1,680	1,600	1,920	1,830	1,280	1,060	786	695	660
13	795	795	2,460	2,520	1,560	1,830	1,740	1,240	1,030	775	690	665
14	795	795	2,360	7,380	1,520	1,740	1,700	1,200	995	775	690	665
15	795	795	2,050	4,820	1,480	1,600	1,600	1,170	960	770	690	660
16	795	795	1,600	3,330	1,480	1,560	1,560	1,140	960	765	685	660
17	795	795	1,640	2,760	1,440	1,480	1,480	1,140	928	765	685	655
18	795	795	5,180	2,580	1,400	1,440	1,480	1,140	928	760	685	650
19	795	795	4,160	3,840	1,400	1,400	1,400	1,100	895	755	685	645
20	850	822	4,160	6,950	1,360	1,400	1,400	1,100	895	750	680	645
21	850	795	4,160	5,920	1,320	1,440	1,360	1,060	865	755	680	640
22	822	795	4,320	8,060	1,320	1,400	1,360	1,060	865	765	675	645
23	795	795	4,480	13,700	1,320	1,400	1,360	1,030	865	760	670	710
24	795	770	3,330	9,110	1,280	1,360	1,400	1,030	865	750	670	725
25	795	770	2,760	6,000	1,240	1,360	1,400	1,060	865	745	670	690
26	770	770	2,460	4,530	1,280	1,320	1,320	1,060	895	735	670	670
27	795	795	2,150	3,640	1,320	1,600	1,280	1,030	895	730	670	665
28	850	850	1,900	3,110	1,440	3,240	1,280	1,030	865	730	675	660
29	1,280	850	1,900	2,810		4,220	1,240	1,060	865	725	675	655
30	1,200	822	1,810	2,580		3,240	1,320	1,060	835	720	670	650
31	1,060		1,680	2,310		4,690		1,060		715	665	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,280	770	853	0.963	1.11	52,430
November	1,170	770	855	.965	1.08	50,860
December	5,160	822	2,343	2.64	3.04	144,100
January	13,700	1,600	4,213	4.76	5.49	259,000
February	2,160	1,240	1,581	1.78	1.85	87,830
March	4,690	1,320	2,234	2.52	2.90	137,400
April	5,220	1,240	2,118	2.39	2.67	126,000
May	1,480	1,030	1,212	1.37	1.58	74,520
June	1,480	835	1,007	1.14	1.27	59,940
July	824	715	772	.871	1.00	47,440
August	735	665	692	.781	.90	42,530
September	725	640	663	.748	.83	39,440
The year	13,700	640	1,549	1.75	23.72	1,121,000

North Umpqua River near Glide, Oreg.

Location.- Staff gage in SW¼ sec. 13, T. 26 S., R. 4 W., 1 mile west of Glide. Zero of gage is about 645 feet above mean sea level by U. S. Geological Survey river profile.

Drainage area.- 1,210 square miles.

Records available.- September 1915 to May 1920, October 1921 to October 1922, October 1927 to September 1934.

Average discharge.- 23 years (1905-8, 1909-18, 1923-34), 3,198 second-feet (partly estimated from records near Oak Creek and at Winchester).

Extremes.- Maximum discharge recorded during year, 27,000 second-feet Jan. 23 (gage height, 10.6 feet); minimum, 664 second-feet Sept. 21 (gage height, 0.93 foot).
1915-20, 1921-22, 1927-34: Maximum discharge recorded, 59,500 second-feet Mar. 19, 1932; minimum, 552 second-feet Aug. 27-30, Sept. 27, 1931.
Maximum stage known, 22.6 feet Nov. 22, 1909 (estimated discharge, 90,000 second-feet).

Remarks.- Records fair. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	950	1,400	950	2,740	2,590	1,590	6,430	1,590	1,090	*865	744	*696
2	902	1,400	1,050	4,310	2,440	2,740	7,150	1,530	1,140	854	*750	*700
3	902	1,340	1,220	10,500	2,300	3,060	5,310	1,650	1,190	863	*770	*690
4	*900	1,220	1,340	7,920	2,160	3,400	4,700	1,650	1,090	863	*770	*690
5	*900	1,160	1,640	4,700	2,030	4,310	4,120	1,710	1,090	872	*760	*690
6	855	1,160	2,590	3,570	2,030	5,970	3,750	1,770	1,900	854	*750	*690
7	855	1,000	5,530	2,900	2,030	4,310	3,230	1,650	1,710	*840	*750	*690
8	*855	950	2,590	2,590	2,300	3,570	2,900	1,710	1,470	836	*740	*690
9	*855	950	1,900	2,300	2,300	2,900	2,590	1,710	1,360	*840	*740	*690
10	855	950	1,520	2,160	2,030	2,440	2,300	1,650	1,240	*840	*740	*690
11	846	902	1,220	2,030	2,030	2,300	2,160	1,530	1,240	*830	*730	*690
12	837	902	2,030	2,030	1,900	2,030	2,030	1,470	1,190	*820	*730	*690
13	828	902	3,230	3,060	1,770	2,030	2,030	1,360	1,140	*810	*720	*690
14	819	902	3,930	11,400	1,770	1,900	1,900	1,360	1,090	*810	*720	*690
15	837	855	*3,500	6,430	1,710	1,770	1,770	1,240	1,090	*810	*720	*690
16	837	855	*3,000	4,700	1,650	1,710	1,770	1,190	1,090	*800	*720	*690
17	855	846	3,930	3,570	1,650	1,710	1,650	1,140	1,040	*800	*720	*680
18	855	837	6,460	3,570	1,590	1,650	1,590	1,190	990	*800	*710	*680
19	902	837	6,670	5,100	1,530	1,530	1,590	1,190	950	*790	*710	*670
20	950	837	5,530	10,800	1,530	1,590	1,530	1,190	940	*790	*710	*670
21	902	855	5,100	8,190	1,530	1,590	1,530	1,140	*910	*790	*710	664
22	855	855	5,530	12,000	1,530	1,530	1,590	1,090	*910	*800	*710	680
23	855	855	*6,500	19,500	1,470	1,530	1,590	1,090	900	*800	712	736
24	855	855	*4,500	13,900	1,470	1,470	1,650	1,090	910	*790	704	776
25	837	855	*3,500	8,190	1,410	1,530	1,590	1,090	900	776	696	768
26	837	855	*3,000	5,970	1,470	1,530	1,470	1,090	980	768	696	736
27	855	950	*2,600	4,700	1,650	1,770	1,410	1,190	940	760	696	680
28	1,050	1,000	2,300	3,930	1,590	3,750	1,410	1,140	910	760	696	680
29	1,340	950	2,300	3,400		5,100	1,410	1,140	890	760	*700	680
30	1,770	950	2,160	3,230		3,750	1,470	1,090	*880	760	696	680
31	1,580		2,030	2,740		6,200		1,090		744	696	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,770	819	940	0.777	0.90	57,780
November	1,400	837	973	.804	.90	57,890
December	6,460	950	3,269	2.70	3.11	201,000
January	19,500	2,030	5,875	4.66	5.60	361,200
February	2,590	1,410	1,838	1.52	1.58	102,100
March	6,200	1,470	2,654	2.19	2.52	163,200
April	7,150	1,410	2,521	2.08	2.32	150,000
May	1,770	1,090	1,346	1.11	1.28	82,750
June	1,900	880	1,105	.913	1.02	65,770
July	872	744	810	.669	.77	49,780
August	770	696	723	.598	.69	44,460
September	776	664	695	.574	.64	41,330
The year	19,500	664	1,902	1.57	21.33	1,377,000

*Estimated.

Lake Creek at Diamond Lake, near Fort Klamath, Oreg.

Location.- Water-stage recorder in SW¼ sec. 30, T. 27 S., R. 6 E., 260 feet below outlet of Diamond Lake and 35 miles north of Fort Klamath. Prior to Oct. 7, 1933, staff gage at same location and datum. Zero of gage is about 5,180 feet above mean sea level by U. S. Geological Survey river profile.

Drainage area.- 57 square miles.

Records available.- May 1922 to September 1925, October 1926 to September 1934; incomplete prior to 1927.

Extremes.- Maximum discharge during year, 84 second-feet Jan. 23 (gage height, 1.49 feet); minimum, 2 second-feet Mar. 17 (gage height, 0.34 foot); minimum daily discharge, 11 second-feet Mar. 17.

1922-25, 1926-34: Maximum discharge, 146 second-feet June 1, 1925 (gage height, 2.13 feet at a former gage); no flow Aug. 25-27, 1931.

Remarks.- Records good except those for December, which are fair. Discharge estimated Aug. 3-5. Flow regulated by operation of gates and fish racks at lake outlet and at times by collection of moss on racks. No diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	43	42	63	70	56	26	29	26	22	22	23
2	27	42	41	66	68	58	29	32	26	22	22	23
3	27	43	40	70	67	58	35	33	26	22	22	23
4	27	43	42	70	67	61	33	41	26	22	22	22
5	27	42	42	70	66	66	25	40	26	22	24	22
6	27	42	45	68	66	66	25	38	26	22	27	22
7	29	42	48	67	64	66	25	37	26	22	27	22
8	29	39	49	67	66	51	26	36	26	22	26	22
9	29	33	55	67	66	51	26	38	26	22	26	22
10	28	26	55	68	64	47	26	37	26	22	26	21
11	29	35	55	67	63	58	28	36	27	22	26	21
12	29	35	52	67	62	55	28	33	27	22	26	21
13	29	34	50	68	62	49	28	29	26	22	25	20
14	29	34	42	71	61	29	29	26	26	22	25	20
15	35	34	55	71	59	18	29	26	26	22	25	20
16	45	34	57	71	59	17	29	27	26	22	25	20
17	45	35	64	72	58	11	29	29	26	22	24	20
18	44	32	66	72	57	15	29	29	22	22	24	20
19	43	30	67	72	57	31	28	29	19	22	24	20
20	43	31	67	74	56	31	29	28	19	22	24	20
21	42	31	68	72	56	31	29	27	19	23	24	20
22	40	33	67	75	56	25	25	26	20	29	24	20
23	38	35	67	82	55	21	28	26	20	26	24	20
24	36	35	67	81	55	14	29	26	20	26	24	20
26	36	34	67	79	55	14	29	26	20	26	24	20
26	35	34	66	77	56	12	29	26	19	25	23	20
27	36	41	64	74	56	13	29	27	19	25	23	20
28	39	45	64	72	56	18	31	27	18	24	23	20
29	42	45	66	72		22	29	27	16	24	23	19
30	43	43	64	71		24	31	26	19	23	23	16
31	43		63	70		24		26		23	23	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	45	27	34.8	0.611	0.70	2,140
November	45	26	36.8	.646	.72	2,190
December	68	40	56.7	.995	1.15	3,480
January	82	63	71.2	1.25	1.44	4,380
February	70	55	60.8	1.07	1.11	3,380
March	66	11	35.9	.630	.73	2,210
April	35	25	28.4	.498	.56	1,690
May	41	26	30.4	.533	.61	1,870
June	27	16	23.1	.405	.45	1,380
July	29	22	23.0	.404	.47	1,420
August	27	22	24.2	.425	.49	1,490
September	23	16	20.6	.361	.40	1,230
The year	82	11	37.1	.651	8.83	26,860

Clearwater River above Trap Creek, Oreg.

Location.- Water-stage recorder in SE¼ sec. 1, T. 27 S., R. 4 E., 150 yards above mouth of Trap Creek and 40 miles east of Glide. Zero of gage is about 3,760 feet above mean sea level by U. S. Geological Survey river profile.

Drainage area.- 40 square miles.

Records available.- October 1927 to September 1934.

Extremes.- Maximum discharge during year, 209 second-feet Jan. 23 (gage height, 1.02 feet); minimum, 125 second-feet Sept. 30 (gage height, 0.50 foot).
1927-34: Maximum discharge, 380 second-feet June 9, 1933 (gage height, 2.02 feet); minimum, 91 second-feet Nov. 4-6, 27, Dec. 12, 29, 1931, Jan. 3, 1932.

Remarks.- Records good. Discharge interpolated Oct. 5, 8. No diversions or regulation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	138	137	138	146	158	149	171	155	144	137	131	128
2	138	137	138	148	158	155	168	155	144	137	131	128
3	137	138	138	163	158	152	166	154	143	137	131	128
4	137	137	138	163	157	154	165	154	143	137	131	128
5	137	137	138	157	157	160	166	155	146	136	130	128
6	137	137	140	152	157	163	166	154	146	136	128	128
7	137	137	144	152	160	158	168	154	146	136	128	128
8	137	136	140	150	163	157	168	154	144	136	128	128
9	137	136	138	149	158	157	168	150	143	136	128	126
10	137	136	140	149	157	158	166	150	143	136	128	126
11	136	137	140	148	155	158	166	150	142	136	128	126
12	136	137	143	148	154	158	168	149	140	136	128	126
13	136	137	148	148	152	158	168	149	140	136	128	126
14	136	137	143	150	152	158	166	148	140	134	128	126
16	136	137	142	149	152	158	166	148	140	134	128	126
16	136	137	140	146	152	158	165	148	140	134	128	126
17	136	137	142	146	152	158	163	148	140	134	128	126
18	137	137	142	146	152	157	161	146	138	134	128	126
19	137	137	142	152	152	157	163	146	138	134	128	126
20	137	137	142	152	152	158	163	146	138	134	128	126
21	137	137	142	154	150	160	163	146	138	134	128	126
22	137	137	142	163	150	158	163	146	138	134	128	128
23	137	137	143	193	150	158	161	144	138	134	128	128
24	137	137	144	178	150	157	161	144	138	134	128	128
25	137	137	143	171	150	158	160	144	138	134	128	126
26	137	138	143	168	150	158	158	144	140	132	128	126
27	137	138	143	165	150	174	157	144	138	132	128	126
28	138	138	143	163	149	200	155	144	138	131	128	126
29	146	138	148	161		190	155	144	138	131	128	126
30	140	138	149	160		183	157	144	138	131	128	125
31	138		148	158		174		144		131	128	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	146	136	137	3.42	3.94	8,440
November	138	136	137	3.42	3.82	8,160
December	149	138	142	3.55	4.09	8,740
January	193	146	156	3.90	4.50	9,620
February	165	149	154	3.85	4.01	8,540
March	200	149	162	4.05	4.67	9,940
April	171	155	164	4.10	4.57	9,740
May	155	144	148	3.70	4.27	9,130
June	146	136	141	3.52	3.93	8,370
July	137	131	134	3.35	3.86	8,270
August	131	128	128	3.20	3.69	7,900
September	128	125	127	3.18	3.55	7,540
The year	200	125	144	3.60	48.90	104,400

South Fork of Coquille River at Powers, Oreg.

Location.- Wire-weight gage in NW¼ sec. 13, T. 31 S., R. 12 W., at bridge at Powers.

Drainage area.- 169 square miles.

Records available.- September 1916 to September 1926, October 1928 to September 1934. Prior to 1928 at station half a mile upstream.

Average discharge.- 15 years (1916-26, 1929-34), 672 second-feet.

Extremes.- Maximum discharge recorded during year, 11,500 second-feet Dec. 18 (gage height, 12.05 feet); minimum, 14 second-feet Sept. 11, 12, 19-21.
1916-26, 1928-34: Maximum discharge recorded, 25,300 second-feet Oct. 31, 1924 (gage height, 17.5 feet at former gage); minimum, 13 second-feet Nov. 30 to Dec. 3, 1929, Oct. 4-13, 1932.

Remarks.- Records fair. No diversions or regulation above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	198	50	950	470	410	1,550	515	135	61	32	18
2	44	153	68	800	450	410	1,410	315	123	57	35	17
3	40	213	538	2,580	430	410	1,000	298	116	52	36	17
4	38	198	315	2,580	390	370	900	245	116	47	34	17
5	33	151	315	1,410	350	315	650	298	112	46	32	17
6	33	118	5,100	1,050	315	450	538	332	114	49	32	15
7	33	111	2,670	900	430	390	515	298	118	52	32	15
8	33	94	1,050	750	1,000	350	430	315	125	54	31	15
9	32	77	650	750	900	315	332	262	123	50	29	15
10	32	68	492	538	750	298	315	235	114	49	28	15
11	31	62	515	492	560	280	298	220	105	46	26	14
12	28	57	4,600	538	492	280	262	205	103	42	26	14
13	27	50	4,840	650	450	245	245	175	105	42	25	17
14	28	48	4,600	2,670	410	213	229	168	95	42	25	17
15	28	44	3,460	1,550	370	198	213	160	91	41	24	17
16	27	44	1,990	1,290	315	184	198	162	83	42	24	17
17	26	44	3,460	950	280	179	198	150	103	44	24	15
18	26	40	10,400	850	262	171	164	145	103	44	24	15
19	26	39	3,360	900	280	161	176	138	91	42	22	14
20	26	44	2,760	2,960	410	156	166	135	79	41	22	14
21	27	40	3,360	1,760	332	153	158	130	74	40	21	14
22	28	39	2,580	1,550	332	156	163	118	68	40	21	19
23	28	39	1,550	4,840	280	151	176	114	64	38	19	42
24	27	38	1,110	3,360	262	146	164	105	64	38	18	70
25	28	38	950	1,990	262	141	168	205	62	35	18	57
26	28	37	750	1,290	262	136	156	166	66	35	18	36
27	27	37	700	1,230	390	213	158	152	64	35	18	36
28	26	77	750	950	390	1,110	139	140	59	34	18	35
29	298	66	2,230	750		650	125	132	61	34	18	35
30	515	57	1,350	605		750	184	148	61	32	19	35
31	298		1,050	560		650		138		32	18	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	515	26	6.35	0.376	0.43	3,910
November	213	37	77.4	.458	.51	4,600
December	10,400	50	2,181	12.9	14.67	134,100
January	4,840	492	1,421	8.41	9.70	87,360
February	1,000	262	422	2.50	2.60	23,450
March	1,110	136	330	1.95	2.25	20,320
April	1,550	125	381	2.25	2.51	22,650
May	515	105	204	1.21	1.40	12,540
June	135	59	93.4	.553	.62	5,560
July	61	32	43.1	.255	.29	2,650
August	36	16	24.9	.147	.17	1,530
September	70	14	23.1	.137	.15	1,380
The year	10,400	14	442	2.62	35.50	320,000

Middle Fork of Coquille River near Myrtle Point, Oreg.

Location.- Water-stage recorder in S½ sec. 26, T. 29 S., R. 12 W., a third of a mile below mouth of Indian Creek and 3¾ miles southeast of Myrtle Point. Zero of gage is 41.20 feet above mean sea level by general adjustment of 1929.

Drainage area.- 305 square miles.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge during year, 8,160 second-feet Jan. 23 (gage height, 14.4 feet); minimum recorded, 7 second-feet Aug. 1.
1930-34: Maximum discharge, 23,600 second-feet Jan. 2, 1933 (gage height, 22.5 feet); minimum, 1 second-foot July 16, 17, 1931.
Maximum stage known, 25.8 feet, probably Oct. 31, 1924.

Remarks.- Records good October to June; poor July to September. Discharge estimated July 12-15, 17-21, 23-25, 27-31, Aug. 2-4, 6-8, 12, 16-19, 21, 31, Sept. 1, 2, 17-23. Flow regulated completely during low-water periods and to some extent at all times by logging ponds above gage. No diversions above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	140	63	575	530	293	834	252	82	187	7	11
2	28	110	68	515	488	252	1,810	224	226	102	8	12
3	27	206	233	1,380	425	280	1,060	252	55	37	11	12
4	25	174	216	2,050	320	290	805	156	48	32	17	12
5	24	122	224	1,440	485	280	586	166	46	34	28	12
6	24	93	407	1,040	350	242	465	224	67	32	26	12
7	24	77	1,150	805	390	368	412	339	254	32	25	12
8	23	67	608	590	979	233	290	224	66	33	23	12
9	23	60	390	567	1,040	216	312	184	53	25	22	11
10	23	54	252	340	805	252	292	120	55	20	21	11
11	24	48	336	731	642	224	126	115	47	16	20	14
12	22	44	2,620	488	530	152	130	391	54	16	18	19
13	18	41	4,180	560	475	370	453	152	62	16	17	12
14	22	40	4,640	1,930	400	169	100	63	30	16	17	12
15	23	38	4,070	1,930	320	140	41	35	31	16	14	12
16	22	36	2,720	1,340	340	136	52	44	32	16	14	10
17	22	34	1,750	948	370	263	489	55	33	18	14	10
18	22	33	2,510	785	340	128	154	93	34	20	13	10
19	22	34	2,800	1,090	320	121	113	97	368	23	13	10
20	23	36	2,300	4,070	320	113	98	88	35	23	13	9
21	23	40	1,540	3,200	290	119	60	443	24	21	14	9
22	24	37	1,150	3,040	242	263	101	150	23	20	14	10
23	23	35	925	5,610	329	68	73	48	21	19	13	11
24	22	34	730	5,780	216	61	387	45	23	19	13	12
25	22	33	590	2,940	216	70	119	59	25	18	13	15
26	22	33	515	1,610	224	86	64	241	28	18	13	16
27	22	34	400	1,240	233	384	67	110	29	18	12	14
28	32	64	412	1,060	224	172	222	106	28	18	12	13
29	192	84	730	805		60	168	50	30	17	12	13
30	252	70	865	695		532	126	57	32	17	11	15
31	190		678	590		320		58		16	11	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	252	18	41.8	0.137	0.16	2,570
November	206	33	65.0	.213	.24	3,870
December	4,640	63	1,293	4.24	4.89	79,480
January	5,780	340	1,611	5.28	6.09	99,060
February	1,040	216	419	1.37	1.43	23,290
March	532	60	215	.705	.81	13,200
April	1,810	41	334	1.10	1.23	19,850
May	443	35	150	.492	.57	9,210
June	368	21	64.7	.212	.24	3,850
July	187	15	29.5	.097	.11	1,810
August	28	7	15.5	.051	.06	950
September	19	9	12.1	.040	.04	720
The year	5,780	7	356	1.17	15.87	257,900

North Fork of Coquille River near Myrtle Point, Oreg.

Location.- Water-stage recorder in NW¼ sec. 36, T. 28 S., R. 12 W., a quarter of a mile below junction with East Fork and 4⅛ miles northeast of Myrtle Point. Zero of gage is 12.22 feet above mean sea level.

Drainage area.- 276 square miles.

Records available.- October 1928 to September 1934. Prior to October 1930 at site 3⅛ miles downstream.

Extremes.- Maximum discharge during year, 7,600 second-feet Jan. 23 (gage height, 29.0 feet); minimum, 19 second-feet Sept. 11-13, 21, 22.
1928-34: Maximum discharge, 10,400 second-feet Jan. 3, 1933 (gage height, 35.7 feet); minimum, 17 second-feet Sept. 5, 1930.
Maximum stage known, 41.2 feet, during winter of 1909-10.

Remarks.- Records good except those for July to September, which are fair, and those for Dec. 25 to Feb. 5, which are poor. Discharge estimated Dec. 25, 26, 28-30, Jan. 27-30, Feb. 1-5. No diversions above gage. Flow regulated by operation of logging above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	131	402	162	1,290	800	357	986	416	136	64	37	24
2	111	350	168	1,200	700	694	1,860	312	131	60	36	24
3	96	504	566	2,500	650	978	1,380	312	126	58	38	23
4	88	532	482	3,090	620	810	934	312	122	56	37	22
5	81	364	418	2,400	580	750	750	334	117	55	41	22
6	76	284	841	1,860	566	1,000	637	515	123	56	40	21
7	72	224	2,910	1,500	566	978	583	418	146	55	38	21
8	70	192	1,620	1,150	956	810	482	364	146	57	35	20
9	66	168	956	978	1,180	674	450	320	131	57	33	20
10	63	152	712	850	871	601	418	284	118	54	32	20
11	60	141	655	850	770	549	387	250	111	52	31	19
12	59	141	2,260	770	619	498	364	236	105	50	30	19
13	59	118	4,890	871	601	466	342	217	100	49	23	19
14	57	121	4,880	2,080	549	434	327	204	96	48	28	20
15	55	112	5,140	2,210	515	402	305	192	93	49	28	22
16	54	106	4,140	1,640	498	380	291	192	77	49	28	23
17	54	100	2,670	1,360	482	364	284	192	81	51	28	22
18	53	98	3,150	1,220	450	350	277	186	79	53	28	21
19	53	98	3,760	1,590	450	327	270	160	79	52	27	20
20	67	119	3,730	4,420	450	320	256	217	78	47	26	20
21	98	136	2,910	4,200	434	305	250	204	77	45	26	19
22	79	112	2,700	5,030	434	291	250	174	75	43	25	19
23	67	88	2,160	6,570	402	284	298	162	74	43	24	20
24	86	83	1,780	6,800	372	277	291	152	72	42	23	25
26	60	88	1,400	4,520	380	270	263	152	71	42	23	36
26	74	93	1,150	2,790	372	256	236	157	70	41	23	38
27	57	90	1,000	1,900	364	263	230	146	71	41	24	36
28	106	152	1,200	1,600	418	515	224	141	75	40	24	38
29	596	256	1,500	1,300		515	210	131	73	40	24	32
30	515	192	2,200	1,100		466	256	141	69	38	24	29
31	450		1,480	934		712		146		38	24	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	596	55	117	0.424	0.49	7,170
November	532	83	187	.678	.76	11,140
December	5,140	162	2,042	7.40	8.53	125,500
January	6,800	770	2,270	8.22	9.48	139,600
February	1,180	364	573	2.08	2.17	31,850
March	1,000	256	513	1.86	2.14	31,550
April	1,860	210	470	1.70	1.90	27,950
May	515	131	237	.859	.99	14,600
June	146	69	97.4	.353	.39	5,800
July	64	38	49.2	.178	.21	3,020
August	41	23	29.5	.107	.12	1,810
September	38	19	23.8	.086	.10	1,420
The year	6,800	19	554	2.01	27.28	401,400

Rogue River above Bybee Creek, Oreg.

Location.- Water-stage recorder in NE¼ sec. 26, T. 30 S., R. 3 E., 500 feet above Bybee Creek and 2 miles northeast of Union Creek. Zero of gage is about 3,465 feet above mean sea level by U. S. Geological Survey river profile.

Drainage area.- 118 square miles.

Records available.- January 1930 to September 1934.

Extremes.- Maximum discharge during year, 1,940 second-feet Jan. 23 (gage height, 4.30 feet); minimum, 232 second-feet Sept. 3-6, 15-20 (gage height, 0.41 foot).
1930-34: Maximum discharge, 4,460 second-feet June 9, 1933 (gage height, 7.68 feet); minimum, 186 second-feet Nov. 16, 1931 (gage height, 0.23 foot).

Remarks.- Records good except those estimated, Mar. 26-31, Apr. 1-5, 9-30, which are fair. No diversions or regulation above station. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	325	360	310	498	585	450	940	450	354	280	265	238
2	322	375	312	620	585	660	880	435	354	280	265	235
3	322	375	322	1,260	568	640	840	450	345	280	265	235
4	320	345	325	915	568	620	800	420	342	280	262	235
5	320	330	325	700	550	960	760	405	348	280	262	235
6	315	322	375	602	585	1,060	720	390	390	280	260	235
7	315	322	550	550	585	825	700	390	360	282	260	235
8	315	318	375	515	680	720	680	405	348	285	260	235
9	312	315	351	498	585	680	660	390	339	288	258	235
10	312	315	345	480	550	660	650	375	328	288	258	235
11	312	312	342	465	532	640	630	360	322	285	255	235
12	312	312	450	465	515	640	620	360	322	285	255	238
13	312	312	532	465	498	640	600	360	318	285	255	238
14	308	312	435	480	480	620	570	357	312	285	255	238
15	305	315	390	465	480	620	550	354	310	288	255	235
16	305	315	390	435	480	602	530	351	305	288	252	235
17	302	312	360	465	465	568	510	351	302	288	252	235
18	302	312	405	498	465	550	495	351	300	285	250	235
19	302	315	375	740	465	550	485	348	295	282	248	235
20	318	325	375	740	465	550	475	351	292	280	248	235
21	305	315	420	680	450	620	470	348	290	288	245	235
22	302	312	435	938	450	550	465	345	288	290	245	240
23	305	310	498	1,640	450	550	460	348	285	282	242	255
24	305	310	450	1,080	435	532	470	345	285	280	242	258
25	305	308	450	848	435	550	470	360	285	278	240	252
26	305	310	435	740	435	540	450	360	295	275	240	250
27	315	312	420	680	465	700	430	351	298	275	245	250
28	342	322	435	640	465	1,200	415	357	292	275	245	248
29	498	310	585	640		1,150	405	357	288	270	242	248
30	390	312	532	620		1,000	425	375	282	268	240	248
31	360		498	602		1,000		354		265	238	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	498	302	322	2.73	3.15	19,810
November	375	308	321	2.72	3.04	19,120
December	585	310	413	3.50	4.04	25,390
January	1,640	435	676	5.73	6.61	41,580
February	680	435	510	4.32	4.50	28,310
March	1,200	450	698	5.92	6.82	42,940
April	940	405	585	4.96	5.53	34,820
May	450	345	373	3.16	3.64	22,920
June	390	282	316	2.68	2.99	18,790
July	290	265	281	2.38	2.74	17,300
August	265	238	252	2.14	2.47	15,480
September	258	235	240	2.03	2.26	14,270
The year	1,640	235	415	3.52	47.79	300,700

Rogue River above Prospect, Oreg.

Location.- Water-stage recorder in NE¼ sec. 19, T. 32 S., R. 3 E., 1½ miles above intake of diversion of The California Oregon Power Co., 3 miles above Mill Creek, and 2 miles northwest of Prospect. Zero of gage is about 2,820 feet above mean sea level by U. S. Geological Survey river profile.

Drainage area.- 332 square miles.

Records available.- July 1907 to February 1912 (incomplete), October 1923 to September 1934.

Average discharge.- 12 years (1910-11, 1923-34), 671 second-feet.

Extremes.- Maximum discharge during year, about 3,600 second-feet Jan. 23 (gage height, about 4.5 feet); minimum, 285 second-feet Sept. 7-13, 20-22 (gage height, 1.30 feet).

1907-12, 1923-34: Maximum discharge, about 9,300 second-feet Nov. 22, 1909 (gage height, about 7.0 feet); minimum, 200 second-feet Nov. 20, 1931 (gage height, 1.07 feet).

Remarks.- Records good except those estimated, Mar. 31 to Apr. 5, which are fair. No diversions or regulation above station. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	406	465	370	656	864	606	1,360	612	430	366	313	293
2	406	490	370	825	856	856	1,260	582	435	361	313	293
3	406	485	397	2,070	825	864	1,200	606	430	356	313	293
4	402	450	379	1,620	795	818	1,150	576	430	352	313	293
5	402	425	374	1,140	788	1,280	1,110	554	435	348	313	289
6	397	415	485	952	780	1,440	1,070	542	500	343	313	289
7	397	410	737	832	788	1,180	1,030	532	490	348	313	285
8	392	406	490	758	960	1,040	976	554	460	348	313	285
9	392	402	450	716	840	952	912	532	456	348	309	285
10	392	402	440	688	788	904	856	510	435	343	309	285
11	392	402	430	656	751	888	818	500	425	343	309	285
12	392	397	576	630	723	872	788	495	425	338	305	289
13	392	397	744	650	695	856	765	485	420	334	305	289
14	392	392	576	856	669	840	744	480	406	334	305	289
15	392	392	515	825	656	825	716	475	397	334	305	289
16	392	392	475	758	656	795	688	465	392	334	305	289
17	392	384	455	751	650	758	662	460	392	334	301	289
18	392	384	495	825	630	723	643	455	388	334	301	289
19	392	379	510	1,230	636	716	624	450	384	330	301	289
20	415	392	537	1,500	630	716	618	450	379	325	301	285
21	397	379	564	1,280	618	780	612	445	379	325	297	285
22	392	379	594	1,620	600	716	600	435	374	334	297	285
23	388	374	682	3,080	594	709	600	435	370	334	293	301
24	388	374	643	2,140	588	682	618	430	370	330	293	317
25	388	374	630	1,560	582	702	618	450	370	325	293	313
26	388	370	624	1,280	588	682	576	460	379	321	293	305
27	392	374	600	1,140	624	896	559	450	384	317	297	301
28	440	384	576	1,050	624	1,680	548	450	379	317	297	293
29	636	366	758	1,000		1,680	532	450	370	317	301	293
30	515	370	737	968		1,390	582	470	370	317	297	289
31	475		688	904		1,400		445		313	293	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	636	388	411	1.24	1.43	25,260
November	490	366	400	1.20	1.34	23,810
December	758	370	545	1.64	1.89	33,520
January	3,080	630	1,128	3.40	3.92	69,340
February	960	582	707	2.13	2.22	39,270
March	1,680	606	943	2.84	3.27	58,010
April	1,360	532	794	2.39	2.67	47,280
May	612	430	491	1.48	1.71	30,220
June	500	370	408	1.23	1.37	24,280
July	366	313	336	1.01	1.16	20,630
August	313	293	304	.916	1.06	18,670
September	317	285	292	.880	.98	17,360
The year	3,080	285	563	1.70	23.02	407,600

Rogue River below South Fork of Rogue River, near Prospect, Oreg.

Location.- Water-stage recorder in NW¼ sec. 16, T. 33 S., R. 2 E., at bridge 6 miles southwest of Prospect. Zero of gage is about 1,708 feet above mean sea level by river profile.

Drainage area.- 643 square miles.

Records available.- April 1929 to September 1934.

Extremes.- Maximum discharge during year, 6,520 second-feet Jan. 23 (gage height, 5.33 feet); minimum recorded, 493 second-feet Sept. 1 (gage height, -.06 foot), probably slightly lower at times. Minimum daily discharge, 692 second-feet Sept. 5.
1929-34: Maximum discharge, about 12,600 second-feet Mar. 19, 1932 (gage height, 8.7 feet); minimum stage and minimum daily discharge not determined, as stage falls too low to be recorded at times.

Remarks.- Records good except those for February and March, which are fair. Discharge estimated Feb. 3, 4, 11, Mar. 29. Minor irrigation diversions above station. Considerable diurnal fluctuation, owing to operation of power plant 4 miles upstream. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,040	1,100	916	1,260	1,730	1,260	2,400	1,340	1,020	824	782	728
2	965	1,100	923	1,460	1,680	1,550	2,230	1,300	1,010	888	752	740
3	979	1,050	965	3,300	1,650	1,640	2,120	1,340	993	848	776	716
4	1,040	1,060	930	2,980	1,620	1,600	2,070	1,340	1,010	812	782	746
5	972	951	916	2,120	1,600	2,120	2,020	1,220	993	860	758	692
6	958	1,040	1,010	1,780	1,550	2,450	1,970	1,220	1,100	830	788	740
7	972	958	1,500	1,600	1,550	2,120	1,920	1,220	1,070	812	764	728
8	993	966	1,140	1,500	1,780	1,870	1,820	1,260	1,040	806	746	752
9	909	965	1,060	1,380	1,640	1,780	1,730	1,220	1,020	867	758	728
10	965	951	986	1,380	1,600	1,780	1,640	1,180	1,010	806	746	722
11	972	930	1,010	1,300	1,520	1,730	1,600	1,140	979	812	746	722
12	965	930	1,100	1,260	1,460	1,730	1,550	1,070	1,000	806	782	734
13	1,010	923	1,420	1,300	1,380	1,680	1,550	1,100	972	824	746	710
14	937	923	1,260	1,820	1,380	1,600	1,500	1,140	951	806	752	728
15	944	923	1,140	1,680	1,340	1,550	1,500	1,070	944	818	746	734
16	944	923	1,060	1,500	1,340	1,550	1,460	1,050	923	836	752	710
17	937	916	1,050	1,600	1,340	1,600	1,380	1,060	902	806	758	716
18	944	909	1,100	1,550	1,340	1,460	1,340	1,060	944	812	710	698
19	944	909	1,140	2,250	1,300	1,420	1,340	1,060	923	794	728	728
20	972	930	1,140	2,620	1,300	1,420	1,300	1,030	916	818	740	722
21	930	916	1,180	2,230	1,260	1,460	1,300	1,060	909	782	752	734
22	930	909	1,180	3,180	1,260	1,420	1,260	1,010	881	806	722	752
23	923	909	1,300	5,470	1,220	1,380	1,300	1,020	867	794	752	782
24	944	909	1,300	4,000	1,220	1,340	1,340	1,020	881	788	734	776
25	944	902	1,260	2,980	1,140	1,420	1,300	1,040	909	782	740	734
26	944	895	1,260	2,500	1,220	1,420	1,260	1,070	916	788	728	746
27	944	902	1,180	2,280	1,220	1,600	1,220	1,020	902	776	770	740
28	1,020	923	1,180	2,120	1,300	2,450	1,180	1,070	895	764	740	752
29	1,380	888	1,380	1,970		2,600	1,140	1,060	860	770	740	728
30	1,220	902	1,380	1,920		2,400	1,260	1,070	867	782	728	728
31	1,140		1,300	1,780		2,450		1,040		752	746	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,380	909	990	1.54	1.78	60,850
November	1,100	888	947	1.47	1.64	56,350
December	1,500	916	1,151	1.79	2.06	70,740
January	5,470	1,260	2,127	3.31	3.82	130,800
February	1,780	1,140	1,426	2.22	2.31	79,220
March	2,600	1,260	1,734	2.70	3.11	106,600
April	2,400	1,140	1,567	2.44	2.72	93,220
May	1,340	1,010	1,126	1.75	2.02	69,220
June	1,100	860	954	1.48	1.65	56,740
July	888	752	809	1.26	1.45	49,720
August	788	710	750	1.17	1.35	46,140
September	782	692	732	1.14	1.27	43,570
The year	5,470	692	1,192	1.85	25.18	863,200

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 The California Oregon Power Co., half a mile below Bear Creek, and 6 miles northwest of Central Point. Zero of gage is 1,124 feet above mean sea level by river profile.

Drainage area.- 2,020 square miles.

Records available.- August 1905 to September 1934.

Average discharge.- 29 years, 2,713 second-feet.

Extremes.- Maximum discharge during year, 10,600 second-feet Jan. 23 (gage height, 6.06 feet); minimum, 609 second-feet Aug. 31 (gage height, 0.08 foot); minimum daily discharge, 734 second-feet Sept. 4.
1905-34: Maximum discharge, 91,500 second-feet Feb. 21, 1927 (gage height, 24.8 feet); minimum stage indeterminate, as water goes below intake pipe of well during low stages, which are usually of short duration; minimum daily discharge, 816 second-feet Sept. 6, 1931.

Remarks.- Records good. Discharge interpolated Sept. 1. Numerous diversions for irrigation above station. Diurnal fluctuation, owing to operation of power plant immediately above station. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,240	1,430	1,200	1,680	2,370	1,630	3,400	1,680	1,200	950	810	774
2	1,200	1,430	1,200	1,790	2,250	1,630	4,030	1,680	1,200	912	606	766
3	1,160	1,430	1,240	3,870	2,190	2,130	3,330	1,680	1,160	920	792	775
4	1,160	1,380	1,290	4,980	2,130	2,010	3,040	1,740	1,160	875	840	734
5	1,200	1,340	1,200	3,260	2,130	2,310	2,830	1,630	1,160	868	786	757
6	1,110	1,290	1,240	2,630	2,070	2,900	2,700	1,530	1,240	875	762	750
7	1,110	1,290	1,840	2,310	2,070	2,700	2,560	1,530	1,380	898	826	769
8	1,110	1,240	1,680	2,070	2,250	2,440	2,440	1,480	1,290	928	791	760
9	1,160	1,200	1,430	1,900	2,310	2,250	2,310	1,530	1,240	890	800	760
10	1,110	1,240	1,380	1,900	2,070	2,130	2,130	1,430	1,200	905	796	767
11	1,160	1,200	1,290	1,790	1,960	2,070	2,010	1,380	1,110	854	792	765
12	1,110	1,200	1,380	1,740	1,900	2,010	1,960	1,380	1,110	840	751	788
13	1,110	1,200	1,900	1,740	1,840	1,960	1,900	1,240	1,110	843	819	785
14	1,110	1,200	1,900	4,730	1,790	1,960	1,790	1,290	1,070	826	772	766
15	1,160	1,200	1,840	3,870	1,740	1,900	1,790	1,240	990	875	777	792
16	1,160	1,200	1,680	2,760	1,740	1,900	1,740	1,200	1,010	819	773	769
17	1,110	1,200	1,630	2,440	1,740	1,790	1,630	1,200	982	881	794	780
18	1,110	1,200	1,580	2,370	1,740	1,680	1,580	1,200	966	840	779	765
19	1,160	1,200	1,790	3,110	1,740	1,680	1,530	1,240	982	840	766	760
20	1,160	1,200	1,960	4,620	1,740	1,680	1,530	1,160	950	840	740	796
21	1,200	1,200	1,790	4,620	1,680	1,680	1,480	1,160	998	833	753	785
22	1,200	1,200	1,840	4,620	1,630	1,630	1,430	1,160	942	792	782	775
23	1,200	1,160	1,840	7,830	1,630	1,580	1,480	1,110	935	884	762	840
24	1,110	1,160	1,840	7,000	1,630	1,680	1,530	1,110	935	854	785	866
25	1,160	1,200	1,740	4,980	1,530	1,580	1,580	1,160	950	778	763	912
26	1,160	1,160	1,680	3,950	1,530	1,680	1,580	1,220	982	810	791	864
27	1,110	1,160	1,630	3,400	1,580	1,740	1,480	1,200	1,010	805	759	849
28	1,200	1,200	1,680	3,040	1,740	3,350	1,480	1,200	1,010	812	784	847
29	1,630	1,200	1,630	2,760		3,870	1,430	1,240	982	805	785	823
30	1,740	1,160	1,840	2,630		3,110	1,430	1,290	950	816	786	824
31	1,530		1,790	2,500		3,480		1,240		800	782	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,740	1,110	1,198	73,690
November	1,430	1,160	1,256	73,550
December	1,960	1,200	1,605	98,680
January	7,830	1,680	3,319	204,100
February	2,370	1,530	1,883	104,600
March	3,870	1,580	2,130	131,000
April	4,030	1,430	2,038	121,200
May	1,740	1,110	1,340	82,370
June	1,380	935	1,073	63,880
July	950	778	853	52,460
August	840	740	784	48,200
September	912	734	792	47,130
The year	7,830	734	1,521	1,101,000

Mill Creek near Prospect, Oreg.

Location.- Staff gage in SE¼ sec. 29, T. 32 S., R. 3 E., at power canal crossing a third of a mile northeast of Prospect. Zero of gage is about 2,587 feet above mean sea level.

Drainage area.- 32 square miles.

Records available.- August to October 1910, May 1925 to September 1934.

Extremes.- Maximum daily discharge during year (estimated), 200 second-feet Jan. 23; minimum, 25 second-feet Aug. 15-31, Sept. 1-21, 26-30.
1910, 1925-34: Maximum discharge recorded, 200 second-feet Feb. 20, 1927; maximum daily discharge (estimated), 200 second-feet Jan. 23, 1934; minimum, 24 second-feet Sept. 4-25, Oct. 2-16, 1931.

Remarks.- Records fair. Gage read once a week, discharge estimated for intervening days. A ditch above station diverts 1 or 2 second-feet for use at Prospect; no regulation. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	40	38	40	76	53	88	48	34	31	29	25
2	38	40	39	55	74	59	96	48	34	31	29	25
3	38	41	41	100	72	70	84	55	34	30	29	25
4	38	40	39	88	70	70	83	47	34	30	29	25
5	38	39	38	77	69	110	82	46	34	30	29	25
6	38	39	44	68	68	97	81	46	34	30	29	25
7	38	39	50	62	68	88	78	46	34	30	29	25
8	38	39	42	58	72	83	76	50	34	30	29	25
9	37	38	40	55	68	81	73	45	34	30	29	25
10	37	38	40	52	66	79	71	43	34	30	29	25
11	37	38	42	51	65	77	67	41	34	30	28	25
12	38	38	44	51	64	76	65	40	33	30	27	25
13	38	38	45	54	63	74	63	40	33	30	27	25
14	38	38	44	75	62	72	61	40	33	30	26	25
15	38	38	43	66	62	70	59	40	33	30	25	25
16	38	38	43	63	61	69	57	40	33	30	25	25
17	38	38	42	64	60	68	55	39	33	30	25	25
18	38	38	42	66	59	67	53	39	33	30	25	25
19	38	38	42	71	58	66	52	39	32	30	25	25
20	38	38	42	90	57	65	51	39	32	30	25	25
21	38	38	43	90	56	65	50	39	32	30	25	25
22	38	38	44	120	56	65	50	38	32	30	25	26
23	38	38	44	200	56	65	49	38	32	30	25	27
24	37	38	44	160	55	66	49	38	32	30	25	27
25	37	38	44	120	55	70	48	38	32	30	25	26
26	37	38	44	106	55	70	46	38	33	30	25	25
27	37	38	43	98	54	90	44	37	32	30	25	25
28	40	38	43	91	54	125	44	37	31	30	25	25
29	58	38	43	85		105	44	36	31	30	25	25
30	50	38	43	82		93	46	36	31	30	25	25
31	43		43	79		90		35		29	25	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	58	37	39.0	1.22	1.41	2,400
November	41	38	38.4	1.20	1.34	2,290
December	50	38	42.5	1.33	1.53	2,610
January	200	40	81.8	2.56	2.95	5,050
February	76	54	62.7	1.96	2.04	3,480
March	125	53	77.4	2.42	2.79	4,760
April	88	44	61.8	1.93	2.15	3,680
May	55	36	41.3	1.29	1.49	2,540
June	34	31	32.9	1.03	1.15	1,960
July	31	29	30.0	.938	1.08	1,850
August	29	25	26.5	.828	.95	1,630
September	27	25	25.2	.788	.88	1,500
The year	200	25	46.6	1.46	19.76	33,730

South Fork of Rogue River above Immaha Creek, near Prospect, Oreg.

Location.- Water-stage recorder in NE¼ sec. 18, T. 33 S., R. 4 E., 300 yards above Immaha Creek, 400 yards above South Fork diversion dam, and 6 miles southeast of Prospect.

Drainage area.- 52 square miles.

Records available.- October 1931 to September 1934.

Extremes.- Maximum discharge during year, 628 second-feet Jan. 23 (gage height, 3.63 feet); minimum, 32 second-feet Sept. 20, 21 (gage height, 0.86 foot).
1931-34: Maximum discharge, 1,100 second-feet Mar. 19, 1932 (gage height, 4.47 feet); minimum, 27 second-feet Oct. 1-21, 1931; minimum gage height, 0.81 foot Oct. 4, 9-21, 1931.

Remarks.- Records good. Discharge estimated Feb. 15-20, May 5-8, July 5-10. No diversions or regulation above station. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	76	50	74	130	84	140	90	65	49	38	35
2	65	76	51	94	124	102	132	91	63	49	38	35
3	63	73	52	270	119	112	130	110	62	49	38	34
4	63	69	51	231	114	108	128	101	61	49	38	34
5	63	65	50	162	112	138	128	94	62	49	38	34
6	62	62	61	134	112	157	130	91	73	49	37	34
7	61	60	118	116	113	136	125	90	72	50	37	34
8	60	59	83	106	126	120	122	93	67	49	37	34
9	59	59	69	98	112	113	116	90	65	48	37	34
10	59	58	65	94	107	108	110	84	61	47	36	34
11	58	57	62	90	101	106	107	81	60	46	36	34
12	58	56	65	87	100	104	106	79	60	45	36	34
13	57	55	71	88	97	104	104	76	59	44	36	34
14	56	54	68	132	94	104	101	73	58	44	36	34
15	56	53	66	128	91	104	106	72	57	43	36	34
16	56	53	63	110	89	102	100	71	56	42	36	33
17	55	53	68	104	88	98	97	71	55	42	36	33
18	54	52	74	110	88	95	93	71	55	42	35	32
19	54	51	69	152	88	93	90	69	54	41	35	33
20	57	51	69	154	90	93	88	67	53	41	34	32
21	55	51	69	146	87	91	86	66	53	41	34	32
22	55	50	72	280	84	91	84	63	52	41	34	33
23	54	49	73	485	83	88	86	63	51	41	34	36
24	53	49	76	328	83	87	86	62	51	41	34	38
25	53	49	74	231	81	98	86	66	51	41	34	36
26	52	49	73	206	80	100	83	67	54	40	34	35
27	53	49	71	181	83	113	80	67	54	39	34	35
28	62	50	71	168	87	164	79	67	53	39	35	34
29	125	49	73	152		159	79	66	51	38	39	34
30	98	50	79	143		140	86	68	50	38	36	34
31	84		77	134		143		66		38	35	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	125	52	62.1	1.19	1.37	3,820
November	76	49	56.2	1.08	1.21	3,350
December	118	50	68.8	1.32	1.52	4,230
January	485	74	161	3.10	3.57	9,890
February	130	80	98.7	1.90	1.98	5,480
March	164	84	111	2.13	2.46	6,850
April	140	79	103	1.98	2.21	6,120
May	110	62	76.9	1.48	1.71	4,730
June	73	50	57.9	1.11	1.24	3,450
July	50	38	43.7	.840	.97	2,690
August	39	34	35.9	.690	.80	2,210
September	38	32	34.1	.656	.73	2,030
The year	485	32	75.8	1.46	19.77	54,850

Imnaha Creek near Prospect, Oreg.

Location.- Staff gage in NE¼ sec. 18, T. 33 S., R. 4 E., 400 yards above mouth and 6 miles southeast of Prospect.

Drainage area.- 26 square miles.

Records available.- September 1931 to September 1934.

Extremes.- Maximum daily discharge during year (estimated), 110 second-feet Jan. 23; minimum, 15 second-feet Sept. 9-22.
1931-34: Maximum discharge recorded, 237 second-feet Mar. 19, 1932 (gage height, 2.10 feet); minimum, 11 second-feet Dec. 14, 1931 (gage height, 0.46 foot).

Remarks.- Records fair. Gage read only once a week, discharge estimated for intervening days. No diversions or regulation above station. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	27	24	27	38	29	35	30	24	20	18	16
2	24	27	24	28	36	30	35	30	23	20	18	16
3	24	27	24	34	35	33	35	34	23	20	18	16
4	24	26	24	34	34	32	35	32	23	20	18	16
5	24	26	24	33	34	35	35	31	24	20	17	16
6	24	26	25	32	34	40	35	31	25	20	17	16
7	24	25	34	31	34	35	34	32	25	20	17	16
8	23	25	28	30	37	34	34	31	25	20	17	16
9	23	25	27	30	35	33	33	30	24	20	17	15
10	23	25	26	29	33	32	32	28	24	19	16	15
11	23	25	25	29	32	31	32	28	24	19	16	15
12	24	24	25	29	31	31	31	27	24	19	16	15
13	23	24	27	29	31	31	30	27	24	19	16	15
14	23	24	26	37	31	31	30	26	24	19	16	15
15	23	24	26	36	31	31	31	26	23	19	16	15
16	23	24	25	35	31	31	30	26	23	19	16	15
17	23	24	27	34	30	30	29	26	23	19	16	15
18	23	24	29	35	30	30	29	26	22	19	16	15
19	23	24	28	40	30	30	29	25	22	19	16	15
20	23	24	27	40	31	29	29	24	22	19	16	15
21	23	24	27	39	30	29	28	24	22	19	16	15
22	23	24	28	75	30	29	28	23	21	18	16	15
23	23	24	29	110	29	29	29	23	21	18	16	16
24	23	24	30	62	29	29	29	23	21	18	16	17
25	23	24	29	55	28	30	29	24	21	18	16	16
26	23	24	28	51	28	30	29	24	21	18	16	16
27	23	24	27	48	29	31	28	24	21	18	16	16
28	26	24	27	46	30	36	28	24	21	18	16	16
29	34	24	27	45		36	28	24	21	18	16	16
30	29	24	29	42		35	29	24	20	18	16	16
31	28		28	39		35		24		18	16	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	34	23	24.1	0.927	1.07	1,480
November	27	24	24.7	.950	1.06	1,470
December	34	24	26.9	1.03	1.19	1,650
January	110	27	40.8	1.57	1.81	2,510
February	38	28	31.8	1.22	1.27	1,770
March	40	29	31.8	1.22	1.41	1,960
April	35	28	30.9	1.19	1.33	1,840
May	34	23	26.8	1.03	1.19	1,650
June	25	20	22.7	.873	.97	1,350
July	20	18	19.0	.731	.84	1,170
August	18	16	16.4	.631	.73	1,010
September	17	16	15.6	.600	.67	926
The year	110	15	25.9	.996	13.54	18,790

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South Fork of Rogue River power canal near Prospect, Oreg.

Location.- Water-stage recorder in E½ sec. 12, T. 33 S., R. 3 E., 1 mile below head gate at diversion dam and 5 miles southeast of Prospect. Zero of gage is about 3,357 feet above mean sea level.

Records available.- April 1932 to September 1934.

Extremes.- Maximum discharge during year, 170 second-feet Jan. 3 (gage height, 3.39 feet); no flow at times.
1932-34: Maximum discharge, 175 second-feet May 31, June 17, 1933; no flow at times.

Remarks.- Records fair. This canal, completed in March 1932, diverts water from South Fork of Rogue River 200 feet below mouth of Imnaha Creek for use at power plant located in W½ sec. 1, T. 33 S., R. 3 E., from which water may be wasted into Middle Fork of Rogue River or mingled with other diversions in main power canal. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	89	66	94	140	101	81	109	74	54	48	44
2	74	89	68	114	136	122	94	109	72	54	48	44
3	73	86	69	150	131	131	150	126	71	54	48	44
4	73	82	67	150	126	126	150	113	70	54	48	42
5	72	78	67	138	126	150	150	105	71	54	48	42
6	72	76	81	145	126	155	150	101	81	54	48	42
7	72	74	128	126	131	150	150	101	80	54	48	42
8	72	73	97	113	136	140	138	113	75	54	48	43
9	71	72	83	105	126	131	140	105	72	54	48	42
10	70	71	78	101	122	126	136	101	69	54	47	42
11	70	70	77	97	118	126	131	97	69	54	47	42
12	69	70	79	94	113	126	126	97	69	54	46	42
13	68	70	88	97	109	126	126	94	64	54	46	42
14	67	70	83	145	109	126	50	94	65	55	46	42
15	67	70	82	140	105	126	35	94	63	53	46	42
16	66	70	76	122	105	126	118	90	62	52	46	42
17	66	69	82	118	105	122	113	89	62	54	46	41
18	66	69	88	126	105	118	109	89	60	53	46	40
19	66	69	82	155	105	118	109	87	60	53	46	40
20	69	69	84	150	109	113	105	86	60	53	45	40
21	67	69	85	150	105	113	50	85	59	53	44	41
22	66	68	90	150	105	113	29	84	59	54	44	42
23	65	68	91	150	101	113	105	83	58	52	44	46
24	64	67	95	145	101	109	105	83	58	52	44	49
25	65	67	95	106	77	122	105	86	58	52	44	46
26	65	67	90	21	94	122	101	86	62	50	44	46
27	66	67	88	22	101	136	97	85	60	49	44	45
28	73	67	87	22	101	160	97	84	59	49	46	44
29	91	67	92	86		155	94	81	58	48	50	44
30	99	67	98	145		155	105	82	57	48	46	44
31	96		95	136		113		77		48	44	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	99	64	71.4	4,390
November	89	67	72.0	4,280
December	128	66	84.9	5,220
January	155	21	117	7,170
February	140	77	113	6,280
March	160	101	128	7,870
April	150	29	108	6,440
May	126	77	94.1	5,780
June	81	57	65.2	3,880
July	54	48	52.5	3,230
August	50	44	46.2	2,840
September	49	40	42.9	2,550
The year	160	21	82.8	59,930

Middle Fork of Rogue River near Prospect, Oreg.

Location.- Water-stage recorder in NE¼ sec. 1, T. 33 S., R. 3 E., 1,000 feet below diversion dam and intake of power canal of Middle Fork of Rogue River and 4½ miles southeast of Prospect.

Drainage area.- 57 square miles.

Records available.- May 1925 to September 1934.

Extremes.- Maximum combined discharge of river and canal during year, 721 second-feet Jan. 23 (river gage height, 2.45 feet); minimum, 88 second-feet Sept. 18-22, 30. 1925-34: Maximum discharge, 1,300 second-feet Mar. 19, 1932 (gage height, 3.55 feet); minimum, 72 second-feet Aug. 24 to Sept. 5, 1931.

Remarks.- Records good. Discharge of river or canal estimated Oct. 23, 24, 30, Nov. 5-7, Sept. 25-28. Flow regulated since Nov. 19, 1931, by operation of head gates at diversion dam of power canal which diverts water around station; practically no storage above diversion dam. Records published include flow of canal. Gage-height record furnished by The California Oregon Power Co.

Combined discharge, in second-feet, of Middle Fork of Rogue River and Middle Fork power canal near Prospect, Oreg., 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	124	132	115	133	176	131	206	169	118	105	97	91
2	124	133	117	163	173	185	200	164	118	105	97	90
3	121	137	122	321	168	173	192	195	118	105	98	90
4	122	128	117	259	163	180	190	173	118	106	97	90
5	122	126	116	203	159	276	190	164	118	105	97	89
6	122	124	139	177	159	256	191	159	126	105	97	89
7	124	123	158	162	159	209	190	158	121	107	97	89
8	124	122	127	149	173	184	187	171	117	105	97	89
9	119	122	121	149	161	176	182	158	115	104	97	89
10	122	115	120	144	156	172	178	153	113	103	97	89
11	122	116	121	140	151	168	175	147	114	103	97	89
12	125	116	130	140	148	170	178	142	121	103	96	89
13	120	116	133	142	145	168	176	135	116	102	96	89
14	121	116	132	180	143	168	189	133	111	101	96	89
15	120	115	122	159	142	170	193	132	111	100	95	89
16	122	115	123	149	142	174	184	133	107	100	96	89
17	120	115	121	153	141	170	180	129	105	101	95	89
18	122	115	126	169	142	167	176	125	114	101	95	88
19	122	115	128	256	139	166	169	122	111	102	95	88
20	125	116	128	229	140	166	169	122	111	101	94	88
21	121	115	129	236	139	166	168	121	111	102	94	88
22	118	115	132	395	134	165	168	121	111	101	92	88
23	119	115	136	591	135	161	169	117	110	101	93	93
24	120	114	134	395	135	160	169	119	110	101	93	94
25	120	115	135	311	131	178	169	124	110	100	93	92
26	116	115	132	274	131	173	158	120	117	100	93	92
27	121	116	129	250	135	211	153	120	111	100	93	91
28	138	116	128	226	135	317	147	124	111	98	93	90
29	186	116	132	211		278	147	119	110	98	93	89
30	148	115	134	201		236	159	124	110	98	92	88
31	136		131	185		220		118		98	92	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	186	116	125	2.19	2.52	7,710
November	137	114	119	2.09	2.33	7,080
December	158	115	128	2.25	2.59	7,870
January	591	133	220	3.86	4.45	13,550
February	176	131	148	2.60	2.71	8,240
March	317	131	190	3.33	3.84	11,690
April	206	147	177	3.11	3.47	10,520
May	195	117	139	2.44	2.81	8,550
June	126	105	114	2.00	2.23	6,770
July	107	98	102	1.79	2.06	6,270
August	98	92	95.1	1.67	1.92	5,850
September	94	88	89.6	1.57	1.75	5,330
The year	591	88	137	2.40	32.68	99,430

Middle Fork of Rogue River power canal near Prospect, Oreg.

Location.- Water-stage recorder in NE¼ sec. 1, T. 33 S., R. 3 E., 1,000 feet below head gate at diversion dam and 4⅛ miles southeast of Prospect. Zero of gage is about 2,632 feet above mean sea level.

Records available.- November 1931 to September 1934.

Extremes.- Maximum discharge during year, 168 second-feet Mar. 27 (gage height, 3.19 feet); no flow at times.
1932-34: Maximum discharge, 188 second-feet Mar. 10, 11, 1932 (gage height, 3.34 feet); no flow at times.

Remarks.- Records good. Discharge estimated Oct. 24, Nov. 5. This canal, completed in November 1931, diverts water from Middle Fork of Rogue River into main power canal to supplement flow of Rogue River above Prospect diversion dam. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	116	124	108	69	70	124	120	159	112	100	91	84
2	116	124	108	69	71	133	120	154	112	100	90	84
3	112	126	112	70	71	106	120	164	112	98	90	84
4	112	120	108	71	71	70	120	159	112	98	90	84
5	106	118	108	71	71	70	120	154	112	98	90	83
6	112	116	120	71	71	71	120	150	116	98	90	83
7	112	47	128	70	71	71	120	150	116	99	90	83
8	95	0	120	40	71	70	120	159	112	98	90	83
9	83	31	116	26	71	70	120	150	108	98	90	83
10	104	112	116	70	71	70	120	146	108	97	90	83
11	100	108	116	70	71	70	120	141	108	97	90	83
12	104	106	120	70	71	70	120	136	108	97	89	83
13	112	106	120	70	71	70	120	63	108	96	89	83
14	112	108	92	70	71	70	140	128	104	95	89	83
15	108	108	66	71	71	70	164	128	104	95	89	83
16	112	108	5	71	71	106	164	128	54	94	90	83
17	108	108	1	71	71	154	164	124	23	94	89	83
18	112	108	27	71	104	154	164	120	108	94	89	83
19	112	108	69	71	132	154	159	116	104	94	89	83
20	112	108	69	71	132	154	159	116	102	94	88	83
21	112	108	69	71	132	154	159	116	104	90	88	85
22	108	108	69	71	128	154	159	116	104	94	86	87
23	112	108	69	71	128	150	159	112	104	94	86	90
24	102	108	69	71	128	150	159	112	104	94	86	90
25	112	108	69	71	124	159	159	116	104	93	86	90
26	108	108	69	71	124	159	150	112	108	93	86	90
27	112	108	69	71	128	164	146	112	104	93	86	89
28	120	108	69	71	128	120	141	116	104	92	86	88
29	108	108	69	71		120	141	112	104	92	86	88
30	124	108	69	71		120	150	116	104	92	86	87
31	128		69	56		120		112		92	86	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	128	83	110	6,760
November	128	0	103	6,110
December	128	1	83.5	5,130
January	71	26	67.7	4,160
February	132	70	92.6	5,150
March	164	70	113	6,940
April	164	120	140	8,320
May	164	63	129	7,930
June	116	23	103	6,120
July	100	90	96.3	5,860
August	91	86	88.3	5,430
September	90	83	84.9	5,050
The year	164	0	101	72,960

Red Blanket Creek near Prospect, Oreg.

Location.- Staff gage in NE¼ sec. 23, T. 32 S., R. 3 E., 3 miles northeast of Prospect. From April 1932 to September 1933 gage was 120 feet upstream.

Drainage area.- 40 square miles.

Records available.- May 1925 to September 1934. Prior to October 1928 in NE¼ sec. 24, T. 32 S., R. 3 E.

Extremes.- Maximum daily discharge during year (estimated), 350 second-feet Jan. 23; minimum, 40 second-feet Aug. 23-31, Sept. 1-22, 26-30.
1925-34: Maximum discharge recorded, 1,200 second-feet Mar. 11, 1928; minimum, 34 second-feet Sept. 3, 4, 25, Oct. 9, 16, 1931.

Remarks.- Records fair. Gage read only once a week, discharge estimated for intervening days. One irrigation diversion above station. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	75	63	85	110	77	134	92	65	54	45	40
2	67	76	64	100	107	113	130	92	65	54	45	40
3	67	79	66	200	103	110	127	108	65	54	45	40
4	66	76	65	160	100	110	124	92	65	54	45	40
5	66	74	64	130	98	160	122	90	65	53	45	40
6	66	73	72	120	98	150	121	89	68	53	45	40
7	66	72	94	110	98	130	118	88	65	52	44	40
8	65	70	77	100	105	110	113	94	63	51	44	40
9	65	68	73	93	95	102	108	88	62	51	44	40
10	65	65	72	88	92	100	106	82	61	50	44	40
11	65	65	75	84	90	99	103	79	60	49	44	40
12	64	65	80	82	88	99	101	77	60	49	43	40
13	64	65	82	86	86	99	99	76	59	48	43	40
14	64	64	80	110	84	98	97	74	59	48	42	40
15	64	64	77	94	83	98	96	72	68	48	41	40
16	64	64	76	90	82	99	94	73	57	48	41	40
17	65	64	76	93	81	98	93	70	57	48	43	40
18	65	64	76	103	80	96	92	68	56	48	43	40
19	65	64	77	130	80	94	90	67	56	48	42	40
20	65	64	79	140	79	91	88	66	55	48	42	40
21	65	63	80	145	78	88	88	65	54	48	41	40
22	64	63	81	230	77	85	89	64	53	47	41	40
23	64	63	84	350	77	84	90	64	53	47	40	43
24	64	63	83	240	77	86	90	64	53	47	40	42
25	65	63	83	180	76	91	88	65	54	47	40	41
26	67	63	83	159	77	90	85	65	56	46	40	40
27	72	63	82	145	78	130	83	65	55	46	40	40
28	82	63	82	133	78	180	83	65	55	46	40	40
29	100	63	84	124		160	82	66	55	46	40	40
30	86	63	86	118		149	89	68	55	46	40	40
31	77		84	113		140		66		45	40	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	100	64	68.1	1.70	1.96	4,190
November	79	63	66.7	1.67	1.86	3,970
December	94	63	77.4	1.94	2.24	4,760
January	350	82	133	3.32	3.83	8,200
February	110	76	87.8	2.20	2.29	4,870
March	180	77	110	2.75	3.17	6,780
April	134	82	101	2.52	2.81	6,000
May	108	64	75.9	1.90	2.19	4,670
June	68	53	58.8	1.47	1.64	3,500
July	54	45	49.0	1.22	1.41	3,010
August	45	40	42.3	1.06	1.22	2,600
September	43	40	40.2	1.00	1.12	2,390
The year	350	40	75.9	1.90	25.74	54,940

Red Blanket Creek power canal near Prospect, Oreg.

Location.- Water-stage recorder in SE¼ sec. 27, T. 32 S., R. 3 E., 200 yards below head gate at diversion dam and 2 miles east of Prospect. Zero of gage is 2,612 feet above mean sea level.

Records available.- November 1931 to September 1934.

Extremes.- Maximum discharge during year, 109 second-feet May 13 (gage height, 3.31 feet); minimum, 2 second-feet May 13 (gage height, 0.65 foot).
1931-34: Maximum discharge, 116 second-feet Nov. 6, 1932; no flow part of Sept. 24, 25, 1932.

Remarks.- Records good. This canal, completed in October 1932, diverts water from Red Blanket Creek into main power canal to supplement flow of Rogue River above Prospect diversion dam. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	67	75	60	83	57	77	89	92	64	53	42	38
2	66	75	64	86	89	89	89	92	64	54	42	38
3	66	76	68	89	89	89	86	95	63	53	44	40
4	66	72	63	66	89	89	89	92	63	52	44	40
5	65	70	63	86	89	89	89	89	64	52	44	38
6	65	69	71	86	89	92	89	86	67	52	44	39
7	65	68	80	86	89	95	86	86	64	52	42	39
8	65	67	80	49	89	92	86	89	65	50	43	38
9	64	66	73	34	89	92	66	86	64	46	43	39
10	64	66	70	80	89	92	86	83	61	46	43	40
11	63	66	69	83	86	92	86	80	61	46	41	39
12	63	65	74	83	89	92	86	60	61	46	40	40
13	64	64	77	86	89	92	86	43	59	46	40	42
14	63	63	72	92	66	89	86	75	57	46	42	41
15	63	64	76	92	86	89	92	71	57	47	42	39
16	62	64	72	89	86	92	95	69	56	46	40	37
17	62	63	73	86	86	95	92	67	56	46	40	38
18	62	63	75	86	83	95	92	67	56	46	40	38
19	62	63	76	89	83	92	89	67	56	46	40	38
20	64	63	77	89	83	92	86	66	55	46	40	38
21	62	62	77	89	83	92	86	65	54	47	40	38
22	61	61	80	89	80	89	86	64	52	46	39	39
23	61	61	83	92	80	86	89	64	50	46	39	44
24	60	61	63	89	80	66	89	66	50	44	39	43
25	60	60	83	89	80	65	89	68	51	42	39	40
26	60	60	83	89	80	89	86	67	55	43	39	40
27	63	61	80	89	83	92	83	65	54	44	39	40
28	69	62	77	89	80	92	63	68	54	44	39	39
29	102	60	83	89		89	80	67	52	42	39	40
30	83	60	86	89		89	89	68	52	42	40	40
31	77		83	35		89		65		42	40	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	102	60	65.8	4,040
November	76	60	65.0	3,870
December	86	60	75.2	4,620
January	92	34	82.8	5,090
February	89	57	84.3	4,680
March	95	65	89.5	5,500
April	95	80	87.5	5,210
May	95	43	74.3	4,570
June	67	50	57.9	3,450
July	54	42	46.9	2,880
August	44	39	40.9	2,520
September	44	37	39.4	2,340
The year	102	34	67.4	48,770

Main power canal below all feeders, near Prospect, Oreg.

Location.- Water-stage recorder in SW¼ sec. 28, T. 32 S., R. 3 E., 0.8 mile below outlet of Red Blanket Creek power canal, 1 mile east of Prospect, and 1.6 miles above diversion dam on Rogue River. Zero of gage is 2,599.0 feet above mean sea level by general adjustment of 1929.

Records available.- November 1931 to September 1934.

Extremes.- Maximum discharge during year, 385 second-feet (discharge measurement) May 3; maximum gage height, 4.44 feet Mar. 27; minimum, 6 second-feet May 13 (gage height, 0.43 foot).
1931-34: Maximum discharge, 403 second-feet July 24, 1933; no flow at times.

Remarks.- Records fair. This canal, completed in November 1931, carries water diverted from South and Middle Forks of Rogue River and Red Blanket Creek into Rogue River above Prospect diversion dam. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	257	297	241	252	276	308	302	364	250	221	174	162
2	257	297	255	279	305	346	310	364	250	221	174	162
3	257	305	262	314	305	331	353	379	242	221	179	162
4	257	282	255	308	298	301	346	368	242	214	179	156
5	250	275	248	300	298	323	346	360	246	214	179	156
6	257	267	276	300	298	324	346	345	266	209	179	158
7	250	192	333	279	298	324	346	341	264	214	174	158
8	235	139	304	156	312	316	346	354	257	209	174	158
9	221	175	283	101	298	309	346	339	247	203	179	158
10	242	267	269	259	290	302	346	333	247	196	179	158
11	235	253	259	252	277	302	346	326	245	194	177	160
12	242	246	287	245	277	302	346	320	245	189	177	165
13	250	246	297	252	277	302	346	164	236	189	177	165
14	250	246	243	308	270	310	296	314	230	189	177	165
15	250	246	238	300	270	310	296	306	236	189	177	160
16	250	246	159	279	265	331	367	296	190	189	177	161
17	250	246	159	272	265	360	367	293	146	189	177	161
18	250	246	195	279	286	360	359	283	236	189	177	161
19	250	253	225	308	323	360	359	283	230	183	172	161
20	257	253	232	308	323	360	365	280	230	183	172	161
21	251	247	232	308	323	360	309	273	230	181	174	163
22	244	247	238	308	315	360	282	270	230	181	174	169
23	244	247	245	308	315	353	349	263	230	181	168	179
24	230	247	252	308	315	353	349	260	230	181	168	185
25	244	247	252	270	286	353	346	268	230	181	168	179
26	244	247	252	182	301	367	338	265	236	181	166	175
27	251	247	245	189	316	374	327	265	236	176	166	175
28	273	247	238	189	316	367	327	263	230	176	166	175
29	320	247	252	246		360	323	263	230	176	170	175
30	320	247	259	320		360	346	267	230	176	166	175
31	320		289	228		324		260		176	160	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	320	221	255	15,690
November	305	139	248	14,770
December	333	159	250	15,360
January	320	101	265	16,280
February	323	265	296	16,460
March	374	301	336	20,650
April	367	282	338	20,090
May	379	164	301	18,500
June	266	146	236	13,980
July	221	176	193	11,840
August	179	160	173	10,660
September	185	156	165	9,830
The year	379	101	254	184,100

South Fork of Big Butte Creek near Butte Falls, Oreg.

Location.- Water-stage recorder in SW¼ sec. 11, T. 35 S., R. 2 E., just below Ginger Creek and 1 mile east of Butte Falls.

Records available.- September 1910 to October 1911, August to October 1915, October 1917 to September 1922, March 1925 to September 1934. At station at Butte Falls, August 1922 to March 1925.

Average discharge.- 18 years (1910-11, 1917-34), 158 second-feet.

Extremes.- Maximum discharge during year, 325 second-feet Jan. 23 (gage height, 1.30 feet); minimum, 46 second-feet Sept. 15 (gage height, 0.39 foot).
1910-11, 1915, 1917-34: Maximum discharge, 2,470 second-feet Feb. 20, 1927 (gage height, 4.05 feet); minimum, 39 second-feet Oct. 14, 1931 (gage height, 0.32 foot).

Remarks.- Records good. Discharge estimated Oct. 1, 2, June 11-18. Diversions above station for irrigation and Medford municipal supply.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78	82	69	73	109	80	138	102	67	65	58	52
2	77	80	69	80	107	80	176	91	65	65	56	54
3	76	78	71	135	102	80	151	94	67	65	54	56
4	76	78	71	138	99	80	138	89	67	63	54	54
5	76	76	71	109	96	84	129	84	67	61	56	56
6	76	73	78	96	89	86	124	82	78	61	54	56
7	76	73	99	91	84	89	115	80	78	60	54	56
8	76	73	84	86	89	86	107	89	73	60	52	58
9	76	73	80	84	89	86	99	86	67	58	52	56
10	76	73	78	84	86	84	96	82	67	58	52	56
11	73	71	78	84	84	82	94	78	65	58	52	54
12	73	71	78	82	84	80	91	78	65	58	52	52
13	73	69	89	84	82	78	89	76	64	56	54	51
14	76	69	91	157	84	78	89	73	64	56	54	51
15	76	69	86	151	82	78	86	69	63	58	54	51
16	73	67	86	126	84	78	84	67	62	60	52	52
17	73	67	84	118	82	78	78	67	61	60	54	56
18	73	69	94	115	82	73	76	67	60	58	52	54
19	73	69	89	129	82	73	76	67	60	58	52	52
20	73	71	89	167	82	71	71	65	60	58	54	54
21	71	69	86	154	82	71	71	65	60	58	52	54
22	71	69	86	170	80	69	71	65	60	58	52	54
23	71	69	84	280	78	67	71	61	60	58	52	58
24	71	69	84	257	78	67	76	60	60	58	52	58
25	71	69	80	208	78	78	86	61	61	58	52	60
26	71	69	78	180	78	73	82	65	65	56	52	65
27	71	71	76	157	82	76	80	65	65	56	52	63
28	78	71	76	144	82	86	78	65	65	56	52	63
29	107	69	71	129		84	76	65	65	58	51	63
30	94	69	73	121		82	82	67	65	58	51	63
31	86		73	115		109		67		56	52	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	107	71	76.2	4,680
November	82	67	71.6	4,250
December	99	69	80.7	4,960
January	280	73	132	8,140
February	109	78	86.3	4,790
March	109	67	79.5	4,890
April	176	71	96.0	5,710
May	102	60	73.9	4,550
June	78	60	64.9	3,860
July	65	56	58.9	3,620
August	58	51	53.0	3,260
September	65	51	56.1	3,340
The year	280	51	77.4	56,050

South Fork of Little Butte Creek near Lakecreek, Oreg.

Location.- Water-stage recorder in SE¼ sec. 29, T. 36 S., R. 2 E., a quarter of a mile above intake of Rogue River Valley Canal and 1½ miles southeast of Lakecreek.

Records available.- April 1921 to September 1934. At station in sec. 11, T. 37 S., R. 2 E., 5 miles above Lakecreek, November 1910 to April 1913.

Average discharge.- 14 years (1911-12, 1921-34), 85.4 second-feet.

Extremes.- Maximum discharge during year, 235 second-feet Jan. 23 (gage height, 2.29 feet); minimum (estimated), 6 second-feet Aug. 2, 3.
1910-13, 1921-34: Maximum discharge (estimated), 3,000 second-feet Dec. 30, 1924 (gage height, 5.25 feet); minimum, 2 second-feet Aug. 10, 1931 (gage height, 0.97 foot).

Remarks.- Records excellent except those estimated, Aug. 2-14, which are good. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	29	21	32	56	42	153	48	25	12	6.3	7.5
2	18	27	22	34	52	44	173	45	24	11	6	6.9
3	19	25	22	85	50	46	133	46	23	9.9	6	6.9
4	19	24	22	103	46	46	112	39	22	10	7	6.9
5	19	24	22	65	45	56	100	33	22	8.8	7	6.9
6	18	22	22	50	45	61	91	31	35	9.9	7	7.5
7	19	22	35	44	45	56	82	29	44	11	7	7.5
8	19	22	28	38	54	62	76	40	36	11	7	7.9
9	19	22	23	35	48	50	70	40	31	9.9	7	7.9
10	16	22	22	34	46	48	63	35	26	9.9	7	7.5
11	18	22	22	31	45	46	59	32	24	8.8	7	7.2
12	19	20	28	31	42	45	54	25	23	8.3	7	7.5
13	20	20	38	33	40	44	51	23	22	7.5	7	7.5
14	21	20	32	91	39	44	48	22	20	6.9	7	7.5
15	21	20	31	72	39	40	44	18	19	6.9	6.9	7.5
16	22	20	26	54	39	39	39	19	17	6.9	6.9	7.5
17	22	20	27	50	38	38	37	19	17	6.3	6.6	7.5
18	22	19	28	48	38	35	33	17	15	6.6	6.9	7.2
19	21	19	28	67	38	34	28	16	15	7.2	7.5	7.2
20	23	20	28	89	40	33	27	17	15	6.9	7.5	7.5
21	23	20	31	72	38	32	27	15	14	7.5	7.5	7.9
22	23	20	32	95	37	32	29	12	14	7.5	7.9	8.3
23	23	19	31	185	37	31	32	12	14	8.3	7.5	11
24	22	19	29	155	34	31	33	12	14	8.3	7.2	20
25	22	19	28	110	34	58	40	13	13	8.3	6.9	16
26	22	19	27	93	34	45	33	14	14	8.3	6.9	14
27	23	20	26	80	40	45	31	21	15	8.3	7.9	13
28	27	21	26	72	45	85	29	20	14	7.5	7.9	12
29	45	20	31	67		87	28	21	13	7.2	7.6	11
30	38	21	35	61		85	37	37	12	6.9	7.9	10
31	33		31	58		147		29		6.6	7.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	45	16	22.6	1,380
November	29	19	21.2	1,260
December	38	21	27.6	1,690
January	185	31	68.8	4,230
February	56	34	42.3	2,350
March	147	31	50.9	3,130
April	173	27	59.7	3,550
May	48	12	25.8	1,590
June	44	12	20.4	1,210
July	12	6.3	8.40	516
August	7.9	6	7.10	437
September	20	6.9	9.02	537
The year	185	6	30.2	21,880

Fish Lake Reservoir near Lakecreek, Oreg.

Location.- Staff gage in SW¼ sec. 3, T. 37 S., R. 4 E., at reservoir outlet 18 miles east of Lakecreek. Gage graduated to read elevation above sea level, irrigation district datum.

Drainage area.- 17 square miles.

Records available.- December 1915 to September 1934.

Extremes.- Maximum contents during year, 7,196 acre-feet June 12 (elevation, 4,825.18 feet); minimum, 101 acre-feet Sept. 30 (elevation, 4,801.00 feet).
1915-34: Maximum contents, 7,535 acre-feet June 26, 1933 (elevation, 4,826.02 feet); minimum contents, practically zero.

Remarks.- Records good. Water is diverted during summer from Fourmile Lake in Klamath River Basin through Cascade Canal into Fish Lake. Permanent dam at outlet of Fish Lake completed in fall of 1915; storage began in November 1915.

Stage and contents, 1933-34

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	----	*2,851	----
Oct. 31	4,816.26	3,925	+1,074
Nov. 30	4,818.05	4,536	+611
Dec. 31	4,819.52	5,050	+514
Jan. 31	4,820.76	5,498	+448
Feb. 28	4,821.06	5,609	+111
Mar. 31	4,821.27	5,687	+78
Apr. 30	4,821.95	5,941	+254
May 31	4,823.57	6,560	+619
June 30	4,821.63	5,820	-740
July 31	4,814.30	3,286	-2,534
Aug. 31	4,803.86	464	-2,822
Sept.30	4,801.00	101	-363
The year			-2,750

*Estimated.

North Fork of Little Butte Creek at Fish Lake, near Lakecreek, Oreg.

Location.- Water-stage recorder in S½ sec. 4, T. 37 S., R. 4 E., half a mile below outlet of Fish Lake and 18 miles east of Lakecreek.

Drainage area.- 18 square miles.

Records available.- October 1914 to September 1934; incomplete prior to 1917.

Extremes.- Maximum discharge during year, 126 second-feet July 4, 5 (gage height, 1.67 feet); minimum, 10 second-feet Oct. 1-14.
1914-34: Maximum discharge, 158 second-feet July 10, 1930; practically no flow at times.

Remarks.- Records good except those for May 8 to June 16, which are fair. Discharge estimated Oct. 20, Jan. 23, Mar. 6, Sept. 8-11. Flow regulated by storage in Fish Lake Reservoir. Beginning in October 1923, Cascade Canal has diverted water from Fourmile Lake in Klamath River Basin into Fish Lake Basin; no diversions from creek above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	15	16	18	19	20	21	23	25	115	102	47
2	10	15	16	18	19	20	20	23	27	115	103	46
3	10	15	16	18	19	19	20	23	52	114	102	44
4	11	15	16	19	20	19	20	24	52	118	100	44
5	11	16	16	18	20	19	20	24	42	125	99	43
6	12	16	16	18	20	19	20	24	28	125	100	43
7	12	16	16	18	20	19	20	24	28	120	100	41
8	12	16	16	18	20	19	21	24	28	115	100	40
9	12	16	16	18	20	19	21	23	29	112	96	40
10	12	16	16	18	20	19	21	23	29	106	92	35
11	12	16	16	18	20	19	21	22	32	106	85	31
12	13	16	16	18	20	19	21	22	51	104	83	30
13	14	16	16	19	20	19	21	23	76	104	82	29
14	14	16	16	19	20	20	22	23	75	100	80	28
15	14	16	16	19	20	20	22	23	79	92	82	27
16	14	16	16	18	20	20	22	23	81	90	82	25
17	14	16	17	18	20	20	22	53	94	85	78	25
18	14	16	17	18	19	20	22	59	94	85	75	24
19	14	16	17	18	19	20	22	59	97	86	72	24
20	14	16	17	19	19	20	22	59	104	87	66	24
21	14	16	17	19	20	20	21	58	104	90	62	23
22	14	16	17	19	20	20	22	59	117	92	60	23
23	14	16	17	19	20	19	22	64	117	90	60	25
24	14	16	17	19	19	19	22	63	117	90	58	26
25	14	16	17	19	19	20	23	59	121	90	55	26
26	14	16	17	19	19	20	23	55	121	89	53	26
27	15	16	17	19	19	20	23	55	121	89	53	25
28	16	16	17	19	20	20	23	48	114	86	53	25
29	16	16	18	19		20	23	43	110	94	51	25
30	16	16	18	19		20	23	32	112	97	51	25
31	15		18	19		21		25		96	49	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	16	10	13.3	815
November	16	15	15.9	944
December	18	16	16.6	1,020
January	19	18	18.5	1,140
February	20	19	19.6	1,090
March	21	19	19.6	1,210
April	23	20	21.5	1,280
May	64	22	37.5	2,300
June	121	25	75.9	4,510
July	125	85	100	6,160
August	103	49	76.9	4,730
September	47	23	31.3	1,860
The year	125	10	37.4	27,060

North Fork of Little Butte Creek above Medford intake, near Lakecreek, Oreg.

Location.- Water-stage recorder in SW¼ sec. 25, T. 36 S., R. 2 E., 300 yards above diversion to pipe line formerly used as water-supply for Medford and since 1927 for irrigation, and 4½ miles east of Lakecreek.

Records available.- September 1911 to March 1913, May 1922 to September 1928, October 1931 to September 1934; incomplete prior to 1931.

Extremes.- Maximum discharge during year, 170 second-feet June 25 (gage height, 2.28 feet); minimum, 31 second-feet Oct. 1 (gage height, 1.62 feet).
1911-13, 1922-28, 1931-34: Maximum discharge (estimated), 680 second-feet Dec. 30, 1924 (gage height, 3.30 feet); minimum (estimated), 11 second-feet Oct. 29 to Nov. 8, 1931.

Remarks.- Records good except those for June 28 to July 14, which are fair. Flow regulated by storage in Fish Lake Reservoir. Small irrigation diversions above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	40	38	40	47	43	80	50	48	157	125	65
2	32	39	39	44	46	44	74	48	48	154	128	63
3	33	39	39	63	46	45	61	48	68	151	128	63
4	33	38	39	54	46	45	56	47	74	154	125	63
5	34	38	39	46	44	43	53	46	74	164	123	61
6	34	39	42	44	44	44	51	46	58	160	123	61
7	36	39	44	43	44	43	50	46	51	157	123	61
8	36	39	40	42	46	43	48	47	51	151	120	59
9	36	39	40	40	44	43	47	46	50	148	120	59
10	36	39	40	42	44	43	47	46	48	142	117	54
11	36	39	40	40	44	43	47	43	50	139	107	50
12	36	39	42	40	44	45	47	43	70	134	105	48
13	36	39	44	43	43	43	47	43	100	134	105	47
14	36	39	43	69	41	43	46	44	105	131	103	46
15	37	39	43	50	41	43	46	44	105	117	103	44
16	37	39	42	44	41	41	46	44	105	112	103	43
17	37	39	43	43	41	41	46	65	117	107	100	41
18	37	39	42	44	41	43	46	80	120	107	98	43
19	36	39	40	54	41	43	46	82	120	110	95	43
20	37	38	40	55	43	41	46	82	131	110	89	43
21	36	38	40	50	43	41	46	82	131	112	82	40
22	36	38	40	57	43	41	46	82	145	115	80	41
23	37	38	40	91	43	41	46	89	151	115	80	47
24	37	38	40	68	41	43	48	91	157	112	78	50
25	37	38	40	58	41	48	47	87	164	110	76	43
26	37	38	40	54	41	43	46	80	160	110	70	43
27	38	39	40	51	46	44	46	80	157	110	68	41
28	43	39	40	51	44	47	44	76	151	107	68	41
29	49	38	40	50		46	46	68	145	115	68	41
30	43	38	40	48		56	48	65	148	123	67	41
31	40		40	47		67		48		123	65	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	49	32	36.8	2,260
November	40	38	38.7	2,300
December	44	38	40.6	2,500
January	91	40	50.5	3,100
February	47	41	43.3	2,410
March	67	41	44.3	2,720
April	80	44	49.8	2,960
May	91	43	60.9	3,740
June	164	48	103	6,150
July	164	107	129	7,920
August	128	65	98.1	6,030
September	65	40	49.5	2,950
The year	164	32	62.2	45,040

Diversions from Little Butte Creek near Lakecreek, Oreg.

Hanley South and Hanley North Canals divert from North Fork of Little Butte Creek in SE¼ sec. 26, T. 36 S., R. 2 E.; water used to irrigate land on both sides of Little Butte Creek near Lakecreek. Rogue River Valley Canal diverts from South Fork of Little Butte Creek in SE¼ sec. 29, T. 36 S., R. 2 E., and from North Fork of Little Butte Creek in NE¼ sec. 20, T. 36 S., R. 2 E.; water used for irrigation of about 15,000 acres of land, chiefly in Bear Creek Basin, on both sides of creek below Phoenix. Eagle Point Canal diverts from Little Butte Creek in SE¼ sec. 31, T. 35 S., R. 1 E.; water used for irrigation of lands near Eagle Point. There are many other smaller diversions from Little Butte Creek and tributaries.

Records are available from April 1929 to September 1934; records of some of the canals published separately prior to 1929.

Diversions, in acre-feet, from Little Butte Creek near Lakecreek, Oreg., March to September 1934

Month	Hanley South Canal	Hanley North Canal	Rogue River Valley Canal below junction of intakes	Eagle Point Canal
March	287	194	*1,550	
April			3,610	
May	363	389	3,610	998
June	440	486	5,190	918
July	455	516	5,630	922
August	485	502	3,940	974
September	392	540	1,380	534
The period			24,910	4,346

*Mar. 21-31 only; no record Mar. 1-20.

Note.- Probably some flow in canals for months for which no record is given.

Emigrant Gap Reservoir near Ashland, Oreg.

Location.- Staff gage in SE¼ 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 1934.

Extremes.- Maximum contents recorded during year, 3,585 acre-feet June 13 (elevation, 2,146.2 feet); no storage from latter part of August to Sept. 30.
1924-34: Maximum contents, 8,748 acre-feet Feb. 20, 1927 (elevation, 2,175.2 feet); no storage at times.

Remarks.- Records good. Emigrant Gap Reservoir was completed in 1924 by Talent Irrigation District to provide water for lands under East and Talent laterals in vicinity of Talent. Natural flow into reservoir may be augmented by water stored in Hyatt Prairie Reservoir and released through Keene Creek Canal in Klamath River Basin, records of which are published in Water-Supply Paper 766.

Stage and contents, 1933-34

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	----	*510	----
Oct. 31	----	*540	+30
Nov. 30	----	*630	+90
Dec. 31	----	*1,000	+370
Jan. 31	----	*1,920	+920
Feb. 28	----	*2,360	+440
Mar. 31	2,141.3	3,004	+644
Apr. 30	----	*3,300	+296
May 31	----	*3,020	-280
June 30	----	*2,990	-30
July 31	----	*810	-2,180
Aug. 31	----	0	-810
Sept.30	----	0	0
The year			-510

*Interpolated or estimated.

Emigrant Creek near Ashland, Oreg.

Location.- Water-stage recorder in SE¼ sec. 20, T. 39 S., R. 2 E., 500 feet below Emigrant Gap Reservoir Dam and 6 miles southeast of Ashland.

Records available.- January 1920 to May 1924 (incomplete), October 1924 to September 1934.

Extremes.- Maximum discharge during year, 30 second-feet July 6 (gage height, 1.23 feet); no flow at times.
1920-34: Maximum discharge, 5,260 second-feet Feb. 20, 1927; no flow at times.

Remarks.- Records good except those estimated, which are fair. Practically all flow October to April stored at Emigrant Gap Reservoir. Diversions for irrigation above station; principal canals are Ashland lateral and East lateral. Kenne Creek Canal diverts water into Emigrant Creek from Klamath River Basin. Flow regulated since December 1924 by storage in Emigrant Gap Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									0.5	23	16	
2									1.1	24	18	
3									1.1	25	18	
4									1.1	24	15	
5								*0.5	1.3	24	9.2	
6									1.6	27	9.2	
7					†0.2				1.5	3.9	8.8	
8								.4	1.4	7.7	9.2	
9									1.5	12	9.2	
10									1.4	13	9.2	
11									4.5	13	11	
12									10	11	20	
13									17	8.0	22	
14									20	12	22	
15								*.5	21	16	21	
16									22	19	20	
17										20	*20	
18										21	20	
19										20	19	
20									*22	20	17	
21							0.6	.6		20	15	
22								.7	22	20	9.6	
23								.7	23	20	2.2	
24								.6	23	20	.6	
25								.6	23	20	.4	
26								.5	23	20	.4	
27								.4	23	20	*.3	
28								.3	22	20	*.2	
29								*.3	22	20	*.1	
30								*.4	23	20	†.1	
31								*.5		16	*.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			0	0
November			0	0
December			0	0
January			*.1	6
February			*.2	11
March			*.3	18
April			*.5	30
May	0.7		.50	31
June	23	0.5	14	835
July	27	3.9	18.1	1,110
August	22	.1	11.1	680
September			0	0
The year	27	0	3.76	2,720

*Estimated.

†Discharge measurement.

Bear Creek at Medford, Oreg.

Location.- Water-stage recorder in NW¼ sec. 30, T. 37 S., R. 1 W., just above Main Street Bridge in Medford.

Records available.- March 1915 to September 1934; incomplete prior to April 1927.

Average discharge.- 13 years (1920-26, 1927-34), 58.2 second-feet.

Extremes.- Maximum discharge during year, 111 second-feet Apr. 2; maximum gage height, 1.56 feet Jan. 23, 24; minimum discharge, 1.5 second-feet June 12 (gage height, 0.12 foot).
1915-34: Maximum discharge, 10,200 second-feet Feb. 20, 1927 (gage height, 10.15 feet); practically dry at times.

Remarks.- Records fair except those for Oct. 29, 30, June 5-7, July 6-8, which are poor. Diversions for irrigation above station. Flow partly regulated since December 1924 by storage in Emigrant Gap Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.3	24	16	30	35	23	76	16	5.2	6.7	4.3	2.0
2	8.2	23	17	30	35	15	91	24	4.4	6.4	4.0	1.8
3	7.1	22	18	34	33	14	85	29	4.0	4.9	3.8	2.0
4	6.8	22	19	50	32	13	74	33	4.0	5.5	4.0	2.0
5	6.3	21	19	48	30	14	64	25	*4.5	4.6	4.3	2.2
6	6.1	21	19	39	28	14	60	21	*6.0	*5.0	3.8	2.1
7	6.1	22	26	35	27	*13	54	18	*9.0	*13	3.6	2.0
8	5.9	18	25	32	32	*12	49	16	7.8	*20	4.6	2.1
9	5.9	17	22	31	31	*11	45	15	6.6	15	4.3	2.1
10	5.6	17	22	27	28	*10	40	13	5.5	11	4.6	2.1
11	*5.5	16	22	28	27	*9.0	31	9.5	5.5	7.0	*4.2	2.1
12	5.4	*15	29	31	25	8.8	24	7.5	5.0	6.7	*3.8	2.2
13	*4.5	14	36	30	26	10	19	*7.0	4.6	5.2	3.5	2.2
14	*4.0	14	32	54	25	9.8	*15	6.6	4.4	4.6	3.3	2.2
15	*5.0	14	34	57	24	9.8	*11	6.1	5.0	5.2	2.8	2.4
16	*6.0	15	30	40	24	9.8	7.5	*5.6	4.0	5.5	2.7	2.2
17	*6.0	16	26	34	22	9.8	7.2	5.5	4.0	5.6	2.2	2.2
18	*6.0	17	24	34	24	13	6.6	*4.4	4.6	5.8	2.4	2.2
19	*6.0	17	22	37	26	15	6.3	3.3	4.6	5.5	2.7	2.2
20	*6.0	17	23	51	24	14	6.3	3.1	4.3	5.5	3.0	2.2
21	*6.0	17	24	45	19	9.5	6.3	2.9	4.6	4.9	2.8	2.2
22	*6.0	17	24	43	*16	9.5	6.6	2.7	4.6	5.8	2.4	2.2
23	6.3	15	26	60	14	9.0	6.8	2.6	5.2	6.1	2.2	2.7
24	6.6	14	26	70	12	10	8.8	2.7	6.4	5.2	2.1	2.8
25	6.8	13	24	54	12	14	12	3.0	7.0	4.6	1.8	2.8
26	7.1	12	24	47	12	12	15	5.2	*10	4.9	1.8	3.0
27	9.0	13	23	44	14	14	16	*6.5	*14	5.2	2.1	4.1
28	19	16	23	41	26	20	15	8.2	15	4.3	2.2	3.0
29	*35	16	30	38		28	15	9.0	15	4.6	2.0	2.7
30	27	16	34	38		39	14	8.8	8.2	4.6	1.8	2.7
31	26		32	37		62		8.8		4.9	2.0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	35	4.0	8.92	548
November	24	12	17.0	1,010
December	36	16	24.9	1,530
January	70	27	40.9	2,520
February	36	12	24.4	1,350
March	62	8.8	15.3	942
April	91	6.3	29.6	1,760
May	33	2.6	10.6	655
June	15	4.0	6.43	383
July	20	4.3	6.58	405
August	4.6	1.8	3.07	189
September	4.1	1.8	2.36	140
The year	90	1.8	15.8	11,430

*Estimated.

Diversions in Bear Creek Basin, Oreg.

Ashland lateral of Talent Irrigation District diverts from Sampson Creek in SW¼ sec. 26, T. 39 S., R. 2 E., for irrigation of lands near Ashland; most of flow is contributed by Kenne Creek Canal, which diverts from Keene Creek in Klamath River Basin. East lateral of Talent Irrigation District diverts from Emigrant Gap Reservoir in SE¼ sec. 20, T. 39 S., R. 2 E., for irrigation of lands chiefly on the east side of Bear Creek Valley above Medford. Talent lateral of Talent Irrigation District diverts from Bear Creek in SW¼ sec. 33, T. 38 S., R. 1 E., for irrigation of lands near Talent. Phoenix Canal diverts from Bear Creek in NW¼ sec. 23, T. 38 S., R. 1 W., to supplement flow of Medford Irrigation District Canal for irrigation of lands west of Bear Creek. Bear Creek Canal diverts from Bear Creek at Medford for irrigation of lands west of Bear Creek near Central Point. Numerous smaller diversions from Bear Creek and tributaries.

Records are available from April 1929 to September 1934; records for some of the canals published separately prior to 1929.

Records for Ashland lateral good; others fair. Discharge partly estimated for all canals.

Diversions, in acre-feet, 1933-34

Month	Ashland lateral	East lateral	Talent lateral	Phoenix Canal	Bear Creek Canal
February	0	0		37	0
March	0	0		418	0
April	57	333	*127	220	0
May	240	705	273	331	193
June	363	1,140	827	291	347
July	468	1,790	1,140	184	289
August	397	489	713	92	154
September	21	0	14	85	62
The period	1,550	4,460	3,090	1,660	1,040

*Apr. 21-30; no record Apr. 1-20.

Note.- Probably little or no flow during months left blank or prior to February.

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.

Records available.- June 1911 to September 1914, September 1925 to September 1934.

Average discharge.- 11 years (1911-14, 1925-26, 1927-34), 282 second-feet.

Extremes.- Maximum discharge during year, 1,950 second-feet Jan. 3 (gage height, 3.70 feet); minimum, 9 second-feet Sept. 4-6 (gage height, 0.31 foot).
1911-14, 1925-34: Maximum discharge (estimated), 20,000 second-feet Feb. 20, 1927 (gage height, 16.0 feet); minimum, 7 second-feet Sept. 2, 1929 (gage height, 0.26 foot).

Remarks.- Records good except those for June 20-26, July 28 to Aug. 1, Aug. 29 to Sept. 3, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	101	48	382	369	234	460	173	85	38	22	10
2	28	94	59	460	369	271	430	173	81	38	19	9
3	28	85	96	1,500	342	291	392	163	78	34	19	9
4	28	76	64	1,080	324	287	360	176	76	36	20	9
5	30	70	57	728	307	369	333	161	76	33	20	10
6	28	63	141	558	303	382	311	152	118	33	20	12
7	28	59	392	460	351	324	303	140	121	35	20	12
8	27	57	167	405	466	287	287	149	94	36	20	12
9	28	55	118	364	387	271	287	149	87	34	20	12
10	30	54	101	333	351	267	252	132	76	33	20	12
11	27	52	103	307	324	271	230	124	64	33	20	12
12	28	50	641	295	307	279	216	118	64	33	20	12
13	28	50	720	291	291	279	212	106	61	31	20	12
14	30	50	360	941	275	275	206	103	57	32	20	12
15	31	50	279	770	267	275	202	103	57	28	20	12
16	32	50	212	564	267	264	196	101	50	30	17	12
17	32	48	230	477	256	245	183	96	48	30	15	11
18	32	48	328	460	245	234	170	94	47	30	16	12
19	32	48	410	622	245	237	161	89	44	30	15	12
20	33	48	504	749	245	237	155	87	41	27	13	12
21	38	50	415	558	234	245	152	85	47	26	12	14
22	42	48	420	590	223	248	161	85	48	26	14	12
23	42	48	374	882	220	252	186	83	42	27	13	13
24	42	48	333	728	209	241	192	87	38	27	14	16
25	40	47	299	602	206	252	186	99	36	25	14	17
26	38	47	295	534	212	230	161	94	40	23	12	20
27	41	47	287	494	245	406	155	101	42	22	12	15
28	54	48	271	455	264	1,300	149	94	41	22	12	14
29	247	47	610	430		792	143	113	42	20	12	13
30	189	47	540	405		570	158	106	40	20	11	12
31	137		420	378		528		91		19	10	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	247	27	48.4	2,980
November	101	47	56.2	3,340
December	720	48	300	18,430
January	1,500	291	574	35,310
February	466	206	289	16,070
March	1,300	230	343	21,110
April	460	143	232	13,820
May	183	83	118	7,230
June	121	36	61.4	3,650
July	38	19	29.4	1,810
August	22	10	16.5	1,020
September	20	9	12.4	738
The year	1,500	9	173	125,500

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Illinois River at Kerby, Oreg.

Location.- Staff gage in SW¼ sec. 4, T. 39 S., R. 8 W., at Kerby.

Drainage area.- 363 square miles.

Records available.- March 1926 to September 1934.

Extremes.- Maximum discharge recorded during year, 12,300 second-feet Jan. 14 (gage height, 9.96 feet); minimum, 13 second-feet Sept. 10-15.
1926-34: Maximum discharge (estimated), 50,000 second-feet Feb. 20, 1927 (gage height, 19.6 feet, at former gage); minimum, that of Sept. 10-15, 1934.

Remarks.- Records good except those below 50 second-feet, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73	275	79	1,360	855	1,030	1,240	248	154	62	28	14
2	73	242	112	6,400	855	1,030	1,170	204	146	59	28	14
3	68	222	321	4,140	745	1,240	1,030	195	146	56	28	14
4	68	193	212	1,890	694	800	910	186	131	55	27	14
5	66	175	184	2,590	694	745	746	373	138	53	27	14
6	68	158	2,320	1,790	647	694	694	399	146	49	27	14
7	68	142	1,360	1,440	603	647	524	373	138	51	25	14
8	68	127	686	1,070	1,390	647	489	349	138	53	24	14
9	68	120	424	1,070	800	603	457	327	131	49	24	14
10	68	112	345	797	1,170	562	427	327	116	45	23	13
11	62	105	396	638	970	562	399	306	109	41	21	13
12	63	105	6,150	686	855	489	327	286	102	37	21	13
13	61	98	5,200	797	745	489	373	248	96	35	20	13
14	63	98	3,560	7,160	745	457	373	248	89	33	20	13
15	64	92	2,320	4,890	745	427	349	230	89	33	18	13
16	68	85	1,610	3,560	647	427	327	221	83	35	18	14
17	68	85	5,430	2,890	603	399	306	221	83	33	18	14
18	73	85	3,940	2,530	694	399	306	186	77	31	18	14
19	68	85	6,400	3,020	647	373	267	178	75	31	18	14
20	68	85	4,760	3,420	647	373	248	178	75	29	18	14
21	68	85	2,450	2,650	647	349	248	170	70	29	18	14
22	68	79	2,090	1,510	603	349	286	162	66	29	17	14
23	68	85	1,790	5,280	603	349	286	162	64	29	16	27
24	73	85	1,210	3,020	603	349	286	162	65	29	16	27
25	73	85	860	2,510	647	327	267	212	73	29	16	25
26	79	85	686	1,910	647	327	267	178	73	29	15	25
27	85	85	595	1,730	910	427	248	162	70	29	14	23
28	92	85	1,210	1,390	1,390	2,310	230	154	68	29	16	23
29	370	85	2,740	1,240		2,530	230	162	66	28	16	23
30	345	85	1,700	1,100		1,100	327	154	64	28	16	23
31	321		1,360	1,030		1,240		154		28	15	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	370	61	96.4	5,930
November	275	79	118	7,010
December	6,400	79	2,016	124,000
January	7,160	638	2,423	149,000
February	1,390	603	779	43,240
March	2,530	327	711	43,740
April	1,240	230	455	27,050
May	399	154	230	14,110
June	154	64	98.0	5,830
July	62	28	38.3	2,350
August	28	14	20.2	1,240
September	27	13	16.6	988
The year	7,160	13	586	424,500

In addition to the records of stream flow obtained at gaging stations and reported in the preceding pages, measurements of flow are made at a number of other points, as shown by the following table:

Miscellaneous discharge measurements in Pacific slope basin in Oregon and in lower Columbia River Basin during the year ending Sept. 30, 1934

Willow Creek Basin, Oreg.

Date	Stream	Tributary to or diverting from-	Locality	Discharge
				sec.-ft.
June 8	Willow Creek...	Columbia River.	Former gaging station near Morgan.....	118

John Day River Basin, Oreg.

May 24	Rock Creek.....	John Day River.	Below springs half a mile above West's dam, 2.3 miles above mouth, near Klondike.	1.1
May 24	....do.....	.....do.....	300 yards above West's dam.....	1.1
May 24	Duncan Ditch...	Rock Creek.....	Head gate, near Klondike.....	.85
May 24	....do.....	.....do.....	1½ miles below head gate.....	.85

Eagle Creek Basin, Oreg.

Oct. 3	Eagle Creek....	Columbia River.	At Columbia River highway bridge at mouth.	84
Dec. 7	....do.....	.....do.....	.....do.....	1,190

Tanner Creek Basin, Oreg.

Dec. 7	Tanner Creek...	Columbia River.	Mouth, near Bonneville.....	446

Willamette River Basin, Oreg.

Oct. 31	Hatchery Canal.	Salmon Creek...	Most southerly canal, 50 feet below lowest fish pond, near Oakridge.	2.5
July 17	Calapooya River	Willamette River.	Below power plant tailrace, at Albany.....	208
Sept. 5	....do.....	.....do.....	.....do.....	107
Sept. 5	Mill Creek.....	.....do.....	At mouth, below gage on Willamette River at Salem.	54
June 27	....do.....	Pudding River..	Mouth, at Aurora.....	9.6
Sept.28	....do.....	.....do.....	.....do.....	9.0
Sept.14	Gales Creek....	Tualatin River.	SE¼ sec. 15, T. 2 N., R. 5 W., near Glenwood.	9.2
Dec. 23	Johnson Creek..	Willamette River.	52d Avenue Bridge, at Portland.....	696

Coastal streams between Columbia River and Umpqua River, Oreg.

Sept.10	Necanicum River	Pacific Ocean..	Highway crossing at Necanicum.....	1.2
Sept.10	....do.....	.....do.....	NE¼ sec. 33, T. 6 N., R. 10 W., above Beerman Creek.	20.3
Sept.10	North Fork of Necanicum River	Necanicum River	NW¼ sec. 21, T. 5 N., R. 9 W., at highway bridge.	2.0
Sept.10	North Fork of Nehalem River.	Nehalem River	SE¼ sec. 22, T. 4 N., R. 9 W., above Soapstone Creek.	18.0
Sept.10	Soapstone Creek	North Fork of Nehalem River	SW¼ sec. 15, T. 4 N., R. 9 W., above Buchanan Creek.	*2.0
Sept.10	Miami River....	Pacific Ocean..	SW¼ sec. 14, T. 1 N., R. 10 W.....	17.5
Sept.10	Kilchis River..	.....do.....	SE¼ sec. 7, T. 1 S., R. 9 W., above highway.	37.4
Sept.10	Tillamook River	.....do.....	Sec. 7, T. 2 S., R. 9 W., below bridge....	8.5
Sept.11	Nestucca River.	.....do.....	Sec. 36, T. 3 S., R. 10 W.....	63
Sept. 9	East Beaver Creek.	Beaver Creek...	NW¼ sec. 18, T. 3 S., R. 9 W., at Hemlock.	5.0
Sept. 9	Beaver Creek...	Nestucca River.	Below West Fork, at Hemlock.....	6.6
Sept. 9	....do.....	.....do.....	Mouth, at Beaver.....	7.7
Sept. 9	Farmer Creek...	.....do.....	NE¼ sec. 1, T. 4 S., R. 10 W., at highway bridge.	2.9
Sept. 9	Three Rivers...	.....do.....	NW¼ sec. 13, T. 4 S., R. 10 W., at Hebo...	19.4
Sept.11	Alder Creek....	Three Rivers...	NE¼ sec. 5, T. 5 S., R. 9 W.....	1.5
Sept. 9	Little Nestucca River.	Pacific Ocean..	NW¼ sec. 15, T. 5 S., R. 10 W.....	11.8
Sept. 9	Neskowin Creek.	.....do.....	SE¼ sec. 36, T. 5 S., R. 11 W., above tidewater.	*2.6
Sept. 8	Salmon River...	.....do.....	SW¼ sec. 29, T. 6 S., R. 10 W., above tidewater.	25.7
Sept.11	Little Salmon R.	Salmon River...	NE¼ sec. 14, T. 6 S., R. 9 W.....	2.0
Sept.11	Sulphur Creek..	.....do.....	SE¼ sec. 20, T. 6 S., R. 9 W.....	2.8
Sept.11	Alderbrook Creek.	.....do.....	SE¼ sec. 25, T. 6 S., R. 10 W.....	1.0
Sept.11	Widow Creek....	.....do.....	NW¼ sec. 25, T. 6 S., R. 10 W.....	2.0

*Estimated.

Miscellaneous discharge measurements in Pacific slope basin in Oregon and in lower Columbia River Basin during the year ending Sept. 30, 1934-- Continued.

Coastal streams between Columbia River and Umpqua River, Oreg.-- Continued.

Date	Stream	Tributary to or diverting from-	Locality	Discharge
				sec.-ft.
Sept.11	Slickrock Creek	Salmon River....	NW¼ sec. 35, T. 6 S., R. 10 W.....	16.0
Sept.11	McMullen Creek.	.....do.....	SW¼ sec. 34, T. 6 S., R. 10 W.....	2.0
Sept. 8	Outlet of Devils Lake.	Pacific Ocean...	Sec. 15, T. 7 S., R. 11 W., at Delake.....	2.0
Sept. 8	Schooner Creek.	.....do.....	Sec. 30, T. 7 S., R. 10 W., at bridge.....	12.1
Sept. 7	Rocky Creek...	.....do.....	NW¼ sec. 19, T. 9 S., R. 11 W., at mouth..	*1.5
Sept. 7	Spencer Creek..	.....do.....	Sec. 5, T. 10 S., R. 11 W., at highway bridge.	*2.2
Sept. 7	Moloch Creek...	.....do.....	Sec. 17, T. 10 S., R. 11 W., at highway bridge.	1.2
Sept.17	Yaquina River..	.....do.....	SE¼ sec. 32, T. 10 S., R. 9 W.....	4.5
Sept.17	.....do.....	.....do.....	Eddyville, above Little Elk Creek.....	3.8
Sept. 5	Alsea River....	.....do.....	SW¼ sec. 6, T. 14 S., R. 8 W.....	23.2
Sept.17	Crooked (Spencer) Creek.	Alsea River.....	SW¼ sec. 21, T. 13 S., R. 7 W., 1 mile above mouth.	2.0
Sept.17	Fall Creek.....	.....do.....	SW¼ sec. 1, T. 14 S., R. 9 W., at mouth...	8.4
Sept.17	Scott Creek....	.....do.....	NW¼ sec. 31, T. 13 S., R. 9 W., at mouth..	7.6
Sept. 7	Yachats River..	.....do.....	SW¼ sec. 26, T. 14 S., R. 12 W., at mouth.	17.7
Sept. 6	Cummings Creek.	.....do.....	SE¼ sec. 10, T. 15 S., R. 12 W., at mouth.	2.2
Sept. 6	Bob Creek.....	.....do.....	NE¼ sec. 22, T. 15 S., R. 12 W., at mouth.	2.0
Sept. 6	Tenmile Creek..	.....do.....	Below Mill Creek, above tidewater, near mouth.	10.6
Sept. 6	Rock Creek.....	.....do.....	NW¼ sec. 18, T. 16 S., R. 12 W., near mouth.	4.7
Sept. 6	Big Creek.....	.....do.....	SE¼ sec. 15, T. 16 S., R. 12 W., near mouth.	6.7
Sept. 6	Sutton Creek...	.....do.....	Highway bridge below Sutton Lake, near Heceta.	3.4
Sept.20	North Fork of Siuslaw River.	Siuslaw River...	NE¼ sec. 34, T. 17 S., R. 11 W., near Minerva.	2.4
Sept.20	McLeod Creek...	North Fork of Siuslaw River..	SE¼ sec. 24, T. 17 S., R. 11 W.....	1.2
Sept.20	Condon Creek...	.....do.....	SE¼ sec. 33, T. 17 S., R. 11 W.....	1.4
Sept.19	Greenleaf Creek	Lake Creek.....	SE¼ sec. 35, T. 16 S., R. 8 W.....	1.7
Sept.19	Deadwood Creek.	.....do.....	NW¼ sec. 14, T. 17 S., R. 9 W.....	4.8
Sept.19	Green Creek....	.....do.....	Sec. 16, T. 17 S., R. 9 W.....	1.2
Sept.19	Indian Creek...	.....do.....	Mouth, near Swisshome.....	12.0
Sept. 6	Tahkenitch Cr..	Pacific Ocean...	Sec. 29, T. 20 S., R. 12 W., below lake outlet.	2.9

Umpqua River Basin, Oreg.

Aug. 23	North Umpqua River.	Umpqua River....	Former gage at Winchester.....	797
Aug. 7	Spring River...	North Umpqua River.	Below junction of springs, T. 26 S., R. 6 E. (unsurveyed).	174
Aug. 5	Silent Creek...	Diamond Lake....	Road crossing half a mile south of diamond Lake.	20.0
Aug. 5	Short Creek....	.....do.....	Mouth, at Diamond Lake.....	8.4
May 30	Fish Creek.....	North Umpqua River.	Above Camas Creek, T. 27 S., R. 3 E.....	102
Aug. 6	.....do.....	.....do.....	.....do.....	31.4
Sept.18	Calapooya Creek	Umpqua River....	SE¼ sec. 22, T. 25 S., R. 6 W., at county bridge.	11.0
Sept.18	Yellow Creek...	.....do.....	SW¼ sec. 12, T. 24 S., R. 7 W., at county bridge.	*1.2
Sept.18	Elk Creek.....	.....do.....	Mouth, at Elkton.....	5.4
Sept.18	Mill Creek.....	.....do.....	SE¼ sec. 27, T. 22 S., R. 10 W., 3 miles below Loon Lake.	5.1
Sept.12	Winchester Creek.	.....do.....	SE¼ sec. 7, T. 22 S., R. 12 W., at mouth..	*3.4

Coastal streams between Umpqua River and Rogue River, Oreg.

Sept.12	Bel Creek.....	Tenmile Creek...	NW¼ sec. 13, T. 23 S., R. 13 W., at mouth.	2.7
Sept.16	East Fork of Millicoma River	Millicoma River.	SE¼ sec. 33, T. 24 S., R. 11 W.....	14.5
Sept.16	West Fork of Millicoma River	.....do.....	SE¼ sec. 6, T. 25 S., R. 11 W.....	2.4
Sept.15	Middle Fork of Coquille River.	Coquille River..	Hoffman Bridge, NW¼ sec. 27, T. 29 S., R. 12 W.	40
Sept.15	Rock Creek.....	Middle Fork of Coquille River.	NE¼ sec. 3, T. 30 S., R. 10 W., near mouth	2.9
Sept.15	Big Creek.....	.....do.....	SE¼ sec. 20, T. 29 S., R. 11 W., near mouth	*1.2
Sept.15	North Fork of Coquille River.	.....do.....	Above East Fork, at Gravelford.....	8.8
Sept.13	Beaver Creek...	.....do.....	SE¼ sec. 15, T. 27 S., R. 13 E., near Coaledo.	1.5
Sept.13	Johnson Creek..	Pacific Ocean...	SE¼ sec. 6, T. 29 S., R. 14 W., at bridge..	*1.5
Sept.13	Floras Creek...	.....do.....	SE¼ sec. 3, T. 31 S., R. 15 W.....	4.2
Sept.13	Willow Creek...	Floras Creek....	Denmark, at highway crossing.....	3.2
Sept.13	Sixes River....	Pacific Ocean...	Above Crystal Creek, at Sixes.....	13.0
Sept.13	Crystal Creek..	Sixes River.....	Mouth, at Sixes.....	2.2
Sept.13	Elk River.....	Pacific Ocean...	NW¼ sec. 21, T. 32 S., R. 15 W., near Sixes	44.6
Sept.13	Hubbard Creek..	.....do.....	Mouth, NE¼ sec. 9, T. 33 S., R. 15 W.....	*1.5
Sept.13	Brush Creek....	.....do.....	NW¼ sec. 6, T. 34 S., R. 14 W., at highway crossing.	4.3

*Estimated.

Miscellaneous discharge measurements in Pacific slope basin in Oregon and in lower Columbia River Basin during the year ending Sept. 30, 1934-- Continued.

Date	Stream	Tributary to or diverting from-	Locality	Discharge
				sec.-ft.
Sept. 13	Brush Creek.....	Pacific Ocean...	SW¼ sec. 25, T. 33 S., R. 15 W.....	9.1
Sept. 13	Beartrap Creek..	Brush Creek.....	SE¼ sec. 36, T. 33 S., R. 15 W., at highway crossing.	1.8
Sept. 13	Euchre Creek....	Pacific Ocean...	NE¼ sec. 8, T. 35 S., R. 14 W., near Wedderburn.	40
		Rogue River	Basin, Oreg.	
Feb. 2	Power canal headrace.	Rogue River.....	Above forebay of California-Oregon Power Co.'s plant near Prospect.	**505
Feb. 2	.....do.....	.....do.....	.....do.....	†850
Feb. 2	.....do.....	.....do.....	.....do.....	††701
Aug. 17	.....do.....	.....do.....	.....do.....	‡424
Aug. 17	.....do.....	.....do.....	.....do.....	‡‡596
		Coastal streams south of Rogue River, Oreg.		
Sept. 14	Pistol River....	Pacific Ocean...	SE¼ sec. 19, T. 38 S., R. 14 W.....	5.9
Sept. 14	Chetco River....	.....do.....	SE¼ sec. 34, T. 40 S., R. 13 W., near Harbor.	57
Sept. 14	Winchuck River..	.....do.....	SE¼ sec. 24, T. 41 S., R. 13 W., above South Fork.	3.0

**Two units operating in Prospect No. 2 plant; output, 20,000 kilowatts.
†Two units operating in Prospect No. 2 plant; output, 36,000 kilowatts.
††Two units operating in Prospect No. 2 plant; output, 30,000 kilowatts.
‡One unit operating in Prospect No. 2 plant; output, 18,500 kilowatts.
‡‡Two units operating in Prospect No. 2 plant; output, 25,000 kilowatts.

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