UNITED STATES DEPARTMENT OF THE INTERIOR
HAROLD L. ICKES, Secretary

GEOLOGICAL SURVEY
W. C. MENDENHALL, Director

Water-Supply Paper 884

SURFACE WATER SUPPLY *of the* UNITED STATES 1939

PART 14

PACIFIC SLOPE BASINS IN OREGON AND LOWER COLUMBIA RIVER BASIN

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SURFACE WATER SUPPLY OF PACIFIC SLOPE BASINS IN OREGON AND LOWER COLUMBIA RIVER BASIN, 1939

SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of stage and flow made on streams, lakes, and reservoirs in the United States during the water year ending September 30, 1939. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of flow of streams and measurements of stage and contents of lakes and reservoirs have been made at about 8,240 gaging stations in the United States and also at many gaging stations in Alaska and Hawaii. In July 1939, 4,160 gaging stations were being maintained by the Geological Survey and cooperating organizations. Miscellaneous discharge measurements were made at many other points.

In the execution of the work many State and private organizations have cooperated, either by furnishing data or by assisting in collecting data. 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 9.

DEFINITION OF TERMS

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

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

"Second-feet per square mile" is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the 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 its 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 of water required to cover an acre to the depth of 1 foot. The term is commonly used in connection with storage for irrigation.

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

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

"Control" is a term used to designate the natural section or reach of the channel or artificial structure below the gage that determines the stage-discharge relation at the gage.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the 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. Typical gaging stations, equipped with water-stage recorder and measuring cable and car, are shown on plate 1.

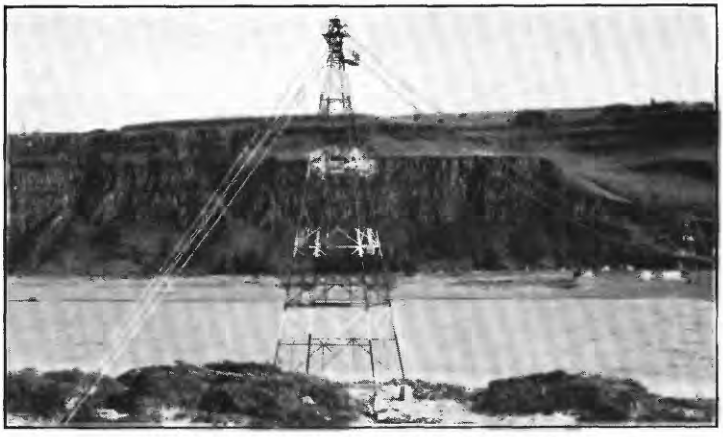
Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the mean daily gage height to these rating tables gives the mean daily discharge, from which the monthly and yearly mean discharge are computed.

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. Skeleton rating tables are published except for those stations whose daily discharge for the greater part of the year was determined by the shifting-control method, the slope method, or other special methods.

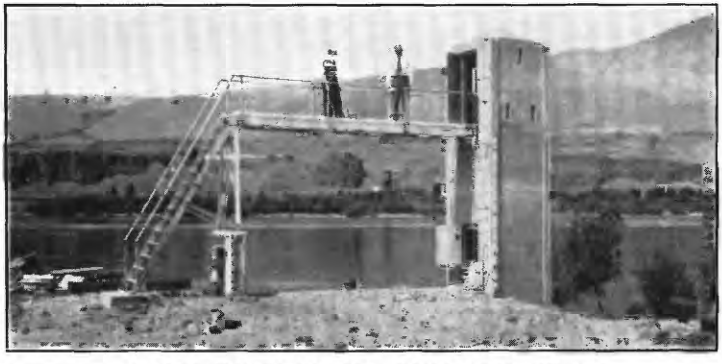
The description of the station gives the type of gage, its latitude and longitude determined from the best available maps, and information in regard to diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Under "Average discharge" is given the average discharge for the number of years indicated. It is given only for stations for which there are 10 or more complete years of record. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (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 peak discharge for the year with the time of its occurrence is given below the table of monthly discharge for some stations. Selected lower peaks are also given if the peak discharge exceeded the mean discharge for that day by more than 10 percent. This supplementary information is generally not given for stations having drainage areas of less than 10 square miles or more than 10,000 square miles.

The table of daily discharge gives, for stations equipped with nonrecording gages, the discharge in second-feet corresponding to once-daily readings of the gage or the mean of twice-daily readings. For flashy floods the mean daily discharge is determined from gage-height graphs based on gage readings made once or twice daily or oftener, as stated in the station description. For stations equipped with water-stage recorders, except those streams subject to sudden or rapid fluctuation, the table gives the discharge corresponding to the mean daily gage height. 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 "Second-foot-days" gives the sum for each month of the figures for that month given in the table of daily 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



A. COLUMBIA RIVER NEAR THE DALLES, OREG.
Measuring cable.



B. COLUMBIA RIVER NEAR THE DALLES, OREG.
Gage shelter and stilling well.

C. WILLAMETTE RIVER AT ALBANY, OREG.

GAGING-STATION STRUCTURES.

given is the minimum daily discharge. The column headed "Mean" gives 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 on (1) the permanency of the stage-discharge relation and (2) the accuracy of observation of stage, measurements of flow, and interpretation of records.

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

Yield indicated by monthly means at some stations may vary widely from natural yield, owing to diversions, amount consumed, regulation by storage, increase or decrease in evaporation due to artificial causes, or other factors. For such stations figures of "second-feet per square mile" and "run-off in inches" are not published unless reservoir records are included indicating the extent of the regulation, or satisfactory adjustments can be made for changes in contents of reservoirs or for other changes incident to use and control. Figures of second-feet per square mile and run-off in inches are also omitted if the drainage area includes large noncontributing areas or if the average annual rainfall over the drainage area is less than 20 inches.

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

The table of monthly discharge 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 the increase in data and the use of improved equipment.

PUBLICATIONS

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

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

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

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

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

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

East of the Mississippi River:
Albany, N. Y., 526 Federal Building.
Asheville, N. C., 220 Post Office Building.
Atlanta, Ga., Georgia School of Technology.
Augusta, Maine, Statehouse.
Boston, Mass., 945 Post Office Building.
Charlottesville, Va., House B, University Row, University of Virginia.
Chattanooga, Tenn., 442 Post Office Building.
College Park, Md., Engineering Building, University of Maryland.
Columbia, S. C., 119 United States Courthouse.
Columbus, Ohio, 404 Engineering Experiment Station, Ohio State University.
Harrisburg, Pa., 490 Education Building.
Hartford, Conn., 203 Federal Building.
Indianapolis, Ind., 318 Federal Building.
Louisville, Ky., 641 Federal Building.
Madison, Wis., 337 N. State Capitol.
Montgomery, Ala., 507 Post Office Building.
Ocala, Fla., Post Office Building.
St. Paul, Minn., 808 New Post Office Building.
South Charleston, W. Va., Naval Ordnance Plant.
Trenton, N. J., 228 Federal Building.
Urbana, Ill., 14 Post Office Annex.

West of the Mississippi River:
Austin, Tex., 300 State Highway Building.
Boise, Idaho, 429 Federal Building.
Denver, Colo., 230 Customhouse.
Fort Smith, Ark., 6 Post Office Building.
Helena, Mont., 408 Federal Building.
Honolulu, Hawaii, 225 Federal Building.
Idaho Falls, Idaho, 204 Federal Building.
Iowa City, Iowa, 508 Hydraulic Laboratory, University of Iowa.
Los Angeles, Calif., G-31 Post Office and Courthouse.
Portland, Oreg., 606 Post Office Building.
Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines and Metallurgy.
St. Louis, Mo., 906 Customhouse, 1114 Market Street.
Salt Lake City, Utah, 303 Federal Building.
San Francisco, Calif., 208 Federal Office Building.
Santa Fe, N. Mex., 204 United States Courthouse.
Tacoma, Wash., 406 Federal Building.
Topeka, Kans., 305 Federal Building.
Tucson, Ariz., 210 Post Office Building.

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

Records of flow of streams in the United States have been published in the reports tabulated as follows:

Stream-flow data in reports of the Geological Survey

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

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.	
11th A, pt. 2	Monthly discharge and descriptive information.....	1884 to 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.

Stream-flow data in reports of the Geological Survey--Continued

Report	Character of data	Year
W 15.....	Descriptions, measurements, and gage heights for streams east of the Mississippi River and Missouri River and tributaries above Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights for streams west of the Mississippi River except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27.....	Measurements, ratings, and gage heights for streams east of the Mississippi River and Missouri River and tributaries.	1898.
W 28.....	Measurements, ratings, and gage heights for streams west of the Mississippi River except Missouri River and tributaries.	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.

Note.- The reports that contain records for years after 1901 are given in the table on page 6.

The table on the following page gives, by years and drainage basins, the numbers of the papers on surface water supply published from 1899 to 1939. The data for any particular station will, in general, be found in the reports covering the years during which the station was maintained. For example, the data for 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

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

Numbers of water-supply papers containing results of stream measurements, 1899-1939

(For basins included see p. 3)

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1899 a...	35	b 35, 36	36	36	36	c 36, 37	37	37	d 37, 38	38, e 39	38, f 39	38	38	38
1900 g...	47, h 48	48	48, i 49	49	49	49, j 50	50	50	50	51	51	51	51	51
1901....	65, 75	65, 75	65, 75	65, 75	k 65, 66, 75	66, 75	k 65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902....	82	b 82, 83	83	m 82, 83	k 83, 85	84	k 83, 84	84	85	85	85	85	85	85
1903....	97	b 97, 98	98	97	k 98, 99, n 100	99	k 98, 99	99	100	100	100	100	100	100
1904....	o 124, p 125, q 126	q 126, 127	128	129	k 128, 130	130, r 131	k 128, 131	132	133	133, s 134	134	135	135	135
1905....	o 165, p 166, q 167	q 167, 168	169	170	171	172	k 169, 173	174	175, t 177	176, s 177	177	178	178	u 177, 178
1906....	o 201, p 202, q 203	q 203, 204	205	206	207	208	k 205, 209	210	211, t 213	212, s 213	213	214	214	214
1907-8...	241	242	243	244	245	246	247	248	249	250, s 251	251	252	252	252
1909....	261	262	263	264	265	266	267	268	269	270, s 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
1935....	781	782	783	784	785	786	787	788	789	790	791	792	793	794
1936....	801	802	803	804	805	806	807	808	809	810	811	812	813	814
1937....	821	822	823	824	825	826	827	828	829	830	831	832	833	834
1938....	851	852	853	854	855	856	857	858	859	860	861	862	863	864
1939....	871	872	873	874	875	876	877	878	879	880	881	882	883	884

a Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Tables of monthly discharge for 1899 in 21st Annual Report, part 4.
b James River only.
c Gallatin River.
d Green and Gunnison Rivers and Colorado River above Gunnison River.
e Mojave River only.
f Kings and Kern Rivers and south Pacific slope basins.
g Rating tables and index to Water-Supply Papers 47-52 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.
h Wissahickon and Schuylkill Rivers to James River.
i Scioto River.
j Loup, Platte, and Elkhorn Rivers and tributaries below Platte River.
k Tributaries of Mississippi River from east.
m Lake Ontario and tributaries to St. Lawrence River proper.
n Hudson Bay only.
o New England rivers only.
p Hudson River to Delaware River, inclusive.
q Susquehanna River to Yadkin River, inclusive.
r Platte and Kansas Rivers.
s The Great Basin in California, except Truckee and Carson River Basins.
t Below junction with Gila River.
u Rogue, Umpqua, and Siletz Rivers only.

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

Reports containing compilation of discharge by States and drainage basins

Water-Supply Paper	Year ending	State or drainage basin and title
		STATE
107	1903	Alabama, Water powers of, with an appendix on stream measurements in Mississippi.
298	1912	California, Water resources of, part 1, Stream measurements in Sacramento River Basin.
299	1912	California, Water resources of, part 2, Stream measurements in San Joaquin River Basin.
300	1912	California, Water resources of, part 3, Stream measurements in the Great Basin and Pacific coast river basins.
447	1918	California, Surface water supply of the southern Pacific slope of.
597-E	1927	California, Surface water supply of Sacramento River Basin.
636-D	1927	California, Surface water supply of San Joaquin River Basin.
636-E	1927	California, Surface water supply of Pacific slope basins in.
637-A	1927	California, Surface water supply of minor San Francisco Bay, northern Pacific, and Great basins in.
74	1900	Colorado, Water resources of.
197	1905	Georgia, Water resources of.
415	1915	Massachusetts, Surface waters of.
230	1906	Nebraska, Surface water supply of.
370	1910	Oregon, Surface water supply of.
S50	1937	Texas, Summary of records of surface waters of.
424	1916	Vermont, Surface waters of.
492	1919	Washington, Summary of hydrometric data in.
870	1935	Washington, Summary of records of surface waters of.
469	1921	Wyoming, Surface waters of, and their utilization.
		DRAINAGE BASIN
395	1914	Colorado River (Ariz., Colo., N. Mex., Utah, Wyo.) and its utilization, 1916.
617	1927	Colorado River, upper (Colo., Utah), and its utilization, 1929.
517	1920	Great Salt Lake Basin, Water powers of, 1924.
618	1926	Green River (Utah, Wyo.) and its utilization, 1930.
198	1906	Kennebec River Basin (Maine), Water resources of, 1907.
		Milk River. (See St. Mary and Milk Rivers.)
536	1920	New-Kanawha River Basin (N. C., Va., W. Va.), Surface water supply of, 1925.
279	1909	Penobscot River Basin (Maine), Water resources of, 1912.
172	1906	Potomac River Basin (Md., Va., W. Va., etc.), 1907.
358	1913	Rio Grande Basin (Colo., N. Mex., Tex.), Water resources of, 1888-1913.
491	1917	St. Mary and Milk Rivers (Mont., Canada), Water supply of, 1920.
109	1904	Susquehanna River Basin (Pa., Md.), Hydrography of, 1905.

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

State reports containing compilation of records of discharge

State	Year ending	Report	Issued by
Alabama.....	1915	Bull. 17, Water powers of Alabama....	Geological Survey of Alabama.
Arkansas....	1928	Stream-gaging report 1.....	Arkansas Geological Survey.
Connecticut.	1926	Bull. 44, Water resources of Connecticut.	State Geological and Natural History Survey.
Georgia.....	1920	Bull. 38, Water powers of Georgia....	Geological Survey of Georgia.
Illinois....	1937	Stream-flow data of Illinois.....	Division of Waterways.
Do.....	1911	Water resources of Illinois.....	Rivers and Lakes Commission.
Indiana.....	1927	Pub. 72, Surface water supply of Indiana.	Department of Conservation.
Do.....	[a]1930	Pub. 112, Surface water supply of Indiana.	Do.
Iowa.....	1932	Stream-flow records of Iowa.....	Iowa State Planning Board.

a Includes records for the years 1927-30.

State reports containing compilation of records of discharge--Continued

State	Year ending	Report	Issued by
Kansas.....	[b]1919	Surface waters of Kansas.....	Kansas Water Commission.
Do.....	[c]1924	....do.....	Do.
Do.....	[d]1928	....do.....	Kansas State Board of Agriculture.
Do.....	[e]1935	Stream-flow data of Kansas.....	Do.
Kentucky...	1920	Surface waters of Kentucky.....	Kentucky Geological Survey.
Minnesota..	1912	Water-resources investigation of Minnesota.	State Drainage Commission.
Missouri...	1926	Reports of Bureau of Geology and Mines, vol. 20, 2d series, Water Resources of Missouri.	Missouri Geological Survey and Water Resources.
Nebraska...	1914	1st hydrographic report.....	Bureau of Water Power, Irrigation and Drainage.
Do.....	[f]1928	2d hydrographic report.....	Do.
New Jersey.	1928	Bull. 33, Surface water supply of New Jersey.	Department of Conservation and Development.
Do.....	[g]1934	Special Report 5, Surface water supply of New Jersey.	State Water Policy Commission.
New Mexico.	1925	Surface water supply of New Mexico.....	Office of the State Engineer.
North Carolina.	1923	Bull. 34, Discharge records of North Carolina streams.	Department of Conservation and Development.
Do.....	[h]1936	Bull. 39, Discharge records of North Carolina streams.	Do.
Oregon.....	1914	Bull. 4, Water resources of the State of Oregon.	Office of the State Engineer.
Do.....	[i]1924	Bull. 7, Water resources of the State of Oregon.	Do.
Do.....	[j]1930	Bull. 8, Water resources of the State of Oregon.	Do.
Do.....	[k]1936	Bull. 9, Water resources of the State of Oregon.	Do.
Pennsylvania	1911	Report of Water Supply Commission of Pennsylvania.	Water Supply Commission of Pennsylvania.
Do.....	[l]1932	Stream-flow records of Pennsylvania....	Department of Forests and Waters.
Tennessee..	1924	Bull. 34, Water resources of Tennessee.	Department of Education.
Do.....	[m]1930	Bull. 40, Surface waters of Tennessee..	Do.
Utah.....	1905	5th Biennial Report, State Engineer....	Office of the State Engineer.
Virginia...	1927	Bull. 31, Water resources of Virginia..	Conservation and Development Commission.
Washington.	1933	Bull. 5, Monthly and yearly summaries of hydrometric data.	Department of Conservation and Development.
Wisconsin..	1914	1st report of Railroad Commission of Wisconsin to Legislature on water powers.	Railroad Commission of Wisconsin.
Do.....	[n]1923	2d report of Railroad Commission of Wisconsin to Legislature on water powers.	Do.

b Includes records for the years 1895-1919.
c Includes records for the years 1919-24.
d Includes records for the years 1924-28.
e Includes records for the years 1928-35.
f Includes records for the years 1914-28.
g Includes records for the years 1928-34.
h Includes records for the years 1889-1936; records of daily and monthly discharge are not included.
i Includes records for the years 1914-24.
j Includes records for the years 1924-30.
k Includes records for the years 1930-36.
l Includes records for the years 1928-32.
m Includes average weekly discharge for the years 1920-30.
n Includes records for the years 1914-23.

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

RECORDS OF DISCHARGE BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The table on the following page contains a list of gaging stations for the area covered by this report at which records of daily discharge were collected during the water year October 1938 to September 1939 by agencies other than the Geological Survey. The records for these stations are not contained in the publications of the Geological Survey.

Records of daily discharge collected by agencies other than the Geological Survey

Stream	Location	Period
Big Butte Springs.....	Sec. 17, T. 35 S., R. 3 E., 6 miles east of Butte Falls, Oreg.	1930-39
Big Marsh Creek.....	NE¼ sec. 20, T. 24 S., R. 7 E., at Hoey ranch, near Crescent, Oreg.	*1924, 1928-39
Brown Creek.....	SW¼SW¼ sec. 29, T. 21 S., R. 8 E., near Lapine, Oreg...	*1938-39
Butter Creek.....	SE¼ sec. 22, T. 2 N., R. 27 E., at Foley Bridge, 15 miles southwest of Hermiston, Oreg.	1933-39
Butter Creek.....	SE¼ sec. 22, T. 1 N., R. 28 E., 1 mile upstream from Vey ranch, Oreg.	1921-39
Cable Creek.....	NE¼ sec. 9, T. 5 S., R. 32 E., 6 miles east of Ukiah, Oreg.	*1932-39
Camas Creek.....	SE¼ sec. 4, T. 5 S., R. 32 E., 200 feet upstream from Cable Creek, near Ukiah, Oreg.	*1932-39
Charlton Creek.....	Sec. 1, T. 21 S., R. 7 E., near Lapine, Oreg.....	1924, 1938-39
Cultus Creek.....	Sec. 19, T. 20 S., R. 8 E., upstream from Crane Prairie, near Lapine, Oreg.	*1938-39
Davis Creek.....	NE¼NE¼ sec. 9, T. 22 S., R. 8 E., near Lapine, Oreg....	1924, 1938-39
Deer Creek.....	Sec. 36, T. 20 S., R. 7 E., near Lapine, Oreg.....	*1938-39
Deschutes River.....	NE¼ sec. 14, T. 15 S., R. 12 E., 1,500 feet upstream from dam at Cline Falls, Oreg.	*1928-39
Deschutes River.....	NW¼NW¼ sec. 28, T. 21 S., R. 8 E., downstream from Sheep Springs, near Lapine, Oreg.	1938-39
Eagle Creek.....	SW¼ sec. 26, T. 3 S., R. 5 E., at Log Cabin camp, near Estacada, Oreg.	1933-39
Grave Creek.....	NE¼SW¼ sec. 12, T. 34 S., R. 6 W., 13 miles north of Grants Pass, Oreg.	*1929-39
Jumpoff Joe Creek.....	Sec. 32, T. 34 S., R. 5 W., 7 miles northeast of Merlin, Oreg.	*1929-39
Klickitat River.....	Sec. 32, T. 11 N., R. 13 E., above Diamond Fork, Wash.	†1930-39
Klickitat River, Diamond Fork of.	Sec. 34, T. 11 N., R. 13 E., 1 mile above mouth, Wash.	†1930-39
Little Butte Creek....	SE¼ sec. 19, T. 36 S., R. 2 E., at Lake Creek, Oreg.	1922-24, 1927-39
Little Walla Walla River.	George St., in Milton, Oreg.....	1916, 1932-39
Mill Creek.....	NW¼NE¼ sec. 18, T. 8 S., R. 2 W., at State penitentiary annex near Salem, Oreg.	1939
North Fork of Big Butte Creek.	SW¼ sec. 2, T. 35 S., R. 2 E., 1 mile north of Butte Falls, Oreg.	1928-39
North Fork of Little Butte Creek.	Sec. 21, T. 36 S., R. 2 E., above Rogue River Valley Canal intake, near Lake Creek, Oreg.	1916-19, 1921-39
North Fork of Walla Walla River.	NE¼ sec. 22, T. 5 N., R. 36 E., 5 miles southeast of Milton, Oreg.	1929-39
North Mill Creek.....	SW¼NE¼ sec. 26, T. 7 S., R. 3 W., below 19th Street at Salem, Oreg.	1938-39
Ochoco Creek.....	NE¼ sec. 6, T. 15 S., R. 17 E., below Ochoco Reservoir, 6 miles east of Prineville, Oreg.	1919-39
Ochoco Reservoir.....	SW¼ sec. 5, T. 15 S., R. 17 E., 6 miles east of Prineville, Oreg.	1918-39
Ochoco Springs.....	NE¼ sec. 6, T. 15 S., R. 17 E., 6 miles east of Prineville, Oreg.	1920-39
Rancheria Creek.....	SE¼ sec. 17, T. 35 S., R. 3 E., 10 miles northeast of Lake Creek, Oreg.	1935-39
Salt Creek.....	SE¼ sec. 30, T. 22 S., R. 6 E., at Gold Lake, Oreg.	1939
South Fork of Little Butte Creek.	NW¼ sec. 21, T. 37 S., R. 4 E., near Lake Creek, Oreg.	*1926-39
South Fork of Walla Walla River.	Above power diversion dam, near Milton, Oreg.....	*1929-39
Tunnel at Fish Lake Dam.	SW¼ sec. 3, T. 37 S., R. 4 E., 18 miles east of Lake Creek, Oreg.	1929-39

*Records for some earlier years published in water-supply papers of Geological Survey.
†Unpublished records collected by Office of Indian Affairs.

Note.- Records for stations listed in the above table were collected by the Oregon State engineer and published in bulletins of the State engineer as follows, except as otherwise noted: For 1915-24, in Bulletin 7; for 1925-30, in Bulletin 8; and for 1931-36 (some to December) in Bulletin 9. Those for years since 1936 have not been published. Records on many canals, also, have been collected by the Oregon State engineer and the Bureau of Reclamation in connection with the operation of irrigation projects.

The Soil Conservation Service began in 1938 to make studies of run-off from four areas of less than 15 acres each in the vicinity of Newberg, Oreg. The records are in the files of that organization.

COOPERATION

The work in the two States was done under cooperative agreements as follows: In Oregon, with the State engineer, Charles E. Stricklin; and in Washington, with the Department of Conservation and Development, John Brooke Fink, director, and Charles J. Bartholet, supervisor of hydraulics.

Financial assistance was furnished by the Corps of Engineers, United States Army, in the operation of 10 gaging stations in Oregon.

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Funds for the construction, repair, and improvement of gaging stations were allocated to the Geological Survey by the Federal Emergency Administration of Public Works.

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

DIVISION OF WORK

The data for the 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 MAIN STEM

Columbia River near The Dalles, Oreg.

Location.- Water-stage recorder, lat. 45°39', long. 120°58', in NE¼ sec. 20, T. 2 N., R. 15 E., just upstream from Celilo Falls, 3 miles downstream from Deschutes River, and 11 miles east of The Dalles. Gage readings above Celilo Falls are elevations above mean sea level (general adjustment of 1929). Since January 1937, all discharge measurements made at gaging cableway 9 miles upstream from recorder, with flow of Deschutes River added.

Drainage area.- 237,000 square miles.

Records available.- June 1878 to September 1939. Prior to October 1931, records based on staff gage at The Dalles, supplemented for a few short periods by gage-height records at Umatilla and Cascade Locks. Maximum stages for each year in period 1858 to 1877, from readings of gage at Lower Cascades Landing.

Average discharge.- 61 years (1878-39), 197,700 second-feet.

Extremes.- Maximum discharge during year, 387,000 second-feet May 21, 22 (gage height, 138.9 feet); minimum, 59,700 second-feet Feb. 15 (gage height, 128.13 feet).

1858-39: Maximum discharge, 1,170,000 second-feet June 6, 1894 (gage height, 59.6 feet on gage at The Dalles and 160.1 feet on gage above Celilo Falls); minimum observed, 35,000 second-feet Jan. 12, 1937 (gage height, 126.0 feet on gage above Celilo Falls).

Remarks.- Records excellent. Storage and diversions for irrigation are only a small part of total run-off. Recorder inspected by employees of Corps of Engineers, U. S. Army.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

128.0	57,500	132	153,000	136	282,000
129	77,300	133	181,000	137	318,000
130	101,000	134	212,000	139	390,000
131	126,000	135	247,000		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	97,200	78,400	66,700	61,900	66,700	65,700	170,000	254,000	383,000	272,000	178,000	111,000
2	97,200	78,400	66,700	63,800	66,700	65,700	170,000	279,000	379,000	268,000	178,000	111,000
3	98,500	79,500	68,700	65,700	66,700	64,700	175,000	297,000	376,000	268,000	178,000	112,000
4	98,500	80,600	70,800	68,700	66,700	65,700	184,000	307,000	368,000	264,000	178,000	112,000
5	97,200	81,800	71,800	71,800	65,700	64,700	187,000	325,000	361,000	264,000	178,000	112,000
6	97,200	80,600	71,800	72,900	65,700	66,700	190,000	332,000	354,000	264,000	178,000	111,000
7	98,500	81,800	70,800	72,900	66,700	69,800	187,000	340,000	343,000	268,000	175,000	110,000
8	101,000	87,600	71,800	71,800	63,800	62,800	181,000	340,000	336,000	268,000	173,000	106,000
9	101,000	76,200	74,000	70,800	64,700	61,900	175,000	336,000	329,000	264,000	170,000	104,000
10	99,800	79,500	74,000	68,700	63,800	65,700	173,000	332,000	318,000	261,000	167,000	101,000
11	98,500	77,300	79,500	68,700	62,800	66,700	167,000	340,000	311,000	254,000	164,000	99,800
12	96,000	76,200	81,800	68,700	61,000	67,700	167,000	340,000	304,000	250,000	161,000	102,000
13	94,800	76,200	78,400	67,700	61,900	70,800	170,000	340,000	297,000	247,000	153,000	102,000
14	96,000	80,600	77,300	69,800	61,900	75,100	167,000	340,000	297,000	247,000	146,000	99,800
15	97,200	71,800	71,800	69,800	62,800	79,500	167,000	343,000	289,000	240,000	142,000	99,800
16	96,000	66,700	66,700	69,800	67,700	79,500	167,000	347,000	289,000	236,000	136,000	96,000
17	94,800	69,800	64,700	68,700	71,800	81,800	167,000	354,000	286,000	233,000	130,000	97,200
18	93,600	70,800	64,700	69,800	70,800	84,100	161,000	368,000	282,000	230,000	126,000	101,000
19	91,200	72,900	66,700	69,800	72,900	92,400	164,000	379,000	279,000	226,000	124,000	101,000
20	90,000	77,300	67,700	68,700	71,800	103,000	164,000	383,000	275,000	223,000	124,000	98,500
21	88,800	78,400	66,700	69,800	70,800	121,000	170,000	387,000	275,000	223,000	124,000	94,800
22	88,800	76,200	65,700	70,800	69,800	139,000	178,000	383,000	272,000	219,000	122,000	90,000
23	87,600	75,100	65,700	68,700	68,700	158,000	190,000	376,000	272,000	212,000	121,000	87,600
24	86,400	74,000	65,700	66,700	66,700	170,000	206,000	372,000	272,000	209,000	120,000	86,400
25	85,200	72,900	64,700	65,700	65,700	175,000	216,000	368,000	272,000	203,000	120,000	86,400
26	84,100	71,800	65,700	65,700	66,700	181,000	219,000	368,000	272,000	196,000	118,000	87,600
27	81,800	69,800	65,700	64,700	65,700	190,000	219,000	365,000	272,000	190,000	114,000	87,600
28	80,600	67,700	65,700	64,700	65,700	193,000	219,000	361,000	272,000	187,000	113,000	87,600
29	80,600	67,700	63,800	65,700	-	187,000	219,000	361,000	268,000	187,000	111,000	85,200
30	79,500	66,700	61,900	64,700	-	184,000	230,000	368,000	268,000	181,000	104,000	84,100
31	79,500	-	61,000	65,700	-	175,000	-	376,000	-	181,000	110,000	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	2,857,100	101,000	79,500	92,160	0.389	0.45	5,667,000
November	2,264,300	87,600	66,700	75,480	.318	.35	4,491,000
December	2,138,700	81,800	61,000	68,990	.291	.34	4,242,000
Calendar year 1938	68,554,300	605,000	61,000	187,800	.792	10.77	136,000,000
January	2,113,400	72,900	61,900	68,170	.288	.33	4,192,000
February	1,862,400	72,900	61,000	66,510	.281	.29	3,694,000
March	3,327,000	193,000	61,900	107,300	.453	.52	6,599,000
April	5,519,000	230,000	161,000	184,000	.776	.87	10,950,000
May	10,761,000	387,000	254,000	347,100	1.46	1.68	21,340,000
June	9,171,000	383,000	268,000	305,700	1.29	1.44	18,190,000
July	7,235,000	272,000	181,000	233,400	.985	1.14	14,350,000
August	4,436,000	178,000	104,000	143,100	.604	.70	8,799,000
September	2,964,400	112,000	84,100	98,810	.417	.47	5,880,000
Water year 1938-39	54,649,300	387,000	61,000	149,700	.632	8.58	108,400,000

WALLA WALLA RIVER BASIN

South Fork of Walla Walla River near Milton, Oreg.

Location.- Water-stage recorder, lat. 45°50', long. 118°10', in NE¼ sec. 15, T. 4 N., R. 37 E., 1 mile upstream from Pacific Power and Light Co.'s penstock intake and 13 miles southeast of Milton. Zero of gage is about 2,050 feet above mean sea level (river profile map).

Drainage area.- 67 square miles.

Records available.- February to October 1903 (gage heights only), August 1906 to November 1917 (incomplete), May 1931 to September 1939. November 1903 to May 1906, at site 7 miles downstream.

Average discharge.- 16 years (1904-5, 1908-15, 1931-39), 167 second-feet.

Extremes.- Maximum discharge during year, 681 second-feet Mar. 21 (gage height, 2.38 feet); minimum, 85 second-feet Sept. 10 (gage height, 0.93 foot).

1903-17, 1931-39: Maximum discharge probably occurred during flood of May 30-31, 1906, when gage was washed out; maximum discharge observed, 1,650 second-feet Apr. 14, 1904; minimum discharge, 72 second-feet Feb. 14, 1932.

Maximum stage known, about 6 feet, present site and datum, Mar. 31, 1931.

Remarks.- Records fair. Discharge for periods of missing gage heights, Dec. 27-29, Feb. 28 to Mar. 9, Mar. 21-24, Apr. 4-6, computed on basis of unpublished record for South Fork of Walla Walla River above intake of city of Milton. No diversion or regulation above station.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Apr. 27 to May 14, July 31 to Sept. 30)

Oct. 1 to Apr. 3				Apr. 7 to Sept. 30					
1.0	89	1.7	243	0.8	80	1.2	137	2.1	480
1.2	122	2.0	379	.9	88	1.4	189		
1.4	165	2.3	605	1.0	100	1.7	283		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	97	105	116	105	120	333	349	198	113	94	87
2	93	100	124	124	103	120	362	378	184	113	94	87
3	93	139	135	150	103	120	333	378	181	124	93	86
4	93	128	143	145	103	115	305	349	173	118	93	86
5	93	109	161	143	105	110	270	316	167	113	92	86
6	93	102	150	132	105	110	255	294	192	111	92	86
7	93	99	177	126	103	115	259	290	167	110	89	86
8	93	99	194	122	102	115	263	294	162	108	89	86
9	93	103	175	122	102	115	266	298	195	106	88	86
10	95	102	161	130	100	111	252	294	167	106	88	86
11	109	100	141	137	100	122	252	287	160	106	88	86
12	95	100	128	137	116	229	256	283	157	106	88	88
13	96	102	120	132	118	250	240	290	154	105	88	89
14	93	105	116	130	147	192	227	309	152	105	88	88
15	93	135	114	130	221	177	227	341	152	105	87	86
16	93	152	111	126	182	184	234	341	147	103	87	86
17	92	158	107	126	158	237	243	324	157	103	87	86
18	92	139	103	124	150	300	276	298	152	103	88	86
19	90	128	102	126	147	405	320	273	165	103	87	86
20	90	132	100	124	139	468	313	252	150	102	87	86
21	90	124	100	122	135	550	341	252	140	102	87	86
22	90	118	100	120	132	600	367	246	137	102	87	86
23	90	112	100	116	132	565	345	230	133	100	87	87
24	92	111	100	114	137	560	328	224	129	100	87	87
25	93	109	100	111	147	554	287	218	126	100	87	87
26	92	107	99	109	139	482	276	218	122	100	87	88
27	93	105	96	111	132	339	305	221	122	98	87	88
28	93	105	100	114	130	286	383	224	118	98	87	87
29	96	103	104	111	-	263	428	230	116	98	87	87
30	99	105	111	107	-	250	362	227	114	98	87	87
31	100	-	111	107	-	263	-	209	-	95	87	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,902	109	90	93.6	1.40	1.61	5,760
November	3,428	158	97	114	1.70	1.90	6,800
December	3,788	194	96	122	1.82	2.10	7,510
Calendar year 1938	57,930	808	90	159	2.37	32.15	114,900
January	3,844	150	107	124	1.85	2.13	7,620
February	3,593	221	100	128	1.91	1.99	7,130
March	8,427	600	110	272	4.06	4.68	16,710
April	8,908	428	227	297	4.43	4.94	17,670
May	8,737	378	209	282	4.21	4.85	17,330
June	4,589	198	114	153	2.28	2.54	9,100
July	3,254	124	95	105	1.57	1.81	6,450
August	2,744	94	87	88.5	1.32	1.52	5,440
September	2,599	89	86	86.6	1.29	1.44	5,160
Water year 1938-39	56,813	600	86	156	2.33	31.51	112,700

Peak discharge.- Mar. 12 (9 p.m.) 300 sec.-ft.; Mar. 17 (9 p.m.) 313 sec.-ft.; Mar. 21 (9 p.m., est.) 681 sec.-ft.; Apr. 21 (10 p.m.) 410 sec.-ft.; Apr. 28 (9 p.m.) 536 sec.-ft.

Umatilla River above Meacham Creek, near Gibbon, Oreg.

Location.- Water-stage recorder, lat. 45°43', long. 118°20', in SW¼ sec. 21, T. 3 N., R. 36 E., 0.8 mile downstream from Ryan Creek, 2¼ miles upstream from Meacham Creek, and 2⅝ miles northeast of Gibbon. Zero of gage is 1,855.25 feet above mean sea level (general adjustment of 1929). Prior to June 27, 1939, recorder at site 1 mile downstream, with zero of gage 1,811.31 feet above mean sea level (general adjustment of 1929).

Drainage area.- 125 square miles, present site; 126 square miles (revised), former site.

Records available.- April 1933 to September 1939.

Extremes.- Maximum discharge during year, 2,010 second-feet Mar. 22 (gage height, 2.80 feet); minimum, 32 second-feet Aug. 31 (gage height, 1.85 feet).
1933-39: Maximum discharge, 2,120 second-feet Apr. 12, 1936 (gage height, 2.95 feet); minimum, 28 second-feet Sept. 27, 1935, Jan. 9, 1937.

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

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	45	80	155	107	164	778	523	175	66	40	37
2	41	45	93	171	102	158	854	541	158	63	40	37
3	41	71	146	223	102	155	787	550	150	63	38	37
4	41	95	199	242	99	149	685	523	150	77	38	36
5	41	82	346	232	97	138	550	443	139	69	37	35
6	41	69	326	207	97	135	460	392	139	64	37	35
7	41	60	320	180	95	132	443	375	139	62	37	35
8	41	56	*470	168	91	138	452	360	136	58	37	35
9	42	60	*430	155	78	141	487	352	*133	57	37	35
10	42	63	*370	199	†75	141	443	345	*130	54	37	35
11	42	63	*260	237	84	184	434	345	*134	51	36	36
12	44	63	*200	237	121	464	434	330	*138	50	36	40
13	42	65	*165	223	149	576	392	322	*140	50	36	44
14	42	74	*135	203	191	404	352	322	133	48	37	43
15	42	256	121	195	555	359	345	338	123	45	36	38
16	44	372	*115	177	411	430	338	360	113	45	36	36
17	45	430	*105	174	309	678	368	352	108	45	36	35
18	45	256	*100	168	282	1,190	469	338	113	45	37	35
19	44	232	*95	171	270	1,380	532	308	116	43	37	35
20	42	195	*90	177	237	1,560	532	276	130	41	36	35
21	42	168	*85	174	214	1,780	*540	264	136	41	36	35
22	42	143	*82	161	*200	1,840	586	258	143	41	37	35
23	42	119	80	143	*190	1,620	595	235	130	41	37	36
24	42	97	*77	132	*245	1,520	559	219	116	41	37	37
25	42	93	*76	124	256	1,420	496	203	93	41	37	37
26	42	86	*75	114	227	1,160	434	198	88	41	36	38
27	42	80	*75	111	207	787	452	192	79	41	36	38
28	42	80	82	114	180	685	541	*192	76	40	36	38
29	44	78	93	116	-	631	658	*198	72	40	37	38
30	45	76	116	107	-	586	595	203	69	40	40	40
31	45	-	132	104	-	631	-	198	-	41	35	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,314	45	41	42.4	2,610
November	3,672	430	45	122	7,280
December	5,139	470	75	166	10,190
Calendar year 1938	72,840	1,450	36	200	144,500
January	5,294	242	104	171	10,500
February	5,271	555	75	188	10,450
March	21,336	1,840	132	688	42,320
April	15,591	854	338	520	30,920
May	10,055	550	192	324	19,940
June	3,699	175	69	123	7,340
July	1,544	77	40	49.8	3,060
August	1,145	40	35	36.9	2,270
September	1,106	44	35	36.9	2,190
Water year 1938-39	75,166	1,840	35	206	149,100

Peak discharge.- Nov. 17 (1 a.m.) 534 sec.-ft.; Mar. 12 (11 p.m.) 646 sec.-ft.; Mar. 18 (10 p.m.) 1,620 sec.-ft.; Mar. 22 (4 a.m.) 2,010 sec.-ft.; Apr. 2 (2 a.m.) 872 sec.-ft.
*Gage heights faulty or missing; discharge computed on basis of records for stations at Pendleton and near Yoakum.
†Gage height affected by ice; discharge computed on basis of records for stations at Pendleton and near Yoakum.

Umatilla River at Pendleton, Oreg.

Location.- Water-stage recorder, lat. 45°40', long. 118°48', in NE¼ sec. 10, T. 2 N., R. 32 E., at Pendleton, 2½ miles upstream from McKay Creek. Zero of gage is 1,062.54 feet above mean sea level (general adjustment of 1929).

Drainage area.- 637 square miles.

Records available.- February 1891 to July 1892, May 1903 to June 1905, October 1934 to September 1939. May 1921 to September 1934, at site about 2¼ miles downstream; records equivalent.

Average discharge.- 16 years (1923-39), 438 second-feet.

Extremes.- Maximum discharge during year, 6,000 second-feet Mar. 21 (gage height, 4.96 feet); minimum, 12 second-feet Aug. 10 (gage height, 0.47 foot).

1891-92, 1903-5, 1921-39: Maximum discharge, 13,500 second-feet (estimated) Apr. 1, 1931 (gage height, 10.7 feet, former site and datum); minimum, 7 second-feet Aug. 14, 1924.

Flood of May 30-31, 1906, reached a stage of 11.0 feet, present datum (discharge not determined but somewhat greater than that of Apr. 1, 1931).

Remarks.- Records good Oct. 1 to Mar. 11, fair Mar. 12 to May 31, poor June 1 to Sept. 30. Discharge interpolated for days of missing gage heights, July 25, 26. Small diversions for irrigation above station; no regulation.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	63	123	234	216	425	2,560	982	214	61	18	19
2	32	63	129	265	212	437	2,740	963	192	61	19	19
3	34	66	180	326	204	414	2,480	992	174	66	18	19
4	34	100	252	392	196	414	2,160	925	166	76	16	19
5	38	106	452	414	196	370	1,780	601	150	72	17	21
6	40	100	517	392	200	376	1,450	686	150	61	17	22
7	38	86	484	359	204	376	1,280	614	154	56	17	22
8	38	84	735	337	200	381	1,280	568	150	43	14	21
9	38	89	671	315	176	381	1,340	548	178	43	13	21
10	38	106	580	348	165	370	1,230	535	183	43	13	21
11	45	106	467	437	180	437	1,190	505	158	40	13	21
12	49	103	398	455	220	1,240	1,210	475	150	36	13	22
13	43	109	337	437	359	1,800	1,100	453	134	35	16	31
14	45	112	290	414	498	1,230	944	458	112	36	16	31
15	45	208	260	392	1,340	963	871	470	112	36	16	29
16	45	380	238	370	1,160	1,100	853	487	127	36	16	29
17	45	497	212	354	814	1,830	880	487	134	33	16	29
18	45	397	196	342	716	3,180	972	481	154	31	17	24
19	45	325	168	348	678	4,310	1,180	442	158	31	17	21
20	45	290	173	348	618	4,420	1,210	398	162	35	18	22
21	45	272	173	342	550	5,200	1,210	360	123	33	19	22
22	45	248	166	320	511	5,080	1,280	387	105	27	19	26
23	45	216	162	305	498	4,750	1,250	340	98	27	18	26
24	45	192	159	275	492	4,200	1,160	315	88	29	18	26
25	45	172	152	256	550	3,980	1,030	280	85	26	18	26
26	45	160	152	238	544	3,880	907	260	85	22	18	26
27	45	141	145	229	498	3,000	889	256	82	18	19	26
28	47	138	148	229	467	2,320	982	256	79	14	19	26
29	51	129	152	229	-	2,010	1,190	256	69	16	19	27
30	56	123	176	224	-	1,800	1,090	260	69	18	18	26
31	59	-	212	220	-	1,940	-	223	-	18	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,342	59	32	43.3	2,660
November	5,181	497	63	173	10,280
December	8,679	735	123	280	17,210
Calendar year 1938	154,169	3,260	16	422	305,800
January	10,146	455	220	327	20,120
February	12,662	1,340	165	452	25,110
March	62,614	5,200	370	2,020	124,200
April	39,698	2,740	853	1,323	78,740
May	15,463	992	223	499	30,670
June	3,995	214	69	133	7,920
July	1,179	76	14	38.0	2,340
August	523	19	13	16.9	1,040
September	720	31	19	24.0	1,430
Water year 1938-39	162,202	5,200	13	444	321,700

Peak discharge.- Feb. 15 (2 p.m.) 1,530 sec.-ft.; Mar. 21 (7:30 a.m.) 6,000 sec.-ft.; Mar. 23 (9 a.m.) 5,310 sec.-ft.

Umatilla River at Yoakum, Oreg.

Location.- Water-stage recorder, lat. 45°41', long. 119°02', in SW¼ sec. 2, T. 2 N., R. 30 E., at highway bridge half a mile northeast of Yoakum station and 2½ miles downstream from abandoned Furnish Reservoir.
Drainage area.- 1,280 square miles.
Records available.- May 1903 to August 1916 (flow slightly affected by storage in Furnish Reservoir 1910-16) and October 1934 to September 1939. June 1915 to September 1934, at site 5 miles upstream, above old Furnish Reservoir.
Average discharge.- 36 years, 661 second-feet.
Extremes.- Maximum discharge during year, 6,180 second-feet Mar. 21 (gage height, 7.00 feet); minimum, 15 second-feet Sept. 20.
1903-39: Maximum discharge, about 20,000 second-feet May 30, 1906 (gage height, about 15.0 feet, former datum, from floodmarks); minimum, 12 second-feet Aug. 10-12, 1908.
Remarks.- Records good except those for periods of missing gage heights, Dec. 8, 9, Feb. 8-13, Mar. 12, Sept. 9, 10, 12-17, which were computed on basis of records at stations near Gibbon and at Pendleton and are fair. Diversions for irrigation above station. Flow regulated to some extent by operation of mills at Pendleton and, since 1927, by storage in McKay Reservoir.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Mar. 12-31)

Oct. 1 to Dec. 4				Dec. 5 to Sept. 30					
0.6	24	1.4	192	0.5	18	1.6	287	4.0	2,080
.7	35	1.6	262	.6	29	2.0	466	5.0	3,220
.8	47	1.8	340	.8	59	2.5	770	6.0	4,500
1.0	80	2.2	532	1.0	98	3.0	1,140	7.0	5,900
1.2	130			1.3	182	3.5	1,580		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	56	151	254	254	482	2,680	1,060	347	326	310	283
2	31	56	148	287	246	482	3,100	985	351	330	314	283
3	39	62	163	334	232	466	2,740	985	355	355	314	299
4	40	75	240	430	226	451	2,400	948	351	347	314	295
5	43	96	477	466	226	420	2,030	826	355	339	306	265
6	45	98	653	446	232	406	1,680	718	377	326	303	182
7	42	94	653	410	240	415	1,490	628	377	318	299	72
8	41	85	800	382	240	410	1,440	578	355	330	295	43
9	45	85	730	368	220	415	1,540	572	373	339	295	36
10	45	94	672	368	205	415	1,490	555	377	339	295	34
11	45	101	634	471	220	451	1,400	537	355	334	295	33
12	53	103	461	532	250	1,340	1,440	520	347	330	295	34
13	52	108	377	520	450	1,980	1,360	498	343	326	306	36
14	48	111	343	477	561	1,400	1,140	493	334	326	314	34
15	47	145	306	466	1,580	1,100	1,020	498	351	330	310	31
16	47	340	280	446	1,490	1,310	985	520	360	326	306	29
17	47	496	257	410	1,100	2,160	985	532	343	326	306	29
18	47	445	232	392	889	3,340	1,100	532	347	318	306	29
19	47	362	222	396	833	4,500	1,260	498	339	314	306	20
20	48	316	208	401	757	4,780	1,310	456	334	318	306	18
21	46	292	202	382	646	5,620	1,310	420	318	318	310	18
22	43	277	198	373	609	5,760	1,400	440	343	318	314	22
23	45	244	198	347	561	5,480	1,400	406	343	318	310	25
24	47	216	189	326	549	5,200	1,310	382	343	310	306	27
25	47	212	182	306	615	4,920	1,100	401	343	314	310	27
26	47	251	179	287	628	4,780	985	387	339	310	310	27
27	47	199	176	276	578	3,720	948	373	330	310	310	27
28	47	142	173	272	526	2,860	985	373	318	310	310	26
29	47	136	176	276	-	2,510	1,220	373	326	318	310	27
30	47	133	195	272	-	2,240	1,220	396	330	314	306	25
31	54	-	229	265	-	2,240	-	368	-	310	291	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,399	54	30	45.1	2,770
November	5,430	496	56	181	10,770
December	10,104	800	148	326	20,040
Calendar year 1938	201,645	3,900	26	552	399,900
January	11,638	532	254	375	23,080
February	15,163	1,580	205	542	30,080
March	72,053	5,760	406	2,324	142,900
April	44,468	3,100	948	1,482	88,200
May	17,258	1,060	368	557	34,230
June	10,404	377	318	347	20,640
July	10,047	355	310	324	19,930
August	9,482	314	291	306	18,810
September	2,336	299	18	77.9	4,630
Water year 1938-39	209,782	5,760	18	575	416,100

Umatilla River near Umatilla, Oreg.

Location.- Water-stage recorder, lat. 45°54', long. 119°20', in NW¼ sec. 21, T. 5 N., R. 28 E., 1⅛ miles downstream from West Division main canal of Umatilla project and 2 miles upstream from Umatilla and mouth of river. Zero of gage is 330.57 feet above mean sea level (general adjustment of 1929).

Drainage area.- 2,290 square miles.

Records available.- October 1903 to September 1939.

Average discharge.- 36 years, 505 second-feet.

Extremes.- Maximum discharge during year, 4,640 second-feet Mar. 23 (gage height, 5.88 feet); minimum, 8 second-feet Nov. 5 (gage height, 2.07 feet).
1903-39: Maximum discharge, 19,600 second-feet May 31, 1906 (gage height, 11.0 feet); no flow at times.

Remarks.- Records good except those for periods of missing gage heights and those for periods Oct. 1 to Feb. 14, May 5 to Sept. 30, which are fair. Several diversions for irrigation above station; Brownell Canal diverts water below station. Flow regulated by storage in McKay and Cold Springs Reservoirs.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 5 to Sept. 30)

2.1	9	2.6	77	3.4	535	4.6	2,100	6.0	4,910
2.2	14	2.8	135	3.8	920	5.0	2,830		
2.4	37	3.0	235	4.2	1,440	5.5	3,820		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	*14	129	†125	116	356	1,630	320	16	20	13	13
2	17	*14	129	†130	116	212	2,140	200	15	26	14	13
3	17	*14	132	†135	113	173	2,150	183	15	87	14	13
4	17	14	129	†180	113	156	1,830	169	15	312	14	13
5	17	72	129	†220	106	148	1,470	160	15	232	14	13
6	17	128	249	229	113	139	1,100	80	15	62	13	14
7	17	135	401	229	113	119	843	36	15	48	14	14
8	15	†130	447	218	109	113	780	21	16	27	14	14
9	*15	†110	638	200	113	106	780	19	16	19	14	14
10	*15	†85	620	189	139	87	750	15	16	18	14	14
11	*15	†85	487	183	229	73	638	12	16	31	14	14
12	*15	90	378	242	270	334	560	14	17	22	13	14
13	*15	122	291	277	263	1,280	560	14	27	18	14	14
14	15	139	235	291	242	1,150	455	14	27	17	14	14
15	15	139	229	277	609	852	291	14	18	16	14	14
16	16	143	218	263	1,220	800	194	14	17	16	14	13
17	16	169	189	277	865	1,110	160	14	16	16	14	13
18	16	263	160	342	683	1,810	164	14	30	16	14	13
19	16	320	156	363	594	2,740	249	14	37	16	14	14
20	15	305	152	386	552	3,370	424	14	17	15	14	14
21	16	256	152	356	479	3,780	416	14	17	14	14	14
22	15	235	148	277	409	4,350	447	14	17	14	14	14
23	16	189	143	229	312	4,420	527	14	17	14	14	14
24	15	160	135	189	327	4,200	503	14	17	14	14	13
25	15	152	†132	164	263	3,900	440	14	17	13	14	13
26	14	135	†130	139	305	3,800	298	14	19	13	14	13
27	14	125	†127	132	284	3,330	183	15	22	13	14	12
28	14	129	†125	132	242	2,350	152	22	21	13	14	12
29	14	129	†123	125	-	1,830	212	22	20	13	14	13
30	14	132	119	125	-	1,550	401	20	19	13	13	12
31	*14	-	†120	119	-	1,340	-	18	-	13	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	479	17	14	15.5	950
November	4,133	320	14	138	8,200
December	6,952	638	119	224	13,790
Calendar year 1938	108,177	2,740	9	296	214,600
January	6,743	386	119	218	13,370
February	9,299	1,220	106	332	18,440
March	49,958	4,420	73	1,612	99,090
April	20,747	2,150	152	692	41,150
May	1,522	320	12	49.1	3,020
June	562	37	15	18.7	1,110
July	1,181	312	13	38.1	2,340
August	429	14	13	13.8	851
September	402	14	12	13.4	797
Water year 1938-39	102,407	4,420	12	281	203,100

*Gage height missing; discharge interpolated.
†Gage height missing; discharge computed on basis of record for station at Yoakum.

McKay Creek near Pilot Rock, Oreg.

Location.- Water-stage recorder, lat. 45°33', long. 118°46', in SE¼ sec. 23, T. 1 N., R. 32 E., 1 mile upstream from backwater from McKay Reservoir and 6 miles northeast of Pilot Rock.

Drainage area.- 178 square miles.

Records available.- May to August 1921 and October 1926 to September 1939 (1927-29 incomplete).

Average discharge.- 11 years (1926-27, 1929-39), 79.0 second-feet.

Extremes.- Maximum discharge during year, 1,230 second-feet Mar. 21 (gage height, 4.28 feet); no flow at times.
1921, 1926-39: Maximum discharge, 6,000 second-feet Apr. 1, 1931 (gage height, 10.4 feet); no flow at times.

Remarks.- Records good except those for periods of missing gage heights, Oct. 25-28, June 18-23 (interpolated), and those for period Apr. 17 to July 10, all of which are fair. Many small diversions for irrigation above station; none between station and McKay Reservoir.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Mar. 1-18)

Oct. 24 to Mar. 21				Mar. 22 to July 25			
0.5	0	2.0	127	0.5	0	2.0	158
.7	1.6	2.5	264	.7	4.4	2.5	275
.9	7.3	3.0	475	.9	15	3.0	475
1.1	17	3.5	720	1.1	30	3.5	720
1.4	42	4.1	1,090	1.4	63	4.0	1,020
1.7	78			1.7	108		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	3.1	16	30	42	100	439	76	4.4	1.8		
2	0	3.6	16	33	37	102	408	73	4.4	1.8		
3	0	3.8	24	37	38	103	368	67	4.4	1.1		
4	0	4.2	49	40	36	98	332	62	4.1	.8		
5	0	4.8	97	45	35	85	294	58	4.1	.7		
6	0	5.2	92	46	37	89	264	51	3.7	.6		
7	0	5.2	102	45	38	95	239	46	3.7	.4		
8	0	3.8	125	45	38	102	239	36	4.1	.4		
9	0	4.5	114	45	26	98	242	31	4.4	.4		
10	0	5.9	95	65	29	95	221	29	4.4	.2		
11	0	6.6	81	121	35	116	210	24	3.4	0		
12	0	5.2	69	127	94	470	221	20	2.8	0		
13	0	5.9	58	118	181	520	203	16	2.4	0		
14	0	6.6	50	112	446	344	177	13	1.4	0		
15	0	20	44	105	860	340	156	10	.8	0		
16	0	63	40	98	516	620	151	7.2	.6	0		
17	0	84	35	88	376	745	146	7.6	.2	0		
18	0	59	33	85	293	830	148	12	.2	0		
19	0	48	33	85	257	922	160	12	.3	0		
20	0	42	30	84	209	988	146	9.0	.4	0		
21	0	38	30	79	171	1,090	143	7.6	.5	0		
22	0	32	29	73	149	922	146	13	.6	0		
23	0	28	29	65	138	830	141	15	.7	0		
24	.1	27	28	59	127	745	134	13	.8	0		
25	.5	25	26	55	131	770	119	12	.8	0		
26	1.0	23	26	51	123	695	110	11	.9	0		
27	1.5	21	25	48	118	525	100	10	.9	0		
28	2.0	19	25	48	110	457	92	8.1	.9	0		
29	2.9	18	25	46	-	403	89	6.7	.9	0		
30	2.7	16	26	45	-	368	84	4.1	1.4	0		
31	3.1	-	28	44	-	403	-	4.1	-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	13.8	3.1	0	0.45	27
November	631.4	84	3.1	21.0	1,250
December	1,500	125	16	48.4	2,980
Calendar year 1938	31,801.1	830	0	87.1	63,080
January	2,067	127	30	66.7	4,100
February	4,690	860	26	168	9,300
March	14,070	1,090	85	454	27,910
April	5,922	439	84	197	11,750
May	764.4	76	4.1	24.7	1,520
June	62.6	4.4	.2	2.09	124
July	8.2	1.8	0	.26	16
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1938-39	29,729.4	1,090	0	81.5	58,980

Peak discharge.- Feb. 14 (8 p.m.) 1,120 sec.-ft.; Mar. 21 (1 a.m.) 1,230 sec.-ft.

McKay Reservoir near Pendleton, Oreg.

Location.- Staff gage, lat. 45°36', long. 118°48', 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, surveys of Bureau of Reclamation.

Records available.- October 1930 to September 1939.

Extremes.- Maximum contents observed during year, 70,460 acre-feet May 1 (elevation, 1,319.3 feet); minimum contents, 13,320 acre-feet (estimated) Oct. 1.
1930-39: Maximum contents observed, 71,300 acre-feet May 1, 1938 (elevation, 1,320.0 feet); minimum observed, 3,051 acre-feet Oct. 1, Nov. 1, Dec. 1, 1935 (gage height, 1,217.6 feet).

Remarks.- Records fair. Gage read to nearest foot or half-foot at beginning of each month. All summer flow above reservoir diverted for irrigation. McKay Reservoir, completed in 1927 by Bureau of Reclamation, has capacity of 74,000 acre-feet at elevation 1,322.0 feet and stores water for irrigation of lands along Umatilla River near Echo, Stanfield, and Hermiston. Gage-height record furnished by Bureau of Reclamation. Capacity table computed by State engineer on basis of surveys by Bureau of Reclamation.

Capacity table (elevation, in feet, and contents, in acre-feet)

1,179.0	0	1,210	1,611	1,240	11,060	1,290	41,130
1,185	24	1,215	2,459	1,245	13,250	1,300	49,840
1,190	117	1,220	3,718	1,250	15,610	1,310	59,870
1,195	295	1,225	5,328	1,260	20,880	1,316	66,550
1,200	565	1,230	7,115	1,270	26,850	1,322	74,000
1,205	1,000	1,235	9,020	1,280	33,540		

Elevation and contents, water year October 1938 to September 1939

Date	Elevation	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	-	*13,320	-
Nov. 1	-	†14,240	+920
Dec. 1	1,249.0	15,120	+880
Calendar year 1938	-	-	-520
Jan. 1	1,253.0	17,110	+1,990
Feb. 1	1,261.0	21,440	+4,330
Mar. 1	1,275.0	30,110	+8,670
Apr. 1	1,310.5	60,400	+30,290
May 1	1,319.3	70,460	+10,060
June 1	1,315.6	66,070	-4,390
July 1	1,303.5	53,160	-12,910
Aug. 1	1,281.5	34,600	-18,560
Sept. 1	1,252.0	16,600	-18,000
Oct. 1	1,248.2	14,720	-1,880
Water year 1938-39	-	-	+1,400

*Computed from record of outflow.
†Interpolated.

McKay Creek near Pendleton, Oreg.

Location.- Water-stage recorder, lat. 45°37', long. 118°48', in sec. 34, T. 2 N., R. 32 E., just upstream from irrigation diversion dam, a quarter of a mile downstream from McKay Dam, and 4 miles south of Pendleton.

Records available.- November 1918 to September 1923, October 1924 to September 1939 (diversions by irrigation canal at gage not included since 1932).

Average discharge.- 18 years (1919-23, 1924-27, 1928-39), 88.7 second-feet.

Extremes.- Maximum daily discharge during year, 310 second-feet (estimated) July 28; no flow Oct. 1 to Apr. 14, Sept. 7-30.

1918-39: Maximum discharge observed, 3,250 second-feet Feb. 10, 1921 (gage height, 4.4 feet, former site and datum), from rating curve extended above 1,110 second-feet; no flow at times.

Remarks.- Records fair. Discharge for period of missing gage heights, July 23-28, computed on basis of notes by county watermaster. Total summer flow diverted for irrigation above McKay Reservoir. Flow completely regulated since 1927 by McKay Reservoir.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 29 to Aug. 27)

0	0	0.8	114
.2	9	1.0	172
.4	34	1.2	251
.6	68	1.4	350

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	12	125	270	299	256
2							0	11	153	270	299	261
3							0	10	166	261	299	265
4							0	9	166	247	294	246
5							0	9	194	247	294	203
6							0	9	208	247	294	106
7							0	9	197	261	294	0
8							0	13	194	280	294	0
9							0	40	190	285	294	0
10							0	45	179	285	294	0
11							0	64	190	285	299	0
12							0	64	194	285	309	0
13							0	64	204	285	309	0
14							0	63	217	285	309	0
15							5	63	238	285	309	0
16							8	63	217	285	309	0
17							8	63	197	285	309	0
18							8	63	176	285	309	0
19							8	64	172	285	309	0
20							8	64	163	285	304	0
21							9	64	186	285	299	0
22							9	66	225	294	299	0
23							9	64	230	294	299	0
24							8	76	242	294	299	0
25							6	117	242	294	299	0
26							5	119	242	300	299	0
27							7	119	238	306	289	0
28							11	119	251	310	289	0
29							14	119	270	304	285	0
30							13	119	275	299	275	0
31							-	119	-	299	251	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1938	30,338.9	329	0	83.1	60,180
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	136	14	0	4.5	270
May	1,903	119	9	61.4	3,770
June	6,141	275	125	205	12,180
July	8,782	310	247	283	17,420
August	9,213	309	251	297	18,270
September	1,337	265	0	44.6	2,650
Water year 1938-39	27,512	310	0	75.4	54,560

Birch Creek at Rieth, Oreg.

Location.- Water-stage recorder, lat. 45°39', long. 118°53', in SE¼ sec. 13, T. 2 N., R. 31 E., a quarter of a mile upstream from mouth and half a mile southwest of Rieth.

Drainage area.- 291 square miles.

Records available.- May 1921 to September 1923 and April 1927 to September 1939 (incomplete prior to October 1929).

Average discharge.- 10 years (1929-39), 28.1 second-feet.

Extremes.- Maximum discharge during year, 530 second-feet Mar. 21 (gage height, 3.69 feet); no flow Oct. 1 to Nov. 21 and probably in parts of July, August, and September. 1921-23, 1927-39: Maximum discharge, 1,640 second-feet Jan. 29, 1928 (gage height, 6.00 feet, former site and datum), from rating curve extended above 300 second-feet; no flow at times.

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

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	10	14	17	28	117	*36				
2		0	10	14	16	*27	122	31				
3		0	8	14	16	*26	118	31				
4		0	9	14	16	*25	112	28				
5		0	9	15	15	*24	102	*22				
6		0	12	14	14	*23	*94	*18				
7		0	12	14	14	22	*88	*14				
8		0	14	13	14	21	*88	11				
9		0	*20	13	*13	21	*89	11			†0.2	
10		0	*23	13	*13	20	*85	*10				
11		0	*20	14	*12	20	79	*8				
12		0	*18	*16	12	52	84	*6				
13		0	18	*21	14	115	78	*4				
14		0	18	*20	18	90	61	*2				
15		0	*17	*20	57	86	57	*1				
16		0	*17	*20	67	161	55	.4				
17		0	*16	20	*59	176	54					
18		0	*16	20	51	197	58					
19		0	*15	*20	50	380	*60					
20		0	14	*19	47	414	*56					
21		0	16	*19	42	398	*55					
22		.4	16	*19	39	291	*58					
23		.4	16	*18	36	258	62					
24		*.8	16	18	34	222	62	*.2				
25		*1	16	18	33	177	59					
26		*3	16	18	32	166	56					
27		*5	15	*18	31	151	*52					
28		*7	15	*18	31	128	*48					
29		10	15	*17	-	115	*44		†0.2			
30		10	14	*17	-	101	*40					
31		-	14	17	-	100	-					

Month	Second-feet-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	37.6	10	0	1.25	75
December	465	23	8	15.0	922
Calendar year 1938	14,915.6	530	0	40.9	29,580
January	525	21	13	16.9	1,040
February	813	67	12	29.0	1,610
March	4,035	414	20	130	8,000
April	2,193	122	40	73.1	4,350
May	236.4	36	-	7.63	469
June	6.0	-	-	.2	12
July	6.2	-	-	.2	12
August	3.1	-	-	.1	6
September	0	0	0	0	0
Water year 1938-39	8,320.3	414	0	22.8	16,500

*Gage heights missing; discharge computed on basis of weather records, recorded range of stage, observer's notes, and records for McKay Creek near Pilot Rock.
†Discharge measurement.

Principal diversions from Umatilla River between Pendleton and Umatilla, Oreg.

The following canals divert water from Umatilla River between Pendleton and Umatilla, Oreg.:

Furnish canal, from right bank of Umatilla River in sec. 36, T. 3 N., R. 29 E. Umatilla project feed canal, from right bank of Umatilla River in SW¼ sec. 22, T. 3 N., R. 29 E., to feed Cold Springs Reservoir of Bureau of Reclamation. Western Land and Irrigation Co.'s canal, from left bank of Umatilla River in NE¼ sec. 21, T. 3 N., R. 29 E.; gage is 1 mile downstream from intake. Allen canal, from right bank of Western Land and Irrigation Co.'s canal, half a mile downstream from head gate of that canal. Maxwell canal, from right bank of Umatilla River in SW¼ sec. 28, T. 4 N., R. 28 E., and at times receives water from Cold Springs Reservoir. West Division main canal, from left bank of Umatilla River in SW¼ sec. 28, T. 5 N., R. 28 E. Brownell canal, from right bank of Umatilla River 2 miles downstream from West Division main canal diversion and 1½ miles upstream from mouth of Umatilla River.

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

Several smaller canals also divert water between Pendleton and Umatilla, but no records for them were obtained.

Records of monthly discharge of the canals, published as a group, are available from March 1926 to September 1939; records for some of the canals published separately prior to 1926.

Diversions, in acre-feet, water year October 1938 to September 1939

Month	Furnish canal	Umatilla project feed canal	Western Land Irrigation Co.'s canal	Allen canal	Maxwell canal	West Division main canal	Brownell canal
October	0	980	365	*434	2,710	8,410	0
November	0	8,220	0	-	1,500	1,080	0
December	0	12,080	0	-	313	0	0
January	0	13,470	0	-	-	0	0
February	0	11,490	1,070	†101	-	36	0
March	502	12,320	5,930	454	‡885	6,660	0
April	8,090	12,600	11,930	1,210	4,120	10,960	955
May	8,910	7,510	12,020	1,170	3,940	10,410	909
June	7,790	0	9,990	932	2,840	10,470	1,110
July	7,410	0	9,950	1,070	2,480	10,860	942
August	7,400	0	9,450	760	2,110	11,270	1,010
September	1,390	0	2,010	811	2,190	9,700	970
The year or period	41,492	78,670	62,715	-	-	79,856	5,896

*Oct. 1-12; no record Oct. 13 to Feb. 20.
†Feb. 21-28.
‡Mar. 15-31.
Note.- Some flow in Allen and Maxwell canals, but no record of it during months left blank.

John Day River at Prairie City, Oreg.

Location.- Staff gage, lat. 44°27', long. 118°43', in NE¼ sec. 10, T. 13 S., R. 33 E., at power plant upstream from outlet of Prairie power canal, three-quarters of a mile southwest of Prairie City. Zero of gage is 3,492.06 feet (revised) above mean sea level (general adjustment of 1929). Prior to Aug. 14, 1939, gage at datum 0.50 foot higher.

Records available.- October 1926 to September 1939. October 1916 to September 1917 (gage heights only) and March 1925 to September 1926, at site downstream from outlet of Prairie power canal.

Average discharge.- 14 years (1925-39), 99.8 second-feet, including flow of Prairie power canal.

Extremes.- Maximum discharge during year, 1,400 second-feet Mar. 20, 21 (gage height, 5.4 feet, former datum, from floodmark), by slope-area method; minimum discharge observed, 4.8 second-feet Aug. 20, 21.

1926-39: Maximum discharge, 1,550 second-feet Mar. 19, 1932, from rating curve extended above 500 second-feet; maximum gage height, that of Mar. 20, 21, 1939; minimum discharge, 2 second-feet Dec. 8, 21, 22, 1932, Aug. 10, 1934.

Remarks.- Records good except those for period of missing gage heights, which are fair. Diversions for irrigation and for power above station. (See record for Prairie power canal at Prairie City.) Staff gage read twice daily by employee of West Coast Power Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	13	11	14	12	15	266	116	26	10	9.2	13
2	34	14	13	20	9.2	17	271	111	26	11	8.8	12
3	42	16	13	24	13	14	271	121	21	11	9.2	13
4	50	55	25	19	11	13	268	117	22	14	10	12
5	64	35	26	19	10	12	234	127	26	16	8.8	13
6	59	22	21	18	11	13	206	114	27	15	8.5	13
7	48	26	22	14	11	15	190	88	22	14	8.5	14
8	35	22	23	17	9.8	13	186	73	20	12	7.5	11
9	22	21	21	14	11	14	184	59	24	10	7.5	11
10	23	18	17	13	12	12	178	58	22	11	6.5	11
11	23	18	13	13	12	16	167	52	18	12	6.5	12
12	23	14	10	13	17	36	190	48	16	11	6.8	12
13	20	17	9.8	12	17	55	162	38	14	12	6.2	16
14	20	16	13	11	12	41	137	35	10	12	6.8	12
15	23	18	22	13	14	49	134	29	11	13	6.8	11
16	41	20	13	11	9.2	104	119	40	14	13	6.8	10
17	62	19	13	12	9.2	238	111	68	24	14	6.5	8.8
18	59	20	12	11	10	375	114	74	38	15	6.8	7.2
19	59	17	13	9.8	12	570	130	153	53	16	5.8	7.2
20	60	16	12	9.8	8.6	800	141	117	46	16	5.0	6.8
21	57	13	13	8.6	8.0	1,020	158	113	32	15	5.0	8.8
22	56	10	13	9.8	14	1,000	157	99	22	12	5.5	10
23	40	9.2	11	15	16	880	162	95	21	9.6	6.8	10
24	22	12	12	10	12	760	155	58	18	8.5	7.5	8.8
25	20	10	12	11	13	*650	134	57	18	8.1	7.8	7.5
26	16	10	9.8	11	13	*600	124	63	16	7.8	8.8	10
27	14	10	12	12	14	*450	105	47	14	8.1	10	10
28	13	10	13	12	14	*350	83	41	12	7.2	10	11
29	13	10	12	12	-	292	96	32	11	8.1	10	12
30	13	10	13	9.2	-	264	116	26	10	9.2	11	8.8
31	13	-	13	12	-	254	-	26	-	8.5	12	-

Month	River only					River and Prairie power canal			
	Second-foot days	Maximum	Minimum	Mean	Run-off in acre-feet	Maximum	Minimum	Mean	Run-off in acre-feet
October...	1,072	64	13	34.6	2,130	65	29	52.7	3,240
November..	521.2	55	9.2	17.4	1,030	94	39	70.6	4,200
December..	456.6	26	9.8	14.7	906	82	44	65.2	4,010
Calendar year 1938	31,681.8	490	9.2	86.8	62,850	551	10	126	91,000
January...	410.2	24	8.6	13.2	814	73	32	61.3	3,770
February..	335.0	17	8.0	12.0	664	71	35	59.6	3,310
March.....	8,942	1,020	12	288	17,740	1,070	41	342	21,040
April.....	4,949	271	83	165	9,820	326	153	225	13,360
May.....	2,295	153	26	74.0	4,550	229	88	145	8,890
June.....	654	53	10	21.8	1,300	113	13	62.5	3,720
July.....	360.1	16	7.2	11.6	714	36	15	21.8	1,340
August....	242.9	12	5.0	7.84	482	29.2	6.0	13.7	845
September.	322.9	16	6.8	10.8	640	42	18	28.9	1,720
Water Year 1938-39	20,560.9	1,020	5.0	56.3	40,790	1,070	6.0	95.9	69,440

*Gage washed out, gage height missing; discharge computed on basis of records for station at Picture Gorge.

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

Location.- Water-stage recorder and concrete control, lat. 44°31'20", long. 119°37'30", in sec. 20, T. 12 S., R. 26 E., on John Day Highway 0.7 mile upstream from Rock Creek Bridge and 7 miles northwest of Dayville. Zero of gage is 2,232.10 feet above mean sea level (general adjustment of 1929).

Records available.- April 1926 to September 1939.

Average discharge.- 13 years, 338 second-feet.

Extremes.- Maximum discharge during year, 3,160 second-feet Mar. 21, 24, 25 (gage height, 10.1 feet); minimum, 2.6 second-feet Aug. 19, 20 (gage height, 1.07 feet).
1926-39: Maximum discharge, about 6,000 second-feet Mar. 19, 1932 (gage height, 14.0 feet), from rating curve extended above 2,300 second-feet; minimum, 1 second-foot several days in August and September 1930, Aug. 8, 9, 1936.

Remarks.- Records excellent except those for periods of ice effect, Nov. 25-27, Dec. 12-17, 24-26 (computed on basis of one discharge measurement and weather records), and those below 10 second-feet, which are fair. Many diversions for irrigation above station.

Rating table, water year 1938-39 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.0	1.3	2.2	99	5.0	675
1.2	7.5	2.5	137	6.0	1,005
1.4	20	3.0	216	7.0	1,420
1.6	37	3.5	309	8.0	1,895
1.9	65	4.0	413	10.0	3,090

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	143	194	192	162	216	1,600	585	262	51	5.7	5.3
2	43	144	196	202	154	216	1,600	557	234	48	5.7	5.3
3	49	147	211	214	160	229	1,600	531	202	44	5.7	5.7
4	54	194	234	220	179	227	1,560	518	177	42	4.0	5.7
5	63	262	262	214	184	208	1,460	506	176	41	3.1	6.2
6	88	229	271	208	189	213	1,330	494	179	38	2.9	6.2
7	103	208	262	197	184	229	1,200	470	172	35	2.7	6.2
8	103	199	271	190	174	225	1,160	435	163	31	3.5	6.2
9	99	199	280	194	148	227	1,160	391	157	26	3.1	6.6
10	97	208	262	192	168	229	1,120	370	151	27	2.9	6.2
11	88	206	243	194	177	232	1,040	349	151	24	2.9	6.2
12	101	194	170	199	192	435	1,080	329	147	23	3.1	7.1
13	101	189	154	197	213	935	1,040	309	130	22	3.5	9.2
14	99	199	180	190	218	660	935	280	111	19	3.5	10
15	100	202	200	190	234	557	865	271	94	16	3.5	10
16	106	206	220	185	271	675	795	280	84	11	3.1	11
17	116	213	205	187	243	1,420	750	300	89	11	3.1	11
18	120	223	202	187	230	1,800	720	349	132	12	2.9	11
19	124	214	194	185	230	2,220	720	402	211	11	2.9	9.2
20	124	208	192	177	220	2,580	735	494	271	11	2.9	7.5
21	114	199	194	163	199	3,020	735	458	271	9.7	3.5	7.5
22	109	174	196	152	197	3,090	750	458	234	9.2	3.5	7.5
23	107	158	190	154	213	3,020	780	470	190	9.2	3.5	8.0
24	109	156	175	162	218	3,090	765	446	151	8.0	2.9	9.7
25	109	150	170	166	221	3,020	735	391	128	7.5	4.0	9.7
26	110	155	165	174	227	2,960	690	380	119	7.5	6.2	7.5
27	110	160	171	177	225	2,400	600	360	106	6.2	5.3	6.6
28	106	169	190	184	225	2,000	557	339	95	6.2	4.4	6.2
29	111	174	187	185	-	1,740	531	319	67	5.7	4.0	6.6
30	124	185	189	184	-	1,600	557	300	56	5.3	4.0	7.1
31	132	-	192	168	-	1,510	-	290	-	5.3	4.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,063	132	43	98.8	6,080
November	5,667	262	143	189	11,240
December	6,422	280	154	207	12,740
Calendar year 1938	203,514	3,350	11	558	403,700
January	5,785	220	152	187	11,470
February	5,655	271	148	202	11,220
March	41,183	3,090	208	1,328	81,690
April	29,170	1,600	531	972	57,860
May	12,431	585	271	401	24,660
June	4,710	271	56	157	9,340
July	622.8	51	5.3	20.1	1,240
August	116.4	6.2	2.7	3.75	231
September	228.2	11	6.3	7.61	453
Water year 1938-39	115,053.4	3,090	2.7	315	228,200

John Day River at Service Creek, Oreg.

Location.- Water-stage recorder, lat. 44°48', long. 120°00', in NE¼ sec. 18, T. 9 S., R. 23 E., a quarter of a mile downstream from 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 (general adjustment of 1929).

Records available.- October 1929 to September 1939.

Average discharge.- 10 years, 1,283 second-feet.

Extremes.- Maximum discharge during year, 15,600 second-feet Mar. 23-25 (maximum gage height, 12.29 feet Mar. 24); minimum discharge observed, 26 second-feet Aug. 23 (gage height, -0.05 foot).

1929-39: Maximum discharge, 28,900 second-feet Mar. 19, 1932 (gage height, 16.75 feet), from rating curve extended above 11,000 second-feet on basis of records for other stations in John Day River Basin; minimum, 20 second-feet Sept. 6, 1931.

Remarks.- Records good except those for periods of missing gage heights, April to June, which are fair, and those for periods of missing gage heights, August and September, which are poor. Many diversions for irrigation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0	29	1.5	255	4.0	1,440	10.0	9,600
.4	59	2.0	405	5.0	2,200	12.0	14,800
.7	96	2.5	600	6.0	3,150		
1.0	144	3.0	840	e.0	5,780		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	280	416	444	352	663	7,400	4,210	1,200	367	58	35
2	102	313	422	472	316	640	e,190	4,020	1,100	337	56	37
3	106	328	448	516	346	676	7,600	4,020	1,030	319	55	41
4	124	343	500	552	405	672	7,100	3,960	980	313	54	41
5	130	405	520	548	440	658	6,600	3,660	940	313	53	41
6	144	552	618	544	440	600	6,180	3,320	920	358	52	40
7	177	480	600	500	448	681	5,620	2,950	880	319	51	41
8	190	405	614	460	422	654	5,400	2,700	850	295	50	40
9	194	364	705	444	346	672	5,470	2,560	800	272	49	38
10	194	402	705	456	310	681	5,400	2,470	750	258	49	39
11	198	426	636	484	370	690	5,020	2,340	725	230	48	39
12	194	394	464	488	456	1,020	4,880	2,160	672	210	48	39
13	203	349	292	500	504	2,900	5,020	2,020	632	192	47	40
14	212	340	270	480	568	2,340	4,540	1,960	584	179	47	42
15	230	370	325	480	640	1,870	4,080	1,910	536	169	45	46
16	220	426	349	476	780	2,080	3,900	1,880	512	163	48	53
17	225	433	500	444	785	4,280	3,720	1,910	536	150	41	85
18	232	464	422	476	720	5,540	3,780	2,080	614	129	41	83
19	240	508	416	452	681	7,320	4,020	1,960	720	121	38	78
20	238	452	426	436	676	8,930	4,470	2,030	896	117	35	72
21	235	412	405	370	614	11,600	4,540	1,930	984	108	32	64
22	225	377	436	328	592	13,200	4,740	1,840	918	104	29	57
23	220	268	430	322	609	13,700	4,810	1,860	780	99	26	54
24	222	265	448	310	632	13,700	4,600	1,820	690	93	28	53
25	222	230	440	370	645	14,000	4,210	1,600	622	88	30	47
26	218	215	394	405	690	12,900	3,780	1,500	580	81	32	45
27	218	225	364	433	672	10,300	3,480	1,400	540	75	35	47
28	220	232	388	468	681	8,400	3,480	1,350	508	71	37	48
29	220	319	440	480	-	7,700	3,960	1,300	472	69	39	50
30	238	367	444	476	-	7,320	4,540	1,260	405	66	41	52
31	262	-	440	419	-	6,700	-	1,230	-	62	37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,149	262	96	198	12,200
November	10,944	552	215	365	21,710
December	14,277	705	270	461	28,320
Calendar year 1938	719,095	14,200	62	1,970	1,426,000
January	14,033	552	310	453	27,830
February	15,140	785	310	541	30,030
March	163,087	14,000	600	5,261	323,500
April	150,530	8,190	3,480	5,018	298,600
May	71,210	4,210	1,230	2,297	141,200
June	22,376	1,200	405	746	44,380
July	5,727	367	62	185	11,360
August	1,331	58	26	42.9	2,640
September	1,487	85	35	49.6	2,950
Water year 1938-39	476,291	14,000	26	1,305	944,700

John Day River at McDonald Ferry, Oreg.

Location.- Water-stage recorder, lat. 45°35', long. 120°25', in NW¼ sec. 11, T. 1 N., R. 19 E., at McDonald Ferry, half a mile downstream from Rock Creek and 10 miles east of Klondike. Zero of gage is 392.27 feet above mean sea level (general adjustment of 1929).

Drainage area.- 7,580 square miles.

Records available.- December 1904 to September 1939.

Average discharge.- 34 years (1905-39), 1,890 second-feet.

Extremes.- Maximum discharge during year, 14,000 second-feet Mar. 25 (gage height, 7.68 feet); minimum, 15 second-feet Aug. 21, 27 (gage height, 0.88 foot).

1904-39: Maximum discharge, 24,900 second-feet Mar. 20, 1932 (gage height, 10.6 feet), from rating curve extended above 12,000 second-feet; minimum, 4 second-feet Aug. 31, 1931 (gage height, 0.68 foot).

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

Remarks.- Records excellent except those for periods of ice effect, Nov. 25-30, Dec. 13-22, Feb. 10-12, which were computed on basis of records for station at Service Creek and are fair. Diversions for irrigation above station.

Rating table, water year 1938-39 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.9	17	2.0	470	3.5	2,310	6.0	8,270
1.2	65	2.5	915	4.5	4,290	7.0	11,550
1.6	209	3.0	1,520	5.0	5,490	8.0	15,100

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	87	248	318	463	500	657	6,810	4,570	1,340	463	55	35
2	89	259	351	456	463	666	7,670	4,380	1,300	414	53	32
3	106	282	428	463	428	648	8,120	4,110	1,170	386	53	31
4	113	300	449	470	386	630	7,670	4,110	1,080	365	49	34
5	131	330	470	508	351	666	7,240	4,110	1,010	337	42	34
6	127	358	508	545	407	666	6,810	3,890	946	324	40	34
7	127	379	515	545	456	657	6,130	3,540	915	294	37	40
8	139	508	588	545	463	613	5,390	3,190	905	294	35	37
9	148	530	604	522	456	657	5,140	2,900	885	324	35	32
10	168	478	604	492	370	657	5,240	2,710	825	288	40	28
11	206	421	693	470	330	666	5,190	2,590	777	282	37	29
12	210	407	711	470	320	684	4,820	2,460	768	276	34	28
13	206	449	640	492	400	768	4,660	2,330	739	237	28	29
14	210	435	500	500	463	2,210	4,850	2,170	693	201	27	31
15	201	407	350	515	508	2,640	4,450	2,060	657	177	25	34
16	210	379	300	492	613	2,040	4,030	1,980	613	156	24	35
17	220	372	290	492	675	2,210	3,770	1,950	579	148	24	35
18	237	421	350	492	777	4,220	3,620	1,920	562	143	28	35
19	237	442	400	470	777	5,970	3,560	2,040	588	139	22	35
20	237	463	500	478	720	7,380	3,740	2,090	657	135	17	39
21	242	500	450	478	693	8,740	4,200	2,030	748	127	16	37
22	248	492	450	456	675	10,900	4,380	2,090	936	116	19	47
23	254	449	470	421	613	12,200	4,570	1,960	1,010	106	22	68
24	254	428	492	386	596	13,000	4,770	1,920	915	99	27	61
25	248	360	435	337	604	13,000	4,730	1,900	806	92	24	55
26	242	300	456	324	613	13,000	4,450	1,760	730	89	21	53
27	242	280	442	365	630	12,200	4,030	1,560	657	78	22	51
28	242	250	449	414	675	10,200	3,640	1,480	604	70	23	47
29	248	240	421	435	-	8,890	3,540	1,450	545	63	22	42
30	248	250	393	470	-	7,670	3,870	1,380	508	61	23	43
31	248	-	435	485	-	7,090	-	1,340	-	55	27	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,125	254	87	198	12,150
November	11,417	530	240	381	22,650
December	14,462	711	290	467	28,680
Calendar year 1938	766,982	13,300	68	2,101	1,521,000
January	14,451	545	324	466	28,660
February	14,962	777	320	534	29,680
March	152,095	13,000	613	4,906	301,700
April	151,090	8,120	3,540	5,036	299,700
May	77,970	4,570	1,340	2,515	154,700
June	24,468	1,340	508	816	48,530
July	6,339	463	55	204	12,570
August	951	55	16	30.7	1,890
September	1,171	68	28	39.0	2,320
Water year 1938-39	475,501	13,000	16	1,303	943,200

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Prairie power canal at Prairie City, Oreg.

Location.- Staff gage, lat. 44°27', long. 118°42', in sec. 11, T. 13 S., R. 33 E., upstream from county-road bridge over canal and 1 mile south of Prairie City.

Records available.- May 1925 to September 1939.

Average discharge.- 14 years, 42.9 second-feet.

Extremes.- Maximum discharge observed during year, 92 second-feet May 5 (gage height, 2.75 feet); no flow at times.
1925-39: Maximum discharge, that of May 5, 1939; no flow at times.

Remarks.- Records fair. Canal diverts water 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 station on John Day River at Prairie City. Staff gage read once daily by employee of West Coast Power Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	52	52	52	56	49	59	65	59	7	20	6
2	0	52	52	52	32	49	52	66	56	6	15	8
3	0	59	59	49	53	52	52	70	51	9	14	8
4	0	29	52	49	52	49	52	73	53	22	16	10
5	0	59	52	49	52	29	49	86	59	20	14	11
6	0	59	52	46	52	43	45	82	56	19	13	11
7	0	59	59	43	46	52	45	76	49	13	13	10
8	3	59	59	49	52	53	53	74	49	11	10	9
9	23	59	59	46	24	53	62	70	52	10	10	8
10	28	59	59	52	52	53	59	73	47	9	7	7
11	29	59	34	52	59	52	59	67	43	6	5	15
12	29	46	34	52	46	66	59	66	39	6	4	19
13	29	46	34	53	45	70	56	65	16	4	3	24
14	29	59	34	52	52	52	56	62	3	3	3	29
15	29	59	59	52	52	52	56	65	2	3	2	31
16	0	66	59	52	45	70	66	73	6	2	2	29
17	0	59	52	52	43	56	65	74	52	3	3	28
18	0	59	52	52	59	49	67	72	62	3	2	25
19	0	59	52	52	49	62	67	76	60	3	3	24
20	0	59	52	40	37	62	66	60	58	3	2	23
21	0	46	52	33	34	52	59	76	56	3	1	20
22	0	29	52	22	51	43	66	76	49	6	1	20
23	9	40	52	52	49	46	62	79	43	14	1	20
24	28	52	49	41	52	40	60	74	41	16	1	20
25	37	52	49	56	49	56	66	76	37	20	1	23
26	46	46	34	52	52	59	66	70	37	19	2	23
27	46	59	52	53	49	59	65	66	32	15	2	22
28	46	52	52	52	40	59	70	62	28	13	3	20
29	46	52	52	52	-	59	65	62	16	13	3	20
30	52	52	52	43	-	59	65	70	10	11	3	22
31	52	-	52	37	-	59	-	62	-	23	4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	561	52	0	18.1	1,110
November	1,597	66	29	53.2	3,170
December	1,565	59	34	50.5	3,100
Calendar year 1938	14,190	66	0	38.9	28,140
January	1,489	56	22	48.0	2,950
February	1,334	59	24	47.6	2,650
March	1,664	70	29	53.7	3,300
April	1,789	70	45	59.6	3,550
May	2,188	86	60	70.6	4,340
June	1,221	62	2	40.7	2,420
July	315	23	2	10.2	625
August	183	20	1	5.9	363
September	545	31	6	18.2	1,080
Water year 1938-39	14,451	86	0	39.6	28,660

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

Location.- Water-stage recorder, lat. 44°20', long. 118°39', in SW¼ sec. 20, T. 14 S., R. 34 E., 100 feet upstream from South Fork of Strawberry Creek and 8½ miles south of Prairie City.

Records available.- October 1930 to September 1939.

Extremes.- Maximum discharge during year, 50 second-feet May 17 (gage height, 1.80 feet); minimum, 2.2 second-feet Feb. 16, 17, Feb. 22 to Mar. 17, Sept. 30.
1930-39: Maximum discharge, 150 second-feet June 9, 1933 (gage height, 2.44 feet), from rating curve extended above 85 second-feet; minimum, 1.4 second-feet several days in each of the years 1931, 1934, 1935, 1937.

Remarks.- Records fair. No diversion above station; some natural regulation by Strawberry Lake.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	3.4	3.2	2.7	*2.5	2.2	7.5	33	36	15	6.6	3.4
2	4.0	3.4	3.4	2.7	*2.5	2.2	7.8	38	35	14	6.3	3.2
3	4.0	3.6	3.4	2.8	*2.5	2.2	8.6	43	33	14	6.3	3.2
4	3.8	3.8	3.8	2.8	2.5	2.2	9.4	46	31	13	6.0	3.2
5	3.8	3.6	3.6	2.8	2.4	†2.2	9.4	47	30	13	6.0	3.2
6	3.8	3.6	3.6	2.8	2.4	2.2	9.4	46	27	12	6.0	3.0
7	3.8	3.8	3.8	2.8	2.4	2.2	9.4	44	25	12	6.0	3.0
8	3.8	3.8	3.8	2.8	2.4	2.2	9.8	44	23	12	6.0	3.0
9	3.6	3.8	4.0	2.8	†2.4	2.2	10	44	23	11	6.0	2.8
10	3.6	3.8	3.8	2.8	2.4	2.2	10	44	21	11	5.7	2.8
11	3.6	3.8	3.8	2.7	2.4	2.2	9.8	45	21	10	5.7	2.7
12	3.6	3.8	*3.6	2.7	2.4	2.2	10	44	20	9.8	5.4	3.0
13	3.6	3.8	*3.4	2.7	2.4	2.2	10	44	20	9.4	5.4	3.0
14	3.6	3.8	*3.2	2.7	2.4	2.2	9.8	45	20	9.0	5.1	2.8
15	3.6	3.8	3.0	2.7	2.4	2.2	9.8	46	20	9.0	5.1	2.7
16	3.6	4.0	2.8	2.7	2.2	2.2	9.4	48	20	9.0	4.8	2.5
17	3.6	4.0	2.8	2.7	2.2	2.2	9.8	48	20	8.6	4.8	2.5
18	3.4	3.8	2.8	2.7	2.4	2.4	11	47	20	8.6	4.6	2.5
19	3.4	3.8	2.8	2.7	2.4	2.4	12	45	19	8.2	4.6	2.5
20	3.6	3.8	2.8	2.7	2.4	2.5	14	41	19	8.2	4.4	2.5
21	3.6	3.6	2.8	†2.6	†2.3	3.0	16	39	19	7.8	4.4	2.5
22	3.4	†3.6	2.8	†2.6	2.2	3.6	18	36	19	7.5	4.2	2.5
23	3.4	†3.6	2.8	2.5	2.2	4.4	18	33	19	7.5	4.2	2.5
24	3.4	3.6	2.8	2.5	2.2	5.1	18	30	18	7.5	4.2	2.4
25	3.4	3.4	2.8	2.5	2.2	6.3	17	29	18	7.5	4.0	2.4
26	3.4	3.4	2.7	2.5	2.2	6.9	16	28	17	7.2	3.8	2.4
27	3.4	3.4	2.7	2.5	2.2	7.2	18	27	16	7.2	3.8	2.4
28	3.4	3.4	2.7	2.5	2.2	7.2	21	29	16	6.9	3.6	2.4
29	3.8	3.4	2.7	2.5	-	7.2	27	31	16	6.8	3.6	2.4
30	3.6	3.4	2.7	2.5	-	7.2	29	35	15	6.6	3.4	2.2
31	3.6	-	2.7	2.5	-	7.5	-	36	-	6.6	3.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	112.0	4.0	3.4	3.61	222
November	109.8	4.0	3.4	3.66	218
December	97.6	4.0	2.7	3.15	194
Calendar year 1938	5,697.3	88	2.7	15.6	11,300
January	82.5	2.8	2.5	2.66	164
February	65.7	2.5	2.2	2.35	130
March	110.3	7.5	2.2	3.56	219
April	394.9	29	7.5	13.2	783
May	1,235	48	27	39.8	2,450
June	656	36	15	21.9	1,300
July	295.7	15	6.6	9.54	587
August	153.4	6.6	3.4	4.95	304
September	81.6	3.4	2.2	2.72	162
Water year 1938-39	3,394.5	48	2.2	9.30	6,730

*Gage height missing; discharge interpolated.
†Stage-discharge relation affected by ice; discharge interpolated.

North Fork of John Day River near Dale, Oreg.

Location.- Water-stage recorder, lat. 45°00', long. 118°57', in SE¼ sec. 35 (revised), T. 6 S., R. 31 E., three-eighths of a mile downstream from Desolation Creek and 1½ miles northeast of Dale. Zero of gage is 2,775.85 feet above mean sea level (general adjustment of 1929).

Drainage area.- 525 square miles.

Records available.- October 1929 to September 1939.

Average discharge.- 10 years, 309 second-feet.

Extremes.- Maximum discharge during year, 2,580 second-feet Apr. 29 (gage height, 6.30 feet); minimum, 23 second-feet Nov. 23 (gage height, 1.77 feet).
1929-39: Maximum discharge, 4,990 second-feet May 14, 1932 (gage height, 8.4 feet); minimum, 6 second-feet Nov. 3, 1936 (gage height, 1.40 feet).

Remarks.- Records good except those for periods of ice effect, which are fair. Small diversions for irrigation and mining above station, which cause diurnal fluctuation at low stages.

Rating table, water year 1938-39 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.8	25	3.0	240	4.6	1,010
2.1	54	3.4	390	5.0	1,310
2.4	96	3.8	560	5.6	1,850
2.7	159	4.2	765	6.2	2,470

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	77	85	*100	*72	90	850	2,050	502	154	47	28
2	40	72	82	*105	*66	83	940	2,200	458	150	44	31
3	44	73	80	111	*74	79	940	2,250	434	148	43	31
4	51	134	80	96	*85	85	940	2,100	422	164	42	31
5	52	111	88	88	*90	111	880	1,750	414	164	41	29
6	51	72	102	85	*92	80	792	1,480	398	148	39	30
7	50	46	109	79	*90	79	765	1,310	366	134	38	27
8	46	86	115	82	*82	86	792	1,270	338	123	38	29
9	45	60	136	88	*70	82	940	1,230	346	115	41	30
10	44	67	*110	86	*74	83	850	1,190	338	106	40	29
11	54	59	*80	83	*80	90	850	1,080	303	98	40	30
12	66	60	*50	82	*86	119	910	1,010	289	93	38	31
13	61	73	*33	77	*92	134	820	975	278	86	37	46
14	58	98	*30	77	*100	126	738	975	264	82	36	65
15	58	86	*55	82	*115	117	710	975	254	80	35	54
16	59	85	*90	79	126	134	738	1,010	289	79	34	43
17	54	100	*85	76	100	182	820	1,120	310	74	31	40
18	54	88	*80	76	80	261	1,010	940	366	72	34	34
19	53	67	*85	77	80	374	1,350	910	410	67	32	34
20	53	80	*90	*74	*72	458	1,480	850	430	65	32	36
21	52	52	*95	*72	*66	585	1,700	738	378	62	30	31
22	52	33	*100	*66	*74	710	2,000	738	322	61	30	31
23	51	35	*100	*70	77	820	1,900	738	292	59	32	31
24	50	*25	*95	*78	83	880	1,750	635	275	56	32	31
25	51	*31	*80	*86	83	940	1,480	595	250	56	34	31
26	48	*35	*65	*90	83	940	1,270	605	231	58	34	31
27	48	*42	*70	*90	83	792	1,390	595	220	56	32	33
28	46	64	*85	*88	85	710	1,800	605	198	54	31	27
29	51	77	*100	*86	-	685	2,470	610	176	52	30	31
30	64	79	*93	*83	-	660	2,300	660	166	50	29	31
31	80	-	*98	*80	-	710	-	560	-	50	28	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,627	80	39	52.5	3,230
November	2,067	134	25	69.6	4,140
December	2,646	136	30	85.4	5,250
Calendar year 1938	141,727	3,380	25	388	281,100
January	2,592	111	66	83.6	5,140
February	2,360	126	66	84.3	4,680
March	11,285	940	79	364	22,380
April	36,175	2,470	710	1,206	71,750
May	33,754	2,250	560	1,089	66,950
June	9,717	502	166	324	19,270
July	2,836	184	50	91.5	5,630
August	1,104	47	28	36.6	2,190
September	1,018	65	27	33.9	2,020
Water year 1938-39	107,201	2,470	25	294	212,600

*Gage height affected by ice; discharge computed on basis of records for John Day River at Prairie City, Middle Fork at Ritter, and North Fork at Monument.

North Fork of John Day River at Monument, Oreg.

Location.- Water-stage recorder, lat. 44°49', long. 119°26', in E½ sec. 1, T. 9 S., R. 27 E., just downstream from entrance to canyon, three-quarters of a mile west of Monument.

Drainage area.- 2,520 square miles.

Records available.- March 1925 to September 1939.

Average discharge.- 13 years (1925-27, 1928-39), 914 second-feet.

Extremes.- Maximum discharge during year, 11,000 second-feet Mar. 25 (gage height, 10.20 feet); minimum discharge observed, 17 second-feet Nov. 26 (gage height, 1.10 feet).
1925-39: Maximum discharge, 22,000 second-feet Mar. 18, 1932 (gage height, 14.8 feet), from rating curve extended above 9,000 second-feet; minimum, 6 second-feet sometime in period Nov. 2-13, 1936, when recorder was not operating.

Remarks.- Records good except those for periods of missing gage heights and ice effect, which are fair. Several small diversions for irrigation above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	138	189	*235	*180	305	6,100	3,380	852	242	65	36
2	69	140	208	*240	*160	338	5,940	3,250	778	228	63	*40
3	83	140	222	*260	*180	338	5,480	3,250	715	221	61	*43
4	85	159	222	*260	*210	334	5,180	3,180	645	232	59	*43
5	87	243	285	*255	*220	289	4,460	2,800	652	282	57	*43
6	91	229	289	*250	*220	334	3,900	2,500	638	252	54	*42
7	89	162	293	*230	*215	343	3,640	2,200	604	228	54	*43
8	89	121	356	*220	*200	334	3,640	2,100	545	209	52	*42
9	85	150	392	*210	*160	348	3,770	2,040	539	187	50	*43
10	81	176	348	*220	*190	343	3,250	1,930	545	176	47	*44
11	87	150	274	*225	*210	388	3,120	1,880	497	165	47	*44
12	89	119	*200	*230	†230	1,030	3,380	1,720	458	152	47	*44
13	101	105	126	*225	*260	1,590	3,120	1,670	430	144	46	*46
14	105	133	†36	*225	*290	1,110	2,620	1,570	405	129	46	*65
15	99	179	†66	*220	*330	1,010	2,440	1,570	390	122	42	*80
16	97	182	†170	*215	*370	1,390	2,320	1,570	405	116	41	88
17	95	202	†250	*200	*350	2,440	2,380	1,670	463	113	41	72
18	97	236	†220	*220	*310	3,410	2,620	1,670	515	109	41	65
19	93	202	†210	*210	*280	4,950	3,120	1,520	617	105	36	59
20	95	165	†220	*195	*250	6,200	3,250	1,520	736	103	39	54
21	93	159	†215	*180	236	7,950	3,510	1,380	659	100	39	52
22	93	105	†230	*170	250	8,680	3,770	1,330	552	96	38	52
23	93	37	*240	*160	268	9,060	3,770	1,330	474	94	38	47
24	93	44	†240	*170	268	9,250	3,380	1,240	436	90	39	47
25	91	34	†230	*180	313	9,440	3,120	1,060	405	86	42	47
26	91	35	†205	*200	313	8,500	2,680	1,040	371	82	42	47
27	91	57	†180	*220	317	6,420	2,620	1,020	352	78	*43	49
28	89	85	*200	*230	325	5,480	2,860	988	329	78	*45	49
29	97	153	*230	†228	-	5,030	3,510	996	290	76	*47	49
30	105	182	*240	*225	-	4,600	3,640	1,020	263	72	*46	46
31	116	-	*235	*210	-	5,030	-	972	-	68	*40	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,826	116	62	91.2	5,610
November	4,222	243	34	141	8,370
December	7,021	392	36	226	13,930
Calendar year 1938	445,532	9,250	34	1,221	883,700
January	6,718	260	160	217	13,320
February	7,105	370	160	254	14,090
March	106,264	9,440	289	3,428	210,800
April	106,590	6,100	2,320	3,553	211,400
May	55,366	3,380	972	1,786	109,800
June	15,660	852	263	519	30,860
July	4,435	282	68	143	8,800
August	1,447	65	38	46.7	2,870
September	1,521	88	36	50.7	3,020
Water year 1938-39	319,075	9,440	34	874	632,900

*Gage height missing; discharge computed on basis of weather records and records for other stations in John Day River Basin.
†Gage height affected by ice; discharge computed on basis of weather records, one discharge measurement, and records for other stations in John Day River Basin.

Middle Fork of John Day River at Ritter, Oreg.

Location.- Water-stage recorder, lat. 44°53', long. 119°08', in NW¼ sec. 8, T. 8 S., R. 30 E., at bridge half a mile south of Ritter.

Drainage area.- 526 square miles.

Records available.- October 1929 to September 1939.

Average discharge.- 10 years, 183 second-feet.

Extremes.- Maximum discharge during year, 1,920 second-feet Mar. 25, 26 (gage height, 5.71 feet); minimum, 3 second-feet Nov. 23, Dec. 13 (gage height, 1.32 feet).
1929-39: Maximum discharge, 4,000 second-feet Mar. 19, 1932 (gage height, 7.78 feet), from rating curve extended above 1,200 second-feet; minimum, 1.0 second-foot Dec. 10, 1932.

Remarks.- Records good except those for days of ice effect and those for period of shifting control, Apr. 11 to May 31, which are fair. A few small diversions for irrigation above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	41	55	56	40	66	1,290	600	182	62	13	9
2	21	38	58	55	32	76	1,240	611	171	59	13	10
3	25	41	54	58	46	76	1,290	622	160	60	12	12
4	28	68	68	56	47	74	1,200	590	156	80	12	12
5	28	59	100	56	51	59	1,060	535	160	85	12	12
6	27	60	82	50	50	79	890	486	154	75	11	12
7	27	44	79	40	49	70	815	442	144	67	10	11
8	26	43	130	43	46	74	843	414	138	60	10	12
9	25	47	126	51	39	74	843	398	142	55	9	12
10	25	49	93	52	43	76	754	382	130	50	8	12
11	26	44	54	59	43	100	697	366	119	47	8	12
12	29	33	21	56	54	222	767	338	109	42	8	12
13	29	37	4	54	54	259	691	326	104	36	7	15
14	28	54	*13	49	59	208	611	320	99	34	7	23
15	28	51	49	55	82	190	565	312	96	33	7	26
15	27	52	51	50	91	299	540	316	112	32	7	23
17	26	72	48	50	84	478	540	350	128	32	6	22
18	27	74	46	46	79	744	560	320	144	32	6	20
19	26	56	49	40	74	1,070	628	316	173	30	6	19
20	26	54	46	40	63	1,340	655	312	196	27	6	18
21	26	41	49	23	63	1,600	667	283	171	24	6	17
22	26	16	54	22	66	1,700	709	283	144	22	6	16
23	26	4	56	33	67	1,740	679	274	128	21	7	15
24	26	13	51	46	73	1,780	644	250	117	20	8	15
25	27	22	46	49	81	1,830	590	225	109	19	10	16
26	27	30	†35	47	76	1,830	510	232	102	18	10	17
27	27	37	†45	48	76	1,380	500	222	96	17	9	16
28	28	42	52	50	76	1,290	555	218	89	16	9	17
29	30	50	54	52	-	1,200	650	210	80	16	8	17
30	34	56	51	42	-	1,110	650	215	69	14	8	17
31	40	-	51	32	-	1,160	-	196	-	14	8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	845	40	21	27.3	1,680
November	1,358	89	4	45.3	2,690
December	1,770	130	4	57.1	3,510
Calendar year 1938	90,746	1,740	4	249	180,000
January	1,460	59	22	47.1	2,900
February	1,704	91	32	60.9	3,380
March	22,252	1,830	59	718	44,140
April	22,633	1,290	500	754	44,890
May	10,964	622	196	354	21,750
June	3,922	196	69	131	7,780
July	1,199	85	14	38.7	2,380
August	267	13	6	8.6	530
September	467	26	9	15.6	926
Water year 1938-39	68,841	1,830	4	189	136,600

*Gage height affected by ice; discharge computed on basis of discharge measurement.
†Gage height affected by ice; discharge computed on basis of weather records and records for John Day River at Prairie City.

Fox Creek at gorge near Fox, Oreg.

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

Location.- Water-stage recorder, lat. 44°37', long. 119°16', 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 1939.

Extremes.- Maximum discharge during year, 575 second-feet Mar. 20 or 21 (gage height, 4.1 feet, from floodmark), from rating curve extended above 180 second-feet; practically no flow at times.
1930-39: Maximum discharge, 800 second-feet Mar. 18, 1932 (gage height, 4.55 feet), from rating curve extended above 180 second-feet; no flow at times.

Remarks.- Records fair except those for periods of ice effect, Nov. 21-23, Dec. 10 to Mar. 11, which were computed on basis of one discharge measurement and records for John Day River at Prairie City and are poor. Several diversions for irrigation in valley above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	1.3	1.6	0.9	0.9	100	28	5.9	0.2		
2	0	.1	1.6	2.1	.8	.9	95	26	4.8	.1		
3	0	.1	2.2	2.3	.8	.9	90	23	4.8	.2		
4	0	.2	2.3	1.3	.8	1.0	82	20	4.8	.6		
5	.1	.2	3.8	1.1	.8	1.0	70	18	3.8	.5		
6	.1	.1	4.8	1.0	.4	1.0	60	15	4.2	.4		
7	.1	.1	5.9	.7	.6	1.0	57	5.4	4.4	.3		
8	.1	.1	4.8	.6	.6	1.0	57	6.8	4.0	.4		
9	0	.4	3.7	1.0	.7	1.0	57	8.0	4.4	.4		
10	0	.5	3.3	1.2	.8	1.0	53	7.3	4.2	.2		
11	.1	.4	1.0	1.3	.8	1.3	52	6.2	3.5	.1		
12	.1	.4	.5	2.1	.8	56	66	5.4	3.7	.1		
13	.1	.4	*.7	2.2	1.0	119	55	3.5	2.1	0		
14	.1	.5	*.9	2.3	1.0	78	49	1.9	3.1	0		
15	.1	1.0	1.1	1.5	1.0	23	43	2.6	1.6	0		
16	.1	1.9	1.8	.6	1.0	31	40	2.9	2.3	0		
17	.1	1.8	1.2	.6	1.0	95	38	2.8	3.5	0		
18	.1	1.6	1.4	.6	1.0	245	37	2.9	5.9	0		
19	.1	1.1	1.2	.9	.9	400	40	4.8	7.6	0		
20	.1	1.0	.8	.7	.9	436	41	12	7.3	0		
21	.1	.4	1.3	.6	.8	460	40	11	5.4	0		
22	.1	.1	.9	.5	.8	388	41	11	4.6	0		
23	.1	.1	1.0	.9	.8	364	44	14	3.5	0		
24	.1	.1	.6	.5	.8	328	44	11	2.3	0		
25	.1	*.1	.6	1.0	.9	282	40	9.9	2.5	0		
26	.1	*.2	.4	1.5	.9	214	35	11	2.5	0		
27	.1	*.2	.5	1.0	.9	146	32	10	2.5	0		
28	.1	.2	.7	1.0	.9	124	29	9.1	1.8	0		
29	.1	.9	1.0	.9	-	106	30	7.6	.7	0		
30	.1	1.3	1.0	.7	-	93	30	5.6	.4	0		
31	.1	-	1.0	.8	-	95	-	5.6	-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.5	0.1	0	0.08	5.0
November	15.6	1.9	.1	.52	31
December	53.3	5.9	.4	1.72	106
Calendar year 1938	11,481.6	352	0	31.5	22,770
January	35.1	2.3	.5	1.13	70
February	23.4	1.0	.4	.84	46
March	4,094.0	460	.9	132	8,120
April	1,547	100	29	51.6	3,070
May	308.3	28	1.9	9.95	612
June	112.1	7.6	.4	3.74	222
July	3.5	.6	0	.11	6.9
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1938-39	6,194.8	460	0	17.0	12,290

*Gage height missing; discharge interpolated.

Deschutes River below Snow Creek, near Lapine, Oreg.

Location.- Water-stage recorder, lat. 43°49', long. 121°46', in NW¼ sec. 28, T. 20 S., R. 8 E., 50 feet downstream from Snow Creek, above flowline of Crane Prairie Reservoir, and 17 miles northwest of Lapine. Zero of gage is about 4,448 feet above mean sea level.

Records available.- November 1937 to September 1939.

Extremes.- Maximum discharge during year, 233 second-feet Nov. 3 (gage height, 1.86 feet); minimum, 88 second-feet Mar. 10, 11, 13 (gage height, 1.33 feet).
1937-39: Maximum discharge, 291 second-feet July 27, 1938 (gage height, 1.96 feet); minimum, that of Mar. 10, 11, 13, 1939.

Remarks.- Records good except those for period of missing gage heights, Apr. 11-18 (interpolated) and those for period of shifting control, Apr. 28 to Aug. 15, which are fair. No diversion or regulation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Apr. 28 to Aug. 15)

1.3	82	1.7	178
1.4	102	1.8	210
1.5	125	1.9	248
1.6	150		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	221	164	135	116	98	90	96	102	116	114	128	125
2	216	164	135	116	100	92	96	102	116	114	128	125
3	210	197	142	118	100	92	96	102	116	116	128	125
4	210	191	150	118	98	92	96	102	116	116	128	123
5	204	172	150	118	100	92	96	102	116	116	128	123
6	204	170	148	114	102	90	96	102	116	116	128	120
7	200	167	140	114	102	90	98	102	116	116	128	120
8	200	164	135	114	100	90	98	102	114	114	128	120
9	197	167	132	111	100	90	98	102	111	114	128	120
10	197	167	132	109	100	88	98	104	109	116	128	120
11	197	161	128	109	100	90	98	104	107	116	128	120
12	194	158	128	109	100	92	98	104	104	116	128	120
13	191	158	128	107	98	90	98	104	104	116	128	123
14	188	156	128	107	102	90	99	107	104	116	128	123
15	188	153	128	107	102	90	99	109	109	116	128	125
16	184	156	125	107	98	90	100	109	114	116	130	120
17	184	153	123	107	96	92	100	109	116	116	130	120
18	181	150	123	107	96	92	100	114	116	118	130	120
19	178	145	123	104	96	92	100	120	120	120	130	120
20	178	145	123	102	92	92	100	118	120	120	130	120
21	175	142	123	102	92	92	102	120	120	120	130	120
22	175	142	120	102	92	94	102	123	125	120	130	120
23	172	138	120	102	92	94	102	118	123	123	130	120
24	172	138	118	100	92	94	102	118	120	125	130	120
25	170	138	118	100	92	94	102	118	118	125	130	120
26	170	135	116	98	90	92	102	118	118	125	130	118
27	170	132	118	100	90	92	102	118	116	125	130	116
28	170	132	118	102	90	92	102	118	114	125	130	116
29	170	132	118	102	-	92	102	116	114	125	128	116
30	170	132	118	102	-	94	102	116	114	125	125	116
31	164	-	116	100	-	94	-	116	-	125	125	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,802	221	164	187	11,510
November	4,619	197	132	154	9,160
December	3,959	150	116	128	7,850
Calendar year 1938	58,248	269	94	160	115,500
January	3,324	118	98	107	6,590
February	2,710	102	90	96.8	5,380
March	2,840	94	88	91.6	5,630
April	2,980	102	96	99.3	5,910
May	5,419	123	102	110	6,780
June	3,442	125	104	115	6,830
July	3,685	125	114	119	7,310
August	3,988	130	125	129	7,910
September	3,612	125	116	120	7,160
Water year 1938-39	44,380	221	88	122	88,020

Deschutes River at Crane Prairie, near Lapine, Oreg.

Location.- Water-stage recorder, lat. 43°45', long. 121°47', in NW¼ sec. 16, T. 21 S., R. 8 E., 200 yards downstream from Crane Prairie Dam and 15 miles northwest of Lapine.

Records available.- January 1914 to June 1917, February 1922 to September 1939.

Average discharge.- 18 years (1914-15, 1922-39), 202 second-feet.

Extremes.- Maximum discharge during year, 474 second-feet Aug. 5 (gage height, 2.17 feet); minimum, 7 second-feet Nov. 26-28 (gage height, 0.32 foot).
1914-17, 1922-39: Maximum discharge, 659 second-feet Aug. 3, 1938 (gage height, 2.58 feet); minimum, 2.5 second-feet Apr. 24, 1923 (gage height, 0.05 foot), caused by closing of dam.

Remarks.- Records good except those for periods of shifting control, Oct. 1 to Nov. 25, Aug. 2-4, Sept. 14-18, 28-30, which are fair. No diversion above station; flow partly regulated since Nov. 4, 1922, by storage in Crane Prairie Reservoir (see p. 41).

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	371	286	10	24	30	35	35	121	226	414	462	248
2	367	288	10	25	31	35	33	151	241	414	466	236
3	363	299	11	25	31	35	31	151	241	417	458	235
4	367	332	11	25	31	35	30	151	241	414	462	232
5	375	332	12	25	31	36	29	167	241	417	474	229
6	375	329	13	25	31	36	29	178	245	417	466	222
7	375	325	14	24	31	36	29	181	251	417	458	216
8	367	318	15	24	31	36	29	181	261	399	451	213
9	359	314	16	24	31	38	28	184	274	399	443	213
10	359	295	17	24	31	38	27	184	288	406	440	213
11	352	303	17	24	33	38	27	184	322	417	428	210
12	348	303	18	25	33	38	25	184	325	421	421	201
13	344	295	19	25	33	38	25	184	332	425	414	204
14	344	292	19	25	33	38	25	187	339	425	406	187
15	348	286	19	27	33	38	25	187	364	436	399	178
16	332	292	19	25	34	38	25	187	378	440	392	178
17	329	285	19	25	34	38	25	187	374	443	378	181
18	325	285	19	27	34	38	25	195	374	443	364	181
19	321	277	19	27	34	38	25	204	374	443	350	201
20	314	274	20	28	34	36	25	204	370	443	342	204
21	314	263	20	28	34	36	25	192	370	443	332	204
22	314	256	21	28	34	36	53	170	374	443	322	207
23	310	250	21	28	34	36	112	138	381	447	312	207
24	306	243	21	28	34	35	110	138	381	455	298	207
25	303	160	22	28	35	35	108	138	385	455	288	156
26	295	13	23	28	35	35	108	156	385	458	281	128
27	295	7	23	28	35	35	108	201	385	458	278	138
28	292	7	23	29	35	35	105	201	392	458	268	134
29	292	8	23	30	-	35	105	201	410	458	258	134
30	288	8	24	30	-	35	105	210	414	455	254	138
31	288	-	24	30	-	35	-	219	-	458	248	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	10,332	375	288	333	20,490
November	7,226	332	7	241	14,330
December	562	24	10	18.1	1,110
Calendar year 1938	96,381	655	7	264	191,200
January	818	30	24	26.4	1,620
February	920	35	30	32.9	1,820
March	1,126	38	35	36.3	2,230
April	1,491	112	25	49.7	2,960
May	5,516	219	121	178	10,940
June	9,938	414	226	331	19,710
July	13,458	458	399	433	28,550
August	11,613	474	248	375	23,030
September	5,837	248	128	195	11,580
Water year 1938-39	68,817	474	7	189	136,500

Deschutes River below Wickiup Reservoir, near Lapine, Oreg.

Location.- Water-stage recorder, lat. 43°41', long. 121°41', in NE¼ sec. 7, T. 22 S., R. 9 E., about 2,000 feet downstream from Wickiup Dam (under construction in 1939) and 9 miles west of Lapine.

Records available.- June 1938 to September 1939.

Extremes.- Maximum discharge during year, 1,050 second-feet (estimated) Aug. 5 (gage height affected by logs on control); minimum, 578 second-feet Dec. 23.
1938-39: Maximum discharge, 1,340 second-feet Aug. 4, 1938 (gage height, 6.15 feet); minimum, that of Dec. 23, 1938.

Remarks.- Records good Oct. 1 to Dec. 13, fair Dec. 14-27, and poor Dec. 28 to Sept. 30. Stage-discharge relation affected by logs on control Dec. 14 to Sept. 30; discharge computed on basis of unpublished records for Deschutes River below Sheep Springs, and Browns Creek and Davis Creek. Flow regulated by storage in Crane Prairie Reservoir (see p. 41); no regulation at Wickiup Reservoir in 1939.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,030	894	605									782
2	1,030	891	612									778
3	1,030	936	610									772
4	1,030	970	608									769
5	1,020	940	605								1,040	766
6	1,020	924	600									763
7	1,010	920	600									754
8	1,010	912	600									751
9	994	912	598								1,020	751
10	988	904	592								1,010	751
11	988	900	592								1,000	748
12	979	894	590								991	745
13	970	868	590								985	754
14	949	885	590								976	751
15	967	879	590								964	742
16	958	879	590								952	742
17	949	885	585								943	742
18	940	876	582								928	742
19	936	870	580								912	742
20	936	864	580								904	742
21	932	855	580								891	748
22	928	846	580								876	742
23	920	837	578								867	742
24	916	834	588								852	742
25	912	822	590								843	727
26	908	618	602								831	664
27	900	602	615								822	667
28	894	602	585								816	673
29	900	602	585								803	673
30	894	605	585								796	676
31	897	-	590								789	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	29,735	1,030	894	959	58,980
November	25,246	970	602	842	50,070
December	18,377	615	578	593	36,450
Calendar year	-	-	-	-	-
January	18,600	-	-	600	36,890
February	16,800	-	-	600	33,320
March	19,220	-	-	620	38,120
April	18,900	-	-	630	37,490
May	23,250	-	-	750	46,120
June	26,700	-	-	890	52,960
July	30,690	-	-	990	60,870
August	29,091	-	789	938	57,700
September	22,141	782	664	738	43,920
Water year 1938-39	278,750	-	-	764	552,900

Deschutes River at Pringle Falls, near Lapine, Oreg.

Location.- Water-stage recorder, lat. 43°44', long. 121°37', in SW¼ sec. 23, T. 21 S., R. 9 E., half a mile upstream from bridge at Pringle Falls and 7 miles northwest of Lapine.

Records available.- December 1915 to June 1917, June 1922 to September 1939.

Average discharge.- 16 years (1923-39), 725 second-feet.

Extremes.- Maximum discharge during year, 1,030 second-feet (estimated) Aug. 5 (gage height affected by logs on control); minimum, 570 second-feet Jan. 12 (gage height, 1.50 feet).

1915-17, 1922-39: Maximum discharge, 1,290 second-feet Aug. 4, 1938 (gage height, 2.88 feet); minimum, 341 second-feet sometime during period when recorder was stopped, Feb. 1-14, 1932.

Remarks.- Records good Oct. 1 to Feb. 1, Feb. 24 to Apr. 19, and poor for other periods. Discharge interpolated for periods of missing gage heights, Feb. 2-12, 14-23, computed on basis of unpublished records for Deschutes River below Sheep Springs and for Browns Creek and Davis Creek for periods of backwater from logs on control, Apr. 20 to Aug. 10. No diversion above station. Flow regulated somewhat since 1922 by storage in Crane Prairie Reservoir (see p. 41).

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,000	890	614	598	590	594	614	683				775
2	1,000	885	619	598		598	619	700				770
3	1,000	922	619	602		598	602	691				770
4	1,000	975	619	598		598	606					760
5	994	934	614	598		598	602					760
											1,010	
6	994	922	610	594		598	606					745
7	994	912	610	594	590	598	602					745
8	988	906	610	594		602	606					740
9	983	906	606	594		602	606					740
10	983	906	606	594		602	606					740
11	978	895	602	590		602	606					
12	966	890	598	586		624	606				978	740
13	961	865	598	586	590	619	598				972	732
14	961	850	602	586		602	594				966	736
15	961	880	610	590		606	590				961	736
											950	732
16	950	880	610	586		610	594					
17	944	885	606	594		610	598				939	727
18	934	875	606	590		610	598				922	727
19	928	870	606	590	592	619	598	740			912	727
20	928	870	606	590		619					895	727
											885	732
21	922	860	606	590		619						
22	917	850	606	590		619					875	736
23	912	845	602	590		619					860	732
24	912	835	598	590	594	619					855	732
25	906	835	598	590	596	624	660				840	732
											830	718
26	900	650	594	590	598	624						
27	890	602	594	594	598	619					825	655
28	890	602	594	594	598	614					820	655
29	895	606	594	594	-	614					805	660
30	890	610	594	594	-	614					800	660
31	890	-	598	594	-	610	-				790	664
											785	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	29,371	1,000	890	947	58,260
November	25,266	978	602	842	50,110
December	18,749	619	594	605	37,190
Calendar year 1938	316,940	1,280	563	868	628,600
January	18,362	602	586	592	36,420
February	16,576	598	-	592	32,880
March	18,904	624	594	610	37,500
April	18,711	-	590	624	37,110
May	22,794	-	683	735	45,210
June	26,250	-	-	*875	52,070
July	30,225	-	-	*975	59,950
August	28,565	-	785	921	56,660
September	21,805	775	655	727	43,250
Water year 1938-39	275,578	-	586	755	546,600

*Estimated.

Deschutes River at Benham Falls, near Bend, Oreg.

Location.- Water-stage recorder, lat. 43°56', long. 121°25', in SE¼ sec. 9, T. 19 S., R. 11 E., 50 yards upstream from head of Benham Falls, 1½ miles downstream from dam site for proposed Benham Falls Reservoir, and 10 miles southwest of Bend.

Records available.- March 1909 to September 1913, August 1920 to September 1921, February 1924 to September 1939. July 1906 to February 1909 and April to September 1914 at West ranch, 7 miles upstream.

Average discharge.- 22 years (1906-13, 1924-39), 1,360 second-feet.

Extremes.- Maximum discharge during year, 1,660 second-feet July 11 (gage height, 2.01 feet); minimum observed, 973 second-feet Dec. 12 (gage height, 0.67 foot).
1906-13, 1920-21, 1924-39: Maximum discharge, 5,000 second-feet (estimated), Nov. 27, 1909 (gage height not determined); minimum, 690 second-feet Feb. 8, 9, 1933 (gage height, -0.14 foot).

Remarks.- Records excellent except those for period of missing gage heights, Nov. 11 to Dec. 11, and those for period of ice effect, Dec. 13-15, all of which were computed on basis of records for Deschutes River below Lava Island and Arnold canal near Bend and are good. Small diversions for irrigation above station. Some regulation since 1922 by storage in Crane Prairie and Crescent Lake Reservoirs (see p. 41).

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 12				Dec. 16 to Sept. 30			
0.7	985	1.4	1,300	0.7	985	1.4	1,320
.8	1,030	1.6	1,400	.8	1,030	1.6	1,420
1.0	1,110	1.8	1,500	1.0	1,120	1.8	1,530
1.2	1,200			1.2	1,220	2.0	1,650

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,430	1,330	1,060	1,030	1,020	1,040	1,170	1,400	1,440	1,570	1,570	1,200
2	1,430	1,330	1,080	1,040	1,020	1,030	1,180	1,380	1,440	1,570	1,570	1,180
3	1,420	1,340	1,110	1,050	1,020	1,050	1,200	1,420	1,460	1,580	1,570	1,160
4	1,420	1,380	1,120	1,050	1,020	1,040	1,200	1,400	1,460	1,580	1,570	1,150
5	1,420	1,430	1,120	1,050	1,020	1,040	1,200	1,420	1,460	1,590	1,530	1,150
6	1,410	1,440	1,150	1,050	1,040	1,030	1,220	1,420	1,440	1,600	1,540	1,140
7	1,420	1,460	1,170	1,040	1,040	1,040	1,250	1,400	1,460	1,590	1,560	1,130
8	1,410	1,460	1,150	1,030	1,020	1,040	1,240	1,430	1,440	1,570	1,540	1,120
9	1,400	1,430	1,140	1,030	1,020	1,040	1,260	1,420	1,440	1,570	1,520	1,120
10	1,390	1,400	1,130	1,030	1,020	1,050	1,280	1,440	1,460	1,550	1,520	1,120
11	1,380	1,360	1,060	1,030	1,020	1,040	1,280	1,440	1,460	1,570	1,540	1,110
12	1,380	1,330	1,020	1,030	1,020	1,080	1,280	1,430	1,470	1,540	1,510	1,110
13	1,370	1,300	1,010	1,030	1,020	1,090	1,280	1,440	1,480	1,530	1,490	1,120
14	1,360	1,330	1,020	1,030	1,040	1,080	1,280	1,440	1,480	1,540	1,480	1,120
15	1,360	1,350	1,040	1,040	1,050	1,080	1,260	1,440	1,480	1,550	1,460	1,120
16	1,360	1,350	1,050	1,040	1,040	1,100	1,240	1,440	1,480	1,570	1,440	1,110
17	1,360	1,350	1,050	1,040	1,030	1,130	1,240	1,440	1,490	1,590	1,430	1,100
18	1,350	1,350	1,050	1,040	1,040	1,160	1,240	1,440	1,520	1,600	1,400	1,100
19	1,340	1,350	1,050	1,040	1,040	1,200	1,240	1,480	1,570	1,570	1,380	1,100
20	1,340	1,330	1,050	1,030	1,040	1,240	1,220	1,490	1,570	1,580	1,370	1,100
21	1,340	1,300	1,050	1,030	1,040	1,230	1,260	1,510	1,550	1,570	1,360	1,120
22	1,340	1,270	1,040	1,030	1,040	1,230	1,290	1,530	1,550	1,580	1,340	1,110
23	1,330	1,270	1,040	1,020	1,040	1,230	1,320	1,540	1,530	1,580	1,340	1,100
24	1,330	1,270	1,030	1,020	1,040	1,230	1,380	1,490	1,540	1,590	1,320	1,100
25	1,330	1,270	1,030	1,010	1,040	1,240	1,410	1,460	1,550	1,600	1,300	1,100
26	1,330	1,260	1,030	1,020	1,040	1,240	1,430	1,440	1,580	1,570	1,280	1,080
27	1,320	1,140	1,020	1,030	1,040	1,240	1,430	1,460	1,580	1,580	1,280	1,030
28	1,320	1,030	1,030	1,030	1,040	1,220	1,440	1,420	1,580	1,580	1,280	1,020
29	1,320	1,030	1,030	1,040	-	1,200	1,430	1,460	1,570	1,580	1,260	1,020
30	1,330	1,040	1,030	1,040	-	1,180	1,420	1,440	1,580	1,570	1,240	1,020
31	1,330	-	1,030	1,020	-	1,180	-	1,440	-	1,570	1,230	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	42,370	1,430	1,320	1,367	84,040
November	39,280	1,460	1,030	1,309	77,910
December	32,990	1,170	1,010	1,064	65,430
Calendar year 1938	513,177	1,850	973	1,406	1,018,000
January	32,040	1,050	1,010	1,034	63,550
February	28,900	1,050	1,020	1,032	57,320
March	35,020	1,240	1,030	1,130	69,460
April	38,570	1,440	1,170	1,286	76,500
May	44,800	1,540	1,380	1,445	88,860
June	45,110	1,580	1,440	1,504	89,470
July	48,780	1,600	1,530	1,574	96,750
August	44,220	1,570	1,230	1,426	87,710
September	33,260	1,200	1,020	1,109	65,970
Water year 1938-39	465,340	1,600	1,010	1,275	923,000

Deschutes River below Lava Island, near Bend, Oreg.

Location.- Water-stage recorder, lat. 44°00', long. 121°22', in SW¼ sec. 23, T. 18 S., R. 11 E., three-quarters of a mile downstream from Lava Island, 1 mile downstream from intake of Arnold canal, and 6 miles southwest of Bend.

Records available.- March 1926 to September 1939.

Average discharge.- 13 years, 1,071 second-feet.

Extremes.- Maximum discharge during year, 1,440 second-feet July 5-7, 25, 27, 28 (gage height, 1.31 feet); minimum, 844 second-feet Dec. 14 (gage height, 0.57 foot), caused by ice jam upstream.
1926-39: 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 excellent except those for periods of shifting control, Oct. 1-10, June 13 to Aug. 28, and those for periods of missing gage heights and backwater from ice, which are good. Arnold canal diverts water for irrigation above station. Flow regulated by storage in Crescent Lake and Crane Prairie Reservoirs (see p. 41).

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,290	1,280	972	940	940	*940	1,100	1,210	1,250	1,430	1,420	1,100
2	1,290	1,280	1,010	964	932	*935	1,100	1,180	1,240	1,430	1,420	1,070
3	1,290	1,290	1,030	972	925	*955	1,110	1,210	1,260	1,430	1,420	1,060
4	1,290	1,320	1,040	972	925	*950	1,110	1,210	1,260	1,430	1,420	1,040
5	1,290	1,370	1,040	972	932	*950	1,110	1,220	1,260	1,440	1,410	1,040
6	1,280	1,390	1,070	972	932	952	1,140	1,220	1,250	1,440	1,390	1,020
7	1,280	1,410	1,100	964	948	960	1,150	1,200	1,260	1,440	1,410	1,020
8	1,280	1,400	1,090	956	948	920	1,140	1,230	1,260	1,430	1,410	1,010
9	1,270	1,380	1,080	956	932	912	1,140	1,230	1,250	*1,430	1,390	1,010
10	1,260	1,360	1,050	948	925	920	1,140	1,230	1,260	*1,420	1,380	1,010
11	1,260	1,320	996	948	925	944	1,150	1,240	1,270	1,430	1,410	1,000
12	1,260	1,280	972	948	925	1,000	1,140	1,240	1,280	1,410	1,390	1,000
13	1,250	1,270	†930	956	925	1,020	1,140	1,240	1,300	1,390	1,370	1,000
14	1,240	1,280	†960	956	932	1,020	1,120	1,240	1,290	1,390	1,350	1,010
15	1,240	1,300	†970	956	940	1,010	1,100	1,240	1,290	1,400	1,340	992
16	1,250	1,300	972	958	948	1,020	1,090	1,250	1,300	1,410	1,330	976
17	1,220	1,300	964	948	*931	1,050	1,070	1,240	1,310	1,420	1,310	968
18	1,220	1,300	972	925	*910	1,080	1,070	1,250	1,330	1,430	1,290	968
19	1,220	1,300	980	918	*910	1,110	1,060	1,270	1,360	1,410	1,260	968
20	1,210	1,280	972	910	*930	1,160	1,030	1,290	1,370	1,400	1,260	968
21	1,210	1,250	972	932	*940	1,170	1,050	1,300	1,370	1,400	1,250	984
22	1,210	1,220	964	932	*940	1,170	1,090	1,330	1,360	1,400	1,230	976
23	1,210	1,200	940	925	*940	1,170	1,110	1,340	1,350	1,420	1,210	968
24	1,210	1,200	925	918	*940	1,170	1,160	1,300	1,350	1,420	1,200	968
25	1,210	1,200	940	910	*940	1,170	1,210	1,280	1,360	1,430	1,180	960
26	1,210	1,180	956	925	*940	1,180	1,230	1,250	1,370	1,410	1,170	952
27	1,210	1,040	948	932	*940	1,180	1,230	1,230	1,380	1,410	1,160	912
28	1,200	948	956	948	*945	1,170	1,250	1,230	1,380	1,430	1,160	896
29	1,200	940	956	948	-	1,150	1,240	1,260	1,380	1,430	1,150	896
30	1,220	948	932	948	-	1,120	1,230	1,250	1,380	1,430	1,130	896
31	1,260	-	918	948	-	1,100	-	1,240	-	1,420	1,120	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	38,540	1,290	1,200	1,243	76,440
November	37,536	1,410	940	1,251	74,450
December	30,577	1,100	918	986	60,650
Calendar year 1938	471,054	1,690	895	1,291	934,300
January	29,303	972	910	945	58,120
February	26,140	948	910	934	51,850
March	32,558	1,180	912	1,050	64,580
April	34,010	1,250	1,030	1,134	67,460
May	38,650	1,340	1,180	1,247	76,660
June	39,330	1,380	1,240	1,311	78,010
July	44,010	1,440	1,390	1,420	87,290
August	40,340	1,420	1,120	1,301	80,010
September	29,638	1,100	896	988	58,790
Water year 1938-39	420,632	1,440	896	1,152	834,300

*Gage heights missing; discharge computed on basis of records for Deschutes River at Benham Falls and unpublished records for Arnold canal near Bend.
†Stage-discharge relation affected by ice; discharge computed on basis of records for Deschutes River at Benham Falls and unpublished records for Arnold canal near Bend.

Deschutes River below Bend, Oreg.

Location.- Water-stage recorder, lat. 44°05', long. 121°18', in SE¼ sec. 20, T. 17 S., R. 12 E., half a mile downstream from North Canal Dam and 2 miles north of Bend.

Records available.- October 1914 to September 1939.

Average discharge.- 25 years, 681 second-feet.

Extremes.- Maximum discharge during year, 1,340 second-feet Nov. 25 (gage height, 3.36 feet); minimum, 12 second-feet Sept. 4 (gage height, 0.87 foot).
1914-39: Maximum discharge, 2,500 second-feet Dec. 7, 1921 (gage height, 3.9 feet); minimum, 1 second-foot Aug. 25, 1930.
Maximum discharge known since 1905 (near this site), 4,820 second-feet Nov. 27, 1909.

Remarks.- Records fair. Six large canals divert water above station. Flow regulated by hydroelectric plant at Bend and, since 1922, by storage in Crescent Lake and Crane Prairie Reservoirs (see p. 41).

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 2				Nov. 3 to Sept. 30			
1.9	228	2.4	535	1.4	72	2.5	595
2.0	280	2.6	695	1.6	109	2.8	835
2.2	395	2.9	960	1.9	220	3.1	1,100
				2.2	385	3.3	1,280

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	233	933	983	956	750	478	826	89	99	135	95	91
2	238	933	1,020	992	965	506	528	87	103	121	97	138
3	254	947	1,060	784	965	694	430	118	101	135	95	103
4	296	1,010	1,100	558	974	852	337	103	115	129	95	72
5	341	1,060	1,100	558	974	956	270	101	107	118	93	84
6	347	1,120	1,120	610	992	956	260	99	95	115	91	80
7	389	1,180	1,140	818	992	965	255	91	99	112	97	86
8	395	1,190	1,140	965	983	920	184	109	107	109	103	93
9	402	1,100	1,120	965	974	903	149	112	95	103	89	89
10	430	1,070	1,040	965	974	920	135	103	109	118	95	95
11	444	1,030	1,010	965	956	938	115	103	109	93	101	93
12	451	992	965	947	938	1,000	99	97	99	89	99	95
13	444	956	974	938	956	1,020	99	99	97	80	86	109
14	451	965	1,040	938	974	1,010	93	112	89	93	89	115
15	486	947	1,050	956	974	1,010	89	107	99	95	99	115
16	465	929	992	965	983	1,020	93	105	95	107	95	105
17	472	912	992	965	947	1,010	91	99	95	109	93	97
18	451	903	1,010	938	938	1,040	95	99	105	115	99	95
19	458	903	1,020	938	947	1,070	103	118	112	99	95	99
20	437	903	1,010	929	965	1,140	91	129	142	82	99	138
21	451	938	1,000	947	974	1,150	99	115	105	87	93	129
22	679	1,140	938	965	983	1,150	112	149	101	89	93	103
23	825	1,160	595	956	965	1,160	115	149	101	107	97	103
24	834	1,250	520	956	956	1,160	129	107	99	105	93	101
25	834	1,240	572	947	767	1,150	145	93	115	103	93	105
26	870	1,230	818	947	565	1,150	115	89	129	86	91	97
27	861	1,120	983	938	558	1,160	115	99	105	87	89	75
28	816	992	983	662	506	1,120	107	87	103	97	101	72
29	816	974	992	595	-	1,060	101	115	101	99	103	77
30	843	992	965	602	-	1,020	91	99	101	97	95	93
31	888	-	947	595	-	992	-	86	-	95	99	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	16,601	888	233	536	32,930
November	31,019	1,250	903	1,034	61,530
December	30,199	1,140	520	974	59,900
Calendar year 1938	238,504	1,270	77	653	473,100
January	26,760	992	558	863	53,080
February	25,395	992	506	907	50,370
March	30,680	1,160	478	990	60,850
April	5,471	826	89	182	10,850
May	3,268	149	86	105	6,480
June	3,132	142	89	104	6,210
July	3,209	135	80	104	6,360
August	2,952	103	86	95.2	5,860
September	2,947	138	72	98.2	5,850
Water year 1938-39	181,633	1,250	72	498	360,300

Deschutes River near Madras, Oreg.

Location.- Water-stage recorder, lat. 44°43', long. 121°14', in NE¼ sec. 13, T. 10 S., R. 12 E., 1 mile downstream from Pelton dam site, 4 miles upstream from mouth of Shitike Creek, and 9 miles northwest of Madras. Zero of gage is about 1,404 feet above mean sea level (river profile map).

Records available.- October 1923 to September 1939.

Average discharge.- 16 years, 4,159 second-feet.

Extremes.- Maximum discharge during year, 7,770 second-feet Mar. 27 (gage height, 4.34 feet); minimum, 3,110 second-feet Sept. 17 (gage height, 1.54 feet).
1923-39: Maximum discharge, 11,300 second-feet Apr. 20, 1938 (gage height, 5.99 feet); minimum, 2,960 second-feet Aug. 15, 1931.

Remarks.- Records excellent. Diversions for irrigation in upper river basin.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.6	3,190	3.0	5,340
1.9	3,610	3.5	6,210
2.2	4,050	4.0	7,120
2.6	4,680	4.5	8,080

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,580	4,230	4,460	4,410	3,990	3,980	5,890	3,640	3,600	3,410	3,290	3,320
2	3,610	4,410	4,520	4,460	4,310	3,990	5,820	3,620	3,540	3,430	3,300	3,290
3	3,610	4,550	4,580	4,500	4,390	4,080	5,730	3,640	3,540	3,460	3,320	3,360
4	3,670	4,780	4,740	4,170	4,340	4,180	5,460	3,640	3,480	3,500	3,320	3,330
5	3,720	4,540	4,820	4,060	4,380	4,360	5,170	3,620	3,480	3,480	3,320	3,330
6	3,750	4,520	4,660	4,080	4,380	4,410	4,890	3,600	3,470	3,430	3,320	3,290
7	3,760	4,570	4,730	4,160	4,360	4,380	4,760	3,580	3,470	3,430	3,290	3,290
8	3,780	4,620	4,760	4,410	4,360	4,340	4,680	3,580	3,470	3,410	3,300	3,290
9	3,800	4,620	4,680	4,460	4,300	4,260	4,600	3,580	3,510	3,410	3,320	3,300
10	3,810	4,490	4,570	4,410	4,330	4,280	4,520	3,600	3,500	3,430	3,300	3,300
11	3,870	4,460	4,550	4,410	4,360	4,300	4,420	3,580	3,510	3,440	3,300	3,300
12	3,860	4,410	4,440	4,380	4,420	4,420	4,300	3,610	3,500	3,430	3,300	3,290
13	3,840	4,440	4,380	4,330	4,390	4,500	4,170	3,600	3,510	3,410	3,320	3,290
14	3,820	4,410	4,420	4,310	4,460	4,870	4,020	3,600	3,500	3,390	3,300	3,300
15	3,820	4,390	4,540	4,360	4,600	4,740	3,930	3,650	3,470	3,370	3,290	3,300
16	3,840	4,390	4,520	4,380	4,500	4,630	3,840	3,680	3,430	3,370	3,300	3,320
17	3,860	4,360	4,460	4,390	4,500	4,790	3,820	3,620	3,430	3,370	3,300	3,320
18	3,810	4,340	4,470	4,390	4,490	5,270	3,800	3,620	3,440	3,370	3,300	3,300
19	3,810	4,340	4,490	4,390	4,460	5,600	3,810	3,570	3,480	3,360	3,290	3,300
20	3,820	4,310	4,490	4,360	4,420	5,800	3,780	3,580	3,530	3,340	3,290	3,330
21	3,810	4,280	4,490	4,310	4,440	6,050	3,750	3,600	3,530	3,320	3,300	3,360
22	3,820	4,390	4,470	4,330	4,440	6,350	3,740	3,600	3,500	3,320	3,290	3,390
23	4,060	4,440	4,330	4,340	4,440	6,660	3,750	3,610	3,480	3,320	3,300	3,320
24	4,140	4,580	4,050	4,340	4,410	6,910	3,760	3,610	3,460	3,320	3,320	3,300
25	4,140	4,620	4,020	4,340	4,410	7,180	3,740	3,600	3,440	3,340	3,320	3,290
26	4,110	4,580	4,120	4,340	4,120	7,440	3,740	3,620	3,440	3,340	3,300	3,300
27	4,180	4,550	4,390	4,360	4,100	7,540	3,690	3,650	3,470	3,340	3,300	3,290
28	4,120	4,440	4,420	4,340	4,050	6,970	3,710	3,670	3,460	3,340	3,300	3,270
29	4,160	4,410	4,410	4,080	-	6,280	3,690	3,780	3,460	3,320	3,290	3,260
30	4,160	4,440	4,410	4,040	-	5,990	3,670	3,930	3,460	3,300	3,300	3,250
31	4,200	-	4,360	4,040	-	5,900	-	3,710	-	3,300	3,320	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	120,340	4,200	3,580	3,882	238,700
November	133,910	4,780	4,230	4,464	265,600
December	138,750	4,820	4,020	4,476	275,200
Calendar year 1938	1,749,400	10,800	3,500	4,793	3,470,000
January	133,680	4,500	4,040	4,312	265,200
February	122,150	4,600	3,990	4,362	242,300
March	164,450	7,540	3,980	5,305	326,200
April	128,650	5,890	3,670	4,288	255,200
May	112,570	3,930	3,570	3,631	223,300
June	104,560	3,600	3,430	3,485	207,400
July	104,800	3,500	3,300	3,381	207,900
August	102,410	3,320	3,290	3,304	203,100
September	99,180	3,390	3,250	3,306	196,700
Water year 1938-39	1,465,450	7,540	3,250	4,015	2,907,000

Deschutes River at Moody, near Biggs, Oreg.

Location.- Water-stage recorder, lat. 45°37', long. 120°54', in SE¼ sec. 26, T. 2 N., R. 15 E., at Moody, 1½ miles upstream from mouth and 5 miles southwest of Biggs. Zero of gage is 167.43 feet above mean sea level (general adjustment of 1929).

Drainage area.- 10,500 square miles.

Records available.- July 1906 to September 1939. October 1897 to December 1899 at site near Moro, 10 miles upstream from mouth.

Average discharge.- 34 years (1898-99, 1906-39), 5,826 second-feet.

Extremes.- Maximum discharge during year, 9,760 second-feet Mar. 27 (gage height, 3.99 feet); minimum, 3,670 second-feet Aug. 21.
1897-99, 1906-39: Maximum discharge, 43,600 second-feet Jan. 7, 1923 (gage height, 10.2 feet), from rating curve extended above 18,000 second-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. Water-stage recorder inspected by agent of Eastern Oregon Land Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

2.1	3,490	3.1	6,370
2.3	3,950	3.4	7,450
2.5	4,490	3.7	8,600
2.8	5,380	4.0	9,800

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,050	4,660	4,960	4,840	4,550	4,660	7,410	5,020	4,410	3,930	3,730	3,760
2	4,050	4,660	5,020	4,870	4,490	4,580	7,640	4,960	4,290	3,900	3,730	3,760
3	4,130	4,720	5,260	5,080	4,930	4,580	7,410	4,930	4,240	3,930	3,730	3,730
4	4,160	5,570	5,510	5,140	4,900	4,720	7,380	4,960	4,240	3,980	3,730	3,780
5	4,180	5,380	6,030	4,780	4,870	4,810	6,900	4,930	4,210	3,980	3,730	3,760
6	4,210	5,080	5,960	4,690	4,960	4,990	6,580	4,840	4,180	3,950	3,730	3,730
7	4,240	5,020	5,600	4,640	4,930	4,990	6,230	4,750	4,160	3,900	3,710	3,710
8	4,240	5,080	5,800	4,810	4,870	4,990	6,130	4,750	4,130	3,900	3,710	3,710
9	4,270	5,110	5,640	5,020	4,840	4,960	6,060	4,720	4,130	3,900	3,710	3,710
10	4,240	5,080	5,480	5,050	4,780	4,870	6,000	4,690	4,180	3,900	3,730	3,730
11	4,210	4,960	5,290	4,990	4,840	4,870	5,900	4,690	4,160	3,950	3,710	3,730
12	4,320	4,870	5,170	4,960	5,020	4,960	5,730	4,660	4,110	3,900	3,710	3,730
13	4,270	4,870	4,900	4,930	5,200	5,200	5,570	4,690	4,110	3,880	3,730	3,760
14	4,270	4,900	4,840	4,900	5,110	5,290	5,350	4,660	4,080	3,850	3,730	3,760
15	4,210	4,900	5,020	4,870	5,800	5,570	5,170	4,690	4,050	3,830	3,710	3,760
16	4,240	4,870	5,110	4,930	6,170	5,410	5,050	4,780	4,000	3,810	3,710	3,760
17	4,240	5,050	*5,000	4,930	5,600	5,410	4,960	4,750	4,000	3,810	3,710	3,760
18	4,240	4,990	*4,950	4,960	5,440	5,730	4,990	4,660	4,030	3,810	3,710	3,760
19	4,210	4,900	*4,950	4,990	5,290	6,340	5,020	4,660	4,050	3,810	3,690	3,760
20	4,240	4,870	*4,950	4,990	5,230	6,790	5,170	4,640	4,080	3,810	3,690	3,760
21	4,240	4,840	*4,950	4,930	5,140	7,190	5,170	4,520	4,080	3,780	3,690	3,780
22	4,240	4,780	*4,950	4,870	5,140	7,640	5,230	4,550	4,050	3,760	3,710	3,830
23	4,270	4,900	4,960	4,900	5,110	8,170	5,290	4,490	4,000	3,760	3,710	3,810
24	4,520	4,930	4,490	4,870	5,080	8,680	5,290	4,460	4,000	3,760	3,710	3,760
25	4,550	5,110	4,520	4,900	5,050	9,080	5,200	4,460	3,980	3,780	3,730	3,760
26	4,550	5,110	4,520	4,900	5,020	9,400	5,140	4,430	3,950	3,780	3,730	3,730
27	4,520	5,050	4,640	4,900	4,690	9,480	5,050	4,490	3,950	3,780	3,710	3,730
28	4,610	5,020	4,960	4,900	4,720	9,360	5,020	4,460	3,950	3,730	3,730	3,730
29	4,520	4,930	4,960	4,840	-	8,330	5,080	4,460	3,950	3,760	3,710	3,710
30	4,580	4,930	4,960	4,580	-	7,680	5,080	4,690	3,950	3,730	3,710	3,710
31	4,610	-	4,900	4,580	-	7,410	-	4,690	-	3,730	3,730	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	133,430	4,610	4,050	4,304	264,700
November	149,140	5,570	4,660	4,971	295,800
December	158,250	6,030	4,490	5,105	313,900
Calendar year 1938	2,235,400	15,200	3,980	6,124	4,434,000
January	151,540	5,140	4,580	4,888	300,600
February	141,770	6,170	4,490	5,063	281,200
March	196,140	9,480	4,580	6,327	389,000
April	172,200	7,640	4,960	5,740	341,600
May	145,130	5,020	4,430	4,682	287,900
June	122,700	4,410	3,950	4,090	243,400
July	119,130	3,980	3,730	3,843	236,300
August	115,210	3,730	3,690	3,716	228,500
September	112,470	3,830	3,710	3,749	223,100
Water year 1938-39	1,717,110	9,480	3,690	4,704	3,406,000

*Gage-height missing; discharge computed on basis of recorded range in stage and records for station near Madras.

Reservoirs in Deschutes River Basin above Bend, Oreg.

Crane Prairie Reservoir.- Staff gage, lat. 43°45', long. 121°47', 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 (surveys of Oregon State engineer). Records available, November 1922 to September 1939. Maximum contents observed during year, 35,560 acre-feet May 2-4 (gage height, 40.72 feet); no usable contents Sept. 10-12. Maximum contents observed during period 1922-39, 50,830 acre-feet Jan. 10-13, 1924 (gage height, 44.10 feet); no usable contents at times.

Gage read once daily Oct. 1 to Dec. 3, Apr. 5 to Sept. 30, and occasionally Dec. 10 to Mar. 22. Reservoir was completed by North Canal Co. in 1922; gates were first closed Nov. 22, 1922. Total usable capacity of reservoir is 55,200 acre-feet between gage height 45 feet (spillway crest) and gage height 28.4 feet (gate sill). Water is used for irrigation of lands near Bend and Redmond.

Crescent Lake Reservoir.- Staff gage, lat. 43°30', long. 121°58', in sec. 11, T. 24 S., R. 6 E., at Crescent Lake Reservoir Dam, 14 miles west of Crescent. Zero of gage is 4,826.0 feet above mean sea level (surveys of Oregon State engineer). Records available, August 1922 to September 1939. Maximum contents observed during year, 57,530 acre-feet Apr. 14-18 (gage height, 15.7 feet); minimum observed, 21,840 acre-feet Aug. 30 (gage height, 6.16 feet). Maximum contents observed during period 1922-39, 72,460 acre-feet July 15, 1923 (gage height, 19.55 feet); minimum observed, 9,640 acre-feet Oct. 21, 1931 (gage height, 2.75 feet).

Gage read once daily Oct. 1 to Jan. 18, Apr. 5 to Sept. 30, Feb. 16, Mar. 1, 20. Reservoir completed in 1922. Total usable capacity of reservoir is 86,050 acre-feet between 23.0 feet (spillway crest) and zero of gage (gate sill). Water stored in reservoir is used for irrigation of lands near Tumalo by Deschutes County Municipal Improvement District, whose canal diverts water from Deschutes River at Bend.

Other reservoirs.- Only a few very small reservoirs for local irrigation.

Stage and contents, water year October 1938 to September 1939

Date	Crane Prairie Reservoir			Crescent Lake Reservoir		
	Gage height* (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)	Gage height* (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	31.50	4,149	-	13.12	47,690	-
Oct. 31	29.46	615	-3,534	13.30	48,370	+680
Nov. 30	30.50	2,110	+1,495	14.05	51,220	+2,850
Dec. 31	†35.00	13,980	+11,870	14.67	53,580	+2,360
Calendar year 1938	-	-	-18,980	-	-	+25,040
Jan. 31	-	‡23,190	+9,210	-	‡55,390	+1,810
Feb. 28	-	‡29,410	+6,220	-	‡57,110	+1,720
Mar. 31	-	‡32,500	+3,090	-	‡57,140	+30
Apr. 30	40.70	35,470	+2,970	15.58	57,060	-80
May 31	40.52	34,710	-760	14.32	52,250	-4,810
June 30	38.06	24,840	-9,870	11.82	42,760	-9,490
July 31	33.50	9,339	-15,501	8.3	29,630	-13,130
Aug. 30	28.66	57	-9,282	6.17	21,870	-7,760
Sept. 30	29.24	401	+344	6.57	23,310	+1,440
Water year 1938-39	-	-	-3,748	-	-	-24,380

*Time of day variable.
†Estimated because of ice and snow.
‡Interpolated.

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Cultus River above Cultus Creek, near Lapine, Oreg.

Location.- Water-stage recorder, lat. 43°49', long. 121°48', at road crossing in sec. 20 or 29, T. 20 S., R. 8 E., above flow line of Crane Prairie Reservoir, 2 miles upstream from Cultus Creek, and 18 miles northwest of Lapine. Altitude, 4,450 feet.

Records available.- June 1923 to September 1925, November 1937 to September 1939.

Extremes.- Maximum discharge during year, 75 second-feet Oct. 1-3 (gage height, 0.88 foot); minimum, 46 second-feet Mar. 20-23 (gage height, 0.71 foot).
1923-25, 1937-39: Maximum discharge, 118 second-feet May 16, 1938 (gage height, 0.99 foot); minimum, 37 second-feet Jan. 14, Feb. 2, Mar. 2, 16, Apr. 1, 1925.

Remarks.- Records fair. Discharge interpolated for period of missing gage heights, Apr. 10-18. Shifting-control method used Oct. 1 to Feb. 3, Apr. 28 to Sept. 30. No diversion or regulation above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	75	67	63	57	48	48	48	65	57	63	63	63
2	75	67	65	57	48	48	48	65	59	63	63	63
3	75	70	65	57	48	48	48	65	59	63	63	63
4	72	70	65	57	48	48	48	63	59	63	65	63
5	67	67	65	57	48	48	48	63	59	63	63	63
6	67	67	65	57	48	48	48	63	59	63	65	63
7	67	67	65	57	48	48	48	59	59	63	65	63
8	65	67	65	57	48	48	48	57	59	63	65	63
9	65	67	65	57	48	48	50	57	59	63	65	63
10	63	67	65	57	48	48	50	57	57	63	65	63
11	63	67	65	57	48	48	51	57	57	63	65	63
12	63	65	63	57	48	48	51	57	57	63	65	63
13	63	65	63	57	48	48	52	54	57	63	65	63
14	63	65	63	54	48	48	52	54	59	63	65	63
15	63	65	63	52	48	48	52	54	61	63	65	61
16	63	65	63	52	48	48	53	54	61	61	65	61
17	63	65	63	52	48	48	53	54	61	61	67	61
18	63	65	61	52	48	48	54	54	61	61	67	61
19	63	65	61	52	48	48	54	54	63	61	67	61
20	63	65	59	52	48	48	54	54	63	61	67	59
21	63	65	59	52	48	46	57	54	63	61	67	59
22	63	65	59	52	48	46	63	54	63	61	67	57
23	63	65	57	52	48	46	65	57	63	61	67	57
24	63	63	57	52	48	48	65	57	63	61	67	57
25	63	63	57	52	48	48	63	57	63	61	67	59
26	63	63	57	50	48	48	63	57	63	63	67	59
27	63	63	57	50	48	48	63	57	63	63	67	57
28	63	63	57	50	48	48	63	57	63	63	65	57
29	67	63	57	50	-	48	70	57	63	63	65	57
30	67	63	57	50	-	48	67	57	63	63	65	57
31	67	-	57	48	-	48	-	57	-	63	63	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,026	75	63	65.4	4,020
November	1,964	70	63	65.5	3,900
December	1,903	65	57	61.4	3,770
Calendar year 1938	25,456	115	46	69.7	50,480
January	1,665	57	48	53.7	3,300
February	1,344	48	48	48.0	2,670
March	1,482	48	46	47.8	2,940
April	1,649	70	48	55.0	3,270
May	1,781	65	54	57.5	3,530
June	1,816	63	57	60.5	3,600
July	1,933	63	61	62.4	3,830
August	2,027	67	63	65.4	4,020
September	1,822	63	57	60.7	3,610
Water year 1938-39	21,412	75	46	58.7	42,460

Quinn River near Lapine, Oreg.

Location.- Water-stage recorder, lat. 43°47', long. 121°50', in NW¼ sec. 1, T. 21 S., R. 7 E., just upstream from flow line of Crane Prairie Reservoir, 150 feet downstream from springs at head of river, and 19 miles northwest of Lapine.

Records available.- June 1922 to September 1925, November 1937 to September 1939.

Extremes.- Maximum discharge during year, 29 second-feet June 11 (gage height, 1.87 feet); minimum, 11 second-feet Jan. 28, Feb. 23 to Mar. 5.
1922-25, 1937-39: Maximum discharge, 47 second-feet July 14-16, 1938; minimum, 3 second-feet Jan. 7, 15, 21, 1925.

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

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.6	5	0.8	21
.7	12	.9	32

Discharge, in second-feet, water year October 1938 to September 1939

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

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	673	24	19	21.7	1,330
November	483	18	15	16.1	958
December	440	16	12	14.2	873
Calendar year 1938	9,012	47	12	24.7	17,870
January	395	14	11	12.7	783
February	351	14	11	12.5	696
March	469	18	11	15.1	930
April	479	17	15	16.0	950
May	538	19	15	17.4	1,070
June	770	28	18	25.7	1,530
July	739	26	22	23.8	1,470
August	576	25	13	18.6	1,140
September	483	18	14	16.1	958
Water year 1938-39	6,396	28	11	17.5	12,690

Odell Creek near Crescent, Oreg.

Location.- Water-stage recorder, lat. 43°33', long. 121°58', in SW¼ sec. 25, T. 23 S., R. 6 E., at outlet of Odell Lake, 3⅝ miles north of Crescent Lake and 14 miles northwest of Crescent. Zero of gage is 4,778.83 feet above mean sea level (general adjustment of 1929).

Drainage area.- 39 square miles.

Records available.- August 1911 to August 1914 (incomplete), December 1923 to June 1924, May 1933 to September 1939.

Extremes.- Maximum discharge during year, 188 second-feet during period Feb. 11 to Mar. 6, while clock was stopped (gage height, 0.97 foot, from recorded range in stage); minimum, 18 second-feet Sept. 7 (gage height, 0.25 foot).
1911-14, 1923-24, 1933-39: Maximum discharge, 390 second-feet June 14, 1912, Jan. 4, 1936; minimum, 12 second-feet sometime in period September 7-30, 1934, while clock was stopped.

Remarks.- Records good except those for period of missing gage-heights, Feb. 11 to Mar. 6, which were computed on basis of records for Waldo Lake outlet and weather records and are poor. No diversion above station. Flow regulated at times by debris that collected on fish racks or by boards used at outlet of Odell Lake to change lake level at summer-resort docks; slightly affected at times by seiches on Odell Lake.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	57	54	59	76	90	52	92	98	57	32	21
2	41	57	74	62	74	100	52	92	95	54	30	21
3	42	85	92	69	79	110	54	92	92	52	32	20
4	42	124	92	71	76	100	54	95	88	52	33	22
5	42	118	92	79	85	90	54	92	88	52	32	22
6	39	107	85	76	101	85	54	92	85	52	29	19
7	39	104	85	74	114	82	57	88	79	52	28	19
8	41	98	88	76	110	79	57	88	76	50	27	19
9	41	98	88	74	104	76	62	92	76	50	27	19
10	41	107	85	71	110	71	59	92	76	50	27	19
11	44	104	76	66	110	71	62	95	74	50	28	20
12	42	98	71	64	130	82	64	95	74	50	26	19
13	42	95	66	62	150	92	64	95	74	50	25	21
14	42	88	62	59	160	85	64	98	74	47	25	22
15	42	82	64	69	170	82	62	101	74	46	24	22
16	39	92	62	64	155	79	59	104	79	46	25	23
17	38	82	59	64	140	74	62	104	82	46	23	23
18	36	79	57	64	130	71	64	107	79	42	22	23
19	35	76	57	64	120	69	64	110	79	42	20	23
20	35	79	54	62	110	66	69	107	76	39	20	23
21	36	66	64	59	105	62	71	107	74	38	20	24
22	36	57	64	59	95	62	76	110	74	38	21	26
23	36	52	62	59	90	57	82	104	71	38	21	26
24	38	52	59	57	85	49	85	101	69	38	21	26
25	39	50	71	57	90	59	88	98	66	36	22	24
26	41	47	52	54	100	62	92	98	64	36	22	25
27	42	46	54	62	90	57	88	98	62	36	23	25
28	42	46	62	76	80	57	88	98	62	36	22	24
29	46	44	62	79	-	54	92	101	62	36	21	23
30	50	46	62	82	-	54	92	101	59	35	21	24
31	54	-	59	79	-	52	-	101	-	34	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,265	54	35	40.8	1.05	1.21	2,510
November	2,336	124	44	77.9	2.00	2.23	4,630
December	2,134	92	52	68.8	1.76	2.03	4,230
Calendar year 1938	28,533	165	35	78.2	2.01	27.20	56,580
January	2,072	82	54	66.8	1.71	1.97	4,110
February	3,039	170	74	109	2.79	2.90	6,030
March	2,279	110	49	73.5	1.88	2.17	4,520
April	2,043	92	52	68.1	1.75	1.95	4,050
May	3,048	110	88	98.3	2.52	2.90	6,050
June	2,281	98	59	76.0	1.95	2.18	4,520
July	1,382	57	34	44.6	1.14	1.31	2,740
August	771	33	20	24.9	.638	.74	1,530
September	667	26	19	22.2	.569	.63	1,320
Water year 1938-39	23,317	170	19	63.9	1.64	22.22	46,240

Fall River near Lapine, Oreg.

Location.- Water-stage recorder, lat. 43°48', long. 121°34', in SE¼ sec. 31, T. 20 S., R. 10 E., downstream from spillway from ponds at State fish hatchery and 10 miles northwest of Lapine.

Records available.- May to September 1912 (fragmentary) and June 1938 to September 1939 in reports of Geological Survey. October 1923 to September 1924 (at site 3 miles downstream) in report of State engineer.

Extremes.- Maximum discharge during year, 157 second-feet Oct. 28 (gage height, 1.77 feet) caused by release of water from fish hatchery; minimum, 128 second-feet Sept. 18 (gage height, 1.25 feet).
1938-39: Maximum discharge, 157 second-feet Aug. 19-21, 26, Oct. 28, 1938; minimum, that of Sept. 18, 1939.
Extremes not determined for 1912, 1923-24.

Remarks.- Records good except those for periods of missing gage heights, Oct. 4-9, Jan. 4-8, Feb. 28 to Mar. 6, May 15-18, which were interpolated, and those for period Feb. 7-27, all of which are fair. Water diverted above station only to ponds at fish hatcheries, from which water is returned to river above station; no regulation.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 27				Mar. 7 to Sept. 30	
1.3	136	1.6	148	1.3	130
1.4	139	1.7	153	1.4	135
1.5	143			1.5	141

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	150	144	141	139	137		131	130	130	131	131	131
2	150	144	141	139	137		131	130	130	131	131	131
3	150	147	141	141	137		132	130	130	131	131	131
4		145	141		137	134	131	130	130	131	131	131
5		145	141		137		130	130	130	131	130	131
6	149	144	141	139	137		130	130	130	131	130	131
7		144	140		137	130	130	130	130	131	130	131
8		143	140		137	130	130	130	130	131	130	131
9		144	140	136	137	130	130	130	131	131	130	130
10	148	144	140	138	137	130	130	130	131	131	130	130
11	148	143	140	138	137	130	130	130	130	131	130	130
12	148	143	140	138	137	131	130	130	131	131	130	130
13	148	143	140	138	137	130	130	130	132	131	130	130
14	148	143	140	138	137	130	130	130	132	131	130	130
15	148	143	140	138	137	130	130	130	132	131	130	130
16	147	143	139	138	137	130	130	130	131	131	130	130
17	147	143	139	138	137	132	130	130	131	131	130	130
18	147	142	139	138	137	131	130	130	131	131	130	130
19	147	142	139	138	138	131	130	130	131	131	130	130
20	148	142	139	138	138	132	130	130	131	131	130	130
21	148	142	139	137	138	132	130	130	131	131	130	130
22	148	142	139	137	138	132	130	130	131	131	130	130
23	147	141	139	137	138	131	130	130	131	131	130	130
24	147	141	139	138	138	131	130	130	131	131	130	130
25	147	141	139	138	138	131	130	130	131	131	130	130
26	146	141	139	138	138	131	130	130	131	131	130	130
27	146	141	139	138	138	131	130	130	131	131	130	130
28	146	141	139	137	138	132	130	130	131	131	130	130
29	145	141	139	137	-	132	130	130	131	131	130	130
30	145	141	139	137	-	131	130	130	131	131	130	130
31	145	-	139	137	-	131	-	130	-	130	131	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,578	150	145	148	9,080
November	4,283	147	141	143	8,500
December	4,330	141	139	140	8,590
Calendar year	-	-	-	-	-
January	4,281	141	137	138	8,490
February	3,846	138	137	137	7,630
March	4,076	-	130	131	8,080
April	3,905	132	130	130	7,750
May	4,030	130	130	130	7,990
June	3,924	132	130	131	7,780
July	4,060	131	130	131	8,050
August	4,035	131	130	130	8,000
September	3,908	131	130	130	7,750
Water year 1938-39	49,256	150	130	135	97,690

Little Deschutes River near Lapine, Oreg.

Location.- Water-stage recorder, lat. 43°41', long. 121°30', in SW¼ sec. 2, T. 22 S., R. 10 E., at bridge at former town of Rosland, 1¼ miles north of Lapine. Zero of gage is 4,192.81 feet above mean sea level (general adjustment of 1929).
Records available.- September 1910 to October 1913 (incomplete), June to November 1918, August to October 1920, May 1924 to September 1939.
Average discharge.- 15 years (1924-39), 148 second-feet.
Extremes.- Maximum discharge during year, 422 second-feet May 22 (gage height, 4.48 feet); minimum, 31 second-feet Sept. 30 (gage height, 1.18 feet).
1910-13, 1918, 1920, 1924-39: 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 for period of ice effect, Dec. 13 to Mar. 14, and those for periods of missing gage heights, Nov. 11-23, Dec. 11-13, Apr. 13-17, all of which were computed on basis of weather records, discharge measurements Jan. 6, 31, Mar. 7, and records for Deschutes River at Pringle Falls and at Benham Falls and are fair. Small diversions for irrigation above station. Flow regulated since August 1922 by Crescent Lake Reservoir (see p.).

Rating tables, water year 1938-39, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Mar. 14

1.4	42	2.3	124
1.6	54	2.6	160
1.8	71	2.9	198
2.0	90		

Mar. 15 to Sept. 30

1.2	32	2.0	100	3.5	278
1.4	47	2.3	130	4.0	350
1.6	63	2.6	163	4.5	425
1.8	81	3.0	211		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	65	88				174	344	316	285	241	53
2	53	74	101				193	341	314	282	233	50
3	53	72	99	70			203	342	310	282	227	47
4	53	93	117			65	216	344	303	284	219	45
5	55	188	176				242	332	296	282	210	45
6	56	194	188	76			258	326	296	282	204	45
7	53	168	180			65	271	322	289	284	197	43
8	50	126	153				274	320	284	278	192	41
9	49	104	140				295	323	279	274	203	40
10	49	93	120				302	317	274	271	201	38
11	49	85				68	295	316	265	268	193	37
12	48	85					296	313	260	261	187	34
13	47	95					295	332	254	256	181	37
14	47	110					295	356	246	253	171	41
15	49	115				90	290	358	244	264	163	39
16	50	120				90	260	360	247	263	158	38
17	49	120				117	248	368	271	261	151	37
18	48	118				145	244	370	289	257	149	36
19	47	115		66		167	247	383	295	253	143	36
20	46	110				164	302	401	289	247	139	36
21	46	105				173	334	413	278	254	136	37
22	47	100	75			177	346	420	268	256	133	37
23	53	95				181	362	419	289	253	131	36
24	53	88				191	371	402	307	247	130	35
25	53	78				210	380	383	306	250	127	35
26	53	77				220	386	362	306	253	124	34
27	53	83				220	388	346	302	246	122	34
28	53	86				189	380	330	296	253	119	34
29	56	85				174	362	319	292	251	116	33
30	60	85				167	352	316	288	244	84	31
31	60	-		68		164	-	316	-	242	61	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,591	60	46	51.3	3,160
November	3,132	194	65	104	6,210
December	2,937	188	-	94.7	5,830
Calendar year 1938	74,018	744	46	203	146,800
January	2,078	76	-	67.0	4,120
February	2,072	-	-	74.0	4,110
March	3,770	220	-	122	7,480
April	8,861	388	174	295	17,580
May	10,894	420	313	351	21,610
June	8,553	316	244	285	16,960
July	8,141	285	242	263	16,150
August	5,045	241	61	163	10,010
September	1,164	53	31	38.8	2,310
Water year 1938-39	58,238	420	31	160	115,500

Crescent Creek at Crescent Lake, near Crescent, Oreg.

Location.- Water-stage recorder and Parshall measuring flume, lat. 43°30', long. 121°58', in sec. 11, T. 24 S., R. 6 E., 100 yards downstream from 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 1939.

Average discharge.- 14 years (1911-14, 1928-39), 37.3 second-feet.

Extremes.- Maximum discharge during year, 251 second-feet June 21 (gage height, 2.86 feet); minimum, 3 second-feet (estimated), Oct. 1 to Jan. 31.
1911-15, 1927-39: Maximum discharge, 313 second-feet July 9, 1929, Aug. 9, 1936; no flow at times.

Remarks.- Records good Apr. 18 to Sept. 30, poor Oct. 1 to Apr. 17. Discharge for periods of missing gage heights, Oct. 1 to Apr. 17, May 19-23, Aug. 30 to Sept. 30, were estimated on basis of notes by watermaster and records of stage of Crescent Lake Reservoir. Flow regulated since 1922 by Crescent Lake Reservoir (see p. 41), storage being released during period Apr. 18 to Aug. 31 for diversion through Deschutes County Municipal Improvement District canal near Bend.

Rating table, April to August 1939 (gage height, in feet, and discharge, in second-feet)

0.2	4.0	1.0	46.8	2.5	203
.4	10.8	1.5	89.3	2.9	257
.7	26.4	2.0	142		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								103	175	236	216	
2								114	175	232	208	
3								113	175	229	203	
4								113	175	226	198	
5								113	173	232	191	
6								113	173	237	184	
7								114	172	236	195	
8								114	172	233	195	
9								114	171	226	189	
10							10	114	171	224	181	
11								140	171	225	175	
12								170	170	230	167	
13								170	170	242	163	
14								170	169	240	155	
15								170	182	239	152	
16								169	196	235	146	
17								169	196	233	143	
18							48	172	194	230	138	
19							99	178	193	239	133	
20							99	178	193	242	128	
21							99	177	217	239	122	
22							99	177	250	236	118	
23							98	176	247	236	116	
24							98	176	247	242	112	
25							98	176	243	232	109	
26							98	176	242	236	106	
27							98	176	239	239	104	
28							98	176	239	233	63	
29							98	175	239	232	9.7	
30							98	175	239	235	9	
31							-	175	-	224	7	

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	93	-	-	3.0	184
November	90	-	-	3.0	179
December	93	-	-	3.0	184
Calendar year 1938	4,185	160	0	11.5	8,310
January	93	-	-	3.0	184
February	112	-	-	4.0	222
March	248	-	-	8.0	492
April	1,398	99	-	46.6	2,770
May	4,746	178	103	153	9,410
June	5,968	250	169	199	11,840
July	7,250	242	224	234	14,380
August	4,335.7	216	7	140	8,600
September	120	-	-	4.0	238
Water year 1938-39	24,546.7	250	3.0	67.3	48,680

Diversions from Deschutes River near Bend, Oreg.

The following five canals, which are equipped with water-stage recorders, ars the only diversions from Deschutes River between the stations at Benham Falls and downstream from Bend:

Arnold canal diverts water from right bank 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, 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 obtained upstream from intake of Pilot Butte canal.)

Deschutes County Municipal Improvement District canal, 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, from right bank in NE¼ sec. 29, T. 17 S., R. 12 E.; water used to irrigate lands north of Bend, mostly near Redmond.

Records of monthly discharge of these canals, published as a group, are available from October 1926 to September 1939; records for each canal published separately prior to 1926.

Diversions, in acre-feet, water year October 1938 to September 1939

Month	Arnold canal	Central Oregon canal	Deschutes County Municipal Improvement District canal	North canal	Swalley canal	Total
October	4,440	15,440	5,930	18,240	4,190	48,240
November	204	4,310	762	8,760	1,760	15,796
December	260	1,310	0	1,280	518	3,368
January	182	2,970	0	2,310	452	5,914
February	196	1,610	0	1,360	184	3,350
March	321	1,450	399	627	621	3,418
April	2,610	24,560	2,120	23,760	4,250	57,300
May	5,660	30,560	5,030	27,100	5,740	74,090
June	5,520	30,330	6,530	26,820	6,480	75,680
July	3,350	32,560	10,680	29,380	6,830	82,800
August	3,420	30,990	7,220	26,820	6,570	75,020
September	3,690	24,070	81	22,450	4,700	54,991
Water year 1938-39	29,853	200,160	38,752	188,907	42,295	499,967

Tumalo Creek near Bend, Oreg.

Location.- Water-stage recorder, lat. 44°05', long. 121°22', in SE¼ sec. 23, T. 17 S., R. 11 E., a quarter of a mile upstream from diversion dam of feed canal of Tumalo project, 4 miles upstream from mouth, and 4 miles northwest of Bend.
Drainage area.- 57 square miles.
Records available.- October 1906 to April 1908 and October 1910 to April 1913 (winters only), November 1913 to September 1939.
Average discharge.- 24 years (1913-21, 1923-39), 78.4 second-feet, excluding flow of Columbia Southern canal.
Extremes.- Maximum discharge during year, 270 second-feet, probably on May 29 (gage height, 2.33 feet, from recorded range in stage); minimum, 4.7 second-feet July 26-30 (gage height, 0.70 foot).
1906-8, 1911-39: Maximum discharge, 1,420 second-feet about Jan. 6, 1923 (gage height, 4.55 feet), from rating curve extended above 200 second-feet; minimum, 4.0 second-feet Oct. 28, 1922 (gage height, 0.55 foot).
Remarks.- Records good except those for periods of missing gage-heights and those for periods of ice effect, all of which are poor. Crater Creek canal diverts flow of tributaries of Soda Creek into head of Tumalo Creek. Columbia Southern canal diverts water above station. Canal records good except those for periods of missing gage heights, Nov. 21-23, Apr. 24 to May 1, May 2-10, 12-14, 16-18, Aug. 4-9, 11-16, 18-20, 22, Sept. 18-21, which were computed on basis of record for Tumalo Creek near Bend and are poor.

Rating table, water year 1938-39 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.7	4.7	1.2	31	1.8	123
.8	7.8	1.4	53	2.0	170
1.0	17	1.6	85	2.2	230

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	59	49	*56	*53	49	*78	65	*110	38	5.0	53
2	58	58	53	*56	†52	48	*78	76	*95	17	5.3	52
3	59	117	64	*56	†52	48	80	87	*80	25	5.0	53
4	60	109	103	56	†52	47	82	82	*80	33	5.3	53
5	59	71	99	56	†52	51	80	68	*75	22	5.3	53
6	59	64	85	†56	†52	47	82	65	*55	14	5.6	53
7	58	62	98	56	†56	47	87	68	*50	13	5.6	52
8	58	60	96	53	†62	46	98	71	*50	12	5.6	52
9	58	60	89	53	†66	46	98	82	*50	12	5.3	51
10	58	59	†80	53	†78	45	94	80	*60	11	5.3	51
11	64	†58	†74	53	†94	46	98	80	*65	12	5.3	54
12	62	†61	†68	51	94	48	98	*75	65	9.5	5.6	53
13	60	†64	†64	51	85	46	90	*70	76	7.8	5.6	56
14	60	60	†60	51	65	45	85	*75	73	7.8	5.9	54
15	59	62	*58	51	54	45	85	*90	58	6.9	5.6	51
16	58	64	*57	†51	54	46	85	*100	41	6.9	5.3	49
17	58	64	*56	51	51	47	94	*75	38	6.6	5.3	49
18	56	62	*56	51	49	47	107	*65	36	6.2	5.6	40
19	56	60	*56	51	49	49	130	*55	39	5.9	5.6	7.8
20	54	60	*57	51	*49	49	136	*45	43	5.9	5.9	*6.2
21	54	75	*58	†51	*49	*49	145	*40	43	5.6	5.9	*6.2
22	54	47	*58	†51	*48	*50	152	*40	47	5.6	14	*30
23	56	†51	*58	†51	*48	*52	158	*40	47	5.3	48	*50
24	56	†54	*58	†51	*48	*52	113	*40	43	5.3	52	*50
25	56	†54	*58	51	*48	*52	49	*45	39	5.0	51	*50
26	54	†54	*68	*52	*48	*54	42	*65	42	5.0	53	*50
27	54	†54	*66	*54	48	*56	47	*80	43	4.7	52	*50
28	56	†54	*62	*55	47	*60	59	*100	48	4.7	53	*50
29	59	53	*58	*56	-	*64	71	*200	52	4.7	51	*50
30	64	51	*57	*54	-	*72	60	*170	53	4.7	51	*50
31	62	-	*57	*53	-	*80	-	*140	-	5.3	51	-

Month	Tumalo Creek					Columbia southern canal (run-off in acre-feet)	Combined run-off in acre-feet
	Second-foot-days	Discharge in second-feet			Run-off in acre-feet		
		Maximum	Minimum	Mean			
October	1,795	64	54	57.9	3,560	0	3,560
November	1,881	117	47	62.7	3,730	198	3,928
December	2,080	103	49	67.1	4,130	0	4,130
Calendar year 1938	28,824	350	12	79.0	57,170	18,390	75,560
January	1,642	56	51	53.0	3,260	0	3,260
February	1,603	94	47	57.2	3,180	0	3,180
March	1,583	80	45	51.1	3,140	0	3,140
April	2,761	158	42	92	5,480	1,240	6,720
May	2,434	200	40	78.5	4,830	6,460	11,290
June	1,696	110	36	56.5	3,360	4,760	8,120
July	328.4	38	4.7	10.6	651	4,720	5,371
August	590.9	53	5.0	19.1	1,170	2,190	3,360
September	1,379.2	56	6.2	46.0	2,740	266	3,006
Water year 1938-39	19,773.5	200	4.7	54.2	39,230	19,830	59,060

*Gage heights missing; discharge computed on basis of records for Squaw Creek near Sisters.
†Stage-discharge relation affected by ice; discharge computed on basis of weather records and records for Squaw Creek near Sisters.

Squaw Creek near Sisters, Oreg.

Location.- Water-stage recorder, lat. 44°14', long. 121°34', in NW¼ sec. 32, T. 15 S., R. 10 E., just upstream from intake of McCallister ditch and 4 miles south of Sisters.

Drainage area.- 63 square miles.

Records available.- 1913 to 1925 (irrigation seasons only), October 1925 to September 1939. July 1906 to May 1913 at site 700 feet downstream, below intake of McCallister ditch.

Average discharge.- 27 years (1906-18, 1919-20, 1925-39), 104 second-feet.

Extremes.- Maximum discharge during year, 400 second-feet May 29 (gage height, 2.02 feet); minimum, 35 second-feet Mar. 10, 11 (gage height, 0.73 foot).
1906-39: Maximum gage height, about 8.75 feet (over top of gage), former site and datum, Nov. 22, 1909 (discharge not determined); minimum discharge, 19 second-feet Dec. 6, 1922.

Remarks.- Records good except those for periods of ice effect, Nov. 23-30, Dec. 13-22, Jan. 16, 17, 22-28, Feb. 2-13, and those for period of missing gage heights, July 5-19, all of which were computed on basis of weather records, discharge measurement Feb. 12, and records for Tumalo Creek near Bend and Lake Creek near Sisters and are fair. A canal near mouth of Pole Creek, a tributary above station, diverts entire flow of that creek for irrigation of lands near Sisters.

Rating table, water year 1938-39 except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Mar. 27 to Apr. 23)

Oct. 1 to Dec. 22				Dec. 23 to Sept. 30			
0.8	43	1.3	132	0.7	33	1.5	190
.9	54	1.5	195	.9	50	1.7	265
1.1	84			1.1	78	1.9	345
				1.3	123		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	54	52	50	44	40	61	123	176	136	98	52
2	62	54	62	49	43	39	61	139	172	126	103	50
3	60	172	72	48	42	39	64	162	166	155	108	57
4	60	102	124	50	41	39	65	162	145	158	108	61
5	57	69	116	48	41	38	68	149	120	140	98	64
6	57	60	88	49	41	37	70	152	116	130	103	55
7	55	63	114	50	43	37	73	169	116	120	90	51
8	54	60	99	45	42	36	76	186	118	115	84	54
9	55	58	81	47	41	36	78	201	129	110	86	58
10	58	57	74	45	42	35	78	201	145	120	88	61
11	67	57	66	45	45	38	78	201	152	120	90	55
12	55	60	64	43	48	42	80	201	162	110	92	48
13	58	63	60	43	49	42	80	208	172	107	90	50
14	57	60	56	43	54	42	80	220	166	103	88	47
15	54	60	54	43	60	42	78	235	149	100	84	46
16	53	66	52	43	55	44	73	231	120	98	84	47
17	53	62	50	42	52	48	73	205	106	96	82	50
18	54	59	49	42	51	52	75	180	103	94	80	52
19	53	58	49	42	49	55	82	155	106	92	75	58
20	52	57	49	42	47	56	94	142	106	92	75	67
21	52	51	50	42	45	56	100	133	110	96	67	73
22	52	52	50	40	44	57	108	120	120	100	73	62
23	53	54	52	42	43	57	110	113	126	106	75	58
24	54	52	52	41	43	58	110	120	118	110	80	54
25	54	52	51	40	42	58	108	145	116	116	78	52
26	54	52	58	41	41	58	106	180	118	118	73	54
27	54	52	58	42	41	60	100	197	133	123	73	54
28	55	50	52	44	40	60	106	235	145	129	58	49
29	57	50	50	46	-	60	118	341	155	118	55	48
30	63	52	50	46	-	60	120	257	155	113	62	49
31	57	-	50	44	-	61	-	194	-	106	58	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,743	67	52	56.2	3,460
November	1,868	172	50	62.3	3,710
December	2,004	124	49	64.6	3,970
Calendar year 1938	40,785	333	46	112	80,900
January	1,377	50	40	44.4	2,730
February	1,269	60	40	45.3	2,520
March	1,482	61	35	47.8	2,940
April	2,573	120	61	85.8	5,100
May	5,657	341	113	182	11,220
June	4,041	176	103	135	8,020
July	3,557	158	92	115	7,060
August	2,558	108	55	82.5	5,070
September	1,636	73	46	54.5	3,240
Water year 1938-39	29,765	341	35	81.5	59,040

Peak discharge.- Nov. 3 (2 p.m.) 293 sec.-ft.; May 29 (5 p.m.) 400 sec.-ft.

Crooked River near Culver, Oreg.

Location.- Staff gage, lat. 44°33', long. 121°16', in SW¼ sec. 11, T. 12 S., R. 12 E., just downstream from Cove power plant and 5 miles northwest of Culver. Zero of gage is about 1,722 feet above mean sea level (river profile map).

Drainage area.- 4,330 square miles.

Records available.- October 1917 to September 1939.

Average discharge.- 22 years, 1,594 second-feet.

Extremes.- Maximum discharge observed during year, 4,310 second-feet Mar. 26, 27 (gage height, 3.90 feet); minimum observed, 1,130 second-feet July 2, 22-25, Aug. 6 (gage height, 0.48 foot).
1917-39: Maximum discharge, 7,600 second-feet Apr. 20, 1938 (gage height, 6.20 feet); minimum, 970 second-feet July 12 to Sept. 5, 1921.

Remarks.- Records good. Discharge interpolated for Oct. 23, 31, Nov. 6. Flow slightly regulated by storage in Ochoco Reservoir. Summer flow upstream from Prineville diverted for irrigation. Springs increase flow about 1,000 second-feet within an area extending a few miles upstream from station. Gage readings furnished by Pacific Power & Light Co. Gage read once daily.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.4	1,090	1.6	1,890	3.5	3,830
.7	1,250	2.0	2,240	4.0	4,440
1.0	1,440	2.5	2,720		
1.3	1,650	3.0	3,250		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,230	1,270	1,270	1,260	1,290	1,290	2,820	1,250	1,170	1,140	1,140	1,170
2	1,250	1,270	1,270	1,260	1,290	1,290	3,030	1,230	1,170	1,130	1,140	1,170
3	1,250	1,300	1,270	1,260	1,270	1,300	3,030	1,230	1,170	1,140	1,140	1,160
4	1,250	1,300	1,270	1,260	1,240	1,300	2,820	1,230	1,160	1,160	1,140	1,180
5	1,270	1,290	1,300	1,270	1,290	1,310	2,720	1,210	1,160	1,160	1,140	1,180
6	1,290	1,300	1,270	1,290	1,270	1,290	2,420	1,210	1,140	1,170	1,130	1,160
7	1,300	1,310	1,270	1,270	1,250	1,270	2,240	1,190	1,140	1,170	1,140	1,170
8	1,300	1,310	1,270	1,270	1,240	1,270	2,060	1,190	1,140	1,160	1,140	1,170
9	1,290	1,310	1,270	1,310	1,230	1,270	2,060	1,170	1,140	1,160	1,140	1,170
10	1,310	1,310	1,310	1,250	1,230	1,270	1,970	1,160	1,140	1,150	1,140	1,180
11	1,300	1,290	1,310	1,240	1,230	1,270	1,890	1,160	1,140	1,150	1,140	1,180
12	1,290	1,290	1,240	1,210	1,250	1,270	1,810	1,160	1,140	1,150	1,140	1,160
13	1,290	1,370	1,230	1,270	1,250	1,400	1,730	1,160	1,150	1,150	1,140	1,160
14	1,290	1,300	1,230	1,260	1,250	1,730	1,730	1,160	1,140	1,150	1,160	1,170
15	1,290	1,300	1,230	1,260	1,260	1,580	1,580	1,160	1,140	1,150	1,150	1,170
16	1,290	1,310	1,240	1,260	1,270	1,440	1,540	1,160	1,140	1,140	1,150	1,190
17	1,290	1,310	1,240	1,250	1,310	1,620	1,540	1,160	1,140	1,150	1,150	1,200
18	1,290	1,300	1,270	1,230	1,370	2,060	1,510	1,160	1,150	1,150	1,150	1,210
19	1,290	1,310	1,260	1,270	1,310	2,520	1,480	1,170	1,150	1,140	1,140	1,210
20	1,270	1,310	1,250	1,260	1,300	2,620	1,440	1,170	1,170	1,150	1,150	1,190
21	1,270	1,290	1,250	1,240	1,290	2,820	1,370	1,190	1,160	1,140	1,160	1,190
22	1,270	1,290	1,250	1,240	1,290	3,140	1,340	1,200	1,160	1,130	1,150	1,210
23	1,260	1,270	1,250	1,230	1,290	3,470	1,340	1,210	1,160	1,130	1,140	1,210
24	1,250	1,270	1,250	1,230	1,290	3,710	1,340	1,190	1,150	1,130	1,140	1,200
25	1,250	1,260	1,270	1,230	1,270	3,950	1,340	1,180	1,150	1,130	1,160	1,200
26	1,250	1,240	1,270	1,240	1,270	4,190	1,310	1,180	1,150	1,140	1,160	1,200
27	1,250	1,240	1,260	1,240	1,340	4,310	1,310	1,180	1,150	1,140	1,160	1,200
28	1,270	1,250	1,260	1,270	1,310	3,590	1,310	1,180	1,140	1,140	1,160	1,200
29	1,270	1,270	1,260	1,270	-	3,030	1,270	1,180	1,140	1,140	1,170	1,200
30	1,300	1,270	1,260	1,270	-	2,920	1,270	1,180	1,140	1,140	1,160	1,190
31	1,280	-	1,250	1,270	-	2,820	-	1,180	-	1,140	1,170	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	39,550	1,310	1,230	1,276	78,450
November	38,710	1,370	1,240	1,290	76,780
December	39,100	1,310	1,230	1,261	77,550
Calendar year 1938	633,590	7,440	1,160	1,736	1,257,000
January	38,940	1,310	1,210	1,256	77,240
February	35,750	1,370	1,230	1,277	70,910
March	68,320	4,310	1,270	2,204	135,500
April	54,620	3,030	1,270	1,821	108,300
May	36,740	1,250	1,160	1,185	72,870
June	34,490	1,170	1,140	1,150	68,410
July	35,520	1,170	1,130	1,146	70,450
August	35,590	1,170	1,130	1,148	70,590
September	35,550	1,210	1,160	1,185	70,510
Water year 1938-39	492,880	4,310	1,130	1,350	977,600

Metolius River near Grandview, Oreg.

Location.- Staff gage, lat. 44°37', long. 121°27', in NE¼ sec. 19, T. 11 S., R. 11 E., at Montgomery ranch, 8 miles northwest of Grandview.

Records available.- October 1921 to September 1939.

Average discharge.- 18 years, 1,444 second-feet.

Extremes.- Maximum discharge observed during year, 1,800 second-feet Nov. 3 (gage height, 0.82 foot); minimum discharge, 1,200 second-feet Sept. 28-30 (gage height, 0.26 foot).
1921-39: Maximum discharge, about 5,780 second-feet Jan. 7, 1923 (gage height, 3.32 feet), from rating curve extended above 2,200 second-feet; minimum, 1,080 second-feet Feb. 17, 1932 (gage height, 0.14 foot).

Remarks.- Records excellent. Staff gage read once daily except Jan. 7, Aug. 11-13, for which discharge was interpolated. No diversion or regulation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.2	1,140
.4	1,340
.6	1,560
.8	1,800

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,320	1,300	1,280	1,280	1,240	1,260	1,410	1,430	1,430	1,340	1,280	1,240
2	1,320	1,300	1,340	1,280	1,240	1,260	1,410	1,430	1,410	1,340	1,260	1,220
3	1,300	1,610	1,340	1,280	1,240	1,260	1,410	1,470	1,410	1,340	1,260	1,220
4	1,300	1,470	1,490	1,280	1,240	1,260	1,410	1,470	1,410	1,340	1,260	1,220
5	1,300	1,380	1,490	1,280	1,240	1,260	1,410	1,470	1,360	1,340	1,260	1,220
6	1,300	1,320	1,430	1,280	1,280	1,260	1,410	1,450	1,360	1,340	1,260	1,220
7	1,300	1,320	1,430	1,280	1,240	1,260	1,410	1,450	1,360	1,320	1,240	1,220
8	1,300	1,300	1,430	1,280	1,240	1,260	1,410	1,450	1,360	1,320	1,240	1,220
9	1,300	1,300	1,410	1,280	1,240	1,260	1,410	1,470	1,360	1,320	1,240	1,220
10	1,300	1,300	1,340	1,280	1,240	1,260	1,410	1,470	1,360	1,320	1,240	1,220
11	1,300	1,300	1,340	1,280	1,240	1,260	1,410	1,450	1,380	1,320	1,240	1,220
12	1,300	1,280	1,300	1,280	1,320	1,300	1,410	1,450	1,380	1,320	1,240	1,220
13	1,300	1,280	1,300	1,280	1,260	1,300	1,410	1,450	1,410	1,320	1,240	1,220
14	1,300	1,280	1,300	1,280	1,260	1,280	1,380	1,450	1,410	1,320	1,240	1,220
15	1,280	1,280	1,300	1,280	1,430	1,280	1,380	1,520	1,380	1,320	1,240	1,220
16	1,280	1,280	1,300	1,280	1,360	1,280	1,380	1,490	1,340	1,320	1,240	1,220
17	1,280	1,300	1,300	1,260	1,340	1,320	1,380	1,470	1,340	1,300	1,240	1,220
18	1,280	1,300	1,280	1,260	1,340	1,320	1,380	1,470	1,340	1,300	1,240	1,220
19	1,280	1,300	1,280	1,260	1,320	1,320	1,430	1,430	1,340	1,300	1,240	1,220
20	1,280	1,280	1,280	1,260	1,300	1,320	1,430	1,430	1,340	1,300	1,240	1,220
21	1,280	1,280	1,280	1,260	1,300	1,340	1,450	1,430	1,340	1,280	1,240	1,220
22	1,280	1,280	1,280	1,260	1,280	1,380	1,450	1,430	1,340	1,280	1,240	1,220
23	1,280	1,260	1,280	1,260	1,280	1,410	1,450	1,430	1,340	1,280	1,240	1,220
24	1,280	1,260	1,280	1,260	1,280	1,410	1,450	1,430	1,340	1,280	1,240	1,220
25	1,280	1,260	1,280	1,260	1,280	1,430	1,430	1,410	1,340	1,280	1,240	1,220
26	1,280	1,260	1,280	1,260	1,280	1,430	1,410	1,410	1,320	1,280	1,220	1,220
27	1,280	1,260	1,280	1,260	1,280	1,430	1,410	1,450	1,320	1,280	1,220	1,220
28	1,280	1,260	1,280	1,260	1,280	1,410	1,430	1,470	1,320	1,280	1,220	1,200
29	1,300	1,260	1,280	1,260	-	1,410	1,430	1,630	1,360	1,280	1,220	1,200
30	1,300	1,260	1,280	1,240	-	1,340	1,430	1,560	1,340	1,280	1,220	1,200
31	1,300	-	1,280	1,240	-	1,410	-	1,490	-	1,280	1,240	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	40,060	1,320	1,280	1,292	79,460
November	39,120	1,610	1,260	1,304	77,590
December	41,040	1,490	1,280	1,324	81,400
Calendar year 1938	542,190	2,340	1,260	1,485	1,075,000
January	39,340	1,280	1,240	1,269	78,030
February	35,870	1,430	1,240	1,281	71,150
March	40,980	1,430	1,260	1,322	81,280
April	42,430	1,450	1,380	1,414	84,160
May	45,310	1,630	1,410	1,462	89,870
June	40,840	1,430	1,320	1,361	81,000
July	40,520	1,340	1,280	1,307	80,370
August	38,480	1,280	1,220	1,241	76,320
September	36,560	1,240	1,200	1,219	72,520
Water year 1938-39	480,550	1,630	1,200	1,317	953,200

Lake Creek near Sisters, Oreg.

Location.- Water-stage recorder, lat. 44°26', long. 121°44', in SW¼ sec. 24, T. 13 S., R. 8 E., a quarter of a mile downstream from Suttle Lake, 6 miles upstream from mouth, and 13 miles northwest of Sisters. Altitude, 3,430 feet (Geological Survey topographic map).

Drainage area.- 20.5 square miles.

Records available.- 1911 to 1913 (occasional readings during summers), April 1915 to September 1939.

Average discharge.- 23 years (1915-18, 1919-39), 50.6 second-feet.

Extremes.- Maximum discharge during year, 115 second-feet May 11 (gage height, 2.07 feet); minimum, 23 second-feet Sept. 24 (gage height, 0.92 foot).
1911-13, 1915-39: Maximum discharge, 302 second-feet Jan. 10, 1923 (gage height, 2.58 feet), from rating curve extended above 150 second-feet; minimum, 14 second-feet Oct. 17, 1933; minimum daily, 15 second-feet July 29, 30, 1932.

Remarks.- Records good except those for periods of missing gage heights, Dec. 12 to Jan. 1, Jan. 27, 28, Feb. 10, 11, which were computed on basis of recorded range in stage and records for Squaw Creek near Sisters. No diversion above station; occasional regulation by storage in Suttle Lake.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.9	22	1.1	30	1.5	56
1.0	26	1.3	41	1.6	84

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	31	33	34	34	35	52	71	54	33	27	28
2	29	31	39	34	33	36	52	72	50	32	27	28
3	30	40	42	36	34	36	51	71	48	32	28	28
4	30	52	42	37	34	37	53	72	46	32	28	27
5	31	46	40	37	34	37	53	70	46	32	28	27
6	30	40	39	36	37	36	54	67	44	32	27	27
7	30	32	39	35	40	36	55	71	43	31	27	27
8	30	29	39	35	38	36	57	70	43	31	27	26
9	30	32	39	34	37	34	56	68	43	32	27	27
10	30	34	37	34	36	34	58	69	42	32	28	26
11	32	32	36	34	35	36	59	75	41	31	27	27
12	32	32	35	34	35	41	59	83	40	30	28	27
13	30	32	34	34	34	42	60	74	40	30	28	28
14	30	31	33	32	36	40	60	70	39	29	27	28
15	30	32	33	34	47	38	59	65	39	30	27	28
16	29	34	33	34	47	37	57	63	39	30	27	28
17	29	34	32	34	44	35	56	63	36	30	24	27
18	29	32	32	34	41	34	56	67	34	29	25	27
19	29	32	32	34	39	34	56	67	35	28	25	27
20	28	32	33	34	39	35	57	64	34	28	25	27
21	28	32	33	33	36	35	59	60	34	28	25	27
22	29	32	34	33	36	37	60	60	36	29	25	27
23	29	31	35	34	36	38	61	58	35	29	26	26
24	29	30	35	34	36	37	63	57	36	29	26	27
25	28	30	36	33	37	39	68	56	34	28	26	27
26	28	30	38	32	37	39	69	54	34	28	26	27
27	29	30	38	33	36	42	70	53	34	29	26	26
28	29	29	36	35	37	45	70	50	34	29	26	26
29	29	30	35	37	-	47	69	48	34	28	27	26
30	29	30	34	36	-	51	70	50	32	28	28	26
31	30	-	34	34	-	54	-	51	-	28	28	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	915	32	28	29.5	1,810
November	994	52	29	33.1	1,970
December	1,110	42	32	35.8	2,200
Calendar year 1938	17,492	110	20	47.9	34,680
January	1,064	37	32	34.3	2,110
February	1,045	47	33	37.3	2,070
March	1,193	54	34	38.5	2,370
April	1,779	70	51	59.3	3,530
May	1,989	83	43	64.2	3,950
June	1,179	54	32	39.3	2,340
July	927	33	28	29.9	1,840
August	826	28	24	26.6	1,640
September	812	28	26	27.1	1,610
Water year 1938-39	13,833	83	24	37.9	27,440

White River below Tygh Valley, Oreg.

Location.- Water-stage recorder, lat. 45°14', long. 121°06', in NW¼ sec. 8, T. 4 S., R. 14 E., just downstream from Pacific Power & Light Co.'s plant at White River Falls and 4½ miles downstream from Tygh Valley.

Drainage area.- 393 square miles.

Records available.- October 1917 to September 1939.

Average discharge.- 22 years, 421 second-feet.

Extremes.- Maximum discharge during year, 1,200 second-feet Mar. 26 (gage height, 3.88 feet); minimum, 44 second-feet Nov. 10 (gage height, 0.14 foot); minimum daily, 91 second-feet Sept. 26.
1917-39: Maximum discharge, 13,300 second-feet Jan. 6, 1923 (gage height, about 13.3 feet), from rating curve extended above 5,000 second-feet; minimum, 10 second-feet Dec. 11-14, 1919, Aug. 9, 1931; minimum daily, 75 second-feet Sept. 1, 1924.

Remarks.- Records good except those for periods of missing gage heights, Dec. 12-18, Feb. 9-11, Aug. 21-23, Sept. 3-8, 18-22, which were computed on basis of records for West Fork of Hood River near Dee and are fair. Several diversions for irrigation above station. Low-water flow regulated somewhat by operation of power plant. Water-stage recorder inspected by employees of Pacific Power & Light Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	107	121	168	216	182	260	865	695	330	164	115	125
2	106	120	193	226	188	260	918	718	314	163	114	114
3	111	251	269	260	198	260	918	718	304	163	112	104
4	121	246	472	252	191	246	840	718	300	180	114	106
5	120	176	582	249	193	240	765	650	310	164	112	110
6	111	152	436	229	208	249	718	628	307	156	110	105
7	108	146	420	224	200	234	672	628	291	151	109	102
8	107	149	500	221	191	232	718	628	278	149	106	100
9	106	152	432	218	185	229	718	628	285	149	106	100
10	107	151	362	221	180	224	695	605	237	146	106	98
11	123	142	307	218	220	226	695	605	249	145	107	96
12	127	141	275	218	365	269	672	605	243	145	106	100
13	117	145	260	210	314	263	605	605	229	143	106	100
14	115	145	245	213	337	252	560	605	221	146	104	101
15	115	151	230	213	815	252	560	628	213	142	104	97
16	109	180	220	210	628	307	560	628	213	141	106	94
17	109	291	210	210	500	354	582	560	232	139	103	93
18	111	213	205	237	440	386	605	560	246	135	103	94
19	108	184	200	257	393	472	718	540	246	131	101	96
20	108	188	196	246	354	582	765	472	232	130	96	98
21	108	176	193	234	334	695	815	520	218	128	96	100
22	106	159	188	229	323	815	865	520	210	125	96	97
23	108	156	200	229	310	945	890	448	205	125	100	94
24	110	156	205	218	300	1,080	840	412	203	125	103	93
25	110	156	193	226	304	1,170	765	404	196	123	104	94
26	110	154	180	218	291	1,080	695	412	186	127	103	91
27	110	154	184	221	285	972	695	396	178	127	101	92
28	109	154	200	221	275	815	718	382	176	127	100	92
29	112	152	215	215	-	718	790	396	174	125	98	93
30	116	152	246	203	-	672	718	376	168	120	97	93
31	121	-	218	198	-	740	-	351	-	118	102	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,466	127	106	112	6,870
November	5,013	291	120	167	9,940
December	8,404	582	168	271	16,670
Calendar year 1938	169,851	2,240	104	465	336,900
January	6,962	260	198	225	13,810
February	8,704	815	180	311	17,260
March	15,499	1,170	224	500	30,740
April	21,940	918	560	731	43,520
May	17,041	718	351	550	33,800
June	7,194	330	168	240	14,270
July	4,352	180	118	140	8,630
August	3,240	115	96	105	6,430
September	2,972	125	91	99.1	5,890
Water year 1938-39	104,787	1,170	91	287	207,800

Klickitat River near Glenwood, Wash.

Location.- Water-stage recorder, lat. 46°05'30", long. 121°15'30", in SE¼ sec. 14, T. 7 N., R. 12 E., half a mile downstream from Dairy Creek, 5 miles north of Glenwood, and 7 miles upstream from Trout Creek. Zero of gage is about 1,703 feet above mean sea level (general adjustment of 1929).

Drainage area.- 360 square miles.

Records available.- December 1910 to September 1939 (incomplete). October 1909 to December 1910, at site 1 mile upstream.

Average discharge.- 22 years (1909-20, 1928-39), 840 second-feet.

Extremes.- Maximum discharge during year, 2,140 second-feet May 16 (gage height, 4.26 feet); minimum, 298 second-feet Feb. 1 (gage height, 2.02 feet).
1909-39: Maximum discharge, 9,870 second-feet Dec. 22, 1933 (gage height, 7.9 feet, present datum), from rating curve extended above 2,000 second-feet; minimum, 204 second-feet Nov. 28, 1931.

Remarks.- Records fair. No diversion or regulation.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to May 16				May 17 to Sept. 30			
2.0	290	3.5	1,330	2.2	275	3.5	1,170
2.5	535	4.0	1,850	2.5	410	4.0	1,750
3.0	898	4.2	2,080	3.0	730	4.1	1,880

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	388	427	465	523	329	373	1,010	1,580	1,130	738	440	400
2	388	412	460	593	369	364	1,080	1,680	1,060	702	445	375
3	383	580	444	573	383	369	1,120	1,740	1,020	730	450	380
4	388	541	517	523	373	364	1,070	1,740	980	688	450	375
5	488	454	634	494	373	347	988	1,630	917	646	440	370
6	422	427	567	444	383	373	955	1,530	874	604	425	351
7	398	417	606	471	373	360	955	1,580	858	604	415	351
8	388	407	810	444	360	355	980	1,630	850	604	415	365
9	388	412	764	427	342	347	1,010	1,680	842	618	425	370
10	412	402	675	433	351	342	988	1,740	874	625	440	370
11	494	373	573	433	383	364	1,010	1,740	908	667	435	351
12	482	388	511	427	449	369	997	1,800	926	604	430	333
13	506	407	506	422	398	364	955	1,850	944	583	415	328
14	449	407	500	417	417	351	972	1,960	926	569	410	324
15	422	417	506	417	529	364	1,010	2,020	874	534	410	333
16	407	476	465	407	449	383	1,020	2,080	826	514	405	351
17	398	494	438	412	427	422	1,060	1,820	794	514	405	342
18	388	454	444	422	407	438	1,150	1,630	770	508	400	338
19	383	433	460	433	398	476	1,330	1,400	802	484	385	338
20	383	438	444	412	373	529	1,380	1,230	842	490	385	356
21	383	393	433	393	393	599	1,430	1,250	858	496	395	370
22	378	360	427	383	383	697	1,530	1,200	850	502	385	351
23	378	360	449	402	378	834	1,630	1,140	818	508	410	342
24	383	417	449	388	373	947	1,580	1,120	754	520	415	338
25	378	383	433	360	378	1,060	1,530	1,200	716	527	405	333
26	383	378	383	378	364	1,050	1,430	1,260	709	534	385	328
27	383	369	422	398	378	947	1,430	1,260	716	541	390	324
28	383	383	417	388	355	890	1,580	1,350	746	508	356	311
29	407	402	427	388	-	866	1,680	1,750	794	472	360	311
30	438	422	433	373	-	858	1,630	1,570	794	466	360	311
31	444	-	460	351	-	906	-	1,280	-	450	405	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	12,693	506	378	409	1.14	1.31	25,180
November	12,633	580	360	421	1.17	1.30	25,060
December	15,522	810	383	501	1.39	1.60	30,790
Calendar year 1938	355,342	3,820	360	974	2.71	36.69	704,800
January	13,329	593	351	430	1.19	1.37	26,440
February	10,868	529	329	388	1.08	1.12	21,560
March	17,308	1,060	342	558	1.55	1.79	34,330
April	36,490	1,680	955	1,216	3.38	3.77	72,380
May	48,440	2,080	1,120	1,563	4.34	5.00	96,080
June	25,772	1,130	709	859	2.39	2.67	51,120
July	17,550	738	450	566	1.57	1.81	34,810
August	12,691	450	356	409	1.14	1.31	25,170
September	10,420	400	311	347	.964	1.08	20,670
Water year 1938-39	233,716	2,080	311	640	1.78	24.13	463,600

Klickitat River near Pitt, Wash.

Location.- Water-stage recorder, lat. 45°45', long. 120°12', in SW¼ sec. S, T. 3 N., R. 13 E., 3½ miles south of Pitt, 5 miles upstream from Silvias Creek, and 7 miles upstream from mouth at Lyle.

Drainage area.- 1,170 square miles.

Records available.- October 1935 to September 1939. Comparable records at former station at Klickitat July 1909 to January 1912, and at station at Pitt October 1928 to September 1935.

Average discharge.- 13 years (1909-11, 1928-39), 1,503 second-feet.

Extremes.- Maximum discharge during year, 3,080 second-feet Feb. 15 (gage height, 5.86 feet); minimum, 585 second-feet Sept. 15, 19, 25, 29, 30 (gage height, 3.53 feet).
1909-12, 1928-39: Maximum discharge observed, about 21,000 second-feet Dec. 22, 1933 (gage height, 12.5 feet, former site and datum), from rating curve extended above 3,000 second-feet; minimum discharge, 466 second-feet Feb. 4, 1937 (gage height, 3.32 feet).

Remarks.- Records good. Small diversions for irrigation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

3.5	570	4.0	910	5.0	1,990
3.7	680	4.5	1,410	5.5	2,600

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	743	790	798	838	694	910	1,750	1,810	1,390	1,020	694	687
2	750	758	886	982	708	902	1,810	1,870	1,280	982	694	644
3	758	854	862	1,050	743	910	1,870	1,810	1,250	991	701	628
4	774	982	878	1,010	736	894	1,810	1,990	1,200	973	708	638
5	870	838	1,060	964	736	854	1,690	1,870	1,160	946	701	638
6	654	782	1,020	894	838	878	1,580	1,750	1,120	894	694	615
7	782	758	946	886	814	870	1,520	1,690	1,100	878	674	610
8	774	750	1,150	878	766	862	1,520	1,750	1,090	870	668	620
9	766	766	1,180	854	708	854	1,580	1,810	1,100	870	674	632
10	766	766	1,090	854	708	846	1,520	1,810	1,110	886	694	632
11	838	743	991	854	736	902	1,520	1,870	1,140	937	687	658
12	862	716	862	838	1,500	1,120	1,520	1,870	1,160	862	694	610
13	886	743	830	830	1,280	1,130	1,460	1,930	1,180	846	680	600
14	846	750	830	814	1,730	1,090	1,410	1,990	1,180	814	674	600
15	798	766	838	806	2,540	1,140	1,460	2,050	1,140	814	680	595
16	774	798	822	790	1,930	1,210	1,460	2,170	1,110	766	668	600
17	758	870	774	782	1,630	1,280	1,460	2,050	1,070	736	662	610
18	750	814	758	814	1,460	1,390	1,580	1,870	1,050	736	662	605
19	743	782	774	862	1,380	1,460	1,750	1,750	1,060	729	662	605
20	743	774	774	846	1,260	1,580	1,810	1,520	1,100	715	650	620
21	736	758	758	814	1,200	1,690	1,930	1,520	1,120	722	662	638
22	736	708	743	774	1,120	1,810	1,990	1,520	1,130	736	662	632
23	729	668	758	774	1,090	1,930	2,050	1,460	1,100	750	662	610
24	743	729	758	766	1,040	2,050	1,990	1,410	1,060	766	674	610
25	736	715	758	758	1,020	2,170	1,870	1,410	1,000	782	680	605
26	729	694	736	729	982	2,170	1,690	1,520	982	782	656	610
27	729	687	736	758	973	1,990	1,690	1,520	982	782	650	615
28	736	694	766	774	937	1,810	1,750	1,520	1,000	774	650	600
29	736	722	766	782	-	1,750	1,870	1,810	1,060	743	615	595
30	758	736	798	766	-	1,630	1,870	1,810	1,090	729	626	600
31	806	-	806	743	-	1,630	-	1,520	-	701	656	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	24,009	886	729	774	0.662	0.76	47,620
November	22,910	982	668	764	.653	.73	45,440
December	26,506	1,180	736	855	.731	.84	52,570
Calendar year 1938	734,784	7,090	668	2,013	1.72	23.35	1,457,000
January	25,884	1,050	729	835	.714	.82	51,340
February	31,259	2,540	694	1,116	.954	.99	62,000
March	41,712	2,170	846	1,346	1.15	1.33	82,730
April	50,780	2,050	1,410	1,693	1.45	1.62	100,700
May	54,250	2,170	1,410	1,750	1.50	1.73	107,600
June	33,514	1,390	982	1,117	.955	1.07	66,470
July	25,532	1,020	701	824	.704	.81	50,640
August	20,814	708	615	671	.574	.66	41,280
September	18,540	687	595	618	.528	.59	36,770
Water year 1938-39	375,710	2,540	595	1,029	.879	11.95	745,200

Hood River near Hood River, Oreg.

Location.- Water-stage recorder, lat. 45°42' (revised), long. 121°31', in SE¼ sec. 36, T. 3 N., R. 10 E., at Powerdale, a quarter of a mile upstream from Pacific Power & Light Co.'s plant and three-quarters of a mile south of town of Hood River. Zero of gage is 106.23 feet above mean sea level (general adjustment of 1929).

Drainage area.- 329 square miles.

Records available.- March 1913 to September 1939.

Average discharge.- 26 years, 1,069 second-feet (including flow of Pacific Power & Light Co.'s conduit).

Extremes.- Maximum discharge during year (river only), 5,700 second-feet Feb. 15 (gage height, 5.71 feet); minimum, 23 second-feet Aug. 12 (gage height, 1.08 feet); minimum daily, 31 second-feet Aug. 12.

1913-39: 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); minimum daily (including discharge of Pacific Power & Light Co.'s conduit), 199 second-feet Aug. 17, 1930.

Remarks.- Records good. Discharge for days of missing gage heights, Apr. 7, 8, Sept. 29, 30, computed on basis of record for West Fork of Hood River near Dee. Diversions for irrigation above station. Daily discharge regulated by pondage at sawmill at Dee and by Pacific Power & Light Co.'s conduit, which diverts water around gage. Water-stage recorder inspected by employees of Pacific Power & Light Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.2	30	2.6	370	4.5	2,950
1.5	52	3.0	670	5.0	4,010
1.8	99	3.5	1,260	5.3	4,690
2.2	196	4.0	2,030		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	54	215	698	422	371	966	418	198	48	39	44
2	78	50	1,370	1,020	708	396	970	435	158	50	41	47
3	72	1,780	1,320	1,170	357	414	1,020	448	148	100	46	43
4	76	764	2,170	942	218	396	944	470	135	166	48	39
5	48	388	2,180	760	316	342	784	380	160	74	57	43
6	76	220	1,210	583	402	364	694	322	132	49	58	75
7	61	162	1,210	488	322	302	600	298	97	48	79	48
8	52	168	1,140	482	266	276	690	350	81	50	65	44
9	49	229	907	463	188	265	690	369	140	48	60	44
10	68	178	695	445	187	233	658	375	140	64	44	44
11	298	122	590	428	263	434	612	373	129	64	35	48
12	122	108	455	417	1,540	614	589	368	115	63	31	42
13	176	126	360	378	974	578	524	404	114	49	34	46
14	66	153	298	348	1,900	498	452	462	110	63	34	42
15	44	293	278	380	4,480	522	418	520	80	49	36	39
16	186	1,090	241	348	2,350	628	411	502	92	53	36	46
17	73	1,030	222	412	1,540	718	426	406	164	46	42	46
18	69	612	251	822	1,190	750	477	458	173	53	36	41
19	72	429	182	1,010	990	900	588	327	194	46	35	38
20	72	457	156	752	815	1,120	588	254	176	43	38	38
21	60	312	177	604	679	1,270	655	386	130	45	34	55
22	57	233	150	510	609	1,520	680	320	102	44	36	54
23	57	180	285	416	558	1,650	620	239	99	44	34	49
24	54	160	186	420	514	1,740	571	219	66	42	42	40
25	56	138	228	392	520	1,800	596	256	46	46	38	49
26	50	116	194	320	464	1,490	494	337	51	44	42	38
27	56	100	244	363	451	1,130	459	325	50	45	38	40
28	57	85	530	392	397	946	498	335	50	54	32	50
29	52	92	905	423	-	830	610	672	60	48	36	65
30	66	98	775	368	-	781	490	504	72	42	32	53
31	80	-	563	286	-	882	-	256	-	48	44	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,465	298	44	79.5	4,890
November	9,927	1,780	50	331	19,690
December	19,697	2,180	150	635	39,070
Calendar year 1938	231,623	4,580	28	635	459,400
January	16,840	1,170	286	543	33,400
February	23,620	4,480	187	844	46,850
March	24,160	1,800	233	779	47,920
April	18,774	1,020	411	626	37,240
May	11,788	672	219	380	23,380
June	3,462	198	46	115	6,870
July	1,728	166	42	55.7	3,430
August	1,302	79	31	42.0	2,580
September	1,390	75	38	46.3	2,760
Water year 1938-39	135,153	4,480	31	370	268,100

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Combined discharge, in second-feet, of Hood River and Pacific Power & Light Co.'s conduit near Hood River, Oreg., for water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	396	479	665	1,130	666	803	1,390	868	648	452	274	344
2	390	465	1,810	1,430	708	828	1,400	885	608	418	267	304
3	439	2,130	1,720	1,600	705	842	1,450	898	598	521	300	304
4	432	1,190	2,560	1,350	662	803	1,390	920	585	604	305	324
5	424	809	2,560	1,170	744	762	1,230	830	610	502	301	355
6	424	660	1,610	1,020	827	763	1,140	772	582	430	297	292
7	420	602	1,610	938	770	739	1,050	748	547	402	256	274
8	415	614	1,540	928	716	713	1,140	800	531	397	255	274
9	410	669	1,300	873	638	698	1,140	819	590	401	270	291
10	450	618	1,100	874	637	668	1,100	825	590	457	291	292
11	704	560	951	851	713	868	1,060	823	579	482	260	295
12	503	545	857	823	1,900	1,030	1,040	818	565	473	267	278
13	571	566	800	786	1,410	1,000	955	854	564	444	277	273
14	506	593	748	753	2,330	910	902	912	558	408	237	264
15	447	733	728	801	4,900	940	868	970	526	407	234	266
16	419	1,530	680	755	2,790	1,060	861	942	539	379	234	269
17	419	1,460	645	825	1,980	1,160	869	856	612	318	223	280
18	407	1,040	631	1,240	1,820	1,180	927	908	604	315	226	272
19	410	867	609	1,420	1,390	1,330	1,040	777	644	315	205	277
20	411	907	598	1,170	1,230	1,490	1,040	704	626	291	223	321
21	409	762	599	1,020	1,110	1,700	1,100	836	579	301	215	337
22	403	683	592	933	1,040	1,930	1,130	770	552	306	225	312
23	404	630	633	861	985	2,080	1,070	689	549	318	228	299
24	425	610	623	828	947	2,160	1,020	669	509	334	255	283
25	441	588	650	820	950	2,220	1,050	706	466	349	283	264
26	417	566	602	763	899	1,900	944	787	455	391	265	273
27	435	544	678	813	875	1,540	909	775	446	413	257	270
28	411	535	980	829	828	1,360	948	785	453	425	244	281
29	464	542	1,330	853	-	1,250	1,060	1,120	492	352	235	275
30	471	548	1,210	788	-	1,200	940	954	505	328	225	270
31	501	-	1,020	736	-	1,270	-	706	-	299	327	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	13,778	704	390	444	27,330
November	23,045	2,130	465	768	45,710
December	32,642	2,560	592	1,053	64,740
Calendar year 1938	371,776	4,940	292	1,019	737,500
January	29,981	1,600	736	967	59,470
February	34,970	4,900	637	1,249	69,360
March	37,197	2,220	668	1,200	73,780
April	32,163	1,450	861	1,072	63,790
May	25,726	1,120	669	830	51,030
June	16,712	648	446	557	33,150
July	12,232	604	291	395	24,260
August	7,964	327	205	257	15,800
September	8,713	355	264	290	17,280
Water year 1938-39	275,123	4,900	205	754	545,700

West Fork of Hood River near Dee, Oreg.

Location.- Water-stage recorder, lat. 45°36', long. 121°38', in SE¼ sec. 1, T. 1 N., R. 9 E., a quarter of a mile upstream from Dead Point Creek, half a mile upstream from mouth, and 1 mile northwest of Dee. Zero of gage is 802.1 feet above mean sea level (general adjustment of 1929).

Drainage area.- 96 square miles.

Records available.- August 1913 to September 1915 (incomplete), June 1932 to September 1939.

Extremes.- Maximum discharge during year, 5,120 second-feet Feb. 15 (gage height, 7.95 feet); minimum, 107 second-feet Sept. 30 (gage height, 1.49 feet).
1913-15, 1932-39: Maximum discharge, 12,900 second-feet Dec. 22, 1933 (gage height, 12.4 feet), from rating curve extended above 5,000 second-feet; minimum, 100 second-feet Sept. 29, 30, 1915, Nov. 29 to Dec. 4, 1936.

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

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.5	108	3.0	570	5.0	1,840
1.7	140	3.5	830	5.5	2,260
2.0	203	4.0	1,120	6.0	2,720
2.5	353	4.5	1,460	6.6	3,350

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	122	163	312	675	328	353	758	470	280	368	135	132
2	122	180	1,280	934	322	372	758	475	268	350	133	117
3	146	1,230	1,120	988	302	364	802	475	259	253	137	118
4	133	635	1,710	814	296	350	731	488	262	280	138	120
5	130	402	1,530	655	346	328	625	430	322	239	133	123
6	130	305	1,000	545	346	318	565	398	296	218	132	114
7	128	265	1,020	488	328	302	535	394	274	213	125	114
8	126	274	902	488	299	296	565	418	268	206	125	116
9	125	289	758	452	274	283	585	422	312	203	128	116
10	148	248	585	444	265	277	555	418	308	210	130	116
11	256	220	488	430	365	439	535	422	289	213	126	116
12	163	210	414	410	1,050	511	520	422	274	198	126	114
13	220	234	372	383	748	475	480	439	265	192	126	112
14	172	262	339	364	1,780	414	444	466	250	189	123	111
15	150	364	315	386	3,330	422	430	480	245	194	123	110
16	138	1,060	292	360	1,570	530	426	439	265	180	122	111
17	133	964	274	462	1,080	605	439	402	357	170	118	112
18	130	630	259	797	868	630	488	410	357	170	118	114
19	130	484	248	896	726	775	555	353	383	161	117	114
20	128	516	236	685	615	924	570	325	357	155	117	118
21	126	398	236	570	545	1,080	620	368	318	159	116	120
22	126	342	234	493	488	1,260	620	339	296	159	116	116
23	126	299	271	439	457	1,340	570	318	280	159	118	114
24	132	277	265	422	434	1,410	550	305	256	161	120	112
25	140	253	286	410	434	1,380	590	336	236	163	126	112
26	135	236	250	375	398	1,080	525	368	234	170	118	112
27	148	223	308	406	390	841	502	342	231	172	118	112
28	138	216	516	426	364	715	535	350	231	161	117	111
29	153	216	880	410	-	640	585	448	236	150	116	110
30	161	223	726	383	-	610	511	372	228	144	114	108
31	167	-	585	357	-	705	-	305	-	144	142	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,482	256	122	145	8,890
November	11,618	1,230	163	387	23,040
December	18,011	1,710	284	581	35,720
Calendar year 1938	166,906	3,240	114	457	331,000
January	16,347	988	357	527	32,420
February	18,748	3,330	265	670	37,190
March	20,029	1,410	277	646	39,730
April	16,974	802	426	566	33,670
May	12,397	488	305	400	24,590
June	8,437	383	228	281	16,730
July	6,104	368	144	197	12,110
August	3,853	142	114	124	7,640
September	3,445	132	108	115	6,830
Water year 1938-39	140,445	3,330	108	385	278,600

Peak discharge.- Feb. 15 (1:30 a.m.) 5,120 sec.-ft.

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

Location.- Venturi meter, lat. 45°42', long. 121°30', 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 the town of Hood River.

Records available.- October 1922 to September 1939. October 1913 to September 1914 and January 1916 to July 1922 at site in tailrace of former plant.

Average discharge.- 17 years (1922-39), 349 second-feet.

Extremes.- Maximum discharge observed during year, 450 second-feet frequently from October to July; no flow occasionally when power plant was shut down.
1913-14, 1916-39: Maximum discharge observed, 510 second-feet Dec. 30, 1932.

Remarks.- Records excellent. Discharge determined from hourly readings of Venturi meter checked by occasional discharge measurements except for Aug. 20, 21, Sept. 3-6 (computed from 24-hour electrical output of plant). Pacific Power & Light Co.'s conduit diverts water from Hood River in SE¼ sec. 11, T. 2 N., R. 10 E., just downstream from Neal Creek. Water is diverted around station on Hood River near town of Hood River and returned to river in NE¼ sec. 36, T. 3 N., R. 10 E. Hourly readings of Venturi meter and record of daily electrical output furnished by Pacific Power & Light Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	334	425	450	431	244	432	427	450	450	404	235	300
2	312	415	438	406	0	432	435	450	450	368	226	257
3	367	350	404	428	348	428	433	450	450	421	254	261
4	356	430	385	410	444	407	450	450	450	438	257	285
5	376	421	385	406	428	418	450	450	450	428	244	312
6	348	440	399	432	425	399	450	450	450	381	239	217
7	359	440	399	450	448	437	450	450	450	354	177	226
8	363	446	398	446	450	437	450	450	450	347	190	230
9	361	440	398	410	450	433	450	450	450	353	210	247
10	382	440	400	429	450	435	445	450	450	393	247	248
11	406	438	361	423	450	434	450	450	450	418	225	247
12	381	437	402	406	355	420	450	450	450	410	236	236
13	395	440	450	408	438	424	431	450	450	395	243	227
14	440	440	450	405	427	412	450	450	448	345	203	222
15	403	440	450	421	422	418	450	450	446	358	198	227
16	233	440	439	407	437	428	450	440	447	326	198	223
17	346	430	426	413	437	444	443	450	448	272	184	234
18	338	430	380	420	435	428	450	450	431	262	190	231
19	338	438	427	413	400	430	450	450	450	269	170	239
20	339	450	442	418	416	369	450	450	450	248	185	283
21	349	450	422	419	432	428	450	450	449	256	181	282
22	346	450	442	423	429	414	450	450	450	262	189	258
23	347	450	348	445	427	432	450	450	450	274	194	250
24	371	450	437	408	433	421	450	450	443	292	213	243
25	385	450	422	428	430	422	450	450	420	303	245	215
26	367	450	408	443	435	412	450	450	404	347	223	235
27	379	444	434	450	422	405	450	450	396	368	219	230
28	354	450	450	437	431	415	450	450	403	371	212	231
29	412	450	428	430	-	416	450	450	432	304	199	210
30	405	450	432	420	-	417	450	450	433	286	193	217
31	421	-	432	450	-	389	-	450	-	251	283	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	11,313	440	233	365	22,440
November	13,124	450	350	437	26,030
December	12,938	450	348	417	25,660
Calendar year 1938	140,117	450	227	384	277,900
January	13,135	450	405	424	26,050
February	11,343	450	0	405	22,500
March	13,036	444	389	421	25,860
April	13,414	450	427	447	26,610
May	13,940	450	440	450	27,650
June	13,250	450	396	442	26,280
July	10,504	438	248	339	20,830
August	6,662	257	170	215	13,210
September	7,323	312	210	244	14,520
Water year 1938-39	139,982	450	0	384	277,600

White Salmon River at Husum, Wash.

Location.- Water-stage recorder, lat. 45°47'50", long. 121°29'15", in SW¼ sec. 30, T. 4 N., R. 11 E., at Husum, 500 feet upstream from Rattlesnake Creek.

Drainage area.- 300 square miles.

Records available.- September 1909 to October 1919 and October 1929 to September 1939 in reports of Geological Survey. November 1919 to September 1920 in State Water-Supply Bulletin 5.

Average discharge.- 21 years (1909-20, 1929-39), 968 second-feet.

Extremes.- Maximum discharge during year, 1,240 second-feet Feb. 15 (gage height, 3.30 feet); minimum, 420 second-feet Sept. 26, 30.
1909-19, 1929-39: Maximum discharge, 10,800 second-feet Dec. 22, 1933 (gage height, 11.0 feet); minimum, 340 second-feet Dec. 30, 1930 (gage height, 0.64 foot).

Remarks.- Records fair. Gage-height record faulty Apr. 21 to Aug. 28; discharge computed on basis of records for station near Underwood. Shifting-control method used Oct. 1 to Feb. 17, Aug. 29 to Sept. 30. Many diversions for irrigation near Trout Lake. Springs greatly increase flow a few miles above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	605	614	634	728	648	736	1,130	1,100	912	722	555	552
2	605	587	694	928	652	732	1,160	1,120	874	715	543	533
3	611	680	697	1,100	652	736	1,190	1,120	862	715	538	523
4	617	728	750	1,030	648	725	1,180	1,140	839	732	538	519
5	634	672	887	942	652	714	1,140	1,100	835	739	535	516
6	627	624	879	879	683	714	1,110	1,060	839	722	532	514
7	620	593	851	831	686	714	1,090	1,050	816	715	527	507
8	620	581	863	799	683	711	1,080	1,060	812	695	524	505
9	611	581	863	770	655	704	1,080	1,090	801	686	522	498
10	630	569	827	753	648	700	1,060	1,090	789	682	522	489
11	694	552	753	746	672	725	1,060	1,100	786	675	522	487
12	690	544	704	725	756	764	1,050	1,110	767	665	519	485
13	725	544	666	711	778	778	1,010	1,140	752	646	522	485
14	676	544	641	694	890	767	987	1,160	745	652	522	485
15	638	546	641	690	1,220	770	956	1,180	755	656	517	479
16	614	578	617	676	1,160	788	920	1,210	759	646	511	479
17	602	644	605	672	1,060	827	942	1,180	767	636	506	467
18	596	638	596	704	957	851	964	1,180	797	636	504	465
19	587	617	587	767	928	875	1,040	1,160	805	612	495	456
20	578	602	581	764	879	907	1,080	1,080	786	596	493	443
21	578	584	575	742	847	946	1,100	1,120	759	617	485	441
22	575	563	566	725	819	1,000	1,140	1,120	752	589	485	434
23	566	552	569	711	803	1,080	1,180	1,080	742	580	485	434
24	563	555	584	694	788	1,140	1,160	1,060	739	575	482	441
25	560	549	593	680	781	1,200	1,130	1,060	742	572	477	435
26	557	544	575	672	764	1,230	1,150	1,060	732	558	477	425
27	555	541	590	680	753	1,200	1,080	1,040	712	552	478	427
28	552	538	605	676	742	1,140	1,120	1,010	702	552	469	425
29	578	541	630	680	-	1,100	1,170	1,060	729	549	465	425
30	605	557	683	672	-	1,080	1,180	1,040	735	546	485	423
31	627	-	686	662	-	1,090	-	980	-	546	498	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	18,896	725	552	610	37,480
November	17,562	728	538	585	34,830
December	20,992	887	566	677	41,640
Calendar year 1938	397,890	2,710	538	1,090	789,300
January	23,503	1,100	662	758	46,620
February	22,234	1,220	648	794	44,100
March	27,444	1,230	700	885	54,430
April	32,639	1,190	920	1,088	64,740
May	34,060	1,210	980	1,099	67,560
June	23,442	912	702	781	46,500
July	19,779	739	546	638	39,230
August	15,753	555	469	508	31,250
September	14,197	552	423	473	28,160
Water year 1938-39	270,501	1,230	423	741	536,500

White Salmon River near Underwood, Wash.

Location.- Water-stage recorder, lat. 45°45'00", long. 121°31'30", in NW¼ sec. 14, T. 3 N., R. 10 E., 1,000 feet downstream from Northwestern Electric Co.'s Condit power plant and 2 miles north of Underwood and mouth.

Drainage area.- 384 square miles.

Records available.- March 1915 to September 1930, September 1935 to September 1939. October 1912 to February 1913 at site at dam 1 mile upstream.

Average discharge.- 19 years (1915-30, 1935-39), 1,045 second-feet.

Extremes.- Maximum discharge during year, 2,260 second-feet Feb. 15 (gage height, 5.65 feet); minimum, 25 second-feet July 16 (gage height, 0.80 foot); minimum daily, 316 second-feet Sept. 10; both minimums due to regulation.
1915-30, 1935-39: Maximum discharge, about 9,700 second-feet Dec. 29, 1917 (gage height, 9.5 feet, former datum, relation to present datum unknown); practically no flow at times when power plant is shut down.

Remarks.- Records excellent except those for period of missing gage heights, Jan. 2-9, which were computed by plant superintendent on basis of power output and are fair. Many diversions for irrigation near Trout Lake. Flow regulated by operation of power plant.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

2.8	300	4.5	1,180
3.0	365	5.0	1,600
3.5	555	5.4	2,000
4.0	820		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	592	656	681	760	742	860	1,190	1,060	981	708	580	550
2	615	625	890		738	848	1,120	1,160	920	720	549	594
3	642	787	756		732	854	1,190	1,160	778	728	536	510
4	604	695	774		738	790	1,230	1,220	863	710	540	586
5	685	774	924		711	820	1,230	1,050	948	826	545	418
				970								
6	643	682	978		782	936	1,170	1,150	796	684	635	524
7	638	647	704		842	816	1,090	1,110	851	730	446	530
8	719	585	1,080		789	797	1,150	970	826	880	517	530
9	618	668	820		731	803	1,190	1,110	782	582	534	862
10	576	12	930	863	616	820	985	1,090	828	568	539	316
11	714	590	806	760	737	778	1,100	1,140	827	732	528	323
12	712	646	729	782	938	974	1,070	1,140	810	620	558	514
13	790	528	715	832	955	970	1,090	1,140	850	672	583	507
14	658	610	697	716	1,110	964	919	1,220	879	660	440	500
15	700	585	621	793	1,950	1,000	1,100	1,120	666	730	532	504
16	646	637	691	724	1,620	910	813	1,240	691	658	516	488
17	628	707	649	797	1,370	1,120	1,090	1,240	864	555	520	486
18	636	756	580	742	1,290	1,060	988	1,160	786	662	512	476
19	621	668	708	844	1,260	1,130	1,000	1,240	809	623	540	494
20	592	629	580	815	999	1,140	1,090	1,120	826	604	485	450
21	608	645	680	858	1,030	1,260	1,130	1,130	828	626	517	458
22	610	642	618	792	894	1,250	1,170	1,090	790	574	534	464
23	606	603	758	784	930	1,250	1,210	1,130	652	574	484	506
24	586	504	528	784	932	1,270	1,160	1,090	795	668	492	413
25	591	642	596	686	900	1,380	1,150	1,070	758	522	489	438
26	579	591	603	708	894	1,390	1,110	1,070	844	572	486	452
27	565	568	668	714	880	1,340	1,060	1,090	706	539	478	472
28	592	553	607	788	882	1,280	1,130	1,040	718	827	472	430
29	640	604	738	766	-	1,250	1,200	1,020	714	345	492	445
30	560	586	745	709	-	1,240	1,240	1,050	700	537	483	450
31	696	-	790	792	-	1,230	-	1,040	-	528	492	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	19,662	790	560	634	39,000
November	19,055	787	504	635	37,800
December	22,644	1,080	528	730	44,910
Calendar year 1938	438,751	3,330	502	1,202	870,200
January	25,569	-	686	825	50,720
February	26,992	1,950	616	964	53,540
March	32,530	1,390	778	1,049	64,520
April	33,363	1,240	813	1,112	66,170
May	34,660	1,240	970	1,118	68,750
June	24,086	981	652	803	47,770
July	19,964	880	345	644	39,600
August	16,054	635	440	518	31,840
September	14,690	862	316	490	29,140
Water year 1938-39	289,269	1,950	316	793	573,800

Wind River near Carson, Wash.

Location.- Water-stage recorder, lat. 45°44'10", long. 121°48'10", in SW¼NE¼ sec. 21, T. 3 N., R. 8 E., three-quarters of a mile upstream from Little Wind River, 1 mile northeast of Carson, and 2½ miles upstream from mouth. Discharge measurements made just downstream from mouth of Little Wind River, and records include its flow.

Drainage area.- 224 square miles.

Records available.- December 1934 to September 1939.

Extremes.- Maximum discharge during year, 7,300 second-feet Feb. 15 (gage height, 11.90 feet), from rating curve extended above 5,000 second-feet on basis of velocity-area studies; minimum, 140 second-feet Sept. 27 (gage height, 2.57 feet).
1934-39: Maximum discharge, 16,700 second-feet Dec. 29, 1937 (gage height, 17.30 feet), from rating curve extended above 5,000 second-feet on basis of velocity-area studies; minimum, 136 second-feet Nov. 29, Dec. 1, 1936 (gage height, 2.21 feet).

Remarks.- Records good except those for periods of missing gage heights, Jan. 27 to Feb. 6 and Mar. 23-27 (computed on basis of records for White Salmon River at Husum and Lewis River near Cougar), and those above 5,000 second-feet, all of which are poor. Discharge for Nov. 25, 26, Aug. 27 interpolated. Flow occasionally affected by pondage at Forest Service power plant on Trout Creek. No diversions.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 16				Nov. 17 to Sept. 30							
2.7	174	4.5	645	2.5	130	4.0	443	6.0	1,140	10.0	4,640
3.0	228	5.0	820	2.7	159	4.5	584	7.0	1,710	11.2	6,280
3.5	350	5.5	1,010	3.0	210	5.0	744	8.0	2,420		
4.0	490	6.0	1,210	3.5	315	5.5	925	9.0	3,400		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	176	405	944	1,760	780	888	1,470	851	443	292	189	190
2	176	391	3,090	4,120	760	906	1,530	833	443	285	187	180
3	208	1,220	3,400	5,030	750	963	1,590	833	430	292	185	175
4	204	1,090	3,190	3,870	750	925	1,470	833	430	304	185	172
5	201	768	3,400	2,690	900	888	1,350	779	443	304	184	169
6	194	580	2,420	2,110	1,100	888	1,190	744	443	288	180	165
7	187	490	1,830	1,770	1,040	888	1,140	710	430	279	178	164
8	184	490	1,650	1,590	925	851	1,140	710	416	270	177	162
9	180	549	1,470	1,410	833	797	1,190	710	430	264	175	159
10	192	490	1,240	1,350	779	779	1,140	633	416	260	173	159
11	334	433	1,040	1,290	861	1,040	1,090	550	416	257	172	159
12	297	405	944	1,240	2,430	1,410	1,090	694	403	251	170	159
13	364	391	851	1,140	2,110	1,470	1,040	710	430	247	170	161
14	268	405	797	1,040	3,160	1,240	963	710	390	243	170	159
15	237	490	727	1,140	6,280	1,190	925	727	377	245	169	158
16	220	1,160	677	1,040	3,870	1,350	906	710	403	243	169	156
17	208	1,650	630	1,090	2,690	1,710	925	677	390	239	167	154
18	218	1,140	599	1,870	2,110	1,830	1,000	661	403	231	165	153
19	194	888	570	2,510	1,770	1,970	1,090	614	430	229	165	152
20	190	833	555	2,040	1,530	2,180	1,090	570	403	227	164	150
21	188	727	540	1,650	1,350	2,420	1,140	630	390	223	164	148
22	184	630	526	1,410	1,240	2,790	1,090	599	377	220	165	147
23	182	555	570	1,240	1,140	3,000	1,040	540	364	216	165	147
24	184	512	614	1,140	1,040	2,850	1,000	526	352	210	165	144
25	188	480	727	1,040	1,040	2,400	1,000	512	339	208	167	144
26	188	448	677	963	1,000	2,050	944	526	339	206	167	146
27	210	416	794	1,000	963	1,800	906	512	327	205	170	141
28	214	403	1,240	930	925	1,590	906	498	315	201	172	146
29	271	390	2,000	860	-	1,470	944	526	315	196	169	144
30	342	456	2,040	800	-	1,350	906	512	304	194	162	143
31	461	-	1,650	800	-	1,410	-	470	-	190	175	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	7,044	461	176	227	1.01	1.16	13,970
November	19,285	1,650	390	643	2.87	3.20	38,250
December	41,402	3,400	526	1,336	5.96	6.87	82,120
Calendar year 1938	378,658	7,000	174	1,037	4.63	62.82	751,000
January	51,733	5,030	800	1,669	7.45	8.59	102,600
February	44,126	6,280	750	1,576	7.04	7.33	87,520
March	47,293	3,000	779	1,526	6.81	7.85	93,800
April	33,205	1,590	906	1,107	4.94	5.51	65,860
May	20,110	851	470	649	2.90	3.34	39,890
June	11,791	443	304	393	1.75	1.95	23,390
July	7,519	304	190	243	1.08	1.24	14,910
August	5,335	189	162	172	.768	.89	10,580
September	4,706	190	141	157	.701	.78	9,330
Water year 1938-39	293,549	6,280	141	804	3.59	48.71	582,200

Sandy River near Marmot, Oreg.

Location.- Water-stage recorder, lat. 45°23', long. 122°08', in NE¼ sec. 24, T. 2 S., R. 5 E., 1 mile southwest of Marmot, 1½ miles upstream from Sandy River Dam of Portland General Electric Co., and 5 miles downstream from Salmon River.

Drainage area.- 262 square miles.

Records available.- August 1911 to December 1915, July 1919 to September 1939. Equivalent records for January 1916 to June 1919 obtained by combining those for Sandy River below dam near Marmot with those for Sandy River canal near Marmot.

Average discharge.- 28 years, 1,331 second-feet.

Extremes.- Maximum discharge during year, 8,860 second-feet Feb. 15 (gage height, 9.08 feet); minimum, 245 second-feet Sept. 29, 30 (gage height, 2.10 feet).
1911-39: Maximum discharge, about 23,200 second-feet Jan. 6, 1923 (gage height, 17.5 feet, former site and datum), by computation of flow over dam; minimum, 210 second-feet Oct. 14, 15, 1931.

Remarks.- Records excellent. No gage-height record Dec. 6; discharge computed on basis of records at stations on Salmon River above Boulder Creek and Sandy River below Bull Run River. No diversion or regulation above station. Water-stage recorder inspected by employee of Portland General Electric Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

2.1	245	3.5	960	6.0	3,520
2.5	415	4.0	1,300	7.0	5,030
3.0	665	5.0	2,220	8.3	7,310

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	277	366	840	1,460	900	990	2,220	1,620	870	744	420	420
2	273	415	2,460	1,660	870	1,020	2,280	1,620	810	709	415	348
3	361	2,730	2,640	1,850	840	1,020	2,340	1,620	810	900	424	338
4	309	1,800	3,950	1,710	810	990	2,110	1,710	840	960	428	334
5	297	1,230	3,800	1,580	900	930	1,850	1,500	960	810	415	343
6	293	900	2,500	1,340	1,090	990	1,710	1,380	1,090	750	406	317
7	273	774	2,710	1,230	990	900	1,760	1,340	990	726	384	305
8	257	810	2,780	1,260	900	900	2,000	1,380	960	692	374	301
9	261	870	2,280	1,230	810	840	2,060	1,420	1,200	692	379	301
10	313	780	1,800	1,230	780	840	1,850	1,420	1,090	726	384	297
11	654	660	1,500	1,200	870	1,090	1,850	1,420	990	726	384	309
12	460	605	1,300	1,120	2,060	1,420	1,800	1,380	930	676	379	297
13	570	638	1,160	1,060	1,660	1,340	1,620	1,380	900	654	379	293
14	420	738	1,060	990	3,780	1,160	1,460	1,420	840	616	366	285
15	348	1,120	990	1,020	7,310	1,300	1,420	1,420	840	610	356	277
16	309	3,170	900	990	3,950	2,110	1,460	1,300	870	575	352	277
17	293	3,380	840	1,200	2,580	2,710	1,620	1,200	1,300	550	348	281
18	281	2,000	810	1,800	2,000	3,040	2,000	1,230	1,580	545	348	281
19	273	1,460	756	1,900	1,710	3,310	2,280	1,120	1,620	520	343	285
20	269	1,540	726	1,540	1,460	3,450	2,280	1,020	1,760	500	334	301
21	265	1,260	738	1,300	1,300	3,660	2,400	1,120	1,500	510	330	305
22	261	1,090	726	1,160	1,200	4,100	2,280	1,060	1,260	505	334	297
23	253	930	840	1,060	1,160	4,100	2,060	1,020	1,160	515	338	281
24	277	840	870	1,060	1,120	4,100	1,900	990	1,020	515	343	273
25	301	780	930	1,090	1,120	3,800	1,900	990	930	515	370	265
26	289	720	870	1,020	1,060	3,170	1,710	1,090	900	525	338	265
27	325	670	930	1,020	1,090	2,340	1,710	1,020	840	530	338	261
28	301	638	1,580	1,120	1,020	1,950	1,900	990	840	505	338	257
29	334	665	1,900	1,120	-	1,800	2,060	1,160	840	465	317	253
30	348	676	1,800	1,020	-	1,710	1,760	1,020	810	446	305	253
31	384	-	1,460	960	-	1,900	-	930	-	438	379	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	10,129	654	253	327	1.25	1.44	20,090
November	34,255	3,380	366	1,142	4.36	4.86	67,940
December	48,446	3,950	726	1,563	5.97	6.88	96,090
Calendar year 1938	449,802	8,070	253	1,232	4.70	63.87	892,200
January	39,300	1,900	960	1,268	4.84	5.58	77,950
February	45,340	7,310	780	1,619	6.18	6.44	89,930
March	62,980	4,100	840	2,032	7.76	8.95	124,900
April	57,650	2,400	1,420	1,922	7.34	8.19	114,300
May	39,290	1,710	930	1,267	4.84	5.58	77,930
June	31,350	1,760	810	1,045	3.99	4.45	62,180
July	19,150	960	438	618	2.36	2.72	37,980
August	11,348	428	305	366	1.40	1.61	22,510
September	8,900	420	253	297	1.13	1.26	17,650
Water year 1938-39	408,138	7,310	253	1,118	4.27	57.96	809,400

Peak discharge.- Nov. 3 (2 p.m.) 4,870 sec.-ft.; Nov. 16 (6 p.m.) 5,190 sec.-ft.; Dec. 2 (7 p.m.) 4,100 sec.-ft.; Feb. 15 (5 a.m.) 8,860 sec.-ft.

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

Location.- Water-stage recorder, lat. 45°27', long. 122°15', in NW¼ sec. 30, T. 1 S., R. 5 E., 1 mile downstream from Bull Run River and 2 miles northwest of Bull Run. Zero of gage is about 202 feet above mean sea level (river profile map).

Drainage area.- 440 square miles.

Records available.- October 1929 to September 1939. April 1910 to September 1914, at site three-quarters of a mile upstream.

Average discharge.- 13 years (1910-11, 1912-14, 1929-39), 2,232 second-feet.

Extremes.- Maximum discharge during year, 21,800 second-feet Feb. 15 (gage height, 12.23 feet); minimum, 113 second-feet Oct. 8 (gage height, 0.94 foot); minimum daily, 128 second-feet Oct. 9.

1919-14, 1929-39: Maximum discharge, 58,000 second-feet Mar. 31, 1931 (gage height, 20.6 feet), from rating curve extended above 15,000 second-feet; minimum, 53 second-feet Oct. 4, 1931 (gage height, 0.53 foot); minimum daily, that of Oct. 9, 1938.

Remarks.- Records excellent. No diversion for irrigation above station; about 50,000 acre-feet diverted annually from Bull Run River by Portland Water Bureau. Flow slightly regulated by Bull Run Lake and Lake Ben Morrow Reservoir of Portland Water Bureau; considerable diurnal regulation by pondage for Bull Run power plant of Portland General Electric Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.0	125	3.0	985	6.0	4,310	9.0	11,000
1.5	260	4.0	1,780	7.0	6,090	10.0	14,100
2.0	455	5.0	2,890	8.0	8,340	11.2	18,100

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	345	558	1,510	3,050	1,680	1,730	3,290	2,720	1,350	1,120	486	592
2	416	563	5,350	4,190	1,610	1,850	3,620	2,520	1,300	921	495	499
3	419	5,590	6,090	4,460	1,560	1,940	3,770	2,450	1,160	1,240	498	396
4	406	5,680	8,840	3,970	1,510	1,840	3,520	2,590	810	1,270	474	415
5	439	3,400	8,340	3,590	1,620	1,590	3,030	2,360	1,670	1,370	494	415
6	360	2,150	5,130	2,980	2,390	1,920	2,710	1,840	1,850	1,150	462	417
7	311	1,660	5,330	2,470	2,200	1,690	2,710	1,780	1,700	1,160	457	378
8	167	1,630	5,400	2,390	1,870	1,610	2,860	2,210	1,530	1,090	424	395
9	128	1,800	4,410	2,570	1,640	1,450	3,320	2,010	1,920	875	460	363
10	345	1,660	3,370	2,580	1,460	1,450	3,160	1,990	1,730	929	458	362
11	1,010	1,380	2,730	2,390	1,600	1,850	3,000	2,040	1,620	916	474	388
12	606	1,050	2,260	2,220	3,700	2,490	2,980	1,990	1,530	890	482	386
13	876	1,150	1,950	2,270	3,820	2,950	2,660	1,790	1,300	828	428	372
14	668	1,320	1,720	1,690	7,920	2,340	2,290	2,020	1,210	795	398	362
15	461	2,120	1,550	1,680	18,100	2,530	1,880	2,180	1,180	794	452	354
16	360	7,150	1,440	1,930	8,840	4,300	2,120	1,940	1,360	736	402	374
17	382	8,340	1,290	2,260	5,710	4,e90	2,e40	1,710	1,900	676	414	292
18	427	4,930	1,220	4,740	4,030	5,240	3,050	1,630	2,760	652	414	294
19	404	3,090	1,170	5,120	3,400	5,560	3,540	1,600	4,060	654	383	329
20	450	3,320	1,080	3,950	2,990	5,650	3,580	1,250	3,550	616	422	367
21	361	2,770	1,120	2,530	2,500	5,890	3,780	1,490	2,740	639	387	334
22	319	2,100	1,130	2,010	2,280	6,500	3,400	1,680	2,210	602	382	322
23	242	1,750	1,670	2,200	2,100	6,710	3,140	1,410	1,950	378	356	336
24	364	1,500	1,850	1,890	2,010	6,500	3,170	1,270	1,650	660	442	306
25	429	1,220	1,710	2,110	1,800	6,090	3,280	1,360	1,100	545	458	309
26	400	1,180	1,780	1,840	1,610	5,120	2,940	1,520	1,330	568	426	311
27	434	1,050	1,980	1,960	2,110	3,940	2,770	1,260	1,170	549	370	320
28	439	980	3,710	2,180	1,870	3,210	2,880	1,380	1,100	594	433	310
29	564	996	5,110	2,200	-	2,830	3,170	1,820	1,130	594	432	329
30	468	1,060	4,410	2,220	-	2,700	2,760	1,570	1,100	498	386	380
31	561	-	2,960	1,860	-	2,800	-	1,430	-	554	446	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	13,561	1,010	128	437	0.993	1.14	26,900
November	73,147	e,340	558	2,438	5.54	6.18	145,100
December	97,610	8,840	1,080	3,149	7.16	8.26	193,600
Calendar year 1938	778,093	18,100	128	2,132	4.85	65.81	1,543,000
January	83,500	5,120	1,680	2,694	6.12	7.06	165,600
February	93,930	18,100	1,460	3,355	7.62	7.94	186,300
March	107,160	6,710	1,450	3,457	7.86	9.06	212,500
April	91,020	3,780	1,880	3,034	6.90	7.70	180,500
May	56,810	2,720	1,250	1,833	4.17	4.81	112,700
June	50,970	4,060	810	1,699	3.86	4.31	101,100
July	24,863	1,370	378	802	1.82	2.10	49,320
August	13,495	498	356	435	.989	1.14	26,770
September	11,007	592	292	367	.834	.93	21,830
Water year 1938-39	717,073	18,100	128	1,965	4.47	60.63	1,422,000

Peak discharge.- Nov. 3 (4 p.m.) 12,200 sec.-ft.; Nov. 16 (7-8 p.m.) 12,800 sec.-ft.; Feb. 15 (8 a.m.) 21,800 sec.-ft.

Salmon River near Government Camp, Oreg.

Location.- Water-stage recorder, lat. 45°16', long. 121°43', in sec. 31, T. 3 S., R. 9 E., near lower end of Red Top Meadows, 4 miles southeast of Government Camp. Zero of gage is 3,446.45 feet above mean sea level (general adjustment of 1929).

Drainage area.- 8.7 square miles.

Records available.- May 1910 to May 1912, April 1926 to September 1939.

Average discharge.- 14 years (1910-11, 1926-39), 41.3 second-feet.

Extremes.- Maximum discharge during year, 144 second-feet Nov. 3 (gage height, 1.61 feet); minimum, 16 second-feet Mar. 4.
1910-12, 1926-39: Maximum discharge, 650 second-feet Dec. 22, 1933 (gage height, 3.61 feet); minimum, 12 second-feet Nov. 21, 1929, Oct. 19, 1930, Nov. 2, 10-12, Nov. 28 to Dec. 4, 1936.

Remarks.- Records fair. Discharge for period of missing gage heights, Mar. 16 to Apr. 10, computed on basis of recorded range in stage and record for station downstream from Linney Creek. Shifting-control method used Feb. 14 to Sept. 30. No diversion or regulation above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	22	32	38	26	20	68	76	54	44	27	22
2	20	25	36	42	26	20	70	79	53	45	27	21
3	24	87	46	41	26	20	63	81	53	54	27	21
4	20	35	109	35	25	18	66	77	55	51	26	21
5	20	26	95	33	25	20	62	68	66	46	24	21
6	19	23	59	31	21	18	60	67	60	43	24	20
7	19	23	96	30	24	18	62	70	54	41	23	20
8	18	24	77	29	23	18	70	74	54	40	23	20
9	18	24	68	30	23	18	70	74	59	40	23	20
10	20	24	53	34	22	18	66	77	54	40	23	20
11	32	23	45	32	24	18	67	76	52	39	23	22
12	21	23	39	30	39	18	59	76	50	38	24	22
13	24	23	37	28	27	18	51	79	49	38	23	21
14	20	25	35	27	32	18	48	83	48	38	22	21
15	20	36	33	27	53	24	52	84	49	37	21	20
16	20	65	31	26	33	40	57	78	50	36	22	20
17	19	49	30	29	27	50	66	72	83	35	23	20
18	19	37	29	35	25	55	77	76	74	35	23	20
19	19	35	29	35	24	50	81	65	69	32	22	20
20	18	40	28	30	23	60	84	64	63	29	21	20
21	18	34	28	29	23	74	88	80	55	29	21	20
22	18	30	30	28	23	76	92	65	52	29	21	20
23	18	30	37	27	23	76	83	68	52	30	21	19
24	19	30	35	29	22	74	74	65	49	31	21	18
25	19	28	31	29	23	72	69	64	47	31	21	18
26	19	28	30	28	22	68	68	66	46	30	20	18
27	19	27	31	28	22	64	74	63	46	29	21	21
28	19	26	31	28	21	60	84	62	46	28	21	21
29	20	30	48	27	-	56	87	69	46	27	21	21
30	21	31	40	27	-	56	74	59	46	27	19	21
31	21	-	35	27	-	64	-	56	-	27	27	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	621	32	18	20.0	2.30	2.65	1,230
November	963	87	22	32.1	3.69	4.12	1,910
December	1,383	109	28	44.6	5.13	5.91	2,740
Calendar year 1938	16,040	146	18	43.9	5.05	68.58	31,830
January	949	42	26	30.6	3.52	4.06	1,880
February	727	53	21	26.0	2.99	3.11	1,440
March	1,279	76	18	41.3	4.75	5.48	2,540
April	2,097	92	48	69.9	8.03	8.96	4,160
May	2,213	84	56	71.4	8.21	9.46	4,390
June	1,634	83	46	64.5	6.26	6.98	3,240
July	1,119	54	27	36.1	4.15	4.78	2,220
August	705	27	19	22.7	2.61	3.01	1,400
September	609	22	18	20.3	2.33	2.60	1,210
Water year 1938-39	14,299	109	18	39.2	4.51	61.12	28,360

Salmon River below Linney Creek, Oreg.

Location.- Water-stage recorder, lat. 45°13', long. 121°52', 200 feet downstream from Linney Creek, 9 miles southeast of Welches, and 11 miles downstream from station near Government Camp.

Drainage area.- 54 square miles.

Records available.- October 1927 to September 1939.

Average discharge.- 12 years, 204 second-feet.

Extremes.- Maximum discharge during year, 650 second-feet Dec. 5 (gage height, 2.43 feet); minimum, 54 second-feet Sept. 30 (gage height, 0.41 foot).
1927-39: Maximum discharge, 4,070 second-feet Mar. 31, 1931 (gage height, 5.81 feet), from rating curve extended above 1,500 second-feet; minimum, 37 second-feet Nov. 2, 1936 (gage height, 0.22 foot).

Remarks.- Records good except those for period of missing gage heights, Mar. 13 to May 10, which were computed on basis of record for station above Boulder Creek and are fair. No diversion or regulation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.4	53	1.0	144	2.0	460
.5	64	1.3	216	2.4	635
.7	92	1.6	310		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	76	136	159	120	123	390	430	185	140	82	80
2	57	86	198	183	118	123	400	430	178	138	80	72
3	70	346	251	206	116	122	400	420	176	148	78	68
4	64	183	528	178	116	118	370	430	183	142	78	67
5	62	125	544	166	116	113	330	390	211	138	78	69
6	62	105	376	153	110	115	310	360	200	133	78	67
7	60	97	429	146	110	110	320	350	180	125	76	64
8	58	102	417	148	106	108	360	350	176	118	76	63
9	57	102	364	144	102	106	370	360	195	115	74	63
10	61	95	296	151	102	105	340	360	176	113	73	63
11	105	84	254	151	113	110	340	350	164	111	73	67
12	77	86	219	146	193	115	320	342	159	108	73	67
13	83	92	198	140	148	113	300	339	155	106	73	65
14	67	97	183	138	198	110	280	342	153	105	70	64
15	63	108	173	140	391	140	260	335	153	105	70	63
16	61	300	159	134	279	250	300	314	159	103	69	61
17	60	317	148	140	228	370	350	296	239	102	69	60
18	58	208	142	178	203	440	410	321	216	100	68	60
19	58	162	138	185	183	480	480	286	203	98	67	60
20	57	190	133	162	166	480	500	264	200	97	67	58
21	57	148	131	151	157	540	550	303	176	95	65	57
22	57	129	129	144	151	600	540	270	166	95	65	57
23	58	116	140	138	146	590	500	257	171	94	65	57
24	61	113	138	142	142	560	450	239	159	92	65	56
25	63	105	134	146	142	520	440	236	151	90	68	56
26	61	98	122	136	136	460	410	233	146	89	67	55
27	65	95	125	136	133	400	420	222	144	88	65	55
28	62	94	142	138	127	350	450	211	144	86	67	56
29	72	110	193	133	-	310	500	219	144	86	65	55
30	73	110	188	129	-	300	450	206	144	83	63	55
31	73	-	159	123	-	340	-	193	-	84	77	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,999	105	57	64.5	1.19	1.37	3,960
November	4,079	346	76	136	2.52	2.81	8,090
December	6,887	544	122	222	4.11	4.74	13,660
Calendar year 1938	75,757	1,050	56	208	3.85	52.17	150,300
January	4,664	206	123	150	2.78	3.20	9,250
February	4,352	391	102	155	2.87	2.99	8,630
March	8,721	600	105	281	5.20	6.00	17,300
April	11,840	550	260	395	7.31	8.16	23,480
May	9,658	430	193	312	5.78	6.66	19,160
June	5,206	239	144	174	3.22	3.59	10,330
July	3,327	148	83	107	1.98	2.28	6,600
August	2,204	82	63	71.1	1.32	1.52	4,370
September	1,860	80	55	62.0	1.15	1.28	3,690
Water year 1938-39	64,797	600	55	178	3.30	44.60	128,500

Peak discharge.- Dec. 5 (6 a.m.) 650 sec.-ft.

Salmon River above Boulder Creek, near Brightwood, Oreg.

Location.- Water-stage recorder, lat. 45°22', long. 122°01', in SW¼SE¼ sec. 25, T. 2 S., R. 6 E., 1 mile upstream from Boulder Creek, 1¼ miles south of Brightwood, and 2¾ miles upstream from mouth. Zero of gage is 1,089.2 feet above mean sea level (general adjustment of 1929), by surveys of Corps of Engineers, U. S. Army.

Drainage area.- 106 square miles.

Records available.- August 1936 to September 1939. October 1912 to March 1913 (gage heights only), at site at fish hatchery downstream from Boulder Creek. August 1913 to September 1914, July 1920 to September 1921, April 1925 to September 1936, at sites at or near Welches, about 5 miles upstream from present site.

Extremes.- Maximum discharge during year, 3,600 second-feet Feb. 15 (gage height, 4.33 feet); minimum, 67 second-feet Sept. 23-30 (gage height, 0.61 foot).
1913-14, 1920-21, 1925-39: Maximum discharge, 13,000 second-feet (estimated) Mar. 31, 1931 (gage height, 9.80 feet at Welches); minimum, 59 second-feet Nov. 30, Dec. 1, 1936.

Remarks.- Records good except those for periods of missing gage heights, Oct. 14 to Dec. 5, Dec. 23 to Feb. 8, which were computed on basis of records for stations on Salmon River below Linney Creek and Sandy River near Marmot and are poor. No diversion or regulation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.6	65	1.5	350	3.0	1,560
.8	108	2.0	610	3.5	2,260
1.0	162	2.5	1,020	4.0	3,030

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	79	105	300	550	270	314	840	631	281	200	108	116
2	77	150	900	680	260	336	858	631	265	190	108	94
3	96	900	1,000	800	255	336	858	624	258	235	106	90
4	94	450	1,600	700	250	318	792	638	273	254	106	83
5	87	250	1,500	600	260	293	688	574	359	221	106	83
6	87	210	903	520	270	314	631	522	364	210	103	83
7	79	200	921	450	260	289	638	506	314	196	101	79
8	77	210	903	460	250	281	744	506	301	187	96	77
9	75	210	760	450	243	265	760	512	382	181	96	75
10	83	200	604	460	239	261	696	512	350	174	96	75
11	193	180	506	440	281	354	696	500	305	168	96	79
12	148	170	435	400	832	490	680	485	281	165	96	81
13	168	180	386	350	592	445	592	490	258	156	96	81
14	115	200	354	340	1,580	359	539	495	243	156	94	77
15	95	280	323	350	2,710	405	317	495	243	151	94	75
16	88	750	297	340	1,190	704	534	465	254	154	92	73
17	83	800	281	400	768	975	604	430	386	145	92	73
18	80	560	261	700	610	1,110	728	455	430	140	92	73
19	78	450	250	780	522	1,200	816	420	455	140	87	73
20	76	500	239	600	455	1,220	840	377	475	137	85	71
21	75	420	235	450	410	1,350	921	425	405	131	85	69
22	74	340	232	370	382	1,520	912	395	341	129	85	69
23	75	270	277	330	368	1,520	832	377	323	126	85	69
24	78	240	290	340	359	1,490	760	354	289	126	85	69
25	82	200	280	350	364	1,380	744	350	269	124	87	69
26	80	200	250	330	336	1,140	666	368	250	121	87	67
27	86	190	320	330	346	858	673	346	235	118	83	67
28	82	180	600	340	328	728	720	323	224	116	87	69
29	92	200	780	340	-	659	784	354	218	113	85	67
30	96	200	740	310	-	645	673	323	210	111	81	67
31	105	-	550	290	-	744	-	297	-	111	90	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	2,883	193	74	93.0	0.877	1.01	5,720
November	9,395	900	105	313	2.95	3.29	18,630
December	17,277	1,600	232	557	5.25	6.05	34,270
Calendar year 1938	152,299	3,190	73	417	3.93	53.41	302,100
January	14,150	800	290	456	4.30	4.96	28,070
February	14,990	2,710	239	535	5.05	5.26	29,750
March	22,303	1,520	261	719	6.78	7.82	44,240
April	21,736	921	517	725	6.84	7.63	43,110
May	14,180	638	297	457	4.31	4.97	28,130
June	9,241	475	210	308	2.91	3.25	18,350
July	4,886	254	111	158	1.49	1.72	9,690
August	2,890	108	81	93.2	.879	1.01	5,730
September	2,293	116	67	76.4	.721	.80	4,550
Water year 1938-39	136,224	2,710	67	373	3.52	47.77	270,200

Peak discharge.- Dec. 4 (time unknown) 2,480 sec.-ft.; Feb. 15 (5 a.m.) 3,600 sec.-ft.

Lake Ben Morrow reservoir near Bull Run, Oreg.

Location.- Water-stage recorder, lat. 45°29', long. 122°05', in SW¼ sec. 16, T. 1 S., R. 6 E., at Bear Creek Dam of city of Portland, 8½ miles northeast of Bull Run. Gage readings are elevations above mean sea level (surveys of Portland Water Bureau).

Records available.- October 1928 to September 1939.

Extremes.- Maximum contents during year, 29,440 acre-feet (estimated) Feb. 15 (gage height not recorded); minimum, 19,300 acre-feet Oct. 10 (gage height, 1,014.28 feet). 1928-39: Maximum contents, 31,600 acre-feet Mar. 31, 1931 (gage height, 1,047.40 feet); minimum, after first filling in May 1929, 18,090 acre-feet Dec. 4, 1936 (gage height, 1,010.45 feet).

Remarks.- Records excellent. Bear Creek Dam on Bull Run River, completed in March 1929, stores water in Lake Ben Morrow reservoir for water supply of city of Portland. Capacity of reservoir at crest of spillway, elevation 1,036 feet, is 26,930 acre-feet, and at center-line of outlet valves, elevation 890 feet, it is 213 acre-feet, which is dead storage. Water-stage-recorder graph furnished by Portland Water Bureau; month-end contents computed by using capacity table based on surveys made and area curve prepared by engineers of Portland Water Bureau.

Elevation and contents, water year October 1938 to September 1939

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	1,015.24	19,610	-
Oct. 31	1,026.67	23,480	+3,870
Nov. 30	1,036.82	27,250	+3,770
Dec. 31	1,037.84	27,650	+400
Calendar year 1938	-	-	-440
Jan. 31	1,037.14	27,370	-280
Feb. 28	1,037.05	27,340	-30
Mar. 31	1,037.42	27,480	+140
Apr. 30	1,037.54	27,530	+50
May 31	1,036.97	27,310	-220
June 30	1,036.70	27,200	-110
July 31	1,034.90	26,510	-690
Aug. 31	1,025.17	22,960	-3,550
Sept.30	1,019.66	21,060	-1,900
Water year 1938-39	-	-	+1,450

Bull Run River below Lake Ben Morrow reservoir, Oreg.

Location.- Water-stage recorder above crest of spillway and scales that indicate number of turns outlet needle valves are open, lat. 45°29', long. 122°05', in SW¼ sec. 16, T. 1 S., R. 6 E., at Bear Creek Dam on Bull Run River, 8½ miles northeast of hamlet of Bull Run. Zero of gage is level with crest of dam and 1,036 feet above mean sea level. Discharge measurements made half a mile downstream, below Bear Creek.

Drainage area.- 77 square miles at gaging section.

Records available.- October 1929 to September 1939.

Average discharge.- 10 years, 560 second-feet.

Extremes.- Maximum discharge during year, 6,300 second-feet (estimated) Feb. 15 (gage height not recorded); minimum, 78 second-feet Sept. 14-20.
1929-39: Maximum discharge, 15,700 second-feet Mar. 31, 1931 (gage height, 10.85 feet); minimum, 5 second-feet (estimated) Oct. 10, 11, 1930.

Remarks.- Records good except those for period of missing gage heights, Feb. 9-14, which were computed on basis of records for station near Bull Run, and are fair. Daily discharge determined by combining discharge through valves near base of dam and flow over crest of dam. No diversion above station. Flow regulated by storage in Bull Run Lake and Lake Ben Morrow reservoir; adjustment applied only for storage in Lake Ben Morrow reservoir. Records of reservoir stage and valve openings furnished by Portland Water Bureau.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	86	432	882	380	346	732	627	304	192	140	108
2	83	90	2,090	1,560	354	377	800	594	266	178	143	108
3	83	2,090	2,050	1,500	321	383	857	574	245	277	139	108
4	83	2,200	2,720	1,160	304	360	857	584	245	407	139	108
5	86	1,240	2,370	968	365	321	700	543	432	348	139	108
6	83	765	1,320	732	516	326	614	490	496	310	139	101
7	83	573	1,550	581	444	310	607	458	416	277	139	92
8	83	508	1,460	588	341	291	739	458	389	245	139	92
9	83	534	1,120	594	300	272	824	470	588	220	150	92
10	83	490	816	620	270	255	784	477	522	200	144	92
11	83	389	607	581	300	343	753	480	434	190	137	91
12	86	321	484	551	880	510	735	470	365	181	137	91
13	84	310	389	496	850	542	655	477	316	164	137	94
14	85	360	346	438	2,000	451	548	484	280	167	137	85
15	85	620	304	464	5,050	532	510	484	272	153	128	78
16	85	2,580	277	464	2,050	1,050	516	451	338	149	126	78
17	85	2,540	255	704	1,210	1,130	627	401	516	139	123	78
18	86	1,420	240	1,890	857	1,140	784	380	840	129	123	78
19	87	925	220	2,000	690	1,170	877	348	1,200	121	123	78
20	85	1,010	215	1,200	568	1,220	908	299	927	118	122	89
21	85	732	218	816	496	1,300	968	310	672	112	122	91
22	85	542	220	627	432	1,500	857	316	522	119	122	91
23	85	428	444	529	398	1,560	753	294	438	105	125	91
24	85	371	562	484	365	1,530	718	280	371	96	113	91
25	85	326	614	522	371	1,440	891	260	332	103	109	91
26	87	272	510	447	365	1,160	803	343	288	122	109	91
27	85	255	529	496	389	848	753	343	262	150	108	93
28	85	240	1,230	620	395	690	760	299	238	157	108	90
29	85	235	1,980	607	-	610	824	438	215	140	108	90
30	85	269	1,540	522	-	594	718	432	205	140	110	90
31	86	-	959	451	-	634	-	351	-	140	108	-

Month	Observed				Change in contents, Lake Ben Morrow reservoir in acre-feet	Adjusted for change in reservoir contents			
	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	87	83	84.5	5,200	+3,870	9,070	148	1.92	2.21
November	2,580	86	757	45,070	+3,770	48,840	821	10.7	11.94
December	2,720	215	906	55,680	+400	56,080	912	11.8	13.60
Calendar year 1938	5,570	83	519	376,100	-440	375,600	519	6.74	91.46
January	2,000	438	777	47,790	-280	47,510	773	10.0	11.53
February	5,050	270	759	42,170	-30	42,140	759	9.86	10.27
March	1,560	255	748	46,010	+140	46,150	751	9.75	11.24
April	968	510	749	44,570	+50	44,620	750	9.74	10.87
May	627	260	426	26,210	-220	25,990	423	5.49	6.33
June	1,200	205	431	25,650	-110	25,540	429	5.57	6.21
July	407	96	179	11,010	-690	10,320	168	2.18	2.51
August	150	108	127	7,830	-3,550	4,280	69.6	.904	1.04
September	108	78	91.9	5,470	-1,900	3,570	60.0	.779	.87
Water year 1938-39	5,050	78	501	362,700	+1,450	364,100	503	6.53	88.62

Bull Run River near Bull Run, Oreg.

Location.- Water-stage recorder, lat. 45°27', long. 122°07', in SE¼ sec. 25, T. 1 S., R. 5 E., 1⅛ miles upstream from intake of pipe line for water supply of city of Portland and 5 miles east of Bull Run.

Drainage area.- 102 square miles.

Records available.- January 1895 to September 1939.

Average discharge.- 32 years (1907-39), 744 second-feet.

Extremes.- Maximum discharge during year, 8,390 second-feet Feb. 15 (gage height, 8.20 feet); minimum, 89 second-feet Oct. 7-9 (gage height, 0.63 foot).
1895-1939: Maximum discharge, 20,600 second-feet Mar. 31, 1931 (gage height, 13.8 feet) by computation of flow over dam; minimum 63 second-feet Aug. 13-16, 1926.

Remarks.- Records good. No diversion above station. Flow regulated by Storage in Bull Run Lake and Lake Ben Morrow reservoir; adjustment applied only for storage in Lake Ben Morrow reservoir because flow from Bull Run Lake is not artificially regulated but reaches river through surface and underground channels. Water-stage-recorder graph furnished by Portland Water Bureau.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.6	83	1.6	390	3.0	1,140	5.0	3,070
.9	152	2.0	560	3.5	1,520	6.0	4,410
1.2	240	2.5	815	4.0	1,970	7.1	6,290

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94	183	546	1,100	524	488	911	727	374	254	160	142
2	94	197	2,430	1,820	488	528	980	690	338	237	163	130
3	118	2,630	2,510	1,800	450	546	1,080	665	306	406	160	125
4	104	2,820	3,250	1,490	430	510	1,070	700	326	556	158	122
5	102	1,600	2,830	1,270	556	470	875	630	560	466	158	120
6	94	1,000	1,630	980	771	502	771	556	610	414	158	118
7	91	754	1,890	793	665	462	760	515	533	370	158	106
8	89	685	1,780	821	542	434	917	528	492	334	158	106
9	89	749	1,430	815	454	394	1,020	542	722	303	163	106
10	106	670	1,060	845	406	374	948	542	645	278	158	106
11	200	542	827	782	426	515	911	538	542	267	152	106
12	140	462	660	722	1,180	754	899	533	462	250	152	109
13	200	458	574	640	1,180	793	804	542	410	228	152	111
14	160	528	488	569	2,720	655	690	556	366	224	152	104
15	140	875	446	600	6,290	788	635	556	358	221	144	98
16	127	3,210	398	578	2,710	1,450	655	510	450	206	140	96
17	122	3,310	366	893	1,580	1,510	766	462	650	189	134	94
18	118	1,850	334	2,230	1,160	1,500	948	458	1,040	180	134	91
19	118	1,220	314	2,350	917	1,540	1,060	410	1,530	177	134	91
20	113	1,340	285	1,430	749	1,550	1,080	358	1,220	163	134	102
21	111	994	296	1,010	645	1,630	1,120	390	887	160	132	109
22	109	771	310	798	569	1,870	994	382	695	160	132	109
23	109	615	605	680	524	1,930	875	350	587	152	134	109
24	109	520	727	640	488	1,890	881	330	506	140	130	109
25	116	458	827	685	515	1,780	1,110	330	442	142	127	109
26	118	406	680	587	479	1,450	948	442	394	152	122	109
27	132	354	738	670	546	1,070	875	406	354	166	122	111
28	125	322	1,620	815	533	869	893	362	326	183	122	109
29	147	318	2,410	815	-	771	961	546	292	163	122	109
30	174	362	1,840	705	-	744	821	515	271	160	122	106
31	177	-	1,190	615	-	798	-	430	-	160	132	-

Month	Observed				Change in contents, Lake Ben Morrow reservoir in acre-feet	Adjusted for change in reservoir contents			
	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	200	89	124	7,630	+3,870	11,500	187	1.83	2.11
November	3,310	183	1,007	59,910	+3,770	63,680	1,070	10.5	11.71
December	3,250	285	1,138	70,000	+400	70,400	1,145	11.2	12.91
Calendar year 1938	6,470	89	665	481,700	-440	481,300	665	6.52	88.39
January	2,350	569	985	60,590	-280	60,310	981	9.62	11.09
February	6,290	406	1,018	56,520	-30	56,490	1,017	9.97	10.38
March	1,930	374	986	60,620	+140	60,760	988	9.69	11.17
April	1,120	635	909	54,070	+50	54,120	910	8.92	9.95
May	727	330	500	30,750	-220	30,530	497	4.87	5.62
June	1,530	271	556	33,100	-110	32,990	554	5.43	6.06
July	556	140	241	14,800	-690	14,110	229	2.25	2.59
August	163	122	143	8,760	-3,550	5,210	84.7	.830	.96
September	142	91	109	6,490	-1,900	4,590	77.1	.756	.84
Water year 1938-39	6,290	89	640	463,200	+1,450	464,700	642	6.29	85.39

Peak discharge.- Nov. 3 (3 p.m.) 5,220 sec.-ft.; Nov. 16 (5 p.m.) 5,300 sec.-ft.; Dec. 2 (7 p.m.) 4,410 sec.-ft.; Dec. 4 (5-6 a.m.) 3,640 sec.-ft.; Feb. 15 (4 a.m.) 8,390 sec.-ft.

Little Sandy River near Bull Run, Oreg.

Location.- Water-stage recorder, lat. 45°25', long. 122°10', in NE¼ sec. 10, T. 2 S., R. 5 E., three-eighths of a mile upstream from 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 (adjustment of 1924), by surveys of Portland General Electric Co.

Drainage area.- 23 square miles.

Records available.- May 1911 to April 1913 (fragmentary), July 1919 to September 1939.

Average discharge.- 20 years (1919-39), 139 second-feet.

Extremes.- Maximum discharge during year, 1,610 second-feet Feb. 15 (gage height, 6.03 feet); minimum, 12 second-feet Sept. 21-30.
1911-13, 1919-39: Maximum discharge, 3,950 second-feet Nov. 20, 1921 (gage height, 9.18 feet), from rating curve extended above 2,000 second-feet; minimum, 10 second-feet Sept. 17, 1924, Sept. 2-5, 1931, Sept. 30 to Oct. 11, 1932, Sept. 21-23, 1938.

Remarks.- Records fair. No diversion or regulation above station. Water-stage-recorder graph furnished by Portland General Electric Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.9	12	2.7	73	4.5	580
2.0	17	3.0	115	5.0	840
2.2	28	3.5	219	5.6	1,250
2.4	43	4.0	380		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	65	104	348	107	99	176	149	68	48	20	29
2	13	81	461	259	104	104	190	145	60	44	20	22
3	38	659	401	250	99	105	204	136	55	102	19	18
4	27	439	602	216	92	102	192	151	70	120	18	16
5	25	268	459	219	107	102	157	132	151	92	18	16
6	26	166	265	176	143	110	145	115	143	80	18	17
7	19	125	431	149	145	105	155	105	120	71	17	16
8	17	132	328	176	129	104	194	115	110	62	16	14
9	16	159	274	176	107	95	202	124	162	57	16	14
10	31	129	185	202	95	89	174	118	118	52	16	14
11	130	99	145	183	95	118	174	118	96	48	16	15
12	63	83	120	168	225	159	168	112	83	46	15	18
13	118	84	105	143	206	172	142	112	72	42	14	16
14	69	101	92	127	672	151	124	115	64	41	14	16
15	50	214	83	136	1,210	190	118	115	66	38	14	16
16	41	694	74	120	558	356	130	99	85	37	14	14
17	34	650	68	219	356	338	162	93	199	35	14	14
18	29	348	64	394	262	338	209	98	328	33	14	14
19	26	219	63	294	206	334	222	81	515	33	13	13
20	23	265	59	206	172	324	230	71	324	32	12	13
21	22	179	62	164	149	338	225	88	204	30	12	12
22	20	140	69	138	129	373	199	80	149	29	12	12
23	20	107	147	120	117	373	172	74	122	27	12	12
24	23	92	140	127	107	366	187	66	101	26	12	12
25	34	79	153	142	105	338	247	70	85	25	18	12
26	30	71	124	118	99	262	190	104	75	24	14	12
27	47	64	138	138	112	190	183	79	68	23	14	12
28	37	59	328	151	107	162	196	70	61	22	16	12
29	48	64	384	142	-	147	214	124	56	22	16	12
30	64	75	256	132	-	145	164	93	51	21	14	12
31	71	-	185	120	-	155	-	77	-	20	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,224	130	13	39.5	1.72	1.98	2,430
November	5,910	694	59	197	8.57	9.56	11,720
December	6,369	602	59	205	8.91	10.27	12,630
Calendar year 1938	46,880	1,040	10	128	5.57	75.86	92,980
January	5,653	394	118	182	7.91	9.12	11,210
February	6,015	1,210	92	215	9.35	9.74	11,930
March	6,344	373	89	205	8.91	10.27	12,580
April	5,445	247	118	182	7.91	8.82	10,800
May	3,229	151	66	104	4.52	5.21	6,400
June	3,861	515	51	129	5.61	6.26	7,660
July	1,382	120	20	44.6	1.94	2.24	2,740
August	479	21	12	15.5	.674	.78	950
September	445	29	12	14.8	.643	.72	883
Water year 1938-39	46,356	1,210	12	127	5.52	74.97	91,930

Peak discharge.- Nov. 3 (12:30 p.m.) 1,330 sec.-ft.; Nov. 16 (4:30 p.m.) 1,140 sec.-ft.; Feb. 15 (4 a.m.) 1,610 sec.-ft.

Middle Fork of Willamette River above Salt Creek, near Oakridge, Oreg.

Location.- Water-stage recorder, lat. 43°44', long. 122°26', in SW¼ sec. 22, T. 21 S., R. 3 E., 400 feet upstream from Salt Creek and 2 miles southwest of Oakridge. Zero of gage is 1,202.8 feet above mean sea level (river profile survey).

Drainage area.- 392 square miles.

Records available.- October 1913 to September 1914, September 1935 to September 1939.

Extremes.- Maximum discharge during year, 4,710 second-feet Mar. 12 (gage height, 5.14 feet); minimum, 232 second-feet Sept. 23-30 (gage height, 1.69 feet).
1913-14, 1935-39: Maximum discharge, 15,100 second-feet Apr. 14, 1937 (gage height, 7.60 feet), from rating curve extended above 5,000 second-feet; minimum, 201 second-feet Nov. 27 to Dec. 2, 1936 (gage height, 1.53 feet).
Maximum stage known, 10.6 feet (date unknown), determined in 1935 from floodmarks.

Remarks.- Records fair. No diversion above gage. Water-stage recorder inspected by employee of Forest Service.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 23				Nov. 24 to Sept. 30			
1.7	245	3.0	1,100	1.7	235	3.5	1,450
2.0	365	3.4	1,560	2.0	338	4.0	2,150
2.3	515	3.8	2,100	2.3	479	4.5	3,100
2.6	725	4.3	2,920	2.6	665	5.0	4,300
				3.0	960		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	273	*410	718	725	732	896	1,550	1,130	770	464	291	291
2	273	*425	2,550	732	676	904	1,670	1,130	725	438	288	281
3	280	*1,100	3,550	1,120	649	936	1,770	1,130	704	464	284	264
4	288	*2,800	3,110	1,270	630	928	1,760	1,130	711	501	281	261
5	280	*1,200	2,240	1,990	662	880	1,610	1,070	704	484	281	258
6	276	*760	1,620	1,340	1,300	978	1,500	987	669	443	278	255
7	273	580	1,410	1,090	1,120	978	1,530	952	636	423	274	252
8	266	515	1,300	936	980	936	1,670	969	617	404	271	247
9	262	567	1,140	840	755	864	1,600	1,100	617	400	267	247
10	262	636	978	770	690	816	1,440	1,110	624	395	267	244
11	284	504	848	732	683	856	1,360	1,100	617	395	264	255
12	284	440	755	697	1,380	3,440	1,320	1,090	617	386	264	261
13	276	420	683	655	1,450	2,790	1,220	1,090	624	377	264	264
14	276	450	636	630	2,040	1,840	1,120	1,130	630	368	264	267
15	280	560	598	649	3,920	1,490	1,060	1,180	611	364	264	255
16	276	749	557	624	2,600	1,600	1,040	1,160	718	360	264	250
17	273	1,020	528	611	1,770	2,320	1,100	1,080	725	347	261	244
18	276	741	501	669	1,500	3,000	1,300	1,030	762	342	264	241
19	270	608	479	732	1,380	3,440	1,550	1,040	800	338	264	241
20	266	548	469	704	1,240	3,550	1,650	960	785	334	258	241
21	262	493	469	649	1,100	4,040	1,760	920	732	326	261	241
22	*260	455	454	611	1,010	4,300	1,710	928	697	322	258	238
23	*260	455	443	569	1,020	4,170	1,640	880	662	314	258	235
24	*265	400	433	534	1,050	3,920	1,470	832	617	310	264	235
25	*260	386	428	512	1,070	3,550	1,370	824	580	306	267	235
26	*265	377	419	501	1,020	3,100	1,230	840	551	306	264	232
27	*280	377	438	655	978	2,410	1,180	880	528	302	261	232
28	*310	377	732	996	944	1,940	1,220	904	512	298	264	232
29	*350	381	936	1,070	-	1,660	1,290	952	506	295	264	232
30	*340	400	872	1,000	-	1,490	1,200	987	479	291	261	232
31	*410	-	770	848	-	1,450	-	856	-	291	261	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	8,756	410	260	282	0.719	0.83	17,370
November	19,134	2,800	377	638	1.63	1.82	37,950
December	31,064	3,550	419	1,002	2.56	2.95	61,610
Calendar year 1938	438,881	8,940	256	1,202	3.07	41.67	870,600
January	25,461	1,990	501	821	2.09	2.41	50,500
February	34,249	3,920	630	1,223	3.12	3.25	67,930
March	65,472	4,300	816	2,112	5.39	6.21	129,900
April	42,890	1,770	1,040	1,430	3.65	4.07	85,070
May	31,371	1,180	824	1,012	2.58	2.97	62,220
June	19,530	800	479	651	1.66	1.85	38,740
July	11,388	501	291	367	.936	1.08	22,590
August	8,296	291	258	268	.684	.79	16,450
September	7,463	291	232	249	.635	.71	14,800
Water year 1938-39	305,074	4,300	232	836	2.13	28.94	605,100

*Gage height missing; discharge computed on basis of recorded range in stage and records for station at Eula.

244757 O—40——6

Middle Fork of Willamette River at Eula, Oreg.

Location.- Water-stage recorder, lat. 43°50', long. 122°37', in sec. 18, T. 20 S., R. 2 E., a quarter of a mile southwest of Eula and 8 miles downstream from North Fork. Zero of gage is 861.65 feet (revised) above mean sea level (general adjustment of 1929).

Drainage area.- 941 square miles.

Records available.- July 1923 to September 1939.

Average discharge.- 15 years (1923-26, 27-39), 2,391 second-feet.

Extremes.- Maximum discharge during year, 10,300 second-feet Feb. 15 (gage height, 7.S feet); minimum, 560 second-feet Sept. 26-30 (gage height, 0.90 foot).
1923-39: Maximum discharge, 55,100 second-feet Feb. 21, 1927 (gage height, 17.0 feet), from rating curve extended above 21,000 second-feet; minimum observed, 450 second-feet Nov. 24, 25, Dec. 5, 6, 1929, Sept. 4-6, 16, 17, 1931.

Remarks.- Records good except those for periods of missing gage heights, which are fair. No large diversions above station. Occasional diurnal fluctuation during periods of low water caused by logging operations upstream. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	650	970	1,520	*2,050	1,900	2,520	4,560	3,200	1,910	1,280	755	778
2	644	1,010	4,000	*2,300	*1,830	2,540	4,860	3,120	1,830	1,250	755	727
3	670	2,870	7,150	*2,700	*1,780	2,690	5,170	3,110	1,750	1,250	748	666
4	698	6,760	7,960	3,010	1,740	2,650	5,170	3,120	1,820	1,390	734	640
5	684	2,910	6,300	4,650	1,780	2,460	4,720	2,870	1,860	1,330	734	626
6	664	1,840	4,800	4,070	3,090	2,550	4,270	2,640	1,770	1,270	720	620
7	657	1,500	4,140	2,840	2,860	2,510	4,340	2,480	1,700	1,210	706	614
8	638	1,340	3,790	*2,500	2,260	2,390	4,790	2,540	1,640	1,160	706	608
9	624	1,430	3,210	*2,250	1,970	2,250	4,560	2,880	1,650	1,120	692	596
10	624	1,580	2,690	2,020	1,870	2,150	4,130	2,960	1,650	1,100	685	590
11	726	1,360	2,280	*1,900	1,840	2,170	3,850	2,970	1,620	1,080	678	608
12	740	1,200	2,000	1,850	3,410	6,700	3,720	2,910	1,590	1,050	678	646
13	684	1,150	1,840	1,770	3,790	6,900	3,460	2,850	1,570	1,010	678	633
14	677	1,230	1,740	1,730	5,420	5,020	3,090	2,970	1,560	1,000	678	666
15	670	1,390	1,660	1,770	9,650	4,130	2,870	3,200	1,550	993	672	633
16	657	1,750	1,560	1,710	7,240	4,340	2,750	3,130	1,810	1,000	672	614
17	644	2,880	1,450	1,720	5,410	5,810	2,950	2,850	1,900	969	666	602
18	638	2,000	1,390	1,900	4,490	7,240	3,580	2,650	2,050	945	652	596
19	624	1,740	1,330	2,030	4,130	8,050	4,270	2,630	2,180	921	652	590
20	618	1,600	1,290	1,970	3,580	8,510	4,640	2,400	2,160	921	626	590
21	618	1,440	1,320	1,860	3,130	9,270	5,020	2,240	1,970	898	633	584
22	618	1,340	1,290	1,780	2,880	9,850	4,860	2,290	1,860	875	633	578
23	618	1,250	1,260	1,690	2,870	9,850	4,640	2,220	1,760	852	640	572
24	631	1,180	1,230	1,610	2,890	9,650	4,200	2,080	1,670	845	652	566
25	624	1,130	1,230	1,550	2,950	9,080	3,920	2,030	1,570	838	646	566
26	631	1,100	1,180	1,510	2,820	8,420	3,580	2,080	1,510	838	633	560
27	664	1,080	1,240	1,740	2,780	7,070	3,390	2,100	1,460	830	633	560
28	705	1,080	2,000	2,360	2,730	5,890	3,460	2,120	1,410	815	646	560
29	818	1,100	2,590	2,560	-	5,090	3,720	2,240	1,370	800	640	560
30	803	1,150	2,420	2,420	-	4,490	3,460	2,430	1,330	778	626	566
31	978	-	2,090	2,140	-	4,270	-	2,080	-	762	646	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	20,939	978	618	675	0.717	0.83	41,530
November	50,160	6,760	970	1,672	1.78	1.99	99,490
December	79,950	7,960	1,180	2,579	2.74	3.16	158,600
Calendar year 1938	1,042,080	19,200	618	2,855	3.03	41.20	2,067,000
January	67,960	4,650	1,510	2,192	2.33	2.69	134,800
February	93,090	9,650	1,740	3,325	3.53	3.68	184,600
March	166,510	9,850	2,150	5,371	5.71	6.58	330,300
April	122,000	5,170	2,750	4,067	4.32	4.82	242,000
May	81,390	3,200	2,030	2,625	2.79	3.22	161,400
June	51,480	2,180	1,330	1,716	1.82	2.03	102,100
July	31,380	1,390	762	1,012	1.08	1.24	62,240
August	20,915	755	626	675	.717	.83	41,480
September	18,315	778	560	610	.648	.72	36,330
Water year 1938-39	804,089	9,850	560	2,203	2.34	31.79	1,595,000

Peak discharge.- Nov. 4 (4 a.m.) 8,720 sec.-ft.; Dec. 4 (1 a.m.) 9,100 sec.-ft.; Feb. 15 (about 2 p.m.) 10,300 sec.-ft.; Mar. 12 (4 p.m.) 8,700 sec.-ft.
*Gage height missing; discharge computed on basis of recorded range in stage and records for Middle Fork at Oakridge and Willamette River at Springfield.

Willamette River at Springfield, Oreg.

Location.- Water-stage recorder, lat. 44°02'45", long. 123°01'40", in SE¼ sec. 34, T. 17 S., R. 3 W., at highway bridge at Springfield. Zero of gage is 423.47 feet (revised) above mean sea level (general adjustment of 1929).

Drainage area.- 2,030 square miles.

Records available.- November 1911 to December 1913, October 1928 to September 1939. June 1919 to September 1928 at site at Eugene, 4 miles downstream. 1894 to 1938 (records of stage by U. S. Weather Bureau), at site at Eugene.

Average discharge.- 21 years (1912-13, 1919-39), 4,988 second-feet.

Extremes.- Maximum discharge during year, 32,800 second-feet Mar. 13 (gage height, 11.5 feet); minimum daily, 645 second-feet (estimated) Sept. 30.
1911-13, 1919-39: 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 recorded by Weather Bureau, 22.0 feet at Eugene Jan. 25, 1903. Floods in December 1861 and February 1890 reached about the same stage.

Remarks.- Records fair. Slight diurnal fluctuation during low water caused by logging operations in basin of Middle Fork of Willamette River. No diversion above station.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 14

1.5	720	2.5	1,790	1.3	630	2.5	1,830	5.0	6,930	9.0	21,520
1.7	890	3.0	2,500	1.7	930	3.0	2,530	6.0	9,930	10.0	25,950
2.0	1,180	3.5	3,360	2.0	1,220	3.5	3,360	7.0	13,400	11.0	30,450
						4.0	4,380	8.0	17,280		

Feb. 15 to Sept. 30

Note.- Same as following table above 3.5 feet.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*760	*2,000	2,070	4,720	5,460	6,510	6,650	3,950	2,520	1,700	882	922
2	*755	*2,500	6,420	4,720	4,720	6,370	7,070	3,810	2,320	1,570	882	1,010
3	*880	3,920	17,300	6,510	4,840	7,210	7,360	3,750	2,210	1,550	874	866
4	*980	18,900	16,500	8,990	4,840	7,500	7,210	3,710	2,240	1,750	874	802
5	*880	9,610	12,700	12,300	5,330	6,930	6,790	3,610	2,590	1,760	866	756
6	*820	5,080	9,930	9,770	11,200	7,500	6,100	3,360	2,650	1,690	*860	749
7	*800	3,510	8,080	7,210	13,000	7,500	5,840	3,160	2,400	1,570	*840	735
8	*765	2,830	7,070	6,370	8,990	6,930	6,370	3,110	2,230	1,550	*830	728
9	*750	3,200	5,970	5,710	6,930	6,240	6,370	3,290	2,200	1,350	*820	714
10	*745	5,080	5,080	5,330	6,100	5,580	5,710	3,490	2,230	1,370	*810	707
11	*920	4,180	4,380	4,500	5,970	5,580	5,330	3,490	2,130	1,340	*800	*740
12	*1,000	3,230	3,830	4,160	10,700	20,000	5,080	3,440	2,020	1,310	*790	*790
13	*880	2,730	3,420	3,850	14,200	26,400	4,840	3,380	1,970	1,260	*790	*780
14	*870	2,800	3,140	3,550	15,700	16,900	4,360	3,380	1,930	1,230	*790	*820
15	*850	3,110	2,900	3,420	27,800	12,100	4,080	3,510	1,910	1,210	*780	*770
16	*820	3,460	2,680	3,440	24,600	11,100	3,830	3,590	2,310	1,230	*780	*750
17	*785	5,460	2,480	3,270	15,300	13,000	3,870	3,420	2,780	1,200	*770	*730
18	*770	4,840	2,360	3,570	11,900	15,700	4,360	3,180	3,360	1,170	*760	*710
19	*760	3,770	2,220	3,930	10,600	16,900	5,200	3,180	3,510	1,110	*750	693
20	*750	3,230	2,160	3,790	8,840	16,500	5,580	3,100	3,630	1,100	*740	693
21	*745	2,830	2,160	3,550	7,500	16,900	5,840	2,960	3,270	1,080	721	*685
22	*740	2,550	2,320	3,320	6,650	17,700	5,840	3,030	2,860	1,040	721	*675
23	*740	2,290	2,220	3,180	6,240	17,300	5,580	2,980	2,600	1,010	721	*670
24	*760	2,090	2,160	2,920	6,240	16,500	5,200	2,840	2,410	993	735	*665
25	*760	1,990	2,070	2,810	6,240	14,900	4,960	2,660	2,230	984	742	*665
26	*770	1,880	2,070	2,660	6,240	13,400	4,610	2,680	2,060	948	742	*660
27	*840	1,800	2,050	3,040	6,240	11,400	4,200	2,730	1,950	939	742	*655
28	*915	1,740	4,180	5,970	7,070	9,300	4,160	2,680	1,840	922	742	*655
29	*1,220	1,720	7,940	7,360	-	7,790	4,310	2,710	1,800	914	756	*650
30	*1,300	1,740	6,930	7,790	-	6,930	4,340	2,990	1,730	906	749	*645
31	*1,660	*	5,580	6,650	-	6,510	-	2,790	-	882	756	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	26,990	1,660	740	871	0.429	0.49	53,530
November	114,070	18,900	1,720	3,802	1.87	2.09	226,300
December	160,370	17,300	2,050	5,173	2.55	2.94	318,100
Calendar year 1938	2,058,135	47,500	696	5,639	2.76	37.68	4,082,000
January	158,360	12,300	2,660	5,108	2.52	2.90	314,100
February	269,440	27,800	4,720	9,623	4.74	4.94	534,400
March	361,080	26,400	5,580	11,650	5.74	6.62	716,200
April	161,040	7,360	3,830	5,368	2.64	2.94	319,400
May	99,960	3,950	2,660	3,225	1.59	1.83	198,300
June	71,890	3,630	1,730	2,396	1.18	1.32	142,600
July	38,638	1,760	882	1,246	.614	.71	76,640
August	24,415	882	721	786	.388	.45	48,430
September	22,090	1,010	645	736	.363	.40	43,810
Water year 1938-39	1,508,343	27,800	645	4,132	2.04	27.63	2,992,000

Peak discharge.- Nov. 4 (12 m.) 22,000 sec.-ft.; Dec. 3 (8 a.m.) 19,800 sec.-ft; Feb. 6 (10 p.m.) 14,900 sec.-ft.; Feb. 15 (7-8 p.m.) 31,400 sec.-ft.; Mar. 13 (1 a.m.) 32,800 sec.-ft.

*Gage height faulty; discharge computed on basis of records for Middle Fork at Eula and Coast Fork at Saginaw.

Willamette River at Albany, Oreg.

Location.- Water-stage recorder, lat. 44°38'20", long. 123°06'20", in SW¼ sec. 6, T. 11 S., R. 3 W., at Albany, just downstream from Calapooya River. Zero of gage is 171.70 feet above mean sea level (general adjustment of 1929).

Drainage area.- 4,840 square miles.

Records available.- November 1878 to April 1882, 1883 to 1888 (fragmentary), January 1892 to September 1939.

Average discharge.- 44 years (1895-1939), 13,750 second-feet.

Extremes.- Maximum discharge during year, 61,000 second-feet Feb. 17 (gage height, 15.55 feet); minimum, 2,240 second-feet Sept. 26, 27 (gage height, 0.20 foot).

1878-82, 1892-1939: Maximum discharge, 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 since 1892, 1,890 second-feet Sept. 5, 1931 (gage height, 0.26 foot).

Maximum stage known, 36.0 feet Dec. 4, 1861 (discharge, 274,000 second-feet, estimated).

Remarks.- Records good. No regulation. Albany power canal diverts water from South Santiam River into Willamette River above station. Gage-height record collected in cooperation with U. S. Weather Bureau.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.2	2,240	1.4	5,040	3.2	10,280	6.0	19,600
.4	2,660	1.7	5,840	3.6	11,540	8.0	26,950
.6	3,100	2.0	6,680	4.0	12,820	10.0	34,800
.8	3,560	2.4	7,840	4.5	14,460	12.0	43,300
1.1	4,280	2.8	9,040	5.0	16,140	15.2	58,900

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,860	4,110	5,900	15,800	21,700	17,200	16,800	11,400	7,140	4,910	2,900	2,790
2	2,840	4,660	9,350	15,800	18,600	16,100	16,800	10,700	6,650	4,730	2,880	3,060
3	2,810	5,840	22,500	18,200	17,500	17,200	17,500	10,400	6,320	4,680	2,880	3,100
4	3,030	11,100	38,100	23,200	17,500	18,900	17,500	10,300	6,150	4,730	2,860	2,900
5	3,190	28,500	39,400	27,700	17,200	18,900	17,200	10,100	6,200	5,040	2,840	2,750
6	3,080	19,600	35,200	30,800	21,000	18,600	16,300	9,820	6,850	4,990	2,790	2,660
7	2,970	12,300	28,500	26,600	32,000	19,200	15,300	9,200	6,910	4,780	2,770	2,580
8	2,860	9,500	23,200	21,700	35,200	18,900	15,000	8,890	6,460	4,580	2,700	2,510
9	2,810	8,290	20,000	19,200	29,200	17,800	15,600	8,740	6,150	4,460	2,690	2,490
10	2,750	10,300	17,200	17,200	24,700	16,300	15,100	9,040	6,120	4,280	2,660	2,470
11	2,730	12,800	15,100	15,300	21,700	15,500	14,300	9,200	6,090	4,160	2,660	2,490
12	2,900	10,900	13,300	14,000	22,100	18,200	13,600	9,200	5,870	4,140	2,660	2,510
13	3,260	9,350	11,900	12,800	30,800	36,000	13,500	9,040	5,620	4,060	2,700	2,560
14	3,170	8,140	10,700	12,000	37,300	48,700	12,800	8,890	5,460	3,940	2,640	2,580
15	3,120	7,990	9,820	11,200	41,500	41,100	11,900	8,890	5,350	3,900	2,600	2,600
16	3,010	8,740	9,200	11,100	53,100	32,400	11,200	9,200	5,410	3,820	2,620	2,600
17	2,920	10,100	8,590	10,700	58,900	29,200	10,700	9,200	6,620	3,870	2,600	2,510
18	2,840	14,300	8,140	10,400	44,600	30,400	10,700	8,740	7,550	3,800	2,580	2,450
19	2,770	12,300	7,700	11,200	33,600	33,200	11,700	8,440	8,890	3,700	2,530	2,430
20	2,700	10,400	7,400	12,000	28,500	34,800	13,000	8,440	9,200	3,660	2,560	2,410
21	2,700	9,350	7,140	11,700	24,700	35,200	13,600	8,440	9,350	3,510	2,490	2,390
22	2,660	8,290	7,200	11,100	21,000	35,600	14,100	8,290	8,440	3,420	2,470	2,370
23	2,680	7,550	7,260	10,600	18,900	36,900	14,100	8,290	7,550	3,400	2,510	2,320
24	2,680	6,970	6,970	9,970	17,800	36,500	13,600	8,290	6,970	3,310	2,510	2,300
25	2,700	6,480	6,820	9,500	17,200	35,200	13,000	7,840	6,480	3,260	2,560	2,280
26	2,750	6,090	6,770	9,200	17,200	32,800	12,800	7,400	6,090	3,190	2,640	2,260
27	2,750	5,790	6,820	9,820	16,600	30,000	12,000	7,400	5,730	3,150	2,620	2,240
28	2,920	5,540	8,290	13,600	16,600	26,200	11,400	7,550	5,460	3,080	2,580	2,260
29	3,100	5,380	15,100	18,900	-	22,100	11,200	7,260	5,250	3,010	2,600	2,280
30	3,380	5,380	18,900	23,200	-	19,600	11,700	7,260	5,070	2,950	2,620	2,280
31	3,700	-	17,800	24,300	-	17,500	-	7,700	-	2,920	2,680	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	90,640	3,700	2,660	2,924	0.604	0.70	179,800
November	286,040	28,500	4,110	9,535	1.97	2.20	567,400
December	450,270	39,400	5,900	14,520	3.00	3.46	893,100
Calendar year 1938	5,521,810	92,600	2,600	15,130	3.13	42.44	10,950,000
January	488,790	30,800	9,200	15,770	3.26	3.76	969,500
February	756,700	58,900	16,600	27,020	5.58	5.81	1,501,000
March	826,200	48,700	15,500	26,650	5.51	6.35	1,639,000
April	414,000	17,500	10,700	13,800	2.85	3.18	821,200
May	273,550	11,400	7,260	8,824	1.82	2.10	542,600
June	197,400	9,350	5,070	6,580	1.36	1.52	391,500
July	121,430	5,040	2,920	3,917	.809	.93	240,900
August	82,390	2,900	2,470	2,658	.549	.63	163,400
September	75,430	3,100	2,240	2,514	.519	.58	149,600
Water year 1938-39	4,062,840	58,900	2,240	11,130	2.30	31.22	8,059,000

Peak discharge.- Nov. 5 (2 p.m.) 30,400 sec.-ft.; Dec. 5 (12 m.) 40,200 sec.-ft.; Jan. 6 (1 p.m.) 31,600 sec.-ft.; Feb. 8 (3 a.m.) 36,900 sec.-ft.; Feb. 17 (8-9 a.m.) 61,000 sec.-ft.; Mar. 14 (12 m.) 49,700 sec.-ft.

Willamette River at Salem, Oreg.

Location.- Water-stage recorder, lat. 44°56'40", long. 123°02'30", in SW¼ sec. 22, T. 7 S., R. 3 W., 300 feet upstream from highway bridge at Salem. Zero of gage is 113.59 feet above mean sea level (general adjustment of 1929).

Drainage area.- 7,280 square miles.

Records available.- October 1909 to December 1916, October 1927 to September 1939.

Average discharge.- 19 years, 22,100 second-feet.

Extremes.- Maximum discharge during year, 95,700 second-feet Feb. 16 (gage height, 14.30 feet); minimum, 2,890 second-feet Sept. 30 (gage height, -4.16 feet).

1909-16, 1927-39: Maximum discharge observed, 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, -4.16 feet Dec. 1, 2, 1936, Sept. 30, 1939.

Maximum discharge known, 500,000 second-feet (estimated) 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 diversions above station for irrigation. Part of flow of Salem canal, which diverts water from North Santiam River, returns to Willamette River below gage; no regulation. Gage-height record collected in cooperation with U. S. Weather Bureau.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

-4.2	2,830	-3.0	4,840	-1.0	9,500	4.0	28,000	10.0	62,500
-4.0	3,130	-2.5	5,850	0	12,300	6.0	37,300	12.0	76,700
-3.5	3,940	-2.0	6,990	2.0	19,500	8.0	49,100	14.0	93,000

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,460	5,920	9,240	27,100	32,600	24,500	26,200	16,800	10,300	7,110	3,650	3,460
2	3,470	6,890	17,900	28,000	28,500	24,000	26,600	15,700	9,500	6,750	3,630	3,820
3	3,520	8,460	51,700	33,100	26,600	24,900	27,600	14,900	8,980	6,590	3,580	4,150
4	3,450	28,700	65,300	40,500	26,200	27,100	28,000	14,600	8,590	6,750	3,570	4,010
5	*3,540	38,300	70,200	47,800	25,800	27,100	27,100	14,600	8,590	7,230	3,520	3,830
6	*3,720	32,600	66,000	49,800	32,100	27,100	25,300	13,900	9,370	6,990	3,490	3,470
7	3,680	20,300	51,100	43,400	45,800	27,600	23,600	13,200	9,900	6,750	3,470	3,340
8	3,580	14,900	39,900	35,400	51,700	27,100	25,200	12,600	9,370	6,430	3,420	3,260
9	3,460	13,200	34,000	31,200	43,400	25,300	24,000	12,200	8,850	6,160	3,360	3,240
10	3,500	16,000	29,400	27,600	35,900	23,200	23,600	12,600	9,110	5,870	3,310	3,240
11	3,460	18,700	24,900	24,500	31,700	21,900	22,300	12,900	9,240	5,720	3,300	3,240
12	3,750	16,400	21,500	21,900	35,400	28,900	21,100	12,900	8,720	5,600	3,280	3,240
13	4,490	13,500	19,100	19,900	49,100	47,100	20,700	12,600	8,340	5,450	3,300	3,240
14	4,580	12,000	16,800	18,300	59,700	63,900	19,500	12,300	7,960	5,270	3,280	3,250
15	4,600	12,000	15,300	17,200	74,400	60,400	17,900	12,300	7,710	5,170	3,240	3,240
16	4,270	13,900	13,900	16,800	93,900	49,800	16,400	12,600	7,710	5,050	3,200	3,260
17	4,010	24,900	12,900	16,000	92,200	44,600	15,700	12,300	9,240	5,070	3,190	3,240
18	3,750	28,000	12,200	16,000	77,400	46,500	16,400	12,000	12,000	5,010	3,180	3,240
19	3,620	23,200	11,400	19,100	57,000	51,700	18,300	11,600	13,500	4,840	3,160	3,240
20	3,500	18,700	11,000	21,100	45,200	55,700	20,300	11,100	14,900	4,710	3,130	3,220
21	3,460	16,400	10,600	19,900	38,300	57,000	21,100	11,000	14,900	4,630	3,130	3,220
22	3,390	14,200	10,700	17,900	33,100	58,300	21,900	11,300	13,200	4,490	3,130	3,220
23	3,390	12,600	10,600	16,800	29,400	61,100	21,500	11,300	11,700	4,420	3,120	3,220
24	3,390	11,300	10,300	15,700	26,600	61,800	20,700	11,100	10,600	4,310	3,120	3,220
25	3,390	10,300	10,200	14,900	25,800	59,700	19,500	10,600	9,760	4,160	3,130	3,220
26	3,420	9,630	10,400	14,600	25,300	55,000	19,500	10,300	9,110	4,090	3,200	3,120
27	3,390	8,980	10,300	14,900	24,500	48,400	18,300	10,700	8,460	4,020	3,310	3,010
28	3,680	8,720	13,200	21,100	24,500	41,000	17,200	10,700	7,960	3,970	3,280	2,960
29	3,990	8,460	23,200	28,500	-	34,500	16,800	10,300	7,710	3,910	3,260	2,900
30	4,450	8,460	33,100	34,500	-	30,300	17,600	10,800	7,350	3,800	3,280	2,890
31	4,990	-	31,200	36,300	-	27,600	-	11,100	-	3,740	3,410	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	116,440	4,990	3,390	3,756	0.516	0.59	231,000
November	475,620	38,300	5,920	15,850	2.18	2.43	943,400
December	767,540	70,200	9,240	24,760	3.40	3.92	1,522,000
Calendar year 1938	8,831,720	142,000	3,240	24,200	3.32	45.13	17,520,000
January	789,800	49,800	14,600	25,480	3.50	4.04	1,567,000
February	1,192,100	93,900	24,500	42,580	5.85	6.09	2,364,000
March	1,263,100	63,900	21,900	40,750	5.60	6.46	2,505,000
April	637,900	28,000	15,700	21,260	2.92	3.26	1,265,000
May	382,900	16,800	10,300	12,350	1.70	1.96	759,500
June	292,630	14,900	7,350	9,754	1.34	1.50	580,400
July	184,060	7,230	3,740	5,292	.727	.84	325,400
August	102,830	3,650	3,120	3,311	.455	.52	203,300
September	99,010	4,150	2,890	3,300	.453	.51	196,400
Water year 1938-39	6,283,730	93,900	2,890	17,220	2.37	32.12	12,460,000

Peak discharge.- Nov. 5 (8 p.m.) 40,500 sec.-ft.; Dec. 5 (11 p.m.) 70,900 sec.-ft.; Feb. 8 (9 a.m.) 53,000 sec.-ft.; Feb. 16 (6 p.m.) 95,700 sec.-ft.; Mar. 14 (6 p.m.) 66,000 sec.-ft.

*Gage height missing; discharge computed on basis of record for station at Albany.

Hills Creek near Oakridge, Oreg.

Location.- Staff gage, lat. 43°42', long. 122°24', in NW¼ sec. 36, T. 21 S., R. 3 E., 1½ miles upstream from mouth and 4½ miles southeast of Oakridge.

Drainage area.- 59 square miles.

Records available.- September 1935 to September 1939.

Extremes.- Maximum discharge observed during year, 795 second-feet Mar. 22 (gage height, 4.06 feet); minimum discharge, 16 second-feet Sept. 25-30 (gage height, 0.80 foot).
1935-39: Maximum discharge, 2,120 second-feet Apr. 14, 1937 (gage height, 4.02 feet, former site and datum), from rating curve extended above 900 second-feet; minimum, 15 second-feet Jan. 20, 1937.

Remarks.- Records good. Discharge for days of missing gage heights, Nov. 19, July 23 interpolated. Records include flow of small diversion about 1,000 feet upstream and return flow of another, half a mile upstream. Gage read once daily; twice daily when stage is over 2.0 feet.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.8	16	1.7	107	3.0	395
1.1	38	2.0	155	3.5	565
1.4	68	2.5	257	4.0	755

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	43	70	78	85	116	212	150	96	55	25	30
2	21	43	294	85	78	116	257	148	88	53	24	26
3	22	125	410	122	73	122	269	152	83	53	24	21
4	24	350	442	119	68	116	257	143	88	61	24	20
5	22	141	335	269	66	107	223	135	99	57	23	20
6	22	96	234	192	146	116	204	128	101	55	23	20
7	22	73	212	141	128	119	208	116	93	51	24	19
8	21	68	194	116	101	113	234	122	90	47	23	19
9	20	61	166	107	88	104	223	135	85	45	23	18
10	20	61	138	101	78	99	196	146	83	43	22	18
11	24	57	116	92	73	96	184	152	78	42	22	20
12	22	49	96	88	184	695	169	145	78	41	22	23
13	22	49	88	85	173	425	155	148	78	39	22	24
14	22	59	80	78	307	269	145	164	75	36	22	23
15	22	80	75	83	548	212	135	169	70	35	22	21
16	22	90	64	75	365	269	127	159	88	39	22	20
17	22	125	61	78	257	410	143	135	90	36	22	19
18	22	93	59	83	223	565	196	127	119	35	20	18
19	21	82	55	88	200	635	246	135	145	34	21	18
20	20	70	53	85	173	695	257	128	138	33	20	18
21	20	61	53	78	148	735	269	119	128	32	20	18
22	19	57	61	73	135	755	269	122	113	32	20	17
23	19	51	51	68	128	755	234	116	101	31	20	17
24	20	47	49	64	135	675	210	110	90	30	20	17
25	20	45	47	61	138	600	188	110	83	29	22	16
26	19	43	45	57	132	548	166	116	78	28	21	16
27	35	43	47	61	128	395	155	116	73	27	21	16
28	33	45	75	93	124	294	166	119	68	26	21	16
29	42	47	85	113	-	234	188	122	64	26	21	16
30	43	49	96	110	-	208	169	132	59	26	21	16
31	51	-	85	99	-	202	-	110	-	25	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	755	51	19	24.4	0.414	0.48	1,500
November	2,303	350	43	76.8	1.30	1.45	4,570
December	3,936	442	45	127	2.15	2.48	7,810
Calendar year 1938	59,350	1,060	19	163	2.76	37.41	117,700
January	3,042	269	57	98.1	1.66	1.91	6,030
February	4,482	548	66	160	2.71	2.82	8,890
March	10,800	755	96	348	5.90	6.80	21,420
April	6,054	269	127	202	3.42	3.82	12,010
May	4,129	169	110	133	2.25	2.59	8,190
June	2,722	145	59	90.7	1.54	1.72	5,400
July	1,202	61	25	38.8	.658	.76	2,380
August	679	25	20	21.9	.371	.43	1,350
September	580	30	16	19.3	.327	.36	1,150
Water year 1938-39	40,684	755	16	111	1.88	25.62	80,700

Salt Creek near Oakridge, Oreg.

Location.- Water-stage recorder, lat. 43°44', long. 122°25', in SW¼ sec. 23, T. 21 S., R. 3 E., 0.7 mile upstream from mouth and 2 miles southeast of Oakridge. Zero of gage is 1,245.67 feet above mean sea level (general adjustment of 1929).

Drainage area.- 113 square miles.

Records available.- July 1913 to September 1914, October 1933 to September 1939.

Extremes.- Maximum discharge during year, 886 second-feet Mar. 23 (gage height, 3.82 feet); minimum, 93 second-feet Aug. 31 (gage height, 1.53 feet).
1913-14, 1933-39: Maximum discharge, 2,170 second-feet Dec. 20, 1934 (gage height, 5.92 feet); minimum, 55 second-feet Jan. 8, 1937 (computed on basis of record for Salmon Creek near Oakridge).

Remarks.- Records good. No diversion above station; slight regulation. Water-stage recorder inspected by employee of U. S. Forest Service.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.5	88	3.0	510
1.8	144	3.5	720
2.1	210	4.0	985
2.5	325		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	113	138	169	218	198	259	450	474	364	198	114	122
2	114	142	283	222	192	271	474	474	336	189	113	113
3	116	335	462	265	189	277	498	486	328	196	114	107
4	118	586	562	289	185	268	498	486	339	220	113	103
5	116	310	490	378	194	250	474	446	336	212	113	103
6	114	225	412	307	286	256	454	420	313	201	111	105
7	114	196	426	274	262	250	458	412	295	185	111	105
8	113	185	406	262	230	238	490	438	289	176	109	102
9	111	187	353	244	210	228	478	482	298	169	109	100
10	113	189	307	230	198	222	454	482	301	165	107	100
11	126	174	274	220	198	232	438	490	295	161	107	105
12	120	163	244	208	289	582	434	490	292	154	107	109
13	118	167	225	198	307	550	402	490	295	150	107	111
14	116	176	218	192	522	426	370	518	289	148	107	114
15	116	187	205	194	716	378	356	550	289	148	107	109
16	114	225	194	187	558	406	353	550	301	148	105	105
17	113	283	185	194	438	518	378	502	328	142	105	103
18	111	232	178	208	392	644	430	478	339	138	103	103
19	111	208	172	210	364	698	502	486	353	136	100	102
20	109	194	167	203	322	735	542	438	336	132	98	102
21	109	176	172	192	298	805	582	409	313	130	100	102
22	109	165	167	187	277	853	598	423	298	128	100	102
23	109	161	165	180	280	864	610	402	283	128	100	100
24	113	154	163	174	283	836	562	381	265	126	102	98
25	111	152	161	174	289	790	526	381	244	124	103	98
26	113	146	154	167	277	720	478	398	232	122	103	98
27	128	144	167	189	277	622	470	416	225	120	102	98
28	118	142	228	225	277	538	490	423	218	118	105	98
29	132	142	256	244	-	482	538	466	215	118	103	98
30	134	146	241	235	-	446	494	486	205	116	102	98
31	148	-	222	218	-	430	-	406	-	116	103	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,620	148	109	117	1.04	1.20	7,180
November	6,030	586	138	201	1.78	1.99	11,960
December	8,028	562	154	259	2.29	2.64	15,920
Calendar year 1938	113,355	1,240	106	311	2.75	37.32	224,800
January	6,888	378	167	222	1.96	2.26	13,660
February	8,508	716	185	304	2.69	2.80	16,880
March	15,074	864	222	486	4.30	4.96	29,900
April	14,281	610	353	476	4.21	4.70	28,330
May	14,183	550	381	458	4.05	4.67	28,130
June	8,814	364	205	294	2.60	2.90	17,480
July	4,714	220	116	152	1.35	1.56	9,350
August	3,283	114	98	106	.938	1.08	6,510
September	3,113	122	98	104	.920	1.03	6,170
Water year 1938-39	96,536	864	98	264	2.34	31.79	191,500

Salmon Creek near Oakridge, Oreg.

Location.- Water-stage recorder, lat. 43°45', long. 122°23', in SW¼ sec. 7, T. 21 S., R. 4 E., a quarter of a mile upstream from Slide Creek and 4 miles east of Oakridge.

Drainage area.- 117 square miles at cable a quarter of a mile above gage, where all discharge measurements are made.

Records available.- October 1933 to September 1939. February 1913 to September 1914, at site 2 miles downstream, below Flat Creek. October 1914 to October 1919, at site 1 mile downstream.

Extremes.- Maximum discharge during year, 1,640 second-feet Mar. 23 (gage height, 4.12 feet); minimum, 104 second-feet Sept. 26-30.
1913-19, 1933-39: Maximum discharge, 6,400 second-feet (estimated) Jan. 12, 1918; minimum, 63 second-feet Jan. 8, 1937 (gage height, 0.87 foot).

Remarks.- Records good except those for period of shifting control, May 2 to July 17, which are poor. No regulation above station. Village of Oakridge has diverted water around station in an 8-inch pipe since 1936. Water-stage recorder inspected by employee of U. S. Forest Service.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	123	155	235	335	272	357	730	505	335	235	144	158
2	123	159	426	357	263	357	764	505	317	226	142	135
3	129	598	856	396	253	365	826	500	310	247	139	127
4	131	779	1,230	420	247	350	814	500	328	275	137	125
5	125	408	992	555	256	328	748	460	335	253	137	123
6	123	290	754	460	335	324	686	412	317	244	137	121
7	123	244	719	400	313	310	702	404	303	229	135	119
8	121	226	636	369	282	299	760	429	296	218	135	117
9	119	238	530	338	263	292	714	465	306	209	133	117
10	119	238	452	317	250	286	653	480	303	204	133	115
11	142	210	392	303	250	299	620	480	296	196	131	121
12	125	195	346	292	388	658	598	460	292	185	131	121
13	125	192	313	282	408	658	550	465	289	182	129	121
14	121	198	292	272	626	510	500	500	282	180	129	123
15	121	218	275	279	1,150	465	470	530	296	178	129	119
16	118	350	256	263	896	530	456	495	338	178	129	117
17	116	512	241	272	692	719	495	452	384	172	129	115
18	114	386	229	313	604	957	598	447	416	172	129	112
19	112	318	221	335	555	1,130	708	438	480	172	125	112
20	110	287	209	320	490	1,270	754	420	465	170	123	112
21	112	259	215	299	447	1,430	790	396	420	168	123	110
22	110	241	207	286	416	1,580	760	404	384	162	125	108
23	112	220	204	269	408	1,600	702	388	357	160	125	108
24	114	212	198	260	404	1,570	636	361	331	158	125	106
25	114	202	198	250	408	1,480	592	361	310	155	125	106
26	116	198	193	241	388	1,360	545	372	289	153	123	104
27	140	195	204	266	388	1,120	530	376	275	151	123	104
28	127	192	296	313	376	929	550	380	263	148	127	104
29	146	198	388	351	-	802	592	416	253	146	127	104
30	146	208	369	320	-	719	540	420	241	146	123	104
31	150	-	335	296	-	697	-	369	-	144	129	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,827	150	110	123	1.05	1.21	7,590
November	8,326	779	155	278	2.38	2.66	16,510
December	12,411	1,230	193	400	3.42	3.94	24,620
Calendar year 1938	149,249	2,640	110	409	3.50	47.46	296,000
January	10,009	555	241	323	2.76	3.18	19,850
February	12,028	1,150	247	430	3.68	3.83	23,860
March	23,751	1,600	286	766	6.55	7.55	47,110
April	19,403	826	456	647	5.53	6.17	38,490
May	13,590	530	361	438	3.74	4.31	26,960
June	9,811	480	241	327	2.79	3.11	19,460
July	5,816	275	144	188	1.61	1.86	11,540
August	4,031	144	123	130	1.11	1.28	8,000
September	3,488	158	104	116	.991	1.11	6,920
Water year 1938-39	126,491	1,600	104	347	2.97	40.21	250,900

Waldo Lake outlet near Oakridge, Oreg.

Location.- Water-stage recorder and artificial control on lake outlet, lat. 43°46', long. 122°03', in NW¼ sec. 7, T. 21 S., R. 6 E., on artificial outlet channel of Waldo Lake, 20 miles east of Oakridge. Elevation of water surface of lake and of zero of gage is about 5,410 feet above mean sea level (topographic map).

Drainage area.- 30 square miles.

Records available.- October 1936 to September 1939.

Extremes.- Maximum discharge during year, 66 second-feet Mar. 13, 14 (gage height, 1.71 feet, allowing for effect of seiches); no flow Oct. 1 to Nov. 2, Sept. 14-30.
1936-39: Maximum discharge, 92 second-feet Mar. 29, 1938 (gage height, 2.15 feet); no flow at times.

Remarks.- Records good. Seiches on Waldo Lake cause rapid changes in stage at gage several times each hour. Lake not regulated artificially. Diversion tunnel into head of Black Creek, near south end of lake, built about 1914, is not used, but an unmeasured leakage passes control gates, which were probably closed throughout year.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.0	0	0.4	9.0	1.2	40.9
.1	1.2	.6	15.9	1.5	55.0
.2	3.4	.9	27.8	1.8	70.3

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	3.8	13	22	50	47	38	45	40	19	2.5
2		0	6.5	14	23	53	46	38	44	39	18	2.0
3		.3	9.6	16	24	56	46	38	44	39	18	1.8
4		2.9	12	17	24	58	45	38	45	40	17	1.6
5		2.9	13	18	26	58	44	38	45	40	16	1.2
6		2.9	13	18	31	60	43	37	45	39	16	.8
7		2.7	14	18	35	59	42	37	44	38	15	.7
8		2.7	14	18	36	59	41	37	44	38	14	.3
9		4.1	14	18	36	58	41	37	44	37	13	.2
10		6.3	14	18	39	57	40	37	44	36	13	.2
11		6.3	14	17	40	56	39	37	43	36	12	.2
12		5.7	13	17	43	61	40	37	43	35	11	.1
13		6.0	12	17	45	65	40	37	42	34	11	.1
14		5.5	11	16	50	65	39	37	42	33	9.9	0
15		5.5	11	17	55	64	39	37	42	32	9.3	0
16		6.3	11	17	55	64	38	37	45	31	8.7	0
17		6.8	10	17	54	62	37	38	46	31	8.0	0
18		6.5	9.9	17	53	61	37	40	47	29	7.7	0
19		6.5	9.9	18	52	60	37	43	48	29	7.1	0
20		6.3	9.3	17	51	58	36	43	48	28	6.0	0
21		6.0	11	17	50	57	36	44	48	27	5.7	0
22		6.0	11	17	49	56	37	45	47	26	5.2	0
23		4.9	11	17	49	55	37	45	46	25	4.9	0
24		4.4	10	16	48	54	39	44	46	24	4.6	0
25		4.4	10	16	49	53	40	44	45	24	4.4	0
26		3.8	9.9	16	50	52	39	44	44	23	3.8	0
27		3.6	9.9	17	51	51	39	44	43	23	3.4	0
28		3.4	13	20	51	50	39	44	43	22	3.4	0
29		3.2	14	22	-	49	39	45	42	21	2.9	0
30		2.9	14	23	-	48	39	46	41	20	2.5	0
31		-	14	23	-	48	-	45	-	20	2.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	0	0	0	0	0	0	0
November	128.8	6.8	0	4.29	.143	.16	255
December	352.8	14	3.8	11.4	.380	.44	700
Calendar year 1938	13,812.1	92	0	37.8	1.26	17.11	27,390
January	542	23	13	17.5	.583	.67	1,080
February	1,191	55	22	42.5	1.42	1.48	2,360
March	1,757	65	48	56.7	1.89	2.18	3,480
April	1,201	47	36	40.0	1.33	1.48	2,380
May	1,251	46	37	40.4	1.35	1.56	2,480
June	1,335	48	41	44.5	1.48	1.65	2,650
July	959	40	20	30.9	1.03	1.19	1,900
August	292.8	19	2.3	9.45	.315	.36	581
September	11.7	2.5	0	.39	.013	.01	23
Water year 1938-39	9,022.1	65	0	24.7	.823	11.18	17,890

North Fork of Middle Fork of Willamette River near Oakridge, Oreg.

Location.- Water-stage recorder, lat. 43°45', long. 122°30', in SW¼ sec. 7, T. 21 S., R. 3 E., 1 mile upstream from mouth and 2½ miles northeast of Oakridge. Zero of gage is 1,029.6 feet above mean sea level (river profile survey). Prior to Oct. 4, staff gage at same site and datum.

Drainage area.- 246 square miles.

Records available.- October 1909 to September 1912 (fragmentary), September 1935 to September 1939. October 1913 to February 1916 at site half a mile upstream, above a small tributary.

Extremes.- Maximum discharge during year, 3,480 second-feet Mar. 23 (gage height, 5.88 feet); minimum, 64 second-feet (regulated) Aug. 19 (gage height, 0.54 foot); minimum daily, 100 second-feet Sept. 27-30.

1909-16, 1935-39: Maximum gage height observed, 12.4 feet, former site and datum, Nov. 22, 1909 (discharge not determined); minimum discharge, that of Aug. 19, 1939.

Remarks.- Records good except minimum for year, which is fair. Tunnel and control gates that were built to divert part of outflow from Waldo Lake into Salmon Creek Basin were not used during year. Leakage under gates amounts to about 2 second-feet. Occasional regulation during periods of low-water by operation of log pond upstream. Staff gage was read twice daily.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.7	89	2.2	615	4.5	2,140
1.0	152	2.6	835	5.0	2,590
1.3	233	3.0	1,070	5.7	3,280
1.6	334	3.5	1,380		
1.9	460	4.0	1,740		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	199	415	664	555	774	1,420	968	485	309	167	170
2	129	236	1,100	720	525	769	1,530	944	451	298	164	150
3	143	1,250	1,980	852	510	791	1,610	938	428	312	160	134
4	138	1,740	2,500	902	500	780	1,600	926	465	334	157	129
5	134	813	2,100	1,110	540	725	1,470	862	515	320	157	125
6	131	540	1,580	926	769	720	1,340	802	480	298	154	118
7	129	411	1,340	818	686	686	1,340	764	442	288	147	116
8	127	357	1,200	774	593	659	1,470	774	424	278	143	114
9	125	415	1,030	725	530	632	1,410	852	428	264	140	112
10	123	442	884	670	510	615	1,270	862	415	261	140	112
11	157	369	769	632	520	664	1,210	862	398	252	140	116
12	164	320	664	604	938	1,300	1,180	840	381	239	140	125
13	143	309	604	560	950	1,350	1,090	824	373	233	140	118
14	143	323	555	535	1,340	1,080	986	846	354	230	140	121
15	136	361	510	560	2,460	1,000	914	857	357	227	138	116
16	131	540	470	530	1,900	1,100	896	830	465	230	138	114
17	129	896	433	535	1,390	1,420	962	764	555	218	136	112
18	127	681	411	670	1,250	1,860	1,150	742	626	213	136	112
19	125	566	386	720	1,130	2,180	1,330	698	659	207	122	112
20	123	500	373	670	1,020	2,500	1,420	664	654	204	123	110
21	121	446	373	620	926	2,830	1,480	637	593	201	118	108
22	121	402	365	588	862	3,180	1,420	654	530	199	123	108
23	123	361	361	545	857	3,230	1,290	670	480	193	118	106
24	125	338	354	510	852	3,180	1,180	615	442	188	123	104
25	125	320	350	490	857	2,980	1,200	588	415	186	121	102
26	125	302	334	465	830	2,730	1,100	598	386	185	118	102
27	150	295	342	556	835	2,230	1,030	588	365	182	116	100
28	140	291	626	703	824	1,820	1,060	571	350	182	121	100
29	174	298	824	720	-	1,560	1,110	588	338	177	127	100
30	172	312	760	670	-	1,400	1,030	610	320	172	118	100
31	201	-	681	615	-	1,350	-	535	-	170	127	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	4,268	201	121	138	0.561	0.65	8,470
November	14,633	1,740	199	488	1.98	2.21	29,020
December	24,694	2,500	334	797	3.24	3.74	48,980
Calendar year 1938	277,659	6,200	120	761	3.09	41.99	550,700
January	20,658	1,110	465	666	2.71	3.12	40,970
February	25,459	2,460	500	909	3.70	3.85	50,500
March	48,095	3,230	615	1,551	6.30	7.26	95,400
April	37,498	1,610	896	1,250	5.08	5.67	74,380
May	23,273	968	535	751	3.05	3.52	46,160
June	13,574	659	320	462	1.84	2.05	26,920
July	7,262	334	170	234	.951	1.10	14,380
August	4,212	167	116	136	.553	.64	8,350
September	3,468	170	100	116	.472	.53	6,880
Water year 1938-39	227,084	3,230	100	622	2.53	34.34	450,400

Fall Creek above Winberry Creek, near Lowell, Oreg.

Location.- Staff gage, lat. 43°57', long. 122°43', in SE¼ sec. 32, T. 18 S., R. 1 E., 2½ miles upstream from Winberry Creek and 4½ miles northeast of Lowell. Zero of gage is 728.0 feet above mean sea level by preliminary determination (general adjustment of 1929).

Drainage area.- 131 square miles.

Records available.- September 1935 to September 1939.

Extremes.- Maximum discharge observed during year, 4,950 second-feet Feb. 15 (gage height, 6.8 feet), from rating curve extended above 2,600 second-feet; minimum observed, 15 second-feet Sept. 24-30.

1935-39: Maximum discharge, 6,850 second-feet Mar. 19, 1938 (gage height, 8.0 feet, from floodmark), from rating curve extended above 2,600 second-feet; minimum discharge observed, 14 second-feet Dec. 1, 1936.

Maximum stage known, about 11 feet (date unknown), from floodmarks observed in 1935.

Remarks.- Records good. No diversion above station. Gage read once daily; oftener during periods of high water.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 29 to Sept. 30)

Oct. 1 to Feb. 14						Feb. 15 to Sept. 30					
0.8	26	2.5	485	4.5	1,960	0.7	14	2.5	465	6.0	3,780
1.1	56	3.0	745	5.0	2,510	1.0	35	3.0	725	7.0	5,250
1.5	131	3.5	1,060	5.6	3,250	1.5	122	4.0	1,470		
2.0	275	4.0	1,470			2.0	267	5.0	2,510		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	234	176	525	431	621	456	142	76	82	32	118
2	25	228	1,210	505	382	665	456	134	69	76	31	53
3	60	2,070	1,290	865	377	785	452	127	66	76	31	35
4	56	2,020	1,290	835	390	818	404	122	100	122	30	27
5	32	745	1,210	1,130	575	713	360	120	203	96	30	26
6	32	404	865	775	1,290	755	329	113	169	86	30	25
7	30	282	690	590	930	677	321	109	122	76	29	23
8	28	222	565	555	662	648	340	104	104	71	28	22
9	27	426	462	490	530	590	302	104	120	67	27	21
10	25	690	377	440	444	545	274	102	137	64	27	20
11	42	431	303	395	431	510	260	102	113	60	27	20
12	89	282	268	350	1,760	2,690	260	98	98	59	26	27
13	54	240	240	306	930	1,710	237	94	88	56	26	22
14	56	318	225	282	3,250	1,060	228	92	76	53	26	25
15	54	422	204	296	4,500	950	209	92	73	54	25	23
16	34	422	181	289	2,180	1,130	197	88	260	56	25	21
17	31	718	171	275	1,290	1,610	203	82	260	53	25	20
18	30	575	155	422	1,130	1,810	215	90	364	50	25	18
19	28	404	150	404	985	1,760	222	90	380	47	24	18
20	28	334	145	377	818	1,660	209	84	364	46	23	18
21	25	261	165	326	665	1,610	209	100	295	45	23	17
22	25	228	184	303	605	1,560	194	147	212	43	23	16
23	25	187	168	275	632	1,380	186	122	171	42	23	16
24	28	176	160	240	621	1,210	180	102	152	41	24	15
25	30	155	173	240	632	985	260	92	127	40	27	15
26	27	141	160	228	580	882	197	113	118	39	25	15
27	56	131	178	275	648	713	174	100	109	37	23	15
28	42	122	1,520	630	755	570	163	88	98	36	27	15
29	85	124	1,100	718	-	492	166	84	92	35	28	15
30	113	113	865	662	-	447	147	82	84	34	25	15
31	113	-	635	530	-	438	-	82	-	33	30	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,356	113	25	43.7	0.334	0.39	2,690
November	13,105	2,070	113	437	3.34	3.73	25,990
December	15,485	1,520	145	500	3.82	4.40	30,710
Calendar year 1938	153,591	4,200	22	421	3.21	43.63	304,600
January	14,533	1,130	228	469	3.58	4.13	28,830
February	28,423	4,500	377	1,015	7.75	8.07	56,380
March	31,994	2,690	438	1,032	7.88	9.08	63,460
April	7,810	456	147	260	1.98	2.21	15,490
May	3,2C_	147	82	103	.786	.91	6,350
June	4,700	380	66	157	1.20	1.34	9,320
July	1,775	122	33	57.3	.437	.50	3,520
August	825	32	23	26.6	.203	.23	1,640
September	736	118	15	24.5	.187	.21	1,460
Water year 1938-39	123,943	4,500	15	340	2.60	35.20	245,800

Fall Creek below Winberry Creek, near Fall Creek, Oreg.

Location.- Staff gage, lat. 43°57', long. 122°47', near center of sec. 2, T. 19 S., R. 1 W., 1⅛ miles downstream from Winberry Creek and 2⅛ miles southeast of Fall Creek. Zero of gage is 637.75 feet above mean sea level by preliminary determination (general adjustment of 1929).

Drainage area.- 190 square miles.

Records available.- October to December 1911 (gage heights only), September 1935 to September 1939.

Extremes.- Maximum discharge observed during year, 6,210 second-feet Feb. 15 (gage height, 9.60 feet); minimum observed, 20 second-feet Sept. 25, 30 (gage height, 0.56 foot).
1935-39: Maximum discharge, 8,240 second-feet Mar. 19, 1938 (gage height, 11.1 feet, from floodmarks), from rating curve extended above 4,200 second-feet; minimum, 19 second-feet Dec. 1, 1936.
Maximum stage known, about 14 feet (date unknown), from floodmarks.

Remarks.- Records fair except those for periods of missing gage heights, which are poor. No diversion above station. Gage read once daily; oftener during periods of high water.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 1 to Sept. 30)

0.5	20	2.2	275	5.0	1,520
.7	31	2.6	405	6.0	2,270
1.0	54	3.0	550	8.0	4,250
1.4	108	3.5	750	10.0	6,730
1.8	179	4.0	975		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	*400	205	670	590	885	590	214	108	108	41	*140
2	*30	*500	1,220	630	530	908	610	196	99	99	41	*80
3	79	4,140	1,840	*1,000	510	1,070	590	187	93	105	41	*50
4	*65	3,000	1,700	1,040	530	1,120	550	187	148	141	41	*38
5	48	930	1,590	1,490	795	952	475	179	275	127	40	*34
6	40	530	1,120	998	1,910	1,020	440	167	238	118	40	*31
7	31	335	885	795	1,370	952	433	163	179	99	38	*30
8	30	305	710	690	908	862	475	159	175	90	38	*28
9	29	440	570	650	710	772	433	159	214	*84	37	26
10	27	818	492	590	630	710	391	155	179	79	37	25
11	79	530	384	510	690	772	356	152	159	76	36	27
12	*110	419	342	475	*2,200	3,700	363	148	151	74	35	*36
13	64	329	335	426	1,870	2,540	329	141	127	71	36	29
14	*68	370	275	370	4,360	1,660	287	*140	111	70	35	32
15	*60	550	248	370	5,690	1,280	275	134	*110	66	33	29
16	*50	550	223	370	3,000	1,660	264	124	356	90	33	27
17	*40	1,170	200	335	1,840	2,190	275	121	440	64	32	26
18	32	670	192	530	1,590	2,450	299	131	590	61	31	25
19	30	530	179	530	*1,300	2,360	317	131	650	61	31	24
20	30	440	179	492	1,040	2,270	323	124	570	59	29	24
21	29	335	187	433	818	2,190	317	134	405	56	27	23
22	27	305	270	391	772	2,110	293	196	311	54	27	23
23	29	233	223	370	795	1,870	270	167	248	50	27	22
24	30	223	223	329	818	1,730	259	*140	218	50	29	21
25	*32	200	218	323	818	1,370	370	124	*190	48	*34	20
26	29	179	223	299	772	1,220	*280	141	167	46	*31	21
27	*65	167	248	433	885	840	243	141	148	46	27	21
28	*55	159	1,950	862	1,040	710	233	*130	141	44	29	21
29	*100	155	1,370	975	-	630	233	118	127	44	*33	21
30	*200	152	1,040	885	-	590	228	141	114	43	*30	20
31	*300	-	772	730	-	570	-	124	-	43	44	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,868	300	27	60.3	0.317	0.37	3,710
November	19,064	4,140	152	635	3.34	3.73	37,810
December	19,613	1,950	179	633	3.33	3.84	38,900
Calendar year 1938	207,158	5,950	25	568	2.99	40.57	410,900
January	18,991	1,490	299	613	3.23	3.72	37,670
February	38,781	5,690	510	1,385	7.29	7.59	76,920
March	43,963	3,700	570	1,418	7.46	8.60	87,200
April	10,801	610	228	360	1.89	2.11	21,420
May	4,668	214	118	151	.795	.92	9,260
June	7,021	650	93	234	1.23	1.37	13,930
July	2,266	141	43	73.1	.385	.44	4,490
August	1,063	44	27	34.3	.181	.21	2,110
September	974	140	20	32.5	.171	.19	1,930
Water year 1938-39	169,073	5,690	20	463	2.44	33.09	335,400

*Gage height faulty or missing; discharge computed on basis of records for Fall Creek above Winberry Creek, near Lowell, Little Fall Creek near Fall Creek, and Middle Fork of Willamette River near Eula.

Little Fall Creek near Fall Creek, Oreg.

Location.- Staff gage, lat. 43°59', long. 122°45', in sec. 25, T. 18 S., R. 1 W., 4 miles northeast of Fall Creek.

Drainage area.- 48 square miles.

Records available.- September 1935 to September 1939.

Extremes.- Maximum discharge observed during year, 1,990 second-feet Feb. 15 (gage height, 5.60 feet); minimum observed, 11 second-feet Sept. 25-30.
1935-39: Maximum discharge, 4,020 second-feet Mar. 18 or 19, 1938 (gage height, 7.0 feet, from floodmark), from rating curve extended above 1,800 second-feet on basis of velocity-area studies; minimum, 10 second-feet Dec. 1, 1936.

Remarks.- Records good except those below 25 second-feet and those for periods of faulty gage heights, which are fair. Gage read once daily; oftener during periods of high water.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 14

1.2	13	2.6	171	4.5	950
1.5	26	3.0	285	5.0	1,360
1.8	44	3.5	450	5.5	1,870
2.2	89	4.0	660		

Feb. 15 to Sept. 30

1.2	10
1.5	22
1.8	43
2.2	89

Note.- Same as preceding table above 2.2 feet.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	125	125	249	203	327	208	63	40	46	21	38
2	15	291	638	249	203	352	219	61	39	42	20	22
3	31	550	710	348	200	373	197	60	40	41	20	18
4	29	660	615	390	197	398	181	59	47	*50	20	17
5	26	276	615	404	348	370	166	56	63	*45	20	16
6	21	152	462	333	550	373	157	55	52	*42	19	15
7	19	125	362	291	458	348	147	54	43	41	19	15
8	17	*100	300	273	380	321	143	52	43	40	18	15
9	17	*180	237	243	303	282	138	51	52	38	17	14
10	16	*300	219	219	255	255	134	50	43	37	17	14
11	29	166	171	197	255	249	129	48	43	36	17	17
12	25	125	157	181	550	950	125	48	43	35	17	15
13	26	117	143	166	638	738	117	46	43	35	17	15
14	25	106	125	157	1,220	592	106	45	35	34	16	14
15	24	171	121	161	1,760	510	103	44	43	34	16	13
16	20	214	110	147	1,180	490	96	43	106	34	16	13
17	19	285	103	171	765	638	92	43	125	32	15	13
18	19	214	96	208	592	710	92	44	125	29	15	13
19	18	197	92	197	510	710	88	45	134	29	15	13
20	17	171	99	187	432	685	85	46	108	28	15	12
21	17	166	117	171	376	638	81	*49	92	27	14	12
22	17	129	99	171	333	660	78	*55	78	27	14	12
23	16	110	96	147	312	615	78	*51	70	27	14	12
24	17	99	92	143	300	550	81	47	65	26	14	12
25	17	88	103	136	306	490	*90	46	61	26	15	11
26	18	83	99	125	300	408	75	*50	56	24	15	11
27	17	81	138	171	380	348	71	45	52	24	15	11
28	35	78	592	225	370	297	69	45	50	23	15	11
29	37	75	490	297	-	249	68	44	47	23	18	11
30	43	78	426	267	-	225	65	43	47	22	15	11
31	53	-	321	225	-	214	-	41	-	22	43	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	718	53	15	23.2	0.483	0.56	1,420
November	5,512	660	75	184	3.83	4.27	10,930
December	8,073	710	92	260	5.42	6.25	16,010
Calendar year 1938	74,736	2,240	15	205	4.27	57.92	148,200
January	6,849	404	125	221	4.60	5.30	13,580
February	13,676	1,760	197	488	10.2	10.62	27,130
March	14,365	950	214	463	9.65	11.12	28,490
April	3,479	219	65	116	2.42	2.70	6,900
May	1,529	63	41	49.3	1.03	1.19	3,030
June	1,885	134	35	62.8	1.31	1.46	3,740
July	1,019	50	22	32.9	.685	.79	2,020
August	542	43	14	17.5	.365	.42	1,080
September	436	38	11	14.5	.302	.34	865
Water year 1938-39	58,083	1,760	11	159	3.31	45.02	115,200

*Gage height faulty; discharge computed on basis of records for Fall Creek above and below Winberry Creek and Middle Fork of Willamette River near Eula.

Coast Fork of Willamette River at London, Oreg.

Location.- Water-stage recorder, lat. 43°39', long. 123°05', in SW¼ sec. 20, T. 22 S., R. 3 W., 0.6 mile north of London and 11 miles south of Cottage Grove. Zero of gage is 852.65 feet above mean sea level (general adjustment of 1929), by surveys of Corps of Engineers, U. S. Army.

Drainage area.- 69 square miles.

Records available.- September 1935 to September 1939.

Extremes.- Maximum discharge during year, 2,780 second-feet Mar. 12 (gage height, 6.67 feet); minimum, 10 second-feet Sept. 27, 28 (gage height, 0.91 foot).
1935-39: Maximum discharge, 3,820 second-feet Apr. 14, 1937, Mar. 18, 1938; minimum, 10 second-feet on several days in 1936, 1938, and 1939.

Remarks.- Records good except those for periods of missing gage heights, which are fair. No diversion above gage; millpond 3 miles upstream may cause slight regulation at times.

Discharge, in second-feet, water year October 1938 September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	109	90	150	235	265	138	51	33	28	16	63
2	18	139	*700	210	229	283	138	50	31	27	16	31
3	69	*400	*1,000	494	265	326	132	47	33	33	14	24
4	29	*1,200	*700	627	279	345	123	46	53	39	14	22
5	21	*400	*450	681	334	337	115	45	61	33	14	21
6	19	*180	*320	406	890	402	108	44	52	31	14	20
7	18	*105	*250	297	586	371	108	43	45	29	14	19
8	16	*90	195	272	402	337	106	42	41	27	14	18
9	15	*150	164	232	308	293	100	42	40	26	14	17
10	15	*250	137	201	301	282	92	41	37	26	14	17
11	21	*160	*122	177	360	315	88	39	33	26	14	19
12	25	*110	*110	158	815	1,930	92	38	31	25	14	20
13	20	*100	*100	142	681	1,150	88	36	29	24	14	18
14	20	*130	*92	130	850	720	81	35	28	23	14	17
15	17	148	86	128	1,650	537	76	34	32	25	14	16
16	15	*160	74	117	956	502	74	34	98	26	14	16
17	14	*180	70	108	636	546	74	34	92	23	13	15
18	13	*140	67	106	537	560	74	35	88	22	13	14
19	12	*110	63	108	458	514	74	60	80	22	12	14
20	*12	*95	60	102	379	462	73	46	71	21	12	14
21	*12	*82	70	94	319	426	68	58	58	20	12	13
22	*12	*72	70	90	283	398	65	64	52	20	12	12
23	*14	*64	63	86	269	352	65	78	45	19	12	12
24	18	*58	58	81	255	308	63	51	42	19	13	12
25	15	*55	57	80	262	269	74	44	39	18	19	11
26	*15	*53	56	80	255	235	65	45	36	17	15	11
27	*18	*51	71	235	276	201	61	41	33	17	14	11
28	23	*50	262	474	297	175	57	38	33	17	15	10
29	61	*50	279	438	-	158	56	39	30	16	16	11
30	57	*54	226	402	-	142	53	38	29	15	14	12
31	73	-	183	304	-	138	-	34	-	16	35	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	722	73	12	23.3	0.338	0.39	1,430
November	4,945	1,200	50	165	2.39	2.67	9,810
December	6,245	1,000	56	201	2.91	3.36	12,390
Calendar year 1938	79,937	2,530	10	219	3.17	43.04	158,600
January	7,210	681	80	233	3.38	3.90	14,300
February	13,367	1,650	229	477	6.91	7.20	26,510
March	13,259	1,930	138	428	6.20	7.15	26,300
April	2,581	136	53	86.0	1.25	1.40	5,120
May	1,372	78	34	44.3	.642	.74	2,720
June	1,405	98	28	46.8	.678	.76	2,790
July	730	39	15	23.5	.341	.39	1,450
August	455	35	12	14.7	.213	.25	902
September	530	63	10	17.7	.257	.29	1,050
Water year 1938-39	52,821	1,930	10	145	2.10	28.50	104,800

Peak discharge.-Feb. 15 (6 a.m.) 1,920 sec.-ft.; Mar. 12 (10 a.m.) 2,780 sec.-ft.
*Gage height missing; discharge computed on basis of records for Row River at Star, Mosby Creek near Cottage Grove, and Coast Fork of Willamette River at Saginaw.

Coast Fork of Willamette River near Cottage Grove, Oreg.

Location.- Staff gage, lat. 43°44', long. 123°03', in SW¼NE¼ sec. 21, T. 21 S., R. 3 W., at bridge on private road 1 mile downstream from Cottage Grove damsite and 4½ miles south of Cottage Grove. Zero of gage is 695.07 feet above mean sea level (surveys of Corps of Engineers, U. S. Army). Prior to Feb. 14, 1939, staff gage at different datum 300 yards upstream.

Drainage area.- 108 square miles.

Records available.- January to September 1939.

Extremes.- Maximum discharge observed during period 3,260 second-feet Mar. 12 (gage height, 9.20 feet); minimum observed, 5 second-feet Aug. 16-18, Sept. 15, 21-25, 28, 29.

Remarks.- Records poor. A logging flume on right bank diverts up to 15 second-feet around station. Log pond upstream causes slight regulation. Gage usually read once daily, occasionally twice daily.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				196	301	370	136	57	36	23	11	63
2				264	*270	410	136	52	32	33	10	26
3				*600	*320	500	132	52	39	*39	11	19
4				700	*350	491	124	30	54	*35	10	15
5				1,040	423	518	113	57	68	31	10	12
6				604	1,590	600	110	54	58	28	10	10
7				381	994	581	106	54	48	23	9	10
8				*340	700	563	132	44	41	29	9	8
9				301	466	446	106	39	41	19	9	9
10				264	511	378	94	39	49	19	10	10
11				229	557	482	91	37	48	19	7	9
12				196	1,490	3,080	91	37	31	19	7	10
13				196	1,390	1,500	85	45	29	18	6	10
14				165	1,240	1,120	88	43	26	17	6	10
15				165	2,280	810	83	33	37	16	6	5
16				136	1,300	700	83	31	106	25	5	8
17				136	790	690	80	31	88	19	5	10
18				136	640	690	77	31	83	17	5	8
19				136	590	630	77	72	78	16	7	8
20				136	491	554	74	56	72	16	7	7
21				110	446	509	72	62	60	15	6	5
22				136	386	473	69	68	52	15	6	5
23				136	378	410	69	83	43	18	8	5
24				136	370	346	67	58	37	15	9	5
25				165	362	306	83	50	35	14	8	5
26				*150	346	255	72	50	31	14	15	6
27				*300	354	208	62	57	30	13	13	7
28				604	428	196	62	50	29	12	12	5
29				604	-	196	64	41	27	11	15	5
30				604	-	144	67	54	25	11	11	6
31				423	-	140	-	39	-	12	*25	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October					
November					
December					
Calendar year					
January	9,689	1,040	110	313	19,220
February	19,763	2,280	270	706	39,200
March	18,296	3,080	140	590	36,290
April	2,705	136	62	90.2	5,370
May	1,506	83	30	48.6	2,990
June	1,433	106	25	47.8	2,840
July	611	39	11	19.7	1,210
August	288	25	5	9.3	571
September	321	63	5	10.7	637
The period	-	-	-	-	108,300

*Gage height faulty or missing; discharge computed on basis of records for station at London.

Coast Fork of Willamette River at Saginaw, Oreg.

Location.- Water-stage recorder, lat. 43°50'05", long. 123°02'30", in NW¼ sec. 15, T. 20 S., R. 3 W., at Saginaw, 1 mile downstream from Row River. Zero of gage is 595.47 feet above mean sea level (general adjustment of 1929). Prior to Oct. 13, 1938, chain and staff gages, at same datum, at bridge 50 feet upstream.

Drainage area.- 529 square miles.

Records available.- October 1923 to September 1939 (1924-27 incomplete).

Average discharge.- 13 years (1925-26, 1927-39), 1,123 second-feet.

Extremes.- Maximum discharge during year, 15,000 second-feet Mar. 12 (gage height, 9.70 feet); minimum, 27 second-feet Aug. 20 (gage height, 0.71 foot).
1923-39: Maximum discharge, 28,600 second-feet Feb. 20; 1927 (gage height, 12.9 feet), from rating curve extended above 15,000 second-feet; minimum observed, 7 second-feet July 31, 1928.

Remarks.- Records good. No diversion or regulation above station. Staff gage read once daily Oct. 1-6, 8-12; no reading Oct. 7. Gage-height record collected in cooperation with U. S. Weather Bureau.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.7	26	2.5	825	6.0	6,050
1.0	68	3.0	1,330	7.0	8,010
1.5	230	4.0	2,680	8.2	10,780
2.0	475	5.0	4,290		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	340	448	1,100	1,440	1,760	1,160	365	189	174	47	178
2	57	535	3,750	1,160	1,250	1,800	1,210	345	174	174	47	155
3	181	1,490	5,230	2,240	1,310	2,130	1,210	335	166	170	46	93
4	125	7,310	3,810	3,070	1,350	2,200	1,100	330	214	197	47	66
5	101	2,280	2,530	4,630	1,570	2,040	955	316	365	189	43	57
6	77	1,100	1,900	2,600	5,070	2,320	842	293	360	181	40	52
7	*68	722	1,520	1,830	3,950	2,280	868	275	293	*160	42	47
8	61	554	1,250	1,620	2,560	2,060	946	270	252	*140	40	46
9	57	722	1,060	1,450	1,920	1,800	825	280	234	*125	37	43
10	54	1,370	884	1,270	1,830	1,620	700	280	222	*115	37	39
11	57	1,060	745	1,110	2,170	1,650	663	275	197	112	34	40
12	*90	761	663	1,000	5,250	10,300	663	262	174	112	35	44
13	77	628	594	884	4,940	8,690	607	244	159	104	33	50
14	86	769	542	801	5,700	5,160	548	234	151	98	35	47
15	75	884	505	777	10,700	3,610	493	230	148	104	37	49
16	68	919	458	745	7,060	3,450	475	230	316	112	39	43
17	64	1,340	420	685	4,260	4,490	517	218	448	107	37	40
18	61	946	395	753	3,570	5,030	607	218	607	90	36	39
19	57	745	375	785	3,070	4,800	649	293	614	88	34	39
20	54	628	365	745	2,400	4,360	614	280	621	83	32	37
21	52	535	380	670	1,960	4,220	600	302	493	77	34	37
22	50	475	464	635	1,730	4,090	548	325	385	75	34	35
23	50	415	420	607	1,690	3,680	487	360	330	70	36	33
24	55	380	400	548	1,690	3,250	470	311	284	66	36	37
25	59	345	385	529	1,700	2,770	499	270	257	64	43	37
26	61	325	380	505	1,640	2,340	453	270	226	63	52	34
27	72	306	390	824	1,690	1,820	415	257	210	59	49	30
28	98	293	1,550	2,230	2,040	1,450	395	226	189	55	46	34
29	226	293	2,280	2,420	-	1,210	410	222	178	52	44	34
30	222	293	1,750	2,380	-	1,080	400	239	174	50	44	34
31	288	-	1,350	1,830	-	1,050	-	214	-	47	50	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,745	288	42	88.6	0.167	0.19	5,440
November	28,763	7,310	293	959	1.81	2.02	57,050
December	37,193	5,230	365	1,200	2.27	2.62	73,770
Calendar year 1938	509,821	19,500	30	1,397	2.64	35.83	1,011,000
January	42,433	4,630	505	1,369	2.59	2.99	84,160
February	85,510	10,700	1,250	3,054	5.77	6.01	169,600
March	98,510	10,300	1,050	3,178	6.01	6.93	195,400
April	20,329	1,210	395	678	1.28	1.43	40,320
May	8,569	365	214	276	.522	.60	17,000
June	8,630	621	148	288	.544	.61	17,120
July	3,313	197	47	107	.202	.23	6,570
August	1,246	52	32	40.2	.076	.09	2,470
September	1,549	178	30	51.6	.098	.11	3,070
Water year 1938-39	338,790	10,700	30	928	1.75	23.83	672,000

Peak discharge.- Nov. 4 (9 a.m.) 10,300 sec.-ft.; Feb. 15 (11 to 12 a.m.) 11,800 sec.-ft.; Mar. 12 (3 p.m.) 15,000 sec.-ft.
*Gage height faulty or missing; discharge computed on basis of records for Row River at Dorena, Mosby Creek and Coast Fork of Willamette River near Cottage Grove.

Row River at Star, Oreg.

Location.- Water-stage recorder, lat. 43°44', long. 122°53', in NW¼ sec. 24, T. 21 S., R. 2 W., half a mile west of Star and 3 miles upstream from Teeter Creek. Zero of gage is 856.16 feet above mean sea level (general adjustment of 1929). Prior to Oct. 18, 1938, staff gage 500 feet upstream with zero of gage 1.00 foot higher.

Drainage area.- 211 square miles.

Records available.- September 1935 to September 1939.

Extremes.- Maximum discharge during year, 7,900 second-feet Mar. 12 (gage height, 9.8 feet), from rating curve extended above 2,800 second-feet on basis of rating for former staff gage, which is well defined to 7,000 second-feet; minimum, 15 second-feet Aug. 21, 24, Sept. 23-30.

1935-1939: Maximum discharge, 15,000 second feet Apr. 13, 1937 (gage height, 11.40 feet, former site and datum, from floodmark), from rating curve extended above 7,000 second-feet; minimum observed, 13 second-feet Oct. 1, 1935 (gage height, 0.32 foot).

Maximum stage known, about 18 feet, former site and datum, sometime in February 1927; determined in 1935 from floodmarks.

Remarks.- Records good. No diversion above station; possibly slight regulation at times by operation of logging ponds. Staff read once daily.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1-17		Oct. 18 to Sept. 30					
0.6	20	1.4	14	3.0	187	5.5	1,340
.8	30	1.6	21	3.4	278	6.0	1,720
1.0	45	1.8	32	3.8	403	7.0	2,680
1.2	64	2.0	47	4.2	570	8.0	4,060
		2.3	77	4.6	770	8.7	5,400
		2.6	116	5.0	1,000		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	125	232	530	476	798	786	202	83	68	24	116
2	21	195	2,320	512	410	798	830	189	78	64	24	62
3	45	1,490	2,370	852	400	892	825	185	75	68	23	36
4	30	3,310	1,800	1,180	425	842	720	183	106	97	22	28
5	28	858	1,160	1,900	520	764	597	163	208	84	22	25
6	21	403	830	1,030	1,670	852	538	145	187	78	21	23
7	24	253	675	710	1,140	792	606	134	145	67	21	22
8	22	202	574	625	742	720	640	138	124	60	20	20
9	21	289	452	538	561	660	534	159	116	56	19	19
10	21	452	365	516	494	610	429	154	106	55	18	19
11	22	302	302	464	534	710	396	152	92	54	18	19
12	49	219	258	414	1,770	5,360	389	141	84	49	18	24
13	36	198	226	365	1,610	2,990	335	133	77	46	18	22
14	30	348	204	329	2,860	1,780	289	133	72	45	18	23
15	29	468	183	338	5,320	1,360	263	134	72	45	18	22
16	26	566	163	311	2,840	1,740	258	126	195	52	17	21
17	24	825	145	297	1,740	2,780	329	112	246	44	17	19
18	24	489	134	386	1,640	3,180	433	116	372	40	17	18
19	22	342	124	403	1,420	3,070	456	150	386	38	17	17
20	21	283	118	372	1,060	2,930	418	134	368	36	16	17
21	20	237	138	323	836	2,930	400	126	268	34	16	17
22	20	195	181	294	759	2,840	348	134	208	33	16	16
23	20	163	159	263	803	2,530	302	156	165	32	16	16
24	21	141	150	237	852	2,240	270	134	138	31	16	16
25	21	124	150	223	842	1,880	286	119	120	30	22	15
26	21	116	146	212	764	1,540	251	124	105	29	23	15
27	28	110	165	418	820	1,080	230	115	94	28	19	15
28	33	105	907	988	940	825	237	105	87	27	19	15
29	66	106	1,190	1,000	-	690	256	105	79	26	20	15
30	65	108	869	847	-	630	228	113	77	24	19	15
31	113	-	640	625	-	665	-	96	-	24	29	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	968	113	20	31.2	0.148	0.17	1,920
November	13,022	3,310	105	434	2.06	2.30	25,830
December	17,330	2,370	118	559	2.65	3.06	34,370
Calendar year 1938	231,680	6,840	17	635	3.01	40.87	459,500
January	17,552	1,900	212	566	2.68	3.09	34,810
February	34,248	5,320	400	1,223	5.80	6.04	67,930
March	51,478	5,360	610	1,661	7.87	9.07	102,100
April	12,879	830	228	429	2.03	2.26	25,550
May	4,310	202	96	139	.659	.76	8,550
June	4,533	386	72	151	.716	.80	8,990
July	1,464	97	24	47.2	.224	.26	2,900
August	603	29	16	19.5	.092	.11	1,200
September	727	116	15	24.2	.115	.13	1,440
Water year 1938-39	159,114	5,360	15	436	2.07	28.05	315,600

Peak discharge.- Nov. 4 (4:30 a.m.) 5,720 sec.-ft.; Feb. 15 (8 a.m.) 6,170 sec.-ft.; Mar. 12 (11 a.m.) 7,900 sec.-ft.

244757 O—40—7

Row River near Dorena, Oreg.

Location.- Staff gage, lat. 43°48', long. 122°57', in NE¼ sec. 36, T. 20 S., R. 3 W., 1⅛ miles upstream from Mosby Creek and 3⅜ miles northwest of Dorena. Zero of gage is 686.24 feet above mean sea level (general adjustment of 1929), by surveys of Corps of Engineers, U. S. Army.

Drainage area.- *270 square miles.

Records available.- January to September 1939.

Extremes.- Maximum discharge observed during period, 8,770 second-feet Mar. 12 (gage height, 10.2 feet); minimum observed, 21 second-feet Aug. 24, Sept. 25-30 (gage height, 0.40 foot).

Remarks.- Records good. No diversion or regulation above station. Gage read once daily, twice daily during freshets.

Rating tables, January to September 1939 (gage height, in feet, and discharge in second-feet)

0.4	21	1.8	400	3.5	1,280	6.0	3,380
.7	58	2.2	580	4.0	1,620	7.0	4,460
1.0	117	2.6	770	4.5	2,000	8.0	5,650
1.4	240	3.0	980	5.0	2,420	9.6	7,870

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				*630	625	1,040	840	218	99	86	31	*140
2				*610	535	1,040	903	204	90	83	33	112
3				*1,000	535	1,230	903	204	86	83	33	58
4				*1,500	580	1,220	810	198	103	133	33	46
5				2,240	670	1,040	680	185	272	108	31	41
6				1,220	3,580	1,220	598	166	226	103	31	36
7				870	1,580	1,100	643	155	178	86	31	33
8				770	1,040	980	710	149	143	79	29	31
9				720	770	876	598	172	133	75	29	29
10				670	670	820	508	172	127	72	29	29
11				580	720	770	454	172	108	72	27	29
12				490	2,690	7,870	454	155	99	68	25	33
13				445	2,200	3,960	400	149	90	61	25	33
14				400	3,530	2,330	352	149	86	61	23	33
15				400	6,920	1,720	312	149	79	58	23	33
16				360	3,690	2,040	304	143	191	68	22	31
17				360	2,200	3,030	352	127	256	61	23	29
18				445	2,040	3,530	472	117	508	58	23	27
19				490	1,690	3,380	517	160	481	52	23	27
20				445	1,340	3,180	472	155	517	49	23	27
21				360	1,100	3,180	445	149	376	49	23	25
22				360	980	3,130	392	166	272	49	23	23
23				320	980	2,740	344	191	211	46	25	23
24				280	1,040	2,360	312	166	172	43	21	23
25				280	1,040	2,100	344	138	149	41	27	21
26				240	925	1,780	288	143	133	41	41	21
27				320	980	1,240	256	138	117	38	31	21
28				1,220	1,280	958	256	122	108	38	29	21
29				1,220	-	800	280	117	99	33	31	21
30				1,100	-	720	256	138	92	31	29	21
31				820	-	730	-	112	-	31	31	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October							
November							
December							
Calendar year							
January	21,165	2,240	240	683	2.53	2.92	41,980
February	45,930	6,920	535	1,640	6.07	6.32	91,100
March	62,114	7,870	720	2,004	7.42	8.55	123,200
April	14,455	903	256	482	1.79	2.00	28,670
May	4,879	218	112	157	.581	.67	9,680
June	5,601	517	79	187	.693	.77	11,110
July	1,956	133	31	63.1	.234	.27	3,880
August	858	41	21	27.7	.103	.12	1,700
September	1,077	140	21	35.9	.133	.15	2,140
The period	-	-	-	-	-	-	313,500

*Gage readings began Jan. 5; discharge computed on basis of records for station at Star.

Mosby Creek near Cottage Grove, Oreg.

Location.- Staff gage, lat. 43°45', long. 122°59', in NW¼ sec. 18, T. 21 S., R. 2 W., 5 miles southeast of Cottage Grove.

Drainage area.- 85 square miles.

Records available.- February 1936 to September 1939.

Extremes.- Maximum discharge observed during year, 3,820 second-feet Mar. 12 (gage height, 6.20 feet), from rating curve extended above 2,100 second-feet; minimum discharge, 4 second-feet Aug. 23, 24, Sept. 29, 30 (gage height, 0.36 foot).
1936-39: Maximum discharge, 5,480 second-feet (revised) Mar. 18, 1938 (gage height, 7.8 feet, from floodmark), from rating curve extended above 2,100 second-feet; minimum, 4 second-feet several times in 1936 and 1939.

Remarks.- Records fair. No diversion or regulation above station. Gage read once daily; oftener during periods of high water.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.3	3.0	0.9	56	1.8	340	3.0	1,010	4.5	2,230
.5	9.5	1.2	128	2.2	535	3.5	1,380	5.0	2,680
.7	27	1.5	225	2.6	760	4.0	1,795	6.0	3,620

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	87	53	140	276	284	117	32	23	19	6	*20
2	5	87	1,220	171	253	260	128	30	19	19	6	*13
3	30	190	820	435	211	284	123	30	19	23	6	*11
4	16	1,120	557	515	239	385	112	32	27	25	5	10
5	11	276	435	978	260	340	96	30	46	23	5	9
6	10	152	260	435	1,460	385	82	30	35	21	6	8
7	9	91	190	260	645	405	87	25	30	19	6	8
8	8	64	164	225	385	340	82	27	27	19	6	8
9	7	117	123	197	284	292	82	27	25	16	6	7
10	7	225	101	164	253	253	69	27	23	16	5	6
11	10	184	82	140	358	225	69	25	21	14	5	8
12	12	140	73	123	1,380	3,620	69	25	19	12	5	8
13	12	87	60	109	820	2,320	60	23	19	12	5	8
14	10	87	53	101	1,040	880	53	25	17	12	5	7
15	10	123	50	91	1,500	579	50	23	21	12	5	7
16	7	112	43	82	1,040	568	53	21	77	14	5	7
17	7	140	40	82	790	623	50	21	87	12	5	6
18	6	101	37	82	535	678	46	23	64	12	5	6
19	8	77	35	82	465	601	53	27	64	12	5	5
20	7	69	30	82	332	525	56	32	56	11	5	5
21	7	56	35	73	253	505	53	35	46	11	5	5
22	7	50	43	69	218	435	54	37	37	10	5	5
23	7	43	40	69	218	367	46	50	32	10	4	5
24	7	37	37	64	204	332	43	35	30	9	4	5
25	8	35	32	53	204	308	53	30	27	9	9	5
26	7	32	30	50	211	232	46	30	23	9	8	5
27	9	30	37	56	211	190	43	30	23	8	7	5
28	11	27	324	495	292	152	40	27	23	8	7	5
29	32	25	332	415	-	128	40	25	21	8	7	4
30	30	30	239	435	-	117	37	25	19	8	6	4
31	43	-	177	324	-	112	-	23	-	7	8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	365	43	5	11.8	0.139	0.16	724
November	3,894	1,120	25	130	1.53	1.71	7,720
December	5,752	1,220	30	186	2.19	2.52	11,410
Calendar year 1938	78,015	2,900	5	214	2.52	34.14	154,700
January	6,597	978	50	213	2.51	2.89	13,080
February	14,337	1,500	204	512	6.02	6.27	28,440
March	16,725	3,620	112	540	6.35	7.32	33,170
April	1,992	128	37	66.4	.781	.87	3,950
May	882	50	21	28.5	.335	.39	1,750
June	1,000	87	17	33.3	.392	.44	1,980
July	420	25	7	13.5	.159	.18	833
August	177	9	4	5.7	.067	.08	351
September	215	20	4	7.2	.085	.09	426
Water year 1938-39	52,356	3,620	4	143	1.68	22.92	103,800

*Gage height faulty; discharge computed on basis of records for Coast Fork of Willamette River at London and Row River at Star.

McKenzie River at McKenzie Bridge, Oreg.

Location.- Water-stage recorder, lat. 44°11', long. 122°07', 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 (general adjustment of 1929).

Drainage area.- 345 square miles at measuring section, three-quarters of a mile upstream from gage.

Records available.- August 1910 to September 1939.

Average discharge.- 23 years (1910-14, 1915-16, 1918-21, 1923-25, 1926-39), 1,626 second-feet.

Extremes.- Maximum discharge during year, 2,900 second-feet Dec. 2, 5 (gage height, 2.74 feet); minimum, 930 second-feet Sept. 30 (gage height, 1.00 foot).
1910-39: Maximum discharge, 18,000 second-feet (estimated) Jan. 6, 1923 (gage height, 8.3 feet, from floodmarks at former gage at highway bridge); minimum, 805 second-feet Oct. 20, 1931.

Remarks.- Records good. No diversion or regulation above station. Water-stage recorder inspected by employee of U. S. Forest Service.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.0	930	2.0	1,910
1.2	1,080	2.4	2,420
1.4	1,260	2.7	2,830
1.7	1,560		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,020	1,020	1,290	1,410	1,220	1,290	2,010	1,990	1,480	1,270	1,080	993
2	1,020	1,020	2,010	1,500	1,220	1,290	2,080	1,980	1,460	1,260	1,070	986
3	1,020	1,600	2,420	1,710	1,210	1,290	2,130	1,970	1,450	1,270	1,070	979
4	1,020	1,530	2,760	1,650	1,190	1,270	2,110	1,970	1,450	1,270	1,060	979
5	1,020	1,230	2,620	1,630	1,190	1,250	2,040	1,910	1,440	1,260	1,060	986
6	1,010	1,170	2,160	1,540	1,210	1,240	1,980	1,850	1,420	1,250	1,060	979
7	1,000	1,140	2,100	1,490	1,200	1,220	1,980	1,810	1,400	1,240	1,060	972
8	1,000	1,140	1,990	1,440	1,190	1,220	2,060	1,850	1,390	1,230	1,050	972
9	1,000	1,160	1,890	1,400	1,180	1,220	2,030	1,890	1,400	1,220	1,050	965
10	1,010	1,150	1,780	1,370	1,170	1,200	1,970	1,910	1,390	1,220	1,050	965
11	1,030	1,120	1,690	1,350	1,160	1,240	1,930	1,910	1,370	1,220	1,040	972
12	1,010	1,120	1,620	1,330	1,280	1,350	1,910	1,900	1,360	1,210	1,040	958
13	1,010	1,110	1,560	1,300	1,260	1,350	1,840	1,900	1,350	1,200	1,030	965
14	1,000	1,100	1,520	1,300	1,380	1,300	1,780	1,930	1,350	1,190	1,030	958
15	993	1,120	1,480	1,300	2,160	1,300	1,740	1,950	1,360	1,190	1,030	951
16	993	1,350	1,440	1,280	1,910	1,350	1,720	1,890	1,400	1,170	1,020	951
17	986	1,430	1,410	1,290	1,730	1,520	1,770	1,800	1,420	1,160	1,020	944
18	986	1,290	1,370	1,340	1,630	1,740	1,900	1,790	1,450	1,160	1,020	944
19	986	1,230	1,340	1,400	1,550	1,910	2,040	1,720	1,470	1,140	1,020	944
20	979	1,220	1,310	1,360	1,480	2,070	2,150	1,680	1,450	1,140	1,020	944
21	979	1,200	1,300	1,330	1,430	2,290	2,220	1,670	1,410	1,130	1,010	951
22	979	1,180	1,290	1,300	1,400	2,480	2,220	1,640	1,390	1,120	1,010	944
23	979	1,160	1,270	1,270	1,370	2,620	2,130	1,630	1,370	1,120	1,010	944
24	979	1,150	1,260	1,250	1,360	2,620	2,060	1,590	1,350	1,120	1,000	944
25	979	1,130	1,250	1,240	1,360	2,550	2,070	1,580	1,330	1,120	1,000	937
26	979	1,120	1,230	1,220	1,340	2,420	2,010	1,640	1,320	1,120	1,000	937
27	979	1,120	1,250	1,260	1,330	2,160	1,990	1,620	1,300	1,110	993	937
28	986	1,100	1,300	1,260	1,300	2,020	2,060	1,590	1,300	1,110	1,000	937
29	993	1,100	1,460	1,260	-	1,950	2,120	1,650	1,300	1,100	993	937
30	1,000	1,120	1,480	1,250	-	1,930	2,060	1,590	1,290	1,090	986	930
31	1,000	-	1,420	1,220	-	1,950	-	1,530	-	1,090	993	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	30,925	1,030	979	998	2.89	3.33	61,340
November	35,630	1,600	1,020	1,188	3.44	3.84	70,670
December	50,270	2,760	1,230	1,622	4.70	5.42	99,710
Calendar year 1938	598,015	5,280	979	1,638	4.75	64.46	1,186,000
January	42,250	1,710	1,220	1,363	3.95	4.55	83,800
February	38,410	2,160	1,160	1,372	3.98	4.14	76,190
March	58,610	2,620	1,200	1,697	4.92	5.67	104,400
April	60,110	2,220	1,720	2,004	5.81	6.48	119,200
May	55,330	1,990	1,530	1,785	5.17	5.96	109,700
June	41,620	1,480	1,290	1,387	4.02	4.48	82,550
July	36,500	1,270	1,090	1,177	3.41	3.93	72,400
August	31,875	1,080	986	1,028	2.98	3.44	63,220
September	28,705	993	930	957	2.77	3.09	56,940
Water year 1938-39	504,235	2,760	930	1,381	4.00	54.33	1,000,000

McKenzie River near Vida, Oreg.

Location.- Water-stage recorder, lat. 44°07', long. 122°28', in NE¼ sec. 5, T. 17 S., R. 3 E., 1 mile upstream from head of Martin Rapids and 5 miles east of Vida. Zero of gage is 855.56 feet above mean sea level (general adjustment of 1929).

Drainage area.- 930 square miles.

Records available.- September 1924 to September 1939. June 1910 to March 1911 (gage heights only), at site at Martin Rapids.

Average discharge.- 15 years, 3,648 second-feet.

Extremes.- Maximum discharge during year, 14,700 second-feet Dec. 2 (gage height, 5.88 feet); minimum observed, 1,430 second-feet Sept. 24, 25 (gage height, 0.53 foot).
1924-39: Maximum discharge, 47,200 second-feet Feb. 20, 1927 (gage height, 14.2 feet), from rating curve extended above 25,000 second-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. No diversion or regulation above station. Water-stage recorder inspected by employee of Eugene Water Board.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second feet)

0.5	1,400	1.6	3,010	3.5	7,240
.7	1,630	2.0	3,720	4.0	6,600
1.0	2,050	2.5	4,730	4.5	10,100
1.3	2,510	3.0	5,950	5.1	11,900

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,610	2,120	2,920	3,740	2,940	3,400	5,580	4,400	2,940	2,300	1,720	*1,620
2	1,610	2,080	8,330	4,000	2,910	3,450	5,920	4,360	2,820	2,260	1,710	*1,600
3	1,670	6,310	10,400	5,220	2,840	3,540	6,100	4,300	2,770	2,320	1,700	†1,560
4	1,660	7,390	11,200	5,250	2,790	3,470	5,820	4,300	2,870	2,400	1,680	†1,520
5	1,620	3,780	9,770	5,800	3,010	3,310	5,420	4,040	2,990	2,300	1,680	†1,520
6	1,610	2,920	7,110	4,730	4,000	3,360	5,100	3,850	2,920	2,260	1,670	†1,520
7	1,590	2,560	6,120	4,120	3,560	3,250	5,180	3,760	2,790	2,200	1,660	†1,520
8	1,580	2,450	5,480	3,870	3,110	3,180	5,600	3,830	2,700	2,170	1,640	†1,520
9	1,570	2,840	4,780	3,630	2,870	3,100	5,380	4,040	2,840	2,140	1,640	†1,520
10	1,570	2,890	4,260	3,450	2,790	3,010	4,960	4,060	2,790	2,110	1,630	†1,520
11	1,770	2,480	3,850	3,340	2,820	3,360	4,800	4,080	2,700	2,100	1,630	†1,520
12	1,710	2,290	3,580	3,220	4,840	6,000	4,710	3,990	2,640	2,060	1,620	†1,560
13	1,660	2,200	3,360	3,100	4,690	5,520	4,380	3,970	2,610	2,040	1,620	†1,560
14	1,640	2,280	3,180	3,030	6,200	4,400	4,080	4,040	2,570	2,020	1,610	†1,560
15	1,610	2,620	3,060	3,150	11,900	4,180	3,910	4,120	2,570	1,990	1,610	†1,520
16	1,580	3,580	2,920	3,040	8,460	4,710	3,850	4,000	3,060	2,000	1,590	†1,520
17	1,570	4,780	2,810	3,080	6,330	6,330	4,100	3,780	3,220	1,940	1,590	†1,480
18	1,560	3,610	2,720	3,470	5,520	7,920	4,710	3,700	3,490	1,920	1,580	†1,480
19	1,550	3,100	2,640	3,850	4,980	8,740	5,320	3,560	3,560	1,900	1,570	†1,480
20	1,550	2,870	2,570	3,560	4,450	9,320	5,580	3,400	3,470	1,870	1,560	1,470
21	1,530	2,670	2,590	3,290	4,100	10,100	5,820	3,340	3,180	1,860	1,560	1,470
22	1,530	2,530	2,530	3,130	3,850	11,000	5,620	3,380	2,980	1,840	1,570	1,460
23	1,530	2,380	2,490	2,960	3,830	10,800	5,220	3,380	2,860	1,830	1,560	1,440
24	1,550	2,290	2,460	2,860	3,800	10,600	4,890	3,200	2,740	1,820	1,570	1,440
25	1,550	2,220	2,480	2,770	3,830	9,770	4,980	3,160	2,640	1,800	1,570	1,440
26	1,560	2,170	2,430	2,720	3,720	8,880	4,660	3,310	2,540	1,790	1,560	1,440
27	1,620	2,120	2,530	3,040	3,700	7,380	4,530	3,270	2,490	1,770	1,550	†1,440
28	1,610	2,110	3,950	3,490	3,590	6,180	4,690	3,180	2,450	1,760	1,570	†1,440
29	1,750	2,160	4,780	3,610	-	5,550	4,940	3,340	2,400	1,750	1,560	†1,480
30	1,790	2,230	4,550	3,450	-	5,220	4,620	3,400	2,350	1,730	†1,520	†1,480
31	1,840	-	3,950	3,180	-	5,250	-	3,110	-	1,730	*1,560	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	50,150	1,840	1,530	1,618	1.74	2.01	99,470
November	88,020	7,380	2,080	2,934	3.15	3.51	174,600
December	135,800	11,200	2,430	4,381	4.71	5.43	269,400
Calendar year 1938	1,466,020	24,200	1,530	4,016	4.32	58.61	2,908,000
January	111,150	5,800	2,720	3,585	3.85	4.44	220,500
February	121,430	11,900	2,790	4,337	4.66	4.85	240,900
March	184,280	11,000	3,010	5,945	6.39	7.37	365,500
April	150,470	6,100	3,850	5,016	5.39	6.01	298,500
May	115,650	4,400	3,110	3,731	4.01	4.62	229,400
June	84,950	3,560	2,350	2,832	3.05	3.40	168,500
July	61,980	2,400	1,730	1,999	2.15	2.48	122,900
August	49,860	1,720	1,520	1,608	1.73	1.99	98,900
September	45,100	1,620	1,440	1,503	1.62	1.81	89,450
Water year 1938-39	1,198,840	11,900	1,440	3,284	3.53	47.92	2,378,000

*Gage heights missing; discharge computed on basis of weather records and records for McKenzie River at McKenzie Bridge and Blue River near Blue River.
†Gage heights missing; discharge computed on basis of readings of gage in tailrace of power plant near Leaburg, 15 miles downstream.

Blue River near Blue River, Oreg.

Location.- Water-stage recorder, lat. 44°11', long. 122°17', near line between secs. 13 and 14, T. 16 S., R. 4 E., 3 miles upstream from North Fork and 3½ miles northeast of the hamlet of Blue River.

Drainage area.- 75 square miles.

Records available.- September 1935 to September 1939.

Extremes.- Maximum discharge during year, 4,320 second-feet Dec. 2 (gage height, 5.46 feet); minimum, 13 second-feet Oct. 1, 2 (gage height, 1.00 foot).

1935-39: Maximum discharge, 5,800 second-feet Jan. 22, 1938 (gage height, 6.50 feet); minimum, 13 second-feet Sept. 27, 28, Oct. 1, 2, 1938.

Remarks.- Records good except those below 40 second-feet, which are fair. No diversion or regulation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

(Shifting-control method used Aug. 1 to Sept. 30)

1.0	13	1.7	249	2.8	1,000	4.0	2,300
1.2	49	2.0	403	3.2	1,390	4.2	2,560
1.4	120	2.4	675	3.6	1,820		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	208	459	440	240	291	806	322	120	97	32	38
2	14	165	2,460	544	236	291	886	316	112	93	30	28
3	25	1,400	2,180	862	218	296	886	311	108	100	30	24
4	25	999	2,000	782	204	282	790	301	120	104	30	24
5	19	409	1,660	814	218	263	675	272	136	89	30	22
6	18	263	1,000	615	311	254	622	249	140	81	28	22
7	18	200	806	478	277	244	675	240	124	75	28	20
8	18	178	645	422	231	236	735	258	120	71	26	20
9	18	218	510	375	204	226	660	272	132	68	26	20
10	18	208	409	357	195	222	579	263	124	68	26	20
11	41	161	337	322	208	358	558	263	112	65	25	20
12	34	132	291	306	586	682	530	254	104	62	25	20
13	36	128	258	287	544	586	446	244	100	59	25	20
14	32	152	236	277	675	440	381	249	93	55	25	20
15	28	258	218	311	2,060	415	364	244	104	55	25	19
16	25	650	195	291	1,200	558	369	218	204	55	24	19
17	24	705	178	291	782	964	465	195	254	52	24	18
18	24	428	165	422	638	1,290	600	195	296	49	24	18
19	22	322	157	558	544	1,490	652	170	296	47	24	18
20	22	282	145	446	459	1,600	652	161	282	47	22	18
21	20	244	145	364	397	1,820	645	170	231	45	20	18
22	20	213	140	322	358	2,000	558	170	195	43	20	18
23	19	182	145	282	347	1,940	478	174	174	43	20	16
24	22	161	145	254	347	1,880	415	153	153	41	22	16
25	22	145	157	240	358	1,710	409	149	140	41	24	16
26	22	140	149	226	337	1,390	369	178	136	38	22	16
27	32	136	161	272	327	982	364	161	128	38	22	16
28	28	136	347	327	311	766	392	149	116	36	25	16
29	65	153	705	347	-	660	403	165	108	36	26	16
30	89	187	638	322	-	638	347	153	100	36	24	16
31	89	-	478	277	-	690	-	132	-	34	32	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	903	89	14	29.1	0.388	0.45	1,790
November	9,163	1,400	128	305	4.07	4.54	18,170
December	17,519	2,460	140	565	7.53	8.68	34,750
Calendar year 1938	137,301	4,170	14	376	5.01	68.17	272,300
January	12,413	862	226	400	5.33	6.14	24,620
February	12,812	2,060	195	458	6.11	6.36	25,410
March	25,464	2,000	222	821	10.9	12.57	50,510
April	16,711	886	347	557	7.43	8.29	33,150
May	6,751	322	132	218	2.91	3.36	13,390
June	4,562	296	93	152	2.03	2.26	9,050
July	1,823	104	34	58.8	.784	.90	3,620
August	786	32	20	25.4	.339	.39	1,560
September	592	38	16	19.7	.263	.29	1,170
Water year 1938-39	109,499	2,460	14	300	4.00	54.23	217,200

Mohawk River near Springfield, Oreg.

Location.- Wire-weight gage, lat. 44°06', long. 122°57', in sec. 17, T. 17 S., R. 2 W., 1 mile upstream from mouth and 4½ miles northeast of Springfield.

Drainage area.- 180 square miles.

Records available.- September 1935 to September 1939.

Extremes.- Maximum discharge observed during year, 4,400 second-feet Feb. 15 (gage height, 13.59 feet); minimum observed, 19 second-feet Oct. 1, 22.
1935-39: Maximum discharge observed, 6,480 second-feet Mar. 18, 1938 (gage height, about 18.0 feet, from floodmark); minimum discharge observed, 11 second-feet Sept. 17, 1938.

Remarks.- Records fair. No diversion above gage. Possibly some regulation caused by operation of logging ponds. Gage read once daily during low-water periods; twice daily at other times.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 15				Feb. 16 to Sept. 30			
1.2	19	5.0	970	1.1	23	5.0	980
1.5	58	6.0	1,290	1.5	70	6.0	1,300
2.0	150	8.0	2,030	2.0	166	6.0	2,030
2.5	268	10.0	2,840	2.5	283	10.0	2,640
3.0	397	12.0	3,690	3.0	410	12.0	3,690
4.0	673	14.0	4,580	4.0	685		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	268	280	616	850	743	424	164	120	94	31	116
2	21	207	1,320	790	760	801	410	166	101	100	31	54
3	125	820	2,270	1,180	1,030	920	384	145	113	147	28	44
4	53	1,640	1,640	1,320	970	920	371	149	143	137	28	41
5	29	673	1,460	1,460	1,150	860	346	139	166	118	29	39
6	29	293	1,090	1,060	2,350	1,010	333	132	141	113	29	42
7	24	256	910	910	2,270	980	333	132	132	105	28	40
8	24	219	731	940	1,600	920	320	139	128	98	26	36
9	22	820	673	790	1,220	801	263	130	145	101	26	36
10	26	970	532	673	1,090	743	296	124	128	94	26	35
11	56	588	478	616	970	772	271	118	109	89	22	37
12	61	397	397	560	1,990	2,550	308	118	101	82	25	42
13	53	371	*370	505	2,350	2,640	271	94	91	73	28	37
14	44	332	345	478	2,800	2,070	247	100	98	67	26	44
15	30	371	332	451	4,310	1,680	247	107	109	64	26	38
16	30	427	306	397	3,180	1,500	235	111	259	67	25	35
17	27	560	280	427	2,390	1,440	223	105	235	65	24	36
18	24	*450	268	451	1,870	1,440	211	113	247	65	24	35
19	24	397	256	451	1,500	1,400	200	107	283	64	26	32
20	20	371	256	427	1,200	1,300	211	113	259	59	23	32
21	24	293	319	397	1,040	1,270	200	156	211	48	22	30
22	19	280	280	397	920	1,240	200	177	188	42	25	29
23	21	243	256	397	860	1,170	200	162	164	45	24	25
24	26	231	280	345	772	1,080	200	384	158	40	29	27
25	24	219	*300	345	772	950	235	358	141	35	28	28
26	21	195	293	371	743	830	200	158	132	33	34	23
27	61	172	319	616	772	656	188	132	137	28	31	23
28	41	172	1,090	860	801	572	166	118	122	33	33	24
29	101	184	1,000	910	-	504	166	120	124	31	40	25
30	108	207	850	1,150	-	464	166	124	118	29	33	25
31	*130	-	702	1,000	-	437	-	116	-	29	53	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	1,317	130	19	42.5	0.236	0.27	2,610
November	12,626	1,640	172	421	2.34	2.61	25,040
December	19,883	2,270	256	641	3.56	4.10	39,440
Calendar year 1938	202,428	5,230	11	555	3.08	41.81	401,500
January	21,280	1,460	345	686	3.81	4.39	42,210
February	42,530	4,310	743	1,519	8.44	8.79	84,360
March	34,663	2,640	437	1,118	6.21	7.16	68,750
April	7,845	424	166	262	1.46	1.63	15,560
May	4,511	384	94	146	.811	.94	8,950
June	4,603	283	91	153	.850	.95	9,130
July	2,186	147	28	70.5	.392	.45	4,330
August	883	53	22	28.5	.158	.18	1,750
September	1,112	118	23	37.1	.206	.23	2,210
Water year 1938-39	153,438	4,310	19	420	2.33	31.70	304,300

*Gage not read; discharge computed on basis of records for Blue River near Blue River.

Long Tom River near Noti, Oreg.

Location.-Staff gage, lat. 44°03', long. 123°26', in sec. 33, T. 17 S., R. 6 W., an eighth of a mile upstream from railroad bridge, 1 mile downstream from Noti Creek, and 1½ miles southeast of Noti. Zero of gage is 388.76 feet above mean sea level (surveys of Corps of Engineers, U. S. Army).

Drainage area.- 88 square miles.

Records available.- October 1935 to September 1939.

Extremes.- Maximum discharge during year, 1,390 second-feet Feb. 7 (gage height, 11.0 feet, from graph based on gage readings); minimum discharge observed, 7 second-feet Sept. 25-27 (gage height, 0.66 foot).
1935-39: Maximum discharge, 3,970 second-feet Jan. 13, 1936 (gage height, 18.3 feet, from graph based on gage readings); minimum discharge observed, that of Sept. 25-27, 1939.

Remarks.- Records fair. No diversion above station; slight diurnal fluctuation caused by operation of logging pond above Noti. Gage read twice daily; oftener during periods of high water.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 7						Feb. 8 to Sept. 30					
1.0	16	3.0	277	7.0	755	0.7	8.4	2.0	106	6.0	635
1.3	32	3.5	356	9.0	1,050	1.0	19	3.0	260	7.0	755
1.6	59	4.0	423	11.0	1,390	1.3	34	4.0	404	9.0	1,050
2.0	106	5.0	540			1.6	59	5.0	533	10.0	1,210
2.5	185	6.0	635								

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	80	168	203	550	215	143	72	40	25	14	26
2	19	93	630	294	472	238	140	70	40	24	14	17
3	32	113	1,080	484	540	282	134	69	41	27	14	15
4	24	294	560	560	530	320	131	68	41	30	14	14
5	28	176	423	742	540	298	126	68	47	30	11	15
6	23	69	310	569	1,000	327	123	66	44	29	11	14
7	22	60	222	397	1,300	369	117	63	43	27	14	14
8	18	53	194	356	930	355	114	62	41	26	13	12
9	18	69	176	277	657	305	107	60	40	23	13	10
10	28	277	143	232	585	268	106	59	40	23	13	10
11	23	168	120	203	533	320	105	58	38	22	13	14
12	32	106	113	185	855	668	110	55	37	21	10	14
13	25	100	100	168	1,070	900	114	54	35	22	11	14
14	24	93	100	151	990	742	109	51	34	23	14	14
15	18	78	86	160	1,210	605	101	48	34	21	14	14
16	18	78	80	160	975	445	98	47	38	21	13	11
17	23	100	78	151	716	411	96	49	47	23	13	10
18	20	93	76	160	585	362	91	48	42	22	12	14
19	20	80	74	194	515	320	91	49	40	21	9	12
20	19	71	74	176	418	290	88	52	40	21	8	12
21	19	69	78	160	376	260	85	67	37	21	11	11
22	15	61	78	151	334	247	81	80	33	16	11	12
23	18	51	71	160	312	231	81	70	32	15	11	8
24	28	49	69	135	282	212	83	55	32	18	11	8
25	25	50	70	135	275	202	93	49	28	17	12	10
26	25	48	74	143	268	193	83	48	30	17	11	8
27	22	44	80	310	241	185	80	49	29	16	14	10
28	26	42	168	680	231	174	77	46	29	15	14	11
29	47	43	250	668	-	161	74	46	28	12	14	11
30	49	55	241	885	-	158	74	44	28	13	14	9
31	72	-	203	729	-	149	-	44	-	13	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	795	72	15	25.6	0.291	0.34	1,580
November	2,763	294	42	92.1	1.05	1.17	5,480
December	6,239	1,080	69	201	2.28	2.63	12,370
Calendar year 1938	98,407	3,140	13	270	3.07	41.59	195,200
January	9,978	885	135	322	3.66	4.22	19,790
February	17,290	1,300	231	618	7.02	7.31	34,290
March	10,212	900	149	329	3.74	4.31	20,260
April	3,055	143	74	102	1.16	1.29	6,060
May	1,766	80	44	57.0	.648	.75	3,500
June	1,108	47	28	36.9	.419	.47	2,200
July	654	30	12	21.1	.240	.28	1,300
August	388	17	8	12.5	.142	.16	770
September	374	26	8	12.5	.142	.16	742
Water year 1938-39	54,622	1,300	8	150	1.70	23.09	108,300

Long Tom River at Monroe, Oreg.

Location.- Staff gage, lat. 44°18'55", long. 123°17'45", in NE¼ sec. 33, T. 14 S., R. 5 W., at Monroe, a quarter of a mile downstream from Shafer Creek. Zero of gage is 262.27 feet above mean sea level (general adjustment of 1929).

Drainage area.- 391 square miles.

Records available.- November 1920 to September 1939 (1925-27 incomplete).

Average discharge.- 16 years (1921-25, 1927-39), 709 second-feet.

Extremes.- Maximum discharge during year, 4,440 second-feet Feb. 9 (gage height, 12.3 feet, from graph based on gage readings); minimum discharge observed, 7 second-feet Sept. 29 (gage height, 0.29 foot).

1920-39: Maximum discharge, about 18,600 second-feet Jan. 7, 1923 (gage height, 14.4 feet, former site and datum); minimum discharge observed, that of Sept. 29, 1939.

Maximum stage known, 282.1 feet above mean sea level sometime in February 1890, from floodmarks at bridge at Monroe, corresponding to stage of about 19 feet at present gage (discharge not determined).

Remarks.- Records good above and fair below 50 second-feet. No diversion above station. Some fluctuation at low stages caused by pondage at mill dam at Monroe. Gage read once daily; oftener during periods of high water.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-31, July 6 to Sept. 30)

0.1	5	0.7	43	1.6	164	3.0	388	5.0	840	10.0	2,440
.3	12	.9	66	2.0	225	3.5	477	6.0	1,140	11.0	2,990
.5	24	1.2	106	2.5	305	4.0	584	8.0	1,760	12.2	4,280

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	66	114	700	2,740	606	329	131	74	43	15	16
2	20	100	422	780	2,290	562	313	131	71	41	14	15
3	23	117	1,510	1,200	2,120	606	305	126	71	43	14	15
4	20	203	2,360	1,730	1,950	750	281	120	71	41	14	18
5	20	225	2,860	2,360	1,890	810	273	117	66	41	14	16
6	26	281	2,530	2,440	2,290	810	257	114	66	42	14	14
7	28	281	1,760	2,190	2,990	900	241	112	69	42	14	15
8	28	194	1,200	1,890	3,980	990	241	109	69	42	13	13
9	24	146	870	1,480	4,280	930	233	106	66	40	13	13
10	24	197	629	1,230	3,480	840	225	103	66	40	13	12
11	23	289	562	960	2,800	780	215	98	61	35	13	14
12	21	422	449	750	2,440	1,200	209	92	61	33	13	13
13	23	414	388	700	2,680	2,360	215	89	56	33	13	11
14	30	321	329	562	3,130	3,290	222	89	56	33	13	12
15	28	249	313	497	3,840	3,480	222	82	54	33	12	13
16	27	222	273	468	3,590	2,800	209	79	54	30	12	14
17	25	222	249	458	3,290	2,050	197	79	59	28	12	12
18	23	225	233	449	2,860	1,570	188	79	69	28	12	12
19	20	233	219	468	2,260	1,290	179	79	84	27	12	12
20	10	219	212	468	1,830	1,050	173	79	74	26	12	11
21	16	194	215	458	1,510	900	167	89	66	26	11	11
22	16	173	225	431	1,230	750	161	109	64	25	11	12
23	28	152	225	405	1,050	676	158	128	59	23	10	12
24	23	134	212	405	900	606	155	140	52	23	9	11
25	23	120	200	388	810	540	155	103	50	20	11	10
26	15	106	206	371	725	497	161	98	47	18	11	10
27	28	100	215	458	700	449	164	95	45	20	12	9
28	24	98	289	1,080	652	440	155	92	43	20	12	8
29	36	95	562	1,540	-	405	146	87	45	18	12	7
30	32	95	810	2,290	-	380	137	79	45	16	12	8
31	42	-	780	2,740	-	337	-	76	-	18	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	745	42	10	24.0	0.061	0.07	1,470
November	5,893	422	66	196	.501	.56	11,690
December	21,421	2,860	114	691	1.77	2.04	42,490
Calendar year 1938	326,827	11,600	10	895	2.29	31.08	648,200
January	32,346	2,740	371	1,043	2.67	3.08	64,160
February	64,307	4,280	652	2,297	5.87	6.11	127,600
March	33,654	3,480	337	1,086	2.78	3.20	66,750
April	6,286	329	137	210	.537	.60	12,470
May	3,110	140	76	100	.256	.30	6,170
June	1,833	84	43	61.1	.156	.17	3,640
July	948	43	16	30.6	.078	.09	1,880
August	385	15	9	12.4	.032	.04	764
September	369	18	7	12.3	.031	.03	732
Water year 1938-39	171,295	4,280	7	469	1.20	16.29	339,800

Coyote Creek near Elmira, Oreg.

Location.- Staff gage, lat. 44°04'15", long. 123°17'25", at southwest corner of sec. 22, T. 17 S., R. 5 W., at road crossing 3 miles east of Elmira. Zero of gage is 353.7 feet above mean sea level (general adjustment of 1929).

Drainage area.- 123 square miles.

Records available.- October 1935 to December 1936, January to September 1939.

Extremes.- Maximum discharge observed during year, 1,610 second-feet Feb. 7 (gage height, 7.36 feet); practically no flow Aug. 15 to Sept. 8, Sept. 19-30.
1935-36, 1939: Maximum discharge observed, 5,000 second-feet Jan. 13, 1936 (gage height, 10.0 feet); minimum discharge, that of Aug. 15 to Sept. 8, Sept. 19-30, 1939.

Remarks.- Records fair. Drainage area at station and measurements of flood discharge are uncertain because of overflow in wide valley at gage merging into other streams; flood measurements include all flow crossing road for 1½ miles west and 2 miles east of station, which is considered to be the total discharge from the tributary area. No diversion or artificial regulation.

Rating table, January to September 1939 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 24 to June 6)

1.2	0	2.0	21	3.5	259	5.5	745
1.4	.8	2.3	58	4.0	358	6.0	915
1.6	3.7	2.6	105	4.5	470	6.6	1,170
1.8	9.0	3.0	171	5.0	595	7.2	1,510

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				560	478	124	64	15	7.7	2.7	0.6	0
2				570	397	124	55	14	7.7	2.7	.4	0
3				585	458	209	55	14	7.7	3.4	.4	0
4				601	460	198	44	14	7.7	3.7	.3	0
5				775	430	174	44	14	7.7	4.1	.3	0
6				560	890	228	41	14	7.7	3.4	.2	0
7				371	1,460	228	41	14	7.7	3.1	.2	0
8				311	1,470	216	36	14	7.7	2.7	.2	0
9				255	950	193	39	14	7.7	2.4	.2	.1
10				210	679	171	34	14	7.7	2.1	.2	.2
11				185	578	195	31	15	7.7	2.1	.2	.2
12				166	873	870	41	14	7.1	2.1	.2	.2
13				149	946	1,440	39	14	7.1	1.8	.1	.2
14				132	1,000	1,210	36	14	7.1	1.8	.1	.2
15				131	998	769	31	14	6.4	1.8	0	.2
16				132	936	505	29	14	6.4	1.8	0	.1
17				129	712	364	29	14	5.8	1.8	0	.1
18				131	495	284	29	14	7.1	1.8	0	.1
19				124	364	225	27	14	8.4	1.5	0	0
20				113	255	196	24	13	7.7	1.1	0	0
21				108	221	180	21	15	6.4	1.1	0	0
22				99	193	164	20	17	6.4	.8	0	0
23				103	180	147	20	25	5.4	.8	0	0
24				89	166	131	21	20	5.0	.8	0	0
25				86	154	118	32	15	4.1	.8	0	0
26				83	134	108	27	12	3.7	.8	0	0
27				168	137	99	21	12	3.4	.8	0	0
28				291	144	92	18	8.4	3.4	.7	0	0
29				399	-	86	17	8.4	3.1	.7	0	0
30				730	-	73	15	8.4	3.1	.7	0	0
31				646	-	67	-	7.7	-	.6	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October							
November							
December							
Calendar year							
January	8,992	775	83	290	2.36	2.72	17,840
February	16,148	1,470	134	577	4.69	4.88	32,030
March	9,188	1,440	67	296	2.41	2.78	18,220
April	981	64	15	32.7	.266	.30	1,950
May	429.9	25	7.7	13.9	.113	.13	853
June	191.8	8.4	3.1	6.39	.052	.06	380
July	56.3	4.1	.6	1.82	.015	.02	112
August	3.6	.6	0	.12	.00098	.001	7.1
September	1.6	.2	0	.05	.00041	.0005	3.2
The period	-	-	-	-	-	-	71,400

Calapooya River at Holley, Oreg.

Location.- Staff gage, lat. 44°21', long. 122°47', near line between secs. 14 and 15, T. 14 S., R. 1 W., a quarter of a mile southwest of Holley and 4 miles upstream from Brush Creek. Zero of gage is 527.30 feet (revised) above mean sea level (general adjustment of 1929).

Drainage area.- 99 square miles.

Records available.- September 1935 to September 1939.

Extremes.- Maximum discharge observed during year, 3,950 second-feet Feb. 15 (gage height, 7.20 feet); minimum observed, 19 second-feet Sept. 26 (slightly regulated).
1935-39: Maximum discharge, 6,200 second-feet Jan. 4, 1936 (gage height, about 9.2 feet, from graph based on gage readings); minimum discharge observed, 17 second-feet Oct. 1, 2, 1935, Nov. 26-30, Dec. 1, 3, 1936.
Maximum stage known, 10.6 feet probably in February 1927 (discharge not determined).

Remarks.- Records good. No diversion above station. Slight regulation at times during low-water periods by operation of small dam upstream. Gage read once daily; oftener during periods of high water.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 15						Feb. 16 to Sept. 30					
0.6	18	2.0	300	5.0	2,020	0.6	17	2.0	282	4.0	1,280
.9	42	2.5	490	6.0	2,810	.9	39	2.5	484	4.6	1,695
1.2	86	3.0	720	7.0	3,750	1.2	78	3.0	710	5.2	2,160
1.6	176	4.0	1,300			1.6	158	3.5	980		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	273	300	490	470	421	526	168	95	101	40	127
2	22	250	2,020	598	430	463	548	163	90	95	40	56
3	105	935	2,170	962	490	505	548	153	83	97	39	40
4	52	1,720	1,580	990	470	484	505	149	106	122	38	34
5	34	620	1,580	1,300	552	442	442	142	168	104	38	32
6	29	373	1,080	908	1,170	526	421	131	179	97	37	33
7	27	273	825	695	908	505	400	124	144	90	37	30
8	25	228	695	598	670	484	442	122	124	85	36	28
9	24	430	575	530	530	442	400	127	131	80	35	28
10	24	490	490	470	490	400	360	122	131	78	34	27
11	57	336	411	430	490	570	340	118	118	75	34	28
12	78	269	354	392	1,580	2,000	320	114	108	74	34	32
13	48	237	318	373	1,170	1,620	301	110	99	70	33	29
14	64	283	293	336	1,800	1,100	268	106	92	69	32	29
15	41	373	273	354	3,550	898	246	106	88	66	32	29
16	32	411	250	318	2,160	980	236	101	400	72	31	28
17	30	825	228	300	1,340	1,280	250	95	*420	63	30	26
18	26	530	219	411	1,100	1,480	282	95	442	60	30	26
19	26	411	204	510	980	1,550	301	95	380	59	30	26
20	25	373	196	430	788	1,460	301	90	380	58	28	25
21	24	318	204	373	660	1,480	301	106	282	56	28	24
22	23	276	210	336	638	1,550	268	133	243	54	28	23
23	23	240	196	300	570	1,480	239	174	198	53	28	23
24	26	216	193	283	526	1,340	220	118	174	50	28	23
25	26	193	216	283	526	1,160	320	101	153	48	32	23
26	25	184	201	263	484	980	239	122	144	48	30	19
27	46	173	196	392	484	760	213	118	131	47	28	22
28	39	168	720	575	484	638	201	103	122	46	30	22
29	81	171	770	695	-	548	201	106	114	44	39	22
30	86	173	745	720	-	505	190	127	108	42	32	22
31	126	-	575	575	-	505	-	108	-	41	29	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,317	126	22	42.5	0.429	0.49	2,610
November	11,752	1,720	168	392	3.96	4.42	23,310
December	18,287	2,170	193	590	5.96	6.87	36,270
Calendar year 1938	160,955	3,950	21	441	4.45	60.45	319,200
January	16,190	1,300	263	522	5.27	6.08	32,110
February	25,510	3,550	430	911	9.20	9.58	50,600
March	28,576	2,000	400	922	9.31	10.73	56,680
April	9,829	548	190	328	3.31	3.69	19,500
May	3,747	174	90	121	1.22	1.41	7,430
June	5,437	442	83	181	1.83	2.04	10,780
July	2,144	122	41	69.2	.699	.81	4,250
August	1,020	40	28	32.9	.332	.38	2,020
September	936	127	19	31.2	.315	.35	1,860
Water year 1938-39	124,745	3,550	19	342	3.45	46.85	247,400

*Gage height faulty; discharge computed on basis of record for South Santiam River below Cascadia.

North Santiam River at Detroit, Oreg.

Location.- Water-stage recorder, lat. 44°43', long. 122°08', in NW¼ sec. 12, T. 10 S., R. 5 E., 1 mile east of Detroit. Zero of gage is 1,475.68 feet (revised) above mean sea level (general adjustment of 1929).

Drainage area.- 224 square miles.

Records available.- January 1907 to October 1909, October 1928 to September 1939. August 1910 to October 1913, at site above Boulder Creek (records not equivalent).

Average discharge.- 12 years (1907-8, 1928-39), 929 second-feet.

Extremes.- Maximum discharge during year, 3,170 second-feet Dec. 5 (gage height, 4.56 feet); minimum, 338 second-feet Sept. 30 (gage height, 0.64 foot).
1907-9, 1910-11, 1928-39: Maximum discharge, 15,000 second-feet Mar. 31, 1931 (gage height, about 12.0 feet), from rating curve extended above 2,700 second-feet; minimum, 295 second-feet Oct. 9-12, 14-16, 20, 21, 1931.

Remarks.- Records good except those for August and September, which are fair. No diversion or regulation above station. Water-stage recorder inspected by employee of U. S. Forest Service.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet) (Shifting-control method used Aug. 1 to Sept. 30)

0.6	335	1.4	635	3.0	1,600
.7	365	1.7	780	3.5	2,030
.9	430	2.1	995	4.0	2,520
1.1	505	2.5	1,230	4.3	2,850

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	395	473	830	820	666	720	1,510	1,430	912	622	437	420
2	395	465	1,600	918	662	720	1,600	1,430	880	608	434	389
3	416	1,170	2,000	1,160	644	720	1,650	1,430	852	635	440	383
4	412	1,070	2,670	1,120	630	690	1,650	1,430	830	644	440	386
5	420	765	2,810	1,170	640	666	1,550	1,310	830	599	430	385
6	402	630	2,020	1,050	685	666	1,470	1,240	810	586	420	374
7	392	568	1,850	973	666	640	1,500	1,230	775	581	416	368
8	386	550	1,640	929	635	635	1,600	1,280	770	568	409	368
9	383	558	1,430	874	608	617	1,570	1,340	825	568	409	371
10	392	537	1,220	836	604	612	1,480	1,370	805	576	412	374
11	465	501	1,100	810	617	765	1,460	1,380	785	576	406	386
12	430	473	978	785	880	940	1,440	1,350	780	550	409	377
13	448	477	902	760	800	880	1,320	1,380	775	545	412	380
14	420	493	841	735	978	805	1,230	1,450	740	521	402	395
15	402	586	800	760	1,730	800	1,190	1,480	740	529	398	368
16	395	830	760	725	1,440	874	1,180	1,390	775	513	395	368
17	389	995	720	730	1,220	995	1,270	1,260	795	505	395	365
18	380	825	690	841	1,110	1,160	1,500	1,280	825	505	392	362
19	377	725	666	946	1,020	1,380	1,700	1,150	868	493	386	362
20	377	680	640	880	946	1,570	1,780	1,090	880	481	380	368
21	377	626	640	830	885	1,810	1,870	1,120	820	485	380	371
22	377	590	622	795	841	2,130	1,850	1,090	785	485	377	365
23	380	554	608	760	820	2,330	1,730	1,060	775	481	380	359
24	380	541	599	740	800	2,430	1,610	1,020	725	473	383	356
25	380	521	599	720	800	2,410	1,560	1,060	685	481	383	353
26	383	505	581	695	775	2,250	1,460	1,160	676	481	377	356
27	398	477	590	750	765	1,910	1,440	1,120	666	489	374	350
28	398	477	671	765	730	1,660	1,540	1,090	671	485	374	347
29	454	529	858	770	-	1,500	1,640	1,230	666	458	374	344
30	465	558	858	735	-	1,410	1,480	1,110	644	451	371	338
31	458	-	810	695	-	1,420	-	968	-	448	409	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	12,526	465	377	404	1.80	2.08	24,840
November	18,749	1,170	465	625	2.79	3.11	37,190
December	33,603	2,810	581	1,084	4.84	5.58	66,650
Calendar year 1938	373,557	5,860	377	1,023	4.57	62.00	740,900
January	26,077	1,170	695	841	3.75	4.32	51,720
February	23,597	1,730	604	843	3.76	3.92	46,800
March	38,115	2,430	612	1,230	5.49	6.33	75,600
April	45,830	1,870	1,180	1,528	6.82	7.61	90,900
May	38,728	1,480	968	1,249	5.58	6.43	76,820
June	23,365	912	644	779	3.48	3.88	46,340
July	16,422	644	448	530	2.37	2.73	32,570
August	12,404	440	371	400	1.79	2.06	24,600
September	11,086	420	338	370	1.65	1.84	21,990
Water year 1938-39	300,502	2,810	338	823	3.67	49.89	596,000

North Santiam River above Mayflower Creek, near Detroit, Oreg.

Location.- Staff gage, lat. 44°44', long. 122°15', in NW¼ sec. 7, T. 10 S., R. 5 E., at axis of dam site half a mile upstream from mouth of Mayflower Creek and 5 miles west of Detroit; auxiliary staff gage a quarter of a mile downstream at cable, where all discharge measurements are made. Zero of gage at dam site is 1,200.0 feet above mean sea level (surveys of Corps of Engineers, U. S. Army).

Drainage area.- 438 square miles.

Records available.- October 1938 to September 1939.

Extremes.- Maximum discharge during year, 10,800 second-feet Dec. 5 (gage height, 11.1 feet, from graph based on gage readings); minimum observed, 470 second-feet Sept. 29, 30 (gage height, 2.4 feet).

Remarks.- Records good. Discharge computed largely on basis of records at other stations in North Santiam River Basin. Staff gage read once or twice a day to tenths or half-tenths of a foot. No diversion or regulation above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*540	870	2,000	*1,800	1,480	1,440	3,570	2,520	1,500	1,020	610	660
2	*540	860	5,000	*2,400	1,380	1,440	3,950	2,610	1,440	980	610	565
3	*580	3,800	*5,500	3,390	1,360	1,480	3,950	2,700	1,380	1,050	610	550
4	*580	3,000	*6,500	3,000	1,300	*1,400	3,820	2,610	1,350	1,100	610	540
5	*590	2,040	7,000	3,100	*1,400	*1,350	3,400	2,350	1,380	980	600	540
6	*570	*1,500	5,070	2,540	1,630	1,320	2,990	2,120	1,320	940	590	530
7	*560	1,190	4,500	2,270	1,440	1,270	3,100	2,100	1,270	920	580	520
8	*540	1,100	3,700	*2,050	1,360	1,270	3,570	2,200	1,270	905	565	520
9	*530	1,270	3,100	1,900	1,270	1,240	3,450	2,350	1,420	905	565	520
10	*540	1,200	2,700	1,760	*1,250	1,220	2,990	2,430	1,430	905	565	520
11	720	*1,000	*2,200	1,700	1,220	1,440	2,890	2,400	1,380	890	565	530
12	742	850	1,960	1,630	*2,300	2,600	2,890	2,300	1,380	840	565	530
13	750	*900	1,760	1,560	1,960	2,400	2,520	2,400	1,380	820	565	530
14	680	930	1,630	1,500	2,600	2,120	2,350	2,520	1,320	780	565	565
15	610	1,600	1,560	*1,550	6,000	1,900	2,200	2,610	1,300	790	560	530
16	*580	2,870	1,440	1,500	4,200	2,200	2,100	2,430	1,380	790	550	520
17	560	3,160	1,380	1,550	3,270	2,790	2,430	2,120	1,440	740	550	520
18	540	2,150	*1,300	1,850	2,790	3,450	2,990	2,040	1,600	730	550	510
19	540	1,730	*1,200	2,200	*2,400	4,220	3,690	1,820	1,700	720	540	510
20	530	*1,600	1,160	2,000	2,080	4,640	3,820	1,700	1,700	720	530	510
21	530	1,440	1,160	1,750	1,930	5,370	4,080	1,760	1,550	700	530	510
22	530	1,270	1,100	*1,670	*1,800	6,270	3,950	1,760	1,440	700	530	500
23	*530	1,150	1,100	1,600	1,730	6,590	3,450	1,700	1,440	690	530	500
24	530	*1,060	*1,100	1,500	1,700	6,910	2,990	1,630	1,300	680	540	490
25	540	1,000	*1,150	1,480	1,700	6,430	2,900	1,750	1,200	680	550	490
26	540	960	*1,100	1,380	*1,600	5,670	2,600	2,040	1,160	680	540	490
27	590	*910	1,150	1,560	1,560	4,640	2,500	1,900	1,160	680	540	490
28	580	905	1,520	1,700	1,500	3,690	2,890	1,820	1,100	660	540	480
29	600	1,030	2,480	*1,750	-	3,330	3,210	2,200	1,100	650	540	470
30	*820	1,130	*2,400	1,630	-	2,990	2,790	2,000	1,080	620	530	470
31	900	-	*2,000	1,560	-	3,100	-	1,630	-	610	590	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	18,712	900	530	604	1.38	1.59	37,110
November	44,475	3,800	850	1,482	3.38	3.77	88,210
December	76,920	7,000	1,100	2,481	5.66	6.52	152,600
Calendar year	-	-	-	-	-	-	-
January	58,830	3,390	1,380	1,898	4.33	4.99	116,700
February	56,210	6,000	1,220	2,008	4.58	4.77	111,500
March	96,180	6,910	1,220	3,103	7.08	8.16	190,800
April	94,030	4,080	2,100	3,134	7.16	7.99	186,500
May	66,520	2,700	1,630	2,146	4.90	5.65	131,900
June	40,870	1,700	1,080	1,362	3.11	3.47	81,060
July	24,855	1,100	610	802	1.83	2.11	49,300
August	17,405	610	530	561	1.28	1.48	34,520
September	15,610	660	470	520	1.19	1.33	30,960
Water year 1938-39	610,617	7,000	470	1,673	3.82	51.83	1,211,000

*Gage not read.

North Santiam River at Mehama, Oreg.

Location.- Water-stage recorder, lat. 44°47', long. 122°37', in NW¼ sec. 18, T. 9 S., R. 2 E., at Mehama, half a mile downstream from mouth of Little North Santiam River. Zero of gage is 601.78 feet above mean sea level (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 1939.

Average discharge.- 23 years (1905-6, 1910-14, 1921-39), 3,236 second-feet.

Extremes.- Maximum discharge during year, 17,600 second-feet Dec. 2 (gage height, 8.24 feet); minimum, 505 second-feet Sept. 24 (gage height, 1.48 feet).
1905-7, 1910-14, 1921-39: Maximum discharge, 62,900 second-feet Nov. 20, 1921, Jan. 6, 1923 (gage height, 17.5 feet); minimum, 400 second-feet Sept. 29, Oct. 13, 1934; minimum daily, 420 second-feet Sept. 18, 1924.

Remarks.- Records good. Shifting-control method used Oct. 1 to Nov. 2, July 1 to Sept. 30, to compensate for effect of temporary dam below gage. Slight regulation of low-water flow by operation of mill dam at Mill City. No diversion for irrigation above station. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	589	1,480	3,910	3,550	2,410	2,480	5,160	3,320	1,900	1,290	708	870
2	582	1,570	11,500	4,490	2,280	2,550	5,500	3,320	1,800	1,220	699	708
3	626	8,860	11,100	6,060	2,270	2,610	5,590	3,340	1,740	1,310	717	642
4	666	7,490	12,000	5,620	2,170	2,650	5,380	3,380	1,760	1,450	708	618
5	650	4,000	12,000	5,740	2,440	2,440	4,840	3,000	1,960	1,280	699	610
6	642	2,750	8,140	4,640	3,470	2,510	4,350	2,770	2,020	1,210	674	603
7	626	2,150	6,680	3,930	3,090	2,360	4,400	2,650	1,840	1,170	666	596
8	603	1,940	5,960	3,590	2,600	2,250	5,000	2,750	1,790	1,120	658	589
9	596	2,440	5,000	3,280	2,270	2,140	4,750	3,000	2,040	1,090	650	582
10	596	2,310	4,180	2,970	2,110	2,080	4,310	3,090	2,080	1,080	650	582
11	960	1,900	3,570	2,770	2,250	3,060	4,080	3,110	1,910	1,080	650	603
12	1,060	1,660	3,060	2,600	4,910	5,470	4,080	2,980	1,800	1,040	650	626
13	1,060	1,650	2,720	2,410	4,570	4,750	3,870	2,980	1,740	1,000	650	610
14	1,020	1,800	2,460	2,280	7,090	3,770	3,260	3,130	1,670	950	650	634
15	825	2,650	2,270	2,430	14,800	3,570	3,060	3,280	1,610	950	642	610
16	726	5,740	2,080	2,300	9,060	4,350	3,000	3,060	2,000	960	634	589
17	674	7,380	1,940	2,380	6,450	5,860	3,400	2,660	2,680	900	626	582
18	650	4,620	1,860	3,320	5,160	7,030	4,310	2,550	3,020	870	626	582
19	634	3,430	1,770	4,270	4,350	7,830	5,030	2,300	3,220	861	618	575
20	610	3,070	1,720	3,530	3,730	8,300	5,030	2,120	3,150	834	596	582
21	603	2,630	1,740	3,020	3,340	9,060	5,210	2,300	2,650	816	603	582
22	596	2,250	1,670	2,750	3,000	9,990	4,910	2,250	2,310	807	603	575
23	596	1,970	1,660	2,480	2,840	10,200	4,490	2,150	2,090	789	603	561
24	610	1,810	1,650	2,360	2,750	10,100	4,060	2,040	1,880	780	610	547
25	618	1,690	1,790	2,360	2,820	9,360	4,100	2,110	1,740	780	658	547
26	618	1,560	1,730	2,230	2,660	8,250	3,690	2,530	1,630	771	626	547
27	717	1,460	1,770	2,630	2,720	6,480	3,510	2,500	1,520	762	610	547
28	717	1,430	3,260	3,220	2,610	5,330	3,770	2,270	1,470	753	626	547
29	1,150	1,530	4,960	3,260	-	4,730	4,200	2,800	1,450	726	634	540
30	1,260	1,770	4,910	3,090	-	4,420	3,690	2,660	1,410	708	618	540
31	1,470	-	3,730	2,660	-	4,570	-	2,120	-	690	666	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	23,350	1,470	582	753	1.13	1.30	46,310
November	87,010	8,860	1,430	2,900	4.36	4.86	172,600
December	132,790	12,000	1,660	4,284	6.44	7.42	263,400
Calendar year 1938	1,172,406	24,380	582	3,212	4.83	65.56	2,325,000
January	102,130	6,060	2,230	3,296	4.95	5.71	202,600
February	110,220	14,800	2,110	3,936	5.92	6.16	218,600
March	160,540	10,200	2,080	5,179	7.79	8.98	318,400
April	129,830	5,590	3,000	4,328	6.51	7.26	257,600
May	84,520	3,380	2,040	2,726	4.10	4.73	167,600
June	59,880	3,220	1,410	1,996	3.00	3.35	118,800
July	30,047	1,450	690	969	1.46	1.68	59,600
August	20,028	717	596	646	.971	1.12	39,720
September	17,926	870	540	598	.899	1.00	35,560
Water year 1938-39	958,271	14,800	540	2,625	3.95	53.57	1,901,000

Peak discharge.- Nov. 3 (4:30 p.m.) 15,100 sec.-ft.; Dec. 2 (8 p.m.) 17,600 sec.-ft.; Dec. 5 (7 a.m.) 13,600 sec.-ft.; Feb. 15 (8 a.m.) 17,400 sec.-ft.

Breitenbush River above French Creek, near Detroit, Oreg.

Location.- Water-stage recorder, lat. 44°45', long. 122°08', in NE¼ sec. 36, T. 9 S., R. 5 E., 0.1 mile downstream from Canyon Creek, 1½ miles upstream from French Creek, and 2 miles east of Detroit. Zero of gage is 1,559.64 feet (revised) above mean sea level (general adjustment of 1929).

Drainage area.- 108 square miles.

Records available.- June 1932 to September 1939. October 1910 to October 1913, at site below French Creek (fragmentary); records equivalent except for inflow from French Creek.

Extremes.- Maximum discharge during year, 2,920 second-feet Dec. 5 (gage height, 5.18 feet); minimum, 99 second-feet Sept. 27 (gage height, 0.44 foot).
1932-39: Maximum discharge, 8,100 second-feet Dec. 22, 1933 (gage height, 9.08 feet), from rating curve extended above 4,700 second-feet; minimum, 93 second-feet Sept. 27, 1934 (gage height, 0.42 foot).

Remarks.- Records good. No diversion or regulation above station. Water-stage recorder inspected by employee of U. S. Forest Service.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.4	94	1.6	363	3.5	1,400
.6	120	2.0	520	4.0	1,780
.9	169	2.5	765	4.7	2,420
1.2	238	3.0	1,060		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	117	199	655	529	318	352	988	675	400	283	138	160
2	116	195	1,630	645	312	346	1,050	705	382	265	135	132
3	134	1,490	1,530	868	298	342	1,080	721	378	321	134	123
4	134	796	2,220	776	286	325	1,010	710	349	328	132	119
5	134	448	2,330	798	305	312	910	620	335	274	130	116
6	128	332	1,340	660	338	305	838	574	312	254	130	114
7	123	277	1,240	574	315	292	880	574	308	257	128	113
8	119	260	1,070	534	280	283	976	615	318	249	126	112
9	116	271	874	492	265	280	922	670	404	243	124	110
10	120	249	716	460	257	280	644	675	408	252	124	109
11	202	220	601	436	274	404	814	665	393	238	124	117
12	162	206	524	408	547	512	798	645	382	223	123	122
13	195	208	472	382	476	468	705	660	393	216	123	123
14	156	220	432	363	646	400	640	716	374	204	122	128
15	138	315	404	378	1,600	385	610	748	352	204	120	117
16	129	840	374	356	1,010	488	615	685	346	202	120	113
17	124	814	349	374	748	705	700	588	360	186	119	110
18	122	552	328	520	640	898	892	552	370	182	117	110
19	119	432	312	615	560	1,100	1,040	472	400	180	116	107
20	116	389	298	524	504	1,280	1,050	444	412	173	114	106
21	114	342	292	464	464	1,530	1,100	468	374	167	114	106
22	113	302	280	424	436	1,800	1,050	448	370	167	114	105
23	114	274	274	385	424	1,860	940	436	374	164	114	105
24	116	257	271	370	424	1,880	826	424	325	160	117	104
25	117	241	286	352	424	1,760	776	480	302	158	117	102
26	117	228	265	342	396	1,540	700	635	295	155	117	101
27	140	220	274	378	389	1,180	695	583	295	151	116	101
28	134	216	360	408	367	970	792	556	315	148	122	101
29	199	241	674	412	-	862	874	754	321	143	120	101
30	197	302	645	374	-	820	732	570	315	141	116	101
31	199	-	520	342	-	874	-	436	-	140	150	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	4,264	202	113	138	1.28	1.48	8,460
November	11,336	1,490	195	378	3.50	3.90	22,480
December	21,840	2,330	265	705	6.53	7.53	43,320
Calendar year 1938	199,404	4,460	113	546	5.06	68.66	395,500
January	14,943	868	342	482	4.46	5.14	29,640
February	13,303	1,600	257	475	4.40	4.58	26,390
March	24,833	1,880	280	801	7.42	8.55	49,260
April	26,847	1,100	610	862	7.98	8.90	51,270
May	18,504	754	424	597	5.53	6.38	36,700
June	10,662	412	295	355	3.29	3.67	21,150
July	6,428	328	140	207	1.92	2.21	12,750
August	3,816	150	114	123	1.14	1.31	7,570
September	3,388	160	101	113	1.05	1.17	6,720
Water year 1938-39	159,164	2,330	101	436	4.04	54.82	315,700

Little North Santiam River near Mehama, Oreg.

Location.- Staff and wire-weight gages, lat. 44°48', long. 122°34', 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 (general adjustment of 1929).

Drainage area.- 110 square miles.

Records available.- October 1931 to September 1939. July to September 1924 and July to September 1931, at site 4 miles upstream.

Extremes.- Maximum discharge observed during year, 8,570 second-feet Dec. 2 (gage height, 10.17 feet); minimum observed, 23 second-feet Sept. 29, 30 (gage height, 2.12 feet). 1924, 1931-39: Maximum discharge, 18,900 second-feet Dec. 22, 1933 (gage height, 14.7 feet), from rating curve extended above 10,000 second-feet; minimum, 21 second-feet Sept. 11, 1934, Sept. 27, 28, 1938.

Remarks.- Records fair. Discharge for periods of faulty or missing gage heights, Nov. 18, 19, Dec. 27, 30, 31, Feb. 12, Apr. 26, May 29, June 15, 25-27, July 27, Sept. 2, 3, computed on basis of records for other gaging stations in North Santiam River Basin. No regulation or diversion above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

2.1	22	4.5	630	7.0	2,740
2.4	48	5.0	895	8.0	4,270
2.8	92	5.5	1,190	9.0	6,180
3.4	199	6.0	1,620	9.5	7,180
4.0	398	6.5	2,140		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	444	1,920	1,100	546	531	934	471	241	175	50	120
2	26	531	5,200	1,260	503	595	1,040	466	199	130	49	100
3	34	5,010	3,430	1,710	489	615	1,100	444	177	229	49	50
4	57	2,870	3,940	1,410	462	610	1,000	419	140	207	48	35
5	39	1,410	3,690	1,410	444	600	890	394	382	182	48	33
6	34	741	1,840	1,040	1,020	595	796	367	489	167	48	30
7	32	560	1,410	922	846	565	829	367	348	158	48	33
8	30	526	1,220	878	665	517	818	359	288	150	47	34
9	28	715	1,020	741	551	480	780	415	498	140	45	28
10	32	645	846	665	475	444	752	415	415	136	44	29
11	218	635	700	610	570	1,190	752	440	352	126	44	40
12	192	620	556	556	1,500	1,660	705	390	285	117	43	36
13	278	556	489	498	1,190	1,200	600	415	229	108	42	33
14	212	546	444	419	2,800	917	493	402	177	106	41	34
15	145	449	394	386	6,980	900	458	375	160	111	40	31
16	101	1,990	329	390	3,110	1,260	503	352	575	111	38	31
17	81	3,100	298	436	1,740	1,980	645	275	950	110	37	29
18	67	2,000	272	978	1,470	2,220	900	275	922	98	35	29
19	61	1,400	253	1,240	1,210	2,540	966	250	1,080	85	34	28
20	63	922	235	956	878	2,620	934	244	961	84	33	26
21	45	768	269	790	774	2,830	900	250	705	81	31	26
22	42	650	256	675	690	2,780	780	275	551	73	30	26
23	42	493	285	526	650	2,560	705	250	440	71	33	26
24	45	427	312	531	620	2,270	595	278	378	68	36	26
25	48	386	319	508	610	2,050	736	282	320	67	40	26
26	47	355	312	489	585	1,520	650	367	270	65	33	25
27	86	326	400	625	650	1,180	585	319	230	64	35	24
28	93	312	1,330	890	620	961	620	288	204	62	33	24
29	244	262	1,500	812	-	834	570	400	202	61	33	23
30	291	386	1,300	741	-	780	517	367	192	54	33	23
31	390	-	1,100	650	-	834	-	326	-	50	48	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,120	390	26	101	0.918	1.06	6,190
November	30,035	5,010	262	1,001	9.10	10.15	59,570
December	35,869	5,200	235	1,157	10.5	12.11	71,150
Calendar year 1937	249,894	6,180	21	685	6.23	84.43	495,700
January	24,842	1,710	386	801	7.28	8.39	49,270
February	32,648	6,980	444	1,166	10.6	11.04	64,760
March	40,638	2,830	444	1,311	11.9	13.72	80,600
April	22,553	1,100	458	752	6.84	7.63	44,730
May	10,937	471	244	353	3.21	3.70	21,690
June	12,360	1,080	140	412	3.75	4.18	24,520
July	3,446	229	50	111	1.01	1.16	6,840
August	1,246	50	30	40.2	.365	.42	2,470
September	1,058	120	23	35.3	.321	.36	2,100
Water year 1938-39	218,752	6,980	23	599	5.45	73.92	433,900

South Santiam River below Cascadia, Oreg.

Location.- Water-stage recorder, lat. 44°24', long. 122°30', in SE¼ sec. 36, T. 13 S., R. 2 E., 100 feet downstream from bridge at Cascadia ranger station, half a mile downstream from Tollgate Creek, three-quarters of a mile upstream from Deer Creek, and 1½ miles southwest of Cascadia. Gaging cable is 0.7 mile upstream, above Tollgate Creek. Zero of gage is 759.27 feet above mean sea level (general adjustment of 1929); erroneous elevation published in Water-Supply Papers 814, 834, and 864.

Drainage area.- 174 square miles, at gaging cable.

Records available.- September 1935 to September 1939. Records do not include run-off from 3 square miles between cable and gage.

Extremes.- Maximum discharge during year, 5,720 second-feet Feb. 15 (gage height, 9.04 feet); minimum, 41 second-feet Oct. 2 (gage height, 1.16 feet).
1935-39: Maximum discharge, 10,700 second-feet Jan. 22, 1938 (gage height, 12.31 feet); minimum, 23 second-feet Dec. 1, 2, 1936 (gage height, 0.98 foot).

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

Rating tables, 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 15						Feb. 16 to Sept. 30			
1.1	36	3.0	490	7.0	3,410	1.3	44	3.5	735
1.4	65	3.5	735	8.0	4,500	1.6	79	4.0	1,000
1.7	101	4.0	1,000	8.5	5,100	2.0	138	5.0	1,660
2.0	148	5.0	1,660			2.5	275	6.0	2,460
2.5	275	6.0	2,460			3.0	490	6.8	3,210

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	244	895	950	635	812	1,150	685	315	221	80	142
2	43	255	3,340	1,030	600	812	1,280	660	283	208	79	95
3	69	2,220	3,610	1,520	575	812	1,310	635	264	227	78	78
4	72	2,210	3,410	1,520	575	812	1,240	635	315	264	76	70
5	56	1,000	2,820	1,810	735	760	1,090	590	432	221	76	69
6	53	635	1,930	1,280	1,280	785	1,000	535	432	208	75	67
7	47	472	1,560	1,000	975	735	1,030	508	368	192	74	65
8	45	427	1,280	922	735	685	1,150	530	343	179	71	64
9	43	585	1,060	812	590	635	1,090	585	414	165	70	62
10	46	635	868	735	522	605	975	585	382	158	69	61
11	107	468	735	685	630	895	922	590	339	154	69	64
12	107	368	635	635	1,730	2,290	895	550	303	147	67	70
13	102	343	580	585	1,480	1,810	785	570	279	138	67	66
14	96	440	522	550	2,720	1,280	710	605	256	135	66	65
15	73	660	476	575	4,980	1,120	660	615	271	135	66	62
16	64	1,330	432	545	2,910	1,450	660	535	522	138	65	60
17	59	1,730	391	585	1,930	2,050	760	468	760	126	64	58
18	56	1,060	355	785	1,590	2,550	975	463	868	120	64	56
19	52	785	331	922	1,340	2,730	1,090	400	975	114	64	55
20	49	710	311	812	1,120	2,820	1,120	386	922	110	61	55
21	47	600	347	710	950	3,010	1,150	468	735	109	60	54
22	45	512	339	635	868	3,210	1,030	472	620	105	61	54
23	44	450	339	580	840	3,110	922	463	526	100	61	54
24	49	404	335	550	812	2,910	840	400	468	93	62	53
25	49	360	382	555	840	2,640	895	391	422	92	66	53
26	50	327	368	522	812	2,130	785	508	373	91	64	52
27	73	307	373	535	895	1,660	760	468	331	88	61	52
28	77	299	1,090	950	895	1,310	785	422	295	87	64	51
29	143	343	1,560	975	-	1,120	840	499	264	84	69	51
30	136	386	1,420	895	-	1,000	735	454	241	83	66	51
31	171	-	1,060	760	-	1,060	-	364	-	82	91	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	2,167	171	43	69.9	0.402	0.46	4,300
November	20,585	2,220	244	686	3.94	4.40	40,790
December	33,154	3,610	311	1,069	6.14	7.08	65,760
Calendar year 1938	282,863	7,360	38	775	4.45	60.45	561,100
January	26,025	1,810	522	840	4.83	5.57	51,620
February	34,564	4,980	522	1,234	7.09	7.38	68,560
March	49,608	3,210	605	1,600	9.20	10.61	98,400
April	28,634	1,310	660	954	5.48	6.11	56,790
May	16,039	685	364	517	2.97	3.42	31,810
June	13,518	975	241	444	2.55	2.84	26,420
July	4,374	264	82	141	.810	.93	8,680
August	2,126	91	60	68.6	.394	.45	4,220
September	1,909	142	51	53.6	.366	.41	3,790
Water year 1938-39	232,483	4,980	43	637	3.66	49.66	461,100

Peak discharge.- Nov. 3 (5 p.m.) 4,270 sec.-ft.; Dec. 2 (9 p.m.) 5,340 sec.-ft.; Dec. 3 (11 p.m.) 4,180 sec.-ft.; Feb. 15 (8 a.m.) 5,720 sec.-ft.

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South Santiam River at Waterloo, Oreg.

Location.- Water-stage recorder, lat. 44°29'55", long. 122°49'20", in NW¼ sec. 28, T. 12 S., R. 1 W., 200 yards downstream from highway at Waterloo and 2½ miles upstream from Hamilton Creek. Zero of gage is 370.39 feet above mean sea level (general adjustment of 1929).

Drainage area.- 640 square miles.

Records available.- July 1905 to March 1907, October 1910 to December 1911, July 1923 to September 1939.

Average discharge.- 17 years (1905-6, 1923-39), 2,734 second-feet.

Extremes.- Maximum discharge during year, 23,800 second-feet Feb. 15 (gage height, 11.63 feet); minimum, 123 second-feet Sept. 30 (gage height, 2.07 feet).
1905-7, 1910-11, 1923-39: Maximum discharge, 70,000 second-feet Mar. 31, 1931 (gage height, 22.0 feet), from rating curve extended above 31,000 second-feet; minimum, 100 second-feet several days in September, October, November 1925.

Remarks.- Records excellent. No diversion or regulation above station. Gage-height record collected in cooperation with U. S. Weather Bureau.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

2.0	101	3.0	730	5.0	3,690
2.2	167	3.5	1,260	6.0	5,810
2.4	258	4.0	1,950	8.0	11,600
2.7	465	4.5	2,780	10.5	19,900

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	153	1,080	2,440	3,690	2,610	2,870	4,080	1,950	967	740	258	545
2	136	1,380	11,800	4,080	2,360	2,960	4,380	1,880	895	692	258	428
3	218	7,520	13,500	5,930	2,440	3,140	4,380	1,880	845	720	248	277
4	258	9,430	12,200	5,810	2,360	3,140	4,180	1,800	885	925	243	223
5	208	4,280	10,900	6,820	2,780	2,870	3,780	1,720	1,070	796	238	208
6	183	2,700	7,360	5,010	5,230	3,140	3,410	1,550	1,210	730	233	200
7	167	1,880	5,690	4,080	4,580	2,960	3,410	1,420	1,060	673	228	188
8	160	1,560	4,800	3,600	3,410	2,700	3,780	1,440	967	608	218	179
9	150	2,270	3,980	3,230	2,700	2,440	3,600	1,560	1,100	581	213	171
10	146	2,780	3,320	2,780	2,440	2,270	3,230	1,580	1,190	545	208	167
11	218	1,950	2,780	2,520	2,520	2,780	3,050	1,580	1,020	537	208	171
12	554	1,480	2,360	2,360	6,500	8,210	3,050	1,490	925	513	208	192
13	405	1,340	2,110	2,190	6,050	7,090	2,700	1,490	865	489	204	204
14	505	1,530	1,880	2,030	8,560	5,120	2,360	1,510	796	465	204	196
15	327	2,270	1,720	2,030	19,900	4,380	2,190	1,560	787	465	200	183
16	248	4,440	1,530	2,030	12,200	5,010	2,110	1,470	1,480	497	196	171
17	208	7,360	1,400	1,950	7,920	6,560	2,270	1,260	2,110	450	196	164
18	192	4,380	1,310	2,870	6,180	8,210	2,960	1,210	2,700	420	192	160
19	179	3,230	1,240	3,980	5,230	9,100	3,410	1,150	2,870	405	188	156
20	167	2,780	1,160	3,230	4,380	9,100	3,410	1,040	2,960	390	183	153
21	160	2,360	1,220	2,700	3,780	9,700	3,500	1,220	2,360	376	175	146
22	153	1,950	1,270	2,360	3,320	10,600	3,230	1,350	1,880	362	175	139
23	153	1,670	1,220	2,110	3,140	10,300	2,870	1,310	1,560	341	175	136
24	156	1,480	1,210	1,950	2,960	10,300	2,520	1,110	1,350	327	175	132
25	167	1,320	1,390	2,030	3,050	9,100	2,780	1,040	1,190	320	208	132
26	171	1,210	1,390	1,800	2,960	7,640	2,520	1,270	1,070	314	196	132
27	218	1,140	1,390	2,190	3,050	5,810	2,360	1,310	978	308	183	129
28	295	1,110	4,690	3,410	3,230	4,580	2,360	1,120	915	295	183	126
29	489	1,190	6,180	3,780	-	3,980	2,520	1,210	855	283	192	126
30	711	1,320	5,690	3,690	-	3,690	2,270	1,440	796	270	196	126
31	855	-	4,280	3,140	-	3,690	-	1,110	-	264	200	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	8,310	855	136	268	0.419	0.48	16,480
November	80,390	9,430	1,080	2,680	4.19	4.68	159,500
December	123,410	13,500	1,160	3,981	6.22	7.17	244,800
Calendar year 1938	1,052,015	29,100	120	2,882	4.50	61.16	2,087,000
January	99,380	6,820	1,800	3,206	5.01	5.78	197,100
February	135,840	19,900	2,360	4,851	7.58	7.89	269,400
March	173,440	10,600	2,270	5,595	8.74	10.08	344,000
April	92,670	4,380	2,110	3,089	4.83	5.39	183,800
May	44,030	1,950	1,040	1,420	2.22	2.56	87,330
June	39,656	2,960	787	1,322	2.07	2.31	78,660
July	15,101	925	264	487	.761	.88	29,950
August	6,382	258	175	206	.322	.37	12,660
September	5,660	545	126	189	.295	.33	11,230
Water year 1938-39	824,269	19,900	126	2,258	3.53	47.92	1,635,000

Peak discharge.- Nov. 3 (8 p.m.) 16,500 sec.-ft.; Dec. 2 (10 p.m.) 21,600 sec.-ft.; Feb. 15 (9:30 a.m.) 23,800 sec.-ft.

Middle Santiam River near Foster, Oreg.

Location.- Water-stage recorder, lat. 44°28', long. 122°31', in SE¼ sec. 2, T. 13 S., R. 2 E., half a mile upstream from mouth of Green Peter Creek and 8 miles northeast of Foster. Zero of gage is 733.44 feet above mean sea level (Northern Pacific Railway bench mark).

Drainage area.- 271 square miles.

Records available.- August 1931 to September 1939.

Extremes.- Maximum discharge during year, 15,400 second-feet Feb. 15 (gage height, 12.90 feet); minimum, 77 second-feet Sept. 27-30 (gage height, 1.37 feet).
1931-39: Maximum discharge, 29,500 second-feet Mar. 18, 1932 (gage height, 17.84 feet); minimum, 54 second-feet Dec. 1, 1936 (gage height, 1.25 feet).

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

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.3	69	3.5	620	8.0	4,960
1.6	104	4.0	875	10.0	8,550
2.0	168	5.0	1,560	12.0	13,100
2.5	282	6.0	2,450		
3.0	429	7.0	3,530		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84	765	1,700	1,940	1,120	1,300	2,500	1,120	517	366	148	304
2	82	690	8,630	2,350	1,050	1,330	2,650	1,080	466	349	145	174
3	111	6,240	7,030	3,410	1,050	1,400	2,650	1,080	446	423	142	130
4	121	4,040	7,030	3,180	990	1,400	2,450	1,080	452	476	140	118
5	104	1,940	6,670	3,290	1,260	1,300	2,160	990	556	403	136	112
6	94	1,220	3,920	2,450	2,020	1,300	1,980	875	598	378	133	108
7	89	875	3,070	1,980	1,600	1,220	2,070	820	521	352	130	104
8	83	792	2,550	1,760	1,260	1,160	2,250	875	491	331	127	100
9	81	1,050	2,070	1,560	1,050	1,050	2,070	960	665	312	124	96
10	83	990	1,720	1,400	930	990	1,800	960	642	301	122	95
11	254	765	1,440	1,300	1,160	1,600	1,720	930	556	287	121	100
12	249	620	1,260	1,190	3,070	3,180	1,720	875	498	274	120	117
13	269	620	1,120	1,080	2,550	2,750	1,520	875	455	261	118	110
14	237	765	990	1,020	4,450	2,020	1,330	902	419	251	117	101
15	157	1,300	902	1,120	11,900	1,940	1,260	875	436	254	115	98
16	128	3,370	820	1,050	5,960	2,450	1,260	792	930	256	112	94
17	114	3,720	740	1,190	3,660	3,530	1,440	890	1,190	237	110	91
18	104	2,160	715	1,980	2,850	4,490	1,890	690	1,300	227	107	90
19	96	1,600	665	2,450	2,450	4,960	2,120	598	1,440	220	105	88
20	92	1,400	620	1,800	2,070	5,280	2,070	577	1,360	214	103	87
21	89	1,190	642	1,480	1,760	5,960	2,120	690	1,050	207	101	84
22	87	990	620	1,300	1,560	6,490	1,840	690	848	201	101	83
23	83	848	620	1,160	1,480	6,490	1,640	620	715	192	101	81
24	89	740	620	1,050	1,440	6,130	1,520	556	642	186	103	80
25	91	690	740	1,050	1,480	5,450	1,680	556	556	182	107	79
26	94	642	690	990	1,400	4,340	1,480	715	513	176	103	78
27	147	620	792	1,300	1,480	3,180	1,360	665	480	170	101	77
28	155	620	2,450	1,720	1,440	2,550	1,400	598	446	166	104	77
29	394	690	3,920	1,720	-	2,250	1,480	765	416	159	108	77
30	429	760	3,070	1,560	-	2,120	1,260	715	391	154	103	77
31	462	-	2,160	1,330	-	2,200	-	577	-	150	150	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	4,752	462	81	153	0.565	0.65	9,430
November	42,712	6,240	620	1,424	5.25	5.86	84,720
December	69,986	8,630	620	2,258	8.33	9.60	138,800
Calendar year 1938	545,296	17,200	73	1,494	5.51	74.83	1,082,000
January	52,160	3,410	990	1,683	6.21	7.16	103,500
February	64,490	11,900	930	2,303	8.50	8.85	127,900
March	91,810	6,490	990	2,962	10.9	12.57	182,100
April	54,690	2,650	1,260	1,823	6.73	7.51	108,500
May	24,791	1,120	556	800	2.95	3.40	49,170
June	19,995	1,440	391	666	2.46	2.74	39,660
July	8,115	476	150	262	.967	1.11	16,100
August	3,657	150	101	118	.435	.50	7,250
September	3,110	304	77	104	.384	.43	6,170
Water year 1938-39	440,268	11,900	77	1,206	4.45	60.38	873,300

Peak discharge.- Nov. 3 (2 p.m.) 10,900 sec.-ft.; Dec. 2 (6 p.m.) 14,400 sec.-ft.; Feb. 15 (5 a.m.) 15,400 sec.-ft.

Albany power canal near Lebanon, Oreg.

Location.- Water-stage recorder, lat. 44°32'55", long. 122°54'20", in SW¼ sec. 2, T. 12 S., R. 2 W., an eighth of a mile downstream from spillway and 1 mile north of Lebanon.

Records available.- April 1926 to September 1939. February to December 1919 at site near Albany.

Average discharge.- 13 years, 217 second-feet.

Extremes.- Maximum discharge during year, 342 second-feet Nov. 3 (gage height, 4.02 feet); minimum, 5 second-feet Oct. 11 (gage height, 0.03 foot).
1919, 1926-39: Maximum discharge, that of Nov. 3, 1938; no flow at times.

Remarks.- Records excellent except those for periods of missing gage heights, Nov. 24 to Dec. 1, July 15-20, which were computed on basis of range of stage, observer's statement that gates were partly closed Dec. 2, and records of South Santiam River at Waterloo and are fair. Canal diverts water from South Santiam River at Lebanon and discharges it into Calapooya River at mouth. Lebanon ditch discharges into canal just below canal intake. Water is used for power and water supply at Albany. Recorder inspected by employee of Mountain States Power Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	120	290	315	312	304	288	285	290	276	282	216	230
2	117	297	247	280	294	288	288	294	283	289	215	252
3	142	288	211	241	285	289	296	290	281	292	206	238
4	191	264	221	243	275	286	309	295	280	302	199	205
5	170	290	265	262	270	284	308	296	288	298	193	178
6	142	302	312	280	222	290	296	294	298	298	192	168
7	128	295	307	294	228	293	290	289	295	297	187	159
8	119	286	299	299	255	289	290	292	294	290	176	148
9	113	304	296	298	276	283	294	297	296	285	169	148
10	80	305	297	294	272	290	290	302	304	283	167	138
11	101	288	308	293	266	295	290	292	303	284	166	137
12	263	181	308	299	260	289	292	293	290	287	166	145
13	246	294	305	307	244	311	293	292	289	290	161	170
14	273	299	304	307	258	245	290	283	288	286	146	164
15	230	307	302	305	259	294	288	287	284	289	154	155
16	189	306	299	302	265	287	289	297	296	286	151	142
17	159	302	263	299	302	284	287	296	289	285	146	139
18	144	303	296	304	285	274	297	298	285	284	141	128
19	131	195	295	306	283	271	304	298	290	283	142	126
20	126	315	292	288	276	278	304	299	290	282	145	122
21	121	310	300	296	274	282	302	307	285	281	117	115
22	116	307	310	315	285	285	290	294	283	266	123	111
23	111	307	310	312	289	287	299	267	281	278	132	111
24	113	305	306	307	288	285	298	271	281	260	132	113
25	121	305	306	302	287	282	298	270	277	255	142	103
26	126	305	307	300	287	275	299	275	281	248	161	99
27	151	305	294	273	288	281	297	230	288	243	146	97
28	211	305	280	239	290	288	296	281	288	233	139	102
29	252	305	275	251	-	289	296	264	285	220	143	99
30	305	310	278	255	-	287	293	274	283	215	152	104
31	297	-	290	274	-	289	-	272	-	214	154	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,108	305	80	165	10,130
November	8,765	315	181	292	17,390
December	8,998	315	211	290	17,850
Calendar year 1938	90,641	325	80	248	179,800
January	8,937	315	239	288	17,730
February	7,667	304	222	274	15,210
March	8,838	311	245	285	17,530
April	8,848	309	285	295	17,550
May	8,879	307	230	286	17,610
June	8,631	304	276	288	17,120
July	8,485	302	214	274	16,830
August	4,981	216	117	161	9,880
September	4,346	252	97	145	8,620
Water year 1938-39	92,483	315	80	253	183,400

Luckiamute River near Hoskins, Oreg.

Location.- Water-stage recorder, lat. 44°43', long. 123°30', in NE¼ sec. 11, T. 10 S., R. 7 W., a quarter of a mile downstream from Benton County line and 3⅝ miles northwest of Hoskins. Zero of gage is 378.7 feet above mean sea level (river profile survey).

Drainage area.- 34 square miles.

Records available.- May 1934 to September 1939.

Extremes.- Maximum discharge during year, 2,280 second-feet Feb. 12 (gage height, 7.37 feet); minimum, 8 second-feet Oct. 1, 2, Aug. 19-21, Sept. 9, 10, 19-30.
1934-39: Maximum discharge, 5,080 second-feet Dec. 29, 1938; minimum, 7 second-feet Sept. 2-5, 10, 21, 22, 1934.

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

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 16-23)

0.7	7	2.2	188	4.0	750
1.0	19	2.6	291	5.0	1,155
1.4	54	3.0	412	6.0	1,605
1.8	111	3.5	576	7.0	2,080

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8	86	90	320	344	188	106	42	24	21	11	20
2	10	73	1,020	476	335	266	98	42	24	20	11	14
3	23	492	750	610	332	353	97	41	24	31	12	12
4	13	224	576	593	306	335	92	40	26	31	12	11
5	10	126	576	593	476	317	88	39	26	26	11	10
6	10	92	444	444	945	314	83	37	25	24	11	10
7	9	74	360	353	750	297	80	36	24	22	10	10
8	9	74	283	300	509	271	79	35	25	21	10	9
9	11	193	236	247	390	244	77	34	36	20	10	8
10	16	184	200	214	320	231	74	33	30	20	10	8
11	34	141	173	190	770	353	70	32	25	19	10	10
12	24	113	152	175	1,830	476	77	31	24	19	10	11
13	37	101	141	156	1,060	542	73	31	23	18	10	11
14	21	92	128	146	1,520	476	66	30	21	18	10	10
15	16	86	116	148	1,700	412	64	31	27	20	10	10
16	13	243	109	135	985	366	62	31	54	19	10	9
17	12	226	103	170	662	335	59	31	38	18	10	9
18	12	170	95	239	509	297	56	28	39	16	9	9
19	11	139	90	303	396	263	54	30	42	18	9	8
20	10	120	84	263	332	236	53	32	39	16	8	8
21	10	100	98	224	283	211	52	35	33	16	9	8
22	10	88	89	204	244	193	51	43	31	15	10	8
23	14	82	86	179	216	184	51	33	29	14	9	8
24	16	79	83	173	206	166	54	31	27	14	10	8
25	20	70	86	162	200	152	60	31	26	14	10	8
26	16	66	82	173	188	142	53	34	25	14	11	8
27	21	61	132	323	181	135	48	29	24	13	10	8
28	21	58	384	428	170	126	45	27	24	13	14	8
29	34	56	412	509	-	120	45	30	23	12	14	8
30	45	69	381	509	-	113	44	27	23	12	10	8
31	43	-	291	428	-	108	-	25	-	12	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	559	45	8	18.0	0.529	0.61	1,110
November	3,778	492	56	126	3.71	4.14	7,490
December	7,840	1,020	82	253	7.44	8.58	15,550
Calendar year 1938	64,890	2,000	8	178	5.24	71.11	128,700
January	9,387	610	135	303	8.91	10.27	18,620
February	16,159	1,830	170	577	17.0	17.70	32,050
March	8,222	542	108	265	7.79	8.98	16,310
April	2,011	106	44	67.0	1.97	2.20	3,990
May	1,031	43	25	33.3	.979	1.13	2,040
June	861	54	21	28.7	.844	.94	1,710
July	566	31	12	18.3	.538	.62	1,120
August	332	21	8	10.7	.315	.36	659
September	287	20	8	9.6	.282	.31	569
Water year 1938-39	51,033	1,830	8	140	4.12	55.84	101,200

Peak discharge.- Feb. 12 (6 a.m.) 2,280 sec.-ft.; Feb. 14 (11 p.m.) 2,080 sec.-ft.

South Yamhill River near Willamina, Oreg.

Location.- Water-stage recorder, lat. 45°03', long. 123°30', in sec. 14, T. 6 S., R. 7 W., a third of a mile upstream from Wallace Bridge, 2 miles upstream from Willamina Creek, and 2 miles southwest of Willamina. Zero of gage is 235.01 feet above mean sea level (general adjustment of 1929).

Drainage area.- 133 square miles.

Records available.- May 1934 to September 1939.

Extremes.- Maximum discharge during year, 7,490 second-feet Feb. 15 (gage height, 9.56 feet); minimum, 11 second-feet Sept. 22-29.
1934-39: Maximum discharge, 14,000 second-feet Dec. 27, 1937 (gage height, 14.08 feet); minimum, 3 second-feet (regulated) Aug. 22, 1938; minimum daily, 7 second-feet Aug. 22, 1938.

Remarks.- Records good. Discharge interpolated for days of missing gage heights, May 8, June 25. Slight regulation occasionally during summer due to operation of millpond upstream; no diversion above gage.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.5	8	1.5	197	4.0	1,480	8.0	5,430
.7	18	2.0	380	5.0	2,240	8.8	6,430
1.0	64	2.5	595	6.0	3,190		
1.2	111	3.0	850	7.0	4,270		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	384	806	1,140	1,100	510	290	96	50	34	14	42
2	14	332	3,700	2,120	1,110	655	272	94	50	31	14	27
3	21	1,710	2,600	2,600	1,060	952	272	88	42	38	14	19
4	22	1,020	1,750	2,200	946	952	258	86	50	54	13	17
5	18	572	1,750	2,240	1,220	868	234	88	58	44	13	16
6	18	392	1,300	2,330	2,160	934	220	82	58	42	13	15
7	15	296	1,060	1,230	2,040	886	214	77	54	38	13	14
8	14	272	850	1,130	1,570	795	214	72	52	31	13	13
9	14	636	725	892	1,230	705	217	66	58	28	13	13
10	20	690	608	762	994	655	200	68	56	28	13	13
11	54	514	528	660	1,500	862	191	64	44	27	13	13
12	50	412	460	582	4,490	1,000	217	62	39	26	14	14
13	104	380	408	523	3,240	1,210	210	54	36	25	13	17
14	50	352	364	478	4,540	1,170	178	56	34	24	14	17
15	31	344	328	496	6,430	1,150	166	56	38	25	14	16
16	25	900	300	464	3,560	1,100	160	58	124	27	13	14
17	22	982	276	500	2,160	1,040	158	58	88	26	13	14
18	20	700	254	645	1,530	958	155	58	98	22	12	13
19	19	559	237	784	1,170	850	152	60	88	22	12	13
20	18	510	223	705	916	746	146	66	82	25	12	12
21	18	420	240	626	751	685	141	84	73	23	12	12
22	16	356	230	586	645	636	135	84	60	21	14	11
23	18	308	220	532	564	600	130	71	58	20	14	11
24	23	279	207	510	505	554	133	62	58	18	15	11
25	30	254	258	487	536	505	158	60	54	17	16	11
26	27	227	237	514	510	460	135	66	50	17	17	11
27	33	207	380	862	514	408	124	58	46	16	17	11
28	41	197	1,150	1,170	505	360	116	56	42	15	17	11
29	200	197	988	1,520	-	328	111	60	39	14	24	12
30	220	412	839	1,560	-	300	104	62	38	14	20	12
31	207	-	715	1,310	-	293	-	54	-	14	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	1,394	220	12	45.0	0.338	0.39	2,760
November	14,814	1,710	197	494	3.71	4.14	29,380
December	23,991	3,700	207	774	5.82	6.71	47,590
Calendar year 1938	188,661	5,590	7	517	3.89	52.75	374,200
January	32,158	2,600	464	1,037	7.80	8.99	63,780
February	47,496	6,430	505	1,696	12.8	13.33	94,210
March	23,127	1,210	293	746	5.61	6.47	45,870
April	5,411	290	104	180	1.35	1.51	10,730
May	2,126	96	54	68.6	.516	.59	4,220
June	1,717	124	34	57.2	.430	.48	3,410
July	806	54	14	26.0	.195	.22	1,600
August	449	24	12	14.5	.109	.13	891
September	445	42	11	14.8	.111	.12	883
Water year 1938-39	153,934	6,430	11	422	3.17	43.08	305,300

Peak discharge.- Dec. 2 (5 p.m.) 6,430 sec.-ft.; Feb. 12 (5-6 a.m.) 5,430 sec.-ft.; Feb. 15 (7 a.m.) 7,490 sec.-ft.

Willamina Creek near Willamina, Oreg.

Location.- Water-stage recorder, lat. 45°09', long. 123°30', 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 (river profile survey).

Drainage area.- 62 square miles.

Records available.- June 1934 to September 1939.

Extremes.- Maximum discharge during year, 3,160 second-feet Feb. 15 (gage height, 6.75 feet); minimum, 9 second-feet Aug. 8-10, 19, Sept. 22-27.
1934-39: Maximum discharge, 5,720 second-feet Dec. 27, 1937 (gage height, 8.83 feet); minimum, 9 second-feet Sept. 3, 4, 1934, Sept. 9, 1935, Aug. 8-10, 19, Sept. 22-27, 1939.

Remarks.- Records good except those for period of missing gage heights, Oct. 1-6, which were computed on basis of recorded range in stage and record for South Yamhill River near Willamina and are fair. No regulation or diversion above station.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 14

0.2	10	2.0	270	4.5	1,350
.6	28	2.5	425	5.0	1,670
1.0	65	3.0	605	5.6	2,120
1.3	110	3.5	825	6.3	2,720
1.6	170	4.0	1,075		

Feb. 15 to Sept. 30

0.1	9	1.0	67
.4	19	1.3	110
.7	37		

Note.- Same as preceding table above 1.3 feet.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	68	245	395	428	318	178	88	41	26	13	19
2	15	66	976	585	411	363	168	66	39	25	12	15
3	30	387	735	602	404	460	161	65	39	36	12	14
4	25	180	605	825	404	453	148	65	42	34	12	13
5	20	107	548	850	548	425	140	64	43	31	12	13
6	15	92	446	645	900	418	134	62	43	30	12	13
7	13	64	381	530	802	397	128	60	41	28	12	12
8	13	65	330	478	645	372	126	58	42	24	10	11
9	15	235	285	394	530	339	124	57	52	23	10	11
10	21	208	245	348	450	324	119	56	44	22	10	10
11	32	142	218	309	646	345	115	53	38	22	11	11
12	28	110	192	276	1,560	418	126	51	34	21	12	13
13	34	107	175	252	1,350	488	117	49	32	20	12	13
14	23	114	161	235	2,150	481	108	47	31	20	12	12
15	18	121	148	235	2,680	478	105	46	36	20	11	12
16	16	301	138	220	1,500	470	99	48	62	20	11	12
17	15	300	128	258	1,020	470	96	47	49	20	11	11
18	15	218	121	309	776	460	91	47	51	19	11	11
19	14	172	115	360	609	439	88	49	52	20	11	10
20	13	157	110	333	512	404	86	53	47	20	10	10
21	13	132	124	303	439	378	84	64	42	18	12	10
22	13	116	114	285	384	363	83	57	36	16	13	9
23	14	105	110	265	351	345	81	52	35	15	13	9
24	17	96	110	255	321	324	86	49	34	14	13	9
25	19	88	126	242	342	297	86	52	33	14	13	10
26	17	82	119	248	327	265	80	55	31	14	14	9
27	17	78	170	324	333	238	77	48	29	13	13	9
28	17	74	442	422	327	220	74	46	29	13	14	10
29	53	74	369	512	-	205	72	47	27	11	17	11
30	54	120	327	548	-	192	71	45	27	11	14	10
31	52	-	294	495	-	186	-	43	-	11	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	673	54	12	21.7	0.350	0.40	1,330
November	4,178	387	64	139	2.24	2.50	8,290
December	8,607	976	110	278	4.48	5.16	17,070
Calendar year 1938	80,378	2,120	10	220	3.55	48.19	159,400
January	12,538	850	220	404	6.52	7.52	24,870
February	21,149	2,680	321	755	12.2	12.70	41,960
March	11,334	488	185	366	5.90	6.80	22,480
April	3,251	178	71	108	1.74	1.94	6,450
May	1,669	68	43	53.8	.868	1.00	3,310
June	1,181	62	27	39.7	.640	.71	2,340
July	631	36	11	20.4	.329	.38	1,250
August	383	20	10	12.4	.200	.23	760
September	342	19	9	11.4	.184	.21	678
Water year 1938-39	65,936	2,680	9	181	2.92	39.55	130,800

Peak discharge.- Feb. 15 (5 to 5 a.m.) 3,150 sec.-ft.

Haskins Creek near McMinnville, Oreg.

Location.- Water-stage recorder and wooden control, lat. 45°19', long. 123°22', in NE¼ sec. 13, T. 3 S., R. 6 W., 300 feet upstream from high-water line of McMinnville water-supply reservoir and 11 miles northwest of McMinnville.

Drainage area.- 5.7 square miles.

Records available.- October 1928 to September 1939.

Average discharge.- 11 years, 25.7 second-feet (not adjusted for diversion since 1937).

Extremes.-Maximum discharge during year, 277 second-feet Feb. 15 (gage height, 3.15 feet); minimum, 0.1 second-foot Aug. 8, 9.
1928-39: Maximum discharge, 610 second-feet Mar. 31, 1931 (gage height, 4.00 feet, before control was built); minimum, prior to diversion above station, 1.0 second-foot Oct. 8, 1932.

Remarks.- Records good except those below 10 second-feet, which are fair. Since Sept. 2, 1937, a small amount of water (probably about 1 second-foot) is being diverted at a point 800 feet upstream into a 12-inch steel pipe, which delivers it into intake of McMinnville water-supply pipe line below reservoir. No regulation. Water-stage recorder inspected by employees of city of McMinnville.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.1	0.0	1.5	9.8	2.8	192
1.2	.7	1.7	24	3.1	264
1.3	2.2	2.0	57		
1.4	5.2	2.4	113		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	13	28	36	36	35	21	*6.8	3.0	1.6	0.2	1.2
2	1.5	9.8	74	51	34	40	20	*6.8	2.8	1.6	.2	.9
3	1.6	45	33	46	32	43	19	*6.8	2.8	2.1	.3	.6
4	.4	19	31	44	31	41	18	*6.8	3.0	1.9	.3	.4
5	.4	12	32	38	40	38	17	6.8	3.0	1.8	.2	.4
6	.3	8.8	30	37	52	37	16	*6.6	3.0	1.6	.2	.4
7	.3	7.8	28	37	47	35	15	6.4	2.8	1.5	.2	.4
8	.3	8.8	27	35	41	33	14	*6.0	3.0	1.3	.2	.3
9	.6	22	25	34	38	30	14	*5.6	4.0	1.0	.2	.3
10	.9	16	22	31	34	29	13	*5.2	2.8	.9	.2	.3
11	4.4	12	19	29	55	34	13	*4.8	2.6	.9	.3	.4
12	3.0	9.3	17	27	166	41	13	4.4	2.4	1.0	.3	.4
13	4.4	10	15	24	44	44	12	4.4	2.2	.9	.3	.4
14	1.5	11	14	22	122	42	12	4.0	2.2	.7	.3	.4
15	.9	12	13	24	237	41	11	4.0	2.8	.7	.3	.4
16	.6	28	12	22	160	41	11	4.4	5.2	.7	.2	.3
17	.4	27	12	26	111	43	10	4.0	3.3	.6	.2	.2
18	.6	20	10	31	82	45	9.8	4.0	3.3	.6	.2	.2
19	.9	16	9.8	35	65	46	9.8	4.4	3.6	.9	.2	.2
20	.9	13	9.3	33	56	45	9.8	4.8	3.3	.7	.3	*.2
21	.9	11	9.8	30	49	44	9.3	5.2	3.0	.6	.6	*.2
22	.9	10	8.8	28	44	43	9.3	4.8	2.6	.4	.7	.2
23	1.2	9.3	8.3	26	41	42	9.3	4.0	2.4	.2	.9	.3
24	1.3	7.8	8.3	25	38	40	9.3	3.6	2.2	.2	1.0	.4
25	1.6	7.3	9.8	24	40	37	8.8	4.4	2.1	.2	1.0	.4
26	1.5	6.4	8.8	24	36	33	8.3	4.4	2.1	.2	.9	.6
27	1.6	6.0	16	34	36	29	8.3	3.6	2.1	.2	.6	.7
28	2.2	6.0	28	42	34	27	7.8	3.3	2.1	.2	.7	.3
29	11	6.0	29	47	-	25	7.8	3.6	1.9	.2	.7	.2
30	9.8	15	27	46	-	23	6.8	3.3	1.8	.2	.6	.2
31	8.3	-	24	41	-	22	-	3.0	-	.2	1.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	64.5	11	0.3	2.08	128
November	405.3	45	6.0	13.5	804
December	638.9	74	8.3	20.6	1,270
Calendar year 1938	8,206.9	213	.2	22.5	16,290
January	1,029	51	22	33.2	2,040
February	1,801	237	31	64.3	3,570
March	1,148	46	22	37.0	2,280
April	363.4	21	6.8	12.1	721
May	150.2	6.8	3.0	4.85	298
June	83.4	5.2	1.8	2.78	165
July	25.8	2.1	.2	.83	51
August	14.4	1.9	.2	.46	29
September	11.8	1.2	.2	.39	23
Water year 1938-39	5,735.7	237	.2	15.7	11,380

Peak discharge.- Dec. 2 (1 p.m.) 166 sec.-ft.; Feb. 12 (2 a.m.) 213 sec.-ft.; Feb. 14 (9 p.m.) 277 sec.-ft.; Feb. 15 (2 and 5 a.m.) 277 sec.-ft.
*Gage height missing; discharge interpolated.

Molalla River above Pine Creek, near Wilhoit, Oreg.

Location.- Water-stage recorder, lat. 45°01', long. 122°29', near line between secs. 30 and 31, T. 6 S., R. 3 E., 1,700 feet upstream from Pine Creek and 5 miles southeast of Wilhoit.

Drainage area.- 96 square miles.

Records available.- October 1935 to September 1939.

Extremes.- Maximum discharge during year, 5,360 second-feet Dec. 2 (gage height, 6.46 feet); minimum, 22 second-feet Oct. 2 (gage height, 0.86 foot).
1935-39: Maximum discharge, 10,800 second-feet Dec. 29, 1937 (gage height, 8.95 feet), from rating curve extended above 4,000 second-feet by velocity-area studies; minimum, 20 second-feet Sept. 28, 1938 (gage height, 0.83 foot).

Remarks.- Records good except those for period of missing gage heights, Apr. 1-11, which were computed on basis of records for station near Canby and are fair. No diversion or regulation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.8	17	2.0	290	4.0	1,700
1.0	36	2.5	505	4.5	2,280
1.3	84	3.0	800	5.0	2,950
1.6	158	3.5	1,200	5.5	3,710

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	251	705	699	424	344	680	376	188	136	46	99
2	22	279	3,120	1,300	393	344	720	364	170	131	45	52
3	28	1,380	2,340	1,610	372	352	760	352	158	170	44	40
4	37	1,020	2,040	1,460	348	340	760	352	170	167	42	36
5	31	576	1,820	1,520	376	328	690	317	261	147	42	36
6	33	397	1,170	1,040	627	348	590	286	301	136	42	37
7	29	313	908	780	544	328	570	268	265	126	41	35
8	25	298	735	693	428	317	620	272	244	116	39	33
9	23	352	645	627	364	301	620	286	279	108	36	31
10	27	305	532	576	328	290	580	294	268	104	35	31
11	131	244	446	532	360	640	540	290	237	99	35	32
12	104	210	389	490	1,140	1,040	522	279	214	93	35	37
13	136	217	352	442	892	856	465	286	191	88	34	36
14	95	290	317	406	1,880	645	414	290	173	84	34	36
15	62	510	298	419	3,690	645	385	290	176	88	34	34
16	49	1,240	268	381	1,930	892	385	265	268	88	33	31
17	42	1,220	247	385	1,260	1,260	442	237	402	80	32	30
18	37	742	230	582	953	1,550	582	230	490	76	32	29
19	35	544	223	754	774	1,670	651	201	566	74	31	29
20	34	500	210	598	645	1,690	645	191	560	73	30	28
21	32	414	223	495	554	1,810	651	251	446	69	29	27
22	32	356	214	432	495	1,940	593	240	364	65	30	27
23	31	301	240	381	460	1,900	510	251	313	62	29	26
24	33	268	244	372	432	1,830	475	223	272	60	30	25
25	35	240	268	381	414	1,590	527	210	237	59	39	25
26	37	220	254	372	389	1,260	460	240	210	57	33	24
27	73	204	283	598	381	922	432	230	194	54	31	24
28	65	198	598	687	360	742	450	210	176	52	34	24
29	217	223	1,000	687	-	639	485	265	164	49	36	25
30	220	294	863	598	-	593	424	254	150	49	32	24
31	230	-	657	495	-	627		214	-	48	37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,008	230	22	64.8	0.675	0.78	3,980
November	13,606	1,380	198	454	4.73	5.28	26,990
December	21,839	3,120	210	704	7.33	8.45	43,320
Calendar year 1938	176,462	3,870	21	483	5.03	68.38	350,000
January	20,792	1,610	372	671	6.99	8.06	41,240
February	21,213	3,690	328	758	7.90	8.23	42,080
March	28,033	1,940	290	904	9.42	10.86	55,600
April	16,628	760	385	554	5.77	6.44	32,980
May	8,314	376	191	268	2.79	3.22	16,490
June	8,107	566	150	270	2.81	3.14	16,080
July	2,808	170	48	90.6	.944	1.09	5,570
August	1,102	46	29	35.5	.370	.43	2,190
September	1,003	99	24	33.4	.348	.39	1,990
Water year 1938-39	145,453	3,690	22	399	4.16	56.37	288,500

Molalla River near Molalla, Oreg.

Location.- Staff gage, lat. 45°08', long. 122°52', in W½ sec. 14, T. 5 S., R. 2 E., at bridge 2 miles southeast of Molalla.

Records available.- July 1938 to September 1939 (low-water periods only). November 1905 to July 1909, at site at Dickey Prairie, in sec. 23, 1 mile upstream.

Extremes.- Maximum discharge observed during period, 123 second-feet Sept. 1; minimum observed, 29 second-feet Sept. 28-30.
1905-9, 1938-39: Maximum daily discharge, 9,800 second-feet (estimated) Feb. 5, 1907; minimum observed, that of Sept. 28-30, 1939.

Remarks.- Records fair. Gage read twice daily. No regulation; two small diversions for irrigation above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36									-	59	123
2	-									-	56	70
3	-									-	54	52
4	-									-	52	43
5	-									-	52	41
6	-									-	51	41
7	-									-	46	39
8	32									-	43	38
9	-									-	41	36
10	-									-	41	36
11	-									-	41	39
12	-									-	41	40
13	-									-	42	42
14	-									-	41	41
15	-									-	40	39
16	-									-	40	36
17	-									-	40	35
18	-									-	38	34
19	-									-	36	34
20	-									-	35	33
21	-									-	35	31
22	-									-	32	31
23	-									-	33	30
24	-									-	33	30
25	-									-	56	30
26	-									-	50	30
27	-									-	36	30
28	-									65	40	29
29	-									65	40	29
30	-									63	37	29
31	-									62	44	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October					
November					
December					
Calendar year					
January					
February					
March					
April					
May					
June					
July 28-31	255	65	62	63.8	506
August	1,325	59	32	42.7	2,630
September	1,191	123	29	39.7	2,360
The period	-	-	-	-	5,500

Molalla River near Canby, Oreg.

Location.- Water-stage recorder, lat. 45°15', long. 122°41', 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 (general adjustment of 1929).

Drainage area.- 323 square miles.

Records available.- August 1928 to September 1939.

Average discharge.- 11 years, 986 second-feet.

Extremes.- Maximum discharge during year, 9,020 second-feet Feb. 15 (gage height, 8.80 feet); minimum, 40 second-feet Oct. 2.
1928-39: Maximum discharge, 22,300 second-feet Mar. 31, 1931 (gage height, 14.7 feet), from rating curve extended above 13,000 second-feet; minimum, 25 second-feet Sept. 14, 1938; minimum daily, 38 second-feet Sept. 7, 1935.

Remarks.- Records good. A few small diversions for irrigation above gage.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	303	777	1,680	980	813	1,190	588	327	262	89	139
2	44	352	3,050	2,660	690	850	1,270	522	291	223	86	144
3	52	1,580	4,640	3,400	870	980	1,320	498	268	279	79	98
4	67	2,220	3,750	3,260	795	1,030	1,320	498	268	359	82	89
5	70	1,330	3,400	3,540	822	970	1,160	482	345	297	70	86
6	70	831	2,460	2,600	1,460	1,040	1,000	430	506	268	73	82
7	64	597	1,920	1,980	1,860	990	960	387	460	251	76	73
8	57	538	1,570	1,740	1,520	930	1,070	380	418	213	70	76
9	52	696	1,400	1,570	1,220	850	1,060	387	452	198	70	70
10	57	880	1,180	1,460	1,050	768	960	394	475	203	67	62
11	144	696	1,000	1,320	1,010	1,010	880	387	430	183	64	70
12	251	522	860	1,190	2,540	2,100	870	373	380	174	73	73
13	223	475	750	1,060	2,980	2,340	786	373	333	165	62	79
14	228	562	660	930	3,850	2,040	696	373	303	161	73	79
15	144	960	597	900	8,080	1,920	633	380	291	156	70	76
16	113	1,650	530	822	5,280	2,160	597	373	380	161	70	76
17	98	2,720	468	768	3,400	2,530	651	339	538	156	67	67
18	92	1,740	445	940	2,530	2,920	804	321	860	144	64	73
19	76	1,250	408	1,270	2,040	3,120	970	309	1,010	131	64	70
20	79	1,080	401	1,100	1,680	3,050	980	279	1,200	128	57	60
21	76	920	408	920	1,400	3,120	990	333	1,030	135	64	64
22	73	777	438	813	1,220	3,330	930	380	813	120	64	62
23	57	624	452	741	1,110	3,260	813	445	696	98	57	62
24	70	530	475	660	1,010	3,120	759	394	570	116	54	60
25	82	460	546	768	980	2,860	831	352	475	105	60	64
26	79	415	546	705	890	2,340	741	387	422	102	86	60
27	109	373	606	920	880	1,860	660	415	373	102	62	60
28	135	345	1,400	1,220	860	1,460	660	366	327	98	70	62
29	239	352	2,040	1,350	-	1,250	714	387	309	95	73	60
30	268	408	2,040	1,330	-	1,120	651	438	274	86	70	57
31	327	-	1,570	1,180	-	1,100	-	366	-	92	62	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,546	327	44	114	0.353	0.41	7,030
November	26,186	2,720	303	873	2.70	3.01	51,940
December	40,787	4,640	401	1,316	4.07	4.69	80,900
Calendar year 1938	389,089	7,720	42	1,066	3.30	44.78	771,700
January	44,797	3,540	660	1,445	4.47	5.15	88,850
February	53,207	8,080	795	1,900	5.88	6.12	105,500
March	57,231	3,330	768	1,846	5.72	6.60	113,500
April	26,926	1,320	597	898	2.78	3.10	53,410
May	12,336	588	279	398	1.23	1.42	24,470
June	14,821	1,200	268	494	1.53	1.71	29,400
July	5,261	359	86	170	.526	.61	10,440
August	2,168	89	54	69.9	.216	.25	4,300
September	2,253	144	57	75.1	.233	.26	4,470
Water year 1938-39	289,519	8,080	44	793	2.46	33.33	574,200

Peak discharge.- Dec. 2 (11 p.m.) 7,000 sec.-ft.; Feb. 15 (9 to 10 a.m.) 9,020 sec.-ft.

Pudding River at Aurora, Oreg.

Location.- Wire-weight gage, lat. 45°14', long. 122°45', in SE¼ sec. 12, T. 4 S., R. 1 W., at highway bridge at Aurora, half a mile upstream from Mill Creek. Zero of gage is 76.79 feet above mean sea level (general adjustment of 1929).

Drainage area.- 493 square miles.

Records available.- October 1928 to September 1939.

Average discharge.- 11 years, 1,077 second-feet.

Extremes.- Maximum discharge observed during year, 5,020 second-feet Feb. 16 (gage height, 15.69 feet); minimum observed, 41 second-feet Aug. 21 (gage height, 0.09 foot).
1928-39: Maximum discharge observed, 13,800 second-feet Dec. 30, 1937 (gage height, 24.5 feet, from graph based on gage readings), from rating curve extended above 9,000 second-feet; minimum discharge, 37 second-feet Sept. 9, 12, 1935.
Maximum stage known, 25.0 feet Jan. 9, 1923 (discharge, about 14,500 second-feet).

Remarks.- Records good. No diversion above station; slight regulation at times in summer caused by mills on tributaries. Gage read twice daily Oct. 1 to June 30, once daily thereafter.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.1	42	1.6	232	4.0	724	10.0	2,480
.4	68	2.0	304	5.0	960	12.0	3,230
.8	112	2.5	400	6.0	1,210	14.0	4,130
1.2	167	3.0	502	8.0	1,810	16.0	5,200

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	329	512	2,340	2,270	1,160	924	392	227	188	58	93
2	64	386	936	2,580	1,930	1,160	924	357	212	176	57	97
3	69	578	1,930	3,230	1,780	1,270	924	336	195	172	56	126
4	68	1,390	2,690	3,600	1,690	1,420	912	319	188	*180	54	110
5	78	1,690	2,870	3,830	1,750	1,450	864	312	205	196	*52	84
6	98	1,480	2,550	3,830	2,130	1,420	816	308	264	229	53	73
7	87	828	2,270	3,470	3,030	1,480	770	290	304	213	53	68
8	82	724	1,810	2,830	3,390	1,450	747	268	272	185	52	64
9	82	678	1,570	2,440	3,150	1,390	*740	255	248	164	49	64
10	78	912	1,360	2,020	2,620	1,300	724	243	246	149	48	61
11	82	1,080	1,210	1,720	2,300	1,180	690	236	250	139	47	58
12	108	912	1,060	1,510	2,480	1,300	655	222	243	130	48	59
13	232	747	960	1,360	3,310	2,270	655	206	218	125	50	59
14	225	701	852	1,210	3,600	2,870	622	196	201	118	49	62
15	229	690	782	1,140	4,640	2,910	578	188	188	118	48	66
16	170	912	724	1,060	5,020	2,760	545	180	193	124	48	65
17	130	1,420	678	1,040	4,740	2,550	523	174	300	122	47	64
18	115	1,840	622	995	4,480	2,410	545	167	390	113	46	62
19	102	1,510	588	1,060	4,180	2,300	589	173	502	106	45	58
20	96	1,270	578	1,180	3,520	2,200	589	180	545	100	43	56
21	91	1,060	589	1,110	2,620	2,020	556	187	567	96	41	54
22	89	900	633	1,060	2,060	1,930	534	222	502	92	42	54
23	85	770	622	995	1,720	1,870	*500	266	420	85	50	53
24	85	*700	589	912	1,510	1,750	481	254	372	78	45	51
25	85	622	*600	888	1,390	1,660	470	225	334	*72	48	50
26	87	578	611	936	1,300	1,540	512	215	300	*70	48	48
27	107	534	678	1,060	1,210	1,420	481	218	268	68	60	48
28	125	492	1,010	1,540	1,180	1,240	444	215	243	64	71	47
29	176	470	1,690	1,900	-	1,110	422	208	224	62	66	47
30	248	456	1,810	2,200	-	1,010	414	*230	206	60	62	47
31	293	-	1,930	2,410	-	948	-	255	-	58	72	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,729	293	63	120	0.243	0.28	7,400
November	26,659	1,840	329	889	1.80	2.01	52,880
December	37,515	2,870	512	1,204	2.44	2.81	74,010
Calendar year 1938	445,719	8,090	43	1,221	2.48	33.60	884,000
January	57,436	3,830	888	1,853	3.76	4.34	113,900
February	75,000	5,020	1,180	2,679	5.43	5.65	148,800
March	52,748	2,910	948	1,702	3.45	3.98	104,600
April	19,150	924	414	638	1.29	1.44	37,980
May	7,499	392	167	242	.491	.57	14,870
June	8,827	567	188	294	.596	.66	17,510
July	3,852	229	58	124	.252	.29	7,640
August	1,608	72	41	51.9	.105	.12	3,190
September	1,948	126	47	64.9	.132	.15	3,860
Water year 1938-39	295,771	5,020	41	810	1.64	22.30	586,600

*Gage not read; discharge computed on basis of records for Molalla River near Canby.

Tualatin River near Willamette, Oreg.

Location.- Staff gage, lat. 45°21'10", long. 122°40'35", in SW¼ sec. 34, T. 2 S., R. 1 E., 300 feet upstream from county bridge and 1 mile northwest of Willamette. Zero of gage is 86.63 feet (revised) above mean sea level (general adjustment of 1929), by surveys of Corps of Engineers, U. S. Army.
Drainage area.- 710 square miles.
Records available.- July 1928 to September 1939.
Average discharge.- 11 years, 1,361 second-feet (including flow of Oswego canal).
Extremes (river only).- Maximum discharge observed during year, 7,170 second-feet Feb. 18, 19 (gage height, 9.34 feet); minimum observed, 4 second-feet Sept. 28-30.
1928-39: Maximum discharge, 23,300 second-feet Dec. 23, 1933 (gage height, 16.7 feet, observed at peak); minimum observed, 2 second-feet Aug. 14-21, 1928 (gage height, 0.25 foot).
Remarks.- Records of discharge of river are good except those below 20 second-feet, which are fair. Records of discharge of Oswego canal are poor to June 28, good thereafter. Oswego canal diverts water from Tualatin River 4½ miles above station for recreational use and development of power at Oswego and returns it to Willamette River below station. Some regulation in low-water season by flashboards on crest of Oswego canal diversion dam. Gage read twice daily.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.4	4	2.0	276	4.5	1,670
.6	16	2.4	430	5.0	2,040
.8	31	2.8	615	6.0	2,910
1.0	52	3.2	825	7.0	3,940
1.2	79	3.6	1,065	8.0	5,130
1.6	160	4.0	1,320	9.4	7,270

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	197	276	1,400	2,860	1,680	879	305	116	48	8	21
2	48	244	625	1,680	2,900	1,560	849	298	108	43	7	25
3	64	354	1,470	2,420	2,930	1,540	803	254	104	45	6	36
4	86	452	2,040	2,990	2,820	1,610	776	263	102	43	6	38
5	96	635	2,350	3,460	2,750	1,670	737	257	106	45	6	33
6	91	726	2,380	3,570	2,850	1,680	695	250	116	49	6	34
7	73	529	2,300	3,600	3,130	1,670	655	158	122	50	6	34
8	62	394	2,130	3,620	3,320	1,680	630	189	124	48	6	27
9	57	366	1,820	3,500	3,300	1,660	605	142	124	48	6	22
10	57	410	1,470	3,300	3,200	1,600	580	170	120	45	7	16
11	65	556	1,180	3,000	3,140	1,540	565	137	118	41	6	12
12	76	520	981	2,590	3,760	1,560	556	131	112	40	7	10
13	96	475	855	2,110	4,230	1,710	547	139	108	39	6	14
14	120	406	715	1,700	4,820	1,980	547	133	104	37	6	12
15	137	366	645	1,420	5,860	2,280	538	133	108	35	6	15
16	129	350	590	1,280	6,160	2,440	511	131	96	33	7	15
17	102	374	552	1,220	6,710	2,500	466	118	84	31	7	20
18	82	520	520	1,160	7,120	2,500	305	146	86	29	8	20
19	71	660	493	1,230	7,100	2,320	430	144	96	28	8	17
20	64	605	470	1,380	6,670	2,220	398	129	106	27	9	16
21	55	506	457	1,450	6,040	2,090	390	144	129	26	9	20
22	58	448	452	1,390	5,340	1,940	382	163	131	25	10	27
23	60	398	480	1,310	4,590	1,820	374	189	112	25	10	22
24	55	350	475	1,220	3,870	1,700	374	189	94	22	9	8
25	56	320	457	1,140	3,270	1,590	374	200	78	20	9	8
26	55	294	457	1,090	2,770	1,480	382	160	69	19	9	7
27	66	263	493	1,110	2,350	1,360	374	160	65	18	10	6
28	86	254	565	1,360	1,960	1,230	350	170	65	18	8	5
29	93	241	843	1,870	-	1,110	327	160	58	16	8	4
30	96	238	1,200	2,410	-	1,020	320	142	53	13	9	4
31	124	-	1,320	2,740	-	933	-	133	-	11	13	-

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	137	41	78.1	4,800	198	94	133	0.187	0.22	8,160
November	726	197	415	24,700	790	252	463	.652	.73	27,560
December	2,380	276	1,002	61,610	2,470	315	1,053	1.48	1.71	64,770
Calendar year 1938	19,000	25	1,536	1,112,000	20,000	78	1,580	2.23	30.22	1,144,000
January	3,620	1,090	2,055	126,400	3,740	1,100	2,106	2.97	3.42	129,500
February	7,120	1,960	4,136	229,700	7,130	2,030	4,185	5.87	6.11	231,300
March	2,500	933	1,731	106,500	2,590	991	1,800	2.54	2.93	110,700
April	879	305	524	31,180	936	338	562	.792	.88	33,430
May	305	118	175	10,780	334	188	236	.332	.38	14,480
June	131	53	100	5,980	190	108	156	.220	.25	9,300
July	50	11	32.8	2,020	108	51	83.7	.118	.14	5,150
August	13	6	7.7	472	56	38	42.2	.059	.07	2,590
September	38	4	18.3	1,090	88	52	66.7	.094	.10	3,970
Water year 1938-39	7,120	4	836	605,200	7,130	38	885	1.05	16.94	640,900

Gales Creek near Gales Creek, Oreg.

Location.- Staff gage, lat. 45°39', long. 123°16', in SE¼ sec. 23, T. 2 N., R. 5 W., half a mile downstream from Beaver Creek and 4½ miles northwest of Gales Creek post office. Zero of gage is 449.5 feet above mean sea level (river profile survey).

Drainage area.- 33 square miles.

Records available.- September 1935 to September 1939.

Extremes.- Maximum discharge observed during year, 1,330 second-feet Feb. 12 (gage height, 4.98 feet); minimum observed, 3.4 second-feet (regulated) Sept. 28.
1935-39: Maximum discharge, 3,540 second-feet Dec. 27, 1937 (gage height, 8.10 feet, from floodmark); minimum observed, that of Sept. 28, 1939.

Remarks.- Records good except those during periods of missing gage heights, which are fair. No diversion above station; slight regulation at times caused by operation of log pond 3 miles upstream. Gage read twice daily Oct. 10 to Mar. 24; once daily Oct. 1-9, Mar. 25 to Sept. 30.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.8	3.2	1.7	37	3.5	465
.9	4.0	2.0	65	4.0	720
1.1	6.8	2.5	146	4.5	1,015
1.4	17	3.0	280	5.0	1,330

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.4	55	77	326	207	122	77	30	17	*12	6.5	8.4
2	9.4	31	665	595	215	122	*74	29	15	11	6.5	7.8
3	9.4	236	433	687	186	150	72	28	20	14	6.6	*7.4
4	8.9	88	301	525	167	165	65	35	*20	13	8.4	7.1
5	8.9	58	329	433	181	161	63	28	18	13	*4.5	6.8
6	8.9	44	258	350	242	130	61	27	17	12	6.6	6.2
7	8.9	37	194	274	274	146	59	26	16	11	6.5	4.8
8	*8.9	44	159	236	230	150	57	24	18	11	6.6	6.2
9	9.4	61	130	161	191	138	55	21	28	9.7	6.5	6.2
10	11	62	108	167	167	134	*54	21	17	9.4	6.5	6.2
11	18	58	89	146	179	167	53	21	16	9.4	6.6	6.5
12	15	36	83	124	1,170	202	53	21	15	9.1	6.8	6.5
13	25	*40	76	112	632	251	50	21	14	9.7	*6:8	6.5
14	15	46	70	115	775	267	49	21	14	8.9	6.8	9.1
15	12	46	65	121	1,170	254	45	20	15	9.1	*6.6	5.1
16	11	83	61	102	720	248	44	21	17	9.4	6.5	6.5
17	11	105	57	100	483	261	42	21	15	9.1	6.5	6.5
18	9.4	86	54	132	374	258	41	21	17	9.1	6.2	6.2
19	9.1	77	52	184	301	236	40	22	26	9.4	*6.2	6.5
20	9.1	66	50	177	191	213	39	21	14	9.1	6.3	6.2
21	9.1	57	51	*160	196	196	38	25	14	8.4	6.3	5.8
22	8.9	51	51	*140	196	186	38	26	14	8.1	6.3	5.8
23	9.4	47	49	126	161	177	36	21	12	8.6	6.5	5.8
24	10	44	44	119	150	172	37	*20	13	7.8	6.6	5.7
25	11	41	*70	112	150	144	36	23	13	7.1	6.6	5.7
26	10	38	*65	110	138	130	35	22	12	6.8	*6.6	5.7
27	10	36	*100	215	136	117	34	19	11	7.1	6.6	5.7
28	11	34	*150	242	126	105	32	19	11	*7.1	7.1	3.4
29	28	32	179	318	-	95	31	18	12	7.1	6.8	5.8
30	27	59	*160	332	-	89	31	17	12	6.8	6.8	5.8
31	26	-	144	267	-	86	-	18	-	6.8	11	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	388.1	28	8.9	12.5	0.379	0.44	770
November	1,798	236	31	59.9	1.82	2.03	3,570
December	4,374	665	44	141	4.27	4.92	8,680
Calendar year 1938	41,120.0	1,080	6.0	113	3.42	46.38	81,560
January	7,208	687	100	233	7.06	8.14	14,300
February	9,308	1,170	126	332	10.1	10.52	18,460
March	5,272	267	86	170	5.15	5.94	10,460
April	1,441	77	31	48.0	1.45	1.62	2,860
May	707	30	17	22.8	.691	.80	1,400
June	473	28	11	15.8	.479	.53	938
July	290.1	14	6.8	9.36	.284	.33	575
August	207.7	11	4.5	6.70	.203	.23	412
September	187.9	9.1	3.4	6.26	.190	.21	373
Water year 1938-39	31,654.8	1,170	3.4	86.7	2.63	35.71	62,800

*Gage heights faulty or missing; discharge computed on basis of record for Wilson River near Tillamook.

Oswego canal near Oswego, Oreg.

Location.- Water-stage recorder, lat. 45°23'30", long. 122°43'10", in NW¼ sec. 20, T. 2 S., R. 1 E., half a mile downstream from point of diversion from Tualatin River, 1 mile upstream from Oswego Lake, and 3 miles southwest of Oswego. Zero of gage is 96.50 feet above mean sea level (general adjustment of 1929). Prior to June 29, 1939, staff gage at site 900 feet downstream (zero of staff gage in 1939 is 97.28 feet above mean sea level, general adjustment of 1929). Auxiliary gage at outlet of Oswego Lake for determination of backwater effect of lake on stages at canal gage.

Records available.- October 1928 to September 1939.

Average discharge.- 11 years, 60.3 second-feet.

Extremes.- Maximum discharge observed during year, 124 second-feet Jan. 11 (gage height, 5.62 feet); practically no flow part of June 13-16, 21, 22.
1928-39: Maximum discharge, about 6,000 second-feet Dec. 23, 1933 (gage height, 16.1 feet), computed from slope, area, and lake-spillway data; practically no flow at times.

Remarks.- Records poor prior to June 28, good thereafter. Discharge computed on basis of gage heights, discharge measurements, and backwater effect as indicated by Oswego Lake gage. Oswego canal diverts water from Tualatin River in NW¼ sec. 20, but diversion dam is in NE¼ sec. 33, about 3 miles downstream.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	55	39	45	7	68	57	29	64	54	38	46
2	53	59	49	53	7	65	55	33	63	54	37	47
3	52	62	69	74	61	63	49	33	64	54	35	50
4	52	64	74	88	65	60	49	34	65	54	34	50
5	52	64	89	103	68	61	45	37	66	55	33	51
6	52	64	88	116	67	61	45	39	65	57	33	50
7	52	62	88	116	67	62	43	39	65	58	32	49
8	52	59	89	118	71	63	43	54	66	59	32	48
9	53	55	67	117	71	63	43	61	66	59	32	47
10	54	53	58	122	72	63	42	66	66	58	33	47
11	54	51	57	124	23	64	40	68	66	56	33	47
12	54	50	49	120	12	65	39	69	66	55	33	47
13	56	49	49	104	10	65	39	70	21	53	33	48
14	58	45	45	70	8	80	39	71	19	52	33	48
15	61	43	44	57	8	86	39	68	19	51	33	49
16	60	43	43	55	8	86	35	68	20	50	32	49
17	58	43	41	10	8	85	35	70	61	50	33	50
18	58	43	41	8	8	87	33	69	64	50	34	51
19	58	43	40	7	8	86	33	68	66	49	34	51
20	56	43	39	5	8	86	32	68	66	49	34	51
21	54	43	39	5	5	77	31	68	38	49	33	50
22	54	43	39	5	5	70	31	71	41	49	33	48
23	54	41	39	5	5	69	31	71	66	49	33	47
24	54	39	39	4	5	67	31	68	64	48	33	47
25	54	38	39	5	5	66	31	68	61	47	34	47
26	54	37	38	5	5	65	30	68	61	46	35	47
27	54	37	39	5	58	64	29	68	58	45	37	47
28	54	37	43	4	67	63	28	68	58	44	38	47
29	54	37	39	4	-	60	28	68	55	43	40	48
30	54	39	39	5	-	58	28	68	55	42	41	48
31	56	-	40	7	-	58	-	66	-	40	43	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,694	61	52	54.6	3,360
November	1,441	64	37	48.0	2,860
December	1,591	89	38	51.3	3,160
Calendar year 1938	15,876	1,000	5	43.5	31,490
January	1,566	124	4	50.5	3,110
February	812	72	5	29.0	1,610
March	2,136	87	58	68.9	4,240
April	1,133	57	28	37.8	2,250
May	1,866	71	29	60.2	3,700
June	1,675	66	19	55.8	3,320
July	1,579	59	40	50.9	3,130
August	1,071	43	32	34.5	2,120
September	1,452	51	46	48.4	2,880
Water year 1938-39	18,016	124	4	49.4	35,740

Clackamas River at Big Bottom, Oreg.

Location.- Water-stage recorder, lat. 45°01', long. 121°55', in sec. 26, T. 6 S., R. 7 E., just downstream from Pot Creek at lower end of Big Bottom, half a mile upstream from site of proposed dam and 28 miles southeast of Estacada.

Drainage area.- 132 square miles.

Records available.- April 1920 to September 1939.

Average discharge.- 19 years, 452 second-feet.

Extremes.- Maximum discharge during year, 1,100 second-feet Dec. 5 (gage height, 3.60 feet); minimum, 222 second-feet Sept. 20-30 (gage height, 1.66 feet).
1920-39: Maximum discharge, 6,750 second-feet Mar. 31, 1931 (gage height, 8.28 feet), from rating curve extended above 3,500 second-feet; minimum, 190 second-feet several days in August and September 1931 (gage height, 1.25 feet).

Remarks.- Records fair. No regulation or diversion above station. Base data furnished by Portland General Electric Co.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 2		Dec. 3 to Sept. 30			
1.7	250	1.6	206	2.8	640
1.9	310	1.9	290	3.1	795
2.2	415	2.2	395	3.4	970
2.6	580	2.5	510		
2.9	725				

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	268	292	439	370	328	356	650	695	395	275	238	254
2	265	292	722	416	328	356	670	705	381	272	235	238
3	277	478	735	518	325	356	690	705	374	275	235	235
4	274	439	790	466	318	346	685	705	367	278	235	232
5	274	348	970	454	322	339	650	655	370	272	235	229
6	271	314	705	423	336	339	631	618	367	269	236	229
7	268	301	631	402	325	332	640	608	353	266	235	227
8	265	298	604	395	314	332	675	622	350	266	232	227
9	265	314	554	381	308	325	680	636	353	263	232	227
10	271	301	506	374	304	322	665	645	342	260	232	227
11	331	292	462	370	318	370	655	645	332	260	232	232
12	292	286	426	367	423	416	650	631	325	257	232	236
13	292	289	406	356	392	402	608	640	318	254	232	232
14	280	295	388	353	434	374	572	660	314	254	232	232
15	274	310	374	360	773	374	559	670	314	254	232	229
16	268	412	364	350	636	388	559	650	336	254	229	227
17	268	431	350	350	546	409	577	600	339	252	229	227
18	265	366	339	364	502	438	636	626	336	249	229	227
19	265	338	332	430	470	478	710	572	328	249	227	224
20	265	331	325	402	442	522	756	530	328	246	227	222
21	265	317	322	381	423	586	822	542	314	246	227	222
22	262	304	314	370	409	680	844	526	308	246	227	222
23	262	298	311	360	398	768	817	502	300	243	227	222
24	265	295	308	353	392	834	773	478	297	243	227	222
25	265	292	311	350	388	874	756	478	290	243	229	222
26	265	289	297	342	378	868	715	498	287	240	227	222
27	274	286	304	353	374	778	710	474	284	240	227	222
28	271	283	332	356	364	700	746	458	284	238	232	222
29	295	295	388	353	-	645	790	474	281	238	232	222
30	298	304	392	346	-	613	720	446	275	238	229	222
31	292	-	364	336	-	618	-	420	-	238	243	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	8,512	331	262	275	2.08	2.40	16,880
November	9,690	478	283	323	2.45	2.73	19,220
December	14,065	970	297	454	3.44	3.97	27,900
Calendar year 1938	181,626	2,250	262	498	3.77	51.18	360,200
January	11,821	518	336	381	2.89	3.33	23,450
February	11,270	773	304	402	3.05	3.18	22,350
March	15,538	874	322	501	3.80	4.38	30,820
April	20,601	844	559	687	5.20	5.80	40,860
May	18,114	705	420	584	4.42	5.10	35,930
June	9,842	395	275	328	2.48	2.77	19,520
July	7,878	278	238	254	1.92	2.21	15,630
August	7,172	243	227	231	1.75	2.02	14,230
September	6,832	254	222	228	1.73	1.93	13,550
Water year 1938-39	141,335	970	222	387	2.93	39.82	280,300

Clackamas River above Three Lynx Creek, Oreg.

Location.- Water-stage recorder, lat. 45°07', long. 122°04', in NE¼ sec. 21, T. 5 S., R. 6 E., just downstream from power plant, 500 feet upstream from Three Lynx Creek and 17 miles southeast of Estacada. Zero of gage is 1,098 feet above mean sea level (surveys of Portland General Electric Co.).

Drainage area.- 488 square miles.

Records available.- October 1911 to December 1913, October 1921 to September 1939.

Average discharge.- 20 years (1911-13, 1921-39), 1,847 second-feet.

Extremes.- Maximum discharge during year, 7,690 second-feet Dec. 2 (gage height, 6.57 feet); minimum, about 456 second-feet Aug. 30 (stage below inlet pipe); minimum daily, 657 second-feet Sept. 26.

1911-13, 1921-39: Maximum discharge, 34,800 second-feet Mar. 31, 1931 (gage height, 15.5 feet), from rating curve extended above 11,000 second-feet; minimum observed, 375 second-feet Aug. 10, 16, 1924, Sept. 20, 1936; minimum daily discharge, 536 second-feet Oct. 22, 1930.

Remarks.- Records good. Water diverted from Oak Grove Fork is used in power plant on Clackamas River just above station. Base data furnished by Portland General Electric Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.9	630	2.5	1,740	4.5	4,070
1.2	780	3.0	2,240	5.0	4,800
1.5	960	3.5	2,790	5.6	5,770
2.0	1,310	4.0	3,400		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	736	900	1,740	1,730	1,330	1,400	2,910	2,580	1,430	972	742	816
2	730	936	4,600	2,100	1,300	1,410	3,030	2,570	1,350	942	736	769
3	758	2,340	4,720	2,840	1,330	1,410	3,150	2,570	1,320	972	758	705
4	736	2,280	5,030	2,640	1,250	1,410	3,150	2,570	1,300	924	742	725
5	769	1,650	5,270	2,560	1,260	1,330	2,910	2,420	1,380	954	742	720
6	742	1,200	3,660	2,160	1,450	1,370	2,700	2,260	1,370	918	730	715
7	725	1,110	3,090	1,910	1,390	1,290	2,690	2,150	1,300	912	736	695
8	725	1,180	2,890	1,810	1,290	1,280	2,810	2,240	1,290	900	725	695
9	695	1,080	2,540	1,750	1,220	1,230	2,890	2,280	1,330	876	736	685
10	725	1,080	2,230	1,650	1,170	1,230	2,770	2,350	1,280	864	730	685
11	948	978	1,870	1,620	1,180	1,520	2,710	2,350	1,180	852	720	710
12	876	918	1,760	1,560	2,070	2,100	2,650	2,310	1,240	864	742	715
13	840	960	1,590	1,530	2,070	2,120	2,530	2,330	1,160	840	720	710
14	822	996	1,460	1,460	2,650	1,770	2,280	2,390	1,150	846	752	710
15	769	1,190	1,420	1,490	5,680	1,720	2,170	2,460	1,130	846	700	700
16	752	1,860	1,320	1,460	4,000	1,970	2,140	2,350	1,220	858	715	685
17	730	2,440	1,290	1,410	3,030	2,280	2,220	2,160	1,310	822	715	666
18	725	1,800	1,210	1,640	2,590	2,600	2,530	2,170	1,260	816	720	680
19	715	1,470	1,200	2,050	2,250	3,030	2,950	2,010	1,370	822	705	670
20	690	1,370	1,130	1,850	2,040	3,530	3,090	1,840	1,370	804	700	666
21	705	1,320	1,150	1,730	1,930	3,860	3,270	1,880	1,260	792	695	670
22	685	1,190	1,110	1,550	1,730	4,420	3,270	1,870	1,200	798	710	666
23	715	1,070	1,130	1,530	1,640	4,720	3,090	1,800	1,190	786	705	666
24	710	1,030	1,110	1,440	1,610	4,800	2,910	1,700	1,120	780	705	662
25	730	978	1,150	1,400	1,600	4,720	2,910	1,680	1,060	786	705	666
26	725	984	1,110	1,370	1,480	4,280	2,720	1,740	1,070	769	700	657
27	747	924	1,150	1,470	1,520	3,600	2,600	1,700	1,040	780	705	662
28	747	912	1,520	1,590	1,490	3,090	2,760	1,580	1,010	747	705	670
29	876	972	1,810	1,560	-	2,840	2,960	1,740	996	769	710	666
30	900	990	2,020	1,540	-	2,590	2,750	1,630	978	747	675	666
31	912	-	1,730	1,440	-	2,660	-	1,540	-	742	720	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	23,660	948	685	763	1.56	1.80	46,930
November	38,098	2,440	900	1,270	2.60	2.90	75,570
December	65,010	5,270	1,110	2,097	4.30	4.96	128,900
Calendar year 1938	702,758	11,200	666	1,925	3.94	53.56	1,394,000
January	53,840	2,840	1,370	1,737	3.56	4.10	106,800
February	53,550	5,680	1,170	1,912	3.92	4.08	106,200
March	77,580	4,800	1,230	2,503	5.13	5.91	153,900
April	83,520	3,270	2,140	2,784	5.70	6.36	165,700
May	66,220	2,580	1,540	2,104	4.31	4.97	129,400
June	36,664	1,430	978	1,222	2.50	2.79	72,720
July	26,100	972	742	842	1.73	1.99	51,770
August	22,301	758	675	719	1.47	1.70	44,230
September	20,773	816	657	692	1.42	1.58	41,200
Water year 1938-39	566,316	5,680	657	1,552	3.18	43.14	1,123,000

Peak discharge.- Nov. 3 (5 p.m.) 3,660 sec.-ft.; Dec. 2 (8 p.m.) 7,690 sec.-ft.; Dec. 5 (7 a.m.) 6,130 sec.-ft.; Feb. 15 (8 a.m.) 6,720 sec.-ft.

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Clackamas River near Cazadero, Oreg.

Location.- Water-stage recorder, lat. 45°14', long. 122°16', in NE¼ sec. 11, T. 4 S., R. 4 E., half a mile upstream from 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 (surveys of Portland General Electric Co.); published gage readings have been reduced to mean sea-level datum.

Drainage area.- 665 square miles.

Records available.- January 1909 to September 1939.

Average discharge.- 30 years, 2,602 second-feet.

Extremes.- Maximum discharge during year, 12,000 second-feet Feb. 15 (gage height, 541.15 feet); minimum, 503 second-feet (regulated) Aug. 30; minimum daily, 720 second-feet Sept. 26-30.

1909-39: Maximum discharge, 60,800 second-feet Mar. 31, 1931 (gage height, 556.5 feet), by computation of flow over dam; minimum, 410 second-feet Oct. 20, 1925, Sept. 28, 1930, when power plant at Three Lynx was shut down (gage height, 532.03 feet); minimum daily, 587 second-feet Aug. 17, 1930.

Remarks.- Records good. Some diurnal fluctuation during low water caused by operation of Oak Grove power plant. Base data furnished by Portland General Electric Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

33.0	720	35.0	2,070	38.0	5,660
33.5	990	35.5	2,540	39.0	7,310
34.0	1,300	36.0	3,070	40.5	10,400
34.5	1,660	37.0	4,260		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	820	1,070	2,200	2,740	1,830	2,040	3,940	3,240	1,810	1,280	876	972
2	825	1,090	6,360	3,400	1,790	2,070	4,200	3,180	1,680	1,230	865	876
3	882	3,670	7,310	4,320	1,750	2,140	4,320	3,180	1,640	1,320	860	790
4	860	3,760	7,860	3,940	1,730	2,070	4,320	3,290	1,650	1,300	850	810
5	924	2,360	7,860	3,820	1,770	1,920	3,980	3,070	1,910	1,260	845	795
6	850	1,780	5,510	3,180	2,270	1,980	3,640	2,800	1,950	1,220	835	790
7	845	1,520	4,520	2,740	2,160	1,880	3,520	2,640	1,810	1,200	825	775
8	835	1,500	4,200	2,640	1,880	1,820	3,820	2,740	1,750	1,160	820	760
9	820	1,650	3,700	2,590	1,700	1,760	3,880	2,800	1,880	1,120	830	760
10	860	1,600	3,180	2,500	1,620	1,680	3,760	2,850	1,820	1,100	830	755
11	1,260	1,370	2,640	2,410	1,640	2,160	3,580	2,850	1,660	1,110	830	775
12	1,100	1,260	2,500	2,270	3,460	3,340	3,460	2,800	1,650	1,090	820	805
13	1,130	1,310	2,200	2,160	3,400	3,500	3,240	2,850	1,540	1,070	820	795
14	1,030	1,500	2,020	2,050	5,340	2,640	2,960	2,900	1,490	1,060	820	780
15	930	2,070	1,920	2,030	10,400	2,740	2,850	3,020	1,470	1,050	815	775
16	882	3,620	1,800	1,980	6,960	3,460	2,740	2,850	1,590	1,060	805	770
17	850	4,520	1,680	1,960	4,930	4,060	2,960	2,640	1,880	1,020	805	740
18	860	3,070	1,580	2,320	4,000	4,580	3,340	2,640	2,020	996	810	740
19	830	2,360	1,540	2,850	3,400	5,280	3,880	2,460	2,320	990	795	740
20	800	2,250	1,460	2,540	3,020	5,740	4,130	2,240	2,540	978	785	740
21	820	2,030	1,510	2,310	2,740	6,370	4,320	2,300	2,240	960	795	745
22	800	1,790	1,450	2,150	2,480	7,220	4,320	2,350	1,960	942	795	745
23	800	1,600	1,560	2,020	2,340	7,490	4,000	2,320	1,910	930	800	740
24	810	1,500	1,520	1,970	2,270	7,490	3,760	2,170	1,710	930	785	740
25	835	1,430	1,640	2,040	2,300	7,130	3,700	2,100	1,580	930	810	730
26	850	1,360	1,580	1,930	2,110	6,290	3,400	2,200	1,570	924	800	720
27	865	1,280	1,720	2,040	2,200	5,140	3,290	2,160	1,460	912	790	720
28	870	1,240	2,740	2,260	2,140	4,320	3,400	2,010	1,400	900	810	720
29	1,030	1,290	3,070	2,240	-	3,880	3,760	2,220	1,360	900	825	720
30	1,080	1,340	3,180	2,200	-	3,580	3,460	2,090	1,310	870	770	720
31	1,120	-	2,690	2,010	-	3,640	-	1,940	-	870	825	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	28,073	1,260	800	906	1.36	1.57	55,680
November	58,190	4,520	1,070	1,940	2.92	3.26	115,400
December	94,700	7,860	1,450	3,055	4.59	5.29	187,800
Calendar year 1938	973,363	16,700	795	2,667	4.01	54.43	1,931,000
January	77,610	4,320	1,930	2,504	3.77	4.35	153,900
February	83,630	10,400	1,620	2,987	4.49	4.68	165,900
March	119,410	7,490	1,680	3,852	5.79	6.68	236,800
April	109,830	4,320	2,740	3,661	5.51	6.15	217,800
May	80,900	3,290	1,940	2,610	3.92	4.52	160,500
June	52,560	2,540	1,510	1,752	2.63	2.93	104,300
July	32,682	1,320	870	1,054	1.58	1.82	64,820
August	25,346	876	770	818	1.23	1.42	50,270
September	23,043	972	720	768	1.15	1.28	45,710
Water year 1938-39	785,974	10,400	720	2,153	3.24	43.95	1,559,000

Peak discharge.- Nov. 3 (5 p.m.) 6,450 sec.-ft.; Nov. 16 (9 p.m.) 5,890 sec.-ft.; Dec. 2 (9 p.m.) 11,000 sec.-ft.; Dec. 5 (9:30 a.m.) 8,740 sec.-ft.; Feb. 15 (9 a.m.) 12,000 sec.-ft.

Oak Grove Fork above power-plant intake, Oreg.

Location.- Water-stage recorder, lat. 45°04', long. 121°57', in SW¼ sec. 3, T. 6 S., R. 7 E., two-thirds of a mile upstream from Kink Creek, 1 mile upstream from 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 1939. May 1909 to December 1923 (incomplete) at site 1 mile downstream, below Kink Creek; records equivalent except for slight inflow from springs and Kink Creek.

Average discharge.- 15 years (1924-39), 463 second-feet.

Extremes.- Maximum discharge during year, 866 second-feet Apr. 29 (gage height, 2.73 feet); minimum, 307 second-feet Sept. 8-10, 14-30 (gage height, 1.80 feet).
1909-39: Maximum discharge, 5,000 second-feet Jan. 7, 1923 (gage height, 5.45 feet), computed from flow at stations on Clackamas River; minimum, 236 second-feet Oct. 15, 16, 18, 1931 (gage height, 1.42 feet).

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

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 6 to Sept. 30)

1.7	275	2.3	580
1.9	360	2.5	705
2.1	465	2.8	915

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	328	324	390	400	380	395	705	810	487	370	328	320
2	328	333	492	421	375	395	726	817	476	365	328	315
3	338	504	538	476	375	395	733	817	465	375	328	315
4	328	416	726	448	370	390	726	817	465	375	324	315
5	328	380	796	438	370	385	698	789	476	365	324	315
6	328	351	628	416	380	385	686	754	470	365	324	311
7	328	342	604	405	370	380	686	740	460	360	324	311
8	328	333	592	410	360	380	712	747	454	356	324	307
9	328	346	556	405	356	375	719	747	460	351	324	307
10	328	342	514	400	356	370	712	747	443	351	324	307
11	360	333	476	400	360	385	719	740	432	346	320	311
12	333	328	448	395	432	400	712	726	421	346	320	315
13	333	328	432	395	400	395	679	726	416	346	320	311
14	324	338	416	390	454	380	653	733	410	342	320	307
15	324	356	405	395	610	400	646	740	410	342	320	307
16	320	470	395	390	550	438	653	712	416	342	320	307
17	320	487	385	395	509	454	679	686	438	338	320	307
18	315	421	380	421	492	475	712	705	438	338	320	307
19	315	385	375	438	470	509	754	666	443	338	315	307
20	315	390	370	421	448	538	775	634	438	338	315	307
21	315	370	365	410	438	574	810	646	421	333	315	307
22	315	356	365	405	432	640	838	622	410	333	315	307
23	315	342	365	395	426	692	838	604	405	333	315	307
24	315	338	365	400	416	733	824	574	395	333	315	307
25	315	338	370	400	416	768	824	574	390	333	320	307
26	315	333	365	395	410	775	803	568	385	333	315	307
27	315	333	370	405	410	719	803	550	380	333	315	307
28	320	328	390	405	400	686	831	538	380	328	315	307
29	324	333	416	400	-	666	859	538	375	328	311	307
30	324	342	416	390	-	653	824	514	370	328	311	307
31	324	-	400	385	-	672	-	498	-	328	320	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	10,046	360	315	324	2.57	2.96	19,930
November	10,920	504	324	364	2.89	3.22	21,660
December	14,105	796	365	455	3.61	4.16	27,980
Calendar year 1938	185,599	1,440	315	508	4.03	54.78	368,100
January	12,649	476	385	408	3.24	3.74	25,090
February	11,765	610	356	420	3.33	3.47	23,340
March	15,803	775	370	510	4.05	4.67	31,340
April	22,339	859	646	745	5.91	6.59	44,310
May	21,079	817	498	680	5.40	6.23	41,810
June	12,829	487	370	428	3.40	3.79	25,450
July	10,692	375	328	345	2.74	3.16	21,210
August	9,909	328	311	320	2.54	2.93	19,650
September	9,279	320	307	309	2.45	2.73	18,400
Water year 1938-39	161,415	859	307	442	3.51	47.65	320,200

Lewis River near Cougar, Wash.

Location.- Water-stage recorder, lat. 46°03'30", long. 122°12'50", in SE¼ sec. 29, T. 7 N., R. 5 E., 1 mile downstream from Swift Creek and 4 miles east of Cougar. Zero of present gage is 576.4 feet above mean sea level (river profile surveys).

Drainage area.- 483 square miles.

Records available.- July 1910 to March 1912 (gage heights only) and June 1924 to September 1939. July 1909 to June 1910 at site 1,000 feet upstream from Swift Creek.

Average discharge.- 15 years (1924-39), 2,776 second-feet.

Extremes.- Maximum discharge during year, 9,440 second-feet Jan. 2 (gage height, 7.90 feet); minimum, 566 second-feet Sept. 29, 30 (gage height, 3.08 feet).
1910-12, 1924-39: Maximum discharge, 54,400 second-feet Dec. 21, 1933 (gage height, 15.7 feet, former datum), from rating curve extended above 15,000 second-feet; minimum, 454 second-feet Oct. 21, 1931 (gage height, 0.01 foot, former datum).

Remarks.- Records good. Discharge for Jan. 6 determined from recorded range of stage. No diversion or regulation.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 3		Nov. 3 to Sept. 30			
3.1	590	3.0	510	5.0	2,540
3.5	950	3.5	920	6.0	4,260
4.0	1,480	4.0	1,370	7.0	6,760
4.5	2,050	4.5	1,900	7.8	9,120
5.3	3,210				

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	630	1,400	2,760	4,840	2,140	1,790	3,560	3,840	2,540	1,680	902	1,050
2	638	1,290	4,480	9,120	2,080	1,790	3,840	3,840	2,400	1,570	902	893
3	742	3,160	5,200	8,810	1,960	1,790	4,040	3,840	2,340	1,620	902	803
4	679	2,540	5,700	7,320	1,900	1,740	3,940	3,940	2,270	1,680	902	767
5	679	1,900	7,610	5,830	1,960	1,680	3,740	3,650	2,270	1,520	884	740
6	679	1,570	5,960	4,720	1,960	1,680	3,470	3,380	2,270	1,470	866	716
7	630	1,420	5,080	3,940	1,960	1,620	3,300	3,140	2,200	1,420	848	692
8	622	1,420	4,600	3,580	1,790	1,570	3,380	3,300	2,140	1,370	848	684
9	622	1,370	4,260	3,220	1,680	1,520	3,380	3,470	2,200	1,320	848	684
10	769	1,280	3,740	3,060	1,620	1,520	3,300	3,560	2,140	1,370	857	676
11	1,590	1,190	3,300	2,900	1,740	1,680	3,380	3,740	2,200	1,370	848	684
12	1,300	1,160	2,900	2,760	2,760	1,790	3,380	3,940	2,270	1,320	830	660
13	1,760	1,140	2,680	2,610	2,400	1,790	3,220	4,260	2,340	1,280	830	644
14	1,090	1,140	2,470	2,470	2,810	1,740	3,060	4,720	2,270	1,240	803	652
15	900	1,240	2,400	2,610	5,700	1,790	2,980	4,960	2,270	1,240	785	644
16	814	2,740	2,140	2,400	4,380	1,960	2,900	4,840	2,270	1,240	776	652
17	760	2,830	1,960	2,540	3,560	2,200	3,060	4,150	2,200	1,140	776	644
18	733	2,340	1,840	3,380	3,220	2,340	3,470	3,740	2,200	1,120	767	636
19	697	2,080	1,790	4,600	2,830	2,610	3,940	3,220	2,400	1,110	758	628
20	679	2,080	1,740	4,040	2,610	2,900	4,150	2,900	2,400	1,100	749	636
21	670	1,900	1,680	3,560	2,400	3,380	4,600	3,220	2,270	1,060	740	644
22	654	1,740	1,620	3,220	2,270	4,150	4,720	3,060	2,200	1,050	749	636
23	654	1,520	1,740	2,980	2,140	5,320	4,490	2,900	2,140	1,040	739	620
24	679	1,570	1,900	2,760	2,080	5,960	4,150	2,830	1,960	1,030	724	612
25	697	1,470	2,080	2,540	2,080	5,960	4,040	2,900	1,840	1,040	767	596
26	724	1,420	1,840	2,470	1,960	5,700	3,740	2,980	1,790	1,030	749	588
27	930	1,370	1,840	2,680	1,900	4,600	3,650	2,900	1,740	1,030	724	588
28	850	1,320	2,080	2,610	1,840	4,040	3,840	2,900	1,740	1,010	776	580
29	1,050	1,320	3,060	2,540	-	3,650	4,260	3,840	1,840	974	785	573
30	1,250	1,620	3,220	2,400	-	3,470	4,150	3,380	1,790	956	724	573
31	1,480	-	3,140	2,270	-	3,380	-	2,900	-	938	830	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	26,651	1,760	622	860	1.78	2.05	52,860
November	50,540	3,160	1,140	1,685	3.49	3.89	100,200
December	96,810	7,610	1,620	3,123	6.47	7.46	192,000
Calendar year 1938	951,604	15,900	622	2,607	5.40	73.26	1,887,000
January	114,760	9,120	2,270	3,702	7.66	8.83	227,600
February	67,670	5,700	1,620	2,417	5.00	5.21	134,200
March	87,110	5,960	1,520	2,810	5.82	6.71	172,800
April	111,130	4,720	2,900	3,704	7.67	8.56	220,400
May	110,240	4,960	2,830	3,556	7.36	8.48	218,700
June	64,900	2,540	1,740	2,163	4.48	5.00	128,700
July	38,338	1,680	938	1,237	2.56	2.95	76,040
August	24,988	902	724	806	1.67	1.92	49,560
September	20,195	1,050	573	673	1.39	1.55	40,060
Water year 1938-39	813,332	9,120	573	2,228	4.61	62.61	1,613,000

Lewis River at Ariel, Wash.

Location.- Water-stage recorder, lat. 45°57', long. 122°34', in NW¼NE¼ sec. 4, T. 5 N., R. 2 E., at Ariel, half a mile downstream from Ariel Dam and power plant and 3 miles upstream from Cedar Creek. Zero of gage is 44 feet above mean sea level (based on surveys of Northwestern Electric Co.).

Drainage area.- 733 square miles.

Records available.- July 1922 to September 1939. July to November 1909, at site 3 miles upstream.

Average discharge.- 16 years (1923-39), 4,547 second-feet, adjusted for storage since March 1931.

Extremes.- Maximum discharge during water year 1937-38, 61,500 second-feet Dec. 30 (gage height, 21.3 feet), from rating curve extended above 25,000 second-feet; minimum, 346 second-feet (revised) Aug. 7 (gage height, 0.37 foot), regulated; minimum daily, 431 second-feet (revised) Aug. 7, regulated. Revised figures of minimum discharge supersede those published in Water-Supply Paper 864.

Maximum discharge during water year 1938-39, 24,600 second-feet Feb. 15 (gage height, 12.7 feet); minimum, 621 second-feet Aug. 4 (gage height, 1.21 feet), regulated; minimum daily, 705 second-feet Sept. 3, 4, regulated.

1909, 1922-39: Maximum discharge, 129,000 second-feet Dec. 22, 1933 (gage height, 35.0 feet, from floodmarks), from rating curve extended above 22,000 second-feet and from spillway-gate openings; no flow at times on June 30 and in periods July 1-3, 6-9, 1931 (caused by regulation during construction of Ariel Dam); minimum daily, 1 second-foot July 6, 1931, regulated.

Remarks.- Records good except those for period of missing gage heights, Feb. 28 to Mar. 4, 1939 (computed on basis of plant-load and spillway-discharge records furnished by power company officials), those above 20,000 second-feet, and those below 2,000 second-feet, all of which are fair. Water-stage recorder inspected by employees of Inland Power & Light Co. No diversion. Regulation caused by operation of power plant and storage in Lake Merwin. Lake Merwin Reservoir on Lewis River, lat. 45°57'30", long. 122°33'10", in SW¼ sec. 34, T. 6 N., R. 2 E., at Ariel, completed in 1931; usable storage, 246,000 acre-feet between elevations 235 feet, spillway crest, and 165 feet, set by Federal Power Commission; elevation of water surface, 209.5 feet at midnight Sept. 30, 1937, 215.6 feet at midnight Sept. 30, 1938, and 213.4 feet at midnight Sept. 30, 1939; water is used for power.

Revisions.- Revised figures of daily discharge for water year 1937-38, superseding those published in Water-Supply Paper 864, are given below.

Discharge, in second-feet, 1937-39

1937-38

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,200	2,500	8,270	14,900	4,570	4,340	4,330	*7,980	4,650	2,890	1,120	2,140
2	2,860	3,030	7,300	*11,200	4,290	4,830	4,210	7,220	4,420	2,770	1,130	2,060
3	*2,160	3,060	6,380	8,910	4,450	5,220	*4,620	7,000	4,380	*1,530	1,080	1,420
4	2,960	3,060	5,480	7,730	4,290	5,210	5,050	5,830	4,490	1,030	1,160	*1,760
5	2,870	3,080	*4,790	6,660	4,560	5,790	5,100	5,890	*5,180	1,960	1,520	859
6	2,880	2,870	4,340	5,960	*5,170	*5,370	4,670	4,980	4,120	2,070	1,020	2,500
7	2,950	*1,840	3,380	5,360	4,520	4,540	4,430	4,820	3,010	2,060	*431	2,170
8	2,800	2,520	2,700	5,100	4,390	4,550	4,850	*5,110	2,790	1,950	1,760	1,970
9	2,190	3,000	3,810	*4,590	4,000	4,580	5,960	4,700	2,920	1,750	1,630	2,140
10	*1,820	3,170	6,190	4,290	3,900	4,320	*5,430	4,960	3,010	*864	1,530	1,600
11	2,620	3,020	8,400	4,790	3,800	3,900	5,370	5,740	2,640	1,710	1,420	*1,780
12	2,550	2,710	*9,260	4,660	3,500	5,630	5,110	6,410	*1,630	1,930	1,410	2,200
13	2,680	2,280	7,580	6,130	*3,990	*4,140	4,930	6,310	3,560	1,830	1,540	2,250
14	2,720	*1,250	7,860	16,900	3,630	6,860	4,620	6,620	3,140	1,650	*570	1,960
15	2,620	12,200	7,040	16,700	3,790	8,140	5,590	*6,550	3,110	2,300	2,540	2,160
16	2,680	14,600	9,620	*11,900	3,500	10,400	9,960	6,750	3,150	1,300	2,150	2,120
17	*1,850	12,500	13,800	10,100	3,120	8,660	*22,300	6,650	3,110	*775	2,020	1,270
18	2,580	9,680	12,300	10,000	3,160	11,000	29,700	5,450	2,910	1,210	1,510	*1,850
19	2,680	9,120	*9,140	8,920	2,710	10,400	18,000	5,340	*2,680	960	1,340	2,550
20	2,660	10,800	7,560	8,340	*2,940	*7,860	12,700	5,110	2,790	1,420	1,340	2,550
21	2,650	*11,600	6,900	11,300	3,710	6,790	9,990	6,020	2,820	1,580	*1,070	2,350
22	2,460	11,600	6,090	12,600	3,910	6,710	9,130	*6,330	3,370	1,590	2,510	2,070
23	1,960	14,300	5,550	*10,400	4,240	6,990	8,250	7,030	3,330	1,310	2,320	2,540
24	*1,410	15,600	5,360	8,710	4,570	7,960	*7,940	7,660	2,930	*971	2,070	2,070
25	2,370	30,400	4,460	7,250	4,050	7,520	7,640	8,040	2,630	1,790	1,660	*1,460
26	2,950	22,300	*7,150	6,650	4,470	6,770	7,170	7,580	*2,710	1,460	2,080	2,290
27	2,910	16,800	14,400	6,260	*4,150	*6,390	6,680	7,790	3,050	1,450	1,240	2,630
28	2,450	*19,600	26,300	6,110	4,380	6,260	6,640	6,730	3,070	1,340	*1,130	2,240
29	2,510	13,500	51,400	5,360	-	5,690	6,970	*5,990	3,220	1,370	2,390	2,420
30	2,770	9,860	43,300	*5,450	-	5,180	7,770	5,250	2,790	1,370	2,180	2,350
31	*1,730	-	22,500	4,890	-	4,760	-	4,600	-	*870	2,330	-

*Sunday

Discharge, in second-feet, of Lewis River at Ariel, Wash., 1937-39--Continued

1938-39

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,410	3,400	2,580	*9,460	4,030	3,150	6,170	4,820	3,260	2,280	1,260	1,820
2	*1,600	3,280	2,250	18,800	4,440	3,440	*6,030	5,000	3,280	*1,700	1,260	1,210
3	2,540	2,950	2,480	17,500	3,780	3,560	6,440	4,980	3,000	1,440	1,330	*705
4	2,860	2,920	*1,600	13,700	3,630	3,360	6,280	5,090	*1,620	1,130	1,240	705
5	2,650	1,800	2,500	10,400	*4,280	*3,210	6,000	4,420	3,060	2,780	1,160	1,900
6	2,340	*1,520	8,880	8,520	4,280	3,520	5,000	4,560	3,180	3,300	*1,120	2,060
7	2,350	2,800	9,450	7,060	4,180	3,170	5,250	*4,160	2,850	2,980	1,590	2,220
8	2,420	3,380	8,280	*7,150	3,820	3,170	5,220	3,880	2,830	2,660	1,320	2,330
9	*1,830	3,360	7,360	6,020	3,560	3,180	*5,280	4,410	1,920	*2,280	1,340	2,060
10	*2,860	3,470	6,680	5,660	3,680	3,190	5,060	4,440	2,400	3,010	1,330	*2,060
11	2,060	3,520	*5,990	5,400	3,160	2,780	4,740	4,620	*2,040	2,580	1,420	2,460
12	2,390	3,300	4,580	5,050	*8,440	*3,240	5,260	4,600	3,400	2,110	1,220	2,080
13	2,480	*1,480	4,680	4,880	6,470	4,030	4,700	5,140	3,650	2,020	*970	2,290
14	2,800	2,840	4,460	4,240	10,000	3,960	4,360	*5,250	3,260	1,940	1,680	2,440
15	2,470	3,090	3,740	*4,800	19,200	3,200	4,520	4,160	3,400	1,090	1,400	2,300
16	*1,330	3,040	3,880	4,220	10,700	2,760	*4,080	5,660	2,790	*1,340	1,410	1,500
17	2,800	2,880	3,060	4,800	8,140	3,140	4,200	5,570	1,840	2,200	1,430	*2,160
18	2,760	3,130	*2,720	7,780	7,000	6,060	4,840	4,490	*2,040	1,950	1,560	2,080
19	2,940	2,780	3,560	10,600	*6,080	*6,380	5,800	4,040	4,020	1,830	1,300	2,370
20	2,620	*1,560	3,920	8,200	4,910	6,560	5,980	3,640	3,820	1,620	*1,120	2,740
21	2,590	2,850	3,680	7,020	4,580	7,380	6,340	*4,280	3,800	1,620	1,790	2,440
22	2,260	3,250	3,620	*5,880	4,400	8,610	6,380	3,720	3,260	1,220	1,500	2,430
23	*1,940	3,260	3,620	5,400	4,040	9,630	*5,820	3,900	3,240	*830	1,600	2,140
24	2,820	2,700	2,600	5,060	3,960	10,400	5,650	3,960	2,850	1,620	1,380	*2,760
25	2,850	3,240	*2,020	4,680	3,960	10,400	5,480	3,450	*1,850	1,660	1,420	2,300
26	3,110	2,980	4,140	4,170	*3,690	*8,710	5,220	3,820	3,190	1,480	1,270	2,500
27	2,900	*1,800	4,260	5,310	3,880	7,150	5,060	3,640	3,530	1,400	*1,020	2,170
28	3,200	2,960	5,680	5,540	3,120	6,380	5,180	*3,660	3,280	1,560	2,380	2,080
29	3,380	3,340	8,500	*5,670	-	5,820	5,380	3,920	3,290	1,040	2,020	2,100
30	*3,490	3,220	7,780	5,130	-	5,420	*5,500	4,500	3,080	*755	1,880	2,020
31	3,240	-	6,880	4,840	-	5,230	-	3,700	-	1,430	1,890	-

Month	Observed				Change in contents in Lake Merwin Reservoir (acre-feet)	Adjusted for change in reservoir contents			
	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 1937	3,200	1,410	2,532	155,700	-70,970	84,730	1,378	1.88	2.17
November	30,400	1,250	9,062	539,200	+165,100	704,300	11,840	16.2	18.07
December	51,400	2,700	10,920	671,600	0	671,600	10,920	14.9	17.18
Calendar year 1937	51,400	910	5,439	3,938,000	+55,930	3,994,000	5,516	7.53	102.29
January 1938	16,900	4,290	8,333	512,400	0	512,400	8,333	11.4	13.14
February	5,170	2,710	3,991	221,700	-200	221,500	3,988	5.44	5.66
March	11,000	3,900	6,347	390,300	+200	390,500	6,351	8.66	9.98
April	29,700	4,210	8,170	486,200	0	486,200	8,170	11.1	12.38
May	8,040	4,600	6,207	381,700	0	381,700	6,207	8.47	9.76
June	5,180	1,630	3,254	193,600	+11,000	204,600	3,438	4.69	5.23
July	2,890	775	1,583	97,310	+4,600	101,900	1,657	2.26	2.61
August	2,540	431	1,587	97,590	-25,550	72,040	1,172	1.60	1.84
September	2,630	859	2,058	122,400	-61,350	61,050	1,026	1.40	1.56
Water year 1937-38	51,400	431	5,345	3,870,000	+22,830	3,893,000	5,377	7.34	99.58
October 1938	3,490	1,330	2,558	157,300	-73,000	84,300	1,371	1.87	2.16
November	3,520	1,480	2,869	170,700	+61,300	232,000	3,899	5.32	5.94
December	9,450	1,600	4,691	288,500	+83,000	371,500	6,042	8.24	9.50
Calendar year 1938	29,700	431	4,309	3,120,000	0	3,120,000	4,309	5.88	79.76
January 1939	18,800	4,170	7,192	442,200	0	442,200	7,192	9.81	11.31
February	19,200	3,120	5,550	308,300	-400	307,900	5,544	7.56	7.87
March	10,400	2,760	5,167	317,700	+12,600	330,300	5,372	7.33	8.45
April	6,440	4,080	5,374	319,800	-200	319,600	5,371	7.33	8.18
May	5,680	3,450	4,371	268,800	+3,000	271,800	4,420	6.03	6.95
June	4,020	1,620	2,968	176,600	-6,800	169,800	2,854	3.89	4.34
July	3,300	755	1,834	112,800	-5,700	107,100	1,742	2.38	2.74
August	2,380	970	1,440	88,520	-18,300	70,220	1,142	1.56	1.80
September	2,760	705	2,081	123,800	-66,000	57,800	971	1.32	1.47
Water year 1938-39	19,200	705	3,833	2,775,000	-10,500	2,765,000	3,819	5:21	70.71

Peak discharge.- Nov. 25, 1937 (12:40 p.m.) 37,500 sec.-ft.; Dec. 30, 1937 (12:15 a.m.) 61,500 sec.-ft.; Jan. 14, 1938 (10:50 p.m.) 25,700 sec.-ft.; Apr. 18, 1938 (7:40 a.m.) 36,100 sec.-ft.; Jan. 2, 1939 (7:40 a.m.) 21,800 sec.-ft.; Feb. 15, 1939 (1:20 to 2 a.m.) 24,600 sec.-ft. (peaks influenced by regulation).

*Sunday.

East Fork of Lewis River near Heisson, Wash.

Location.- Water-stage recorder, lat. 45°50', long. 122°28', in N½ sec. 17, T. 4 N., R. 3 E., just upstream from Basket Creek, 1½ miles northeast of Heisson and 20 miles upstream from mouth. Zero of gage is 366.8 feet above mean sea level (river profile surveys).

Drainage area.- 124 square miles.

Records available.- September 1929 to September 1939.

Average discharge.- 10 years, 735 second-feet.

Extremes.- Maximum discharge during year, 8,450 second-feet Feb. 14 (gage height, 9.22 feet); minimum, 37 second-feet Oct. 2 (gage height, 0.15 foot).
1929-39: Maximum discharge, 15,600 second-feet Dec. 22, 1933 (gage height, 12.3 feet), from rating curve extended above 12,000 second-feet; minimum, 29 second-feet Nov. 3, 1935 (gage height, 0.04 foot).

Remarks.- Records excellent. No diversion or regulation.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.1	33	2.0	368	5.0	2,040
.3	50	2.5	526	6.0	3,130
.5	70	3.0	741	7.0	4,550
.8	104	3.5	1,010	8.1	6,380
1.1	152	4.0	1,310		
1.5	238	4.5	1,630		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	458	845	2,110	872	692	928	340	150	202	79	168
2	39	382	2,870	3,660	818	818	928	332	143	191	74	115
3	126	2,870	2,500	3,660	741	872	928	329	138	288	71	89
4	101	1,890	2,430	2,820	692	845	818	340	168	274	73	77
5	75	1,100	2,430	2,180	982	766	669	310	355	233	73	78
6	80	741	1,740	1,630	1,460	872	583	284	397	229	72	78
7	59	563	1,660	1,340	1,220	792	563	270	335	204	68	70
8	51	592	1,560	1,220	982	716	624	272	305	182	63	64
9	50	872	1,370	1,130	792	646	646	277	397	170	62	62
10	76	766	1,100	1,190	692	624	603	272	360	164	62	59
11	463	583	900	1,100	1,040	872	583	264	321	156	63	68
12	279	508	766	982	3,130	1,100	583	257	282	145	65	76
13	528	508	669	872	2,230	1,160	508	257	252	139	64	70
14	256	526	603	766	4,460	1,010	442	255	229	139	64	73
15	174	766	544	818	6,340	1,220	412	255	233	148	64	66
16	132	3,220	491	741	3,240	1,780	412	238	332	147	62	62
17	112	2,820	442	982	2,130	1,860	491	220	412	131	60	60
18	98	1,740	412	1,780	1,630	1,860	583	217	530	121	60	60
19	86	1,280	382	2,080	1,310	1,780	583	195	928	124	56	58
20	80	1,160	368	1,520	1,070	1,740	508	182	818	124	51	53
21	74	928	382	1,220	928	1,820	508	217	603	112	54	54
22	72	741	427	1,010	792	2,040	474	191	491	102	54	54
23	69	624	603	872	741	2,080	412	204	412	99	56	53
24	80	544	818	818	692	1,950	412	174	368	96	59	55
25	102	491	1,010	716	741	1,700	412	176	329	96	67	59
26	90	442	845	692	646	1,340	382	211	295	92	69	53
27	172	412	1,080	1,010	766	1,010	365	178	270	88	61	53
28	152	382	1,660	1,190	716	845	382	168	248	86	70	61
29	284	368	2,420	1,340	-	792	412	224	231	83	88	59
30	368	428	2,080	1,220	-	741	368	187	217	81	62	56
31	474	-	1,520	1,010	-	818	-	164	-	82	122	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	4,842	528	39	156	1.26	1.45	9,600
November	28,705	3,220	368	957	7.72	8.61	56,940
December	36,927	2,870	368	1,191	9.60	11.07	73,240
Calendar year 1938	249,240	5,830	37	683	5.51	74.66	494,400
January	43,679	3,660	692	1,409	11.4	13.14	86,640
February	41,853	6,340	646	1,495	12.1	12.60	83,010
March	37,161	2,080	624	1,199	9.67	11.15	73,710
April	16,522	928	365	.551	4.44	4.95	32,770
May	7,460	340	164	241	1.94	2.24	14,800
June	10,549	928	138	352	2.84	3.17	20,920
July	4,528	288	81	146	1.18	1.36	8,980
August	2,068	122	81	66.7	.538	.62	4,100
September	2,063	168	53	68.8	.555	.62	4,090
Water year 1938-39	236,357	6,340	39	648	5.23	70.98	468,800

Cowlitz River at Packwood, Wash.

Location.- Water-stage recorder, lat. 46°36'40", long. 121°40'45", in SE¼ sec. 16, T. 13 N., R. 9 E., half a mile upstream from Skate Creek and half a mile northwest of Packwood.

Drainage area.- 287 square miles.

Records available.- September 1929 to September 1939. July 1911 to December 1919, at site 1 mile upstream.

Average discharge.- 18 years, 1,618 second-feet.

Extremes.- Maximum discharge during water year 1937-38, 15,700 second-feet Apr. 18 (gage height, 10.49 feet); minimum, 308 second-feet Oct. 13 (gage height, 3.43 feet). These figures were not affected by revision.

Maximum discharge during water year 1938-39, 11,700 second-feet May 29 (gage height, 9.03 feet); minimum, 283 second-feet Sept. 14, 29 (gage height, 3.49 feet).

1911-19, 1929-39: Maximum discharge, 36,600 second-feet Dec. 21, 1933 (gage height, 13.0 feet); minimum, 160 second-feet Nov. 21, 1929 (gage height, 2.10 feet).

Remarks.- Records good. Discharge for period of missing gage heights, Nov. 9-14, 1938, computed on basis of records for Cowlitz River near Mayfield and Cispus River near Randle. Shifting-control method used Apr. 18 to May 31, 1938, and Aug. 10 to Sept. 10, 1939. No diversion or regulation.

Revisions.- Revised figures of daily discharge for water year 1937-38 superseding those published in Water-Supply Paper 864, are given below.

Discharge, in second-feet, 1937-39

1937-38

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	435	864	2,100	2,180	968	1,040	702	3,800	2,640	1,660	621	533
2	362	772	1,780	1,800	920	1,130	702	2,960	2,880	1,350	558	603
3	340	723	1,590	1,560	880	1,100	744	2,440	2,880	1,260	573	621
4	331	660	1,390	1,380	840	1,010	780	2,110	3,400	1,270	634	527
5	322	625	1,260	1,230	818	992	825	1,860	3,860	1,260	653	428
6	313	586	1,170	1,140	810	968	818	1,720	4,160	1,480	633	397
7	322	612	1,100	1,050	758	912	825	1,690	4,570	1,580	597	371
8	336	4,640	1,030	984	723	856	928	1,800	3,790	1,620	556	366
9	344	3,640	968	944	695	848	1,210	1,850	2,410	1,420	556	356
10	349	2,540	1,420	1,070	681	832	1,240	1,860	1,920	1,250	585	382
11	349	2,150	2,540	1,120	660	832	1,240	2,680	2,190	1,240	538	444
12	344	1,860	2,520	1,280	646	856	1,170	3,350	2,800	1,140	482	499
13	336	2,040	2,170	1,600	632	1,020	1,110	3,460	2,880	1,290	488	494
14	326	3,160	2,980	3,440	618	1,140	1,110	3,300	2,340	1,480	609	499
15	331	2,660	2,710	4,360	580	1,130	1,180	3,550	2,410	1,500	573	488
16	761	2,150	2,440	2,960	554	1,220	1,680	3,700	2,640	1,380	591	488
17	632	1,850	3,180	2,280	540	1,120	8,270	3,130	2,410	1,230	609	494
18	477	1,590	3,110	1,920	540	1,130	12,600	2,510	1,920	1,110	510	472
19	420	1,660	2,420	1,680	528	1,070	6,470	2,400	2,050	1,050	482	516
20	1,120	3,510	2,020	1,500	534	968	4,340	2,850	2,720	1,060	527	472
21	896	3,320	1,770	1,500	540	880	3,480	3,390	3,770	1,080	516	466
22	688	3,370	1,590	1,780	540	832	3,200	4,220	4,060	1,050	477	455
23	618	4,260	1,410	1,670	573	818	2,980	4,980	3,860	940	488	418
24	547	3,330	1,320	1,490	632	788	2,830	5,530	3,400	842	516	413
25	483	6,190	1,210	1,340	674	780	2,640	5,590	2,800	833	550	376
26	528	5,130	1,170	1,220	695	788	2,500	5,500	2,410	859	585	402
27	825	4,990	1,190	1,150	780	825	2,350	5,870	2,190	824	603	413
28	1,740	5,920	1,980	1,120	904	880	2,480	5,120	2,340	782	538	397
29	1,560	3,740	3,440	1,100	-	825	3,030	3,960	2,560	736	504	366
30	1,180	2,690	4,200	1,040	-	772	3,740	3,140	2,120	686	510	376
31	1,020	-	2,880	1,000	-	730	-	2,560	-	666	499	-

Discharge, in second-feet, of Cowlitz River at Packwood, Wash., 1937-39--Continued

1938-39

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	371	521	850	3,060	688	509	1,850	2,460	2,600	2,520	869	624
2	376	455	1,090	3,770	667	509	2,140	2,600	2,520	2,360	896	535
3	361	1,240	1,330	2,970	638	515	2,330	2,820	2,600	2,680	923	555
4	322	1,170	2,350	2,260	625	509	2,140	2,970	2,210	2,520	932	570
5	351	877	3,860	1,800	625	491	1,850	2,530	2,140	2,000	932	565
6	327	699	2,480	1,480	611	485	1,680	2,200	2,000	1,800	887	493
7	322	646	4,340	1,330	591	468	1,580	1,960	1,930	1,740	820	475
8	317	621	4,780	1,290	565	456	1,680	2,200	2,000	1,740	820	530
9	308	650	3,580	1,240	534	444	1,850	2,600	2,210	1,930	896	535
10	438	560	2,530	1,310	526	444	1,800	2,690	2,520	2,140	932	540
11	679	520	1,900	1,330	552	462	1,800	3,310	2,760	2,140	878	468
12	834	500	1,580	1,290	742	474	1,740	3,580	3,110	1,860	796	367
13	1,130	500	1,330	1,190	742	485	1,630	4,160	3,390	1,860	788	324
14	714	550	1,180	1,150	782	474	1,530	5,000	3,110	1,740	764	304
15	499	679	1,070	1,120	1,000	491	1,480	5,600	3,020	1,680	740	400
16	423	1,380	952	1,070	952	604	1,580	5,470	2,440	1,420	732	422
17	366	1,620	875	1,080	866	734	1,740	4,260	2,140	1,220	748	450
18	322	1,300	807	1,230	790	900	2,260	3,310	2,360	1,230	740	456
19	308	1,160	750	1,530	726	1,100	2,820	2,460	3,110	1,170	716	474
20	303	1,420	710	1,380	667	1,380	2,820	2,080	3,110	1,120	708	565
21	303	1,130	668	1,230	631	1,740	2,530	2,020	3,020	1,180	716	578
22	298	913	667	1,100	598	2,140	2,460	2,080	3,110	1,300	716	515
23	294	774	790	996	578	2,740	2,530	2,080	2,850	1,380	672	462
24	327	707	996	952	565	3,220	2,530	2,140	2,210	1,360	740	428
25	356	653	1,010	875	571	3,140	2,200	2,970	1,930	1,380	756	439
26	346	603	918	832	546	2,670	1,960	3,490	1,930	1,500	644	439
27	472	567	926	850	540	2,140	1,900	3,220	2,210	1,500	618	394
28	397	550	926	850	515	1,800	2,260	5,710	2,760	1,410	525	362
29	556	538	1,130	824	-	1,630	3,050	9,040	3,390	1,200	488	367
30	615	603	1,330	790	-	1,580	2,670	5,020	3,110	1,060	480	367
31	640	-	1,900	734	-	1,630	-	3,200	-	959	665	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October 1937	18,635	1,740	313	601	2.09	2.41	36,960
November	81,232	6,190	586	2,708	9.44	10.53	161,100
December	62,058	4,200	968	2,002	6.98	8.05	123,100
Calendar year 1937	621,428	8,280	258	1,703	5.93	80.62	1,233,000
January 1938	49,788	4,360	944	1,606	5.60	6.46	98,750
February	19,263	968	528	688	2.40	2.50	38,210
March	29,092	1,220	730	938	3.27	3.77	57,700
April	77,174	12,600	702	2,572	8.96	10.00	153,100
May	102,880	5,870	1,690	3,319	11.6	13.37	204,100
June	86,380	4,570	1,920	2,879	10.0	11.16	171,300
July	35,928	1,660	666	1,159	4.04	4.66	71,260
August	17,141	653	477	553	1.93	2.22	34,000
September	13,532	621	356	451	1.57	1.75	26,840
Water year 1937-38	593,103	12,600	313	1,625	5.66	76.88	1,176,000
October 1938	13,675	1,130	294	441	1.54	1.78	27,120
November	24,106	1,620	455	804	2.80	3.12	47,810
December	49,625	4,780	667	1,601	5.58	6.43	98,430
Calendar year 1938	518,584	12,600	294	1,421	4.95	67.22	1,029,000
January 1939	42,913	3,770	734	1,384	4.82	5.56	85,120
February	18,435	1,000	515	658	2.29	2.38	36,570
March	36,364	3,220	444	1,173	4.09	4.72	72,130
April	62,390	3,050	1,480	2,080	7.25	8.09	123,700
May	105,430	9,040	1,960	3,401	11.9	13.72	209,100
June	77,800	3,390	1,930	2,593	9.03	10.08	154,300
July	51,099	2,680	959	1,648	5.74	6.62	101,400
August	23,537	932	480	759	2.64	3.04	46,680
September	14,003	624	301	467	1.63	1.82	27,770
Water year 1938-39	519,377	9,040	294	1,423	4.96	67.36	1,030,000

Peak discharge.- Nov. 25, 1937 (4 p.m.) 8,670 sec.-ft.; Nov. 27, 1937 (11:30 p.m.) 7,520 sec.-ft.; Apr. 18, 1938 (6 a.m.) 15,700 sec.-ft.; May 29, 1939 (1:20 a.m.) 11,700 sec.-ft.

Cowlitz River near Mayfield, Wash.

Location.- Water-stage recorder, lat. 46°30'40", long. 122°36'50", in NE¼ sec. 24, T. 12 N., R. 1 E., 1 mile upstream from Mill Creek, 2 miles downstream from Winston Creek, and 2½ miles west of Mayfield. Zero of gage is 226.6 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,400 square miles.

Records available.- April 1934 to September 1939. August 1910 to November 1911, at site 2½ miles upstream.

Extremes.- Maximum discharge during year, 19,400 second-feet Feb. 15 (gage height, 15.45 feet); minimum, 1,080 second-feet Oct. 2 (gage height 7.56 feet, from graph based on gage readings).

1910-11, 1934-39: Maximum discharge, 36,900 second-feet Nov. 6, 1934 (gage height, 20.1 feet), from rating curve extended above 18,000 second-feet; minimum, 766 second-feet Nov. 30, Dec. 1, 1936 (gage height, 7.18 feet).

Discharge known to have been greater during December 1933 (amount not determined).

Remarks.- Records good. Discharge for period Oct. 1-22 based on two staff gage readings daily Oct. 1, 4-8, 10-18, 20-22, and one reading Oct. 3. No diversion or regulation.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 16

7.6	1,120	10.0	4,650
8.0	1,570	11.0	6,700
8.5	2,220	11.4	7,600
9.0	2,950		

Nov. 17 to Sept. 30

7.6	1,110	11.0	6,460
8.0	1,470	12.0	8,850
8.5	2,040	14.0	14,600
9.0	2,790	15.0	17,800
10.0	4,490		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,220	2,250	3,820	9,980	4,600	4,080	7,610	8,260	7,230	5,620	2,180	1,850
2	1,150	2,040	6,040	16,000	4,360	4,080	8,320	7,980	6,350	5,100	2,050	1,920
3	1,440	4,270	7,550	15,800	4,170	4,060	8,900	8,180	6,160	5,040	2,050	1,650
4	1,330	6,320	8,200	13,500	4,040	4,040	8,920	8,580	6,030	5,340	2,080	1,540
5	1,310	4,760	12,900	11,200	3,990	3,910	8,120	8,420	6,280	4,960	2,040	1,550
6	1,290	3,720	12,700	9,260	3,990	3,940	7,280	7,420	5,990	4,450	2,010	1,520
7	1,190	3,240	10,900	8,080	3,990	3,810	6,820	6,680	5,620	4,150	1,920	1,430
8	1,170	3,080	15,000	7,630	3,960	3,670	6,800	6,440	5,430	3,990	1,850	1,390
9	1,170	3,170	13,900	7,120	3,760	3,550	7,140	6,890	5,600	3,940	1,810	1,410
10	1,230	2,920	11,400	7,020	3,590	3,470	7,190	7,560	5,680	4,100	1,850	1,410
11	2,110	2,620	9,180	7,050	5,230	3,470	7,020	8,250	5,990	4,290	1,890	1,420
12	2,650	2,430	7,660	6,930	7,630	3,430	7,070	8,950	6,260	4,170	1,840	1,390
13	3,430	2,420	6,590	6,530	7,090	3,540	6,750	9,600	6,610	3,890	1,780	1,300
14	3,050	2,520	5,820	6,180	8,460	3,600	6,240	10,900	6,700	3,820	1,740	1,240
15	2,260	3,010	5,290	6,140	17,400	3,790	5,880	12,300	6,350	3,690	1,690	1,220
16	1,870	7,470	4,830	6,030	13,500	4,360	5,720	12,900	6,280	3,640	1,670	1,240
17	1,560	8,850	4,420	6,370	10,500	5,060	5,840	11,800	5,800	3,210	1,650	1,240
18	1,500	7,020	4,100	7,490	8,780	5,920	6,640	9,850	5,780	2,920	1,650	1,260
19	1,410	5,800	3,880	8,380	7,560	6,980	8,200	8,250	6,930	2,970	1,610	1,250
20	1,340	6,030	3,640	7,950	6,570	8,080	9,150	6,860	7,800	2,770	1,600	1,260
21	1,300	5,500	3,570	7,160	5,880	9,410	9,980	6,460	7,420	2,650	1,580	1,340
22	1,260	4,780	3,470	6,420	5,340	11,200	10,800	6,550	7,140	2,660	1,600	1,360
23	1,230	4,150	3,700	5,970	4,980	13,500	10,400	6,260	6,930	2,730	1,580	1,340
24	1,220	3,760	4,440	5,620	4,650	15,100	9,390	6,110	6,240	2,770	1,550	1,290
25	1,250	3,430	5,320	5,540	4,580	14,900	8,450	6,370	5,500	2,760	1,620	1,240
26	1,340	3,180	4,800	5,230	4,420	13,400	7,540	7,610	5,060	2,770	1,670	1,230
27	1,460	2,930	4,890	5,170	4,290	11,100	7,000	7,880	4,910	2,850	1,530	1,220
28	1,620	2,770	6,280	5,150	4,240	9,260	7,000	7,630	5,140	2,890	1,510	1,210
29	1,620	2,660	7,470	5,140	-	8,200	8,280	11,800	5,660	2,710	1,470	1,160
30	1,880	2,710	7,780	5,120	-	7,560	9,080	12,700	6,240	2,470	1,400	1,140
31	2,220	-	7,800	4,960	-	7,320	-	9,150	-	2,320	1,440	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	50,080	3,430	1,150	1,615	1.15	1.33	99,330
November	119,810	8,850	2,040	3,994	2.85	3.18	237,600
December	217,640	15,000	3,470	7,021	5.02	5.79	431,700
Calendar year 1938	2,051,270	31,900	1,150	5,620	4.01	54.51	4,069,000
January	236,120	16,000	4,960	7,617	5.44	6.27	468,300
February	171,570	17,400	3,590	6,128	4.38	4.56	340,300
March	207,840	15,100	3,470	6,705	4.79	5.52	412,200
April	233,530	10,800	5,720	7,784	5.56	6.20	463,200
May	264,610	12,900	6,110	8,536	6.10	7.03	524,800
June	185,160	7,800	4,910	6,172	4.41	4.92	367,300
July	111,540	5,620	2,320	3,598	2.57	2.96	221,200
August	53,910	2,180	1,400	1,739	1.24	1.43	106,900
September	41,010	1,920	1,140	1,367	.976	1.09	81,340
Water year 1938-39	1,892,820	17,400	1,140	5,186	3.70	50.28	3,754,000

Cowlitz River at Castle Rock, Wash.

Location.- Water-stage recorder, lat. 46°16'30", long. 122°55'00", in SE¼ sec. 10, T. 9 N., R. 2 W., at highway bridge in Castle Rock, 2½ miles downstream from mouth of Toutle River and 14 miles upstream from mouth. Zero of gage is 19.73 feet above mean sea level (general adjustment of 1929).

Drainage area.- 2,210 square miles.

Records available.- December 1926 to September 1939.

Average discharge.- 12 years, 8,856 second-feet.

Extremes.- Maximum discharge during year, 43,600 second-feet Feb. 15 (gage height, 17.31 feet); minimum, 1,520 second-feet Oct. 9 (gage height, 5.85 feet).
1926-39: Maximum discharge observed, 139,000 second-feet Dec. 23, 1933 (gage height, 31.6 feet, present datum), from rating curve extended above 65,000 second-feet; minimum discharge, 998 second-feet Nov. 7, 8, 1935.

Remarks.- Records excellent. No diversion or regulation.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

5.8	1,470	8.0	4,920	13.0	21,850
6.0	1,700	9.0	7,300	15.0	31,600
6.3	2,060	10.0	10,200	16.7	40,260
7.0	3,050	11.0	13,620		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,590	3,550	7,120	15,300	9,110	6,960	10,300	10,400	9,140	7,200	2,860	2,490
2	1,560	3,190	14,100	27,300	8,410	7,120	11,000	9,740	7,930	6,480	2,700	2,840
3	1,830	6,640	19,200	29,900	7,960	7,630	11,700	9,890	7,540	6,460	2,670	2,450
4	1,960	9,980	15,900	25,600	7,410	7,520	12,000	10,300	7,600	6,730	2,680	2,160
5	1,710	8,020	20,500	20,400	7,630	6,960	11,000	10,500	8,070	6,510	2,660	2,110
6	1,640	6,000	20,700	16,100	10,500	7,010	9,980	9,440	8,130	5,910	2,610	2,090
7	1,640	4,960	16,900	13,500	10,700	6,760	9,350	8,580	7,410	5,410	2,540	1,990
8	1,550	4,670	19,700	12,400	9,020	6,340	9,170	8,160	7,070	5,070	2,450	1,900
9	1,540	5,160	19,700	11,200	7,710	5,980	9,410	8,410	7,170	4,960	2,390	1,880
10	1,590	4,860	16,600	10,900	6,990	5,680	9,590	9,140	7,140	5,010	2,400	1,890
11	2,600	4,180	13,500	11,000	8,250	5,960	9,350	9,740	7,380	5,250	2,430	1,900
12	3,550	3,710	11,200	10,600	29,800	6,560	9,530	10,500	7,570	5,210	2,420	1,940
13	4,580	3,620	9,710	9,890	19,800	7,250	9,200	11,200	7,990	4,860	2,360	1,830
14	4,520	3,690	8,640	9,290	21,400	7,140	8,560	12,600	8,190	4,710	2,280	1,760
15	3,130	4,420	7,850	9,230	39,800	7,300	8,070	14,200	7,960	4,670	2,240	1,720
16	2,540	8,970	7,140	9,050	28,400	8,990	7,790	15,100	8,020	4,600	2,200	1,690
17	2,200	15,900	6,530	9,320	20,300	9,440	7,820	14,300	7,600	4,220	2,160	1,720
18	2,050	12,500	6,070	11,300	16,400	10,100	8,470	12,200	7,630	3,780	2,140	1,710
19	1,930	9,680	5,680	14,600	13,600	11,100	9,980	10,500	8,930	3,730	2,120	1,710
20	1,820	9,650	5,410	13,500	11,500	12,300	11,300	8,790	10,700	3,640	2,110	1,700
21	1,760	8,930	5,360	11,700	10,000	13,800	12,100	8,160	10,200	3,460	2,090	1,750
22	1,710	7,630	5,290	10,400	9,050	16,000	13,100	8,190	9,320	3,410	2,090	1,810
23	1,680	6,660	5,500	9,470	8,350	18,600	13,000	7,960	9,050	3,460	2,100	1,810
24	1,660	5,910	6,290	8,900	7,790	20,600	12,000	7,710	8,470	3,500	2,060	1,760
25	1,680	5,410	7,910	9,410	7,880	20,600	11,000	7,710	7,490	3,500	2,100	1,720
26	1,740	4,940	7,650	8,470	7,520	18,700	9,920	8,790	6,700	3,460	2,180	1,690
27	2,020	4,540	7,380	9,470	7,270	15,800	9,170	9,410	6,390	3,520	2,090	1,680
28	2,120	4,260	11,100	10,700	7,380	13,300	8,930	9,200	6,390	3,570	2,020	1,680
29	2,450	4,080	11,700	11,400	-	11,600	9,800	11,800	6,830	3,460	2,050	1,640
30	2,840	4,300	12,700	12,000	-	10,600	11,200	15,300	7,520	3,230	1,950	1,590
31	3,400	-	11,800	10,900	-	10,100	-	11,600	-	3,000	1,960	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	68,590	4,580	1,540	2,213	1.00	1.15	136,000
November	190,010	15,900	3,190	6,334	2.87	3.20	376,900
December	344,830	20,700	5,290	11,120	5.03	5.80	684,000
Calendar year 1938	2,973,920	40,700	1,540	8,148	3.69	50.04	5,899,000
January	403,200	29,900	8,470	13,010	5.89	6.79	799,700
February	359,930	39,800	6,990	12,850	5.81	6.05	713,900
March	323,800	20,600	5,680	10,450	4.73	5.45	642,200
April	303,790	13,100	7,790	10,130	4.58	5.11	602,600
May	319,520	15,300	7,710	10,310	4.67	5.38	633,800
June	237,530	10,700	6,390	7,918	3.58	3.99	471,100
July	141,980	7,200	3,000	4,580	2.07	2.39	281,600
August	71,110	2,860	1,950	2,294	1.04	1.20	141,000
September	56,610	2,840	1,590	1,887	.854	.95	112,300
Water year 1938-39	2,820,900	39,800	1,540	7,728	3.50	47.48	5,595,000

Peak discharge.- Feb. 12 (9 a.m.) 35,400 sec.-ft.; Feb. 15 (10:45 a.m.) 43,600 sec.-ft.

Clear Fork of Cowlitz River near Packwood, Wash.

Location.- Water-stage recorder, lat. 46°40'50", long. 121°34'30", in NE¼ sec. 29, T. 14 N., R. 10 E., three-quarters of a mile upstream from mouth and 7 miles northeast of Packwood.

Drainage area.- 56 square miles.

Records available.- August 1907 to September 1917, October 1913 to September 1917 (gage heights only), August 1930 to September 1939.

Average discharge.- 14 years (1907-12, 1930-39), 251 second-feet.

Extremes.- Maximum discharge during year, 1,160 second-feet May 29 (gage height, 5.43 feet); minimum, 50 second-feet Oct. 2, 3.
1907-17, 1930-39: Maximum discharge, 8,030 second-feet Dec. 22, 1933 (gage height, 11.7 feet), from rating curve extended above 1,200 second-feet; minimum, 30 second-feet Nov. 2, 1935, Nov. 29, 30, Dec. 1, 1936.

Remarks.- Records good. No regulation. Small diversion a few hundred feet above gage for fish hatchery.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

2.4	48	3.0	119	4.5	601
2.6	66	3.5	228	5.0	857
2.8	89	4.0	382	5.2	980

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	92	123	573	108	78	317	411	374	327	117	99
2	50	85	148	648	106	79	359	432	367	301	111	85
3	54	323	161	488	102	79	398	475	371	313	111	76
4	58	238	379	363	100	77	378	510	334	324	109	73
5	73	174	672	292	100	75	327	436	320	264	108	73
6	61	142	436	246	97	74	289	367	304	243	105	75
7	56	127	614	226	95	72	272	341	298	238	97	70
8	54	119	722	211	90	70	280	367	310	238	93	68
9	53	113	648	209	83	68	301	432	330	253	93	66
10	79	102	462	221	83	68	292	475	374	266	92	65
11	218	92	344	223	90	72	289	532	394	253	92	66
12	292	90	280	214	123	73	289	569	440	230	89	66
13	273	90	246	204	111	72	269	648	462	240	88	64
14	142	97	218	195	109	69	253	774	427	223	85	63
15	106	144	202	192	140	73	248	857	440	216	85	62
16	90	318	183	177	130	93	250	829	363	195	84	61
17	82	283	168	163	116	113	269	648	330	179	83	60
18	76	221	155	214	108	132	337	524	371	177	82	60
19	70	211	144	236	103	168	449	407	462	179	78	59
20	67	238	134	218	96	211	475	348	457	172	77	57
21	66	197	130	199	92	272	560	341	423	174	76	57
22	64	170	125	183	89	359	592	341	415	177	75	57
23	63	146	161	166	88	488	537	344	382	179	74	56
24	65	134	183	157	88	564	466	359	313	177	72	55
25	74	123	177	140	87	550	398	488	283	170	74	55
26	69	114	157	136	83	470	355	532	283	170	73	54
27	90	108	161	140	83	371	341	484	313	168	70	54
28	77	103	159	134	79	313	390	653	378	159	73	64
29	93	100	206	127	-	277	510	948	436	144	75	53
30	97	102	243	121	-	261	457	624	398	132	69	52
31	108	-	344	114	-	266	-	449	-	128	84	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,871	292	50	92.6	1.65	1.90	5,690
November	4,596	323	85	153	2.73	3.05	9,120
December	8,485	722	123	274	4.89	5.64	16,830
Calendar year 1938	90,007	1,980	50	247	4.41	59.79	178,500
January	7,152	648	114	231	4.12	4.75	14,190
February	2,779	140	79	99.2	1.77	1.84	5,510
March	6,007	564	68	194	3.46	3.99	11,910
April	10,947	592	248	365	6.52	7.27	21,710
May	15,945	948	341	514	9.18	10.58	31,630
June	11,152	462	283	372	6.64	7.41	22,120
July	6,609	327	128	213	3.80	4.38	13,110
August	2,694	117	69	86.9	1.55	1.79	5,340
September	1,915	99	52	63.8	1.14	1.27	3,800
Water year 1938-39	81,152	948	50	222	3.96	53.87	161,000

Peak discharge.- May 29 (3 a.m.) 1,160 sec.-ft.

Lake Creek near Packwood, Wash.

Location.- Water-stage recorder, lat. 46°35'55", long. 121°34'15", in sec. 21, T. 13 N., R. 10 E., 500 feet downstream from 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 1939.

Average discharge.- 22 years, 102 second-feet.

Extremes.- Maximum discharge during year, 365 second-feet May 29 (gage height, 3.81 feet); minimum, 24 second-feet Oct. 28.
1911-24, 1930-39: Maximum discharge, 1,400 second-feet Dec. 22, 1933 (gage height, 5.9 feet); minimum, 19 second-feet Dec. 1, 1936.
Maximum stage recorded, 6.0 feet (former datum) Dec. 18, 1917 (discharge not determined).

Remarks.- Records good. Discharge for periods of missing gage heights, Oct. 27, 28, Dec. 2, 3, Jan. 5-31, computed on basis of records for Clear Fork of Cowlitz River near Packwood. No diversion. Natural regulation in Packwood Lake.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Sept. 12-30)

1.5	23	2.3	80	3.5	287
1.7	33	2.7	134	3.8	365
2.0	52	3.0	182		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	40	46	92	46	40	76	130	184	196	91	73
2	32	38	50	105	46	40	82	128	154	177	85	72
3	38	63	55	108	44	42	91	134	142	167	84	64
4	41	81	69	102	44	41	95	146	134	175	85	57
5	45	68	98	95	48	39	92	146	128	163	82	56
6	43	59	100	85	49	38	88	134	120	149	77	57
7	40	53	124	80	48	37	85	124	115	136	70	52
8	36	50	179	75	44	35	86	118	113	128	66	48
9	34	49	175	75	42	34	90	120	118	130	64	46
10	42	45	149	75	41	34	91	124	126	146	67	44
11	80	42	122	80	43	37	91	134	136	155	68	44
12	92	41	102	80	56	38	91	143	151	149	66	44
13	109	42	91	75	56	40	88	162	167	144	64	43
14	80	41	80	75	60	38	85	191	179	149	59	41
15	61	43	73	75	76	40	82	247	184	142	56	40
16	50	58	67	70	70	42	79	287	182	140	54	40
17	43	72	63	70	64	42	80	270	163	119	52	39
18	38	67	59	75	57	41	86	227	160	108	50	38
19	35	64	56	80	53	43	102	182	193	108	48	37
20	32	66	54	80	48	46	116	146	230	105	47	37
21	30	61	55	75	45	52	131	131	217	105	47	37
22	29	56	56	75	43	60	144	124	208	109	48	38
23	28	52	61	70	41	72	148	116	202	118	48	37
24	29	49	66	65	40	85	144	113	177	122	48	37
25	30	46	67	60	44	95	138	126	149	122	50	36
26	27	46	63	60	42	95	125	162	136	131	50	35
27	30	43	64	55	42	91	115	174	132	138	48	34
28	35	42	66	55	41	86	113	191	149	137	48	34
29	38	41	69	50	-	80	128	352	186	125	49	34
30	41	43	72	50	-	76	134	328	213	111	47	34
31	44	-	79	48	-	74	-	245	-	102	54	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,365	109	27	44.0	2.34	2.70	2,710
November	1,560	81	38	52.0	2.77	3.09	3,090
December	2,529	179	46	81.6	4.34	5.00	5,020
Calendar year 1938	33,367	379	27	91.4	4.86	66.04	66,180
January	2,315	108	48	74.7	3.97	4.58	4,590
February	1,373	76	40	49.0	2.61	2.72	2,720
March	1,653	95	34	53.3	2.84	3.27	3,280
April	3,096	148	76	103	5.48	6.11	6,140
May	5,355	352	113	173	9.20	10.61	10,620
June	4,848	230	113	162	8.62	9.62	9,620
July	4,206	196	102	136	7.23	8.34	8,340
August	1,872	91	47	60.4	3.21	3.70	3,710
September	1,328	73	34	44.3	2.36	2.63	2,630
Water year 1938-39	31,500	352	27	86.3	4.59	62.37	62,470

Cispus River near Randle, Wash.

Location.- Water-stage recorder, lat. 46°26'50", long. 121°51'35", in NW¼ sec. 18, T. 11 N., R. 8 E. (unsurveyed), 500 feet upstream from suspension bridge to 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 1939.

Average discharge.- 11 years (1910-11, 1929-39), 1,313 second-feet.

Extremes.- Maximum discharge during year, 3,640 second-feet May 15, 16 (gage height, 6.1 feet); minimum, 279 second-feet Sept. 29, 30 (gage height, 3.31 feet).
1910-12, 1929-39: Maximum discharge, 20,000 second-feet Dec. 22, 1933 (gage height, 12.7 feet), from rating curve extended above 8,000 second-feet; minimum, 183 second-feet Dec. 30, 1936 (gage height, 3.04 feet).

Remarks.- Records fair. No diversion or regulation.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 13 to Jan. 28)

3.3	275	5.0	1,880
3.6	414	5.5	2,680
4.0	664	6.0	3,480
4.5	1,160		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	340	488	952	1,500	687	594	1,900	2,360	1,850	1,300	530	494
2	331	488	1,270	2,600	687	581	2,120	2,440	1,740	1,170	524	425
3	335	1,060	1,500	2,760	672	568	2,200	2,520	1,730	1,100	556	404
4	331	1,160	1,600	2,360	657	562	2,040	2,600	1,600	1,160	568	394
5	373	850	2,680	2,010	650	536	1,850	2,360	1,440	1,100	562	399
6	354	711	2,280	1,670	657	543	1,730	2,120	1,370	1,030	556	368
7	326	657	2,040	1,480	629	530	1,720	2,010	1,330	985	518	354
8	322	615	2,680	1,330	601	512	1,780	2,120	1,360	974	512	363
9	317	588	2,440	1,240	565	500	1,780	2,280	1,370	985	518	368
10	373	549	2,120	1,290	562	500	1,740	2,440	1,490	1,040	506	363
11	575	530	1,730	1,290	575	512	1,800	2,600	1,600	952	476	363
12	464	518	1,490	1,220	719	518	1,800	2,840	1,700	910	476	335
13	615	512	1,300	1,150	672	524	1,640	3,000	1,790	900	453	326
14	442	512	1,150	1,080	821	494	1,520	3,320	1,700	880	436	322
15	383	568	1,040	1,050	1,430	530	1,500	3,480	1,600	850	442	326
16	358	888	941	963	1,200	636	1,560	3,480	1,430	786	436	340
17	340	1,140	860	941	1,090	840	1,660	3,080	1,430	726	425	335
18	335	974	812	985	996	1,050	2,040	2,680	1,540	711	420	331
19	335	870	768	1,090	900	1,330	2,520	2,200	1,800	657	414	335
20	331	963	726	1,040	821	1,680	2,600	1,880	1,960	657	399	358
21	335	812	703	974	777	2,040	2,920	2,010	1,820	650	394	354
22	322	726	672	930	742	2,520	3,080	1,990	1,740	664	394	335
23	317	680	719	900	719	3,080	3,000	1,880	1,620	664	383	317
24	309	650	786	880	695	3,320	2,680	1,860	1,440	672	388	322
25	309	608	768	812	680	3,240	2,360	2,040	1,320	687	394	313
26	313	581	703	795	657	2,920	2,040	2,200	1,290	672	363	309
27	354	549	719	812	643	2,360	2,010	2,200	1,280	657	363	313
28	331	536	751	795	615	2,040	2,200	2,280	1,370	643	363	296
29	414	530	804	777	-	1,900	2,760	3,080	1,520	601	340	292
30	470	608	860	742	-	1,840	2,600	2,680	1,540	575	349	292
31	530	-	910	711	-	1,760	-	2,120	-	568	420	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	11,584	615	309	374	1.16	1.34	22,980
November	20,921	1,160	488	697	2.16	2.41	41,500
December	38,774	2,680	672	1,251	3.87	4.46	76,910
Calendar year 1938	470,055	6,710	309	1,288	3.99	54.12	932,200
January	38,177	2,760	711	1,232	3.81	4.39	75,720
February	21,122	1,430	562	754	2.33	2.43	41,890
March	40,860	3,320	494	1,308	4.05	4.67	80,450
April	63,150	3,080	1,500	2,105	6.52	7.27	125,300
May	78,150	3,480	1,860	2,456	7.60	8.76	151,000
June	46,770	1,960	1,280	1,559	4.83	5.39	92,770
July	25,926	1,300	568	836	2.59	2.99	51,420
August	13,878	568	340	448	1.39	1.60	27,530
September	10,446	494	292	348	1.08	1.20	20,720
Water year 1938-39	407,458	3,480	292	1,116	3.46	46.91	808,200

Toutle River near Silver Lake, Wash.

Location.- Water-stage recorder, lat. 46°20', long. 122°44', in SE¼ sec. 19, T. 10 N., R. 1 E., at highway bridge half a mile downstream from confluence of North and South Forks and 5 miles northeast of Silver Lake. Gage moved to right bank Oct. 6, 1938. Zero of gage is approximately 407.3 feet above mean sea level (river profile surveys).

Drainage area.- 472 square miles.

Records available.- October 1919 to December 1923, September 1929 to September 1939. September 1909 to August 1912, at site 2 miles downstream.

Average discharge.- 15 years (1909-11, 1919-21, 1922-23, 1929-39), 2,043 second-feet.

Extremes.- Maximum discharge during year, 15,400 second-feet Feb. 15 (gage height, 11.3 feet); minimum, 313 second-feet Sept. 30 (gage height, 1.71 feet).
1909-12, 1919-23, 1929-39: Maximum discharge observed, 35,600 second-feet Mar. 2, 1910; maximum gage height recorded, 22.7 feet Dec. 23, 1933; minimum discharge, 240 second-feet Nov. 21, 1929 (gage height, 1.67 feet).

Remarks.- Records good. Discharge for period of missing gage heights, Jan. 22 to Feb. 2, computed on basis of records for Lewis River near Cougar. No diversion or regulation.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to 6

1.7	313
1.9	389
2.1	473

Oct. 6 to Sept. 30

1.7	309	4.0	2,120
2.0	432	4.5	2,820
2.3	585	5.0	3,770
2.6	780	6.0	6,030
3.0	1,100	8.0	9,410
3.5	1,580	10	13,100

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	354	1,120	2,800	3,930	1,950	1,840	2,180	1,580	1,120	1,080	484	724
2	343	1,000	5,440	7,310	1,850	1,890	2,240	1,530	1,040	1,010	474	678
3	475	3,070	6,240	7,630	1,780	2,000	2,370	1,530	1,020	1,140	465	520
4	447	2,900	5,000	6,240	1,730	1,940	2,300	1,630	1,100	1,170	465	456
5	385	2,000	5,810	4,540	1,780	1,840	2,060	1,580	1,530	1,050	456	441
6	354	1,530	4,420	3,460	2,240	1,840	1,940	1,480	1,480	1,030	451	437
7	343	1,330	3,660	2,990	2,120	1,780	1,840	1,380	1,280	944	437	414
8	336	1,330	3,880	2,740	1,890	1,730	1,840	1,380	1,240	879	428	397
9	339	1,480	3,460	2,440	1,680	1,630	1,890	1,430	1,240	840	428	380
10	426	1,280	2,820	2,580	1,580	1,530	1,890	1,480	1,240	848	428	372
11	1,230	1,100	2,440	2,580	2,010	1,630	1,840	1,530	1,200	832	428	380
12	887	994	2,120	2,440	7,630	1,780	1,890	1,580	1,190	795	419	384
13	1,330	986	1,940	2,240	4,540	1,780	1,780	1,680	1,200	759	414	380
14	825	1,100	1,780	2,120	6,840	1,840	1,680	1,840	1,160	745	401	372
15	633	1,280	1,630	2,240	13,100	2,120	1,580	2,000	1,170	752	392	372
16	541	2,790	1,530	2,120	7,780	2,740	1,530	1,940	1,280	766	388	363
17	494	4,420	1,380	2,300	5,240	2,900	1,580	1,730	1,380	697	384	355
18	470	2,990	1,330	2,820	3,980	3,080	1,730	1,580	1,580	658	380	347
19	441	2,370	1,240	3,770	3,360	3,260	1,940	1,430	2,120	658	376	343
20	428	2,510	1,200	3,260	2,820	3,560	2,000	1,280	2,510	658	363	343
21	410	2,120	1,200	2,740	2,510	3,880	2,180	1,330	2,060	627	359	351
22	401	1,840	1,190	2,550	2,240	4,310	2,180	1,280	1,780	615	359	347
23	388	1,630	1,330	2,400	2,120	4,880	2,000	1,280	1,630	597	359	336
24	388	1,480	1,480	2,300	2,000	5,000	1,840	1,200	1,480	585	363	328
25	406	1,330	1,840	2,250	2,060	4,420	1,840	1,200	1,380	580	397	328
26	423	1,240	1,630	2,200	1,940	3,660	1,680	1,280	1,280	574	388	324
27	684	1,150	1,770	2,300	1,940	2,900	1,630	1,240	1,190	568	372	320
28	563	1,090	2,660	2,250	1,890	2,510	1,630	1,280	1,160	558	372	324
29	903	1,060	2,660	2,200	-	2,240	1,730	1,580	1,190	530	423	317
30	1,080	1,360	2,580	2,100	-	2,120	1,730	1,480	1,170	510	376	313
31	1,180	-	2,510	2,060	-	2,120	-	1,280	-	494	515	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	17,907	1,330	336	578	1.22	1.41	35,520
November	51,880	4,420	986	1,729	3.66	4.08	102,900
December	80,970	6,240	1,190	2,612	5.53	6.38	160,600
Calendar year 1938	640,813	9,700	328	1,756	3.72	50.49	1,271,000
January	95,090	7,630	2,060	3,067	6.50	7.49	188,600
February	92,600	13,100	1,580	3,307	7.01	7.30	183,700
March	80,750	5,000	1,530	2,605	5.52	6.36	160,200
April	56,540	2,370	1,530	1,885	3.99	4.45	112,100
May	46,020	2,000	1,200	1,485	3.15	3.63	91,280
June	41,400	2,510	1,020	1,380	2.92	3.26	82,120
July	23,549	1,170	494	760	1.61	1.86	46,710
August	12,744	515	359	411	.871	1.00	25,280
September	11,746	724	313	392	.831	.93	23,300
Water year 1938-39	611,196	13,100	313	1,675	3.55	48.15	1,212,000

Peak discharge.- Feb. 15 (6:30 a.m.) 15,400 sec.-ft.

Youngs River near Astoria, Oreg.

Location.- Water-stage recorder, lat. 46°04', long. 123°47', in NW¼ sec. 27, T. 7 N., R. 9 W., 50 feet upstream from 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 (general adjustment of 1929).

Drainage area.- 32 square miles.

Records available.- January 1934 to September 1939. March 1916 to September 1917 (gage heights only), at site 3 miles upstream. August 1927 to December 1933, at site 1 mile upstream (drainage area, 30 square miles).

Extremes.- Maximum discharge during year, 3,020 second-feet Feb. 12, 15 (gage height, 11.05 feet); minimum, 4 second-feet (estimated) Aug. 20, Sept. 20-30.
1927-39: Maximum discharge, about 6,300 second-feet Nov. 24, 1927 (gage height, 6.52 feet, former site and datum); minimum, 3.7 second-feet Sept. 22, 23, 1938.

Remarks.- Records good except those below 20 second-feet, which are fair, and those for period of missing gage heights, Aug. 14 to Sept. 30, which were computed on basis of records for Wilson and Trask Rivers near Tillamook and are poor. No diversion or regulation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.7	3.7	2.2	40	4.0	230	8.0	1,450
1.0	8.2	2.6	23	5.0	450	9.0	1,920
1.4	16	3.0	97	6.0	720		
1.8	26	3.5	151	7.0	1,050		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	158	375	751	308	181	59	29	20	29	8	8
2	6	127	1,170	1,050	308	258	55	28	18	28	8	7
3	8	1,100	690	1,050	308	352	65	28	17	29	7	6
4	8	512	500	720	277	319	58	28	43	31	7	6
5	7	287	550	615	450	277	51	27	85	32	7	6
6	6	182	352	425	562	298	48	26	65	33	7	5
7	6	149	267	341	462	267	46	26	48	30	7	5
8	5	170	228	425	341	228	46	25	46	25	6	5
9	6	298	212	330	267	190	49	23	61	22	6	5
10	10	267	163	267	207	174	46	22	48	19	6	5
11	51	202	139	225	1,050	230	44	21	40	18	6	5
12	86	161	122	184	1,900	388	55	20	36	16	6	6
13	92	166	110	155	900	400	57	19	32	16	6	5
14	40	152	98	138	1,590	364	48	18	30	16	6	5
15	25	149	90	173	1,610	341	44	17	34	24	6	5
16	18	747	82	161	750	319	42	17	48	23	6	5
17	15	512	76	277	500	287	39	18	63	18	6	5
18	12	308	69	425	375	212	37	18	81	16	5	5
19	10	239	64	450	287	178	36	17	88	17	5	5
20	9	239	62	330	225	150	34	18	85	16	4	4
21	8	173	83	248	184	135	33	21	70	15	5	4
22	7	145	81	207	160	126	32	19	57	13	6	4
23	8	124	93	179	144	115	32	19	53	12	6	4
24	9	109	112	168	135	103	36	18	48	11	6	4
25	12	95	214	154	158	94	46	18	42	11	6	4
26	13	84	161	174	150	86	46	19	58	10	6	4
27	17	77	291	525	178	80	37	18	36	9	6	4
28	24	69	475	512	172	74	33	20	34	9	6	4
29	104	65	450	525	-	69	33	36	31	9	7	4
30	108	181	341	512	-	63	31	31	30	9	7	4
31	160	-	287	412	-	62	-	24	-	9	9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	895	160	5	28.9	0.903	1.04	1,780
November	7,245	1,100	65	242	7.56	8.44	14,370
December	8,007	1,170	62	258	8.06	9.29	15,880
Calendar year 1938	51,182.3	1,250	3.7	140	4.38	59.45	101,500
January	12,108	1,050	138	391	12.2	14.07	24,060
February	13,958	1,900	135	498	15.6	16.24	27,690
March	6,400	400	62	206	6.44	7.42	12,690
April	1,318	65	31	43.9	1.37	1.53	2,610
May	688	36	17	22.2	.694	.80	1,360
June	1,427	88	17	47.6	1.49	1.66	2,830
July	575	33	9	18.6	.578	.67	1,140
August	195	9	4	6.3	.197	.23	387
September	148	8	4	4.9	.153	.17	294
Water year 1938-39	52,964	1,900	4	146	4.53	61.56	105,100

WILSON RIVER BASIN

Wilson River near Tillamook, Oreg.

Location.- Water-stage recorder, lat. 45°29', long. 123°43', in NW¼ sec. 18, T. 1 S., R. 8 W., 1 mile upstream from North Fork and 6¾ miles east of Tillamook. Zero of gage is 42.13 feet above mean sea level (general adjustment of 1929). Prior to Oct. 1, 1938, staff gage at site 100 feet downstream, with datum 0.93 foot higher.

Drainage area.- 162 square miles.

Records available.- July 1931 to September 1939. December 1914 to November 1916 (incomplete), at site three-quarters of a mile downstream.

Extremes.- Maximum discharge during year, 15,800 second-feet Feb. 14 (gage height, 13.80 feet); minimum, 63 second-feet Sept. 27-30.
1914-16, 1931-39: Maximum discharge, 30,000 second-feet Dec. 21, 1933 (gage height, 19.28 feet, former site and datum, observed at peak), from rating curve extended above 15,000 second-feet; minimum discharge observed, 59 second-feet Sept. 22, 1938.

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

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.2	65	2.6	555	4.5	2,090	8.0	6,070
1.5	127	3.0	795	5.0	2,590	9.0	7,510
1.8	211	3.5	1,160	6.0	3,680	10.0	9,050
2.2	360	4.0	1,600	7.0	4,820	11.4	11,400

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	67	1,200	1,550	2,960	1,490	1,030	730	258	199	196	102	113
2	76	1,030	6,730	5,550	1,360	1,380	718	248	186	189	100	94
3	106	5,690	5,240	5,060	1,200	1,600	706	237	180	231	98	87
4	96	3,020	3,740	3,960	1,130	1,480	646	234	186	237	96	79
5	79	1,840	4,400	3,130	1,620	1,370	577	224	205	211	96	79
6	69	1,310	3,020	2,400	2,160	1,320	522	218	189	205	96	78
7	67	1,050	2,300	1,940	2,020	1,220	490	211	186	189	94	76
8	65	1,020	1,870	1,830	1,640	1,140	500	208	189	180	96	76
9	79	1,620	1,580	1,580	1,380	1,060	506	202	244	174	96	74
10	109	1,560	1,330	1,400	1,180	1,030	470	199	234	169	94	74
11	304	1,280	1,150	1,230	2,960	1,470	446	189	214	160	91	78
12	401	1,070	1,000	1,080	9,530	2,000	465	183	205	150	91	79
13	782	1,080	902	975	4,820	2,040	432	177	192	147	89	78
14	369	1,110	814	895	7,310	1,780	396	174	186	144	89	74
15	255	1,220	730	960	11,400	1,770	378	172	214	158	87	74
16	205	3,100	670	930	5,300	2,140	360	174	374	152	85	74
17	174	2,960	622	1,490	3,350	2,490	352	174	328	144	85	72
18	155	2,040	582	2,490	2,490	2,490	352	172	360	142	83	72
19	142	1,590	544	3,020	1,960	2,340	352	169	436	160	81	70
20	130	1,380	511	2,260	1,600	2,020	340	177	414	163	72	70
21	122	1,140	572	1,740	1,360	1,990	324	202	369	147	79	69
22	116	990	544	1,460	1,180	2,020	316	205	332	140	83	69
23	118	867	572	1,240	1,060	2,050	296	186	304	134	83	67
24	147	782	628	1,150	990	1,800	308	174	276	127	83	67
25	166	700	840	1,060	998	1,460	340	189	258	125	85	65
26	147	634	776	1,050	945	1,200	320	211	244	120	83	65
27	158	588	1,100	2,010	1,010	996	296	192	234	116	79	63
28	196	544	2,490	2,210	982	860	280	192	218	113	81	63
29	336	516	2,800	2,310	-	776	280	262	211	109	91	63
30	577	670	2,510	2,120	-	724	273	234	208	104	83	63
31	1,060	-	1,940	1,780	-	712	-	211	-	102	116	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	6,873	1,060	65	222	1.37	1.58	13,630
November	43,601	5,690	516	1,453	8.97	10.01	86,480
December	54,057	6,730	511	1,744	10.8	12.45	107,200
Calendar year 1938	356,409	8,730	59	976	6.02	81.79	706,800
January	63,270	5,550	895	2,041	12.6	14.53	125,500
February	74,445	11,400	945	2,659	16.4	17.08	147,700
March	47,760	2,490	712	1,541	9.51	10.96	94,730
April	12,771	730	273	426	2.63	2.93	25,330
May	6,265	262	169	202	1.25	1.44	12,430
June	7,575	436	180	252	1.56	1.74	15,020
July	4,838	257	102	156	.963	1.11	9,600
August	2,767	116	72	89.3	.551	.64	5,490
September	2,225	113	63	74.2	.458	.51	4,410
Water year 1938-39	326,447	11,400	63	894	5.52	74.98	647,500

Peak discharge.- Dec. 2 (4:30 p.m.) 12,200 sec.-ft.; Feb. 12 (4:30 a.m.) 13,200 sec.-ft.; Feb. 14 (11:55 p.m.) 15,800 sec.-ft.

244757 O—40——10

Trask Rivsr near Tillamook, Oreg.

Location.- Water-stage recorder, lat. 45°27', long. 123°44', in NW¼ sec. 31, T. 1 S., R. 8 W., half a mile upstream from Gold Creek and 6 miles east of Tillamook.

Drainage area.- 152 square miles.

Records available.- July 1931 to September 1939.

Extremes.- Maximum discharge during year, 12,300 second-feet Feb. 15 (gage height, 9.5 feet); minimum, 58 second-feet Sept. 26, 27.
1931-39: Maximum discharge, 20,000 second-feet Dec. 22, 1933 (gage height, 13.00 feet); minimum, that of Sept. 26, 27, 1939.
Maximum stage known, about 17 feet, probably occurred during flood of November 1921 or on Mar. 31, 1931 (discharge, about 30,000 second-feet).

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

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 14

0.4	71	2.0	690	5.0	4,100
.7	137	2.5	1,000	6.0	5,710
1.0	230	3.0	1,460	7.0	7,480
1.5	435	4.0	2,640	8.3	9,910

Feb. 15 to Sept. 30

0.4	58	1.5	415
.7	124	2.0	675
1.0	213	2.5	1,000

Note.- Same as preceding table above 2.5 feet.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	657	1,080	2,010	1,260	1,000	598	244	169	172	95	122
2	86	620	4,330	3,650	1,170	1,300	582	238	160	166	92	90
3	145	4,560	3,950	3,950	1,040	1,510	565	227	160	207	88	81
4	114	2,510	2,920	3,350	1,000	1,410	530	227	181	213	88	77
5	94	1,510	3,060	2,850	1,510	1,270	495	224	216	197	86	75
6	84	1,040	2,320	2,130	2,130	1,220	465	213	213	187	84	71
7	79	860	1,890	1,720	1,950	1,140	445	213	197	175	86	68
8	75	860	1,510	1,620	1,510	1,060	445	207	194	166	86	66
9	82	1,670	1,310	1,360	1,260	972	450	200	238	157	81	64
10	117	1,560	1,120	1,310	1,080	930	420	197	213	154	84	62
11	358	1,220	962	1,080	2,320	1,220	410	187	194	151	86	68
12	281	1,000	860	925	6,940	1,460	455	184	181	146	84	69
13	495	962	800	860	4,410	1,620	420	178	172	143	81	66
14	273	925	745	800	6,510	1,460	384	172	163	138	81	69
15	193	962	684	860	9,910	1,480	361	169	203	151	79	71
16	159	2,580	635	800	5,210	1,670	343	172	338	148	77	68
17	140	2,580	590	1,120	3,280	1,890	334	172	293	132	77	66
18	124	1,780	570	1,560	2,380	1,890	325	166	343	129	75	64
19	112	1,360	535	2,010	1,890	1,780	317	172	410	146	73	64
20	108	1,170	510	1,670	1,540	1,560	313	187	384	146	62	64
21	103	962	550	1,310	1,290	1,470	301	220	338	129	69	64
22	99	830	530	1,170	1,140	1,430	293	213	301	124	77	62
23	103	745	555	1,000	1,020	1,380	285	181	278	116	77	60
24	122	690	580	962	951	1,240	297	169	255	112	79	60
25	143	625	745	892	1,000	1,060	313	184	234	109	79	60
26	127	580	662	925	944	930	285	207	216	106	79	58
27	134	540	892	1,460	1,030	814	274	178	207	104	79	60
28	137	510	1,950	1,720	1,000	741	263	176	197	102	86	60
29	341	500	1,890	1,890	-	681	266	224	184	99	97	62
30	465	646	1,720	1,780	-	636	252	194	181	97	86	62
31	565	-	1,410	1,510	-	620	-	178	-	95	124	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	5,529	565	71	178	1.17	1.35	10,970
November	37,014	4,560	500	1,234	8.12	9.06	73,420
December	41,865	4,330	510	1,350	8.88	10.24	83,040
Calendar year 1938	297,712	6,600	62	816	5.37	72.81	590,500
January	50,254	3,950	800	1,621	10.7	12.34	99,680
February	66,675	9,910	944	2,381	15.7	16.35	132,200
March	38,844	1,890	620	1,253	8.24	9.50	77,050
April	11,486	598	262	383	2.52	2.81	22,780
May	6,075	244	166	196	1.29	1.49	12,050
June	7,013	410	160	234	1.54	1.72	13,910
July	4,417	213	95	142	.934	1.08	8,760
August	2,577	124	62	83.1	.547	.63	5,110
September	2,053	122	58	68.4	.450	.50	4,070
Water year 1938-39	273,802	9,910	58	750	4.93	67.07	543,000

Peak discharge.- Nov. 3 (10 a.m.) 7,840 sec.-ft.; Feb. 12 (5 a.m.) 8,770 sec.-ft.; Feb. 15 (1-2 a.m.) 12,300 sec.-ft.

Nestucca River near McMinnville, Oreg.

Location.- Water-stage recorder, lat. 45°19', long. 123°28', in SW¼ sec. 8, T. 3 S., R. 6 W., half a mile downstream from dam at outlet of Meadow Lake and 13 miles northwest of McMinnville.

Drainage area.- 12 square miles.

Records available.- October 1928 to September 1939.

Average discharge.- 11 years, 45.7 second-feet.

Extremes.- Maximum discharge during year, 655 second-feet Feb. 15 (gage height, 3.70 feet); minimum, 1.7 second-feet Sept. 28-30.

1928-39: Maximum discharge, 1,480 second-feet Dec. 22, 1933, Dec. 27, 1937 (gage height, 5.1 feet), from rating curve extended above 600 second-feet; minimum, 1.0 second-foot Oct. 11, 1929.

Remarks.- Records fair. No diversion above gage. Flow regulated slightly by dam at outlet of Meadow Lake.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.3	1.5	1.3	29	3.0	310
.5	3.6	1.6	50	3.5	545
.8	9.1	2.0	89		
1.0	14.4	2.5	174		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	18	54	69	57	53	41	13	8.0	5.7	2.6	2.8
2	2.6	21	176	119	54	62	38	13	7.8	5.6	2.6	2.9
3	3.2	70	206	184	48	66	37	12	7.6	5.7	2.6	2.9
4	3.2	73	140	186	45	63	35	12	7.6	5.9	2.4	2.8
5	3.1	45	116	186	57	59	32	12	7.4	6.1	2.4	2.8
6	3.0	33	94	131	79	57	30	12	7.6	5.9	2.3	2.6
7	3.4	25	75	98	78	54	28	12	7.4	5.9	2.3	2.5
8	3.5	23	62	83	64	51	27	11	7.6	5.7	2.2	2.4
9	3.5	34	52	67	56	56	27	11	8.0	5.6	2.2	2.3
10	3.8	47	44	57	51	45	26	11	8.0	5.2	2.2	2.3
11	4.7	38	39	50	86	56	24	10	7.8	5.2	2.1	2.3
12	5.9	31	34	45	326	76	24	10	7.6	5.0	2.1	2.3
13	7.2	31	31	41	231	86	24	9.6	7.4	4.9	2.1	2.3
14	7.4	33	28	37	275	74	23	9.4	7.0	4.7	2.1	2.1
15	6.6	35	26	39	545	70	22	8.9	7.2	4.6	2.0	2.1
16	6.1	56	24	38	273	76	21	8.9	8.6	4.6	2.0	2.1
17	5.7	79	23	44	168	83	20	8.7	9.1	4.6	2.0	2.1
18	5.2	62	22	56	120	94	19	8.7	9.1	4.2	2.0	2.0
19	4.7	48	21	64	98	101	18	8.7	9.4	4.2	2.0	2.0
20	4.6	42	20	61	81	101	17	8.9	9.4	4.2	2.0	2.0
21	4.4	35	20	54	69	97	16	9.6	8.9	4.2	2.0	1.9
22	4.2	31	20	50	62	97	16	10	8.5	4.2	2.0	1.9
23	4.2	26	20	48	58	96	16	9.8	8.0	3.9	2.0	1.9
24	4.4	23	20	44	55	92	16	9.6	7.4	3.8	2.0	1.9
25	4.7	21	22	44	56	84	16	9.4	7.2	3.6	2.0	1.9
26	5.0	20	22	42	54	73	16	9.6	6.8	3.5	2.0	1.8
27	5.0	18	26	58	55	62	16	9.4	6.6	3.4	2.0	1.8
28	5.4	17	58	75	54	55	15	9.1	6.5	3.1	2.0	1.8
29	7.6	16	70	85	-	50	14	8.9	6.1	3.0	2.0	1.7
30	11	22	67	78	-	46	14	8.7	5.9	2.9	2.1	1.7
31	14	-	58	65	-	43	-	8.5	-	2.8	2.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	159.6	14	2.3	5.15	0.429	0.49	317
November	1,073	79	16	35.8	2.98	3.32	2,130
December	1,690	206	20	54.5	4.54	5.23	3,350
Calendar year 1938	15,325.5	484	2.2	42.0	3.50	47.51	30,400
January	2,298	186	37	74.1	6.18	7.12	4,560
February	3,255	545	45	116	9.67	10.07	6,460
March	2,175	101	43	70.2	5.85	6.74	4,310
April	688	41	14	22.9	1.91	2.13	1,360
May	313.4	13	8.5	10.1	.842	.97	622
June	231.4	9.4	5.9	7.71	.642	.72	459
July	141.9	6.1	2.8	4.58	.382	.44	281
August	66.7	2.6	2.0	2.15	.179	.21	132
September	65.9	2.9	1.7	2.20	.183	.20	131
Water year 1938-39	12,157.9	545	1.7	33.3	2.78	37.64	24,110

Peak discharge.- Dec. 2 (8-10 p.m.) 285 sec.-ft.; Feb. 12 (11 a.m.) 381 sec.-ft.; Feb. 15 (8 a.m.) 655 sec.-ft.

Siletz River at Siletz, Oreg.

Location.- Water-stage recorder, lat. 44°43', long. 123°53', in NW¼SW¼ sec. 11, T. 10 S., R. 10 W., 1¼ miles east of Siletz. Zero of gage is about 105 feet above mean sea level (river profile map). Prior to Oct. 1, 1938, wire-weight gage at bridge 2 miles downstream, with zero of gage 88.26 feet above mean sea level (general adjustment of 1929).

Drainage area.- 202 square miles (204 square miles at former site).

Records available.- November 1905 to May 1912, January 1924 to September 1939.

Average discharge.- 19 years (1906-11, 1925-39), 1,667 second-feet.

Extremes.- Maximum discharge during year, 17,800 second-feet Feb. 15 (gage height, 17.60 feet); minimum, 59 second-feet Oct. 1.

1905-12, 1924-39: Maximum discharge, 34,600 second-feet Nov. 22, 1909, from rating curve extended above 19,000 second-feet; minimum discharge observed, 51 second-feet Dec. 6, 7, 1929.

Maximum discharge known, 40,800 second-feet Nov. 20, 1921 (gage height, 31.6 feet, at former site), from rating curve extended above 19,000 second-feet.

Remarks.- Records excellent. No diversion for irrigation above station. Flow regulated occasionally at low and medium stages by operation of logging pond at Valsetz.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

2.2	61	3.6	460	5.5	1,500	10.0	5,980
2.5	111	4.0	635	6.0	1,850	12.0	8,760
2.8	183	4.5	890	7.0	2,650	14.0	11,800
3.2	308	5.0	1,180	8.0	3,580	16.0	15,000

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	1,240	1,120	2,610	2,410	1,330	805	315	189	214	115	220
2	65	1,460	7,060	4,580	2,330	1,820	795	304	183	205	113	147
3	120	7,400	6,260	5,720	2,370	2,330	805	290	178	332	111	118
4	109	4,460	4,460	4,820	2,210	2,370	760	284	200	343	111	103
5	82	2,250	4,820	4,580	3,010	2,210	685	273	214	280	111	100
6	75	1,460	3,580	3,380	5,590	2,290	635	257	197	251	109	96
7	71	1,180	2,920	2,650	5,070	2,090	599	254	191	235	107	94
8	68	1,090	2,450	2,330	3,480	1,930	617	247	197	220	103	87
9	78	1,850	2,090	1,930	2,570	1,710	630	244	287	211	100	87
10	143	2,210	1,740	1,710	2,170	1,570	590	235	247	200	100	85
11	254	1,710	1,460	1,460	4,280	2,250	563	226	217	194	100	89
12	223	1,360	1,240	1,300	10,900	2,830	604	220	197	189	98	103
13	432	1,240	1,090	1,180	7,380	3,100	572	214	189	183	96	98
14	238	1,090	1,000	1,060	10,700	2,830	509	205	183	180	94	92
15	165	1,090	918	1,060	15,000	2,830	480	203	208	200	92	85
16	135	3,130	835	1,000	e,360	2,650	460	214	484	191	90	84
17	120	3,280	775	1,300	5,070	2,530	444	214	404	175	85	82
18	109	2,130	725	2,290	3,380	2,330	436	200	416	167	85	78
19	102	1,680	675	3,010	2,530	2,170	424	197	504	175	84	77
20	96	1,460	635	2,330	2,090	1,930	412	200	460	173	80	75
21	92	1,210	745	1,850	1,780	1,780	388	226	408	160	82	69
22	90	1,030	690	1,640	1,570	1,710	376	244	365	186	89	71
23	100	945	680	1,430	1,400	1,680	365	220	340	145	87	*71
24	133	835	645	1,330	1,270	1,570	384	208	312	135	87	*71
25	165	760	725	1,240	1,330	1,430	456	211	284	133	89	*71
26	147	700	685	1,270	1,240	1,300	404	257	267	131	98	*71
27	203	640	1,000	2,250	1,300	1,120	369	214	251	129	90	71
28	186	599	2,740	3,100	1,300	1,000	347	200	241	129	105	71
29	420	594	3,190	3,580	-	918	354	229	226	124	143	69
30	670	745	2,920	3,580	-	835	340	214	223	120	107	68
31	690	-	2,290	3,010	-	815	-	194	-	118	186	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	5,840	690	59	182	0.901	1.04	11,190
November	50,828	7,400	594	1,694	8.39	9.36	100,800
December	62,163	7,060	635	2,005	9.93	11.45	123,300
Calendar year 1938	499,093	20,400	59	1,367	6.72	91.19	989,900
January	74,580	5,720	1,000	2,406	11.9	13.72	147,900
February	112,090	15,000	1,240	4,003	19.8	20.62	222,300
March	59,258	3,100	815	1,912	9.47	10.92	117,500
April	15,608	805	340	520	2.57	2.87	30,960
May	7,213	315	194	233	1.15	1.33	14,310
June	8,262	504	178	275	1.36	1.52	16,390
July	5,828	343	118	188	.931	1.07	11,560
August	3,147	186	80	102	.505	.58	6,240
September	2,705	220	68	90.2	.447	.50	5,370
Water year 1938-39	407,322	15,000	59	1,116	5.52	74.98	807,800

Peak discharge.- Nov. 3 (2 p.m.) 14,000 sec.-ft.; Dec. 2 (5 p.m.) 12,900 sec.-ft.; Feb. 12 (8 a.m.) 12,800 sec.-ft.; Feb. 15 (2 a.m.) 17,800 sec.-ft.

*Gage height missing; discharge interpolated.

Siuslaw River above Wildcat Creek, at Austa, Oreg.

Location.- Staff gage, lat. 44°00', long. 123°39', in SW¼ sec. 16, T. 18 S., R. 8 W., a quarter of a mile upstream from Wildcat Creek and Austa.

Drainage area.- 267 square miles.

Records available.- September 1931 to September 1939.

Extremes.- Maximum discharge observed during year, 4,680 second-feet Feb. 15 (gage height, 8.30 feet); minimum observed, 20 second-feet Sept. 28 (gage height, 1.04 feet).
1931-39: Maximum discharge observed, 12,900 second-feet Jan. 12, 1936 (gage height, 15.5 feet), from rating curve extended above 4,500 second-feet; minimum observed, that of Sept. 28, 1939.

Remarks.- Records good. No diversion or regulation above gage. Gage read once daily; occasionally twice.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 14				Feb. 15 to Sept. 30			
1.2	31	3.5	875	1.0	18	3.0	560
1.4	51	4.0	1,200	1.2	32	3.5	825
1.7	100	4.5	1,550	1.4	53	4.0	1,135
2.0	180	5.0	1,920	1.7	101	5.0	1,830
2.5	370	6.0	2,720	2.0	175	6.0	2,630
3.0	600	7.5	4,000	2.5	340	8.2	4,580

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	194	330	705	1,840	530	356	172	101	69	34	49
2	33	350	2,800	935	1,410	560	348	172	101	66	34	42
3	51	678	3,640	1,480	1,760	754	332	164	101	69	33	35
4	59	1,060	2,400	1,840	1,920	1,000	316	162	101	72	33	34
5	56	705	1,550	2,720	1,840	903	308	153	110	79	33	34
6	51	455	1,200	1,920	3,910	945	296	148	105	76	32	34
7	49	290	875	1,340	4,000	1,100	279	148	101	72	32	33
8	44	194	650	1,060	3,040	1,140	279	143	101	69	32	31
9	40	290	550	875	2,240	1,100	272	138	99	66	31	27
10	47	935	500	760	1,760	803	262	136	97	62	31	27
11	49	678	455	650	1,920	885	252	133	86	61	30	26
12	49	500	370	600	3,640	3,050	252	130	82	61	30	27
13	47	330	350	525	3,550	3,590	265	128	82	61	30	31
14	44	270	310	500	3,910	2,870	252	123	79	61	30	29
15	42	250	290	478	4,680	2,190	239	121	76	61	30	27
16	38	212	250	455	3,500	1,680	233	119	114	61	29	27
17	38	370	250	432	2,430	1,330	233	119	164	58	29	27
18	38	330	222	478	1,830	1,140	221	119	148	56	28	27
19	36	270	208	650	1,470	975	215	116	133	56	28	26
20	35	215	194	600	1,260	837	209	119	123	56	27	26
21	35	180	215	550	1,070	759	203	138	105	53	26	26
22	35	187	222	478	921	704	200	170	95	53	26	26
23	36	150	201	455	814	630	197	164	86	49	25	25
24	47	131	194	432	737	600	192	167	82	49	26	23
25	44	121	180	410	693	540	215	148	82	46	26	22
26	40	114	180	390	650	501	209	133	76	44	27	22
27	44	109	194	935	600	474	197	126	72	42	30	22
28	51	105	525	1,840	570	447	186	119	71	41	31	20
29	67	109	1,130	2,080	-	420	181	110	69	39	33	21
30	105	109	1,130	2,560	-	396	175	110	69	38	32	21
31	109	-	815	2,320	-	372	-	105	-	36	35	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,492	109	33	48.1	0.180	0.21	2,960
November	9,891	1,060	105	330	1.24	1.38	19,620
December	22,380	3,640	180	722	2.70	3.11	44,390
Calendar year 1938	292,112	9,240	30	800	3.00	40.71	579,400
January	31,453	2,720	390	1,015	3.80	4.38	62,390
February	57,865	4,580	570	2,067	7.74	8.06	114,800
March	33,225	3,590	372	1,072	4.01	4.62	65,900
April	7,374	356	175	246	.921	1.03	14,630
May	4,253	172	105	137	.513	.59	8,440
June	2,911	164	69	97.0	.363	.40	5,770
July	1,782	79	36	57.5	.215	.25	3,530
August	933	35	25	30.1	.113	.13	1,850
September	847	49	20	28.2	.106	.12	1,680
Water year 1938-39	174,406	4,580	20	478	1.79	24.28	346,000

Lake Creek at Triangle Lake, Oreg.

Location.- Water-stage recorder, lat. 44°10', long. 123°34', in SW¼ sec. 20, T. 16 S., R. 7 W., 500 feet downstream from outlet of Triangle Lake. Zero of gage is 672.41 feet above mean sea level (general adjustment of 1929).

Drainage area.- 50 square miles.

Records available.- August 1931 to September 1939.

Extremes.- Maximum discharge during year, 1,140 second-feet Feb. 16 (gage height, 4.36 feet); minimum, 5.5 second-feet Sept. 30.
1931-39: Maximum discharge, 3,960 second-feet Dec. 22, 1933, Jan. 13, 1936 (gage height, 8.1 feet), from rating curve extended above 2,400 second-feet; minimum, that of Sept. 30, 1939.

Remarks.- Records good. No diversion above gage; flow regulated only by natural storage in Triangle Lake.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 15				Feb. 16 to Sept. 30			
0.5	9	2.5	312	0.4	5.5	2.0	177
.8	21	3.0	485	.7	15	2.5	312
1.2	53	3.6	750	1.0	32	3.0	485
1.6	102	4.2	1,050	1.3	57	3.6	750
2.0	177			1.6	98	4.3	1,110

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	48	78	245	545	212	128	47	28	19	8	10
2	11	70	271	297	457	218	123	45	27	18	8	12
3	12	100	655	382	417	250	118	45	26	19	8	12
4	12	173	725	449	396	291	110	45	26	19	7.5	12
5	12	200	545	545	438	297	105	41	27	19	7.5	11
6	13	156	424	565	678	300	101	41	27	19	7.5	11
7	13	113	346	485	975	309	96	39	27	19	7	10
8	12	93	282	400	875	309	92	38	27	19	7	10
9	13	107	228	328	678	291	89	38	26	18	7	10
10	14	179	193	276	525	265	86	37	26	17	7	9
11	16	208	166	239	461	273	80	36	26	17	7	9
12	18	173	148	212	588	420	80	35	24	16	7	9
13	19	138	131	191	825	610	82	34	24	16	7.	9
14	19	113	120	175	950	655	79	33	23	15	7	9
15	18	99	110	169	1,050	588	76	32	23	15	7	8.5
16	17	93	100	160	1,110	485	73	31	28	15	7	8
17	16	99	94	154	950	410	70	31	35	15	7	8
18	15	116	90	164	750	362	68	31	37	15	6.5	8
19	14	115	86	198	588	334	64	31	37	14	6.5	7.5
20	14	105	82	222	485	309	62	32	36	13	6	7.5
21	13	93	82	210	414	282	59	36	34	13	6	7
22	12	83	84	193	356	259	58	41	31	13	6	7
23	13	74	83	177	312	236	56	44	29	13	6	7
24	14	68	80	162	279	220	56	43	27	12	6	7
25	14	63	79	152	262	205	56	41	26	12	6	7
26	15	59	78	148	250	191	56	39	24	11	6	6.5
27	15	55	83	202	233	177	55	37	23	11	6	6
28	16	53	129	424	222	164	53	34	21	10	7	6
29	19	51	233	610	-	153	51	32	20	10	7	6
30	25	55	270	700	-	144	49	31	20	9.5	7	5.5
31	33	-	256	655	-	136	-	29	-	9	9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	477	33	10	15.4	0.308	0.36	946
November	3,152	208	48	105	2.10	2.34	6,250
December	6,331	725	78	204	4.08	4.70	12,560
Calendar year 1938	79,893	2,830	9	219	4.38	59.52	158,500
January	9,489	700	148	306	6.12	7.06	18,820
February	16,069	1,110	222	574	11.5	11.98	31,870
March	9,355	655	136	302	6.04	6.96	18,560
April	2,328	128	49	77.6	1.55	1.73	4,620
May	1,147	47	29	37.0	.740	.85	2,280
June	814	37	20	27.1	.542	.60	1,610
July	460.5	19	9	14.9	.298	.34	913
August	214.5	9	6	6.92	.138	.16	425
September	255.5	12	5.5	8.52	.170	.19	507
Water year 1938-39	50,092.5	1,110	5.5	137	2.74	37.27	99,360

Umpqua River near Elkton, Oreg.

Location.- Staff gage, lat. 43°35', long. 123°33', 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 (river profile map).
Drainage area.- 3,680 square miles.
Records available.- October 1905 to September 1939 (prior to November 1908, incomplete).
Average discharge.- 34 years, 7,100 second-feet.
Extremes.- Maximum discharge observed during year, 57,300 second-feet Mar. 13 (gage height, 19.0 feet); minimum observed, 834 second-feet Sept. 26, 27, 29, 30 (gage height, 1.08 feet).
1905-39: Maximum discharge, 172,000 second-feet Feb. 21, 1927 (gage height, 41.0 feet, from floodmark), from rating curve extended above 50,000 second-feet; minimum observed, 640 second-feet July 18, 1926 (gage height, 0.71 foot).
Maximum stage known, 45.5 feet sometime in 1861.
Remarks.- Records good. Some diversions for irrigation from streams in South Umpqua River Basin, but low-water flow probably only slightly affected. Slight regulation by gates and racks of fish hatchery at Diamond Lake and by power plant at Winchester ordinarily does not affect discharge at this station. Gage read twice daily.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.0	770	4.0	4,340	11.0	23,800
1.5	1,220	5.0	6,130	13.0	31,500
2.0	1,730	6.0	8,300	15.0	39,700
2.5	2,300	7.0	10,900	17.0	48,400
3.0	2,930	9.0	17,000	19.0	57,300

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,070	1,410	1,880	5,930	10,600	8,540	8,060	4,030	2,370	1,450	976	913
2	1,010	1,720	3,740	5,280	8,300	8,060	8,790	3,810	2,250	1,410	976	949
3	1,010	2,570	29,200	5,640	8,420	8,920	9,300	3,740	2,290	1,410	976	1,000
4	1,050	10,400	41,800	11,200	8,790	11,500	9,300	3,670	2,260	1,420	958	1,010
5	1,080	21,700	29,900	18,600	9,040	11,200	8,540	3,600	2,180	1,570	949	949
6	1,060	7,940	14,500	20,000	20,000	10,600	7,600	3,460	2,220	1,610	940	913
7	1,010	4,920	13,000	13,000	33,900	11,500	7,060	3,310	2,120	1,560	922	904
8	1,000	3,390	8,660	9,690	22,400	10,900	7,270	3,200	2,050	1,450	922	904
9	1,000	2,980	7,270	8,660	15,100	10,100	7,600	3,120	1,990	1,390	922	895
10	994	4,030	6,230	7,830	12,100	8,920	6,950	3,280	1,870	1,340	913	886
11	985	6,230	5,280	7,060	11,800	8,180	6,230	3,360	1,830	1,310	904	886
12	976	5,280	4,840	6,130	15,800	16,100	5,930	3,330	1,770	1,280	904	886
13	994	3,960	4,180	5,640	27,200	52,800	5,740	3,200	1,710	1,260	904	877
14	1,010	3,270	3,740	5,100	25,300	38,000	5,280	3,140	1,680	1,240	904	895
15	1,010	3,140	3,460	4,760	41,800	24,200	4,840	3,090	1,680	1,220	895	904
16	1,000	3,280	3,220	4,670	43,600	18,300	4,500	3,140	1,700	1,200	886	895
17	994	4,030	3,030	4,500	26,500	19,600	4,340	3,120	2,040	1,180	877	886
18	976	5,840	2,840	4,180	19,600	24,600	4,580	2,930	2,600	1,150	868	886
19	967	4,920	2,630	4,180	17,000	26,800	5,190	2,980	2,850	1,130	868	886
20	967	3,530	2,490	4,500	14,500	25,700	5,640	3,230	2,750	1,120	868	886
21	967	3,290	2,420	4,420	11,800	25,300	5,740	3,280	2,590	1,110	868	877
22	958	3,070	2,440	4,100	10,100	25,300	5,840	3,150	2,380	1,080	850	868
23	958	2,720	2,550	3,810	9,040	24,900	5,550	3,110	2,140	1,030	850	868
24	994	2,420	2,460	3,670	8,920	22,800	5,370	3,150	1,950	1,050	850	868
25	976	2,230	2,340	3,350	8,920	20,600	5,010	2,960	1,800	1,060	868	859
26	976	2,050	2,280	3,160	9,040	18,300	4,670	2,770	1,720	1,060	895	834
27	976	1,920	2,300	3,420	8,420	15,800	4,260	2,630	1,630	1,050	895	842
28	994	1,850	2,550	6,940	8,300	12,100	4,100	2,580	1,570	1,030	886	850
29	1,070	1,840	5,460	13,300	-	9,960	4,100	2,460	1,530	1,020	868	842
30	1,140	1,830	8,420	13,900	-	8,790	4,180	2,420	1,490	994	886	834
31	1,240	-	7,270	12,700	-	8,180	-	2,360	-	994	895	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	31,412	1,240	958	1,013	0.275	0.32	62,300
November	127,760	21,700	1,410	4,259	1.16	1.29	253,400
December	232,370	41,800	1,880	7,496	2.04	2.35	460,900
Calendar year 1938	3,398,238	104,000	940	9,310	2.53	34.35	6,740,000
January	229,220	20,000	3,160	7,394	2.01	2.32	454,700
February	466,290	43,600	8,300	16,650	4.52	4.71	924,900
March	546,550	52,800	8,060	17,630	4.79	5.52	1,084,000
April	181,560	9,300	4,100	6,052	1.64	1.83	360,100
May	97,630	4,030	2,380	3,149	.856	.99	193,600
June	61,040	2,880	1,490	2,035	.553	.62	121,100
July	36,178	1,610	994	1,232	.336	.39	75,720
August	27,943	976	850	901	.245	.28	55,420
September	26,752	1,010	834	892	.242	.27	53,060
Water year 1938-39	2,066,705	52,800	834	5,662	1.54	20.89	4,099,000

Cow Creek near Azalea, Oreg.

Location.- Staff gage, lat. 42°50', long. 123°11', in sec. 4, T. 32 S., R. 4 W., 4 miles northeast of Azalea.

Drainage area.- 76 square miles.

Records available.- April 1926 to September 1939 (incomplete prior to 1932).

Extremes.- Maximum discharge during year, 1,840 second-feet Mar. 12 (gage height, 6.7 feet, from floodmark); minimum observed, 5.0 second-feet Aug. 13, 14, 22, 23.
1926-39: Maximum discharge observed, 4,000 second-feet (estimated) Jan. 2, 1933 (gage height, 7.8 feet); minimum discharge, 4 second-feet Sept. 9-19, 1929, Aug. 26-28, 1931, Aug. 21 to Sept. 6, 1934.

Remarks.- Records good. Staff gage read once daily. Minor diversions for irrigation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Sept. 17-30)

1.7	4.5	2.6	112	4.6	760
1.9	15	3.0	207	5.2	1,040
2.1	35	3.5	349		
2.3	60	4.0	520		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	42	78	35	72	102	120	35	23	11	6.8	8.6
2	12	48	560	37	68	106	122	24	21	12	7.2	8.1
3	14	51	446	92	70	125	120	24	31	15	6.3	7.6
4	17	207	180	122	77	116	114	34	34	20	6.3	7.6
5	14	69	108	334	89	122	104	34	31	16	5.8	7.2
6	13	42	78	133	319	129	96	33	26	15	5.8	7.2
7	13	31	63	94	180	133	92	32	24	14	5.8	6.8
8	12	24	55	92	127	122	89	32	23	13	5.8	6.8
9	12	31	51	85	114	112	84	31	22	13	5.8	6.3
10	12	33	47	75	96	108	77	31	21	13	5.4	5.8
11	12	32	43	68	104	110	74	30	20	12	5.4	6.8
12	13	25	39	63	262	805	75	28	20	12	5.4	8.1
13	13	24	34	62	194	990	72	26	18	11	5.0	8.6
14	13	30	37	57	349	380	68	24	16	11	5.0	8.6
15	14	33	35	59	600	349	64	24	18	11	5.4	8.1
16	14	42	32	57	334	319	62	23	21	11	5.8	8.1
17	14	50	30	55	262	349	60	24	25	10	5.8	6.8
18	14	41	30	54	234	412	59	27	24	10	5.8	6.3
19	14	33	28	54	207	412	57	45	22	9.6	5.4	6.3
20	14	31	28	51	168	380	55	40	20	9.0	5.4	6.3
21	14	27	32	50	142	380	54	37	20	9.0	5.4	5.8
22	13	25	32	47	129	364	51	35	18	8.6	5.0	5.8
23	17	26	31	46	127	349	48	34	16	8.1	5.0	5.8
24	21	25	31	43	125	319	48	32	15	8.1	6.3	5.4
25	19	24	30	43	125	262	47	30	15	7.2	8.1	5.8
26	16	24	30	47	116	234	45	28	14	6.8	7.6	5.8
27	20	21	32	75	114	194	43	26	14	6.8	7.6	5.8
28	22	20	35	96	110	155	42	24	13	6.3	7.2	5.4
29	33	24	36	100	-	146	41	25	12	6.3	6.8	5.8
30	28	30	36	102	-	127	37	27	11	6.3	6.8	6.8
31	34	-	35	89	-	120	-	24	-	6.8	7.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	504	34	12	16.3	0.214	0.25	1,000
November	1,165	207	20	38.8	.511	.57	2,310
December	2,362	560	28	76.2	1.00	1.15	4,680
Calendar year 1938	58,783.5	1,940	7.2	161	2.12	28.80	116,600
January	2,417	334	35	78.0	1.03	1.19	4,790
February	4,914	600	68	176	2.32	2.42	9,750
March	8,331	990	102	269	3.54	4.08	16,520
April	2,120	122	37	70.7	.930	1.04	4,200
May	923	45	23	29.8	.392	.45	1,830
June	608	34	11	20.3	.267	.30	1,210
July	328.9	20	6.3	10.6	.139	.16	652
August	188.8	8.1	5.0	6.09	.080	.09	374
September	204.2	8.6	5.4	6.81	.090	.10	405
Water year 1938-39	24,065.9	990	5.0	65.9	.867	11.80	47,720

North Umpqua River below Lake Creek, Oreg.

Location.- Water-stage recorder, lat. 43°19', long. 122°11', in NW¼ sec. 13, T. 26 S., R. 5 E., 200 yards downstream from mouth of Lake Creek and 30 miles southwest of Crescent. Zero of gage is about 4,090 feet above mean sea level (river profile map).

Drainage area.- 175 square miles.

Records available.- October 1927 to September 1939.

Average discharge.- 12 years, 363 second-feet.

Extremes.- Maximum discharge during year, 579 second-feet Nov. 4 (gage height, 1.44 feet); minimum, 289 second-feet Sept. 28-30 (gage height, 0.83 foot).
1927-39: Maximum discharge, 1,190 second-feet June 9, 1933 (gage height, 2.34 feet), from rating curve extended above 700 second-feet; minimum, 206 second-feet Dec. 9, 1931.

Remarks.- Records good. No diversion above station; slight regulation at Diamond Lake.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.8	277	1.2	450
1.0	356	1.4	555

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	333	358	358	354	333	345	403	522	445	362	333	312
2	333	358	372	354	350	350	408	522	441	362	333	312
3	337	426	426	358	354	350	412	528	436	362	329	312
4	337	490	422	358	354	350	417	533	436	367	329	312
5	337	403	403	358	354	350	417	522	431	358	324	312
6	341	390	390	350	350	354	408	516	426	358	324	312
7	341	385	394	354	358	350	376	511	412	354	320	312
8	341	385	390	358	358	354	390	511	394	350	316	312
9	341	385	385	354	358	354	394	528	390	337	316	312
10	341	380	376	354	362	350	394	522	390	341	316	308
11	345	380	372	350	367	354	394	522	390	341	316	308
12	341	376	362	350	362	358	398	511	394	337	316	308
13	341	380	367	350	362	362	390	516	394	337	316	308
14	341	376	367	350	372	362	390	522	394	337	316	304
15	341	376	367	350	380	362	380	528	394	337	312	304
16	341	380	362	345	372	362	385	528	403	337	312	304
17	341	380	358	345	367	367	394	522	398	337	312	304
18	337	372	358	345	362	376	412	522	398	337	312	300
19	337	367	358	345	362	390	431	500	394	337	308	300
20	333	367	358	345	362	390	450	490	390	337	308	316
21	333	362	358	337	358	394	475	480	385	337	308	320
22	329	358	358	341	358	398	495	475	385	337	308	320
23	329	362	354	337	358	403	506	475	380	337	308	304
24	329	358	350	341	354	408	500	460	376	337	308	308
25	345	358	354	341	354	408	490	460	372	337	308	320
26	345	358	350	341	354	408	485	460	372	337	308	296
27	350	358	354	341	354	403	480	465	367	337	308	296
28	354	354	354	345	350	398	516	460	367	333	308	293
29	350	358	358	350	-	398	522	465	367	337	308	289
30	350	358	358	350	-	394	522	470	367	333	312	293
31	354	-	354	345	-	398	-	460	-	333	312	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	10,548	354	329	340	1.94	2.24	20,920
November	11,298	490	354	377	2.15	2.40	22,410
December	11,447	426	350	369	2.11	2.43	22,700
Calendar year 1938	158,320	792	324	434	2.48	33.63	314,000
January	10,796	358	337	348	1.99	2.29	21,410
February	10,039	380	333	359	2.05	2.14	19,910
March	11,600	408	345	374	2.14	2.47	23,010
April	13,034	522	376	434	2.48	2.77	25,850
May	15,506	533	460	500	2.86	3.30	30,760
June	11,888	445	367	396	2.26	2.52	23,580
July	10,620	367	333	343	1.96	2.26	21,060
August	9,764	333	308	315	1.80	2.08	19,370
September	9,211	320	289	307	1.75	1.95	18,270
Water year 1938-39	135,751	533	289	372	2.13	28.85	269,200

North Umpqua River at Toketee Falls, Oreg.

Location.- Water-stage recorder, lat. 43°16', long. 122°25', in T. 26 S., R. 3 E. (unsurveyed), an eighth of a mile downstream from mouth of Clearwater River, half a mile upstream from Toketee Falls, and 30 miles east of Hoaglin. Zero of gage is 2,373 feet above mean sea level, by surveys of The California Oregon Power Co.

Drainage area.- 337 square miles.

Records available.- February 1908 to July 1909, December 1914 to November 1917 (incomplete), July 1924 to September 1939.

Average discharge.- 14 years (1925-39), 859 second-feet.

Extremes.- Maximum discharge during year, 1,680 second-feet Mar. 24, 25 (gage height, 2.48 feet); minimum, 600 second-feet Sept. 27-30 (gage height, 0.88 foot).
1908-9, 1914-17, 1924-39: Maximum discharge, 3,600 second-feet Feb. 20, 1927 (gage height, 4.65 feet), from rating curve extended above 1,600 second-feet on basis of velocity-area studies; minimum, 475 second-feet Nov. 27-29, Dec. 12, 14, 1931.

Remarks.- Records good except those for period of missing gage heights, Nov. 23 to Feb. 25, which were computed on basis of recorded range of stage, weather reports, and records for North Umpqua River below Lake Creek and above Rock Creek and are poor. No diversion above station; regulation at Diamond Lake has little effect.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	650	700			-	750	1,270	1,340	1,010	775	676	648
2	656	689			-	755	1,340	1,340	1,000	770	676	638
3	662	978			-	755	1,390	1,350	984	793	670	632
4	662	1,180			-	744	1,390	1,340	984	799	670	632
5	662	815			-	733	1,340	1,300	970	775	670	626
6	656	750			-	738	1,320	1,270	949	770	665	626
7	656	733			-	733	1,310	1,250	928	758	665	626
8	656	722			-	733	1,370	1,270	900	753	665	621
9	650	738			-	722	1,350	1,310	894	742	665	621
10	650	728			-	716	1,300	1,310	887	742	660	621
11	656	711			-	728	1,290	1,290	887	736	660	632
12	656	700			-	860	1,270	1,280	887	731	660	632
13	656	711			-	860	1,200	1,280	880	726	654	638
14	650	706			-	809	1,150	1,280	874	720	654	632
15	650	711			-	809	1,120	1,300	887	720	654	626
16	650	761			-	854	1,120	1,280	921	714	654	626
17	645	761			-	997	1,160	1,240	900	714	648	621
18	645	733			-	1,160	1,240	1,240	894	709	648	621
19	645	716			-	1,260	1,340	1,200	887	709	648	621
20	645	711			-	1,360	1,420	1,160	868	704	643	632
21	645	700			-	1,520	1,480	1,120	854	704	643	643
22	645	694			-	1,630	1,500	1,120	848	698	643	632
23	645	690			-	1,640	1,500	1,100	842	698	643	616
24	645	685			-	1,660	1,450	1,070	829	692	648	626
25	656	680			-	1,650	1,390	1,070	823	692	643	643
26	662	675			779	1,600	1,320	1,070	811	687	638	610
27	678	675			773	1,460	1,320	1,080	805	687	638	600
28	678	675			761	1,340	1,350	1,080	805	687	643	600
29	684	680			-	1,260	1,380	1,090	793	687	638	600
30	684	690			-	1,210	1,350	1,090	781	682	638	600
31	684	-			-	1,210	-	1,040	-	676	638	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	20,364	684	645	657	1.95	2.25	40,390
November	22,098	1,180	675	737	2.19	2.44	43,830
December	24,180	-	-	780	2.31	2.66	47,960
Calendar year 1938	370,557	2,330	645	1,015	3.01	40.89	735,000
January	22,785	-	-	735	2.18	2.51	45,190
February	22,120	-	-	790	2.34	2.44	43,870
March	33,256	1,660	716	1,073	3.18	3.67	65,960
April	39,730	1,500	1,120	1,324	3.93	4.38	78,800
May	37,560	1,350	1,040	1,212	3.60	4.15	74,500
June	26,582	1,010	781	886	2.63	2.93	52,720
July	22,450	799	676	724	2.15	2.48	44,530
August	20,258	676	638	653	1.94	2.24	40,180
September	18,742	648	600	625	1.85	2.06	37,170
Water year 1938-39	310,125	1,660	600	850	2.52	34.21	615,100

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

Location.- Water-stage recorder, lat. 43°20', long. 123°00', in NW¼ sec. 12, T. 26 S., R. 3 W., half a mile upstream from mouth of Rock Creek and 5 miles northeast of Glide. Zero of gage is about 770 feet above mean sea level (river profile map).

Drainage area.- 886 square miles.

Records available.- June 1924 to September 1939.

Average discharge.- 15 years, 2,269 second-feet.

Extremes.- Maximum discharge during year, 14,000 second-feet Mar. 12 (gage height, 10.06 feet); minimum, 668 second-feet Sept. 29 (gage height, 2.23 feet).
1924-39: Maximum discharge, 55,000 second-feet Feb. 20, 1927 (gage height, 20.18 feet), from rating curve extended above 18,000 second-feet; minimum, 521 second-feet Oct. 16, 1931 (gage height, 1.86 feet).

Remarks.- Records excellent except those for periods of missing gage heights, Nov. 26, Dec. 23, 24, Jan. 24-26, 28, Jan. 30 to Feb. 4, which were computed on basis of records for North Umpqua River above Toketee Falls and Umpqua River near Elkton and are fair. No diversion above station; slight regulation at Diamond Lake.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

2.2	655	4.0	1,980	7.0	6,420
2.5	805	4.5	2,490	8.0	8,630
2.8	1,000	5.0	3,060	9.3	11,800
3.2	1,300	5.5	3,750		
3.6	1,620	6.0	4,530		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	794	1,070	1,730	1,980	1,700	2,480	4,290	2,450	1,560	1,100	817	772
2	800	1,250	6,770	1,990	1,750	2,520	4,700	2,440	1,500	1,080	811	794
3	817	2,870	11,100	2,870	1,800	2,740	4,780	2,440	1,480	1,100	805	756
4	829	3,340	8,990	3,420	1,900	2,730	4,530	2,410	1,480	1,240	800	740
5	817	2,970	5,410	5,600	2,130	2,540	3,980	2,290	1,510	1,160	794	735
6	805	1,760	3,980	3,560	4,130	2,690	3,740	2,190	1,460	1,110	788	725
7	800	1,400	3,290	2,690	3,200	2,670	3,820	2,120	1,410	1,070	783	720
8	794	1,260	2,890	2,360	2,450	2,540	4,130	2,140	1,360	1,050	783	715
9	788	1,620	2,490	2,130	2,040	2,390	3,750	2,300	1,350	1,020	778	715
10	783	2,120	2,180	1,950	1,970	2,320	3,390	2,370	1,330	1,010	772	710
11	788	1,600	1,910	1,880	1,990	2,320	3,200	2,300	1,300	1,000	766	715
12	805	1,290	1,740	1,830	3,560	9,600	3,140	2,230	1,280	979	766	745
13	805	1,200	1,600	1,760	4,210	8,170	2,660	2,180	1,280	958	761	735
14	800	1,240	1,530	1,690	5,410	5,040	2,600	2,210	1,250	944	761	745
15	794	1,420	1,460	1,760	11,800	3,980	2,440	2,260	1,270	944	761	730
16	788	1,900	1,390	1,730	7,720	4,620	2,380	2,200	1,600	937	756	725
17	783	2,940	1,320	1,660	5,040	7,720	2,610	2,060	1,640	924	756	720
18	778	1,980	1,280	1,700	4,290	9,110	3,010	2,050	1,750	917	750	715
19	778	1,630	1,240	2,040	3,980	9,230	3,400	2,160	1,680	904	745	710
20	772	1,480	1,210	2,000	3,430	9,350	3,470	2,020	1,610	898	740	710
21	772	1,390	1,210	1,800	2,960	9,960	3,620	1,920	1,500	891	735	725
22	766	1,260	1,200	1,670	2,720	10,300	3,490	1,940	1,410	884	730	730
23	766	1,160	1,240	1,560	2,730	9,710	3,320	1,940	1,340	878	730	715
24	766	1,130	1,180	1,450	2,800	9,110	3,060	1,820	1,290	865	745	700
25	772	1,090	1,150	1,400	2,940	8,400	2,860	1,750	1,250	859	750	705
26	788	1,080	1,110	1,450	2,800	7,610	2,620	1,740	1,220	853	740	710
27	829	1,080	1,150	1,690	2,680	5,800	2,540	1,740	1,190	847	740	682
28	853	1,080	2,070	2,200	2,690	4,700	2,600	1,700	1,160	841	740	678
29	937	1,090	3,140	2,820	-	4,130	2,720	1,710	1,140	835	740	673
30	930	1,120	2,830	2,400	-	3,820	2,570	1,790	1,110	823	735	673
31	1,010	-	2,240	2,000	-	3,820	-	1,640	-	817	740	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	25,107	1,010	766	810	0.914	1.05	49,800
November	52,820	8,340	1,070	1,761	1.99	2.22	104,800
December	82,030	11,100	1,110	2,646	2.99	3.45	162,700
Calendar year 1938	1,050,296	20,700	766	2,878	3.25	44.10	2,083,000
January	67,040	5,600	1,400	2,163	2.44	2.81	133,000
February	96,820	11,800	1,700	3,458	3.90	4.06	192,000
March	172,120	10,300	2,320	5,552	6.27	7.23	341,400
April	99,620	4,780	2,380	3,321	3.75	4.18	197,500
May	64,510	2,450	1,640	2,081	2.35	2.71	128,000
June	41,710	1,750	1,110	1,390	1.57	1.75	82,730
July	29,738	1,240	817	959	1.08	1.24	58,980
August	23,618	817	730	762	.860	.99	46,850
September	21,623	794	673	721	.814	.91	42,890
Water year 1938-39	776,756	11,800	673	2,128	2.40	32.60	1,541,000

Peak discharge.- Dec. 2 (10 p.m.) 12,900 sec.-ft.; Dec. 3 (10 p.m.) 13,400 sec.-ft.; Feb. 15 (8 a.m.) 13,700 sec.-ft.; Mar. 12 (1:30 p.m.) 14,000 sec.-ft.

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

Location.- Water-stage recorder, lat. 43°11', long. 122°10', in SW¼ sec. 30, T. 27 S., R. 6 E., 260 feet downstream from outlet of Diamond Lake and 35 miles north of Fort Klamath. Zero of gage is about 5,180 feet above mean sea level (river profile map).

Drainage area.- 57 square miles.

Records available.- May 1922 to September 1925 (incomplete) and October 1926 to September 1939.

Average discharge.- 12 years (1926-29, 1930-39), 47.2 second-feet.

Extremes.- Maximum discharge during year, 95 second-feet Dec. 3 (gage height, 1.56 feet); minimum, 1 second-foot Apr. 7; minimum daily, 11 second-feet Oct. 1, 2.
1922-25, 1926-39: Maximum discharge observed, 146 second-feet June 1, 1925 (gage height, 2.13 feet, former site and datum); no flow Aug. 25-27, 1931.

Remarks.- Records fair except those for periods of missing gage heights, Jan. 20-25, 28-31, Feb. 2-14, 16-23, 25-28, Mar. 2-15, 17-26, May 29 to June 1, which were computed on basis of weather records and are poor. Flow regulated by operation of gates and fish racks at lake outlet and, at times, by collection of moss on rocks. No diversion for irrigation above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	37	64	55	62	69	72	44	52	35	28	21
2	11	37	75	56	64	70	70	44	52	35	28	21
3	12	43	84	57	66	72	69	45	52	36	28	21
4	12	57	78	60	66	72	68	43	51	35	28	21
5	13	57	77	62	66	70	67	46	51	34	28	21
6	13	58	74	62	70	70	40	46	50	34	28	22
7	13	58	72	61	74	70	16	45	43	34	27	22
8	13	57	69	61	72	70	21	44	31	27	27	21
9	13	61	68	60	72	68	21	47	28	26	27	21
10	13	62	66	60	74	68	22	44	28	28	28	21
11	13	63	64	58	76	68	21	48	34	28	27	21
12	13	63	63	58	76	72	23	40	37	27	28	21
13	13	63	61	57	78	76	24	47	37	27	29	21
14	13	62	60	57	80	74	16	49	36	27	30	21
15	13	62	57	56	82	72	12	50	37	27	29	25
16	13	61	57	56	80	72	12	49	40	26	29	28
17	13	61	57	57	78	72	12	55	40	26	28	27
18	13	61	56	56	76	72	13	49	40	28	28	26
19	13	60	56	56	76	72	13	54	40	27	26	32
20	13	58	55	55	74	72	14	55	39	27	25	44
21	13	58	55	54	74	76	13	44	39	27	25	50
22	13	58	55	53	72	78	14	55	39	27	24	36
23	13	57	54	52	70	80	14	57	38	27	24	31
24	19	54	54	51	69	82	15	55	38	27	23	49
25	34	56	54	51	70	82	15	56	37	28	23	42
26	34	56	54	51	74	80	16	60	36	28	22	16
27	37	57	52	54	72	79	25	55	36	28	22	15
28	41	57	55	58	70	78	46	51	36	29	22	14
29	34	56	55	68	-	77	43	51	36	31	21	15
30	34	58	55	66	-	74	43	51	36	28	22	15
31	36	-	55	64	-	73	-	52	-	28	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	562	41	11	18.1	0.318	0.37	1,110
November	1,708	63	37	56.9	.998	1.11	3,390
December	1,911	84	52	61.6	1.08	1.24	3,790
Calendar year 1938	21,429	112	3	58.7	1.03	13.97	42,510
January	1,782	68	51	57.5	1.01	1.16	3,530
February	2,033	82	62	72.6	1.27	1.32	4,030
March	2,280	82	68	73.5	1.29	1.49	4,520
April	870	72	12	29.0	.509	.57	1,730
May	1,531	60	43	49.4	.867	1.00	3,040
June	1,189	52	28	39.6	.695	.78	2,360
July	902	36	26	29.1	.511	.59	1,790
August	805	30	21	26.0	.456	.53	1,600
September	760	50	14	25.3	.444	.50	1,510
Water year 1938-39	16,333	84	11	44.7	.784	10.66	32,400

Clearwater River above Trap Creek, Oreg.

Location.- Water-stage recorder, lat. 43°15', long. 122°17', in SE¼ sec. 1, T. 27 S., R. 4 E., 150 yards upstream from mouth of Trap Creek and 40 miles east of Glide. Zero of gage is about 3,760 feet above mean sea level (river profile map).

Drainage area.- 40 square miles.

Records available.- October 1927 to September 1939.

Average discharge.- 11 years (1928-39), 142 second-feet.

Extremes.- Maximum discharge during year, 226 second-feet Apr. 22-24 (gage height, 1.07 feet); minimum, 126 second-feet Sept. 25-30.
1927-39: Maximum discharge, 380 second-feet June 9, 1933 (gage height, 2.02 feet), from rating curve extended above 200 second-feet; minimum, 91 second-feet Nov. 4-6, 27, Dec. 12, 29, 1931, Jan. 3, 1932.

Remarks.- Records good except those for periods of missing gage heights, Jan. 4 to Feb. 24, June 21-28, which were computed on basis of recorded range of stage, weather records, and records for North Umpqua River below Lake Creek and are fair. No diversion or regulation above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	141	145	143	145	135	140	167	205	177	150	136	131
2	141	143	154	145	135	140	171	207	177	150	136	129
3	143	159	165	146	136	140	175	207	175	150	136	129
4	143	183	161	146	136	140	177	205	173	152	136	129
5	141	148	156	146	136	140	177	202	171	148	136	129
6	141	143	154	145	137	138	179	200	169	146	136	129
7	141	143	156	144	137	138	181	200	169	146	134	129
8	141	141	154	143	137	140	187	202	167	145	134	129
9	141	141	150	143	138	138	191	207	169	145	134	129
10	141	141	148	142	137	138	191	209	171	145	134	129
11	141	140	148	142	138	140	191	207	171	143	134	133
12	141	140	146	141	140	141	191	207	171	143	134	129
13	143	140	146	141	142	140	187	207	171	143	134	129
14	143	140	146	140	144	140	185	209	171	143	133	128
15	143	140	148	140	148	140	185	211	171	141	133	128
16	143	143	148	139	146	140	185	207	169	141	133	128
17	143	145	146	139	145	140	187	202	167	141	133	128
18	143	143	146	138	143	141	194	200	165	141	133	128
19	143	141	146	138	142	143	200	194	165	141	133	128
20	143	141	145	137	141	146	209	189	165	141	133	128
21	141	140	145	137	141	150	219	187	163	140	131	128
22	143	140	145	136	140	154	221	185	161	140	131	128
23	141	141	145	135	140	158	226	183	159	140	131	128
24	141	140	143	135	140	161	219	181	157	140	133	128
25	141	140	145	134	140	165	211	183	156	140	131	126
26	143	140	143	134	140	167	207	183	155	138	131	126
27	145	140	143	135	140	167	207	185	154	138	131	126
28	146	140	145	137	140	165	209	187	153	138	131	126
29	146	141	145	136	-	165	209	187	152	138	131	126
30	145	143	145	136	-	165	205	187	152	138	131	126
31	143	-	143	135	-	165	-	179	-	138	131	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	4,415	146	141	142	3.55	4.09	8,760
November	4,305	183	140	144	3.60	4.02	8,540
December	4,593	165	143	148	3.70	4.27	9,110
Calendar year 1938	60,990	305	140	167	4.18	56.73	121,000
January	4,330	146	134	140	3.50	4.04	8,590
February	3,914	148	135	140	3.50	3.64	7,760
March	4,585	167	138	148	3.70	4.27	9,090
April	5,843	226	167	195	4.88	5.44	11,590
May	6,104	211	179	197	4.92	5.67	12,110
June	4,966	177	152	166	4.15	4.63	9,850
July	4,423	152	138	143	3.58	4.13	8,770
August	4,128	136	131	133	3.32	3.83	8,190
September	3,847	133	126	128	3.20	3.57	7,630
Water year 1938-39	55,453	226	126	152	3.80	51.60	110,000

South Fork of Coquille River at Powers, Oreg.

Location.- Water-stage recorder, lat. 42°54', long. 124°04', in SE¼ sec. 12, T. 31 S., R. 12 W., half a mile northeast of bridge at Powers and three-quarters of a mile upstream from Woodward Creek. Zero of gage is about 200 feet above mean sea level (river profile map). Prior to Nov. 17, 1938, wire-weight gage at bridge at Powers, at different datum.

Drainage area.- 169 square miles.

Records available.- October 1928 to September 1939. September 1916 to September 1926, at site 1 mile upstream.

Average discharge.- 20 years (1916-26, 1929-39), 699 second-feet.

Extremes.- Maximum discharge during year, 11,100 second-feet Dec. 2 (gage height, 12.06 feet), from rating curve extended above 4,200 second-feet on basis of rating for wire-weight gage; minimum, 12 second-feet Sept. 22-25, 27-30; minimum gage height, 1.07 feet Sept. 23, 24, 28, 29.

1916-26, 1928-39: Maximum discharge, 25,300 second-feet Oct. 31, 1924 (gage height, 17.5 feet, former site and datum), from rating curve extended above 12,000 second-feet; minimum, that of Sept. 22-25, 27-30, 1939.

Remarks.- Records good except those for period of faulty gage heights, which are fair. No diversion or regulation above gage. Wire-weight gage read once daily.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	635	1,460	448	1,120	737	517	109	55	45	19	29
2	17	830	6,960	1,120	1,120	782	513	103	53	43	19	28
3	*19	442	4,520	1,600	1,490	1,090	472	100	51	47	18	23
4	*22	4,010	2,310	2,120	1,460	1,120	420	98	56	49	18	21
5	*25	1,140	1,530	3,080	1,600	1,060	372	96	59	48	18	19
6	*22	635	1,090	1,800	4,260	1,230	345	92	58	45	18	18
7	*20	380	828	1,270	2,500	1,270	322	88	54	41	18	17
8	*19	322	651	1,270	1,680	1,200	304	87	50	39	18	16
9	*18	420	537	1,160	1,230	1,020	280	84	49	37	18	16
10	*19	890	458	943	1,380	894	257	84	49	37	18	16
11	*21	770	395	770	1,460	1,320	244	81	47	36	18	16
12	*26	535	356	633	2,400	7,410	244	78	45	34	18	18
13	*30	380	319	537	2,130	4,520	228	74	43	33	18	20
14	*26	340	290	472	1,840	2,600	210	72	41	33	17	18
15	*23	305	273	450	3,300	1,840	196	72	42	33	16	16
16	*21	340	250	416	2,650	1,640	187	71	120	36	16	16
17	*20	391	228	368	1,840	2,000	179	72	151	33	16	15
18	19	352	216	352	1,530	2,180	171	72	118	32	16	14
19	18	304	207	383	1,340	1,960	164	71	100	30	16	14
20	18	264	196	345	1,120	1,800	156	71	85	28	16	14
21	17	225	210	319	936	1,800	144	74	76	27	16	13
22	17	199	216	304	808	1,760	139	81	71	26	18	13
23	19	182	190	280	750	1,600	139	85	67	24	17	13
24	27	161	182	264	731	1,380	137	75	60	23	16	12
25	25	151	179	244	763	1,160	139	71	58	23	16	13
26	25	137	177	241	756	1,020	131	68	55	22	16	13
27	30	131	184	1,120	744	834	122	64	54	22	16	13
28	37	122	412	2,360	802	681	116	60	50	22	17	13
29	189	161	467	2,310	-	578	116	59	48	20	19	12
30	178	485	416	2,000	-	522	114	58	47	19	18	13
31	166	-	364	1,490	-	508	-	56	-	19	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,150	189	17	37.1	0.220	0.25	2,280
November	15,639	4,010	122	521	3.08	3.44	31,020
December	26,071	6,960	177	841	4.98	5.74	51,710
Calendar year 1938	363,743	11,900	16	997	5.90	80.05	721,600
January	30,469	3,080	241	983	5.82	6.71	60,430
February	43,740	4,260	731	1,562	9.24	9.62	86,760
March	49,516	7,410	508	1,597	9.45	10.90	98,210
April	7,078	517	114	236	1.40	1.56	14,040
May	2,426	109	56	78.3	.463	.53	4,810
June	1,912	151	41	63.7	.377	.42	3,790
July	1,006	49	19	32.5	.192	.22	2,000
August	538	20	16	17.4	.103	.12	1,070
September	/2	29	12	16.4	.097	.11	976
Water year 1938-39	180,037	7,410	12	493	2.92	39.62	357,100

Peak discharge.- Dec. 2 (4:45 p.m.) 11,100 sec.-ft.; Mar. 12 (9 a.m.) 9,990 sec.-ft.
*Gage height faulty; discharge computed on basis of records for North and Middle Forks near Myrtle Point.

Middle Fork of Coquille River near Myrtle Point, Oreg.

Location.- Water-stage recorder, lat. 43°02', long. 124°05', in S½ sec. 26, T. 29 S., R. 12 W., a third of a mile downstream from Indian Creek and 3¾ miles southeast of Myrtle Point. Zero of gage is 41.20 feet above mean sea level (general adjustment of 1929).

Drainage area.- 305 square miles.

Records available.- October 1930 to September 1939.

Extremes.- Maximum discharge during year, 9,500 second-feet Mar. 12 (gage height, 16.12 feet); minimum, 5.9 second-feet Sept. 25, 26, 30 (gage height, 1.64 feet).
1930-39: Maximum discharge, 22,600 second-feet Jan. 2, 1933 (gage height, 22.5 feet), from rating curve extended above 9,000 second-feet; minimum daily, 1 second-foot July 16, 17, 1931.
Maximum stage known, 25.8 feet, probably Oct. 31, 1924.

Remarks.- Records good except those for periods of missing gage heights, which are fair. Flow regulated completely during low-water periods and to some extent at other times by logging ponds above station. No diversion above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.6	5.0	3.5	127	9.0	2,110
1.8	10	4.0	202	11.0	3,600
2.1	19	5.0	400	13.0	5,520
2.5	36	6.0	665	15.0	7,960
3.0	73	7.0	1,060		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	231	515	*600	1,930	970	346	103	73	43	16	44
2	12	562	2,600	*1,300	1,870	1,120	336	99	54	40	16	48
3	16	949	4,800	*1,800	2,880	1,930	326	94	47	72	16	18
4	19	5,000	3,520	*2,400	3,200	2,370	305	92	55	58	15	16
5	94	1,870	1,990	*3,500	3,280	2,110	275	88	73	55	14	12
6	42	890	1,340	1,750	7,700	2,110	266	85	72	50	46	10
7	18	566	970	1,290	5,520	2,230	246	83	59	43	17	9.2
8	14	484	790	1,440	3,360	1,990	246	80	55	39	15	8.3
9	13	1,010	648	1,340	2,230	1,690	228	78	48	77	13	7.8
10	13	2,190	540	1,150	2,440	1,440	210	78	52	34	12	7.0
11	14	1,690	467	910	2,960	1,290	185	75	48	34	10	7.2
12	16	1,040	422	752	4,940	6,680	237	71	43	34	9.7	7.5
13	21	735	378	600	5,410	5,630	246	60	41	32	9.4	8.0
14	18	615	346	503	4,900	3,780	219	62	39	31	9.2	8.3
15	16	540	326	585	6,550	2,370	192	62	39	31	8.6	8.6
16	14	491	305	452	4,900	1,870	177	62	118	37	8.0	8.0
17	13	600	266	496	2,960	1,870	168	63	166	36	7.8	7.2
18	12	540	*250	315	2,110	1,750	162	62	154	32	7.8	7.0
19	11	467	237	510	1,690	1,540	154	72	131	62	7.5	7.2
20	11	411	*230	455	1,390	1,290	148	72	119	32	7.5	7.0
21	11	357	*240	210	1,100	1,180	140	73	93	27	7.2	6.8
22	10	315	*260	543	930	1,080	135	74	81	22	7.2	6.8
23	12	275	*235	315	830	930	134	75	76	21	7.2	6.3
24	13	246	*220	168	790	790	134	69	65	21	7.2	6.1
25	17	228	*210	219	790	682	137	65	61	20	7.8	5.9
26	17	207	*210	527	830	600	127	64	57	19	8.6	5.9
27	16	190	*220	465	810	528	120	62	52	19	9.4	6.3
28	19	175	*500	3,340	1,060	456	113	58	50	18	10	6.5
29	68	172	*735	3,200	-	422	113	56	49	18	9.7	6.3
30	94	216	*580	3,280	-	389	111	57	47	18	12	6.1
31	144	-	*450	2,720	-	357	-	54	-	17	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	820	144	10	26.5	0.087	0.10	1,630
November	23,262	5,000	172	775	2.54	2.83	46,140
December	24,800	4,800	210	800	2.62	3.02	49,190
Calendar year 1938	384,465	15,800	10	1,053	3.45	46.90	762,500
January	37,135	3,500	168	1,198	3.93	4.53	73,660
February	79,360	7,700	790	2,834	9.29	9.67	157,400
March	53,444	6,680	557	1,724	5.65	6.51	106,000
April	5,936	346	111	198	.649	.72	11,770
May	2,248	103	54	72.5	.238	.27	4,460
June	2,117	166	39	70.6	.231	.26	4,200
July	1,092	77	17	35.2	.115	.13	2,170
August	364.8	46	7.2	11.8	.039	.04	724
September	319.3	48	5.9	10.6	.035	.04	633
Water year 1938-39	230,898.1	7,700	5.9	633	2.08	28.12	458,000

Peak discharge.- Nov. 4 (12 m.) 6,920 sec.-ft.; Dec. 3 (1 a.m.) 5,410 sec.-ft.; Feb. 6 (1:30 p.m.) 8,660 sec.-ft.; Feb. 12 (11:30 p.m.) 6,430 sec.-ft.; Feb. 15 (4 p.m.) 7,700 sec.-ft.; Mar. 12 (2-3 p.m.) 9,500 sec.-ft.

*Gage height missing; discharge computed on basis of records for South Fork at Powers and North Fork near Myrtle Point.

North Fork of Coquille River near Myrtle Point, Oreg.

Location.- Water-stage recorder, lat. 43°06', long. 124°04', in NW¼ sec. 36, T. 28 S., R. 12 W., a quarter of a mile downstream from East Fork and 4½ 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 1939. Prior to October 1930, at site 3½ miles downstream.

Average discharge.- 10 years (1929-39), 891 second-feet.

Extremes.- Maximum discharge during year, 7,630 second-feet Feb. 6 (gage height, 30.72 feet); minimum, 15 second-feet Sept. 26, 27.
1928-39: Maximum discharge, 10,400 second-feet Jan. 3, 1933 (gage height, 35.7 feet); minimum, 14 second-feet Sept. 3, 1938.
Maximum stage known, 41.2 feet sometime during winter of 1909-10.

Remarks.- Records fair. No diversion above gage. Flow partly regulated by operation of logging ponds above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.4	13	3.0	114	6.0	524	19.0	3,630
1.7	26	3.5	166	8.0	890	24.0	5,210
2.0	41	4.0	226	10.0	1,305	28.0	6,610
2.5	73	5.0	365	14.0	2,250	30.0	7,360

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	307	350	1,260	2,380	1,050	458	172	55	73	81	26
2	30	795	1,380	2,180	1,950	1,220	426	160	130	71	40	36
3	34	1,060	5,580	2,380	2,700	1,930	410	155	81	88	36	38
4	48	5,690	5,310	2,480	3,200	2,560	395	150	105	129	26	36
5	51	3,990	3,630	3,120	3,480	2,560	365	144	177	134	22	34
6	40	1,420	2,510	2,700	6,830	2,510	350	139	166	110	22	79
7	34	814	1,760	1,900	7,060	2,950	335	134	120	90	25	64
8	31	610	1,260	1,740	5,580	2,780	321	129	114	67	30	51
9	30	899	1,010	1,550	4,020	2,300	307	124	100	74	30	45
10	31	2,430	852	1,330	3,930	1,880	293	121	76	72	31	24
11	38	2,250	738	1,110	4,430	1,620	286	116	73	71	31	21
12	55	1,580	664	970	4,590	4,350	300	117	82	70	31	20
13	74	1,070	610	852	5,520	6,320	350	105	86	67	32	20
14	52	833	558	776	5,310	5,010	300	106	78	64	32	20
15	46	700	524	719	6,870	3,510	272	106	84	60	33	20
16	40	628	474	700	6,940	2,480	258	78	189	62	34	20
17	35	852	442	628	4,980	2,000	246	88	410	72	32	20
18	34	738	410	628	3,400	1,740	232	105	279	66	30	21
19	30	646	395	682	2,480	1,530	220	129	226	60	28	20
20	28	558	380	646	1,930	1,300	213	155	195	58	27	19
21	26	507	410	592	1,550	1,130	207	144	166	56	26	18
22	26	458	490	558	1,280	1,010	195	134	91	54	26	17
23	26	410	395	541	1,110	910	195	134	102	51	26	17
24	32	380	365	507	1,010	814	195	124	103	51	26	17
25	44	350	350	474	970	738	213	94	97	49	26	16
26	45	328	350	458	1,010	682	207	111	91	48	26	15
27	43	307	365	664	970	628	189	105	86	46	26	15
28	60	286	1,350	2,510	1,130	592	177	96	83	45	25	16
29	166	286	3,000	3,170	-	541	177	92	79	45	25	19
30	220	300	2,120	3,200	-	507	177	139	76	44	26	21
31	286	-	1,510	2,950	-	474	-	172	-	43	24	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	1,766	286	26	57.0	0.207	0.24	3,500
November	31,482	5,690	286	1,049	3.80	4.24	62,440
December	39,542	5,580	350	1,276	4.62	5.33	78,430
Calendar year 1938	419,923	9,160	16	1,150	4.17	56.58	832,900
January	43,975	3,200	458	1,419	5.14	5.93	87,220
February	96,610	7,060	970	3,450	12.5	13.02	191,600
March	59,626	6,320	474	1,923	6.97	8.04	118,300
April	8,269	458	177	276	1.00	1.12	16,400
May	3,878	172	78	125	.453	.52	7,690
June	3,800	410	55	127	.460	.51	7,540
July	2,090	134	43	67.4	.244	.28	4,150
August	935	81	22	30.2	.109	.13	1,850
September	805	79	15	26.8	.097	.11	1,600
Water year 1938-39	292,778	7,060	15	802	2.91	39.47	580,700

Peak discharge.- Nov. 4 (4 p.m.) 6,390 sec.-ft.; Dec. 3 (10 a.m.) 5,940 sec.-ft.; Feb. 6 (9 p.m.) 7,630 sec.-ft.; Feb. 15 (11 p.m.) 7,480 sec.-ft.; Mar. 13 (4 a.m.) 6,610 sec.-ft.

Rogue River above Bybee Creek, Oreg.

Location.- Water-stage recorder, lat. 42°56', long. 122°26', in NE¼ sec. 26, T. 30 S., R. 3 E., 700 feet upstream from Bybee Creek and 2 miles northeast of Union Creek. Zero of gage is about 3,465 feet above mean sea level (river profile map).

Drainage area.- 118 square miles.

Records available.- January 1930 to September 1939.

Extremes.- Maximum discharge during year, 1,870 second-feet Nov. 4 (gage height, 4.54 feet); minimum, 260 second-feet Feb. 6, Sept. 27, 29, 30 (gage height, 1.18 feet). 1930-39: Maximum discharge, 4,460 second-feet June 9, 1933 (gage height, 7.68 feet), from rating curve extended above 2,000 second-feet; minimum daily, 180 second-feet (estimated) Jan. 7, 1937 (gage height affected by ice).

Remarks.- Records good except those for periods of missing gage heights, Jan. 24, Mar. 21 to Apr. 8, Aug. 25 to Sept. 24, which were computed on basis of records for station above Prospect and are fair. No diversion or regulation above station. Water-stage recorder inspected by employee of The California Oregon Power Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.1	240	1.7	415	2.8	890
1.2	265	2.0	530	3.2	1,090
1.4	320	2.4	705	3.6	1,310

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	317	368	422	365	320	335	800	855	546	356	293	276
2	317	344	498	377	347	341	900	875	530	353	293	278
3	365	670	1,190	450	362	341	940	890	522	377	290	272
4	341	1,290	1,160	415	365	332	930	870	514	408	288	276
5	323	538	890	404	338	329	900	822	506	371	288	272
6	320	422	736	380	296	332	880	795	490	362	288	270
7	317	387	723	377	288	326	900	795	474	350	285	270
8	317	374	682	377	350	329	940	845	466	347	285	272
9	314	380	610	368	359	323	915	925	466	344	285	270
10	314	371	558	365	344	320	850	960	462	344	282	268
11	320	353	514	365	374	326	840	905	450	338	282	270
12	317	347	478	359	380	390	818	875	443	332	282	285
13	317	347	462	356	380	362	741	860	440	329	280	282
14	317	344	446	356	368	341	696	870	429	329	280	285
15	317	350	432	359	474	347	687	885	436	326	280	280
16	311	377	418	353	394	371	710	840	498	326	278	285
17	311	408	408	356	374	418	782	786	490	323	278	280
18	311	371	398	356	368	506	890	759	482	317	278	277
19	308	359	390	356	362	574	1,000	732	470	317	275	275
20	308	353	387	347	353	660	1,060	687	446	314	275	273
21	305	344	387	344	350	780	1,130	678	426	311	272	270
22	305	341	374	344	347	860	1,110	692	415	311	272	268
23	308	338	368	341	350	950	1,090	638	408	308	278	266
24	311	335	362	325	347	960	990	615	398	305	290	265
25	308	332	362	335	350	950	900	620	387	302	280	262
26	308	332	356	338	344	920	845	624	380	302	275	262
27	338	329	362	356	344	840	870	628	377	299	272	262
28	317	332	374	350	338	760	905	628	371	305	276	262
29	353	344	380	347	-	720	925	642	365	299	278	260
30	344	377	380	344	-	700	860	633	362	296	272	262
31	350	-	368	338	-	720	-	574	-	293	270	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	9,929	365	305	320	2.71	3.12	19,690
November	12,157	1,290	329	405	3.43	3.83	24,110
December	15,875	1,190	356	512	4.34	5.00	31,490
Calendar year 1938	207,798	1,730	305	569	4.82	65.46	412,200
January	11,203	450	325	361	3.06	3.53	22,220
February	9,966	474	288	356	3.02	3.14	19,770
March	16,763	960	320	541	4.58	5.28	33,250
April	26,804	1,130	687	893	7.57	8.45	53,160
May	23,803	960	574	768	6.51	7.50	47,210
June	13,449	546	362	448	3.80	4.24	26,680
July	10,194	408	293	329	2.79	3.22	20,220
August	8,700	293	270	281	2.38	2.74	17,260
September	8,155	285	260	272	2.31	2.58	16,180
Water year 1938-39	166,998	1,290	260	458	3.88	52.63	331,200

Peak discharge.- Nov. 4 (8:30 a.m.) 1,870 sec.-ft.; Dec. 3 (8 p.m.) 1,710 sec.-ft.

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Rogue River above Prospect, Oreg.

Location.- Water-stage recorder, lat. 42°47', long. 122°30', in NE¼ sec. 19, T. 32 S., R. 3 E., 1½ miles upstream from intake of diversion of The California Oregon Power Co., 2 miles northwest of Prospect, and 3 miles upstream from Mill Creek. Zero of gage is about 2,620 feet above mean sea level (river profile map).

Drainage area.- 332 square miles.

Records available.- July 1907 to February 1912 (incomplete), October 1923 to September 1939.

Average discharge.- 17 years (1910-11, 1923-39), 702 second-feet.

Extremes.- Maximum discharge during year, 3,510 second-feet Dec. 3 (gage height, 4.44 feet); minimum, 324 second-feet Sept. 28-30 (gage height, 1.42 feet).
1907-12, 1923-39: Maximum discharge, 9,300 second-feet (estimated) Nov. 22, 1909 (gage height, about 7.0 feet, former datum); minimum observed, 200 second-feet Nov. 20, 1931 (gage height, 1.07 feet).

Remarks.- Records good. Discharge for period of missing gage heights, Jan. 14-19, computed on basis of records for stations above Bybee Creek and at Dodge Bridge. No diversion or regulation above station. Water-stage-recorder graph furnished by The California Oregon Power Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.4	315	2.2	795	3.5	2,150
1.6	410	2.6	1,140	4.0	2,850
1.8	520	3.0	1,550		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	416	504	701	544	460	532	1,540	1,330	763	482	380	351
2	416	470	1,070	568	482	538	1,710	1,340	731	476	375	351
3	482	846	2,760	723	504	538	1,830	1,360	715	492	370	342
4	465	2,290	2,410	694	526	526	1,800	1,330	708	556	370	346
5	432	900	1,720	694	504	514	1,640	1,260	701	504	370	342
6	426	638	1,350	638	465	514	1,580	1,200	680	487	365	342
7	416	562	1,280	619	432	504	1,660	1,180	659	470	365	342
8	416	532	1,180	619	454	504	1,800	1,240	645	460	365	346
9	410	544	1,040	593	476	498	1,700	1,350	638	454	365	338
10	410	526	926	568	443	492	1,550	1,400	632	454	365	338
11	416	492	819	562	492	492	1,530	1,320	619	448	360	342
12	416	465	747	556	509	715	1,470	1,280	612	438	360	360
13	410	470	694	544	509	715	1,310	1,260	606	426	360	356
14	410	470	687	540	520	632	1,200	1,270	586	426	360	360
15	410	476	666	535	708	586	1,170	1,270	586	426	360	351
16	410	498	632	540	687	666	1,210	1,230	680	426	360	356
17	405	612	606	560	632	575	1,340	1,130	680	421	356	351
18	405	544	586	540	626	1,190	1,530	1,090	659	416	356	346
19	405	520	574	545	612	1,400	1,740	1,050	645	410	351	342
20	400	509	562	526	586	1,620	1,830	996	619	410	346	336
21	400	482	556	509	574	1,910	1,920	960	593	405	346	338
22	400	465	538	509	563	2,140	1,860	1,000	568	400	342	338
23	400	465	532	504	568	2,230	1,840	926	556	400	346	333
24	405	465	520	476	568	2,250	1,650	875	538	395	375	333
25	405	460	514	498	562	2,250	1,460	867	532	395	356	328
26	405	460	509	504	562	2,120	1,340	875	520	395	346	328
27	443	460	514	544	556	1,760	1,370	884	509	390	342	328
28	416	460	532	532	550	1,550	1,420	875	504	390	346	324
29	465	482	550	532	-	1,420	1,470	884	492	385	351	324
30	448	520	568	526	-	1,350	1,360	900	487	385	346	324
31	470	-	550	514	-	1,380	-	811	-	380	346	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	13,033	482	400	420	1.27	1.46	25,850
November	17,587	2,290	460	586	1.77	1.98	34,880
December	26,893	2,760	509	868	2.61	3.01	53,340
Calendar year 1938	350,285	3,380	400	960	2.89	39.26	694,800
January	17,356	723	476	560	1.69	1.95	34,430
February	15,135	708	432	541	1.63	1.70	30,020
March	34,411	2,250	492	1,110	3.34	3.85	68,250
April	46,830	1,920	1,170	1,561	4.70	5.24	92,890
May	34,743	1,400	811	1,121	3.38	3.90	68,910
June	18,463	763	487	615	1.85	2.06	36,620
July	15,402	556	380	432	1.30	1.50	26,580
August	11,101	380	342	358	1.08	1.24	22,020
September	10,238	360	324	341	1.03	1.15	20,310
Water year 1938-39	259,192	2,760	324	710	2.14	29.04	514,100

Peak discharge.- Nov. 4 (10 a.m.) 3,030 sec.-ft.; Dec. 3 (9 p.m.) 3,510 sec.-ft.

Rogue River below South Fork of Rogue River near Prospect, Oreg.

Location.- Water-stage recorder, lat. 42°42', long. 122°36', 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 (river profile map).

Drainage area.- 643 square miles.

Records available.- April 1929 to September 1939.

Average discharge.- 10 years, 1,533 second-feet.

Extremes.- Maximum discharge during year, 7,400 second-feet Dec. 3 (gage height, 5.85 feet); minimum, 638 second-feet Sept. 16 (gage height, 0.23 foot); minimum daily, 842 second-feet Sept. 28.

1929-39: Maximum discharge, about 12,600 second-feet Mar. 19, 1932 (gage height, 8.7 feet), from rating curve extended above 5,700 second-feet; minimum gage height and minimum daily discharge not determined, as stage falls too low at times to be recorded.

Remarks.- Records good except those for periods of faulty or missing gage heights, which are fair. Minor diversions for irrigation above station. Considerable diurnal fluctuation caused by operation of power plant 4 miles upstream. Water-stage-recorder graph furnished by The California Oregon Power Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.5	800	2.0	2,020	4.0	4,570
.7	930	2.5	2,560	4.5	5,320
1.0	1,140	3.0	3,180		
1.5	1,550	3.5	3,860		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,040	1,190	1,400	1,200	1,130	1,300	2,970	2,570	1,790	1,220	1,000	902
2	1,030	1,160	1,870	1,220	1,160	1,280	3,210	2,630	1,770	1,200	1,000	*920
3	1,070	1,540	5,200	1,410	1,200	1,280	3,410	2,630	1,710	1,200	1,000	*920
4	1,080	4,240	5,140	1,450	1,230	1,300	3,400	2,580	1,680	1,380	1,000	*915
5	1,030	*2,100	3,510	1,540	1,230	1,260	3,180	2,500	1,690	1,330	965	*900
6	1,080	*1,600	2,680	1,430	1,230	1,280	3,080	2,370	1,640	1,240	972	*915
7	1,040	*1,300	2,400	1,400	1,170	1,260	3,150	2,360	1,580	1,200	986	*905
8	1,020	*1,200	2,250	1,370	1,150	1,280	3,380	2,450	1,560	1,160	986	*900
9	1,010	*1,250	2,000	1,360	1,180	1,230	3,190	2,610	1,570	1,150	1,010	*880
10	1,040	*1,300	1,810	1,320	1,140	1,230	2,980	2,740	1,550	1,150	958	*880
11	1,020	*1,240	1,650	1,280	1,200	1,240	2,960	2,620	1,520	1,140	958	*890
12	1,050	*1,160	1,550	1,280	1,270	1,800	2,850	2,540	1,530	1,110	951	*910
13	1,040	*1,120	1,460	1,230	1,270	1,930	2,580	2,480	1,500	1,100	951	*920
14	1,040	*1,140	1,440	1,230	1,360	1,660	2,410	2,500	1,470	1,110	937	*930
15	1,030	*1,160	1,420	*1,200	1,810	1,600	2,330	2,560	1,460	1,070	958	*910
16	1,000	*1,260	1,360	*1,200	1,720	1,660	2,280	2,500	1,600	1,090	944	874
17	1,040	*1,350	1,330	*1,220	*1,500	1,960	2,330	2,360	1,600	1,080	944	888
18	1,030	*1,300	1,290	*1,200	*1,440	2,460	2,800	2,280	1,570	1,070	951	881
19	1,020	1,160	1,280	*1,210	*1,400	2,800	3,140	2,220	1,550	1,060	930	860
20	*1,010	1,160	1,250	*1,170	*1,350	3,130	3,280	2,120	1,520	1,040	916	867
21	1,010	1,130	1,240	*1,150	*1,300	3,640	3,510	2,060	1,440	1,060	930	860
22	993	1,100	1,220	*1,130	*1,260	4,030	3,450	2,120	1,400	1,040	916	874
23	1,000	1,100	1,200	*1,120	*1,340	4,200	3,510	2,010	1,390	1,040	923	867
24	1,000	1,100	1,170	*1,110	1,380	4,170	3,180	1,940	1,340	1,040	972	860
25	1,000	1,100	1,130	*1,100	1,370	4,200	2,860	1,900	1,320	1,030	944	860
26	1,000	1,080	1,150	1,100	1,320	4,070	2,680	1,940	1,330	1,030	930	860
27	1,040	1,080	1,180	1,190	1,330	3,510	2,700	1,960	1,290	1,040	909	854
28	1,010	1,100	1,200	1,270	1,330	3,140	2,780	1,950	1,270	1,030	930	842
29	1,050	1,100	1,240	1,260	-	2,910	2,840	2,020	1,270	1,020	923	860
30	1,060	1,130	1,240	1,260	-	2,760	2,640	2,030	1,250	1,010	909	848
31	1,140	-	1,210	1,240	-	2,760	-	1,890	-	1,000	902	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	32,023	1,140	993	1,033	1.61	1.86	63,520
November	39,950	4,240	1,080	1,332	2.07	2.31	79,240
December	55,470	5,200	1,130	1,789	2.78	3.20	110,000
Calendar year 1938	774,533	7,000	993	2,122	3.30	44.82	1,536,000
January	38,850	1,540	1,100	1,253	1.95	2.25	77,060
February	36,770	1,810	1,130	1,313	2.04	2.12	72,930
March	72,330	4,200	1,230	2,333	3.63	4.18	143,500
April	89,260	3,510	2,280	2,975	4.63	5.17	177,000
May	71,440	2,740	1,890	2,305	3.58	4.13	141,700
June	45,160	1,790	1,250	1,505	2.34	2.61	89,570
July	34,440	1,380	1,000	1,111	1.73	1.99	68,310
August	29,505	1,010	902	952	1.48	1.71	58,520
September	26,552	930	842	885	13.8	1.54	52,670
Water year 1938-39	571,750	5,200	842	1,566	2.44	33.07	1,134,000

Peak discharge.- Nov. 4 (11 a.m.) 5,740 sec.-ft.; Dec. 3 (8 p.m.) 7,400 sec.-ft.

*Gage heights faulty or missing; discharge computed on basis of records for stations above Prospect and at Dodge Bridge.

Rogue River at Dodge Bridge, near Eagle Point, Oreg.

Location.- Water-stage recorder, lat. 42°31'30", long. 122°50'30", in SE¼ sec. 17, T. 35 S., R. 1 W., at Dodge Bridge, 0.6 mile downstream from Reese Creek and 4½ miles northwest of Eagle Point. Zero of gage is 1,273.66 feet above mean sea level (general adjustment of 1929). Prior to Dec. 21, 1938, staff gage at same site and datum.

Records available.- October 1938 to September 1939.

Extremes.- Maximum discharge during year, 11,800 second-feet Mar. 12 (gage height, 5.84 feet); minimum, 742 second-feet Sept. 16 (gage height, 1.12 feet); minimum daily, 950 second-feet Sept. 5. Peak discharge on Dec. 3 may have exceeded that on Mar. 12.

Remarks.- Records excellent except those for period Oct. 1 to Dec. 20, which are fair. Many small diversions for irrigation above station; most of flow of Big Butte Creek is diverted near Butte Falls. Diurnal fluctuation caused by operation of power plant about 30 miles upstream.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.3	950	2.6	2,920	4.5	7,360
1.6	1,340	3.0	3,660	5.0	8,920
1.9	1,770	3.5	4,730	5.5	10,590
2.2	2,240	4.0	5,960		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1,200	1,280	1,880	1,610	1,800	2,240	3,960	2,960	2,030	1,370	1,060	974
2	*1,150	1,340	3,210	1,680	1,770	2,260	4,200	2,940	1,970	1,350	1,050	998
3	*1,250	1,400	10,300	2,130	1,900	2,380	4,370	2,960	1,920	1,370	1,030	998
4	*1,300	5,250	†7,500	2,660	2,030	2,340	4,390	2,920	1,900	1,520	1,030	986
5	*1,250	2,550	4,410	3,820	2,210	2,240	4,090	2,830	1,970	1,580	1,010	950
6	*1,250	1,840	3,580	2,590	3,380	2,350	3,880	2,690	1,890	1,440	1,030	986
7	*1,200	†1,500	3,150	2,210	2,570	2,260	3,900	2,620	1,830	1,400	1,060	974
8	*1,160	†1,300	2,940	2,140	2,190	2,220	4,090	2,690	1,800	1,340	1,070	974
9	*1,150	†1,350	2,570	2,080	2,060	2,160	3,960	2,830	1,780	1,310	1,020	962
10	*1,170	†1,450	2,350	1,940	2,000	2,130	3,720	2,960	1,770	1,310	1,050	962
11	*1,150	†1,350	†2,150	1,840	2,110	2,130	3,620	2,880	1,740	1,310	986	974
12	*1,200	1,280	1,980	1,820	3,240	7,250	3,510	2,790	1,720	1,260	998	998
13	*1,180	1,150	1,890	1,740	3,050	7,170	3,280	2,720	1,700	1,240	1,020	1,010
14	*1,170	1,300	1,860	1,710	3,680	4,370	3,030	2,720	1,680	1,230	998	1,030
15	*1,160	1,330	1,800	1,700	5,130	3,600	2,920	2,780	1,650	1,230	1,020	998
16	*1,150	1,370	1,770	1,680	4,430	3,780	2,850	2,720	1,780	1,230	1,010	986
17	*1,150	1,640	1,740	1,710	3,530	4,780	2,970	2,570	1,860	1,190	998	974
18	*1,140	1,560	1,700	1,680	3,260	5,650	3,210	2,540	1,820	1,170	998	986
19	*1,140	1,400	†1,650	1,700	3,100	5,960	3,530	2,710	1,780	1,170	998	974
20	*1,130	†1,280	†1,600	1,650	2,850	6,150	3,680	2,470	1,720	1,170	986	962
21	*1,130	1,230	1,540	1,610	2,600	6,610	3,860	2,400	1,650	1,160	998	986
22	*1,120	1,230	1,560	1,550	2,500	6,980	3,660	2,550	1,610	1,140	986	986
23	*1,120	1,260	1,540	1,540	2,590	6,840	3,990	2,540	1,550	1,120	974	974
24	*1,110	†1,230	1,510	1,510	2,660	6,560	3,700	2,300	1,520	1,120	1,020	974
25	*1,120	1,200	1,450	1,510	2,640	6,360	3,360	2,220	1,480	1,110	998	986
26	*1,130	1,260	1,470	1,480	2,470	6,040	3,120	2,220	1,490	1,100	974	986
27	1,140	†1,240	1,490	1,830	2,450	5,220	3,060	2,220	1,450	1,080	974	974
28	1,190	1,230	1,560	2,420	2,380	4,570	3,140	2,180	1,420	1,070	986	974
29	1,240	1,230	1,650	2,270	-	4,180	3,210	2,240	1,410	1,070	998	986
30	1,230	1,240	1,710	2,300	-	3,920	3,050	2,300	1,380	1,050	974	998
31	1,280	-	1,680	2,080	-	3,820	-	2,140	-	1,060	974	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	36,460	1,300	1,110	1,176	72,320
November	45,270	5,250	1,150	1,509	89,790
December	77,190	10,300	1,450	2,490	153,100
Calendar year	-	-	-	-	-
January	60,190	3,820	1,480	1,942	119,400
February	76,580	5,130	1,770	2,735	151,900
March	134,520	7,250	2,130	4,339	266,800
April	107,510	4,390	2,850	3,584	213,200
May	80,610	2,960	2,140	2,600	159,900
June	51,270	2,030	1,380	1,709	101,700
July	38,270	1,580	1,050	1,235	75,910
August	31,278	1,070	974	1,009	62,040
September	29,480	1,030	950	983	58,470
Water year 1938-39	768,628	10,300	950	2,106	1,525,000

*No gage readings prior to Oct. 27; discharge computed on basis of records for stations below South Fork of Rogue River and at Raygold.

†Gage heights faulty or missing; discharge computed on basis of records for stations below South Fork of Rogue River and at Raygold.

Rogue River at Raygold, near Central Point, Oreg.

Location.- Water-stage recorder, lat. 42°26', long. 122°59', in sec. 18, T. 36 S., R. 2 W., at Raygold, just downstream from dam and power house of The California Oregon Power Co., half a mile downstream from Bear Creek, and 6 miles northwest of Central Point. Zero of gage is 1,124 feet above mean sea level (river profile map).

Drainage area.- 2,020 square miles.

Records available.- August 1905 to September 1939.

Average discharge.- 34 years, 2,736 second-feet.

Extremes.- Maximum discharge during year, 15,200 second-feet Mar. 12 (gage height, 7.62 feet); minimum, 595 second-feet Aug. 23 (gage height, 0.07 foot); minimum daily, 904 second-feet Aug. 23.
1905-39: Maximum discharge, 91,500 second-feet Feb. 21, 1927 (gage height, 24.8 feet), from rating curve extended above 36,000 second-feet; minimum not recorded; minimum daily, 616 second-feet Sept. 6, 1931.

Remarks.- Records excellent. Many diversions for irrigation above station. Diurnal fluctuation caused by operation of power plant immediately above station. Water-stage-recorder graph furnished by The California Oregon Power Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.5	880	2.0	2,420	5.0	7,920
.7	1,040	2.5	3,100	6.3	11,220
1.0	1,300	3.0	3,880		
1.5	1,810	4.0	5,720		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,290	1,510	1,680	1,800	2,120	2,510	4,570	3,250	2,160	1,390	1,050	1,000
2	1,260	1,690	3,120	1,790	1,980	2,510	4,810	3,200	2,050	1,320	1,060	1,010
3	1,280	1,630	9,790	2,250	2,140	2,780	5,050	3,180	2,000	1,370	1,050	1,030
4	1,390	4,930	9,210	2,740	2,460	2,760	5,050	3,100	1,970	1,510	1,040	1,020
5	1,330	3,630	5,400	4,810	2,760	2,590	4,770	3,020	2,120	1,610	1,040	1,000
5	1,300	2,190	4,050	3,100	4,840	2,390	4,480	2,880	2,000	1,500	1,020	992
7	1,280	1,850	3,450	2,500	3,640	2,790	4,390	2,820	1,910	1,430	1,060	984
8	1,280	1,670	3,220	2,430	2,990	2,620	4,570	2,850	1,850	1,390	1,090	984
9	1,270	1,660	2,900	2,420	2,640	2,620	4,480	2,960	1,830	1,340	1,030	968
10	1,240	1,800	2,620	2,160	2,620	2,460	4,220	3,120	1,810	1,330	1,040	960
11	1,260	1,710	2,360	2,050	2,750	2,430	4,070	3,090	1,780	1,300	976	960
12	1,260	1,570	2,210	1,990	4,470	7,970	3,910	2,990	1,770	1,260	976	1,020
13	1,260	1,510	2,050	1,920	4,270	11,200	3,740	2,880	1,730	1,240	1,000	1,040
14	1,260	1,520	1,990	1,880	4,790	6,060	3,430	2,850	1,690	1,210	992	1,070
15	1,280	1,520	1,960	1,840	6,310	4,660	3,220	2,900	1,660	1,220	992	1,060
16	1,260	1,550	1,900	1,850	5,720	4,610	3,180	2,850	1,790	1,270	992	1,050
17	1,280	1,810	1,820	1,830	4,360	5,680	3,200	2,710	1,970	1,160	968	1,020
18	1,270	1,800	1,780	1,810	3,910	6,660	3,480	2,630	1,920	1,190	976	1,020
19	1,240	1,640	1,730	1,830	3,690	7,010	3,800	2,880	1,900	1,160	976	1,020
20	1,250	1,580	1,730	1,800	3,360	7,160	3,980	2,710	1,820	1,140	984	984
21	1,230	1,560	1,770	1,740	3,060	7,550	4,190	2,590	1,720	1,160	952	1,000
22	1,190	1,490	1,730	1,670	2,890	7,970	4,200	2,820	1,620	1,130	960	1,010
23	1,210	1,460	1,700	1,680	2,930	7,800	4,410	2,750	1,550	1,110	904	984
24	1,240	1,440	1,630	1,610	3,030	7,510	4,220	2,580	1,520	1,060	1,000	984
25	1,240	1,400	1,580	1,620	3,030	7,370	3,830	2,430	1,480	1,100	1,060	968
26	1,250	1,400	1,580	1,590	2,850	7,120	3,530	2,450	1,480	1,100	1,020	992
27	1,300	1,400	1,580	1,800	2,780	6,350	3,400	2,430	1,450	1,080	1,000	976
28	1,330	1,380	1,610	2,890	2,690	5,600	3,450	2,370	1,420	1,100	976	984
29	1,310	1,400	1,780	2,590	-	5,090	3,480	2,390	1,390	1,090	1,010	984
30	1,380	1,410	1,830	2,640	-	4,730	3,380	2,450	1,360	1,060	1,010	984
31	1,420	-	1,800	2,420	-	4,480	-	2,320	-	1,040	1,000	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	39,640	1,420	1,190	1,279	78,620
November	53,110	4,930	1,380	1,770	105,300
December	83,630	9,790	1,580	2,698	165,900
Calendar year 1938	1,404,460	23,900	1,190	3,848	2,786,000
January	67,050	4,810	1,590	2,163	133,000
February	95,080	6,310	1,980	3,396	188,600
March	161,440	11,200	2,430	5,208	320,200
April	120,490	5,050	3,180	4,016	239,000
May	86,450	3,250	2,320	2,789	171,500
June	52,720	2,160	1,360	1,757	104,600
July	38,370	1,610	1,040	1,238	76,110
August	31,204	1,090	904	1,007	61,890
September	30,058	1,070	960	1,002	59,620
Water year 1938-39	859,242	11,200	904	2,354	1,704,000

Peak discharge.- Nov. 4 (6:30 p.m.) 7,050 sec.-ft.; Dec. 3 (11:45 p.m.) 11,700 sec.-ft.; Feb. 15 (11 p.m.) 6,970 sec.-ft.; Mar. 12 (8 p.m.) 15,200 sec.-ft.

Rogue River at Grants Pass, Oreg.

Location.- Water-stage recorder, lat. 42°26', long. 123°19', in NW¼ sec. 20, T. 36 S., R. 5 W., at filter plant 0.6 mile east of Pacific Highway Bridge at Grants Pass. Staff gage at same site and datum used Jan. 1-4.

Records available.- January to September 1939.

Extremes.- Maximum discharge during period, 18,600 second-feet Mar. 12 (gage height, 9.81 feet); minimum, 794 second-feet Aug. 24 (gage height, 0.73 foot).

Remarks.- Records fair for period Jan. 1-4, excellent thereafter. Many diversions from Rogue River and tributaries above station, the largest of which is at Savage Rapids Dam of Grants Pass Irrigation District, 5 miles upstream. Flow regulated slightly by Fish Lake and Emigrant Gap Reservoirs and by pondage in pools above dams at Raygold and Savage Rapids. Water-stage recorder inspected by employees of Grants Pass Water Department.

Rating table, period January to September 1939 (gage height, in feet, and discharge, in second-feet)

0.7	770	2.6	2,900	5.0	6,890
1.0	1,030	3.0	3,440	6.0	8,980
1.4	1,440	3.5	4,170	7.0	11,290
1.8	1,900	4.0	5,000	8.0	13,750
2.2	2,380	4.5	5,920	9.0	16,400

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				1,780	2,510	2,980	4,220	3,060	2,040	1,200	940	886
2				1,780	2,300	2,890	4,760	3,000	1,900	1,190	931	877
3				2,020	2,510	3,100	4,930	2,990	1,850	1,190	931	913
4				2,900	2,820	3,220	4,880	2,940	1,830	1,330	904	913
5				5,620	3,100	3,020	4,630	2,850	1,950	1,530	895	895
6				3,720	5,880	3,130	4,300	2,760	1,880	1,460	886	877
7				2,900	4,760	3,260	4,170	2,650	1,780	1,320	877	868
8				2,770	3,750	3,030	4,270	2,670	1,730	1,300	895	859
9				2,720	3,240	2,900	4,250	2,740	1,680	1,210	949	850
10				2,460	3,070	2,800	4,020	2,910	1,650	1,200	886	85[illegible]
11				2,320	3,270	2,770	3,840	2,960	1,640	1,180	868	859
12				2,220	4,690	8,590	3,720	2,860	1,510	1,150	859	886
13				2,160	5,430	15,000	3,640	2,760	1,530	1,050	859	931
14				2,100	5,230	8,060	3,560	2,720	1,520	1,040	859	994
15				2,040	7,250	5,810	3,110	2,700	1,480	1,050	859	1,000
16				2,080	7,130	5,430	3,060	2,740	1,570	1,080	859	958
17				2,060	5,320	6,340	3,030	2,610	1,830	1,060	850	904
18				2,000	4,640	7,350	3,190	2,520	1,800	994	842	904
19				2,020	4,380	7,640	3,470	2,800	1,770	1,000	842	895
20				2,040	3,980	7,660	3,640	2,690	1,680	994	842	877
21				1,950	3,580	8,020	3,800	2,560	1,590	994	834	877
22				1,880	3,400	8,310	3,880	2,740	1,480	985	834	877
23				1,850	3,370	8,120	4,080	2,780	1,440	985	826	868
24				1,820	3,510	7,780	4,020	2,540	1,380	976	810	859
25				1,760	3,480	7,600	3,690	2,380	1,350	949	818	859
26				1,770	3,360	7,290	3,400	2,370	1,250	940	868	859
27				1,830	3,190	6,570	3,260	2,330	1,300	949	859	859
28				3,060	3,160	5,750	3,200	2,280	1,250	958	850	859
29				2,930	-	5,310	3,240	2,260	1,230	976	859	859
30				3,030	-	4,830	3,190	2,300	1,210	976	877	859
31				2,870	-	4,510	-	2,200	-	958	877	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October					
November					
December					
Calendar year					
January	74,460	5,620	1,760	2,402	147,700
February	112,310	7,250	2,300	4,011	222,800
March	179,070	15,000	2,770	5,776	355,200
April	114,250	4,930	3,030	3,808	226,600
May	82,670	3,060	2,200	2,667	164,000
June	49,100	2,040	1,210	1,603	95,400
July	34,174	1,530	940	1,102	67,780
August	26,945	949	810	869	63,440
September	26,631	1,000	850	888	52,820
The period	-	-	-	-	1,386,000

Peak discharge.- Mar. 12 (9 p.m.) 18,600 sec.-ft.

Reservoirs in Rogue River Basin, Oreg.

Fish Lake Reservoir.- Staff gage, lat. 42°23', long. 122°21', in SW¼ sec. 3, T. 37 S., R. 4 E., at reservoir outlet, 18 miles east of Lake Creek. Zero of gage is at mean sea level (irrigation-district datum). Drainage area, 17 square miles. Records available, December 1915 to September 1939. Maximum contents observed during year, 7,814 acre-feet June 10 (elevation, 4,826.70 feet); minimum observed, 618 acre-feet Sept. 12 (elevation, 4,804.64 feet). Maximum contents during period 1915-39, 7,975 acre-feet June 20, 1938 (elevation, 4,827.09 feet); no usable contents at times.

Gage read once daily by employee of Medford Irrigation District. Water is diverted during summer from Fourmile Lake in Klamath River Basin through Cascade canal into Fish Lake Reservoir. Permanent dam at outlet of Fish Lake completed in fall of 1915; storage in reservoir began in November 1915. Total capacity of reservoir is 7,940 acre-feet between elevations 4,799 feet (bottom of outlet tunnel) and 4,827 feet (spillway crest is at elevation 4,828 feet). Water is used to irrigate lands near Medford.

Emigrant Gap Reservoir.- Staff gage, lat. 42°10', long. 122°36', in SE¼ sec. 20, T. 39 S., R. 2 E., at Emigrant Gap Dam of Talent Irrigation District, on Emigrant Creek, 6 miles southeast of Ashland. Zero of gage is at mean sea level (surveys of Talent Irrigation District). Records available, December 1924 to September 1939. Maximum contents observed during year, 8,342 acre-feet Mar. 24, Apr. 5 (elevation, 2,173.5 feet); minimum contents, 297 acre-feet (estimated) Oct. 1. Maximum contents during period 1924-39, 8,748 acre-feet Feb. 20, 1927 (elevation, 2,175.2 feet, observed at peak; no usable contents at times.

Gage read 1 to 6 times weekly by employee of Talent Irrigation District. Reservoir was completed in 1924 by Talent Irrigation District to provide water for irrigation of lands under East and Talent laterals near Talent. Capacity between elevation 2,070 and 2,173.5 feet (spillway crest) is 8,342 acre-feet. Natural flow into reservoir may be augmented by water diverted from Hyatt Prairie Reservoir, in Klamath River Basin, obtained through Keene Creek canal, records of which are published under "Reservoirs in Klamath River Basin," in Water-Supply Paper 881.

Elevation, and contents, water year October 1938 to September 1939

Date	Fish Lake Reservoir			Emigrant Gap Reservoir		
	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	4,813.65	3,078	-	-	*286	-
Oct. 31	4,816.96	4,161	+1,083	-	*622	+336
Nov. 30	4,819.51	5,046	+885	-	*955	+333
Dec. 31	4,820.83	5,524	+478	-	*1,430	+475
Calendar year 1938	-	-	+1,952	-	-	-
Jan. 31	-	*5,830	+306	-	*2,052	+622
Feb. 28	4,822.47	6,139	+309	-	*3,359	+1,307
Mar. 31	-	*6,243	+104	2,172.6	8,132	+4,773
Apr. 30	4,824.76	7,028	+785	-	*7,365	-767
May 31	4,826.36	7,675	+647	-	*6,172	-1,193
June 30	4,825.81	6,654	-1,021	-	*3,296	-2,876
July 31	4,816.33	3,948	-2,706	-	*1,766	-1,530
Aug. 31	4,806.71	1,114	-2,834	2,108.9	675	-1,091
Sept. 30	4,805.70	858	-256	-	*479	-196
Water year 1938-39	-	-	-2,220	-	-	+193

*Interpolated between contents obtained from gage readings made near the end of the month and the first of the following month.

South Fork of Rogue River above Imnaha Creek, near Prospect, Oreg.

Location.- Water-stage recorder, lat. 42°42', long. 122°27', in NE¼ sec. 18, T. 33 S., R. 4 E., 300 yards upstream from Imnaha Creek, 400 yards upstream from South Fork Diversion Dam, and 6 miles southeast of Prospect.

Drainage area.- 52 square miles.

Records available.- October 1931 to September 1939.

Extremes.- Maximum discharge during year, 1,140 second-feet Dec. 3 (gage height, 4.52 feet); minimum, 44 second-feet Sept. 23-30 (gage height, 1.06 feet).
1931-39: Maximum discharge, that of Dec. 3, 1938; minimum, 27 second-feet Oct. 1-21, 1931.

Remarks.- Records good. No diversion or regulation above station. Water-stage-recorder graph furnished by The California Oregon Power Co.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

1.1	45	1.9	157	3.0	405
1.3	67	2.2	215	3.4	535
1.6	109	2.6	300	3.8	700

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	65	66	74	57	66	223	278	166	93	66	50
2	52	60	100	74	59	66	245	282	161	90	65	49
3	56	102	663	80	60	66	267	290	157	97	65	48
4	56	402	556	77	60	66	278	285	159	135	62	48
5	55	177	318	79	60	63	267	267	159	118	61	48
6	54	110	225	76	57	63	265	251	150	108	61	47
7	54	90	201	72	56	62	275	249	142	102	61	47
8	53	80	187	72	57	61	300	263	138	97	60	45
9	52	77	161	70	60	61	290	282	137	94	60	45
10	52	74	140	70	59	62	273	288	135	91	60	45
11	52	70	126	67	60	61	275	269	134	88	57	46
12	52	66	114	67	62	76	265	265	130	86	57	47
13	52	66	108	67	60	79	241	265	127	86	56	48
14	52	65	100	66	63	72	221	269	124	83	56	50
15	53	65	97	66	91	72	215	273	124	81	56	48
16	53	66	93	65	91	75	223	265	138	81	56	47
17	53	74	88	65	83	87	247	241	143	81	55	47
18	52	68	87	63	79	108	280	231	142	80	54	47
19	52	65	84	63	76	116	325	223	140	79	53	47
20	51	62	81	61	74	132	358	213	134	79	52	46
21	51	60	80	61	71	152	375	201	124	76	52	46
22	50	56	79	60	70	181	390	209	118	75	51	45
23	51	56	79	59	70	199	417	199	114	75	52	44
24	51	56	76	59	70	215	372	185	109	74	53	44
25	50	55	76	60	68	235	335	183	106	72	51	44
26	49	55	74	59	68	249	300	187	103	71	50	44
27	49	55	74	62	67	233	300	193	100	70	50	44
28	49	55	75	61	66	221	312	193	97	67	50	44
29	53	55	76	60	-	213	325	207	96	67	50	44
30	54	59	77	60	-	211	285	205	93	66	50	45
31	59	-	74	60	-	211	-	179	-	66	50	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	1,625	59	49	52.4	1.01	1.16	3,220
November	2,466	402	55	82.2	1.58	1.76	4,890
December	4,435	663	66	143	2.75	3.17	8,800
Calendar year 1938	56,528	663	49	155	2.98	40.42	112,100
January	2,055	80	59	66.3	1.28	1.48	4,080
February	1,874	91	56	66.9	1.29	1.34	3,720
March	3,834	249	61	124	2.38	2.74	7,600
April	8,744	417	215	291	5.60	6.25	17,340
May	7,390	290	179	238	4.58	5.28	14,660
June	3,900	166	93	130	2.50	2.79	7,740
July	2,628	135	66	84.8	1.63	1.88	5,210
August	1,732	66	50	55.9	1.08	1.24	3,440
September	1,389	50	44	46.3	.890	.99	2,760
Water year 1938-39	42,072	663	44	115	2.21	30.08	83,460

Peak discharge.- Nov. 4 (12 m.) 660 sec.-ft.; Dec. 3 (5 p.m.) 1,140 sec.-ft.

Imnaha Creek near Prospect, Oreg.

Location.- Staff gage, lat. 42°42', long. 122°27', in NE¼ sec. 18, T. 33 S., R. 4 E., 400 yards upstream from mouth and 6 miles southeast of Prospect.

Drainage area.- 26 square miles.

Records available.- September 1931 to September 1939.

Extremes.- Maximum daily discharge during year, 220 second-feet (estimated), Dec. 3; minimum daily, 19 second-feet Sept. 5-11, 18-30.
1931-39: Maximum discharge observed, 237 second-feet Mar. 19, 1932 (gage height, 2.10 feet); minimum discharge, 11 second-feet Dec. 14, 1931 (gage height, 0.46 foot).

Remarks.- Records for low-water periods fair, others poor. Staff gage read only once weekly; discharge for intervening days computed on basis of records for stations on South Fork of Rogue River and power canal. No diversion or regulation above station. Gage readings furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	28	*28	29	25	28	86	78	*44	31	22	20
2	24	27	50	29	*26	*28	90	78	43	30	22	20
3	26	*36	220	31	26	28	98	76	42	32	*22	20
4	26	120	180	30	26	28	102	*72	42	38	22	20
5	25	60	90	*31	26	28	100	70	42	33	22	19
6	*25	43	56	30	25	28	*100	64	41	*31	21	19
7	25	35	49	30	24	28	102	62	40	30	21	*19
8	25	31	*43	29	24	28	*107	64	*40	30	21	19
9	24	29	39	29	*24	*28	104	67	40	29	21	19
10	24	*28	37	29	24	28	99	68	39	29	*21	19
11	24	27	36	29	25	28	100	*62	38	28	20	19
12	24	25	35	*29	25	31	97	61	37	28	20	20
13	*24	25	34	29	26	31	*93	61	36	*28	20	20
14	24	25	33	29	27	29	86	61	35	28	20	*20
15	25	25	*33	29	33	29	82	62	*35	27	20	20
16	25	26	32	28	*31	*30	82	61	38	27	20	20
17	25	*28	32	28	31	33	83	57	40	27	*20	20
18	24	27	31	28	30	39	86	*55	40	26	20	19
19	23	27	31	*28	30	42	94	54	39	26	20	19
20	*23	27	31	27	30	47	*97	53	38	*26	20	19
21	23	26	30	27	30	52	103	53	36	25	20	*19
22	23	26	*30	*26	30	60	105	54	*35	25	20	19
23	24	26	30	*27	*30	*65	108	52	34	25	20	19
24	24	*26	29	26	30	74	92	51	34	24	*21	19
25	24	26	29	26	29	83	86	*51	33	*24	20	19
26	24	26	28	*26	29	88	85	50	33	24	20	19
27	*25	26	28	27	29	85	*87	51	32	*23	20	19
28	25	26	29	27	28	83	88	51	32	23	20	*19
29	26	26	*30	26	-	83	88	53	*31	23	20	19
30	26	27	30	26	-	*83	80	52	31	23	20	19
31	27	-	29	26	-	83	-	47	-	23	*20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	761	27	23	24.5	0.942	1.09	1,510
November	960	120	25	32.0	1.23	1.37	1,900
December	1,442	220	28	46.5	1.79	2.06	2,860
Calendar year 1938	21,553	220	23	59.0	2.27	30.83	42,740
January	871	31	26	28.1	1.08	1.24	1,730
February	773	33	24	27.6	1.06	1.10	1,530
March	1,458	88	28	47.0	1.81	2.09	2,890
April	2,810	108	80	93.7	3.60	4.02	5,570
May	1,851	78	47	59.7	2.30	2.65	3,670
June	1,120	44	31	37.3	1.43	1.60	2,220
July	846	38	23	27.3	1.05	1.21	1,680
August	636	22	20	20.5	.788	.91	1,260
September	580	20	19	19.3	.742	.83	1,150
Water year 1938-39	14,108	220	19	38.7	1.49	20.17	27,970

*Gage read on this date.

South Fork power canal near Prospect, Oreg.

Location.- Water-stage recorder, lat. 42°43', long. 122°24', in E½ sec. 12, T. 33 S., R. 3 E., 1 mile downstream from head gate at diversion dam and 5 miles southeast of Prospect. Zero of gage is about 3,357 feet above mean sea level (surveys of The California Oregon Power Co.).

Records available.- April 1932 to September 1939.

Extremes.- Maximum discharge during year, 173 second-feet June 16 (gage height, 3.43 feet); minimum, 2 second-feet Oct. 17-19, Dec. 4, 6, 30, 31, Sept. 1-10.
1932-39: Maximum discharge, 175 second-feet May 31, June 17, 1933; no flow at times.

Remarks.- Records good. This canal, completed in March 1932, diverts water from South Fork of Rogue River 200 feet downstream from Imnaha Creek for use at power plant 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 flow of other diversions in Main power canal. Water-stage-recorder graph furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	85	88	9b	78	90	167	151	152	137	83	25
2	69	81	120	96	79	90	168	154	152	110	82	2
3	75	114	146	103	81	90	169	156	152	126	80	2
4	74	154	57	101	80	90	170	156	153	150	79	2
5	72	124	157	102	80	89	170	155	152	143	78	2
6	71	91	144	95	78	88	167	154	155	135	77	2
7	69	108	163	95	78	87	165	150	155	129	76	4
8	69	99	163	94	80	87	165	120	155	124	75	2
9	68	97	158	92	81	86	165	157	155	122	74	2
10	67	94	154	91	79	86	164	157	156	120	72	15
11	67	90	149	90	81	81	163	156	154	115	72	67
12	67	86	140	89	84	105	162	156	156	114	71	68
13	66	86	134	88	81	98	161	157	157	113	71	70
14	66	85	128	87	88	95	161	158	156	111	70	72
15	69	85	122	87	119	98	160	158	161	110	70	68
16	68	87	117	85	114	104	160	155	170	108	69	19
17	29	94	113	85	104	118	162	153	165	107	69	15
18	2	89	110	85	101	138	159	154	162	105	68	64
19	27	86	107	84	99	147	158	154	162	104	67	64
20	68	85	105	83	95	155	158	154	161	102	67	64
21	68	84	103	82	94	159	155	150	158	99	67	65
22	68	80	100	81	93	161	154	151	156	97	67	64
23	69	79	98	80	93	163	155	152	154	95	68	63
24	69	77	95	79	92	165	154	152	150	94	68	63
25	68	78	96	80	92	166	154	153	147	92	67	63
26	68	79	94	80	90	167	153	154	144	91	66	63
27	70	79	94	84	90	165	154	155	142	90	65	63
28	69	78	96	82	90	164	154	155	141	87	65	64
29	73	78	99	82	-	163	154	157	140	87	65	63
30	74	81	40	81	-	165	153	156	139	85	64	65
31	79	-	91	80	-	166	-	154	-	84	64	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,007	79	2	64.7	3,980
November	2,713	154	77	90.4	5,380
December	3,581	163	40	116	7,100
Calendar year 1938	44,387	170	2	122	88,030
January	2,718	103	79	87.7	5,390
February	2,494	119	78	89.1	4,950
March	3,826	167	81	123	7,590
April	4,814	170	153	160	9,550
May	4,754	158	120	153	9,430
June	4,612	170	139	154	9,150
July	3,386	150	84	109	6,720
August	2,196	83	64	70.8	4,360
September	1,265	72	2	42.2	2,510
Water year 1938-39	38,366	170	2	105	76,110

Middle Fork of Rogue River near Prospect, Oreg.

Location.- Water-stage recorder, lat. 42°44', long. 122°24', in NE¼ sec. 1, T. 33 S., R. 3 E., 1,000 feet downstream from diversion dam and intake of Middle Fork power canal and 4⅛ miles southeast of Prospect.

Drainage area.- 57 square miles.

Records available.- May 1925 to September 1939.

Average discharge.- 14 years, 169 second-feet, including flow of Middle Fork power canal.

Extremes.- Maximum combined discharge of river and canal during year, 721 second-feet Dec. 3 (river gage height, 2.40 feet); minimum combined daily discharge, 108 second-feet Sept. 23, 26, 28, 29.

1925-39: 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. They include flow of canal. Flow regulated since Nov. 19, 1931, by operation of head gates at diversion dam of power canal that diverts water around station; practically no storage above diversion dam. Water-stage-recorder graph furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	123	140	138	141	131	140	289	275	236	158	127	118
2	122	136	176	144	133	141	304	281	231	156	126	*117
3	134	263	493	152	134	140	319	281	229	173	125	*116
4	128	438	514	150	132	140	322	278	229	210	124	*116
5	126	212	362	153	133	138	307	267	219	179	123	*115
6	124	172	285	147	134	139	304	258	210	164	123	*114
7	122	146	269	145	133	138	310	266	206	157	*122	113
8	122	141	242	144	132	137	316	284	209	*152	*121	112
9	122	142	218	142	133	137	304	297	216	*149	*121	*112
10	121	140	204	141	131	136	292	300	219	*147	121	*113
11	123	137	195	140	133	137	278	297	219	*145	121	*115
12	122	†133	186	139	139	166	268	294	222	*143	121	*116
13	122	132	179	138	136	170	248	297	224	142	121	*117
14	123	133	173	138	135	157	234	306	219	140	120	116
15	124	134	169	138	198	154	231	312	222	139	120	114
16	124	142	163	135	170	169	237	306	228	139	119	*113
17	123	144	159	136	160	203	250	291	225	137	119	*113
18	122	137	156	136	157	†230	271	277	223	137	119	112
19	121	134	148	136	154	262	303	260	214	136	*118	112
20	119	133	144	134	151	295	319	245	204	135	118	111
21	120	131	143	133	148	324	331	238	196	134	117	111
22	121	128	141	132	148	364	331	242	193	130	117	110
23	122	127	140	131	148	388	340	229	189	132	121	*110
24	122	127	138	131	148	395	315	222	182	131	121	110
25	121	126	138	130	147	399	289	226	174	131	*119	110
26	121	125	136	130	145	395	272	240	170	129	*117	110
27	126	125	137	140	145	350	276	250	166	128	117	110
28	124	126	143	138	145	322	289	263	163	128	117	110
29	130	126	149	139	-	304	295	288	161	127	117	109
30	130	130	144	137	-	286	273	277	160	127	116	111
31	133	-	142	134	-	283	-	252	-	127	116	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,837	134	119	124	2.18	2.51	7,610
November	4,560	438	125	152	2.67	2.98	9,040
December	6,124	514	136	198	3.47	4.00	12,150
Calendar year 1938	75,895	647	119	208	3.65	49.53	150,500
January	4,304	153	130	139	2.44	2.81	8,540
February	4,051	198	131	145	2.54	2.64	8,040
March	7,139	399	136	230	4.04	4.66	14,160
April	8,717	340	231	291	5.11	5.70	17,290
May	8,399	312	222	271	4.75	5.48	16,660
June	6,158	238	160	205	3.60	4.02	12,210
July	4,462	210	127	144	2.53	2.92	8,850
August	3,724	127	116	120	2.11	2.43	7,390
September	3,386	118	109	113	1.98	2.21	6,720
Water year 1938-39	64,861	514	109	178	3.12	42.36	128,700

Peak discharge.- Nov. 4 (8 a.m.) 700 sec.-ft.; Dec. 3 (7 p.m.) 721 sec.-ft.
*Gage height for river missing; discharge of river interpolated.
†Gage height for power canal missing; combined discharge computed on basis of records for South Fork of Rogue River near Prospect.

Middle Fork power canal near Prospect, Oreg.

Location.- Water-stage recorder, lat. 42°44', long. 122°24', in NE¼ sec. 1, T. 33 S., R. 3 E., 1,000 feet downstream from head gate at diversion dam and 4½ miles southeast of Prospect. Zero of gage is about 2,632 feet above mean sea level (surveys of The California Oregon Power Co.).

Records available.- November 1931 to September 1939.

Extremes.- Maximum discharge during year, 158 second-feet July 3 (gage height, 3.10 feet); minimum, 1 second-foot Apr. 17-22.
1931-39: Maximum discharge, 196 second-feet Feb. 3, 1935 (gage height, 3.50 feet); no flow at times.

Remarks.- Records good. 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. Water-stage-recorder graph furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	121	136	137	139	129	138	84	99	98	154	126	118
2	120	133	143	142	131	139	84	99	98	152	125	117
3	132	136	117	144	132	138	84	99	98	154	124	116
4	127	77	88	144	130	138	84	99	98	157	124	116
5	125	50	120	145	131	136	84	99	97	156	123	115
6	123	100	120	144	132	137	84	98	97	155	123	114
7	121	136	122	143	131	136	84	98	97	153	122	113
8	121	136	120	142	130	135	84	99	125	149	120	112
9	121	137	120	140	131	135	84	98	148	146	120	112
10	120	137	120	139	129	134	84	98	148	145	120	113
11	121	134	121	138	131	135	29	98	148	143	120	115
12	120	*131	121	137	136	129	2	98	148	141	120	116
13	120	130	121	136	134	129	2	98	148	140	120	117
14	121	131	121	136	144	146	2	98	147	139	120	116
15	122	132	121	136	152	148	2	98	151	138	120	114
16	122	136	121	134	151	150	2	98	157	138	119	113
17	121	139	122	135	151	147	1	98	157	136	119	113
18	120	135	126	135	151	*142	1	98	157	136	119	112
19	120	132	134	135	149	140	1	98	156	135	118	112
20	118	131	140	133	147	92	1	98	156	134	118	110
21	119	129	140	132	144	2	1	98	156	133	117	110
22	120	127	139	131	144	30	41	98	156	129	117	109
23	121	126	138	130	144	86	98	98	156	127	120	109
24	121	126	136	130	144	85	98	98	156	129	120	109
25	120	126	136	129	144	85	99	98	155	129	118	109
26	119	125	135	128	142	85	99	98	155	128	117	109
27	120	125	135	136	142	84	65	98	155	127	117	109
28	122	126	139	135	140	84	96	98	154	127	117	109
29	127	126	142	136	-	84	96	98	154	126	117	108
30	128	129	142	134	-	84	97	98	154	126	116	110
31	130	-	140	132	-	84	-	98	-	126	116	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,783	132	118	122	7,500
November	3,774	139	50	126	7,490
December	3,977	143	88	128	7,890
Calendar year 1938	33,651	161	2	92.2	66,740
January	4,230	145	128	136	8,390
February	3,896	152	129	139	7,730
March	3,517	150	2	113	6,980
April	1,673	99	1	55.8	3,320
May	3,044	99	98	98.2	6,040
June	4,180	157	97	139	8,290
July	4,308	157	126	139	8,540
August	3,712	126	116	120	7,360
September	3,375	118	108	112	6,690
Water year 1938-39	43,469	157	1	119	86,220

*Gage height missing; discharge computed on basis of records for Middle and South Forks of Rogue River.

Red Blanket Creek near Prospect, Oreg.

Location.- Staff gage, lat. 42°47', long. 122°26', in NE¼ sec. 23, T. 32 S., R. 3 E., 3 miles northeast of Prospect.

Drainage area.- 40 square miles.

Records available.- May 1925 to September 1939. Prior to October 1928, in NE¼ sec. 34 (revised), T. 32 S., R. 3 E.

Average discharge.- 14 years, 101 second-feet.

Extremes.- Maximum discharge observed during year, 541 second-feet Nov. 4 (gage height, 2.58 feet), from rating curve extended above 310 second-feet; minimum daily discharge, 54 second-feet (estimated) Sept. 6-9.
1925-39: Maximum discharge observed, 1,200 second-feet Mar. 11, 1928; minimum observed, 34 second-feet Sept. 3, 4, 25, Oct. 9, 16, 1931.

Remarks.- Records poor. One diversion for irrigation above station. Gage read once weekly; discharge for intervening days computed on basis of records for stations on Rogue River and Middle Fork near Prospect. Gage readings furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	78	82	82	74	83	165	154	133	86	67	*57
2	64	75	*110	86	76	83	171	155	*132	84	66	56
3	67	180	400	94	*76	*83	178	155	130	90	65	56
4	66	*410	450	92	76	83	182	152	128	110	*64	55
5	65	210	300	94	76	82	178	*150	120	96	63	55
6	64	130	210	*92	77	83	175	152	114	90	63	54
7	*63	100	190	88	76	82	*179	153	112	*87	63	54
8	63	86	170	87	76	81	*181	159	114	85	62	*54
9	63	83	*146	86	77	81	178	161	*117	84	61	54
10	62	81	133	85	*76	*81	170	162	117	83	61	55
11	62	*78	121	84	78	80	158	161	117	82	*59	56
12	62	75	112	83	80	94	150	*161	116	81	59	58
13	62	74	106	*82	78	96	142	162	116	81	59	60
14	*62	75	100	82	86	88	*139	164	116	*79	58	63
15	63	76	96	82	110	88	135	166	115	78	58	*62
16	63	82	*94	81	98	92	138	164	115	77	58	60
17	63	85	91	81	*93	*106	143	158	114	76	58	60
18	63	*81	89	81	92	130	150	152	113	76	*58	60
19	62	78	86	81	91	140	160	*148	109	74	57	60
20	61	77	84	*80	89	160	*176	142	105	73	56	59
21	*60	76	84	77	86	180	*194	135	102	*72	56	58
22	62	74	83	75	86	200	200	138	100	71	55	*57
23	64	74	*82	*73	86	220	203	130	*98	71	56	57
24	64	74	81	73	*86	*234	176	128	96	70	58	57
25	64	*73	81	73	85	240	160	130	93	69	*57	57
26	65	72	80	74	84	240	148	*134	91	68	56	57
27	68	72	80	*81	84	210	151	137	90	*68	56	57
28	*67	73	83	79	83	190	*155	137	89	*68	56	57
29	70	73	87	80	-	175	160	150	88	68	56	*58
30	71	76	*85	78	-	165	152	146	*87	67	56	59
31	73	-	83	76	-	*162	-	136	-	67	56	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,993	73	60	64.3	1.61	1.86	3,950
November	2,951	410	72	98.4	2.46	2.74	5,850
December	4,079	450	80	132	3.30	3.80	8,090
Calendar year 1938	52,616	550	60	144	3.60	48.94	104,400
January	2,542	94	73	82.0	2.05	2.36	5,040
February	2,335	110	74	83.4	2.08	2.17	4,630
March	4,112	240	80	133	3.32	3.83	8,160
April	4,947	203	135	165	4.12	4.60	9,810
May	4,632	166	128	149	3.72	4.29	9,190
June	3,287	133	87	110	2.75	3.07	6,520
July	2,431	110	67	78.4	1.96	2.26	4,820
August	1,833	67	55	59.1	1.48	1.71	3,640
September	1,722	63	54	57.4	1.44	1.61	3,420
Water year 1938-39	36,864	450	54	101	2.52	34.30	73,120

*Gage read on this date.

Red Blanket power canal near Prospect, Oreg.

Location.- Water-stage recorder, lat. 42°45', long. 122°27', in SE¼ sec. 27, T. 32 S., R. 3 E., 200 yards downstream from head gate at diversion dam and 2 miles east of Prospect. Zero of gage is 2,612 feet above mean sea level (surveys of The California Oregon Power Co.).

Records available.- November 1931 to September 1939.

Extremes.- Maximum discharge during year, 107 second-feet Nov. 6 (gage height, 3.30 feet); minimum, 3 second-feet Apr. 11-15.
1931-39: Maximum discharge, 116 second-feet Nov. 6, 1932; no flow for part of day Sept. 24, 25, 1932.

Remarks.- Records excellent. 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. Water-stage-recorder graph furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	84	89	81	74	82	5	88	90	86	64	56
2	64	79	98	84	75	83	5	88	91	85	67	56
3	73	91	91	90	76	82	5	88	92	87	65	56
4	68	88	81	89	74	82	5	89	93	94	61	55
5	65	84	80	92	76	79	5	91	93	89	60	54
6	64	92	80	89	78	81	5	91	92	87	60	54
7	64	88	80	87	75	79	5	91	93	86	59	54
8	62	84	80	86	74	79	5	91	92	85	59	54
9	62	87	80	84	74	78	5	91	92	83	59	54
10	62	83	87	82	75	77	5	92	92	83	59	54
11	62	79	91	82	75	78	4	92	92	82	58	54
12	62	76	94	80	80	88	3	92	92	80	58	55
13	62	77	95	80	77	90	3	92	92	80	58	59
14	62	76	94	80	83	92	3	92	92	79	58	62
15	64	77	94	80	96	92	3	92	92	77	58	61
16	64	80	91	79	92	95	4	92	93	76	57	59
17	63	86	88	79	92	97	4	92	93	76	56	59
18	61	80	87	79	91	96	4	92	93	74	57	59
19	61	79	86	79	89	88	4	92	92	72	57	58
20	61	78	85	77	87	71	38	91	94	71	56	58
21	61	76	85	76	85	29	86	91	94	71	56	59
22	61	74	83	76	85	5	86	91	94	70	56	58
23	61	74	80	74	85	5	86	91	93	68	58	58
24	64	73	79	74	85	5	86	91	92	67	59	58
25	67	73	79	73	85	5	86	91	92	67	57	58
26	66	73	77	74	84	5	86	91	92	67	56	58
27	71	73	78	80	84	5	72	91	92	67	56	58
28	64	73	83	80	83	5	89	91	91	66	56	58
29	73	74	84	79	-	5	88	91	89	65	56	58
30	73	77	83	77	-	5	88	91	86	65	56	58
31	74	-	81	76	-	5	-	91	-	65	56	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,005	74	61	64.7	3,980
November	2,388	92	73	79.6	4,740
December	2,643	98	77	85.3	5,240
Calendar year 1938	20,307	100	3	55.6	40,280
January	2,498	92	73	80.6	4,950
February	2,289	96	74	81.8	4,540
March	1,768	97	5	57.0	3,510
April	973	89	3	32.4	1,930
May	2,819	92	88	90.9	5,590
June	2,760	94	86	92.0	5,470
July	2,370	94	65	76.5	4,700
August	1,808	67	56	58.3	3,590
September	1,712	62	54	57.1	3,400
Water year 1938-39	26,033	98	3	71.3	51,640

Main power canal below all feeders, near Prospect, Oreg.

Location.- Water-stage recorder, lat. 42°45', long. 122°28', in SW¼ sec. 28, T. 32 S., R. 3 E., 0.8 mile downstream from outlet of Red Blanket power canal, 1 mile east of Prospect, and 1.6 miles upstream from diversion dam on Rogue River. Zero of gage is 2,599.0 feet above mean sea level (general adjustment of 1929).

Records available.- November 1931 to September 1939.

Extremes.- Maximum discharge during year, 420 second-feet July 4 (gage height, 4.28 feet); no flow for 2 hours Apr. 19.
1931-39: Maximum discharge, 423 second-feet June 22, 1936; no flow at times.

Remarks.- Records good. Figures of discharge based largely on combined flow of tributary canals. Main power 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. Water-stage-recorder graph furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	267	298	310	316	288	319	253	327	331	378	283	211
2	265	283	352	324	294	320	253	327	335	349	284	182
3	290	325	343	341	295	319	252	326	336	384	282	181
4	282	307	207	338	290	316	252	328	336	396	274	180
5	272	244	338	344	295	312	252	330	338	381	272	180
6	267	261	330	336	295	314	251	330	338	387	270	177
7	265	328	341	330	279	310	249	322	338	383	269	176
8	262	313	338	327	280	310	248	292	360	371	265	175
9	260	316	341	319	283	307	248	328	373	360	263	174
10	259	306	347	318	288	306	248	327	375	357	262	182
11	259	294	351	313	296	301	98	327	376	349	259	232
12	259	283	349	312	310	331	8	325	379	343	258	248
13	258	284	344	308	304	327	6	325	383	339	256	252
14	259	283	339	307	327	344	5	325	384	335	256	255
15	263	284	335	308	379	349	4	325	391	333	255	248
16	258	295	327	304	371	359	3	325	373	331	253	199
17	220	313	320	304	362	370	2	324	365	327	253	188
18	186	295	319	306	355	387	2	325	365	324	252	241
19	204	288	324	306	349	371	3	325	365	320	249	238
20	249	283	327	302	341	276	36	325	370	319	249	238
21	248	277	325	298	335	60	142	325	383	313	249	238
22	248	273	319	295	333	114	234	325	386	308	248	237
23	249	270	314	292	333	256	286	325	387	302	253	235
24	251	269	312	290	333	255	333	324	392	392	256	234
25	251	267	308	290	331	253	331	327	391	301	251	234
26	245	266	302	289	328	252	330	327	391	295	248	234
27	252	266	306	306	327	253	239	328	389	294	246	233
28	246	266	316	302	324	253	330	330	387	290	246	234
29	266	269	325	302	-	253	328	331	383	289	246	233
30	266	279	270	298	-	253	328	331	379	286	242	234
31	273	-	307	295	-	* 252	-	331	-	284	244	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	7,899	290	186	255	15,670
November	8,585	328	244	286	17,030
December	9,986	352	207	322	19,810
Calendar year 1938	91,085	396	8	250	180,700
January	9,620	344	289	310	19,080
February	8,925	379	279	319	17,700
March	9,002	387	60	290	17,860
April	5,554	333	2	185	11,020
May	10,094	331	292	326	20,020
June	11,079	392	331	369	21,970
July	10,330	396	284	333	20,490
August	7,993	284	242	258	15,850
September	6,503	255	174	217	12,900
Water year 1938-39	105,570	396	2	289	209,400

South Fork of Big Butte Creek near Butte Falls, Oreg.

Location.- Water-stage recorder, lat. 42°32', long. 122°33', in SW¼ sec. 11, T. 35 S., R. 2 E., just downstream from 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 1939. August 1922 to March 1925, at site at Butte Falls.

Average discharge.- 23 years (1910-11, 1917-39), 158 second-feet.

Extremes.- Maximum discharge during year, 618 second-feet Mar. 22 (gage height, 1.82 feet); minimum, 58 second-feet Aug. 24 (gage height, 0.47 foot).
1910-11, 1915, 1917-39: 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 for periods of missing gage heights; Dec. 18, 19, July 8, 23, 24, 26-31, Aug. 2-7, 9-14, 16, 17, computed on basis of records for South and North Forks of Little Butte Creek near Lake Creek. Diversions above stations for irrigation and, since 1927, for Medford municipal supply.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.5	63	1.3	318
.6	82	1.6	483
.8	132	1.8	605
1.0	194		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	96	100	98	105	184	354	175	98	89	74	74
2	78	94	150	104	108	188	360	165	98	89	74	76
3	82	100	386	121	110	191	376	162	98	91	73	76
4	84	194	313	121	110	188	365	156	105	100	73	74
5	82	132	208	138	116	181	344	153	110	96	74	74
6	80	100	165	124	147	198	328	147	110	94	74	74
7	80	98	150	118	138	186	318	141	108	89	72	74
8	80	94	138	116	132	191	313	138	105	84	71	74
9	80	100	127	116	129	191	304	138	105	80	69	72
10	80	100	121	116	127	191	290	135	103	80	68	72
11	80	96	113	113	127	198	276	135	103	80	68	74
12	80	89	105	108	147	431	267	132	100	78	68	76
13	78	87	105	103	156	501	258	129	96	76	68	78
14	76	87	110	103	198	392	237	121	91	76	68	76
15	76	87	110	105	328	381	222	127	96	78	67	76
16	78	91	108	103	323	392	215	118	108	78	67	76
17	78	94	105	103	276	448	218	116	105	76	67	74
18	78	94	102	105	250	531	218	121	105	78	67	72
19	78	89	103	105	229	562	222	141	105	78	67	72
20	78	89	100	105	208	574	222	132	105	76	65	72
21	78	84	100	98	198	593	222	127	100	76	65	71
22	78	84	100	98	198	599	229	144	98	76	65	69
23	76	84	100	94	201	586	254	138	96	75	65	69
24	76	84	96	94	204	555	237	124	94	74	63	69
25	76	84	94	96	208	543	222	118	94	74	67	69
26	74	84	94	96	198	525	208	116	94	74	69	71
27	76	84	94	108	194	483	198	105	94	74	71	71
28	76	84	100	118	194	442	194	108	94	74	71	71
29	87	84	100	118	-	408	191	105	94	74	71	71
30	94	87	100	116	-	376	188	103	91	74	72	72
31	96	-	98	110	-	354	-	100	-	74	74	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,473	96	74	79.8	4,910
November	2,854	194	84	95.1	5,660
December	3,995	386	94	129	7,920
Calendar year 1938	73,663	1,120	74	202	146,100
January	3,370	138	94	109	6,680
February	5,059	328	105	181	10,030
March	11,765	599	181	380	23,340
April	7,850	376	188	262	15,570
May	4,070	175	100	131	8,070
June	3,003	110	91	100	5,960
July	2,485	100	74	80.2	4,930
August	2,147	74	63	69.3	4,260
September	2,189	78	69	73.0	4,340
Water year 1938-39	51,260	599	63	140	101,700

South Fork of Little Butte Creek near Lake Creek, Oreg.

Location.- Water-stage recorder, lat. 42°25', long. 122°36', in SE¼ sec. 29, T. 36 S., R. 2 E., a quarter of a mile upstream from intake of Rogue River Valley canal and 1¼ miles southeast of Lake Creek.

Records available.- April 1921 to September 1939. November 1910 to April 1913 at site in sec. 11, T. 37 S., R. 2 E., 5 miles upstream from Lake Creek.

Average discharge.- 19 years (1911-12, 1921-39), 92.3 second-feet.

Extremes.- Maximum discharge during year, 810 second-feet Mar. 12 (gage height, 3.54 feet); minimum, 10 second-feet Aug. 3 (gage height, 1.10 feet).
1910-13, 1921-39: Maximum discharge, 3,000 second-feet (estimated) Dec. 30, 1924 (gage height, 5.25 feet); minimum, 2 second-feet Aug. 10, 1931 (gage height, 0.97 foot).

Remarks.- Records good. Shifting-control method used except for low flows. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	33	37	30	34	62	280	212	44	24	13	14
2	19	37	52	32	34	77	301	202	43	22	13	14
3	20	35	209	50	38	92	322	202	42	24	12	14
4	20	131	140	58	53	89	318	199	52	33	12	14
5	20	69	94	89	82	82	293	189	54	30	14	13
6	20	40	82	52	143	122	293	173	47	28	14	13
7	19	33	82	44	97	105	293	164	44	27	14	13
8	19	30	71	50	77	102	297	164	40	24	13	13
9	18	32	60	48	62	94	293	167	39	23	13	13
10	18	34	58	44	69	92	272	170	34	22	12	12
11	18	32	47	42	75	94	264	161	32	18	13	13
12	18	29	40	38	164	301	260	149	30	17	13	14
13	18	31	38	37	131	340	237	140	28	16	14	16
14	18	30	39	34	176	183	220	128	27	16	13	16
15	18	30	39	34	234	173	206	122	28	16	14	16
16	19	30	37	32	170	186	202	116	38	16	14	16
17	18	40	32	34	126	246	202	105	48	16	14	16
18	18	34	33	33	113	297	212	102	43	16	14	15
19	18	31	31	34	110	318	234	110	42	15	13	14
20	18	30	31	33	97	340	246	100	37	16	13	15
21	19	27	31	30	89	390	260	89	32	16	14	15
22	19	24	30	30	82	404	272	97	30	16	13	14
23	19	24	28	30	82	395	314	92	30	15	12	14
24	19	24	26	27	82	390	289	75	28	14	14	14
25	19	25	27	27	89	400	305	69	25	13	14	14
26	19	24	26	28	80	390	246	62	25	13	14	13
27	21	24	28	32	77	344	237	58	25	13	14	13
28	21	24	30	43	71	314	230	54	24	13	14	14
29	23	24	31	40	-	293	237	50	24	13	14	14
30	23	27	31	42	-	268	223	50	24	13	14	14
31	25	-	30	38	-	268	-	47	-	13	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	601	25	18	19.4	1,190
November	1,038	131	24	34.6	2,060
December	1,570	209	26	50.6	3,110
Calendar year 1938	56,467	840	18	155	112,000
January	1,215	89	27	39.2	2,410
February	2,736	234	34	97.7	5,430
March	7,250	404	62	234	14,380
April	7,856	322	202	262	15,580
May	3,818	212	47	123	7,570
June	1,059	54	24	35.3	2,100
July	571	33	13	18.4	1,130
August	416	14	12	13.4	825
September	425	18	12	14.2	843
Water year 1938-39	28,555	404	12	78.2	56,630

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North Fork of Little Butte Creek at Fish Lake, near Lake Creek, Oreg.

Location.- Water-stage recorder, lat. 42°23', long. 122°21', in S½ sec. 4, T. 37 S., R. 4 E., half a mile downstream from outlet of Fish Lake and 18 miles east of Lake Creek.

Drainage area.- 18 square miles.

Records available.- October 1914 to September 1939.

Average discharge.- 24 years (1915-39), 32.0 second-feet.

Extremes.- Maximum discharge during year, 146 second-feet July 28, 30, 31 (gage height, 1.67 feet); minimum, 2.8 second-feet Sept. 15 (gage height, 0.34 foot).
1914-1939: Maximum discharge, 158 second-feet July 10, 1930; no flow at times.

Remarks.- Records good. Discharge interpolated for period of missing gage heights, Dec. 24-26. Flow regulated by storage in Fish Lake Reservoir. Since September 1923 water has been diverted by Cascade canal from Fourmile Lake, in Klamath River Basin, into Fish Lake Basin. No diversions from creek above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.5	6.5	1.2	65
.6	10	1.4	94
.8	21	1.7	153
1.0	39		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	19	20	20	21	22	26	39	54	110	144	76
2	13	19	20	20	21	22	27	39	68	110	142	72
3	14	19	21	20	21	22	27	39	61	108	142	71
4	14	22	20	20	21	22	27	39	43	90	136	68
5	14	20	20	20	21	22	27	39	37	88	131	65
6	14	19	20	20	21	22	27	39	36	92	129	59
7	14	19	20	20	22	22	28	39	36	92	121	54
8	14	19	20	20	22	22	28	39	37	103	123	54
9	14	19	20	20	22	22	29	39	43	103	125	54
10	15	19	20	20	22	22	30	39	76	112	123	55
11	15	19	20	20	22	22	31	39	96	125	123	52
12	16	19	20	20	22	22	31	39	98	123	122	40
13	16	19	20	20	22	23	31	39	99	123	122	35
14	16	19	20	20	22	23	31	39	116	123	125	20
15	16	19	20	20	22	23	32	39	118	123	118	7.2
16	16	19	20	20	22	23	33	39	107	122	112	7.6
17	16	19	20	20	22	23	33	39	90	122	108	8.6
18	16	19	20	20	22	23	34	39	78	127	108	19
19	16	19	20	20	22	23	34	39	75	127	108	38
20	17	19	20	20	22	23	34	39	66	129	107	27
21	16	19	20	20	22	23	35	39	79	133	105	23
22	16	19	20	20	22	23	35	39	91	135	101	23
23	17	19	20	20	22	23	36	39	101	135	96	27
24	17	19	20	20	22	23	36	39	107	138	96	31
25	17	19	20	20	22	23	37	38	108	142	92	31
26	17	19	20	20	22	24	38	38	108	142	90	31
27	17	19	20	20	22	24	38	38	110	140	88	31
28	17	19	20	20	22	25	38	38	114	144	86	31
29	17	20	20	20	-	25	38	38	112	144	85	31
30	17	19	20	20	-	25	39	37	112	142	84	31
31	17	-	20	21	-	26	-	37	-	146	80	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	484	17	13	15.6	960
November	575	22	19	19.2	1,140
December	621	21	20	20.0	1,230
Calendar year 1938	15,269	127	10	41.8	30,280
January	621	21	20	20.0	1,230
February	610	22	21	21.8	1,210
March	712	26	22	23.0	1,410
April	970	39	26	32.3	1,920
May	1,200	39	37	38.7	2,380
June	2,476	118	36	82.5	4,910
July	3,793	146	88	122	7,520
August	3,471	144	80	112	6,880
September	1,172.4	76	7.2	39.1	2,330
Water year 1938-39	16,705.4	146	7.2	45.8	33,120

North Fork of Little Butte Creek above Medford intake, near Lake Creek, Oreg.

Location.- Water-stage recorder, lat. 42°24', long. 122°32', in SW¼ sec. 25, T. 36 S., R. 2 E., 300 yards upstream from point of diversion of pipe line, used for irrigation since 1927 and before that to supply water for city of Medford, and 4½ miles east of Lake Creek.

Records available.- September 1911 to March 1913 (incomplete), May 1922 to September 1928 (incomplete), and October 1931 to September 1939 in reports of Geological Survey. September 1911 to March 1913 and May 1922 to September 1936 in reports of State engineer.

Average discharge.- 13 years (1911-12, 1922-23, 1928-39), 65.5 second-feet.

Extremes.- Maximum discharge during year, 178 second-feet July 25 (gage height, 2.26 feet); minimum, 22 second-feet Sept. 16.

1911-13, 1922-28, 1931-39: Maximum discharge, 680 second-feet (estimated) Dec. 30, 1924 (gage height, 3.30 feet); minimum, 11 second-feet (estimated) Oct. 29 to Nov. 8, 1931.

Remarks.- Records good. Flow regulated by storage in Fish Lake Reservoir. Small diversions for irrigation above station; some water diverted into Fish Lake from Fourmile Lake, in Klamath River Basin, since September 1923.

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Mar. 12				Mar. 13 to Sept. 30			
1.6	31	2.0	93	1.5	18	2.0	98
1.7	42	2.2	142	1.6	27	2.2	158
1.8	56			1.7	39	2.3	192
				1.8	54		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	50	49	45	49	59	88	76	70	126	161	101
2	36	46	66	46	49	64	91	79	91	123	165	96
3	38	52	95	48	49	64	91	79	88	129	165	93
4	38	75	63	49	50	63	88	76	79	115	158	93
5	38	46	53	50	55	61	84	76	62	109	155	88
6	38	45	50	46	64	70	84	76	60	115	152	84
7	38	42	50	46	56	66	84	74	60	115	145	81
8	38	42	49	49	55	63	84	74	60	120	145	79
9	38	46	48	49	53	61	84	72	66	120	145	79
10	38	46	46	48	55	59	81	72	81	123	142	79
11	38	45	46	48	55	63	81	72	118	136	142	79
12	38	43	45	48	73	107	81	70	118	136	139	66
13	38	45	45	48	64	112	76	70	115	132	139	56
14	38	45	45	48	85	88	74	70	129	132	145	48
15	39	45	45	48	104	88	72	70	132	136	145	31
16	39	46	45	46	81	96	72	68	126	132	145	25
17	39	46	45	48	73	120	74	68	109	132	139	27
18	39	45	45	48	71	132	76	72	98	136	139	34
19	39	43	43	48	68	132	76	72	93	136	139	66
20	39	42	45	48	66	132	76	70	88	155	136	51
21	39	42	45	46	64	136	76	70	93	148	132	44
22	40	42	43	46	64	139	79	72	109	148	132	44
23	40	42	43	46	64	132	81	68	120	161	129	46
24	40	42	43	45	64	129	79	68	123	161	126	52
25	40	42	43	45	66	123	76	68	123	168	123	52
26	40	42	42	46	63	120	74	66	126	158	120	51
27	40	42	42	49	63	109	72	66	123	158	118	52
28	41	42	46	55	61	98	72	64	129	158	115	52
29	41	43	45	53	-	93	74	64	129	161	112	52
30	42	45	45	52	-	91	74	62	126	161	109	52
31	42	-	43	50	-	88	-	62	-	161	106	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,207	42	36	38.9	2,390
November	1,359	75	42	45.3	2,700
December	1,498	95	42	48.3	2,970
Calendar year 1938	29,328	164	36	80.4	58,180
January	1,487	55	45	48.0	2,950
February	1,784	104	49	63.7	3,540
March	2,958	139	59	95.4	5,870
April	2,374	91	72	79.1	4,710
May	2,186	79	62	70.5	4,340
June	3,044	132	60	101	6,040
July	4,301	168	109	139	8,530
August	4,263	165	106	138	8,460
September	1,853	101	25	61.8	3,680
Water year 1938-39	28,314	168	25	77.6	56,180

Diversions from Little Butte Creek near Lake Creek, Oreg.

The following canals divert water from Little Butte Creek and its tributaries near Lake Creek post office:

Hanley South and Hanley North canals, from North Fork in SE¼ sec. 26, T. 36 S., R. 2 E. Water used to irrigate land on both sides of Little Butte Creek near Lake Creek post office.

Rogue River Valley canal, from South Fork in SE¼ sec. 29, T. 36 S., R. 2 E., and from North Fork 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 that creek below Phoenix.

Eagle Point canal, from main stream in SE¼ sec. 31, T. 35 S., R. 1 E. Water used for irrigation of lands near Eagle Point.

Many smaller canals.

Records for all canals partly estimated.

Records for these canals, published as a group, are available from April 1929 to September 1939; records of some of the canals published separately prior to 1929

Diversions, in acre-feet, water year October 1938 to September 1939

Month	Hanley south canal	Hanley north canal	Rogue River Valley canal below junction of intake	Eagle Point canal
October	*71	-	†1,080	‡403
March	-	-	**466	-
April	††278	††329	5,920	1,000
May	554	479	7,380	1,000
June	466	505	6,450	1,030
July	449	451	8,160	1,010
August	474	486	7,120	950
September	‡‡407	455	2,830	757

*Oct. 1-6; no record Oct. 7 to Apr. 13.
†Oct. 1-25; no record Oct. 26 to Mar. 21.
‡Oct. 1-26; no record Oct. 27 to Mar. 31.
**Mar. 22-31.
††Apr. 14-30.
‡‡Sept. 1-28; no record Sept. 29-30.
Note.- Probably some flow in canals during periods of missing record.

Emigrant Creek near Ashland, Oreg.

Location.- Water-stage recorder, lat. 42°10', long. 122°36', in SE¼ sec. 20, T. 39 S., R. 2 E., 500 feet downstream from Emigrant Gap Reservoir Dam and 6 miles southeast of Ashland.

Records available.- January 1920 to May 1924 and October 1924 to September 1939 (some years incomplete).

Extremes.- Maximum discharge during period, 159 second-feet Mar. 25 (gage height, 2.26 feet); no flow at times.
1920-39: Maximum discharge, 5,260 second-feet Feb. 20, 1927, by computation of flow over dam; no flow at times.

Remarks.- Records fair. Discharge for periods of no record, Mar. 1-21, Sept. 15-20, computed on basis of watermaster's notes; for days Sept. 29, 30, extrapolated. Diversions for irrigation above station. Principal canals are Ashland lateral and East lateral. Water diverted by Keene Creek canal from Klamath River Basin into Emigrant Creek above station. Flow regulated since December 1924 by storage in Emigrant Gap Reservoir.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.1	0.0	0.8	14	1.8	86
.2	.1	1.0	22	2.0	115
.4	2.4	1.2	32	2.3	166
.6	7.2	1.5	53		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	4.3	3.0	7.8	34	35	11
2						0	5.3	2.8	18	32	35	6.7
3						0	10	5.0	20	28	34	6.7
4						0	20	8.8	20	24	34	6.7
5						0	28	9.1	20	24	33	4.5
6						0	19	9.7	21	24	33	1.6
7						0	9.4	10	21	24	29	3.0
8						0	3.0	10	24	22	26	8.4
9						0	.7	10	25	22	26	10
10						0	.5	9.4	28	23	26	10
11						0	.5	7.2	29	24	26	5.0
12						0	.4	3.2	30	28	25	.1
13						0	.4	3.9	33	30	24	7.3
14						0	.4	9.1	33	30	24	19
15						0	.3	10	33	31	25	10
16						0	.3	15	33	32	25	.4
17						0	.3	15	31	32	25	.4
18						0	.3	15	30	32	25	.4
19						0	.7	6.4	28	33	25	.4
20						0	8.8	2.1	27	33	25	.4
21						0	16	1.8	28	33	25	.4
22						4.9	20	1.2	30	33	25	.3
23						32	14	.3	33	33	25	.3
24						96	6.9	.1	33	33	24	.2
25						153	3.0	.1	33	33	22	.1
26						136	2.8	.1	34	34	21	.1
27						126	3.0	.1	34	34	21	.1
28						97	3.2	.1	37	33	19	.1
29						53	3.2	.1	37	32	16	.1
30						22	3.2	.1	37	33	16	0
31						3.9	-	.3	-	35	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-	-
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1938	-	-	-	-	-
January	0	0	0	0	0
February	0	0	0	0	0
March	723.8	153	0	23.3	1,440
April	187.9	28	.3	6.26	373
May	169.0	15	.1	5.45	335
June	847.8	37	7.8	28.3	1,680
July	928	35	22	29.9	1,840
August	788	35	14	25.4	1,560
September	113.7	19	0	3.79	226
Water year 1938-39	-	-	-	-	7,450

Note.- There was probably some flow in October.

Bear Creek at Medford, Oreg.

Location.- Water-stage recorder, lat. 42°19', long. 122°52', in NW¼ sec. 30, T. 37 S., R. 1 W., just upstream from Main Street Bridge in Medford.

Records available.- March 1915 to September 1939 (prior to April 1927, incomplete).

Average discharge.- 18 years (1920-26, 1927-39), 68.8 second-feet.

Extremes.- Maximum discharge during year, 702 second-feet Mar. 12 (gage height, 2.72 feet); minimum, 6.5 second-feet Sept. 25.
1915-39: Maximum discharge, 10,200 second-feet Feb. 20, 1927 (gage height, 10.15 feet), from rating curve extended above 1,600 second-feet; practically no flow at times.

Remarks.- Records good. Diversions for irrigation above station. Flow partly regulated since December 1924 by storage in Emigrant Gap Reservoir.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*12	37	37	27	35	55	141	30	21	13	11	8.7
2	*12	43	39	29	33	45	137	26	17	14	10	8.9
3	*20	111	119	39	35	53	139	23	13	16	9.2	8.9
4	21	*165	115	43	37	62	124	19	14	24	9.8	7.6
5	19	*120	72	84	41	74	117	22	17	28	9.8	9.8
6	18	*85	57	51	98	78	87	19	17	18	10	7.6
7	18	*60	51	43	87	84	55	21	16	14	9.2	7.6
8	18	*40	50	46	71	69	42	20	15	14	10	8.1
9	17	36	45	44	60	68	34	20	14	12	10	7.6
10	16	37	41	39	60	64	40	25	14	12	11	7.3
11	16	37	37	40	61	65	37	27	14	11	11	7.3
12	16	33	32	38	96	233	32	23	16	10	11	7.6
13	17	32	31	37	98	547	39	20	14	11	11	7.6
14	19	32	32	37	87	238	46	22	14	11	11	8.7
15	23	32	31	37	183	201	44	24	13	11	10	8.7
16	22	33	30	37	168	220	37	22	17	12	9.5	8.7
17	22	33	30	37	119	273	33	26	19	12	8.7	8.1
18	22	36	30	38	116	320	28	29	24	12	8.7	7.8
19	15	30	30	37	100	315	24	43	24	11	8.9	7.6
20	14	30	37	36	84	305	21	47	23	12	8.1	7.0
21	13	29	37	34	78	310	20	51	18	12	7.6	7.0
22	17	27	33	33	77	300	24	94	16	11	7.8	7.0
23	20	26	30	33	85	305	38	107	13	12	7.0	7.3
24	21	26	29	31	80	315	56	80	15	12	7.3	6.8
25	22	26	28	31	87	396	45	78	15	11	7.3	6.5
26	22	26	27	31	74	402	40	74	17	9.8	7.8	6.8
27	18	26	27	40	65	374	37	57	16	9.2	7.6	6.8
28	16	27	28	44	62	335	34	47	15	11	7.5	6.5
29	18	26	28	38	-	273	34	37	13	10	8.1	7.8
30	22	26	28	39	-	*190	33	27	13	11	7.6	8.4
31	23	-	28	38	-	128	-	24	-	12	8.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	569	23	12	18.4	1,130
November	1,327	165	26	44.2	2,630
December	1,269	119	27	40.9	2,520
Calendar year 1938	76,647	1,520	11	210	152,000
January	1,211	84	27	39.1	2,400
February	2,266	183	33	80.9	4,490
March	6,697	647	45	216	13,280
April	1,618	141	20	53.9	3,210
May	1,184	107	19	38.2	2,350
June	487	24	13	16.2	966
July	399.0	28	9.2	12.9	791
August	281.4	11	7.0	9.08	558
September	232.4	9.8	6.5	7.75	461
Water year 1938-39	17,540.8	547	6.5	48.1	34,790

Peak discharge.- Mar. 12 (11 p.m.) 702 sec.-ft.
*Gage height missing; discharge computed on basis of record for Applegate River near Ruch.

Diversions in Bear Creek Basin, Oreg.

The following canals divert water from streams in Bear Creek Basin:

Ashland lateral of Talent Irrigation District, from Sampson Creek in SW¼ sec. 26, T. 39 S., R. 2 E. Water used to irrigate lands near Ashland. Most of flow is received from Keene Creek, in Klamath River Basin, through Keene Creek canal.

East lateral of Talent Irrigation District, from Emigrant Gap Reservoir in SE¼ sec. 20. T. 39 S., R. 1 E. Water used to irrigate lands that are mostly on east side of Bear Creek above Medford.

Talent lateral of Talent Irrigation District, from Bear Creek in SW¼ sec. 33, T. 38 S., R. 1 E. Water used to irrigate lands near Talent.

Phoenix canal, from Bear Creek in NW¼ sec. 23, T. 38 S., R. 1 W. Water supplements flow of Medford Irrigation District canal, used to irrigate lands west of Bear Creek.

Bear Creek canal, from Bear Creek at Medford. Water used to irrigate lands west of Bear Creek near Central Point.

Many smaller canals.

Records of these canals, published as a group, are available from April 1929 to September 1939; records for some canals published separately prior to 1929.

Diversions, in acre-feet, water year October 1938 to September 1939

Month	Ashland lateral	East lateral	Talent lateral	Phoenix canal	Bear Creek canal
October	-	0	131	333	0
November	-	0	-	17	0
December	-	0	-	-	0
January	-	0	-	-	0
February	-	0	-	-	0
March	1	286	506	.69	-
April	415	2,090	1,800	713	0
May	587	1,660	1,550	866	759
June	659	2,860	1,990	744	766
July	1,020	3,230	2,110	631	722
August	1,000	2,540	1,740	466	516
September	247	553	387	505	261
The year or period	4,129	13,219	-	-	3,024

Note.- Probably slight flow in canals at times during periods of missing gage height record, as follows: Ashland lateral, Oct. 1 to Feb. 28; Talent lateral, Oct. 19 to Mar. 3; Phoenix canal, Nov. 10 to Mar. 12; Bear Creek canal, Mar. 1-31.

Applegate River near Copper, Oreg.

Location.- Water-stage recorder, lat. 42°03', long. 123°07', in SE¼ sec. 25, T. 40 S., R. 4 W., a quarter of a mile downstream from French Gulch, 1½ miles downstream from Squaw Creek, and 3 miles northeast of Copper Store. Zero of gage is 1,759.66 feet above mean sea level (general adjustment of 1929). Prior to Dec. 22, 1938, staff gage at same site and datum.

Records available.- December 1938 to September 1939.

Extremes.- Maximum discharge during period, 1,330 second-feet Mar. 22 (gage height, 4.28 feet); minimum, 20 second-feet Sept. 23-25.

Remarks.- Records excellent. Discharge for days of missing gage heights, Dec. 18, Jan. 8 interpolated. About 11 second-feet diverted for irrigation of 482 acres above station in Applegate River Basin; Grand Applegate ditch diverts about 3.3 second-feet around station on left bank. About 21 second-feet for irrigation and 8 second-feet for mining are diverted at times into Thompson Creek Basin. Several hundred acre-feet normally stored each winter in Squaw Lake for irrigation the following summer.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.6	16	1.4	95	2.8	490
.7	21	1.7	146	3.2	675
.9	36	2.0	215	3.6	890
1.1	57	2.4	340	4.2	1,275

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		*131	-	98	118	152	665	396	169	64	33	23
2			-	112	124	154	769	400	159	61	32	24
3			-	165	124	152	852	392	156	64	34	24
4			-	208	118	146	796	372	152	73	30	24
5			-	273	117	142	710	358	150	69	33	28
6			-	195	165	148	685	333	140	68	31	25
7			-	165	154	142	752	333	135	60	30	24
8			-	152	140	142	758	358	129	59	30	24
9			-	140	131	138	670	392	127	56	27	23
10			-	135	131	135	612	389	122	54	28	22
11			-	129	127	148	598	375	117	49	28	23
12			-	127	161	826	571	350	113	49	29	27
13			-	125	165	774	499	326	106	47	29	29
14			-	122	165	508	446	322	102	46	29	33
15			-	125	221	422	430	316	101	47	26	29
16			163	122	215	474	442	292	124	47	24	27
17			159	120	198	620	504	267	124	46	24	24
18			152	118	190	774	602	264	118	44	24	23
19			146	120	188	874	650	252	108	43	24	22
20			142	120	178	956	670	255	102	42	24	22
21			131	117	172	1,130	685	279	98	38	24	22
22			115	113	169	1,240	594	299	92	34	23	22
23			113	110	174	1,200	553	273	84	33	22	20
24			108	107	172	1,150	504	240	82	33	26	20
25			106	106	172	1,120	458	237	80	33	25	20
26	*50		101	106	167	1,080	434	235	78	33	25	22
27			101	142	165	884	438	226	74	33	22	22
28			102	133	159	752	450	212	72	33	23	22
29			104	136	-	680	454	218	69	34	25	23
30			102	136	-	625	403	210	66	34	25	23
31			100	127	-	616	-	185	-	32	23	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-	-
November	-	-	-	-	-
December 16-31	1,945	163	100	122	3,860
Calendar year	-	-	-	-	-
January	4,204	273	98	136	8,340
February	4,490	221	117	160	8,890
March	18,304	1,240	135	590	36,310
April	17,654	852	403	588	35,020
May	9,356	400	185	302	18,560
June	3,349	169	66	112	6,640
July	1,458	73	32	47.0	2,890
August	832	34	22	26.8	1,650
September	716	33	20	23.9	1,420
Water year 1938-39	-	-	-	-	123,600

Peak discharge.- Mar. 12 (11 a.m.) 1,110 sec.-ft.; Mar. 22 (11 p.m.) 1,330 sec.-ft.
*Discharge measurements made on these days.

Applegate River near Ruch, Oreg.

Location.- Water-stage recorder, lat. 42°11', long. 123°03', in sec. 15, T. 39 S., R. 3 W., at Cameron Bridge, 1¼ miles upstream from Little Applegate River and 4½ miles south of Ruch. Zero of gage is 1,475.09 feet above mean sea level (general adjustment of 1929), surveys of Corps of Engineers, U. S. Army.

Records available.- June 1911 to September 1914, September 1925 to September 1939.

Average discharge.- 16 years (1911-14, 1925-26, 1927-39), 321 second-feet.

Extremes.- Maximum discharge during year, 1,360 second-feet Mar. 23 (gage height, 3.04 feet); minimum, 14 second-feet Sept. 24 (gage height, 0.11 foot).
1911-14, 1925-39: Maximum discharge, 20,000 second-feet (estimated), Feb. 20, 1927 (gage height, 16.0 feet), from rating curve extended above 8,000 second-feet; minimum, 7 second-feet Sept. 2, 1929 (gage height, 0.26 foot).

Remarks.- Records good except those for periods of missing gage heights, June 5-19, July 31 to Aug. 13, which were computed on basis of records for stations near Copper and Applegate and Illinois River at Kerby and are fair. Diversions for irrigation above station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.1	13	1.0	168	2.5	900
.2	21	1.3	264	2.8	1,130
.4	43	1.6	382	3.0	1,310
.6	73	1.9	527		
.8	114	2.2	700		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	117	214	103	132	168	634	373	171	60	34	19
2	54	132	465	117	135	174	730	373	160	60	33	20
3	77	112	1,090	174	135	174	816	369	160	62	32	20
4	71	700	781	204	132	162	767	343	160	70	30	19
5	59	289	549	316	130	160	682	331	155	68	31	19
6	54	168	378	224	189	165	688	312	148	67	29	19
7	53	132	373	189	189	160	712	312	135	60	27	18
8	51	112	360	174	165	160	730	331	122	60	26	17
9	50	107	296	154	151	154	646	373	112	59	25	17
10	50	110	257	148	151	148	576	373	105	53	25	19
11	47	101	214	143	143	154	571	356	98	47	25	19
12	49	92	192	140	174	750	554	343	90	46	24	20
13	49	88	174	135	195	900	480	312	87	41	23	21
14	49	88	165	135	189	582	432	304	83	39	23	25
15	51	88	154	137	257	465	409	304	80	39	21	28
16	53	90	146	135	244	491	409	282	100	39	20	25
17	56	101	137	135	220	623	465	268	130	38	19	23
18	53	96	132	132	211	774	549	257	115	37	19	22
19	54	92	127	132	204	879	599	250	100	41	19	22
20	54	88	135	130	198	956	623	244	94	37	19	22
21	54	86	127	127	192	1,130	652	271	92	37	20	21
22	54	82	122	124	192	1,260	566	289	90	37	19	19
23	51	81	117	122	192	1,220	517	275	82	37	19	18
24	51	79	112	122	192	1,180	480	247	77	36	19	16
25	50	79	110	119	192	1,130	437	237	73	36	19	15
26	47	77	105	117	189	1,090	414	237	71	36	19	15
27	47	77	103	157	183	893	409	224	70	36	19	15
28	50	77	105	154	177	742	418	208	68	36	20	16
29	75	84	105	151	-	670	427	208	67	36	22	16
30	73	140	105	154	-	611	378	208	62	36	22	17
31	73	-	103	143	-	594	-	189	-	35	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,715	77	47	55.3	3,400
November	3,765	700	77	126	7,470
December	7,553	1,090	103	244	14,980
Calendar year 1938	264,103	4,990	41	724	523,800
January	4,647	316	103	150	9,220
February	5,053	257	130	180	10,020
March	18,719	1,260	148	604	37,130
April	16,770	816	378	559	33,260
May	9,003	373	189	290	17,860
June	3,157	171	62	105	6,260
July	1,421	70	35	45.8	2,820
August	722	34	19	23.3	1,430
September	582	28	15	19.4	1,150
Water year 1938-39	73,107	1,260	15	200	145,000

Peak discharge.- Nov. 4 (12 m.) 1,310 sec.-ft.; Dec. 3 (4 a.m.) 1,310 sec.-ft.; Mar. 12 (3 p.m.) 1,180 sec.-ft.

Applegate River near Applegate, Oreg.

Location.- Water-stage recorder, lat. 42°14', long. 123°08', in NE¼ sec. 26, T. 38 S., R. 4 W., 0.9 mile downstream from Keeler Creek and 2 miles southeast of Applegate. Zero of gage is 1,285.33 feet above mean sea level (general adjustment of 1929). Prior to Dec. 23, 1938, staff gage at same site and datum.

Records available.- October 1938 to September 1939.

Extremes.- Maximum discharge observed during year, 1,820 second-feet Nov. 4 (gage height, 4.25 feet, from floodmarks); minimum discharge, 8 second-feet Sept. 7, 12, 13. Peak discharge of Dec. 3 probably higher than that of Nov. 4.

Remarks.- Records excellent except those for periods of missing gage readings, Oct.1-14, 14, 16, which are fair. Many diversions above station for irrigation of about 4,000 acres in Applegate River Basin. About 10 second-feet is diverted through Wagner Gap to Bear Creek Basin for several months each year. Fowler-Keeler and Berryman ditches may divert 4.3 second-feet and 13.6 second-feet, respectively, around station.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.5	7	1.6	123	3.2	870
.7	14	2.0	220	3.6	1,180
1.0	36	2.4	374	4.0	1,550
1.3	72	2.8	600		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*67	136	236	123	160	192	744	400	182	42	10	12
2	*65	162	266	131	156	195	842	379	165	38	10	12
3	*90	119	1,280	190	165	198	956	379	153	43	11	13
4	*85	940	972	220	158	190	926	351	151	50	11	13
5	*70	420	704	420	153	182	821	333	153	52	13	13
6	*61	203	447	277	217	190	772	308	136	50	14	14
7	*58	165	400	226	236	182	814	300	131	47	14	12
8	*57	142	415	206	206	182	863	324	129	45	13	10
9	*56	131	333	187	187	177	758	369	125	43	12	10
10	*56	131	277	177	190	174	672	394	119	39	13	10
11	*53	125	223	172	187	172	652	369	110	36	11	10
12	*56	119	206	165	226	766	626	365	104	36	11	9
13	*56	115	180	162	283	1,150	552	328	92	32	12	9
14	*56	112	177	158	249	758	486	316	78	28	12	10
15	58	112	174	162	300	582	464	316	72	27	12	11
16	*59	114	162	158	320	588	469	284	89	26	9	11
17	61	119	153	156	284	730	498	270	99	28	11	12
18	58	123	153	156	263	919	600	266	94	25	11	12
19	61	115	149	156	256	1,040	665	270	84	26	10	12
20	58	112	160	153	242	1,120	665	270	78	24	10	12
21	58	106	149	149	230	1,300	704	288	72	25	10	12
22	57	104	149	144	223	1,420	613	312	65	25	10	12
23	57	97	140	140	223	1,400	570	312	57	21	10	12
24	54	97	134	136	220	1,320	540	281	51	17	9	11
25	57	97	129	131	217	1,280	480	266	51	13	10	11
26	56	97	127	134	212	1,250	442	263	47	12	11	14
27	53	96	127	167	209	1,050	447	242	48	12	11	14
28	54	96	129	182	203	884	447	226	47	11	12	14
29	68	101	127	174	-	800	474	223	45	11	13	14
30	81	121	127	180	-	744	415	226	44	11	13	15
31	87	-	125	170	-	710	-	206	-	12	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,923	90	53	62.0	3,810
November	4,727	940	96	158	9,380
December	8,530	1,280	125	275	16,920
Calendar year	-	-	-	-	-
January	5,462	420	123	176	10,830
February	6,155	320	153	220	12,210
March	21,845	1,420	172	705	43,330
April	18,977	956	415	633	37,640
May	9,436	400	206	304	18,720
June	2,871	182	44	95.7	5,690
July	907	52	11	29.3	1,800
August	351	14	9	11.3	696
September	356	15	9	11.9	706
Water year 1938-39	81,540	1,420	9	223	161,700

*Gage not read; discharge computed on basis of records for Applegate River near Ruch.

Applegate River near Wilderville, Oreg.

Location.- Staff gage, lat. 42°21', long. 123°24', in W½ sec. 15, T. 37 S., R. 6 W., 900 feet downstream from Jackson Creek and 4 miles southeast of Wilderville. Zero of gage is 949.54 feet above mean sea level (general adjustment of 1929), surveys of Corps of Engineers, U. S. Army.

Records available.- October 1938 to September 1939.

Extremes.- Maximum discharge observed during year, 3,470 second-feet Mar. 13 (gage height, 6.34 feet); minimum observed, 3.0 second-feet Sept. 12-15, 18-25.

Remarks.- Records good except those for periods of missing gage heights, which are fair. Many diversions above station for irrigation and mining use. Two ditches divert about 17 second-feet around station on left bank.

Rating table, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

0.5	3.0	1.8	66	3.6	700	6.0	3,000
.7	5.5	2.1	108	4.0	945	6.5	3,690
.9	9.2	2.4	172	4.5	1,330		
1.2	19	2.8	300	5.0	1,820		
1.5	39	3.2	480	5.5	2,380		

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*96	178	324	186	332	362	868	460	218	29	*8	4.0
2	*94	254	629	192	320	354	945	412	194	28	7	4.5
3	*120	218	1,980	254	380	372	1,040	412	178	31	8	4.5
4	*112	1,500	1,390	376	386	349	1,010	376	189	35	7	4.5
5	*98	730	964	1,050	367	328	893	367	194	36	7	4.0
6	*94	394	736	700	886	332	844	340	183	38	7	4.5
7	*93	293	*560	475	796	328	856	332	162	35	7	4.0
8	*92	248	*580	408	629	332	868	340	152	32	7	4.0
9	*92	237	*520	372	546	320	796	376	143	31	7	4.0
10	92	251	450	336	495	312	748	403	112	32	3.5	4.0
11	78	227	385	316	495	304	700	358	102	32	4.0	3.5
12	81	209	324	304	676	1,820	676	358	92	31	5.0	3.0
13	78	192	276	290	754	3,310	629	367	84	23	4.5	3.0
14	78	186	286	276	658	1,840	563	332	78	24	4.0	3.0
15	76	186	276	276	832	1,270	530	340	68	24	6	3.0
16	74	186	254	265	796	1,100	500	300	66	23	7	3.5
17	76	180	244	258	694	1,230	520	293	71	19	8	3.5
18	76	189	237	254	612	1,460	607	286	73	20	7	3.0
19	92	180	230	254	568	1,570	652	300	78	18	7	3.0
20	92	172	234	258	525	1,640	629	332	76	17	7	3.0
21	89	167	237	248	495	1,810	688	367	66	17	6	3.0
22	92	162	227	240	465	1,970	652	421	58	14	7	3.0
23	89	154	218	230	445	1,950	640	412	56	14	6	3.0
24	92	150	212	221	426	1,840	607	324	54	12	6	3.0
25	89	147	200	218	416	1,760	563	349	51	11	6	3.0
26	86	150	197	212	412	1,670	530	349	47	*10	4.0	3.5
27	86	147	192	244	398	1,450	510	308	41	*10	4.5	3.5
28	89	145	197	344	380	1,190	480	293	36	*9	4.0	3.5
29	98	145	192	312	-	1,020	500	279	29	*9	4.0	3.5
30	119	160	194	403	-	919	470	265	32	*9	4.0	3.5
31	122	-	192	372	-	856	-	230	-	*10	4.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,835	122	74	91.5	5,620
November	7,737	1,600	145	258	15,350
December	13,137	1,980	192	424	26,060
Calendar year	-	-	-	-	-
January	10,144	1,050	186	327	20,120
February	15,183	886	320	542	30,120
March	35,368	3,310	304	1,141	70,150
April	20,514	1,040	470	684	40,690
May	10,681	460	230	345	21,190
June	2,983	218	29	99.4	5,920
July	683	38	9	22.0	1,350
August	183.5	8	3.5	5.92	364
September	106.0	4.5	3.0	3.53	210
Water year 1938-39	119,554.5	3,310	3.0	328	237,100

*Gage not read; discharge computed on basis of records for Applegate River near Ruch.

Illinois River at Kerby, Oreg.

Location.- Water-stage recorder, lat. 42°13', long. 123°39', in NW¼ sec. 4, T. 39 S., R. 8 W., 1 mile northwest of Kerby. Zero of gage is about 1,218 feet above mean sea level (river profile map).

Drainage area.- 367 square miles.

Records available.- March 1926 to September 1939.

Average discharge.- 13 years, 1,024 second-feet.

Extremes.- Maximum discharge during year, 13,500 second-feet Mar. 12 (gage height, 13.83 feet); minimum, 18 second-feet Aug. 22, Sept. 10.

1926-39: Maximum discharge, 50,000 second-feet (estimated) Feb. 20, 1927 (gage height, 19.6 feet, former site and datum), from rating curve extended above 26,000 second-feet; minimum, 13 second-feet Sept. 10-15, 1934.

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

Rating tables, water year 1938-39 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Mar. 12

1.0	37	2.3	420	5.0	2,120
1.2	75	2.6	565	6.0	2,920
1.4	123	2.9	725	8.0	4,800
1.6	178	3.2	890	10.0	7,300
1.8	237	3.6	1,130	12.0	10,400
2.0	300	4.0	1,410	14.0	13,900

Mar. 13 to Sept. 30

0.2	14	1.8	335
.4	31	2.2	495
.6	54	2.6	665
.8	81	3.0	860
1.0	115	4.0	1,450
1.4	205	5.0	2,120

Note.- Same as preceding table above 5.0 feet.

Discharge, in second-feet, water year October 1938 to September 1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	297	1,830	310	1,070	780	1,210	371	181	70	28	21
2	39	555	7,060	363	1,130	780	1,270	355	171	67	27	21
3	46	460	7,600	1,270	1,480	808	1,270	335	155	67	26	21
4	59	3,360	3,540	2,340	1,340	725	1,180	321	157	64	24	20
5	65	1,440	2,120	4,000	1,300	703	1,090	307	162	66	25	21
6	65	808	1,550	2,120	4,200	835	1,000	293	157	66	23	21
7	67	570	1,200	1,440	2,680	835	1,000	279	149	64	22	20
8	65	442	1,010	1,160	1,830	890	1,000	276	138	60	22	19
9	63	550	862	950	1,410	835	910	279	136	58	22	19
10	63	890	752	835	1,580	780	835	279	124	55	21	19
11	63	676	654	752	1,520	1,040	785	279	119	54	21	19
12	67	525	575	692	2,120	9,160	760	268	115	47	21	20
13	73	438	515	626	1,970	6,460	688	253	111	42	21	20
14	71	384	475	570	1,830	3,360	642	244	108	43	20	22
15	71	347	438	545	3,000	2,440	598	235	101	44	21	22
16	71	332	406	510	2,360	2,440	555	226	136	43	21	21
17	71	328	371	480	1,830	2,840	575	214	217	42	21	20
18	71	318	347	456	1,620	2,840	598	211	183	41	20	20
19	69	304	328	456	1,480	2,680	620	214	162	41	20	20
20	67	281	318	447	1,340	2,600	620	223	151	39	19	21
21	61	268	318	424	1,160	2,680	642	247	136	38	19	21
22	61	249	307	398	1,100	2,760	575	332	126	36	19	21
23	63	240	294	375	1,070	2,600	555	387	119	36	19	22
24	63	216	274	351	1,040	2,360	523	335	113	34	20	22
25	65	207	265	332	1,040	2,120	495	500	110	32	21	21
26	65	207	256	318	980	2,050	463	272	97	32	21	22
27	67	207	259	890	890	1,770	443	253	86	32	20	23
28	77	207	314	1,550	862	1,480	431	235	81	32	21	23
29	108	225	367	1,550	-	1,330	415	220	75	31	21	21
30	123	495	343	1,760	-	1,210	399	211	73	30	21	21
31	123	-	324	1,580	-	1,150	-	194	-	30	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,139	123	37	69.0	4,240
November	15,286	3,360	207	528	31,390
December	35,272	7,600	256	1,138	69,960
Calendar year 1938	568,423	21,000	32	1,557	1,127,000
January	29,650	4,000	310	956	58,810
February	45,232	4,200	862	1,615	89,720
March	65,341	9,160	703	2,108	129,600
April	22,147	1,270	399	738	43,930
May	8,448	387	194	273	16,760
June	3,949	217	73	132	7,830
July	1,436	70	30	46.3	2,850
August	668	28	19	21.5	1,320
September	624	23	19	20.8	1,240
Water year 1938-39	230,732	9,160	19	632	457,600

Peak discharge.- Nov. 4 (10 a.m.) 5,700 sec.-ft.; Dec. 2 (9 p.m.) 11,500 sec.-ft.; Jan. 5 (1 a.m.) 5,700 sec.-ft.; Mar. 12 (1 p.m.) 13,500 sec.-ft.

SPRINGS IN THE WALLA WALLA RIVER BASIN, OREGON-WASHINGTON

Ground-water overflow through many springs on the alluvial fan of the Walla Walla River near Milton and Freewayer, Oreg., amounts to about 50,000 acre-feet a year. During the irrigation season, practically all the overflow is used to water crops on land that is not served by diversions from the river. The water users have a vital interest in the amount and variation of ground-water overflow, because (1) the acreage of crop land under irrigation in the basin is greater that can be watered from the Walla Walla River in years of small run-off, (2) the variation in spring discharge depends on the range in stream flow and the time and place of irrigation on the upper part of the fan, and (3) the springs are fed from a body of ground water from which irrigation wells also draw a considerable supply.

A survey made in May and June 1933, listed 57 springs or spring groups in the area.[1/] In order to bring about a more effective use of the available water supply through a better understanding of the relation between surface- and ground-water supplies in the basin, ground-water levels and ground-water discharge are being measured periodically at representative wells and at the 18 principal springs or spring groups.

A noteworthy feature of the springs is their occurrence in three parallel zones that are concentric about the apex of the alluvial fan. The inner zone is 3 to 3½ miles downstream from Freewater and extends from the vicinity of Nicholas Spring, which is about half a mile east of the Walla Walla River at McCoy Bridge, to springs in the vicinity of Dugger Creek. Within this zone are fully three-fourths of the springs in the Walla Walla Basin. The intermediate and outer spring zones, each of which contains only a few springs, are about 2 miles and 4 miles, respectively, beyond the inner zone.

Variations in the discharge of the springs follow largely fluctuations in elevation of the ground-water table. These fluctuations depend chiefly on the height of ground-water waves that are created by successive freshets in the Walla Walla River and that pass outward through the alluvial fan as the freshets wane, or they may be caused by deep infiltration of water applied to the land for irrigation and, in lesser degree, to deep infiltration of rainfall and to pumpage from irrigation wells.

Discharge measurements of springs in the Walla Walla River Basin, Oreg.-Wash., during the year ending September 30, 1939*

Springs of the inner zone

Nicholas Spring, Oreg., NE¼NE¼ sec. 24, T. 6 N., R. 35 E., 150 feet above confluence of spring channel and Walla Walla River

Date	Discharge	Date	Discharge	Date	Discharge
	Sec.-ft.		Sec.-ft.		Sec.-ft.
Oct. 14	0.41	Mar. 25	2.63	June 28	0.88
Nov. 11	.57	Apr. 14	1.40	July 12	.73
Dec. 10	1.38	28	1.76	26	.48
Jan. 12	1.23	May 12	1.71	Aug. 12	.29
Feb. 13	1.76	26	1.14	24	.22
Mar. 14	2.22	June 10	1.06	Sept. 13	.32

*Measurements by the Oregon State Water Resources Department.

1/ Piper, A. M., Robinson, T. W., and Thomas, H. E., Ground water in the Walla Walla Basin, Oregon-Washington: Supreme Court of the United States, October term 1935, State of Washington vs. State of Oregon, transcript of record, p. 132 A, October 14, 1935.

Discharge measurements of springs in the Walla Walla River Basin, Oreg.-Wash., during the year ending September 30, 1939--Continued

Springs of the innter zone--Continued

Big Spring Branch (west prong), Oreg., SE¼NW¼ sec. 24, T. 6 N., R. 35 E., at Ballou residence, 75 feet above bridge on county road

Date	Discharge	Date	Discharge	Date	Discharge
	Sec.-ft.		Sec.-ft.		Sec.-ft.
Oct. 14	6.02	Mar. 25	8.07	June 28	8.63
Nov. 11	3.85	Apr. 14	13.1	July 12	6.88
Dec. 10	8.35	28	16.7	26	5.19
Jan. 12	7.70	May 12	19.7	Aug. 12	3.10
Feb. 13	6.24	25	20.9	24	3.49
Mar. 14	5.80	June 10	15.1	Sept. 13	4.22

Big Spring Branch (east prong), Oreg., NE¼SW¼ sec. 24, T. 6 N., R. 35 E., above flow line of small reservoir supplying two diversion pumps

Oct. 14	2.18	Mar. 25	4.07	June 28	2.40
Nov. 11	2.24	Apr. 14	4.58	July 12	1.64
Dec. 10	2.72	28	4.53	26	1.64
Jan. 12	3.61	May 12	4.72	Aug. 12	1.12
Feb. 13	2.92	25	4.86	24	1.76
Mar. 14	2.59	June 10	3.52	Sept. 13	2.07

Engle Spring, Oreg., NW¼SE¼ sec. 23, T. 6 N., R. 35 E., at diversion dam

Oct. 14	3.37	Mar. 25	3.16	June 28	3.49
Nov. 11	3.01	Apr. 14	3.41	July 12	3.37
Dec. 10	3.48	28	4.32	26	2.95
Jan. 12	3.44	May 12	4.52	Aug. 12	2.72
Feb. 13	3.08	26	3.84	24	2.70
Mar. 14	2.81	June 10	3.95	Sept. 13	3.48

Downing Spring, Oreg., SE¼SW¼ sec. 23, T. 6 N., R. 35 E., at weir, 200 feet below spring orifice

Oct. 14	1.82	Mar. 25	0.84	June 28	2.27
Nov. 11	.42	Apr. 14	1.54	July 12	2.09
Dec. 10	1.19	28	3.51	26	1.34
Jan. 12	.59	May 12	3.80	Aug. 24	.65
Feb. 13	.97	26	3.57	Sept. 13	1.19
Mar. 13	.47	June 10	3.15		

Haun Spring, Oreg., NW¼SE¼ sec. 23, T. 6 N., R. 35 E., at Haun farm, 50 feet above highway crossing

Oct. 14	1.31	Mar. 25	1.16	June 28	1.97
Nov. 11	.88	Apr. 14	1.90	July 12	1.64
Dec. 10	1.37	28	2.40	26	1.43
Jan. 12	1.15	May 12	2.60	Aug. 12	.96
Feb. 13	1.18	26	2.49	24	1.02
Mar. 13	.98	June 10	2.34	Sept. 13	1.20

Springs of the intermediate and outer zones

McEvoy Spring, Wash., SE¼NW¼ sec. 10, T. 6 N., R. 35 E., at McEvoy farm and 200 feet upstream from Walla Walla Valley Railway

Oct. 14	4.91	Mar. 26	3.22	June 28	4.90
Nov. 11	3.89	Apr. 15	3.57	July 12	5.95
Dec. 10	2.90	28	4.33	26	4.69
Jan. 12	3.20	May 11	5.94	Aug. 12	2.77
Feb. 13	3.23	25	6.25	24	2.85
Mar. 13	3.35	June 12	5.68	Sept. 12	3.30

Lewis Spring, Oreg., NW¼NW¼ sec. 23, T. 6 N., R. 35 E., below road crossing

Oct. 14	2.68	Mar. 25	2.22	June 27	1.97
Nov. 11	2.12	Apr. 14	2.46	July 12	2.70
Dec. 10	2.41	28	2.54	26	2.08
Jan. 12	2.23	May 12	2.92	Aug. 12	1.68
Feb. 13	2.46	25	2.87	24	2.06
Mar. 13	2.21	June 10	2.57	Sept. 13	2.28

Unnamed spring, Wash., NW¼NE¼ sec. 16, T. 6 N., R. 35 E., at a small diversion structure

Oct. 14	3.25	Mar. 13	3.03	July 25	2.87
Nov. 11	2.73	26	3.38	Aug. 12	2.24
Dec. 10	3.82	May 11	6.02	24	2.04
Jan. 12	3.51	June 28	3.47	Sept. 12	1.89
Feb. 13	4.24	July 12	3.66		

Discharge measurements of springs in the Walla Walla River Basin, Oreg.-Wash., during the year ending September 30, 1939--Continued

Springs of the intermediate and outer zones--Continued

East Mud Creek (west prong), Oreg., SW¼SW¼ sec. 22, T. 6 N., R. 35 E., at weir

Date	Discharge	Date	Discharge	Date	Discharge
	Sec.-ft.		Sec.-ft.		Sec.-ft.
Oct. 13	2.17	Mar. 25	2.86	June 26	3.52
Nov. 10	2.65	Apr. 15	2.75	July 11	3.10
Dec. 9	3.15	28	3.51	25	2.50
Jan. 11	2.98	May 11	3.85	Aug. 12	1.77
Feb. 11	2.37	24	3.68	23	1.61
Mar. 14	2.85	June 14	3.52	Sept. 12	1.69

East Mud Creek (east prong), Oreg., SE¼SW¼ sec. 22, T. 6 N., R. 35 E., in diversion ditch, 150 feet below diversion dam

Oct. 13	1.47	Mar. 25	1.83	June 26	1.46
Nov. 10	1.26	Apr. 15	1.47	July 11	1.25
Dec. 9	1.75	28	1.58	25	1.39
Jan. 11	1.29	May 11	1.76	Aug. 12	.97
Feb. 11	1.42	24	2.32	23	.97
Mar. 14	1.65	June 12	1.90	Sept. 12	.95

East Mud Creek (branch of), Oreg., SW¼SW¼ sec. 16, T. 6 N., R. 35 E., near Lockwood dwelling

Oct. 13	1.70	Mar. 26	3.63	June 28	5.94
Nov. 10	2.83	Apr. 15	3.69	July 12	4.46
Dec. 10	4.42	28	4.21	25	3.66
Jan. 11	4.16	May 11	5.41	Aug. 12	2.25
Feb. 13	4.12	25	6.27	23	1.84
Mar. 13	4.36	June 12	6.32	Sept. 12	1.12

South Mud Creek, Oreg., SE¼NW¼ sec. 28, T. 6 N., R. 35 E., at Von der Ahe farm

Oct. 13	1.67	Mar. 25	1.70	June 26	4.53
Nov. 10	3.47	Apr. 15	2.02	July 11	3.25
Dec. 9	2.11	28	3.07	25	2.40
Jan. 11	1.71	May 11	3.92	Aug. 12	1.44
Feb. 11	1.75	24	4.57	23	1.28
Mar. 14	1.78	June 14	4.34	Sept. 12	1.27

Johnson Creek, Oreg., SE¼NW¼ sec. 29, T. 6 N., R. 35 E. at two weirs

Oct. 13	2.30	Mar. 25	2.25	June 29	3.95
Nov. 10	2.09	Apr. 15	4.01	July 11	4.03
Dec. 9	3.21	28	3.59	25	4.58
Jan. 11	2.70	May 12	3.93	Aug. 12	2.61
Feb. 11	2.48	24	4.27	23	1.39
Mar. 13	2.94	June 12	4.26	Sept. 12	2.14

Dugger Creek, Oreg., NW¼NW¼ sec. 32, T. 6 N., R. 35 E., at two weirs

Oct. 13	5.50	Mar. 25	5.51	June 27	12.4
Nov. 10	10.4	Apr. 14	9.36	July 11	8.53
Dec. 9	8.89	28	9.83	25	8.67
Jan. 11	4.86	May 12	15.1	Aug. 12	6.57
Feb. 11	6.23	24	9.94	23	5.42
Mar. 13	7.79	June 12	12.1	Sept. 12	5.65

Schwartz Spring Branch (south prong), Oreg., SW¼SE¼ sec. 23, T. 6 N., R. 34 E., at weirs

Oct. 13	2.06	Mar. 25	7.56	June 26	7.94
Nov. 10	2.05	Apr. 12	6.94	July 11	5.76
Dec. 9	3.19	27	5.22	25	5.63
Jan. 11	3.90	May 12	7.37	Aug. 12	5.08
Feb. 11	4.46	24	8.44	23	3.16
Mar. 13	6.26	June 13	8.05	Sept. 12	3.25

Schwartz Spring Branch (north prong), Oreg., NE¼SW¼ sec. 23, T. 6 N., R. 34 E., in ditch diverting from spring

Oct. 13	3.87	Mar. 25	4.53	June 26	5.55
Nov. 10	3.48	Apr. 12	5.67	July 11	6.09
Dec. 9	4.15	28	4.75	25	5.26
Jan. 11	4.61	May 12	3.59	Aug. 12	3.87
Feb. 11	4.47	24	4.90	23	5.18
Mar. 13	5.74	June 14	4.40	Sept. 12	4.46

South Mud Creek, Oreg., SW¼SE¼ sec. 13, T. 6 N., R. 34 E., at Krumbaugh farm

Oct. 13	4.24	Mar. 25	6.13	June 26	7.41
Nov. 10	4.14	Apr. 12	6.59	July 12	6.48
Dec. 10	4.72	28	7.05	25	5.90
Jan. 11	4.95	May 11	6.90	Aug. 12	5.12
Feb. 11	5.74	25	7.56	23	6.12
Mar. 13	6.50	June 13	8.42	Sept. 12	4.83

In addition to the records of stream flow obtained at gaging stations in the Pacific slope basins in Oregon and lower Columbia River Basin and reported in the preceding pages, measurements of flow were made also at other points, as listed in the following table:

Miscellaneous discharge measurements in Pacific slope basins in Oregon and in lower Columbia River Basin during water year October 1938 to September 1939

Date	Stream	Tributary to or diverting from-	Locality	Discharge
Columbia River Basin between Deschutes River and Sandy River, Oreg.-Wash.				
Nov. 18	Little Wind River..	Wind River.....	At mouth, 1 mile east of Carson, Wash.	18.2
Deschutes River Basin, Oreg.				
Nov. 16	Rock Creek.....	Cultus River in Crane Prairie Reservoir.	Below Cold Creek, in reservoir near Lapine.	18.2
Sept. 1	....do.....	....do.....	....do.....	20.0
Sandy River Basin, Oreg.				
Aug. 3	Sandy River Canal..	Sandy River.....	At intake, near Marmot.....	416
Willamette River Basin, Oreg.				
July 23	Bear Creek.....	Coast Fork of Willamette River.	SE¼ sec. 20, T. 19 S., R. 2 W., at road crossing.	1.40
25	Owl Creek.....	Willamette River.....	NW¼ sec. 5, T. 12 S., R. 4 W., near Albany.	.27
Aug. 11	Rickreall Creek....	....do.....	SE¼ sec. 25, T. 7 S., R. 5 W., near Rickreall.	.55
11	....do.....	....do.....	SW¼ sec. 29, T. 7 S., R. 4 W., near Rickreall.	.49
Sept. 14	Santiam River.....	....do.....	At highway bridge at Jefferson.	482
Aug. 4	North Santiam River.	Santiam River.....	At highway bridge at Stayton, below diversions.	77.4
July 28	Molalla River.....	Willamette River.....	NE¼ sec. 29, T. 4 S., R. 2 E., at highway crossing.	65.7
Oct. 8	Mill Creek.....	Pudding River.....	At mouth, at Aurora.....	7.2
July 27	....do.....	....do.....	....do.....	6.2
Coastal Streams between Columbia River and Rogue River, Oreg.				
Feb. 4	Little Creek.....	Pacific Ocean.....	SW¼ sec. 28, T. 10 S., R. 11 W., near Newport.	5.7
Rogue River Basin, Oreg.				
Dec. 1	Evans Creek.....	Rogue River.....	NE¼ sec. 34, T. 34 S., R. 3 W., former gaging station near Rogue River.	12.2
1	Pleasant Creek.....	Evans Creek.....	At mouth, ½ mile southwest of Wimer.	1.1
1	Ditch Creek.....	Pleasant Creek.....	At mouth, 2 miles northwest of Wimer.	.5
Oct. 13	Applegate River....	Rogue River.....	3 miles east of Applegate.....	62.3
31	Elliot Creek.....	Applegate River.....	At mouth, at Oregon-California boundary line.	26.0
Nov. 28	....do.....	....do.....	....do.....	9.0
Oct. 31	Carberry Creek.....	....do.....	NE¼ sec. 10, T. 41 S., R. 4 W., at mouth.	21.9
Nov. 28	....do.....	....do.....	....do.....	12.6
29	Little Applegate River.	....do.....	SE¼ sec. 13, T. 39 S., R. 3 W., above Sterling Creek.	13.9
May 16	....do.....	....do.....	NW¼ sec. 13, T. 39 S., R. 3 W., below Sterling Creek.	28.6
Nov. 29	....do.....	....do.....	NE¼ sec. 10, T. 39 S., R. 3 W., at mouth.	5.4
May 16	....do.....	....do.....	....do.....	29.4
16	Sterling Creek.....	Little Applegate River.	SE¼ sec. 13, T. 39 S., R. 3 W., at mouth.	13.4
Oct. 17	New Berryman Ditch.	Applegate River.....	NE¼ sec. 26, T. 38 S., R. 4 W., near Applegate.	13.7
Feb. 4	Jackson Creek.....	....do.....	At mouth, near Wilderville.....	60.9
May 29	East Fork of Illinois River.	Illinois River.....	At road crossing ¾ mile north of Takilma.	15.8
29	Althouse Creek.....	East Fork of Illinois River.	At mouth, 4 miles west of Holland.	32.7
29	Sucker Creek.....	....do.....	SW¼ sec. 35, T. 39 S., R. 8 W., at mouth.	64.8
29	Kelly Creek.....	Tyger Creek.....	Sec. 35, T. 39 S., R. 8 W., at highway crossing.	6.3
24	West Fork of Illinois River.	Illinois River.....	Sec. 19, T. 40 S., R. 8 W., above Wood Creek.	42.9
26	Wood Creek.....	West Fork of Illinois River.	Sec. 29, T. 40 S., R. 8 W., above Fry Creek.	2.1
24	....do.....	....do.....	Sec. 19, T. 40 S., R. 8 W., at mouth.	30.3
28	Fry Creek.....	Wood Creek.....	Sec. 28, T. 40 S., R. 8 W., below waste from Esterly Mine.	23.6
26	Rough and Ready Creek.	West Fork of Illinois River.	SW¼ sec. 17, T. 40 S., R. 8 W., at mouth.	19.8

PART 14. PACIFIC SLOPE BASINS IN OREGON AND LOWER COLUMBIA RIVER BASIN

The following tables summarize in convenient form for general reference and for use in preliminary investigations the figures of yearly discharge and run-off for certain gaging stations in the Pacific Slope basins in Oregon and Lower Columbia River Basin, previously published in the annual series of water-supply papers. All gaging stations, both active and discontinued, at which 10 or more complete years of record have been collected and published are represented, also some special stations, as noted below. The summaries present figures of maximum and minimum daily discharge and yearly mean discharge and run-off, for both the water years ending September 30 and the calendar years. The figures for the water years prior to 1911 and figures for the calendar years 1911 to 1933 have not been previously published in the annual water-supply papers but are included in these summaries.

The number of the water-supply paper in which the figures of daily and monthly discharge as well as yearly discharge are published is shown in the column headed W.S.P. (no. and page). The descriptions contained in the water-supply papers indicated give detailed information relative to the gaging stations, including location, diversions, regulation by storage, effect of irrigation, and other pertinent information. Records for stations which were operated prior to 1901 are generally contained in the annual reports of the Geological Survey. Reference is made to these reports if records have not also been published in water-supply papers.

Figures of drainage area are given for each station when known. These figures have been revised from time to time as more accurate maps have become available. The discharge per square mile and run-off in inches in the following tables, in general, have been revised according to the latest figure for the drainage area.

Summaries for incomplete years are given for those stations in irrigated regions for which seasonal records were collected in order to show the flow available for irrigation. An incomplete year is included for other stations if the maximum daily discharge or minimum daily discharge for all the years of record occurred in that year.

Former names under which records for some of the stations have been published in the annual water-supply papers are indicated in these yearly summaries as follows:

1. If the name of the stream or town or other feature to which the station is referred has been changed, the former name is given in parentheses, indicating that records for some of the earlier years are published under the obsolete name.

2. If the entire name of a station has been changed, the superseded name and years when it was used are given in parentheses beneath the present name.

YEARLY-DISCHARGE SUMMARY

Summary of yearly discharge, in second-feet, at stations in COLUMBIA RIVER MAIN STEM

Columbia River near (at) The Dalles, Oreg.
(Drainage area, 237,000 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off		Maximum day	Minimum day	Mean	Per square mile	Run-off	
						Inches	Acre-feet					Inches	Acre-feet
1879	370-16	643	59.6	242.0	1.02	13.85	175,000	643	59.6	243.2	1.03	13.93	176,000
1880	370-16	914	68.3	264.0	1.11	15.18	192,000	914	68.3	267.1	1.13	15.35	193,900
1881	370-16	598	73.8	252.0	1.06	14.46	183,000	598	73.8	251.7	1.06	14.42	182,200
†1882	370-16	883	65.3	232.0	.979	13.30	168,000	883	65.3	233.6	.986	13.38	169,100
†1883	370-16	573	58.8	212.0	.895	12.14	154,000	573	58.8	205.2	.866	11.75	148,600
†1884	370-16	698	51.0	215.0	.907	12.34	156,000	698	49.9	224.0	.945	12.86	162,600
†1885	370-16	482	49.9	214.0	.903	12.28	155,000	482	76.0	212.5	.897	12.17	153,800
†1886	370-16	673	64.4	211.0	.890	12.07	153,000	673	64.4	203.3	.858	11.64	147,200
†1887	370-16	896	66.8	261.0	1.10	14.96	189,000	896	66.1	267.3	1.13	15.31	193,500
†1888	370-16	564	54.9	203.0	.857	11.63	147,000	564	54.9	199.7	.843	11.49	145,000
†1889	370-16	302	62.6	135.0	.569	7.72	97,000	302	60.0	130.9	.552	7.51	94,790
†1890	370-16	633	47.4	197.0	.831	11.29	143,000	633	47.4	197.3	.832	11.29	142,900
†1891	370-16	448	62.6	167.0	.705	9.55	121,000	448	62.6	171.6	.724	9.83	124,200
1892	370-16	607	66.2	198.0	.835	11.38	144,000	607	66.2	197.9	.835	11.37	143,600
†1893	370-16	679	66.2	220.0	.928	12.59	159,000	679	66.2	231.2	.986	13.24	167,400
1894	370-16	1,160	88.3	311.0	1.31	17.77	225,000	1,160	88.0	306.5	1.29	17.54	221,900
1895	370-16	475	80.1	194.0	.819	11.13	140,000	475	70.0	182.9	.772	10.50	132,400
1896	370-16	785	70.0	229.0	.966	13.15	166,000	785	70.0	239.4	1.01	13.73	173,800
1897	370-16	780	78.0	243.0	1.03	13.87	176,000	780	82.0	240.7	1.02	13.78	174,300
1898	370-16	649	82.0	230.0	.970	13.19	167,000	649	63.2	222.4	.938	12.71	161,000
†1899	370-16	787	63.2	236.0	.996	13.50	171,000	787	71.4	250.3	1.06	14.33	181,200
1900	370-16	536	103.0	224.0	.945	12.85	163,000	536	99.0	220.4	.930	12.61	159,600
1901	370-16	662	81.1	219.0	.924	12.53	158,000	662	77.0	209.0	.882	11.99	151,300
†1902	370-16	644	63.2	198.0	.835	11.32	143,000	644	63.2	196.9	.831	11.27	142,600
1903	370-16	787	72.2	211.0	.890	12.09	153,000	787	73.8	224.3	.946	12.84	162,400
1904	370-16	629	80.2	242.0	1.02	13.89	176,000	629	70.4	227.4	.959	13.02	165,100
†1905	370-16	412	57.8	141.0	.595	8.10	102,000	412	57.8	142.9	.603	8.19	103,400
†1906	370-16	374	64.4	158.0	.667	9.04	114,000	374	64.4	165.9	.700	9.50	120,100
†1907	370-16	587	77.8	229.0	.966	13.12	166,000	587	77.8	224.4	.947	12.84	162,500
†1908	370-16	653	65.0	197.0	.831	11.30	143,000	653	65.0	194.2	.819	11.13	141,000

†Revised yearly figures not previously published.

Note.- Figures of maximum, minimum, and mean discharge and run-off in acre-feet in the above table are expressed in thousands.

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Summary of yearly discharge, in second-feet, at stations in Columbia River main stem--Continued

Columbia River near (at) The Dalles, Oreg.--Continued
(Drainage area, 237,000 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
†1909	370-16	675	68.0	192.0	.810	11.02	139,000	675	68.0	201.6	.851	11.56	14,000
1910	370-16	566	79.4	213.0	.899	12.21	154,000	566	79.4	209.9	.886	12.05	152,000
†1911	312-50	574	67.4	188.0	.793	10.78	136,000	574	67.4	180.0	.759	10.31	130,300
†1912	332-533	568	57.2	184.0	.776	10.56	134,000	568	57.2	186.0	.785	10.68	135,100
†1913	362-529	759	68.0	214.0	.903	12.23	155,000	759	68.0	216.1	.912	12.37	156,500
†1914	394-15	493	70.6	187.0	.789	10.70	135,000	493	66.8	188.9	.797	10.80	136,800
†1915	414-15	328	62.0	147.0	.620	8.45	107,000	328	62.0	141.8	.598	8.13	102,700
†1916	414-15	727	62.0	238.0	1.00	13.80	173,000	727	62.0	239.7	1.01	13.87	174,000
†1917	464-12	727	62.0	210.0	.886	12.03	152,000	727	62.0	213.5	.901	12.24	154,600
†1918	484-6	578	70.6	205.0	.865	11.72	148,000	578	68.9	201.2	.849	11.51	145,700
†1919	514-10	553	57.0	172.0	.726	9.86	125,000	553	47.0	167.9	.708	9.63	121,500
†1920	514-10	428	47.0	158.0	.667	9.11	115,000	428	65.6	169.1	.714	9.72	122,800
1921	534-10	773	86.6	230.0	.970	13.18	167,000	773	81.0	226.0	.954	13.02	164,600
1922	554-10	677	64.4	183.0	.772	10.47	133,000	677	56.0	176.8	.746	10.10	128,000
1923	574-6	581	56.0	179.0	.755	10.29	130,000	581	61.4	179.5	.757	10.31	129,900
1924	594-11	433	60.8	137.0	.578	7.87	99,300	433	60.8	137.1	.578	7.87	99,530
1925	614-11	642	68.0	201.0	.848	11.51	146,000	642	68.0	200.7	.847	11.48	145,300
1926	634-11	269	63.2	118.0	.498	6.77	85,500	269	63.2	124.8	.527	7.15	90,430
1927	654-12	690	74.0	206.0	.869	11.79	149,000	690	82.5	225.4	.951	12.90	163,200
1928	674-12	766	86.8	231.0	.975	13.28	168,000	766	60.7	205.4	.867	11.79	149,000
1929	694-11	460	43.2	133.0	.561	7.61	96,100	460	43.2	129.6	.547	7.49	93,830
1930	709-11	332	40.0	131.0	.553	7.60	95,200	332	40.0	131.8	.556	7.57	95,460
1931	724-11	308	50.8	122.0	.515	7.00	88,400	308	50.8	121.8	.514	6.98	88,200
1932	739-11	565	43.2	186.0	.785	10.64	135,000	565	43.2	191.5	.808	10.98	139,000
1933	754-11	722	47.2	198.0	.835	11.34	143,000	722	47.2	212.6	.897	12.18	153,900
1934	769-11	453	86.4	211.5	.892	12.11	153,100	453	63.4	196.7	.830	11.26	142,400
1935	794-15	476	61.6	170.2	.718	9.76	123,200	476	52.1	164.6	.695	9.45	119,200
1936	814-15	529	45.1	158.9	.670	9.13	115,400	529	45.1	157.4	.664	9.03	114,200
1937	834-10	376	36.0	128.7	.543	7.37	93,190	376	36.0	135.8	.573	7.78	98,300
1938	864-11	605	66.7	190.2	.803	10.90	137,700	605	61.0	187.8	.792	10.77	136,000
1939	884-11	387	61.0	149.7	.632	8.58	108,400	-	-	-	-	-	-

†Revised yearly figures not previously published.
Note.- Figures of maximum, minimum, and mean discharge and run-off in acre-feet in the above table are expressed in thousands.

WALLA WALLA RIVER BASIN

South Fork of Walla Walla River near Milton, Oreg.
(Drainage area, 67 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1907	370-217	-	-	-	-	-	-	398	118	179	2.63	35.70	130,000
1908	370-217	510	-	179	2.63	35.70	129,800	510	126	185	2.72	36.92	134,000
1910	370-217	735	107	177	2.60	35.29	128,000	735	107	171	2.51	34.07	124,000
1911	312-455	390	91	149	2.19	29.73	108,000	390	91	142	2.09	28.37	103,000
1912	332-534	630	91	183	2.69	36.62	133,000	630	91	188	2.76	37.57	136,000
1913	362-532	630	104	190	2.79	37.87	138,000	630	104	190	2.79	37.87	137,500
1914	394-17	371	99	154	2.26	30.68	112,000	371	99	152	2.24	30.41	110,400
1915	414-17	575	90	144	2.12	28.78	104,000	575	90	147	2.16	29.32	106,100
1932	739-13	890	74	187	2.75	37.43	136,000	890	74	198	2.91	39.61	143,800
1933	754-13	708	90	194	2.85	38.69	140,000	1,110	105	205	3.01	40.86	148,200
1934	769-12	1,110	97	163	2.43	32.97	117,700	407	97	149	2.22	30.28	108,000
1935	794-16	448	95	156	2.33	31.60	113,000	448	94	149	2.22	30.07	107,500
1936	814-16	930	94	173	2.58	35.10	125,400	930	92	173	2.58	35.07	125,400
1937	834-11	600	87	146	2.18	29.59	105,800	600	87	153	2.28	30.94	110,600
1938	864-12	808	87	163	2.43	32.97	117,800	808	90	159	2.37	32.15	114,900
1939	884-12	600	86	156	2.33	31.51	112,700	-	-	-	-	-	-

Note.- Records for periods 1907-15, 1932-33 collected at site three-quarters of a mile downstream (drainage area, 68 square miles, revised).

UMATILLA RIVER BASIN

Umatilla River at Gibbon, Oreg.
(Drainage area, 353 square miles)

1897	370-231	4,220	75	653	1.85	25.11	470,000	4,220	75	609	1.73	23.48	440,700
1898	370-231	3,730	74	496	1.41	19.14	355,000	3,730	74	434	1.23	16.70	314,300
1899	370-231	2,530	80	596	1.69	22.94	429,000	2,530	80	631	1.79	24.30	456,900
1901	370-231	4,160	88	728	2.06	27.96	525,000	4,160	88	656	1.86	25.25	474,900
1902	370-231	3,860	82	493	1.40	19.00	356,000	3,860	82	520	1.47	19.95	376,400
1903	370-231	3,100	98	444	1.26	17.10	321,000	3,100	95	432	1.22	16.56	312,400
*1905	370-231	1,240	56	254	.720	9.77	184,000	1,240	56	258	.731	9.92	186,600
1908	370-231	8,400	52	407	1.15	15.65	295,000	8,400	52	387	1.10	14.97	280,600
1909	370-231	2,380	45	389	1.10	14.93	281,000	3,940	45	456	1.29	17.51	329,900
1910	370-231	4,300	50	520	1.47	19.95	377,000	4,300	50	485	1.37	18.60	351,200
1911	312-457	2,100	44	343	.972	13.19	249,000	-	-	-	-	-	-

*Yearly figures not previously published; discharge for periods of missing record estimated.

Summary of yearly discharge, in second-feet, at stations in Umatilla River Basin--Continued

Umatilla River at Pendleton, Oreg.

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1924	594-18	3,720	19	396	288,000	3,720	19	397	288,100
1925	614-19	4,040	-	482	349,000	4,040	-	431	312,100
1926	634-16	3,320	18	293	212,000	3,320	18	334	241,300
1927	654-16	2,750	17	476	345,000	5,580	17	622	450,200
1928	674-16	5,670	22	734	534,000	5,670	22	538	390,600
1929	694-15	3,170	16	341	247,000	3,170	16	341	247,000
1930	709-13	2,950	14	297	215,000	2,950	14	314	226,700
1931	724-14	-	11	361	261,000	-	11	378	273,900
1932	739-15	9,300	25	673	488,000	9,300	25	667	484,100
1933	754-14	3,230	18	572	414,000	3,230	18	614	443,800
1934	769-15	3,340	14	341	247,000	3,340	14	325	235,100
1935	794-18	2,940	15	359	259,900	2,940	15	302	218,900
1936	814-18	4,880	22	440	319,600	4,880	22	439	318,700
1937	834-13	4,120	22	366	264,600	4,120	22	407	294,400
1938	864-15	3,260	16	436	315,500	3,260	16	422	305,800
1939	884-14	5,200	13	444	321,700	-	-	-	-

Umatilla River at Yoakum, Oreg.
(published as Umatilla River above Furnish Reservoir, near Yoakum, Oreg., 1917-34)
(Drainage area, 1,280 square miles)

1904	370-256	7,670	30	1,120	815,000	7,670	30	995	722,200
1905	370-256	2,040	20	325	235,000	2,040	20	345	250,100
1906	370-256	*20,000	28	710	514,000	*20,000	28	820	593,500
1907	370-256	7,230	28	924	658,000	7,230	28	832	602,100
1908	370-256	16,000	12	576	418,000	16,000	12	526	382,000
1909	370-256	3,060	20	486	351,000	3,490	20	584	423,000
1910	370-256	6,260	12	735	532,000	6,260	12	680	492,000
1911	312-459	2,530	32	419	303,000	2,530	32	381	275,600
1912	332-537	5,440	51	990	718,000	5,440	51	997	723,000
1913	362-535	9,120	49	902	652,000	9,120	49	919	663,800
1914	394-20	3,640	16	586	425,000	3,640	16	557	403,800
1915	414-22	3,640	16	375	272,000	3,640	16	444	322,000
1916	444-22	7,350	-	1,010	736,000	7,350	-	952	691,000
1917	464-17	7,740	28	1,030	745,000	7,740	28	1,113	806,600
1918	484-9	6,950	33	757	549,000	5,050	23	661	478,700
1919	514-15	5,470	24	563	408,000	5,470	24	659	476,700
1920	514-15	6,000	16	735	534,000	6,400	16	762	553,000
1921	534-15	7,730	20	1,050	762,000	7,730	20	1,050	761,200
1922	554-15	6,590	31	859	622,000	6,590	31	738	533,600
1923	574-11	4,330	40	574	415,000	4,330	40	650	470,300
1924	594-20	4,990	22	529	384,000	4,990	22	520	377,400
1925	614-21	5,330	25	628	454,000	5,330	25	570	412,400
1926	634-18	5,040	15	387	281,000	5,040	15	429	310,900
1927	654-17	3,180	61	602	436,000	3,180	74	774	561,100
1928	674-17	6,240	46	1,000	727,000	6,240	46	803	583,700
1929	694-16	3,300	87	496	359,000	3,300	68	484	350,200
1930	709-14	3,250	33	388	281,000	3,250	33	387	280,500
1931	724-15	-	32	445	322,000	-	32	463	334,800
1932	739-15	12,900	33	903	656,000	12,900	50	903	655,300
1933	754-15	3,460	50	699	507,000	3,460	42	737	533,500
1934	769-16	3,460	16	435	314,800	3,460	16	420	304,300
1935	794-19	3,030	17	437	316,300	3,030	17	378	273,400
1936	814-19	5,550	27	531	385,300	5,550	32	529	384,000
1937	834-14	4,280	31	486	352,200	4,280	31	527	381,800
1938	864-16	3,900	26	562	406,800	3,900	26	552	399,900
1939	884-15	5,760	18	575	416,100	-	-	-	-

*Revised figure, not previously published.
Note.- Discharge for period 1910-16 slightly affected by storage in Furnish Reservoir (removed in 1934), and since 1927 by storage in McKay Reservoir.

Umatilla River near Umatilla, Oreg.
(Drainage area, 2,290 square miles)

1904	370-266	8,030	9	1,110	805,400	8,030	9	956	693,800
1905	370-266	1,890	0	288	208,000	1,890	0	301	217,800
1906	370-266	15,200	0	603	435,000	15,200	0	698	505,400
1907	370-266	5,600	.4	871	619,000	5,600	.4	776	561,900
1908	370-266	10,200	.4	412	299,000	10,200	.4	373	270,900
1909	370-266	4,910	.4	336	242,000	4,910	.4	435	314,600
1910	370-266	6,060	1.5	656	477,000	6,060	5.8	586	424,300
1911	312-461	2,130	42	281	204,000	2,130	42	269	195,100
1912	362-537	4,910	79	854	620,000	4,910	90	870	631,300
1913	362-537	9,300	90	872	631,000	9,300	90	879	636,500
1914	394-21	3,140	90	452	327,000	3,140	8	433	313,200
1915	414-23	2,450	8	233	169,000	2,450	-	259	187,500
1916	444-24	9,300	34	918	667,000	9,300	49	934	678,000
1917	464-19	9,880	68	1,060	770,000	9,880	68	1,104	799,300
1918	484-11	6,500	23	629	456,000	5,050	6.5	532	385,300
1919	514-17	4,680	6.5	367	265,000	6,300	4	493	356,200
1920	514-17	6,790	1	613	445,000	6,790	1	551	400,200
1921	534-18	7,340	1.5	798	578,000	7,340	4.0	843	610,000
1922	554-17	5,370	0	656	475,000	5,370	0	552	399,700
1923	574-13	3,130	5	346	251,000	3,130	0	390	282,500
1924	594-22	4,050	0	343	249,000	4,050	0	347	252,100
1925	614-22	4,460	3	426	308,000	4,460	2	379	273,600

Summary of yearly discharge, in second-feet, at stations in Umatilla River Basin--Continued

Umatilla River near Umatilla, Oreg.--Continued
(Drainage area, 2,290 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1926	634-20	4,460	2	240	174,000	4,460	2	277	200,600
1927	654-18	3,490	12	466	338,000	4,200	12	632	457,700
1928	674-18	5,240	15	845	613,000	5,240	13	652	472,700
1929	694-17	3,600	13	293	212,000	3,600	14	294	212,800
1930	709-15	2,590	0	221	160,000	2,590	0	209	151,400
1931	724-16	10,500	0	272	197,000	10,500	0	292	211,600
1932	739-16	10,200	.1	651	472,000	10,200	7	650	471,600
1933	754-16	2,970	8	458	332,000	2,970	8	497	359,600
1934	769-17	3,080	.2	253	183,300	3,080	.2	225	162,600
1935	794-20	2,550	7	206	149,200	2,550	8	179	129,700
1936	814-20	3,720	.5	324	234,800	3,720	.5	319	231,400
1937	834-15	3,300	0	236	170,700	3,300	0	270	195,700
1938	864-17	2,740	9	313	226,700	2,740	9	296	214,600
1939	884-16	4,420	12	281	203,100	-	-	-	-
		McKay Creek near Pilot Rock, Oreg.							
1927	654-19	534	0	101	73,400	643	0	129	93,290
1930	709-16	660	0	56.3	40,800	660	0	59.7	43,240
1931	724-17	2,840	0	67.8	49,100	2,840	0	70.6	51,160
1932	739-17	3,170	0	134	97,500	3,170	0	131	94,810
1933	754-17	1,020	0	96.6	70,100	1,020	0	108	77,980
1934	769-18	545	0	52.5	37,980	432	0	48.4	35,070
1935	794-21	436	0	52.8	38,240	436	0	43.6	31,540
1936	814-21	710	0	62.4	45,270	710	0	62.1	45,100
1937	834-16	922	0	75.3	54,490	922	0	82.8	59,980
1938	864-18	830	0	89.2	64,590	830	0	87.1	63,080
1939	884-17	1,090	0	81.5	58,980	-	-	-	-
		McKay Creek near Pendleton, Oreg.							
1920	514-19	2,100	0	158	114,000	2,100	0	144	104,300
1921	534-21	3,250	0	165	119,000	3,250	0	161	116,600
1922	554-19	1,840	0	138	100,000	1,840	0	122	88,460
1923	574-15	618	0	94.0	68,100	618	0	106	76,630
1924	594-24	900	-	87.1	63,200	900	-	84.4	61,270
1925	614-24	1,160	0	92.0	70,100	1,160	0	87.4	63,130
1926	634-21	860	0	61.8	44,700	860	0	59.7	43,230
1927	654-20	799	-	60.4	43,900	-	-	-	-
1928	674-20	-	-	-	-	-	0	159	115,600
1929	694-19	369	0	82.3	59,600	315	0	70.8	51,230
1930	709-17	315	0	69.6	50,300	263	0	50.2	36,290
1931	724-19	273	0	54.0	39,100	273	0	54.0	39,060
1932	739-19	789	0	123	89,400	789	0	128	93,180
1933	754-19	780	0	94.9	68,800	780	0	89.8	65,020
1934	769-20	289	0	69.5	50,280	289	0	69.5	50,280
1935	794-23	270	0	51.8	37,520	270	0	51.8	37,520
1936	814-23	308	0	58.2	42,250	308	0	58.2	42,250
1937	834-18	318	0	65.3	47,260	318	0	65.3	47,260
1938	864-20	329	0	83.1	60,180	329	0	83.1	60,180
1939	884-19	310	0	75.4	54,560	-	-	-	-
		Birch Creek at Rieth, Oreg.							
1929	694-20	-	-	-	-	265	0	38.1	27,630
1930	709-18	247	0	23.8	17,300	247	0	24.3	17,600
1931	724-20	920	0	24.0	17,400	920	0	23.8	17,240
1932	739-20	1,060	0	45.9	33,300	1,060	0	45.0	32,650
1933	754-20	269	0	34.8	24,900	269	0	37.3	26,900
1934	769-21	170	0	16.2	11,740	170	0	13.8	10,020
1935	794-24	230	0	14.7	10,660	230	0	14.3	10,320
1936	814-24	341	0	23.4	17,000	341	0	23.5	17,030
1937	834-19	495	0	32.2	23,330	495	0	36.0	26,080
1938	864-21	530	0	43.3	31,370	530	0	40.9	29,580
1939	884-20	414	0	22.8	16,500	-	-	-	-
		JOHN DAY RIVER BASIN							
		John Day River at Prairie City, Oreg.							
1926	634-27	313	27	86.1	62,350	313	27	88.5	64,090
1927	654-22	950	31	150	109,000	950	31	157	113,800
1928	674-23	815	32	158	114,000	815	32	150	109,200
1929	694-23	736	20	123	88,880	736	20	120	87,110
1930	709-21	175	21	67.1	48,600	175	21	65.6	47,470
1931	724-23	444	11.2	64.4	46,600	444	11	61.7	44,650
1932	739-22	1,280	16	116	84,100	1,280	16	118	85,520
1933	754-22	449	13	115	83,100	449	13	116	83,820
1934	769-23	265	5	59.5	43,080	265	5	58.5	42,320
1935	794-26	264	5	67.8	49,090	264	5	65.9	47,730
1936	814-26	313	8	77.7	56,360	313	8	76.6	55,560
1937	834-21	350	8	83.1	60,160	596	8	94.6	68,530
1938	864-23	596	10	134	96,970	551	10	126	91,000
1939	884-22	1,070	6.0	95.9	69,440	-	-	-	-

Note.- Records include flow of Prairie power canal.

Summary of yearly discharge, in second-feet, at stations in John Day River Basin--Continued

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

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1927	654-24	3,410	14	595	431,000	3,410	14	619	448,500
1928	674-24	2,630	15	*563	409,000	2,630	15	570	373,800
1929	694-25	1,570	3.1	282	204,000	1,570	3.1	281	203,400
1930	709-22	592	1	154	111,000	592	1	146	105,900
1931	724-24	1,570	1.5	157	114,000	1,570	1.5	150	108,400
1932	794-27	5,440	5	443	321,700	5,440	5	449	326,200
1933	754-23	1,520	4	348	252,000	1,520	4	353	225,500
1934	769-24	565	1.2	124	90,100	565	1.2	116	84,090
1935	794-27	1,380	1.6	184	133,500	1,380	1.6	177	128,300
1936	814-27	2,240	1.1	280	203,100	2,240	1.1	278	201,900
1937	834-22	2,360	2.4	295	213,200	2,830	2.4	362	262,100
1938	864-24	3,350	10	600	434,300	3,350	11	558	403,700
1939	884-23	3,090	2.7	315	228,200	-	-	-	-

*Figure as previously published in error.

John Day River at Service Creek, Oreg.

1930	709-23	2,810	-	699	506,000	2,810	-	684	494,600
1931	724-25	11,500	21	790	572,000	11,500	21	782	565,600
1932	739-24	26,800	50	2,250	1,630,000	26,800	57	2,259	1,640,000
1933	754-24	8,090	66	1,590	1,150,000	8,090	68	1,643	1,189,000
1934	769-25	3,760	33	643	465,600	2,500	33	605	438,000
1935	794-29	7,020	27	917	664,000	7,020	27	885	640,900
1936	814-28	10,100	32	1,179	856,000	10,100	32	1,177	854,700
1937	834-23	12,900	43	1,363	986,500	12,900	43	1,536	1,112,000
1938	864-25	14,200	62	2,096	1,518,000	14,200	62	1,970	1,426,000
1939	884-24	14,000	26	1,305	944,700	-	-	-	-

John Day River at McDonald Ferry (McDonald), Oreg.
(Drainage area, 7,580 square miles)

1905	370-290	-	-	-	-	5,130	88	1,280	923,470
1906	370-290	13,800	162	1,990	1,430,000	13,800	162	2,040	1,477,500
1907	370-290	22,800	210	2,950	2,100,000	22,800	210	2,890	2,091,000
*1908	370-290	11,600	125	1,350	981,800	11,600	125	1,320	960,400
1909	370-290	6,220	93	1,370	992,000	6,520	93	1,480	1,074,000
1910	370-290	14,000	75	2,070	1,500,000	14,000	75	2,010	1,457,000
1911	512-465	7,910	75	1,330	961,000	7,910	75	1,274	923,600
1912	332-547	14,300	252	3,320	2,410,000	14,300	287	3,353	2,435,000
1913	362-545	13,000	178	2,440	1,770,000	13,000	178	2,068	1,786,000
1914	394-29	10,700	85	2,110	1,520,000	10,700	85	2,048	1,482,000
1915	414-29	5,620	63	1,010	729,000	5,620	63	1,047	757,200
1916	444-26	16,800	155	3,280	2,380,000	16,800	250	3,260	2,367,000
1917	464-22	20,800	150	3,110	2,250,000	20,800	150	3,166	2,297,000
1918	484-13	9,880	113	1,890	1,370,000	9,880	113	1,809	1,310,000
1919	514-23	15,400	71	1,760	1,280,000	15,400	71	1,925	1,394,000
1920	514-23	10,500	103	2,090	1,520,000	10,500	103	2,008	1,458,000
1921	534-40	17,200	120	3,600	2,610,000	17,200	120	3,756	2,720,000
1922	554-33	16,400	117	3,000	2,170,000	16,400	117	2,783	2,016,000
1923	574-31	10,500	117	1,960	1,420,000	10,500	125	1,962	1,421,000
1924	594-35	9,180	66	1,100	803,000	9,180	66	1,096	797,000
1925	614-34	14,000	100	2,080	1,510,000	14,000	107	2,073	1,500,000
1926	634-30	7,560	24	1,060	769,000	7,560	24	1,113	805,000
1927	654-25	12,500	96	2,240	1,620,000	12,500	96	2,502	1,810,000
1928	674-25	11,100	71	2,660	1,930,000	11,100	71	2,333	1,694,000
1929	694-26	7,250	38	1,340	974,000	7,250	38	1,339	969,900
1930	709-24	3,050	38	733	531,000	3,050	38	718	519,800
1931	724-26	10,700	5	800	579,000	10,700	5	792	573,100
1932	739-25	22,900	40	2,270	1,650,000	22,900	40	2,282	1,657,000
1933	754-25	8,000	64	1,600	1,160,000	8,000	64	1,642	1,188,000
1934	769-26	3,460	13	637	461,500	2,280	13	603	436,800
1935	794-30	6,760	21	919	665,300	6,760	21	892	645,900
1936	814-29	9,280	19	1,207	876,600	9,280	19	1,203	873,300
1937	834-24	13,000	36	1,460	1,057,000	13,000	36	1,640	1,187,550
1938	864-26	13,300	68	2,231	1,615,000	13,300	68	2,101	1,521,000
1939	884-25	13,000	16	1,303	943,200	-	-	-	-

*Erroneous figures published in Water-Supply Paper 370. Corrected figure for June 16, 1908, 1,380 second-feet.

North Fork John Day River near Dale, Oreg.

1930	709-27	1,080	19	208	150,000	1,080	19	208	150,500
1931	724-29	1,700	21	221	160,000	1,700	21	218	157,800
1932	739-28	4,630	-	481	349,000	4,630	-	484	351,400
1933	754-28	3,710	-	396	286,000	3,710	-	405	292,800
1934	769-29	1,050	22	222	161,000	1,050	22	217	157,300
1935	794-33	1,620	25	267	193,200	1,620	15	259	187,800
1936	814-32	2,520	15	309	224,600	2,520	10	306	221,800
1937	834-27	2,910	10	295	213,400	2,910	10	314	227,600
1938	864-29	3,380	30	399	289,200	3,380	25	388	281,100
1939	884-28	2,470	25	294	212,600	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in John Day River Basin--Continued

North Fork of John Day River at Monument, Oreg.

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1926	634-36	4,490	63	706	511,000	4,490	63	749	542,900
1927	654-28	7,860	102	1,290	935,000	-	-	-	-
1929	694-29	5,730	49	949	686,000	5,730	46	942	681,000
1930	709-28	2,260	40	519	376,000	2,260	35	516	373,200
1931	724-30	8,900	24	605	438,000	8,900	20	608	440,400
1932	739-29	-	20	1,630	1,180,000	-	17	1,627	1,182,000
1933	754-29	6,280	17	1,140	824,000	6,280	43	1,176	851,500
1934	769-30	2,880	32	484	350,600	1,920	32	452	327,000
1935	794-34	5,800	45	671	485,600	5,800	20	653	472,800
1936	814-33	7,050	20	798	579,500	7,050	25	795	577,000
1937	834-28	9,250	25	931	674,100	9,250	30	1,019	738,100
1938	864-30	9,250	54	1,289	933,200	9,250	34	1,221	883,700
1939	884-29	9,440	34	874	632,900	-	-	-	-

Middle Fork of John Day River at Ritter, Oreg.

1930	709-29	470	-	112	81,400	470	8	111	80,490
1931	739-30	1,830	3.2	133	96,300	1,830	3.2	132	95,910
1932	739-30	3,230	4.3	308	224,000	3,230	-	309	224,400
1933	754-30	1,420	-	237	172,000	1,420	7	243	175,900
1934	769-31	420	3	95.1	68,860	378	3	90.9	65,810
1935	794-35	1,240	4	136	98,310	1,240	4	132	95,520
1936	814-34	1,870	6	177	128,200	1,870	6	176	127,500
1937	834-29	1,560	8	178	128,600	1,560	9	199	144,300
1938	864-31	1,740	8	265	191,900	1,740	4	249	180,000
1939	884-30	1,830	4	189	136,600	-	-	-	-

DESCHUTES RIVER BASIN

Deschutes River at Crane Prairie, near Lapine, Oreg.

1914	394-34	-	-	-	-	-	-	294	213,100
1915	414-34	-	-	189	149,000	-	-	185	133,700
1923	574-39	430	4	176	128,000	430	4	132	95,720
1924	594-41	594	24	194	141,000	594	24	228	165,500
1925	614-38	449	-	280	202,000	449	-	310	224,500
1926	634-41	392	165	221	160,000	231	155	191	138,500
1927	654-31	418	155	246	178,000	418	165	284	205,900
1928	674-31	389	239	318	230,000	384	196	298	216,000
1929	694-32	305	128	214	155,000	305	93	191	138,200
1930	709-32	373	72	160	116,000	373	17	145	104,900
1931	724-35	283	17	114	82,200	283	25	123	89,100
1932	739-33	431	17	174	127,000	431	17	194	140,700
1933	754-33	514	29	202	146,000	514	29	210	151,800
1934	769-34	490	80	240	173,900	490	7	186	134,700
1935	794-38	535	7	153	111,100	535	13	165	119,200
1936	814-37	501	13	167	121,300	501	16	171	123,900
1937	834-32	538	16	172	124,600	538	9	163	117,900
1938	864-35	655	9	227	164,200	655	7	264	191,200
1939	884-33	474	7	189	136,500	-	-	-	-

Deschutes River at Pringle Falls, near Lapine, Oreg.

1924	594-43	1,130	555	738	536,000	1,130	555	744	540,000
1925	614-39	1,010	614	801	580,000	1,010	635	853	617,500
1926	634-44	990	614	736	533,000	770	590	675	488,500
1927	654-33	984	590	733	531,000	984	614	793	574,000
1928	674-33	1,010	763	877	637,000	1,010	717	858	622,400
1929	694-34	834	620	710	514,000	778	575	674	487,700
1930	709-34	825	555	638	462,000	825	455	614	444,100
1931	724-37	740	423	542	392,000	740	423	536	387,900
1932	739-36	932	-	595	432,000	932	-	642	466,500
1933	754-34	1,080	500	724	524,000	1,080	500	753	545,100
1934	769-35	990	658	796	576,200	990	502	722	523,100
1935	794-39	1,060	502	666	481,900	1,060	506	684	495,400
1936	814-38	1,080	543	732	531,300	1,080	554	748	542,700
1937	834-33	1,060	585	735	532,400	1,060	546	717	519,000
1938	864-37	1,280	546	816	591,000	1,280	563	868	628,600
1939	884-35	-	586	755	546,600	-	-	-	-

Deschutes River at Benham Falls, near Bend, Oreg.

1907	370-318	4,000	1,160	1,840	1,340,000	4,000	1,160	1,921	1,390,000
1908	370-318	2,560	1,280	1,740	1,260,000	2,230	1,170	1,709	1,241,000
1909	370-318	2,280	1,170	1,620	1,170,000	4,760	1,280	1,686	1,220,000
1910	370-318	4,760	1,330	1,750	1,270,000	2,380	1,330	1,672	1,211,000
1911	312-476	1,780	1,180	1,490	1,080,000	1,740	1,180	1,450	1,051,000
1912	332-558	2,260	1,000	1,600	1,160,000	2,260	1,000	1,655	1,202,000
1913	362-553	2,130	1,300	1,670	1,210,000	-	-	-	-
1925	614-41	1,840	870	1,390	1,000,000	1,840	1,110	1,447	1,048,000
1926	634-46	1,440	1,000	1,240	896,000	1,440	899	1,181	856,200
1927	654-34	1,780	899	1,330	965,000	1,780	900	1,414	1,024,000
1928	674-34	1,720	1,100	1,460	1,060,000	1,700	1,100	1,395	1,013,000
1929	694-35	1,340	-	1,180	853,000	1,340	-	1,144	827,800
1930	709-35	-	-	1,090	794,000	-	-	1,058	766,600

Summary of yearly discharge, in second-feet, at stations in Deschutes River Basin--Continued

Deschutes River at Benham Falls, near Bend, Oreg.--Continued

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1931	724-38	1,120	-	921	667,000	1,120	787	901	652,900
1932	739-37	1,330	751	1,020	740,000	1,330	751	1,074	779,200
1933	754-35	1,770	-	1,200	867,000	1,770	-	1,244	900,700
1934	769-36	1,470	986	1,238	896,000	1,470	841	1,155	836,200
1935	794-40	1,650	730	1,118	809,400	1,650	730	1,133	820,200
1936	814-39	1,710	804	1,210	878,700	1,710	910	1,226	889,800
1937	834-34	1,650	933	1,199	868,300	1,650	885	1,191	862,500
1938	864-38	1,850	885	1,344	972,700	1,850	973	1,406	1,018,000
1939	884-36	1,600	1,010	1,275	923,000	-	-	-	-

Deschutes River below Lava Island, near Bend, Oreg.

1927	654-35	1,560	858	1,160	843,000	1,560	940	1,231	892,600
1928	674-35	1,640	1,070	1,300	946,000	1,640	1,020	1,253	908,200
1929	694-36	-	896	1,050	*758,900	-	844	1,018	736,700
1930	709-36	1,300	832	978	708,000	1,300	706	951	688,200
1931	724-39	1,010	706	831	601,000	1,010	702	808	584,800
1932	739-38	1,190	670	907	658,000	1,190	670	959	696,500
1933	754-36	1,520	-	1,070	776,000	1,520	-	1,113	805,700
1934	769-37	1,350	898	1,115	807,200	1,350	747	1,042	754,700
1935	794-41	1,440	722	1,004	727,200	1,440	722	1,017	736,600
1936	814-40	1,440	740	1,065	772,800	1,440	809	1,071	777,100
1937	834-35	1,490	790	1,060	769,600	1,490	777	1,068	772,800
1938	864-39	1,690	777	1,233	892,400	1,690	895	1,291	934,300
1939	884-37	1,440	896	1,152	834,300	-	-	-	-

*Erroneous figure published in Water-Supply Paper 694.

Deschutes River below Bend, Oreg.

1915	414-41	1,500	170	839	608,000	1,500	170	765	553,800
1916	444-36	1,570	316	992	721,000	1,570	588	1,066	774,200
1917	464-32	1,900	592	1,100	795,000	1,900	592	1,095	793,000
1918	484-15	1,850	340	1,010	733,000	1,850	340	995	720,100
1919	514-31	1,450	228	871	631,000	1,730	228	881	638,200
1920	514-31	1,730	70	814	591,000	1,610	70	780	566,000
1921	534-50	1,590	560	1,090	786,000	2,280	640	1,192	862,700
1922	554-46	2,280	370	1,140	827,000	1,700	370	1,049	759,400
1923	574-43	1,490	26	777	563,000	1,490	26	701	507,600
1924	594-47	1,650	14	596	433,000	1,650	14	599	434,700
1925	614-43	1,510	98	721	522,000	1,510	98	768	555,600
1926	634-49	1,300	-	570	413,000	1,300	-	534	387,400
1927	654-36	1,270	87	665	481,000	1,420	87	724	524,200
1928	674-36	1,470	97	755	548,000	1,470	97	701	509,100
1929	694-37	1,190	2	544	394,000	1,190	2	500	361,700
1930	709-37	1,120	2	456	330,000	1,100	2	433	313,700
1931	724-40	908	3	356	258,000	863	3	325	235,700
1932	739-39	931	72	362	263,000	1,100	72	420	304,600
1933	754-37	1,100	42	478	346,000	1,200	42	492	356,100
1934	769-38	1,200	32	433	313,300	1,150	32	399	289,100
1935	794-42	1,010	65	428	309,600	994	65	425	307,500
1936	814-41	1,050	78	493	357,800	1,050	78	476	345,400
1937	834-36	1,040	58	460	333,100	1,130	58	472	341,600
1938	864-40	1,270	77	579	419,200	1,270	77	653	473,100
1939	884-38	1,250	72	498	360,300	-	-	-	-

Deschutes River near Madras, Oreg.

1924	594-49	-	-	4,110	2,980,000	-	-	3,624	2,960,000
1925	614-44	10,200	3,350	4,650	3,370,000	10,200	3,560	4,692	3,398,000
1926	634-51	6,820	3,230	4,030	2,920,000	6,820	3,230	4,031	2,920,000
1927	654-37	8,660	3,400	4,620	3,340,000	8,660	3,560	4,743	3,435,000
1928	674-37	8,190	3,540	4,690	3,400,000	8,190	3,540	4,552	3,303,000
1929	694-38	5,690	3,270	4,010	2,900,000	5,690	3,270	3,952	2,861,000
1930	709-38	5,940	3,230	3,870	2,800,000	5,940	3,230	3,802	2,751,000
1931	724-41	6,340	2,990	3,590	2,600,000	6,340	2,990	3,524	2,550,000
1932	739-40	8,550	3,060	3,900	2,840,000	8,550	3,180	4,020	2,920,000
1933	754-38	6,150	3,180	4,020	2,910,000	6,150	3,260	4,071	2,946,000
1934	769-39	5,410	3,260	3,901	2,824,000	5,410	3,370	3,906	2,828,000
1935	794-42	6,090	3,380	4,127	2,988,000	6,090	3,330	4,062	2,940,000
1936	814-42	11,000	3,760	5,158	3,744,000	8,000	3,290	4,153	3,014,000
1937	834-37	9,090	3,290	4,058	2,938,000	9,090	3,300	4,182	3,028,000
1938	864-41	10,800	3,340	4,781	3,461,000	10,800	3,500	4,793	3,470,000
1939	884-39	7,540	3,250	4,015	2,907,000	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Deschutes River Basin--Continued

Deschutes River at Mecca, Oreg.

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1912	332-572	8,490	3,300	5,190	3,760,000	8,490	3,300	5,290	3,840,000
1913	362-566	9,410	4,200	5,100	3,690,000	9,410	4,200	5,127	3,712,000
1914	394-43	8,320	3,900	5,040	3,650,000	8,320	3,900	5,020	3,634,000
1915	414-43	7,470	3,470	4,390	3,180,000	7,470	3,470	4,331	3,134,000
1916	444-38	11,700	3,680	5,450	3,960,000	11,700	4,070	5,512	3,999,000
1917	464-34	11,600	4,070	5,200	3,770,000	11,600	4,070	5,299	3,837,000
1918	484-17	9,300	3,740	4,970	3,600,000	7,800	3,740	4,834	3,497,000
1919	514-35	10,300	3,840	4,800	3,470,000	10,300	3,840	4,872	3,526,000
1920	514-35	10,100	3,170	4,460	3,230,000	10,100	3,170	4,415	3,201,000
1921	534-53	9,820	3,850	5,510	3,980,000	10,600	4,060	5,753	4,166,000
1922	554-49	10,600	3,760	5,290	3,830,000	9,300	3,760	5,030	3,642,000
1923	574-46	13,100	3,410	4,820	3,490,000	13,100	3,410	4,760	3,447,000
1924	594-51	7,570	3,310	4,190	3,040,000	7,570	3,310	4,187	3,038,000
1925	614-46	11,700	3,400	4,870	3,530,000	11,700	3,560	4,915	3,559,000
1926	634-52	7,340	3,200	4,150	3,010,000	7,340	3,200	4,149	3,005,000

Deschutes River at Moody, near Biggs, Oreg.
(Published as Deschutes River near Moro, Oreg., 1897-99)

1898	370-351	-	-	-	-	10,800	4,100	6,274	4,542,000
1899	370-351	16,000	4,100	7,670	5,560,000	16,000	4,300	8,358	6,055,000
1907	370-354	30,600	5,080	7,870	5,700,000	30,600	5,660	7,969	5,773,000
1908	370-354	22,200	-	6,800	4,940,000	15,800	-	6,510	4,728,000
1909	370-354	14,200	-	6,450	4,670,000	26,000	5,080	7,008	5,074,000
1910	370-354	26,900	-	7,860	5,690,000	-	-	7,428	5,374,000
1911	312-489	-	-	6,110	4,420,000	10,800	4,820	5,891	4,265,000
1912	332-575	17,900	4,080	7,020	5,100,000	17,900	4,080	7,170	5,203,000
1913	362-568	13,700	4,780	6,690	4,840,000	13,700	4,780	6,586	4,766,000
1914	394-45	11,800	4,300	6,090	4,410,000	11,800	4,300	5,984	4,331,000
1915	414-45	9,850	3,680	4,980	3,600,000	9,850	3,680	4,979	3,604,000
1916	444-40	23,500	3,920	7,110	5,160,000	23,500	5,000	7,187	5,219,000
1917	464-36	14,500	4,350	6,230	4,510,000	17,500	4,340	6,359	4,606,000
1918	484-19	17,500	4,080	5,800	4,200,000	10,500	4,080	5,498	3,979,000
1919	514-38	13,500	4,100	5,460	3,950,000	13,500	4,150	5,649	4,090,000
1920	514-38	16,300	3,510	5,270	3,820,000	16,300	3,510	5,199	3,774,000
1921	534-54	14,300	4,200	6,630	4,800,000	22,900	4,450	7,083	5,128,000
1922	554-51	22,900	4,200	6,530	4,730,000	11,300	4,200	6,060	4,388,000
1923	574-48	37,800	4,120	6,090	4,410,000	37,800	4,120	6,075	4,395,000
1924	594-54	8,240	3,670	4,900	3,560,000	9,800	3,670	4,882	3,546,000
1925	614-47	19,200	3,820	5,900	4,270,000	19,200	4,030	5,848	4,234,000
1926	634-56	13,300	3,600	4,710	3,410,000	13,300	3,600	4,797	3,473,000
1927	654-40	25,200	3,820	6,000	4,340,000	25,200	4,040	6,196	4,484,000
1928	674-39	11,500	4,040	5,910	4,290,000	11,500	4,040	5,614	4,075,000
1929	694-40	7,400	3,640	4,770	3,450,000	7,400	3,640	4,706	3,407,000
1930	709-40	8,550	3,550	4,470	3,240,000	8,550	3,550	4,370	3,165,000
1931	724-43	14,200	3,380	4,190	3,030,000	14,200	3,380	4,147	3,003,000
1932	739-42	12,400	3,460	4,850	3,520,000	12,400	3,640	5,017	3,643,000
1933	754-39	9,800	3,660	4,980	3,600,000	12,400	3,780	5,124	3,711,000
1934	769-40	12,400	3,620	4,788	3,466,000	10,200	3,620	4,698	3,401,000
1935	794-44	9,000	3,690	4,958	3,590,000	7,300	3,760	4,825	3,493,000
1936	814-43	11,000	3,760	5,158	3,744,000	11,000	3,810	5,138	3,730,000
1937	834-38	12,800	3,810	4,904	3,550,000	12,800	3,810	5,158	3,734,000
1938	864-42	15,200	3,810	6,225	4,507,000	15,200	3,980	6,124	4,434,000
1939	884-40	9,480	3,690	4,704	3,406,000	-	-	-	-

Little Deschutes River near Lapine, Oreg.

1925	614-55	-	34	178	129,000	-	57	181	131,000
1926	634-59	250	28	102	74,350	250	28	105	76,270
1927	654-41	750	42	192	139,000	750	-	203	146,800
1928	674-40	462	-	201	146,000	462	-	181	131,300
1929	694-41	327	-	121	88,100	380	-	129	93,510
1930	709-41	380	30	130	94,200	358	27	118	85,660
1931	724-44	286	9	65.8	47,700	286	9	62.3	45,140
1932	739-43	539	9	143	104,000	539	-	152	110,000
1933	754-41	775	-	164	119,000	775	-	169	122,700
1934	769-42	244	16	114	82,460	244	16	111	80,290
1935	794-48	410	20	152	109,800	410	21	150	108,300
1936	814-45	693	30	165	119,600	693	25	159	115,300
1937	834-40	420	28	127	91,700	420	28	146	105,600
1938	864-47	744	46	210	152,400	744	46	203	146,800
1939	884-46	420	31	160	115,500	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Deschutes River Basin--Continued

Crescent Creek at Crescent Lake, near Crescent, Oreg.
(published as Crescent Lake outlet near Crescent, Oreg., 1912 and Crescent Creek at outlet of Crescent Lake, near Crescent, Oreg., 1913-14)

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1912	332-576	-	-	-	-	-	-	69.9	50,770
1913	362-577	-	-	69.5	50,400	-	-	69.3	50,190
1914	394-51	-	-	58.9	42,600	-	-	55.6	40,250
1929	694-42	311	0	47.5	34,400	311	0	47.7	34,540
1930	709-43	230	0	30.9	22,400	230	0	30.7	22,260
1931	724-45	150	0	8.2	5,900	150	0	8.16	5,900
1932	739-44	134	0	17.7	12,900	134	0	17.7	12,860
1933	754-42	271	0	22.2	16,000	271	0	22.2	16,000
1934	769-44	181	0	30.4	22,030	181	0	30.4	22,030
1935	794-50	246	0	30.3	21,930	246	0	30.3	21,930
1936	814-47	225	0	31.6	22,910	225	0	31.6	22,910
1937	834-42	225	0	30.3	21,950	225	0	30.3	21,950
1938	864-49	160	0	10.7	7,760	160	0	11.5	8,310
1939	884-47	253	-	67.3	48,680	-	-	-	-

Tumalo Creek near Bend, Oreg.
(Drainage area, 57 square miles)

1914	394-64	415	-	74.4	53,900	415	35	87.2	63,120
1915	414-59	194	44	81.4	58,900	194	44	76.8	55,550
1916	444-51	448	44	102	73,600	448	44	102	74,330
1917	464-47	332	31	92.3	66,800	440	31	95.3	68,970
1918	484-30	440	47	95.7	69,300	400	-	91.7	66,410
1919	514-55	460	-	86.3	64,100	460	-	86.7	62,750
1920	514-55	238	-	77.8	56,500	238	33	88.7	64,420
1921	534-67	382	60	116	84,000	-	-	-	-
1924	594-81	240	8	56.1	40,700	240	10	62.4	45,240
1925	614-68	478	10	87.4	63,200	478	15	85.3	61,720
1926	634-72	207	16	60.6	43,900	239	16	67.2	48,670
1927	654-43	318	26	92.6	67,100	318	26	95.0	68,780
1928	674-44	395	25	89.9	65,300	395	25	86.0	62,430
1929	694-44	379	28	72.9	52,800	379	29	71.2	51,590
1930	709-45	223	29	71.7	51,900	193	-	68.4	49,540
1931	724-47	234	25	64.6	46,810	234	25	64.5	46,730
1932	739-46	292	28	84.0	61,080	292	7	85.3	62,020
1933	754-44	536	7	85.3	61,840	536	19	92.1	66,700
1934	769-46	240	14	74.5	53,940	240	14	68.5	49,610
1935	794-52	222	14	55.2	39,910	222	-	47.9	34,650
1936	814-49	360	7	61.3	44,480	360	7	64.4	46,730
1937	864-51	510	7	64.7	46,870	188	10	69.4	52,220
1938	864-51	350	12	79.7	57,670	350	12	79.0	57,170
1939	884-49	200	4.7	52.4	39,230	-	-	-	-

Columbia Southern canal near Tumalo, Oreg.

1914	394-67	103	0	30.5	22,200	-	-	-	-
1917	464-50	-	-	17.2	12,400	-	-	19.8	14,310
1918	484-33	105	-	18.7	13,500	105	-	17.9	12,930
1919	514-58	32	-	13.1	9,480	-	-	13.8	9,980
1920	514-58	80	0	15.7	11,400	80	0	13.9	10,060
1921	534-70	162	0	25.6	18,600	-	-	-	-
1924	594-83	81	0	26.8	19,400	81	0	18.8	13,610
1925	614-70	92	0	28.5	20,600	92	0	31.5	22,790
1926	634-74	91	0	25.0	18,100	91	0	19.7	14,240
1927	(*)	107	0	19.8	14,300	107	0	24.9	18,050
1928	(*)	72	0	23.8	17,300	72	0	18.7	13,560
1929	(*)	57	0	10.9	7,840	57	0	11.8	8,540
1930	(*)	35	0	6.3	4,530	35	0	5.68	4,110
1931	(*)	36	0	3.24	2,340	36	0	2.16	1,560
1932	(*)	83	0	7.9	5,750	-	0	10.2	7,420
1933	(*)	122	0	20.2	14,600	122	0	20.1	14,550
1934	(*)	162	0	22.2	16,050	162	0	23.8	17,220
1935	(*)	120	0	41.5	30,000	-	-	-	-
1937	(*)	138	0	20.4	14,800	138	0	15.4	11,170
1938	(*)	124	0	25.6	18,520	124	0	25.4	18,390
1939	(*)	129	0	27.4	19,830	-	-	-	-

*From reports of State engineer.

Squaw Creek near Sisters, Oreg.

1907	370-399	-	-	147	106,000	-	-	129	93,060
1908	370-399	-	-	107	78,000	-	-	108	78,290
1909	370-399	-	-	100	72,800	-	-	121	87,330
1910	370-399	1,960	54	135	97,800	317	43.6	119	86,340
1911	512-502	344	41.6	105	75,900	344	41	96.3	69,720
1912	332-593	395	32	104	75,100	395	32	106	76,790
1913	362-591	420	-	120	86,800	420	-	121	87,660
*1914	394-70	-	-	108	77,890	-	-	107	77,600
*1915	414-63	-	-	84.4	61,120	-	-	80.1	58,020
*1916	444-56	-	-	115	83,420	-	-	117	84,650
*1917	464-52	-	-	111	80,340	-	-	117	84,360
*1918	484-35	-	-	116	84,330	-	-	-	-
*1920	514-63	-	-	96.5	70,030	-	-	-	-
1926	634-77	238	32	82.2	59,500	385	32	88.8	64,270
1927	654-45	385	34	116	84,500	349	-	120	86,580
1928	674-45	351	-	110	79,700	351	-	102	73,690
1929	694-46	426	24	90.2	65,400	426	24	91.5	66,240
1930	709-46	364	-	82.8	60,000	186	-	78.0	56,460
1931	724-48	313	28	79.3	57,400	313	28	78.2	56,620

*Yearly figures not previously published; discharge for periods of missing record estimated.

Summary of yearly discharge, in second-feet, at stations in Deschutes River Basin--Continued

Squaw Creek near Sisters, Oreg.--Continued

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1932	739-47	373	-	96.7	70,200	373	-	103	74,520
1933	754-45	860	-	117	85,000	860	-	121	87,430
1934	769-47	315	44	100	72,370	315	44	101	72,860
1935	794-53	312	46	104	75,380	312	-	96.6	69,920
1936	814-50	326	-	102	74,240	326	35	101	73,510
1937	834-45	765	20	93.3	67,520	765	20	101	73,150
1938	864-53	333	41	115	83,550	333	46	112	80,900
1939	884-50	341	35	81.5	59,040	-	-	-	-

Crooked River near Culver, Oreg.

1918	484-38	3,300	1,100	1,320	958,000	3,300	1,100	1,316	952,700
1919	514-67	5,200	1,050	1,380	1,000,000	5,200	1,050	1,385	1,003,000
1920	514-67	4,100	1,060	1,270	920,000	4,100	1,060	1,268	921,300
1921	534-75	4,900	970	1,620	1,170,000	4,900	970	1,628	1,179,000
*1922	554-74	5,940	1,090	1,438	1,041,000	5,940	1,090	1,435	1,038,000
1923	574-79	3,720	1,120	1,380	999,000	3,720	1,120	1,384	1,001,000
1924	594-87	3,880	1,110	1,240	902,000	3,880	1,110	1,240	899,200
*1925	614-74	6,230	1,110	1,487	1,076,000	6,230	1,160	1,500	1,086,000
1926	634-79	2,720	1,120	1,280	928,000	2,720	1,110	1,290	934,200
1927	654-46	4,330	1,080	1,530	1,110,000	4,330	1,080	1,525	1,105,000
*1928	674-46	4,830	1,080	1,482	1,076,000	4,830	1,080	1,467	1,065,000
1929	694-47	2,370	1,130	1,260	914,000	2,370	1,130	1,275	922,600
1930	709-47	2,390	1,150	1,280	923,000	2,390	1,150	1,260	911,800
1931	724-49	2,870	1,140	1,230	894,000	2,870	1,140	1,238	896,100
*1932	739-48	6,380	1,140	1,499	1,088,000	6,380	1,170	1,512	1,097,100
1933	754-46	3,090	1,180	1,370	995,000	3,090	1,180	1,378	998,600
1934	769-48	1,560	1,180	1,236	894,700	1,560	1,180	1,225	886,500
1935	794-54	3,090	1,170	1,352	978,700	3,090	1,170	1,359	984,200
*1936	814-51	5,800	1,160	1,467	1,065,000	5,800	1,160	1,460	1,060,000
*1937	834-46	6,680	1,160	1,413	1,023,000	6,680	1,160	1,471	1,065,000
1938	864-54	7,440	1,160	1,776	1,286,000	7,440	1,160	1,736	1,257,000
1939	884-51	4,310	1,130	1,350	977,600	-	-	-	-

*Figures of discharge supersede those published in water-supply paper indicated, because of revisions of high-water periods. These revised figures are contained in Water-Supply paper 864, p. 54

Metolius River near Grandview, Oreg.

1922	554-77	3,870	1,400	1,630	1,180,000	1,950	1,400	1,546	1,119,000
1923	574-82	4,370	1,400	1,640	1,180,000	4,370	1,400	1,643	1,188,000
1924	594-94	1,950	1,300	1,440	1,050,000	2,480	1,300	1,428	1,038,000
1925	614-80	2,930	1,300	1,590	1,150,000	2,930	1,400	1,592	1,153,000
1926	634-85	2,070	1,280	1,410	1,020,000	2,340	1,280	1,407	1,019,000
1927	654-47	3,710	1,280	1,560	1,130,000	3,710	1,300	1,602	1,160,000
1928	674-47	2,630	1,400	1,570	1,140,000	1,950	1,300	1,525	1,107,000
1929	694-48	1,720	1,280	1,380	1,000,000	1,720	1,250	1,363	987,000
1930	709-48	1,720	1,230	1,340	972,000	1,700	1,170	1,319	956,300
1931	724-50	2,930	1,110	1,230	888,000	2,930	1,110	1,208	874,100
1932	739-49	1,930	1,080	1,320	960,000	1,930	1,080	1,361	987,100
1933	754-47	2,780	1,140	1,400	1,010,000	2,780	1,140	1,425	1,032,000
1934	769-49	2,630	1,260	1,455	1,053,000	2,630	1,260	1,453	1,052,000
1935	794-55	2,200	1,260	1,466	1,061,000	1,820	1,220	1,433	1,037,000
1936	814-52	1,860	1,200	1,392	1,011,000	1,860	1,200	1,384	1,005,000
1937	834-47	2,060	1,100	1,346	974,600	2,410	1,100	1,380	998,800
1938	864-56	2,410	1,240	1,500	1,086,000	2,340	1,260	1,485	1,075,000
1939	884-52	1,630	1,200	1,317	953,200	-	-	-	-

Lake Creek near Sisters, Oreg.
(Drainage area, 20.5 square miles)

1916	444-68	-	-	68.5	49,600	-	-	66.7	48,420
1917	464-60	-	-	61.1	44,200	-	-	67.8	49,140
1918	484-44	244	32	60.5	43,800	-	-	-	-
1920	514-75	89	24	47.6	34,600	89	24	47.8	34,740
1921	534-80	148	29	60.4	43,700	244	-	66.3	48,010
1922	554-79	244	32	58.8	42,600	162	30	50.9	36,850
1923	574-84	298	30	62.2	45,000	298	30	62.1	44,880
1924	594-95	82	25	42.3	30,700	82	25	43.5	31,540
1925	614-82	138	29	59.1	42,800	138	29	57.0	41,320
1926	634-86	85	26	40.5	29,300	-	26	49.1	35,550
1927	654-48	-	-	62.2	45,000	191	-	60.2	43,630
1928	674-48	191	30	60.1	43,600	112	30	53.5	38,850
1929	694-49	117	28	44.5	32,200	117	24	44.2	31,990
1930	709-49	108	22	39.8	28,800	108	21	38.2	27,660
1931	724-51	166	21	36.7	26,600	166	22	36.4	26,340
1932	739-50	110	15	43.7	31,800	110	15	46.2	33,550
1933	754-48	-	24	52.1	37,720	-	22	54.5	39,450
1934	769-50	192	22	47.2	34,180	160	24	46.6	33,740
1935	794-56	108	24	45.7	33,060	108	22	41.8	30,280
1936	814-53	112	22	41.5	30,120	112	22	41.1	29,850
1937	834-48	129	20	41.1	29,740	129	20	45.4	32,850
1938	864-57	110	20	50.3	36,410	110	20	47.9	34,680
1939	884-53	83	24	37.9	27,440	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Deschutes River Basin--Continued

White River below Tygh Valley, Oreg.
(Drainage area, 393 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1918	484-49	4,980	126	515	373,000	-	-	414	299,900
1919	514-79	1,810	-	438	317,000	1,900	-	475	343,800
1920	514-79	2,600	-	400	290,000	2,600	102	384	279,100
1921	534-82	3,030	126	582	422,000	4,570	126	678	490,700
1922	554-83	4,570	144	579	419,000	2,450	86	465	336,100
1923	574-87	10,900	86	591	428,000	10,900	136	590	427,200
1924	594-100	1,150	75	294	213,000	1,260	75	316	229,600
1925	614-86	2,690	120	476	344,000	2,690	102	447	323,100
1926	634-89	2,000	94	263	190,000	2,000	94	308	223,100
1927	654-50	4,920	119	541	391,000	4,920	129	566	409,400
1928	674-50	2,430	122	476	346,000	2,140	121	403	292,800
1929	694-50	1,120	110	293	212,000	1,120	107	290	209,700
1930	709-50	1,260	103	266	192,000	1,260	103	260	188,000
1931	724-52	5,740	83	279	202,000	5,740	83	287	207,600
1932	739-51	2,590	90	429	312,000	2,590	102	462	335,400
1933	754-49	2,100	102	453	328,000	4,340	136	518	374,900
1934	769-51	4,340	88	432	312,800	2,940	88	396	287,000
1935	794-57	2,890	100	433	313,500	1,240	108	364	263,600
1936	814-54	1,840	108	389	282,200	1,840	100	387	280,600
1937	834-49	1,990	100	339	245,500	2,690	102	402	290,800
1938	864-58	2,690	104	514	372,400	2,240	104	465	336,900
1939	884-54	1,170	91	287	207,800	-	-	-	-

KLICKITAT RIVER BASIN

Klickitat River near Glenwood, Wash.*

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off		Maximum day	Minimum day	Mean	Per square mile	Run-off	
						Inches	Acre-feet					Inches	Acre-feet
1910	292-511	6,250	-	1,160	3.31	45.12	842,000	3,490	447	1,060	3.03	41.20	769,000
1911	312-522	2,750	389	835	2.35	31.94	605,000	2,750	379	788	2.21	30.04	570,000
1912	332-620	2,620	379	800	2.25	30.58	581,000	2,620	380	804	2.26	30.71	583,000
1913	362-614	3,120	382	881	2.47	33.63	638,000	3,120	382	889	2.50	33.94	644,000
1914	394-82	2,780	391	954	2.68	36.38	691,000	2,780	414	979	2.75	37.54	709,000
1915	414-85	2,100	335	667	1.87	25.45	483,000	2,100	315	624	1.75	23.81	452,000
1916	444-82	4,490	315	1,200	3.37	45.93	872,000	4,490	-	1,230	3.46	46.96	891,000
1917	464-68	3,140	330	877	2.46	33.43	635,000	5,500	330	957	2.69	36.45	692,000
1918	484-59	5,500	340	1,030	2.89	39.24	745,000	-	385	961	2.70	36.63	695,000
1919	514-85	4,100	365	934	2.62	35.58	676,000	4,100	365	923	2.59	35.15	668,000
1920	514-85	1,700	-	669	1.88	25.55	486,000	-	-	-	-	-	-
1929	694-51	2,500	296	662	1.86	25.23	479,000	2,500	283	633	1.78	24.16	459,000
1930	709-51	1,520	264	583	1.64	22.24	422,000	1,520	264	574	1.61	21.89	416,000
1931	724-53	2,150	279	537	1.51	20.47	389,000	2,150	236	538	1.51	20.51	390,000
1932	739-52	2,500	236	767	2.15	29.35	558,000	2,500	265	842	2.37	32.15	611,000
1933	754-50	3,720	291	902	2.53	34.40	653,000	8,790	291	1,040	2.92	39.68	753,000
1934	769-52	8,790	396	1,109	3.12	42.28	802,900	3,620	389	1,009	2.83	38.45	730,300
1935	794-58	2,520	352	861	2.42	32.80	623,500	2,250	299	758	2.13	28.87	548,700
1936	814-55	3,000	285	718	2.02	27.44	521,200	3,000	278	715	2.01	27.33	519,200
1937	834-50	2,330	278	683	1.92	26.07	494,800	2,330	278	741	2.06	28.21	536,400
1938	864-59	3,820	345	1,005	2.79	37.89	727,400	3,820	360	974	2.71	36.69	704,800
1939	884-55	2,080	311	640	1.78	24.13	463,600	-	-	-	-	-	-

*At three sites in the vicinity of Glenwood, Wash.; drainage areas, 1910, 350 square miles, 1911-37, 356 square miles, and 1938-39, 360 square miles.

Klickitat River near Pitt, Wash.*

1910	292-514	10,200	742	2,450	2.24	30.43	1,770,000	10,200	835	2,270	2.08	28.29	1,650,000
1911	312-524	3,610	770	1,530	1.40	19.07	1,110,000	3,610	695	1,410	1.29	17.53	1,020,000
1929	694-52	3,010	594	1,070	.922	12.49	773,000	3,010	510	1,030	.888	12.07	748,000
1930	709-52	4,820	510	1,010	.871	11.82	732,000	4,820	490	988	.852	11.56	715,000
1931	724-54	8,600	490	900	.776	10.54	652,000	8,600	505	920	.793	10.76	666,000
1932	739-53	6,840	505	1,460	1.26	17.12	1,060,000	6,840	608	1,550	1.34	18.26	1,130,000
1933	754-51	14,670	590	1,670	1.44	19.56	1,210,000	19,600	590	2,054	1.77	24.04	1,487,000
1934	794-59	19,600	685	2,101	1.81	24.58	1,521,000	11,000	720	1,838	1.58	21.52	1,331,000
1935	794-59	4,090	720	1,631	1.41	19.12	1,181,000	4,090	640	1,435	1.23	16.78	1,039,000
1936	814-56	3,820	640	1,329	1.14	15.44	965,000	3,820	558	1,312	1.12	15.26	952,700
1937	834-51	5,150	522	1,203	1.03	13.96	871,200	12,200	522	1,381	1.18	16.02	1,000,000
1938	864-60	12,200	555	2,150	1.84	24.94	1,556,000	7,090	668	2,013	1.72	23.35	1,457,000
1939	884-56	2,540	595	1,029	.879	11.95	745,200	-	-	-	-	-	-

*At three sites in the vicinity of Pitt, Wash.; drainage areas, 1910-12, 1,090 square miles, 1928-35, 1,160 square miles, and 1936-39, 1,170 square miles.

Summary of yearly discharge, in second-feet, at stations in HOOD RIVER BASIN

Hood River and Pacific Power & Light Co.'s conduit near Hood River, Oreg.
(Drainage area, 329 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1914	394-87	4,890	375	1,080	781,000	4,890	375	1,083	783,800
1915	414-91	2,600	290	795	575,000	8,900	290	893	646,500
1916	444-94	8,900	310	1,570	1,140,000	6,870	459	1,459	1,059,000
1917	464-76	3,000	459	1,150	836,000	13,000	369	1,415	1,024,000
1918	484-63	13,000	344	1,330	963,000	4,340	344	1,076	779,000
1919	514-87	7,760	406	1,040	754,000	7,760	384	1,131	818,800
1920	514-87	10,300	290	973	706,000	11,000	290	1,018	738,900
1921	534-88	11,000	301	1,530	1,110,000	15,600	301	1,599	1,158,000
1922	554-90	15,600	362	1,240	898,000	6,380	362	1,052	761,700
1923	574-92	29,800	366	1,280	928,000	29,800	303	1,347	975,200
1924	594-103	10,500	270	775	563,000	5,590	270	752	545,700
1925	614-89	6,660	332	1,160	841,000	6,660	332	1,069	773,700
1926	634-93	6,000	217	691	500,000	8,530	217	800	579,400
1927	654-52	9,000	333	1,110	799,000	11,400	333	1,210	876,200
1928	674-52	11,400	301	1,230	890,000	7,690	301	1,007	731,000
1929	694-53	2,350	259	793	574,000	2,360	259	775	560,900
1930	709-53	3,790	199	694	502,000	3,790	199	681	492,500
1931	724-55	13,200	206	768	556,000	13,200	206	803	581,700
1932	739-54	6,480	280	1,000	727,000	6,480	280	1,124	815,300
1933	754-52	6,060	355	1,210	876,000	19,200	366	1,494	1,082,000
1934	769-54	19,200	274	1,410	1,021,000	8,170	274	1,220	883,000
1935	794-61	6,460	307	1,143	827,800	3,700	307	895	648,200
1936	814-57	6,000	289	1,004	728,900	6,000	289	1,006	730,100
1937	834-52	4,880	301	885	640,900	8,240	301	1,109	803,100
1938	864-61	8,240	292	1,184	857,200	4,940	292	1,019	737,500
1939	884-58	4,900	205	754	545,700	-	-	-	-

WHITE SALMON RIVER BASIN

White Salmon River at Husum, Wash.
(Drainage area, 300 square miles)

1910	312-530	4,340	496	1,220	879,000	3,410	520	1,160	838,000
1911	312-530	2,840	520	980	710,000	2,140	475	897	649,000
1912	332-630	2,710	452	952	691,000	2,710	452	971	705,000
1913	362-627	2,070	484	1,010	728,000	2,070	585	1,010	728,000
1914	394-96	2,360	585	973	704,000	2,360	585	985	713,000
1915	414-100	2,260	450	788	570,000	2,260	450	768	556,000
1916	444-104	3,200	450	1,280	927,000	3,200	565	1,280	932,000
1917	464-86	2,220	545	927	672,000	7,220	505	1,040	756,000
1918	484-71	7,220	505	1,110	806,000	3,980	520	993	719,000
1919	514-104	4,800	500	989	716,000	-	-	-	-
1930	709-57	2,320	378	650	471,000	2,320	344	637	461,000
1931	724-59	4,220	344	618	447,000	4,220	360	637	461,000
1932	739-58	2,280	367	948	687,000	2,280	477	1,030	748,000
1933	754-56	3,550	502	1,070	776,000	10,300	630	1,270	921,000
1934	769-58	10,300	556	1,383	1,001,000	6,030	556	1,244	900,600
1935	794-65	2,590	564	1,059	766,500	1,700	470	934	676,000
1936	814-61	2,140	470	901	653,900	2,140	429	893	648,200
1937	834-56	2,970	429	825	597,400	5,040	450	945	684,200
1938	864-65	5,040	519	1,181	855,300	2,710	538	1,090	789,300
1939	884-61	1,230	423	741	536,500	-	-	-	-

White Salmon River near Underwood, Wash.
(Drainage area, 384 square miles)

1916	484-75	3,570	469	1,490	1,080,000	3,570	572	1,480	1,080,000
1917	484-75	2,130	572	1,050	760,000	9,200	498	1,220	882,000
1918	484-75	9,200	498	1,350	978,000	5,310	561	1,180	855,000
1919	514-106	5,010	561	1,110	805,000	5,010	460	1,100	797,000
1920	514-106	3,240	460	830	603,000	3,330	500	911	662,000
1921	534-100	4,110	550	1,410	1,020,000	4,110	491	1,400	1,010,000
1922	554-98	3,360	491	1,040	752,000	2,500	484	957	693,000
1923	574-98	6,280	484	1,030	747,000	6,280	447	1,020	740,000
1924	594-108	2,850	387	760	552,000	2,850	387	787	571,000
1925	614-96	4,800	397	1,140	829,000	4,800	489	1,110	801,000
1926	634-100	2,550	437	732	529,000	3,260	437	799	578,000
1927	654-55	4,140	467	1,210	879,000	4,260	647	1,270	921,000
1928	674-55	4,390	587	1,220	882,000	4,390	451	1,090	794,000
1929	694-57	1,640	405	738	534,000	1,640	366	703	509,000
1930	709-58	2,990	356	712	515,000	-	-	-	-
1936	814-62	2,540	443	1,004	728,800	2,540	378	995	722,200
1937	834-57	3,600	378	914	662,000	6,280	269	1,063	769,700
1938	864-66	6,280	269	1,320	955,600	3,330	502	1,202	870,200
1939	884-62	1,950	316	793	573,800	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in SANDY RIVER BASIN

Sandy River near Marmot, Oreg.
(Drainage area, 262 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1912	362-634	11,700	311	1,570	5.99	81.53	1,140,000	11,700	460	1,559	5.95	80.99	1,132,000
1913	362-634	10,800	371	1,520	5.80	78.73	1,100,000	10,800	362	1,446	5.52	74.93	1,047,000
1914	394-99	4,820	329	1,140	4.35	59.05	826,000	4,820	329	1,132	4.32	58.64	819,900
*1915	414-102	3,500	294	945	3.61	49.00	684,000	12,500	294	1,200	4.58	62.17	869,000
*1916	444-111	12,500	303	1,820	6.95	94.60	1,320,000	7,690	325	1,553	5.93	80.72	1,128,000
*1917	464-91	5,250	325	1,550	5.92	80.36	1,130,000	19,800	302	1,871	7.14	96.92	1,356,000
*1918	484-79	19,800	302	1,620	6.18	83.89	1,170,000	7,800	312	1,322	5.05	68.55	957,400
*1919	514-116	7,610	304	1,250	4.77	64.75	903,000	12,500	302	1,428	5.45	73.98	1,033,000
1920	514-111	12,500	302	1,310	5.00	68.06	950,200	10,100	313	1,274	4.86	66.15	925,000
1921	534-102	14,300	281	1,690	6.45	87.55	1,220,000	17,000	281	1,781	6.80	92.31	1,288,000
1922	554-100	17,000	302	1,360	5.19	70.45	984,000	7,620	290	1,106	4.22	57.28	800,300
1923	574-100	23,500	290	1,390	5.31	72.08	1,010,000	23,500	316	1,441	5.50	74.66	1,044,000
1924	594-110	7,410	267	1,050	4.01	54.42	760,000	7,200	267	1,145	4.37	59.48	830,100
1925	614-98	7,200	304	1,470	5.61	76.17	1,060,000	6,570	253	1,275	4.87	66.06	924,200
1926	634-103	7,700	253	881	3.36	45.63	638,000	7,700	274	1,059	4.04	54.85	766,100
1927	654-57	7,320	360	1,420	5.42	73.26	1,020,000	13,000	360	1,575	6.01	81.61	1,140,000
1928	674-57	13,000	290	1,480	5.65	77.26	1,080,000	8,140	290	1,144	4.37	59.48	830,400
1929	694-59	6,340	257	1,090	4.16	56.58	796,000	6,340	220	1,066	4.07	55.24	772,200
1930	709-60	7,500	220	975	3.72	50.54	706,000	7,500	253	991	3.78	51.31	716,500
1931	724-61	19,800	-	973	3.71	50.42	705,000	19,800	210	1,024	3.91	53.04	741,400
1932	739-59	10,100	210	1,410	5.38	73.07	1,020,000	10,100	246	1,591	6.07	82.61	1,155,000
1933	754-57	8,820	246	1,640	6.26	85.24	1,190,000	14,500	341	1,825	6.97	94.56	1,321,000
1934	769-59	14,500	228	1,406	5.37	72.84	1,018,000	9,800	228	1,266	4.83	65.63	916,900
1935	794-67	9,800	232	1,329	5.07	68.83	961,900	3,850	244	1,002	3.82	51.92	725,400
1936	814-64	11,100	244	1,225	4.68	63.64	889,100	11,100	216	1,234	4.71	64.13	896,000
1937	834-59	7,690	216	1,145	4.37	59.30	828,800	10,600	278	1,524	5.82	78.94	1,104,000
1938	864-68	10,600	273	1,498	5.72	77.62	1,085,000	8,070	253	1,232	4.70	63.87	892,200
1939	884-64	7,310	253	1,118	4.27	57.96	809,400	-	-	-	-	-	-

*Records for period Dec. 22, 1915, to Sept. 30, 1919, obtained by combining flow of Sandy River at station below dam with that of Sandy River canal.

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

1911	312-540	15,600	376	2,250	5.15	69.91	1,630,000	15,600	376	2,092	4.79	65.02	1,515,000
1913	362-637	13,400	360	2,500	5.72	77.64	1,810,000	13,400	360	2,368	5.41	73.43	1,714,000
1914	394-101	12,700	301	2,160	4.94	67.06	1,560,000	-	-	-	-	-	-
1930	709-61	12,400	-	1,670	3.80	51.66	1,210,000	12,400	184	1,689	3.84	52.13	1,223,000
1931	724-62	45,000	244	1,660	3.77	51.13	1,200,000	45,000	129	1,772	4.03	54.65	1,283,000
1932	739-60	22,400	129	2,340	5.32	72.42	1,700,000	22,400	262	2,700	6.14	83.50	1,960,000
1933	754-58	18,500	262	2,920	6.64	90.06	2,110,000	33,900	318	3,304	7.51	101.95	2,392,000
1934	769-60	33,900	242	2,591	5.89	80.05	1,876,000	20,700	242	2,304	5.24	71.12	1,668,000
1935	794-68	20,700	170	2,300	5.23	70.97	1,665,000	8,410	170	1,628	3.70	50.24	1,179,000
1936	814-65	22,600	264	2,068	4.70	63.95	1,501,000	22,600	291	2,117	4.81	65.44	1,537,000
1937	834-60	15,800	291	2,021	4.59	62.41	1,433,000	21,500	357	2,688	6.11	83.04	1,946,000
1938	864-69	21,500	302	2,567	5.83	79.28	1,858,000	18,100	128	2,132	4.85	65.81	1,543,000
1939	884-65	18,100	128	1,965	4.47	60.63	1,422,000	-	-	-	-	-	-

*At two sites in the vicinity of Bull Run, Oreg.; drainage areas, 1910-14, 437 square miles and 1930-39, 440 square miles.

Little Zigzag River at Twin Bridges, near Rhododendron, Oreg.
(Drainage area, 3.7 square miles)

1927	654-60	47	19	24.5	6.62	89.76	17,700	42	-	24.7	6.68	90.48	17,870
1928	674-60	42	20	27.4	7.41	100.91	19,900	34	19	26.6	7.19	97.81	19,290
1929	694-62	40	19	25.1	6.78	92.00	18,200	40	21	25.3	6.84	92.90	18,330
1930	709-64	35	19	24.4	6.59	89.49	17,600	50	-	24.2	6.54	88.85	17,530
1931	724-63	150	18	22.3	6.03	81.78	16,200	150	17	21.5	5.81	78.96	15,580
1932	739-61	68	15	23.0	6.22	84.58	16,700	68	15	24.5	6.62	90.03	17,765
1933	754-59	64	16	27.5	7.43	100.74	19,900	97	-	28.8	7.78	105.62	20,860
1934	769-61	97	20	29.1	7.86	106.75	21,060	59	20	27.5	7.43	101.00	19,910
1935	794-69	46	19	24.5	6.62	89.89	17,750	38	18	23.5	6.35	86.33	17,050
1936	814-66	62	18	24.8	6.70	91.31	18,010	-	-	-	-	-	-

Salmon River near Government Camp (Rowe), Oreg.
(Drainage area, 8.7 square miles)

1911	312-544	102	15	34.7	3.99	54.16	25,100	104	14	31.8	3.66	49.68	23,100
1927	654-63	194	19	42.4	4.87	66.11	30,700	250	20	49.3	5.67	76.97	35,720
1928	674-63	250	17	49.9	5.74	78.13	36,300	114	16	39.3	4.52	61.52	28,550
1929	694-65	124	-	34.6	3.98	54.03	25,100	124	-	34.4	3.95	53.62	24,930
1930	709-67	96	12	31.5	3.62	49.14	22,800	96	12	30.9	3.55	48.19	22,400
1931	724-65	330	12	30.4	3.49	47.37	22,000	330	13	30.8	3.54	48.05	22,270
1932	739-63	194	13	42.5	4.89	66.56	30,800	194	14	49.2	5.66	77.04	35,750
1933	754-60	209	20	53.3	6.13	83.21	38,600	493	21	58.5	6.72	91.22	42,360
1934	769-62	493	14	50.4	5.79	78.66	36,520	182	13	43.5	5.00	67.90	31,530
1935	794-70	163	13	43.4	4.99	67.67	31,380	94	16	38.5	4.43	60.09	27,870
1936	814-67	157	16	40.4	4.64	63.11	29,320	157	12	39.8	4.57	62.25	28,910
1937	834-61	125	12	38.6	4.44	60.21	27,950	146	13	44.6	5.13	69.52	32,270
1938	864-70	146	17	46.6	5.36	72.78	33,780	146	18	43.9	5.05	68.58	31,830
1939	884-66	109	18	39.2	4.51	61.12	28,360	-	-	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Sandy River Basin--Continued

Salmon River below Linney Creek, Oreg.
(Drainage area, 54 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1928	769-63	1,920	50	241	4.46	60.68	175,000	760	50	181	3.35	45.68	131,650
1929	794-66	714	57	179	3.31	44.87	129,000	714	48	178	3.30	44.87	128,800
1930	709-68	610	48	155	2.87	38.86	112,000	610	49	148	2.74	37.25	107,230
1931	724-66	2,530	49	158	2.93	39.79	115,000	2,530	48	164	3.04	41.17	118,580
1932	739-64	1,480	48	229	4.24	57.76	167,000	1,480	54	260	4.81	65.52	188,300
1933	754-61	1,320	54	256	4.74	64.32	185,000	2,650	79	284	5.26	71.42	205,800
1934	769-63	2,650	50	222	4.11	55.86	161,000	1,240	48	195	3.61	49.14	141,400
1935	794-71	1,240	48	213	3.94	53.57	154,000	660	51	175	3.24	44.13	127,000
1936	814-68	1,300	51	200	3.70	50.36	145,000	1,300	44	199	3.69	50.33	144,800
1937	834-62	1,080	44	192	3.56	48.19	139,000	1,100	55	232	4.30	58.43	168,200
1938	864-71	1,110	56	231	4.28	58.21	167,600	1,050	56	208	3.85	52.17	150,300
1939	884-67	600	55	178	3.30	44.60	128,500	-	-	-	-	-	-

Salmon River at Welches, Oreg.
(Drainage area, 100 square miles)

1914	394-104	3,160	90	389	3.89	52.80	282,000	-	-	-	-	-	-
1921	534-107	5,230	94	589	5.89	79.95	426,000	-	-	-	-	-	-
1926	634-113	2,920	68	281	2.81	38.19	204,000	4,160	68	342	3.42	46.47	247,800
1927	654-64	4,470	88	486	4.86	66.03	352,000	7,000	92	574	5.74	77.88	415,200
1928	674-65	7,000	75	534	5.34	72.67	388,000	3,300	75	386	3.86	52.58	280,400
1929	694-67	3,300	75	374	3.74	50.76	271,000	3,300	65	374	3.74	50.74	270,800
1930	709-69	3,540	65	343	3.43	46.57	248,000	3,540	69	333	3.33	45.25	241,200
1931	724-67	8,000	65	328	3.28	44.51	238,000	8,000	65	345	3.45	46.86	250,000
1932	739-65	4,690	69	484	4.84	65.88	351,000	4,690	73	555	5.55	75.53	402,800
1933	754-62	3,280	73	554	5.54	75.13	401,000	5,270	93	619	6.19	84.00	448,100
1934	769-65	5,270	68	472	4.72	64.17	342,000	3,790	68	422	4.22	57.35	305,500
1935	794-72	3,790	68	456	4.56	61.92	330,100	1,680	72	338	3.38	45.89	244,700
1936	814-69	4,800	71	407	4.07	55.42	295,600	-	-	-	-	-	-

Bull Run River below Lake Ben Morrow (Bull Run) Reservoir, Oreg.
(Drainage area, 77 square miles)

1930	709-71	4,080	50	408	5.30	71.90	296,000	3,890	5	426	5.53	75.02	308,200
1931	724-69	12,900	5	441	5.73	77.63	319,000	12,900	35	493	6.40	86.88	357,000
1932	739-67	7,660	35	637	8.27	112.55	462,500	7,660	83	712	9.25	125.84	516,700
1933	754-64	5,980	97	757	9.83	133.54	548,000	10,600	115	862	11.19	151.89	624,100
1934	769-67	10,600	72	657	8.53	115.70	475,400	5,980	34	570	7.40	100.47	412,700
1935	794-74	5,980	34	563	7.31	99.21	407,400	2,540	8	382	4.96	67.42	276,900
1936	814-71	6,290	8	498	6.47	88.18	361,800	6,290	49	518	6.73	91.55	375,700
1937	834-65	4,170	49	500	6.49	87.99	361,700	6,290	80	677	8.79	119.35	490,300
1938	864-74	6,290	88	626	8.13	110.48	453,500	5,570	83	519	6.74	91.46	375,600
1939	884-70	5,050	78	503	6.53	88.62	364,100	-	-	-	-	-	-

Note.- All figures except those for the maximum and minimum day adjusted for storage.

Bull Run River near Bull Run, Oreg.
(Drainage area, 102 square miles)

1908	370-444	10,900	89	752	7.37	100.21	545,000	10,900	85	634	6.22	84.66	460,000
1909	370-444	5,960	82	654	6.41	87.10	474,000	9,490	82	838	8.22	111.58	606,800
1910	370-444	9,490	72	861	8.44	114.60	624,000	9,490	72	749	7.34	99.64	543,000
1911	312-546	5,080	80	645	6.32	85.87	467,000	5,230	80	642	6.29	85.38	465,000
1912	332-646	10,400	92	811	8.03	108.30	589,000	10,400	92	838	8.22	111.89	609,000
1913	362-641	5,980	107	848	8.31	112.84	614,000	5,980	107	756	7.41	100.63	547,700
1914	394-105	5,230	72	665	6.52	88.48	481,000	5,230	72	653	6.40	86.93	472,800
1915	414-106	3,320	74	510	5.02	67.90	369,000	8,830	74	680	6.67	90.48	492,000
1916	444-114	8,830	112	992	9.73	132.40	720,000	5,670	87	831	8.15	111.01	604,000
1917	464-94	4,720	87	781	7.66	103.86	566,000	12,900	88	994	9.75	132.19	719,400
1918	484-84	12,900	69	864	8.47	114.97	625,000	4,700	68	651	6.38	86.68	471,300
1919	514-121	5,060	68	662	6.49	88.01	479,000	8,240	70	781	7.66	104.16	565,700
1920	514-121	9,890	91	766	7.53	102.55	557,000	9,890	91	755	7.40	100.82	548,300
1921	534-109	11,400	85	991	9.72	131.88	718,000	14,500	85	1,053	10.3	140.15	762,300
1922	554-102	14,500	90	766	7.51	101.99	554,000	7,900	90	610	5.98	81.20	441,700
1923	574-102	17,200	95	779	7.64	103.53	564,000	17,200	109	789	7.74	104.92	571,400
1924	594-112	8,200	71	549	5.38	73.22	399,000	6,020	71	644	6.31	85.99	467,100
1925	614-100	6,020	70	849	8.32	113.06	614,000	5,840	64	718	7.04	95.70	520,300
1926	634-115	7,090	63	541	5.30	72.11	392,000	7,090	63	621	6.09	82.72	450,200
1927	654-65	7,250	88	807	7.91	107.59	585,000	10,600	88	942	9.24	125.61	682,800
1928	674-66	10,600	88	892	8.75	119.14	648,000	5,910	83	676	6.63	90.18	491,100
1929	694-68	2,510	83	622	6.10	82.82	451,000	4,550	76	576	5.65	76.71	417,300
1930	709-72	4,990	76	530	5.20	70.54	384,000	4,990	72	556	5.45	73.90	402,200
1931	724-70	16,400	72	564	5.53	75.03	408,000	16,400	86	623	6.11	83.03	451,000
1932	739-68	9,070	86	802	7.86	107.15	582,000	9,070	105	908	8.90	121.21	659,100
1933	754-65	6,820	110	986	9.67	131.13	714,000	12,300	147	1,100	10.78	146.32	796,200
1934	769-68	12,300	80	824	8.08	109.58	596,200	7,280	80	740	7.25	98.54	535,700
1935	794-75	7,820	82	751	7.36	99.92	543,500	3,190	110	513	5.03	68.24	371,200
1936	814-72	7,420	110	643	6.30	85.81	466,700	7,420	95	663	6.50	88.45	481,300
1937	834-66	5,220	95	648	6.35	86.24	469,400	7,450	103	874	8.57	116.27	632,500
1938	864-75	7,450	103	803	7.87	106.80	581,200	6,470	89	665	6.52	88.39	481,300
1939	884-71	6,290	89	642	6.29	85.39	464,700	-	-	-	-	-	-

Note.- All figures except those for maximum and minimum day adjusted for change in contents in Lake Ben Morrow (Bull Run) Reservoir.

Summary of yearly discharge, in second-feet, at stations in Sandy River Basin--Continued

Little Sandy River near Bull Run, Oreg.
(Drainage area, 23 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1920	514-125	1,840	15	163	7.09	96.46	118,000	1,560	15	157	6.83	92.76	113,800
1921	534-111	1,980	16	197	8.57	116.03	142,000	2,740	16	199	8.65	117.49	144,000
1922	554-104	2,740	16	151	6.57	88.90	109,000	1,550	16	128	5.57	75.28	92,470
1923	574-104	2,970	12	150	6.52	88.50	109,000	2,970	12	143	6.22	84.48	103,500
1924	594-114	750	10	96.6	4.20	57.11	70,100	1,130	10	117	5.09	69.06	84,730
1925	614-102	1,130	16	152	6.61	89.88	110,000	990	14	131	5.70	77.39	95,000
1926	634-116	1,100	14	99.0	4.30	58.47	71,600	1,100	14	112	4.87	66.09	81,010
1927	654-66	945	16	150	6.52	88.13	108,000	1,480	16	168	7.30	98.77	121,200
1928	674-67	1,480	18	159	6.91	94.08	115,000	1,130	18	130	5.65	76.67	94,100
1929	694-69	1,280	12	129	5.61	76.42	93,700	1,280	12	120	5.22	70.64	86,630
1930	709-73	1,010	11	99.8	4.34	58.92	72,200	1,010	11	107	4.65	62.92	77,120
1931	724-71	2,940	10	106	4.61	62.71	76,900	2,940	10	114	4.96	67.02	82,230
1932	739-69	1,640	11	145	6.30	85.72	105,000	1,640	10	165	7.17	97.55	119,700
1933	754-66	1,080	10	179	7.78	105.80	130,000	2,050	18	195	8.48	115.00	141,100
1934	769-69	2,050	11	143	6.22	84.12	103,000	1,120	11	127	5.52	74.97	91,960
1935	794-76	1,120	12	133	5.78	78.76	96,600	471	12	97.1	4.22	57.27	70,260
1936	814-73	1,330	12	125	5.43	74.11	91,000	1,330	12	128	5.57	75.60	92,740
1937	834-67	1,020	12	124	5.39	73.21	89,800	1,490	16	164	7.13	97.05	118,900
1938	864-76	1,490	10	151	6.57	89.55	109,600	1,040	10	128	5.57	75.86	92,980
1939	884-72	1,210	12	127	5.52	74.97	91,930	-	-	-	-	-	-

WILLAMETTE RIVER BASIN

Middle Fork of Willamette River at Eula, Oreg.
(Drainage area, 941 square miles)

1924	594-115	11,400	495	2,000	2.13	28.99	1,450,000	27,000	495	2,394	2.54	34.57	1,738,000
1925	694-70	27,000	574	3,300	3.51	47.65	2,370,000	27,000	500	2,709	2.88	39.09	1,959,000
1926	694-70	14,400	480	1,770	1.88	25.52	1,280,000	14,400	480	2,138	2.27	30.81	1,547,000
*1927	694-70	40,000	-	-	-	-	-	40,000	-	-	-	-	-
1928	694-70	22,000	-	2,710	2.88	39.20	1,960,000	22,000	-	2,129	2.26	30.76	1,545,000
1929	694-70	18,200	500	1,890	2.01	27.28	1,370,000	23,500	450	2,054	2.18	29.59	1,487,000
1930	709-74	23,500	450	1,780	1.89	25.66	1,290,000	11,800	495	1,645	1.75	23.76	1,191,000
1931	724-72	22,500	450	1,520	1.62	21.99	1,100,000	22,500	450	1,612	1.71	23.21	1,166,000
1932	739-70	36,600	455	2,970	3.16	43.01	2,160,000	36,600	604	3,120	3.32	45.19	2,265,000
1933	754-67	17,800	604	3,100	3.29	44.66	2,240,000	17,800	695	3,023	3.21	43.71	2,189,000
1934	769-70	16,500	517	1,795	1.91	25.93	1,299,000	20,100	517	2,207	2.35	31.90	1,598,000
1935	794-77	20,100	535	2,710	2.88	39.09	1,962,000	7,400	545	2,116	2.25	30.26	1,532,000
1936	814-75	14,500	545	2,495	2.65	36.08	1,811,000	14,500	545	2,429	2.58	35.13	1,763,000
1937	834-69	25,500	545	2,384	2.53	34.39	1,726,000	25,500	585	3,003	3.19	43.33	2,174,000
1938	864-78	19,200	618	3,239	3.44	46.74	2,345,000	19,200	618	2,855	3.03	41.20	2,067,000
1939	884-74	9,850	560	2,203	2.34	31.79	1,595,000	-	-	-	-	-	-

*Year incomplete.

Willamette River at Springfield (Eugene), Oreg.
(Drainage area, 2,030 square miles)

1912	332-652	-	-	-	-	-	-	59,600	1,100	6,737	3.32	45.17	4,890,000
1913	362-651	48,900	1,050	6,430	3.17	42.99	4,650,000	48,900	1,050	5,942	2.93	39.73	4,300,000
1920	514-127	36,500	693	4,490	2.21	30.10	3,260,000	56,500	693	5,340	2.63	35.81	3,878,000
1921	534-113	56,500	780	7,230	3.56	48.36	5,240,000	46,100	780	6,303	3.10	42.14	4,566,000
1922	554-106	46,100	680	5,480	2.70	36.67	3,970,000	22,400	680	4,835	2.38	32.33	3,500,000
1923	574-107	62,000	680	4,930	2.43	32.95	3,570,000	62,000	900	5,078	2.50	33.95	3,675,000
1924	594-117	37,400	550	3,100	1.53	20.80	2,250,000	55,000	550	4,128	2.03	27.68	2,998,000
1925	614-105	55,000	550	6,840	3.37	45.76	4,960,000	52,600	580	5,346	2.63	35.75	3,875,000
1926	634-120	52,800	500	3,360	1.66	22.47	2,430,000	52,800	500	4,367	2.15	29.20	3,160,000
1927	654-68	68,000	750	6,280	3.09	41.97	4,540,000	68,000	750	6,544	3.22	43.76	4,737,000
1928	674-69	40,300	600	5,830	2.87	39.11	4,240,000	40,300	600	4,431	2.18	29.71	3,220,000
1929	694-72	26,000	594	3,660	1.80	24.52	2,650,000	45,200	535	3,987	1.96	26.69	2,886,000
1930	709-75	45,200	535	3,420	1.68	22.90	2,480,000	24,900	618	3,166	1.56	21.17	2,289,000
1931	724-73	43,700	515	2,780	1.37	18.62	2,020,000	43,700	515	3,238	1.60	21.67	2,345,000
1932	739-71	60,700	574	5,790	2.85	38.82	4,200,000	60,700	650	5,953	2.93	39.92	4,323,000
1933	754-68	37,700	650	6,100	3.00	40.78	4,420,000	37,700	832	5,778	2.85	38.60	4,182,000
1934	769-71	31,000	582	3,098	1.53	20.72	2,243,000	39,800	582	4,214	2.08	28.20	3,051,000
1935	794-78	39,800	598	5,513	2.72	36.87	3,991,000	20,400	638	4,128	2.03	27.60	2,988,000
1936	814-76	42,400	638	4,797	2.36	32.16	3,482,000	42,400	622	4,554	2.24	30.53	3,306,000
1937	834-70	54,000	622	4,885	2.41	32.67	3,536,000	51,000	760	6,428	3.17	42.99	4,654,000
1938	864-79	47,500	696	6,610	3.26	44.18	4,786,000	47,500	696	5,639	2.78	37.68	4,082,000
1939	884-75	27,800	645	4,132	2.04	27.63	2,992,000	-	-	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Willamette River Basin--Continued

Willamette River at Albany, Oreg.
(Drainage area, 4,840 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
†1879	370-475	-	1,870	-	-	-	-	-	1,870	-	-	-	-
1881	370-475	229.0	-	-	-	-	-	229.0	-	-	-	-	-
1895	370-475	-	-	-	-	-	-	79.7	2,220	11,590	2.39	32.44	8,389
1896	370-475	128.0	2,220	17,300	3.57	48.59	12,500	160.0	2,950	21,280	4.40	59.89	15,450
1897	370-475	160.0	2,950	18,200	3.76	51.04	13,200	79.7	3,330	16,760	3.46	46.97	12,130
1898	370-475	73.9	2,760	12,000	2.48	33.66	8,710	67.0	2,760	10,580	2.19	29.73	7,661
1899	370-475	112.0	3,330	18,400	3.80	51.58	13,300	112.0	3,750	19,700	4.07	55.25	14,260
1900	370-475	120.0	2,580	15,100	3.12	42.35	10,900	120.0	2,580	13,850	2.86	38.82	10,020
1901	370-475	179.0	2,760	15,800	3.26	44.25	11,400	179.0	2,950	15,300	3.16	42.90	11,080
1902	370-475	79.7	2,950	14,500	3.00	40.72	10,500	124.0	2,950	16,460	3.40	46.15	11,920
1903	370-475	188.0	2,950	15,800	3.26	44.25	11,400	188.0	3,330	14,080	2.90	39.37	10,150
1904	370-475	124.0	3,330	19,000	3.93	53.49	13,700	124.0	3,140	17,530	3.62	49.27	12,730
1905	370-475	69.4	2,400	9,130	1.89	25.66	6,620	69.4	2,400	8,891	1.84	24.98	6,437
1906	370-475	56.3	2,760	11,000	2.27	30.81	7,950	56.3	2,580	12,470	2.58	35.02	9,028
1907	370-475	182.0	2,580	15,500	3.20	43.44	11,200	182.0	2,580	16,400	3.39	46.02	11,870
1908	370-475	142.0	2,580	12,800	2.64	35.93	9,260	51.9	2,760	10,450	2.16	29.40	7,586
1909	370-475	115.0	2,760	13,000	2.69	36.52	9,400	168.0	2,950	16,250	3.36	45.61	11,770
1910	370-475	168.0	2,580	13,900	2.87	38.96	10,000	90.5	2,580	11,970	2.47	33.46	8,664
1911	312-553	82.4	2,400	11,100	2.29	31.09	8,060	78.0	2,400	10,400	2.15	29.18	7,553
1912	332-654	130.0	3,330	14,400	2.98	40.56	10,500	130.0	3,730	15,150	3.13	42.60	11,000
1913	362-653	91.5	3,330	14,100	2.91	39.50	10,200	91.5	3,330	13,040	2.69	36.52	9,447
1914	394-112	67.1	2,760	11,600	2.40	32.58	‡8,427	67.1	2,760	11,350	2.35	31.90	8,229
1915	414-110	48.0	2,400	8,740	1.81	24.57	6,330	72.9	2,400	11,110	2.30	31.22	8,036
1916	444-120	151.0	2,400	17,500	3.62	49.27	13,700	151.0	3,220	15,610	3.23	43.97	11,340
1917	464-99	45.6	3,220	14,100	2.91	39.50	10,200	89.0	3,030	15,410	3.18	43.17	11,160
1918	484-88	89.0	2,470	14,400	2.98	40.45	10,400	87.5	2,470	12,270	2.54	34.48	8,891
1919	514-129	86.8	2,470	14,300	2.95	40.04	10,400	86.8	2,470	16,620	3.43	46.56	12,030
1920	514-129	69.0	2,360	11,600	2.40	32.67	8,450	89.0	2,360	13,600	2.81	38.25	9,870
1921	534-115	115.0	3,030	18,700	3.86	52.49	13,500	120.0	3,030	17,520	3.62	49.14	12,680
1922	554-108	120.0	2,780	14,100	2.91	39.50	10,200	48.5	2,780	11,670	2.41	32.71	8,445
1923	574-109	195.0	2,940	13,400	2.77	37.60	9,690	195.0	3,090	13,510	2.79	37.87	9,785
1924	594-118	52.0	2,460	8,830	1.82	24.77	6,420	90.6	2,460	11,620	2.40	32.67	8,440
1925	614-107	126.0	2,460	17,600	3.64	49.41	12,800	126.0	2,400	14,080	2.91	39.50	10,190
1926	634-121	131.0	2,020	9,310	1.92	26.06	6,740	131.0	2,020	11,630	2.40	32.58	8,431
1927	654-69	161.0	2,400	16,800	3.47	47.10	12,200	161.0	2,400	17,270	3.57	48.46	12,560
1928	674-70	74.0	2,400	15,100	3.12	42.47	10,900	74.0	2,400	12,090	2.50	34.03	8,767
1929	694-73	50.8	2,340	10,300	2.13	28.93	7,470	84.2	2,340	10,910	2.25	30.62	7,899
1930	709-76	84.2	2,160	9,210	1.90	25.81	6,660	48.7	2,160	8,343	1.72	23.39	6,042
1931	724-74	108.0	1,890	7,980	1.65	22.33	5,770	108.0	1,890	9,638	1.99	27.02	6,973
1932	739-72	126.0	2,030	15,500	3.20	43.58	11,200	126.0	2,400	15,470	3.20	43.54	11,230
1933	754-69	90.0	2,400	16,000	3.31	44.79	11,600	90.0	3,070	16,030	3.31	44.95	11,610
1934	769-72	70.2	2,210	9,853	2.04	27.62	7,134	72.6	2,210	11,660	2.41	32.69	8,445
1935	794-79	72.6	2,210	14,470	2.99	40.59	10,480	43.7	2,340	11,070	2.29	31.05	8,012
1936	814-77	120.0	2,340	12,780	2.64	35.93	9,278	120.0	2,170	12,250	2.53	34.43	8,891
1937	834-71	124.0	2,170	12,990	2.68	36.45	9,400	124.0	2,840	17,200	3.55	48.26	12,450
1938	864-80	92.6	2,600	17,880	3.69	50.15	12,940	92.6	2,600	15,130	3.13	42.44	10,950
1939	884-76	58.9	2,240	11,130	2.30	31.22	8,059	-	-	-	-	-	-

†Year incomplete.
‡Corrected. Erroneous figure published in Water-Supply Paper 394.
Note.- Figures of maximum discharge and run-off in acre-feet in the above table are expressed in thousands.

Willamette River at Salem, Oreg.
(Drainage area, 7,280 square miles)

1910	414-112	315.0	3,750	25,500	3.50	47.51	18,400	170.0	3,750	21,920	3.01	40.86	15,870
1911	414-112	155.0	3,750	20,100	2.76	37.47	14,500	155.0	3,750	18,340	2.52	34.21	13,280
1912	414-112	214.0	4,240	25,200	3.46	47.10	18,300	214.0	4,400	26,950	3.70	50.36	19,540
1913	414-112	151.0	4,240	25,800	3.54	48.05	18,700	151.0	4,240	23,700	3.26	44.25	17,150
1914	414-112	123.0	3,510	21,800	2.99	40.59	15,800	123.0	3,510	21,340	2.93	39.77	15,440
1915	414-112	92.0	3,310	15,900	2.18	29.59	11,500	120.0	3,310	21,180	2.91	39.50	15,340
1916	444-122	248.0	3,380	35,200	4.84	65.88	25,600	248.0	4,250	31,120	4.27	58.12	22,580
1928	674-71	120.0	3,200	24,500	3.37	45.78	17,800	105.0	3,200	19,380	2.66	36.23	14,070
1929	694-74	73.6	3,200	16,600	2.28	30.97	12,000	114.0	3,100	17,230	2.37	32.09	12,460
1930	709-77	114.0	2,860	15,000	2.06	27.99	10,900	82.0	2,860	13,700	1.88	25.51	9,909
1931	724-75	200.0	2,500	13,700	1.88	25.47	9,890	200.0	2,500	16,480	2.26	30.72	11,920
1932	739-73	167.0	2,570	24,700	3.39	46.11	17,900	167.0	3,170	25,000	3.43	46.73	18,170
1933	754-70	115.0	3,170	25,900	3.56	48.31	18,800	165.0	3,700	27,020	3.71	50.40	19,580
1934	769-73	165.0	2,760	17,790	2.44	33.18	12,880	121.0	2,760	19,750	2.71	36.84	14,300
1935	794-80	118.0	2,800	23,680	3.25	44.18	17,150	69.5	3,080	17,670	2.43	32.96	12,790
1936	814-78	211.0	3,180	20,800	2.86	38.86	15,100	211.0	3,060	19,960	2.74	37.28	14,490
1937	834-72	194.0	3,060	21,050	2.89	39.26	15,240	194.0	3,680	28,630	3.93	53.38	20,730
1938	864-81	173.0	3,240	29,430	4.04	54.89	21,310	142.0	3,240	24,200	3.32	45.13	17,520
1939	884-77	93.9	2,890	17,220	2.37	32.12	12,460	-	-	-	-	-	-

Note.- Figures of maximum discharge and run-off in acre-feet in the above table are expressed in thousands.

Summary of yearly discharge, in second-feet, at stations in Willamette River Basin--Continued

Salmon Creek near Oakridge, Oreg.*

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1914	394-116	1,430	112	378	3.12	42.39	274,000	1,430	112	352	2.91	39.54	255,300
1915	414-117	805	113	267	2.21	30.00	194,000	1,630	101	330	2.73	37.00	238,900
1918	484-89	-	-	471	3.89	52.89	340,000	-	-	426	3.52	47.85	308,900
1919	514-131	1,840	119	416	3.44	46.72	302,000	-	-	-	-	-	-
1934	769-75	1,720	111	267	2.28	30.98	193,300	3,040	107	333	2.85	38.63	241,400
1935	794-82	3,040	107	411	3.51	47.69	297,400	1,000	107	326	2.79	38.11	236,100
1936	814-81	1,540	107	368	3.15	42.86	267,400	1,540	94	361	3.09	41.95	261,700
1937	834-75	2,740	78	344	2.94	39.91	248,900	2,740	78	424	3.62	49.16	306,600
1938	864-84	2,640	121	452	3.86	52.52	327,600	2,640	110	409	3.50	47.46	296,000
1939	884-80	1,600	104	347	2.97	40.21	250,900	-	-	-	-	-	-

*At two sites in the vicinity of Oakridge, Oreg.; drainage areas, 1914-19, 121 square miles and 1934-39, 117 square miles.

Coast Fork of Willamette River at Saginaw, Oreg.
(Drainage area, 529 square miles)

1926	634-123	14,600	-	852	1.61	21.89	617,000	14,600	-	1,161	2.19	29.84	841,400
1928	674-72	12,500	8	1,550	2.93	39.83	1,120,000	12,500	8	1,124	2.12	28.96	816,900
1929	694-75	10,800	28	869	1.64	22.30	629,000	12,700	22	961	1.82	24.63	695,000
1930	709-78	12,700	22	824	1.56	21.12	596,000	7,760	32	737	1.39	18.89	533,800
1931	724-76	14,700	23	640	1.21	16.38	462,000	14,700	23	872	1.65	22.36	630,000
1932	739-74	18,200	30	1,460	2.76	37.62	1,060,000	18,200	33	1,392	2.63	35.81	1,011,000
1933	754-71	17,700	33	1,430	2.70	36.78	1,040,000	17,700	48	1,317	2.49	33.78	953,400
1934	794-83	9,750	32	621	1.17	15.91	449,300	11,000	32	967	1.83	24.80	699,800
1935	794-83	11,000	25	1,333	2.52	34.19	965,200	7,170	25	964	1.82	24.72	698,100
1936	814-87	18,400	20	1,186	2.24	30.51	860,800	18,400	20	1,089	2.06	28.02	790,800
1937	834-82	21,500	23	1,212	2.29	31.10	877,200	21,500	55	1,656	3.13	42.49	1,199,000
1938	864-91	19,500	30	1,694	3.20	43.43	1,226,000	19,500	30	1,397	2.64	35.83	1,011,000
1939	884-88	10,700	30	928	1.75	23.83	672,000	-	-	-	-	-	-

McKenzie River at McKenzie Bridge, Oreg.
(Drainage area, 345 square miles)

1911	(*)	3,710	1,040	1,500	4.35	59.05	1,090,000	3,320	1,050	1,424	4.13	56.06	1,031,000
1912	(*)	6,170	1,050	1,700	4.93	67.10	1,240,000	6,170	-	1,768	5.12	69.69	1,284,000
1913	(*)	4,620	-	1,630	5.30	71.94	1,320,000	4,620	-	1,784	5.17	70.18	1,292,000
1914	394-121	2,920	1,080	1,590	4.61	62.58	1,150,000	-	-	-	-	-	-
1916	444-127	5,260	924	1,990	5.77	78.54	1,450,000	-	-	-	-	-	-
1919	514-133	4,400	1,110	1,660	4.81	65.29	1,200,000	4,400	1,110	1,761	5.10	69.23	1,274,000
1920	514-133	6,440	1,110	1,570	4.55	61.93	1,140,000	8,600	1,110	1,704	4.94	67.24	1,236,000
1921	534-116	8,600	1,320	2,150	6.23	84.57	1,550,000	-	-	-	-	-	-
1924	594-121	4,600	908	1,540	4.46	60.71	1,120,000	4,600	890	1,538	4.46	60.71	1,115,000
1925	614-110	7,420	890	1,780	5.16	70.04	1,290,000	7,420	1,030	1,684	4.88	66.24	1,218,000
1927	654-71	7,420	955	1,710	4.96	67.33	1,240,000	7,420	1,130	1,826	5.29	71.81	1,322,000
1928	674-73	7,420	1,070	1,790	5.19	70.64	1,300,000	5,970	1,030	1,565	4.54	61.80	1,137,000
1929	694-76	2,620	1,030	1,380	4.00	54.30	1,000,000	3,540	920	1,392	4.03	54.70	1,007,000
1930	709-79	3,850	856	1,260	3.65	49.55	909,000	3,850	832	1,199	3.48	47.24	867,900
1931	724-77	7,660	832	1,230	3.57	48.46	890,000	7,660	810	1,259	3.65	49.55	911,000
1932	739-75	7,260	810	1,710	4.96	67.51	1,240,000	7,260	1,030	1,081	5.22	71.05	1,307,000
1933	754-72	6,750	1,030	1,770	5.13	69.64	1,280,000	6,750	1,120	1,843	5.34	72.49	1,334,000
1934	769-77	6,550	960	1,576	4.57	62.03	1,141,000	6,550	932	1,595	4.62	62.71	1,155,000
1935	794-85	4,740	932	1,602	4.64	62.98	1,160,000	2,390	970	1,412	4.09	55.52	1,022,000
1936	814-90	5,500	970	1,511	4.38	59.62	1,097,000	5,500	912	1,493	4.33	58.90	1,084,000
1937	834-85	5,090	905	1,441	4.18	56.67	1,043,000	5,090	905	1,620	4.70	63.70	1,173,000
1938	864-94	5,280	985	1,742	5.05	68.54	1,261,000	5,280	979	1,638	4.75	64.46	1,186,000
1939	884-92	2,760	930	1,381	4.00	54.33	1,000,000	-	-	-	-	-	-

*From reports of State engineer.

McKenzie River near Vida, Oreg.
(Drainage area, 930 square miles)

*1925	614-111	26,700	1,460	4,449	4.78	64.89	3,221,000	26,700	1,570	3,993	4.29	58.23	2,891,000
1926	634-126	24,400	1,430	2,920	3.14	42.63	2,110,000	24,400	1,430	3,168	3.41	46.28	2,296,000
1927	654-72	31,700	1,540	4,320	4.65	63.11	3,130,000	31,700	1,840	4,715	5.07	68.82	3,414,000
1928	674-74	27,800	1,680	4,360	4.69	63.80	3,170,000	24,100	1,570	3,520	3.78	51.52	2,556,000
1929	694-77	17,000	1,470	3,050	3.28	44.57	2,210,000	17,600	1,320	3,136	3.37	45.78	2,270,000
1930	709-80	17,600	1,290	2,710	2.91	39.60	1,960,000	14,500	1,260	2,571	2.76	37.54	1,861,000
1931	724-78	29,200	1,260	2,590	2.78	37.83	1,870,000	29,200	1,260	2,757	2.96	40.27	1,997,000
1932	739-76	29,500	1,260	4,040	4.34	59.12	2,930,000	29,500	1,480	4,256	4.58	62.30	3,090,000
1933	754-73	23,400	1,480	4,340	4.67	63.42	3,140,000	23,400	1,770	4,453	4.79	65.03	3,224,000
1934	769-78	21,500	1,410	3,326	3.58	48.51	2,408,000	21,500	1,400	3,555	3.82	51.87	2,574,000
1935	794-86	19,900	1,400	3,885	4.18	56.71	2,813,000	6,980	1,530	3,199	3.44	46.67	2,316,000
1936	814-91	19,800	1,530	3,570	3.84	52.24	2,592,000	19,800	1,350	3,484	3.75	50.99	2,530,000
1937	834-86	23,400	1,350	3,451	3.71	50.36	2,498,000	23,400	1,510	4,166	4.48	60.82	3,016,000
1938	864-95	24,200	1,570	4,400	4.73	64.23	3,186,000	24,200	1,530	4,016	4.32	58.61	2,908,000
1939	884-93	11,900	1,440	3,284	3.53	47.92	2,378,000	-	-	-	-	-	-

*Yearly figures not previously published; discharge for periods of missing record estimated.

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Summary of yearly discharge, in second-feet, at stations in Willamette River Basin--Continued

Long Tom River at (near) Monroe, Oreg.*

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off		Maximum day	Minimum day	Mean	Per square mile	Run-off	
						Inches	Acre-feet					Inches	Acre-feet
1922	554-111	5,880	12	787	2.00	27.15	570,000	4,200	12	673	1.71	23.21	487,000
1923	574-112	15,800	12	791	2.01	27.28	574,000	15,800	23	688	1.75	23.76	498,800
1924	594-123	3,840	8	308	.782	10.64	223,000	11,900	8	718	1.82	24.77	521,000
1925	614-113	11,900	9	1,230	3.12	42.35	889,000	9,500	9	797	2.02	27.42	577,300
1928	674-76	5,650	13	793	2.01	27.37	574,000	5,650	13	711	1.80	24.55	514,900
1929	694-79	5,450	14	461	1.17	15.86	334,000	8,890	14	534	1.36	18.36	386,100
1930	709-82	8,890	15	518	1.31	17.85	375,000	3,920	17	390	.992	13.47	282,100
1931	724-80	4,770	11	367	.939	12.72	266,000	5,560	11	579	1.48	20.08	419,100
1932	739-78	5,560	13	824	2.11	28.67	598,000	4,990	14	732	1.87	25.47	531,900
1933	754-74	10,600	14	833	2.13	28.92	603,000	10,600	25	878	2.25	30.48	635,800
1934	769-79	7,390	12	496	1.27	17.21	359,100	7,860	12	612	1.57	21.24	442,900
1935	794-87	7,860	13	834	2.13	28.97	604,200	5,700	13	575	1.47	19.96	416,200
1936	814-97	15,300	14	692	1.77	24.10	502,300	15,300	14	650	1.66	22.64	471,800
1937	834-90	11,800	14	728	1.86	25.27	527,200	11,800	25	1,116	2.85	38.73	807,900
1938	864-99	11,500	14	1,216	3.11	42.20	880,100	11,500	10	895	2.29	31.08	648,200
1939	884-97	4,280	7	469	1.20	16.29	339,800	-	-	-	-	-	-

*At two sites in the vicinity of Monroe, Oreg.; drainage areas, 1922-30, 394 square miles and 1931-39, 391 square miles.

North Santiam at Detroit, Oreg.*

†1907	370-524	-	-	-	-	-	-	9,220	400	1,010	4.51	61.22	733,900
1908	370-524	5,820	400	926	4.13	56.22	672,000	5,820	375	837	3.74	50.91	608,000
1911	312-567	3,120	376	778	3.52	47.78	564,000	-	-	738	3.34	45.34	534,000
1929	694-80	2,520	374	843	3.68	49.95	612,000	5,480	342	865	3.78	51.31	626,900
1930	709-83	5,480	339	754	3.29	44.66	545,000	3,520	330	698	3.05	41.40	505,100
1931	724-81	10,100	306	700	3.06	41.54	507,000	10,100	295	720	3.14	42.62	521,600
1932	739-79	7,620	295	1,020	4.48	60.98	742,000	7,620	367	1,120	4.94	67.24	813,100
1933	754-75	7,000	367	1,120	5.00	67.87	813,000	9,800	450	1,203	5.37	72.89	870,600
1934	769-80	9,800	346	969	4.33	58.78	701,500	6,500	343	943	4.21	57.15	682,700
1935	794-88	4,870	343	991	4.42	60.00	717,600	1,980	361	828	3.70	50.23	599,600
1936	814-101	5,210	361	936	4.18	56.91	679,800	5,210	321	917	4.09	55.70	665,600
1937	834-92	6,690	321	909	4.06	55.11	658,200	6,690	340	1,116	4.98	67.61	807,600
1938	864-101	5,860	385	1,154	5.15	69.92	835,600	5,860	377	1,023	4.57	62.00	740,900
1939	884-100	2,810	338	823	3.67	49.89	596,000	-	-	-	-	-	-

*At four sites in the vicinity of Detroit, Oreg.; drainage areas, 1907-8, 224 square miles; 1911, 221 square miles; 1929-32, 229 square miles; and 1932-39, 224 square miles.
†Yearly figures not previously published; discharge for periods of missing record estimated.

North Santiam River at Mehama, Oreg.
(Drainage area, 665 square miles)

1906	370-531	17,100	700	3,150	4.74	64.34	2,270,000	36,200	700	3,909	5.88	79.82	2,830,000
*1911	312-570	21,700	660	3,030	4.56	61.90	2,194,000	19,300	660	2,831	4.26	57.83	2,049,000
1912	332-671	37,200	660	4,130	6.21	84.53	3,000,000	37,200	660	4,488	6.75	91.88	3,257,000
1913	362-669	30,200	660	4,390	6.60	89.59	3,180,000	30,200	830	4,118	6.19	84.03	2,981,000
1914	394-124	18,400	660	3,480	5.23	70.99	2,520,000	-	-	-	-	-	-
1922	554-118	50,500	621	3,710	5.58	75.74	2,690,000	26,000	621	2,969	4.46	60.54	2,150,000
1923	574-118	58,000	630	3,510	5.28	71.67	2,540,000	58,000	720	3,541	5.32	72.22	2,563,000
1924	594-124	19,600	420	2,440	3.67	49.95	1,770,000	27,500	420	2,857	4.30	58.53	2,073,000
1925	614-114	27,500	520	4,020	6.05	82.12	2,900,000	25,500	580	3,410	5.13	69.64	2,468,000
1926	634-132	30,000	480	2,290	3.44	46.68	1,660,000	30,000	480	2,773	4.17	56.61	2,009,000
1927	654-76	33,000	740	3,840	5.77	78.43	2,780,000	33,000	740	4,134	6.22	84.31	2,993,000
1928	674-77	33,000	626	3,750	5.63	76.71	2,720,000	24,000	626	2,963	4.46	60.69	2,152,000
1929	694-81	13,800	520	2,590	3.89	52.87	1,880,000	19,200	464	2,528	3.80	51.61	1,832,000
1930	709-84	19,200	464	2,190	3.29	44.68	1,590,000	14,800	495	2,077	3.12	42.39	1,504,000
1931	724-82	43,800	454	2,160	3.25	44.11	1,570,000	43,800	454	2,423	3.64	49.44	1,754,000
1932	739-80	30,700	454	3,540	5.32	72.33	2,570,000	30,700	540	3,831	5.76	78.39	2,781,000
1933	754-76	24,800	540	3,970	5.97	80.91	2,870,000	34,100	788	4,177	6.28	85.25	3,022,000
1934	769-81	34,100	525	2,927	4.40	59.74	2,119,000	24,700	518	2,954	4.44	60.24	2,138,000
1935	794-89	23,500	518	3,182	4.78	64.95	2,304,000	7,140	524	2,406	3.62	49.11	1,742,000
1936	814-102	26,200	524	2,896	4.35	59.23	2,102,000	26,200	468	2,792	4.20	57.10	2,027,000
1937	834-93	26,700	468	2,865	4.31	58.50	2,074,000	26,700	628	3,794	5.71	77.49	2,747,000
1938	864-102	24,380	582	3,754	5.65	76.64	2,718,000	24,380	582	3,212	4.83	65.56	2,325,000
1939	884-102	14,800	540	2,625	3.95	53.57	1,901,000	-	-	-	-	-	-

*Yearly figures not previously published; discharge for period of missing record estimated.

South Santiam River at Waterloo, Oreg.
(Drainage area, 640 square miles)

1906	370-550	14,000	192	2,680	4.19	56.84	1,940,000	36,900	192	3,512	5.49	74.48	2,542,000
1924	594-127	32,700	135	2,170	3.39	46.00	1,570,000	49,000	135	3,271	5.11	69.57	2,375,000
1925	614-115	49,000	100	4,690	7.33	99.61	3,400,000	34,800	100	3,359	5.25	71.24	2,432,000
1926	634-134	38,000	100	2,110	3.30	44.78	1,530,000	38,000	135	2,633	4.11	55.91	1,907,000
1927	654-77	38,500	185	3,460	5.41	73.35	2,500,000	38,500	185	3,706	5.79	78.57	2,682,000
1928	674-78	31,800	126	3,210	5.02	68.23	2,330,000	29,400	126	2,300	3.59	48.92	1,672,000
1929	694-82	21,000	146	2,170	3.39	45.95	1,570,000	21,100	106	2,203	3.44	46.73	1,595,000
1930	709-85	21,100	106	1,670	2.61	35.40	1,210,000	18,600	115	1,566	2.45	33.23	1,134,000
1931	724-84	46,400	120	1,700	2.66	36.15	1,230,000	46,400	120	2,059	3.22	43.67	1,489,000
1932	739-83	35,600	126	3,170	4.95	67.35	2,300,000	35,600	129	3,388	5.29	71.98	2,457,000
1933	754-80	22,000	129	3,580	5.59	75.96	2,590,000	22,300	187	3,592	5.61	76.16	2,601,000
1934	769-84	22,300	126	2,257	3.53	47.87	1,634,000	21,300	126	2,500	3.91	53.03	1,810,000
1935	794-92	21,300	111	2,815	4.40	59.70	2,038,000	7,780	111	1,995	3.12	42.30	1,444,000
1936	814-106	28,200	111	2,509	3.92	53.36	1,821,000	28,200	107	2,380	3.72	50.61	1,728,000
1937	834-97	29,100	107	2,564	4.01	54.37	1,856,000	29,100	183	3,567	5.57	75.64	2,582,000
1938	864-106	29,100	120	3,469	5.42	73.62	2,512,000	29,100	120	2,882	4.50	61.16	2,087,000
1939	884-106	19,900	126	2,258	3.53	47.92	1,635,000	-	-	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Willamette River Basin--Continued

Albany Power canal near Lebanon, Oreg.

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1927	654-78	-	-	202	146,000	-	-	197	142,800
1928	674-79	-	-	146	106,000	-	-	126	91,430
1929	694-83	-	-	146	106,000	-	-	160	116,200
1930	709-86	-	-	195	141,000	-	-	210	151,900
1931	724-86	-	-	200	145,000	-	-	204	147,300
1932	739-85	-	-	230	167,000	-	-	231	168,200
1933	754-82	-	-	251	182,000	-	-	242	175,500
1934	769-86	-	-	212	153,600	-	-	204	147,000
1935	794-94	304	53	223	161,400	317	74	248	179,400
1936	814-108	317	25	263	191,200	332	25	238	173,000
1937	834-99	332	80	244	176,600	324	142	275	199,200
1938	864-108	325	93	256	185,100	325	80	248	179,800
1939	884-108	315	80	253	183,400	-	-	-	-

Haskins Creek near McMinnville, Oreg.
(Drainage area, 5.7 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1929	694-85	125	1.4	17.2	3.02	40.94	12,400	116	1.4	15.5	2.72	36.90	11,220
1930	709-88	210	1.4	16.0	2.81	38.20	11,600	210	1.4	15.3	2.68	36.46	11,070
1931	724-88	500	1.4	20.2	3.54	48.28	14,600	500	1.4	27.5	4.82	65.61	19,930
1932	739-87	218	1.2	33.9	5.95	80.82	24,600	218	1.1	35.3	6.19	84.35	25,640
1933	754-83	200	1.1	38.0	6.67	90.56	27,500	381	2.3	41.6	7.30	98.95	30,080
1934	769-91	381	1.3	29.6	5.19	70.48	21,440	191	1.3	29.5	5.18	70.34	21,390
1935	794-99	176	1.6	33.9	5.95	80.79	24,560	158	1.8	22.6	3.96	53.79	16,360
1936	814-113	338	1.5	24.9	4.37	59.60	18,100	338	1.1	23.8	4.18	56.88	17,270
1937	834-103	246	.6	20.4	3.58	48.55	14,760	446	.6	32.9	-	-	23,800
1938	864-112	446	.2	33.4	-	-	24,180	213	.2	22.5	-	-	16,290
1939	884-112	237	.2	15.7	-	-	11,380	-	-	-	-	-	-

Molalla River near Canby, Oreg.
(Drainage area, 323 square miles)

1929	694-86	5,720	41	796	2.50	33.42	576,000	7,500	41	787	2.44	33.07	569,900
1930	709-89	7,500	48	754	2.33	31.70	546,000	5,420	49	695	2.15	29.24	503,400
1931	724-89	15,200	42	691	2.14	29.06	501,000	15,200	42	883	2.73	37.11	640,200
1932	739-88	9,750	48	1,210	3.75	50.81	875,000	9,750	40	1,245	3.85	52.48	904,100
1933	754-84	6,710	40	1,250	3.87	52.36	903,000	13,100	70	1,399	4.33	58.84	1,014,000
1934	769-92	13,100	48	1,050	3.25	44.15	760,100	6,750	48	952	2.95	39.97	688,800
1935	794-100	5,260	38	1,013	3.14	42.57	733,600	4,030	38	730	2.26	30.66	528,700
1936	814-115	9,220	47	924	2.86	38.91	671,100	9,220	42	891	2.76	37.52	646,900
1937	834-105	10,500	42	948	2.93	39.82	686,200	15,600	74	1,422	4.40	59.77	1,030,000
1938	864-115	15,600	42	1,418	4.39	59.60	1,027,000	7,720	42	1,066	3.30	44.78	771,700
1939	884-115	8,080	44	793	2.46	33.33	574,200	-	-	-	-	-	-

Pudding River at Aurora, Oreg.
(Drainage area, 493 square miles)

1929	694-87	4,970	50	766	1.55	21.09	554,000	4,880	49	769	1.56	21.15	556,100
1930	709-90	5,140	49	825	1.67	22.71	597,000	5,140	57	747	1.52	20.58	540,900
1931	724-90	9,100	49	763	1.55	20.98	552,000	9,100	49	1,050	2.13	28.87	759,200
1932	739-89	5,440	54	1,360	2.76	37.46	986,000	5,440	48	1,305	2.65	36.00	946,900
1933	754-85	7,500	48	1,410	2.86	38.79	1,020,000	10,100	72	1,581	3.21	43.49	1,145,000
1934	769-93	10,100	47	1,179	2.39	32.45	853,600	7,140	47	1,111	2.25	30.59	804,100
1935	794-101	7,140	37	1,159	2.35	31.92	839,000	5,710	37	820	1.66	22.58	593,400
1936	814-116	8,690	47	948	1.92	26.17	688,100	8,690	53	922	1.87	25.44	669,100
1937	834-106	7,790	58	1,028	2.09	28.29	744,000	13,400	70	1,521	3.09	41.87	1,101,000
1938	864-116	13,400	43	1,597	3.24	43.95	1,156,000	8,090	43	1,221	2.48	33.60	884,000
1939	884-116	5,020	41	810	1.64	22.30	586,600	-	-	-	-	-	-

Tualatin River near Willamette, Oreg.
(Drainage area, 710 square miles)

1929	694-88	5,920	46	810	1.14	15.47	585,300	5,920	46	738	1.04	14.12	533,600
1930	709-91	4,931	54	730	1.03	13.98	528,500	4,930	54	690	.972	13.19	500,100
1931	724-91	7,340	62	882	1.24	16.87	638,000	7,530	62	1,228	1.73	23.49	889,000
1932	739-90	8,440	47	1,670	2.35	32.06	1,210,000	8,440	47	1,682	2.37	32.28	1,221,000
1933	754-86	8,570	59	1,790	2.52	34.31	1,300,000	28,300	81	2,145	3.02	41.03	1,553,000
1934	769-94	28,300	59	1,642	2.31	31.40	1,189,000	9,870	59	1,667	2.35	31.86	1,207,000
1935	794-102	9,870	63	1,946	2.74	37.22	1,409,000	8,890	63	1,239	1.75	23.71	897,000
1936	814-117	16,000	74	1,258	1.77	24.12	913,500	16,000	79	1,257	1.77	24.09	912,400
1937	834-107	7,840	79	1,245	1.75	23.78	901,400	25,100	88	1,839	2.59	35.13	1,331,000
1938	864-117	25,100	78	2,114	2.98	40.43	1,531,000	20,000	78	1,580	2.23	30.22	1,144,000
1939	884-117	7,130	38	885	1.05	16.94	640,900	-	-	-	-	-	-

Note.- Records include flow of Oswego canal.

Summary of yearly discharge, in second-feet, at stations in Willamette River Basin--Continued

Clackamas River at Big Bottom, Oreg.
(Drainage area, 132 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off		Maximum day	Minimum day	Mean	Per square mile	Run-off	
						Inches	Acre-feet					Inches	Acre-feet
1921	534-124	3,280	280	662	5.02	68.14	479,000	3,280	280	646	4.89	66.38	468,100
1922	554-120	3,280	256	481	3.64	49.41	348,000	1,880	256	417	3.16	42.89	301,600
1923	574-121	5,800	258	518	3.92	53.21	375,000	5,800	258	524	3.97	53.89	379,100
1924	594-128	1,390	212	363	2.75	37.45	264,000	2,150	212	387	2.93	39.84	280,800
1925	614-117	3,050	220	526	3.98	54.06	380,000	3,050	234	482	3.65	49.54	348,600
1926	634-137	2,680	222	338	2.56	34.78	245,000	2,900	222	373	2.83	38.35	269,900
1927	654-79	2,900	228	495	3.75	50.90	358,000	3,480	255	523	3.96	53.76	378,400
1928	674-82	3,480	245	486	3.68	50.23	353,000	2,170	235	418	3.17	43.21	303,800
1929	694-90	1,080	208	360	2.73	37.04	261,000	1,080	202	362	2.74	37.23	262,000
1930	709-93	1,080	199	313	2.37	32.19	227,000	1,000	199	296	2.24	30.39	214,100
1931	724-93	4,130	190	326	2.47	33.56	236,000	4,130	190	340	2.58	34.98	246,300
1932	739-92	1,920	194	423	3.20	43.64	307,000	1,920	213	454	3.44	46.87	329,800
1933	754-88	2,830	213	485	3.67	49.85	351,000	4,850	252	549	4.16	56.33	396,800
1934	769-96	4,850	246	503	3.81	51.69	364,100	2,920	246	464	3.52	47.67	335,600
1935	794-104	1,420	246	469	3.55	48.23	339,400	990	250	424	3.21	43.60	306,700
1936	814-120	2,400	250	464	3.52	47.86	337,000	2,400	236	452	3.42	46.63	328,400
1937	834-110	2,620	216	444	3.36	45.66	321,500	2,730	216	522	3.95	53.69	378,200
1938	864-120	2,730	241	554	4.20	56.98	401,200	2,250	262	498	3.77	51.18	360,200
1939	884-120	970	222	387	2.93	39.82	280,300	-	-	-	-	-	-

Clackamas River above Three Lynx Creek, Oreg.
(Drainage area, 488 square miles)

1912	554-121	12,900	630	2,010	4.12	56.08	1,460,000	12,900	695	2,210	4.53	61.63	1,605,000
1913	554-121	11,600	695	2,280	4.68	63.67	1,660,000	9,350	820	2,133	4.37	59.37	1,546,000
1922	554-121	22,000	705	1,990	4.08	55.26	1,440,000	11,600	705	1,679	3.44	46.72	1,214,000
1923	574-123	28,800	705	2,170	4.45	60.25	1,570,000	28,800	750	2,202	4.51	61.22	1,595,000
1924	594-130	8,590	544	1,470	3.01	40.96	1,070,000	12,500	544	1,609	3.30	44.85	1,167,000
1925	614-118	15,300	616	2,230	4.57	62.07	1,620,000	15,300	606	1,965	4.03	54.67	1,424,000
1926	634-138	14,500	544	1,280	2.62	35.69	928,000	14,900	544	1,497	3.07	41.67	1,084,000
1927	654-80	14,900	665	2,120	4.34	59.00	1,540,000	16,300	706	2,271	4.65	63.12	1,644,000
1928	674-83	16,300	646	2,110	4.32	59.00	1,540,000	13,100	646	1,754	3.59	48.96	1,273,000
1929	694-91	5,260	-	1,530	3.14	42.51	1,110,000	7,410	550	1,539	3.15	42.73	1,113,000
1930	709-94	7,410	541	1,320	2.70	36.74	957,000	5,400	536	1,223	2.51	34.02	885,300
1931	724-94	22,700	536	1,330	2.73	37.02	964,000	22,700	546	1,427	2.92	39.67	1,033,000
1932	739-93	13,000	546	1,870	3.83	52.24	1,360,000	13,000	650	2,051	4.20	57.19	1,488,000
1933	754-89	14,500	650	2,130	4.36	59.28	1,540,000	24,200	750	2,385	4.89	66.39	1,727,000
1934	769-97	24,200	-	1,951	4.00	54.28	1,413,000	13,100	-	1,779	3.65	49.49	1,288,000
1935	794-105	8,350	590	1,855	3.80	51.61	1,343,000	3,620	630	1,547	3.17	43.03	1,120,000
1936	814-121	14,200	630	1,790	3.67	49.93	1,299,000	14,200	570	1,752	3.59	48.87	1,272,000
1937	834-111	15,000	570	1,722	3.53	47.90	1,247,000	15,600	622	2,173	4.45	60.43	1,573,000
1938	864-121	15,600	622	2,236	4.58	62.19	1,618,000	11,200	666	1,925	3.94	53.56	1,394,000
1939	884-121	5,680	657	1,552	3.18	43.14	1,123,000	-	-	-	-	-	-

Clackamas River near Cazadero, Oreg.
(Drainage area, 665 square miles)

1909	370-574	-	-	-	-	-	-	37,600	825	3,275	4.92	75.19	2,371,000
1910	370-574	37,600	819	3,050	4.59	62.31	2,210,000	18,600	819	2,560	3.85	52.26	1,852,000
1911	312-589	10,700	798	2,240	3.37	45.75	1,620,000	8,410	798	2,100	3.16	42.89	1,529,000
1912	332-685	19,300	806	2,720	4.09	55.67	1,980,000	19,300	902	2,841	4.27	58.12	2,065,000
1913	362-682	13,200	902	2,750	4.14	56.20	2,000,000	13,200	930	2,590	3.89	52.80	1,876,000
1914	394-130	11,400	766	2,330	3.50	47.51	1,690,000	11,400	766	2,304	3.46	46.97	1,668,000
1915	414-127	5,440	705	1,860	2.80	38.01	1,350,000	18,800	705	2,252	3.39	46.02	1,631,000
1916	444-133	18,800	705	3,690	5.55	75.54	2,680,000	15,700	950	3,343	5.03	68.47	2,427,000
1917	464-105	8,060	950	2,880	4.33	58.78	2,080,000	40,500	910	3,455	5.20	70.59	2,507,000
1918	484-95	40,500	759	3,230	4.86	65.97	2,339,000	16,500	759	2,622	3.94	53.48	1,898,000
1919	514-139	18,900	759	2,700	4.06	55.11	1,960,000	26,500	786	3,038	4.57	62.03	2,199,000
1920	514-139	26,500	795	2,450	3.68	50.09	1,780,000	29,900	795	2,640	3.97	54.04	1,916,000
1921	534-126	29,900	900	3,830	5.76	78.19	2,770,000	31,700	900	3,784	5.69	77.24	2,739,000
1922	554-126	31,700	818	2,630	3.95	53.62	1,900,000	15,000	760	2,137	3.21	43.57	1,548,000
1923	574-125	49,700	760	2,860	4.30	58.37	2,070,000	49,700	880	2,986	4.49	60.95	2,164,000
1924	594-132	12,200	635	2,020	3.04	41.24	1,460,000	17,100	635	2,183	3.28	44.68	1,585,000
1925	614-120	17,600	740	2,870	4.32	58.60	2,080,000	17,600	708	2,494	3.75	50.87	1,806,000
1926	634-140	17,200	636	1,660	2.50	33.90	1,200,000	17,500	636	1,965	2.95	40.11	1,423,000
1927	654-81	17,500	835	2,830	4.26	57.84	2,050,000	24,700	835	3,093	4.65	63.15	2,239,000
1928	674-84	24,700	760	2,920	4.39	59.83	2,120,000	18,600	760	2,373	3.57	48.58	1,723,000
1929	694-92	9,250	720	2,110	3.17	43.00	1,520,000	12,100	654	2,122	3.19	43.33	1,537,000
1930	709-95	12,100	587	1,860	2.80	37.86	1,340,000	7,950	587	1,718	2.58	35.08	1,245,000
1931	724-95	37,900	-	1,850	2.78	37.70	1,340,000	37,900	-	2,002	3.01	40.89	1,448,000
1932	739-94	19,000	590	2,540	3.82	51.94	1,840,000	19,000	674	2,790	4.20	57.12	2,026,000
1933	754-90	17,000	674	2,910	4.38	59.39	2,110,000	34,800	865	3,253	4.89	66.35	2,355,000
1934	769-98	34,800	616	2,609	3.92	53.20	1,889,000	17,100	616	2,375	3.57	48.47	1,719,000
1935	794-106	12,100	646	2,535	3.81	51.73	1,835,000	5,070	706	2,056	3.09	41.95	1,489,000
1936	814-122	20,500	710	2,420	3.64	49.49	1,757,000	20,500	659	2,377	3.57	48.61	1,726,000
1937	834-112	20,100	659	2,395	3.60	48.88	1,734,000	24,300	825	3,090	4.65	63.08	2,237,000
1938	864-122	24,300	795	3,141	4.72	64.10	2,274,000	16,700	795	2,667	4.01	54.43	1,931,000
1939	884-122	10,400	720	2,153	3.24	43.95	1,559,000	-	-	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Willamette River Basin--Continued

Oak Grove Fork at Timothy Meadows, Oreg.
(Drainage area, 54 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1914	394-131	316	132	172	3.19	43.30	124,000	316	-	168	3.11	42.22	121,500
1915	414-129	237	-	145	2.69	36.52	105,000	366	-	147	2.72	36.92	106,100
1916	444-135	556	100	225	4.17	56.76	164,000	-	-	-	-	-	-
1921	534-128	670	115	232	4.30	58.37	168,000	820	121	250	4.63	62.85	181,100
1922	554-128	820	121	208	3.85	52.26	151,000	496	127	186	3.44	46.70	134,900
1923	574-127	922	127	205	3.80	51.58	149,000	922	116	205	3.80	51.58	148,200
1924	594-133	252	103	145	2.69	36.62	105,000	314	100	143	2.65	36.12	104,000
1925	614-122	618	100	190	3.52	47.78	138,000	618	109	188	3.48	47.30	136,300
1926	634-142	310	95	137	2.54	34.37	98,900	378	90	139	2.57	35.01	100,700
1927	654-82	399	90	174	3.22	43.83	126,000	624	122	193	3.57	48.59	140,000
1928	674-85	624	122	197	3.65	49.67	143,000	358	105	176	3.26	44.28	127,500
1929	694-93	-	-	153	2.83	38.36	111,000	-	-	-	-	-	-

Oak Grove Fork above power-plant intake, Oreg.*

1910	362-686	2,670	375	600	4.58	62.17	434,000	1,580	358	562	4.29	58.23	407,100
1911	362-686	1,270	350	489	3.73	50.63	354,000	-	-	-	-	-	-
1913	362-686	-	-	567	4.33	58.78	410,000	-	-	556	4.24	57.56	402,200
1914	394-132	1,010	354	497	3.79	51.45	360,000	1,010	350	486	3.71	50.36	352,000
1915	414-130	839	347	425	3.24	43.98	308,000	1,410	340	455	3.47	47.10	329,400
1916	444-137	-	340	687	5.24	71.32	498,000	-	-	-	-	-	-
1921	534-130	2,050	314	670	5.11	69.44	485,000	2,280	360	714	5.45	74.01	517,100
1922	554-130	2,280	346	551	4.21	57.16	399,000	1,320	324	485	3.70	50.29	351,400
1923	574-129	4,360	324	591	4.51	61.27	428,000	4,360	340	598	4.61	62.34	432,700
1924	594-135	905	314	427	3.39	46.16	310,000	1,160	301	439	3.48	47.40	318,400
1925	614-123	1,900	301	556	4.41	59.81	402,000	1,900	312	532	4.22	57.29	384,900
1926	634-144	1,220	286	403	3.20	43.41	292,000	1,420	286	419	3.33	45.16	303,500
1927	654-83	1,420	286	510	4.05	54.95	370,000	1,860	344	557	4.42	59.95	403,200
1928	674-86	1,860	333	558	4.43	60.32	405,000	1,430	326	495	3.93	53.47	359,300
1929	694-94	1,110	311	439	3.48	47.34	318,000	1,110	271	433	3.44	46.70	314,000
1930	709-96	898	263	382	3.03	41.16	277,000	898	252	366	2.90	39.41	264,900
1931	724-96	2,540	252	365	2.90	39.37	264,000	2,540	236	365	2.90	39.30	264,000
1932	739-95	1,420	236	437	3.47	47.24	318,000	1,420	264	472	3.75	50.94	342,500
1933	754-91	1,660	266	485	3.85	52.20	351,000	2,730	306	524	4.16	56.46	379,600
1934	769-99	2,730	277	496	3.94	53.42	359,100	1,860	271	463	3.67	49.83	334,900
1935	794-107	1,190	271	457	3.63	49.26	330,900	894	282	426	3.28	45.85	308,100
1936	814-123	1,460	282	456	3.62	49.29	331,300	1,460	272	455	3.61	49.18	330,400
1937	834-113	1,530	257	433	3.44	46.68	313,800	1,870	257	479	3.80	51.56	346,600
1938	864-123	1,870	291	532	4.22	57.29	384,900	1,440	315	508	4.03	54.78	368,100
1939	884-123	859	307	442	3.51	47.65	320,200	-	-	-	-	-	-

*At two sites above power-plant intake; drainage areas, 1910-23, 131 square miles, and 1924-39, 126 square miles.

LEWIS RIVER BASIN

Lewis River near Cougar, Wash.
(Drainage area, 483 square miles)

1925	614-125	21,000	656	3,130	6.48	88.12	2,270,000	21,000	572	2,750	5.69	77.36	1,990,000
1926	634-145	10,800	542	1,920	3.98	53.94	1,390,000	11,800	542	2,290	4.74	64.43	1,660,000
1927	654-85	12,200	806	3,110	6.44	87.26	2,250,000	24,900	844	3,330	6.89	93.52	2,410,000
1928	674-88	24,900	656	3,280	6.79	92.42	2,380,000	12,300	656	2,720	5.63	76.54	1,970,000
1929	694-96	7,200	598	2,120	4.39	59.44	1,530,000	7,450	490	1,900	3.93	53.46	1,380,000
1930	709-98	9,460	490	1,870	3.87	52.57	1,350,000	9,460	550	1,820	3.77	51.10	1,310,000
1931	724-98	16,100	550	2,030	4.20	57.18	1,470,000	16,100	464	2,340	4.84	65.91	1,700,000
1932	739-97	13,100	464	3,210	6.65	90.49	2,330,000	13,100	708	3,550	7.35	100.14	2,580,000
1933	754-93	15,300	708	3,580	7.41	100.57	2,590,000	45,000	1,020	4,340	8.99	122.05	3,140,000
1934	769-101	45,000	625	3,741	7.75	105.14	2,708,000	24,200	577	3,264	6.76	91.75	2,363,000
1935	794-108	19,200	577	3,310	6.85	93.01	2,396,000	7,400	614	2,444	5.06	68.67	1,770,000
1936	814-124	10,600	614	2,530	5.24	71.26	1,837,000	12,500	550	2,561	5.30	72.14	1,859,000
1937	834-114	17,200	550	2,436	5.04	68.55	1,763,000	22,200	614	3,125	6.47	87.96	2,262,000
1938	864-124	22,200	614	3,147	6.52	88.45	2,278,000	15,900	622	2,607	5.40	73.26	1,887,000
1939	884-124	9,120	573	2,228	4.61	62.61	1,613,000	-	-	-	-	-	-

Lewis River near Amboy, Wash.
(Drainage area, 665 square miles)

1912	394-134	22,300	840	3,760	5.65	76.94	2,730,000	22,300	990	4,180	6.29	85.53	3,030,000
1913	394-134	21,100	990	4,530	6.81	92.42	3,280,000	15,500	1,350	4,270	6.42	87.26	3,090,000
1914	394-134	34,100	910	4,440	6.68	90.59	3,210,000	34,100	910	4,460	6.71	91.08	3,230,000
1915	414-132	15,200	686	3,120	4.69	63.60	2,260,000	23,900	686	3,410	5.13	69.58	2,470,000
1916	444-139	23,900	735	5,550	8.35	113.74	4,030,000	23,900	840	4,940	7.43	101.30	3,590,000
1917	464-108	11,100	840	3,840	5.77	78.42	2,780,000	52,500	735	4,730	7.11	96.57	3,420,000
1918	484-99	52,500	730	4,460	6.71	91.09	3,230,000	27,900	730	3,900	5.86	79.76	2,830,000
1919	514-146	34,600	800	4,420	6.65	90.14	3,200,000	34,600	1,020	4,400	6.62	89.77	3,190,000
1920	514-146	19,900	920	3,690	5.55	75.57	2,680,000	38,600	920	4,510	6.78	92.30	3,280,000
1921	534-132	38,600	880	5,490	8.26	112.06	3,980,000	32,000	880	5,210	7.83	106.30	3,770,000
1922	554-132	32,000	960	4,110	6.18	83.88	2,980,000	29,600	960	3,440	5.17	70.11	2,490,000
1923	574-131	47,000	780	4,000	6.02	81.56	2,890,000	47,000	780	3,830	5.76	78.28	2,780,000
1924	594-138	23,900	660	2,870	4.32	58.59	2,080,000	23,900	660	3,430	5.16	70.19	2,490,000
1925	614-127	35,600	822	4,510	6.78	92.05	3,270,000	35,600	750	3,960	5.95	80.79	2,870,000
1926	634-147	19,900	720	2,830	4.26	57.79	2,050,000	19,900	720	3,410	5.13	69.50	2,470,000
1927	654-86	21,800	1,020	4,520	6.80	92.33	3,280,000	47,000	1,020	4,800	7.22	98.03	3,480,000
1928	674-89	47,000	754	4,770	7.17	97.57	3,460,000	21,800	754	4,000	6.02	81.92	2,910,000
1929	694-97	11,900	720	3,130	4.71	63.94	2,270,000	14,200	720	2,790	4.20	56.93	2,020,000
1930	709-99	15,000	690	2,850	4.29	58.19	2,060,000	15,000	690	2,780	4.18	56.82	2,010,000

Summary of yearly discharge, in second-feet, at stations in Lewis River Basin--Continued

Lewis River at (near) Ariel, Wash.
(Drainage area, 733 square miles)
Water year ending Sept. 30

Year	W.S.P. (no. and page)	Observed				Change in contents in Lake Merwin Reservoir (acre-feet)	Adjusted for change in reservoir contents			
		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	
1924	594-140	27,500	760	3,210	2,330,000	0	2,330,000	3,210	4.38	59.46
1925	614-128	38,400	860	5,170	3,740,000	0	3,740,000	5,170	7.05	95.83
1926	634-148	25,500	794	3,390	2,450,000	0	2,450,000	3,390	4.62	62.73
1927	654-87	23,000	1,050	5,010	3,630,000	0	3,630,000	5,010	6.83	92.76
1928	674-90	51,600	770	5,500	3,990,000	0	3,990,000	5,500	7.50	102.17
1929	694-98	14,100	740	3,530	2,560,000	0	2,560,000	3,530	4.82	65.31
1930	709-100	18,700	715	3,150	2,290,000	0	2,290,000	3,150	4.30	58.43
1931	724-100	30,200	1	2,840	2,060,000	+346,000	2,400,000	3,320	4.53	61.43
1932	739-98	36,400	597	5,390	3,910,000	-23,900	3,890,000	5,360	7.31	99.48
1933	754-94	30,300	555	5,910	4,280,000	+89,600	4,370,000	6,040	8.24	111.64
1934	769-102	114,000	333	6,903	4,998,000	-177,000	4,822,000	6,660	9.09	123.28
1935	794-109	32,400	266	5,012	3,629,000	+58,400	3,687,000	5,093	6.95	94.31
1936	814-125	26,100	670	4,053	2,942,000	-600	2,941,000	4,052	5.53	75.24
1937	834-115	34,200	515	4,048	2,931,000	+18,200	2,949,000	4,073	5.56	75.51
1938	864-125	51,400	431	5,345	3,870,000	+22,830	3,893,000	5,377	7.34	99.58
1939	884-125	19,200	705	3,833	2,775,000	-10,500	2,765,000	3,919	5.21	70.71
Calendar year										
1924	594-140	27,500	760	3,890	2,830,000	0	2,830,000	3,890	5.31	72.36
1925	614-128	38,400	810	4,620	3,340,000	0	3,340,000	4,620	6.30	85.41
1926	634-148	25,500	794	3,970	2,880,000	0	2,880,000	3,970	5.42	73.60
1927	654-87	51,600	1,050	5,370	3,890,000	0	3,890,000	5,370	7.33	99.43
1928	674-90	26,500	770	4,540	3,300,000	0	3,300,000	4,540	6.19	84.41
1929	694-98	16,400	740	3,130	2,270,000	0	2,270,000	3,130	4.27	57.91
1930	709-100	18,700	715	3,060	2,220,000	0	2,220,000	3,060	4.17	56.61
1931	724-100	30,200	1	3,440	2,490,000	+389,000	2,880,000	3,970	5.42	73.59
1932	739-98	36,400	597	5,910	4,290,000	+11,700	4,300,000	5,930	8.09	110.03
1933	754-94	114,000	555	7,670	5,550,000	+400	5,550,000	7,670	10.5	141.97
1934	769-102	41,100	333	5,405	3,914,000	+1,300	3,915,000	5,407	7.38	100.10
1935	794-109	16,200	266	3,879	2,808,000	-178,000	2,630,000	3,633	4.96	67.27
1936	814-125	26,100	515	3,881	2,817,000	+124,300	2,941,000	4,052	5.53	75.25
1937	834-115	51,400	910	5,439	3,938,000	+55,930	3,994,000	5,516	7.53	102.29
1938	864-125	29,700	431	4,309	3,120,000	0	3,120,000	4,309	5.88	79.76

Canyon Creek near Amboy, Wash.
(Drainage area, 62 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off		Maximum day	Minimum day	Mean	Per square mile	Run-off	
						Inches	Acre-feet					Inches	Acre-feet
1923	754-98	8,000	19	493	7.95	107.88	357,000	7,430	19	446	7.19	97.48	323,000
1924	754-98	4,350	19	295	4.76	64.84	214,000	3,360	25	360	6.13	83.39	276,000
1925	754-98	4,570	20	517	8.34	113.12	374,000	4,570	17	422	6.81	92.40	306,000
1926	754-98	3,690	17	303	4.89	66.29	219,000	3,690	23	366	5.90	80.19	265,000
1927	754-98	3,580	33	457	7.37	100.14	331,000	6,860	33	489	7.89	107.20	354,000
1928	754-98	6,860	23	465	7.50	102.13	338,000	3,840	23	382	6.16	83.99	278,000
1929	754-98	2,200	24	324	5.23	70.82	234,000	2,100	25	266	4.29	58.18	192,000
1930	754-98	2,500	24	274	4.42	59.91	198,000	2,500	24	271	4.37	59.34	196,000
1931	754-98	7,290	24	289	4.66	63.14	209,000	7,290	26	383	6.18	83.79	277,000
1932	754-98	4,540	22	512	8.26	112.35	371,000	4,540	19	551	8.89	102.94	400,000
1933	754-98	-	19	578	9.32	126.68	419,000	9,280	45	726	11.7	159.22	526,000
*1934	769-104	9,280	12	587	9.47	128.58	424,900	-	12	-	-	-	-

*Calendar year incomplete.

East Fork of Lewis River near Heisson, Wash.
(Drainage area, 124 square miles)

1930	709-109	4,540	46	505	4.07	55.26	365,000	3,710	50	499	4.02	54.68	361,000
1931	724-108	12,300	50	515	4.15	56.39	373,000	12,300	50	671	5.41	73.45	486,000
1932	737-102	7,350	44	858	6.92	94.07	622,000	7,350	42	923	7.44	101.30	670,000
1933	754-107	6,610	42	986	7.95	107.93	713,000	13,500	53	1,160	9.35	127.19	840,000
1934	769-105	13,500	35	876	7.06	95.87	633,900	6,940	35	756	6.10	82.75	547,200
1935	794-110	6,940	37	780	6.29	85.42	564,700	3,710	35	495	3.99	54.23	358,200
1936	814-126	5,940	35	628	5.06	68.91	455,700	6,300	47	664	5.35	72.80	481,800
1937	834-116	6,350	47	668	5.39	73.09	483,700	10,600	64	943	7.60	103.17	682,300
1938	864-126	10,600	37	883	7.12	96.55	639,000	5,830	37	683	5.51	74.66	494,400
1939	884-127	6,340	39	648	5.23	70.98	468,800	-	-	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in KALAMA RIVER BASIN

Kalama River near Kalama, Wash.
(Drainage area, 184 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1917	464-109	4,400	246	1,080	5.87	79.68	784,000	10,700	205	1,260	6.85	92.98	912,000
1918	484-101	10,700	175	1,190	6.47	87.82	858,000	9,100	175	1,100	5.98	81.18	798,000
1919	514-148	9,100	178	1,200	6.52	88.50	867,000	9,100	228	1,150	6.25	84.84	834,000
1920	514-148	5,770	166	920	5.00	68.08	668,000	9,500	166	1,200	6.52	88.48	869,000
1921	534-133	9,900	265	1,620	8.80	119.78	1,180,000	9,900	227	1,530	8.32	112.93	1,110,000
1922	554-136	6,360	227	1,170	6.36	85.98	845,000	8,370	271	968	5.26	71.38	701,000
1923	574-136	9,700	195	983	5.34	72.55	712,000	9,700	190	899	4.89	66.34	651,000
1924	594-144	6,660	158	677	3.68	49.98	491,000	6,660	158	941	5.11	69.59	683,000
1925	614-133	8,640	191	1,290	7.01	94.79	931,000	8,640	173	1,090	5.92	80.59	791,000
1926	634-153	5,980	173	820	4.46	60.45	593,000	5,560	207	963	5.23	71.00	697,000
1927	654-91	6,280	246	1,230	6.68	90.91	891,000	10,300	246	1,260	6.85	92.81	911,000
1928	674-98	10,300	197	1,200	6.52	88.78	873,000	5,770	197	1,020	5.54	75.11	738,000
1929	694-107	4,270	187	789	4.29	58.24	571,000	4,930	156	705	3.83	52.02	510,000
1930	709-110	4,930	156	714	3.88	52.72	517,000	4,400	165	691	3.76	51.00	500,000
1931	724-109	8,550	170	768	4.17	56.62	556,000	-	-	-	-	-	-

COWLITZ RIVER BASIN

Cowlitz River at Packwood (Lewis), Wash.
(Drainage area, 287 square miles)

1912	362-697	5,520	285	1,410	4.91	66.83	1,020,000	5,520	355	1,390	4.84	65.88	1,010,000
1913	362-697	6,520	355	1,540	5.37	72.89	1,110,000	6,520	378	1,540	5.37	72.89	1,120,000
1914	492-339	12,500	378	1,390	4.84	65.70	1,010,000	13,400	390	1,570	5.47	74.25	1,140,000
1915	414-134	13,400	375	1,150	4.01	54.44	829,000	7,190	360	1,030	3.59	48.73	743,000
1916	444-150	11,600	360	2,210	7.70	104.81	1,600,000	11,600	323	2,030	7.07	96.23	1,470,000
1917	464-112	8,440	323	1,650	5.75	78.05	1,190,000	8,440	390	2,180	7.60	103.16	1,580,000
1918	484-102	-	332	1,950	6.79	92.17	1,420,000	-	295	1,600	5.57	75.61	1,160,000
1919	514-151	16,000	275	1,590	5.54	75.20	1,150,000	16,000	184	1,590	5.54	75.20	1,150,000
†1929	709-111	-	-	-	-	-	-	-	164	-	-	-	-
1930	709-111	4,690	164	1,150	4.01	54.25	830,000	4,690	225	1,180	4.11	55.92	856,000
1931	724-110	6,410	225	1,200	4.18	56.49	866,000	6,410	208	1,290	4.49	61.11	936,000
1932	739-103	12,400	208	1,700	5.92	80.66	1,240,000	13,000	309	1,930	6.72	91.66	1,400,000
1933	754-108	13,000	309	2,030	7.07	96.07	1,470,000	24,200	320	2,450	8.57	116.10	1,780,000
1934	769-106	24,200	240	2,331	8.12	110.30	1,688,000	17,100	240	2,008	7.00	95.03	1,454,000
1935	794-111	17,100	241	1,862	6.49	88.01	1,348,000	7,090	280	1,414	4.93	66.77	1,023,000
1936	814-127	8,110	280	1,518	5.29	71.99	1,102,000	8,110	274	1,538	5.36	72.93	1,116,000
1937	834-117	8,280	258	1,398	4.87	66.20	1,012,000	8,280	258	1,703	5.93	80.62	1,233,000
1938	864-127	12,600	313	1,625	5.66	76.88	1,176,000	12,600	294	1,421	4.95	67.22	1,029,000
1939	884-128	9,040	294	1,423	4.96	67.36	1,030,000	-	-	-	-	-	-

†Calendar year incomplete.

Cowlitz River at Mossy Rock, Wash.
(Drainage area, 1,170 square miles)

*1913	394-139	-	-	6,050	5.17	70.18	4,380,000	-	-	5,690	4.86	65.97	4,120,000
1914	394-139	30,300	975	4,480	3.83	51.96	3,240,000	30,300	975	4,710	4.03	54.69	3,410,000
1915	414-136	17,900	862	3,050	2.61	35.40	2,210,000	20,900	825	3,070	2.62	35.67	2,220,000
1916	444-152	23,000	825	6,730	5.75	78.33	4,890,000	23,000	975	6,190	5.29	71.92	4,490,000
1917	464-114	17,400	975	5,170	4.42	59.94	3,740,000	-	-	-	-	-	-
1927	654-92	21,700	1,350	5,450	4.66	63.21	3,940,000	29,600	1,580	6,060	5.18	70.31	4,390,000
1928	674-99	29,600	950	5,940	5.08	69.11	4,310,000	26,700	950	4,650	3.97	54.03	3,370,000
1929	694-108	17,300	870	3,980	3.40	46.20	2,880,000	17,300	630	3,750	3.19	43.30	2,700,000
1930	709-112	19,100	630	3,550	3.03	41.13	2,570,000	19,100	740	3,540	3.03	41.06	2,560,000
1931	724-111	28,000	740	3,460	2.96	40.17	2,510,000	28,000	760	3,790	3.24	43.93	2,740,000
*1932	739-104	29,200	-	5,310	4.54	61.78	3,860,000	-	-	6,110	5.22	71.07	4,440,000
*1933	769-107	-	-	6,108	5.22	70.89	4,423,000	71,300	1,670	7,711	6.59	89.50	5,582,000
1934	769-107	71,300	857	7,204	6.16	83.60	5,216,000	40,800	804	5,868	5.02	68.07	4,248,000
1935	794-112	30,000	804	5,513	4.71	63.96	3,991,000	-	-	-	-	-	-

*Daily discharge for incomplete year published in water-supply paper; monthly discharge for periods of missing record estimated and monthly and yearly figures published in Washington State Water-Supply Bulletin No. 5.

Cowlitz River at (near) Castle Rock, Wash.
(Drainage area, 2,210 square miles)

1927	654-93	-	-	-	-	-	-	71,300	2,140	10,400	4.71	64.08	7,550,000
1928	674-100	71,300	1,620	10,100	4.57	61.99	7,300,000	42,400	1,620	7,650	3.46	47.16	5,560,000
1929	694-109	21,100	1,390	6,480	2.93	39.84	4,690,000	21,100	1,230	6,220	2.81	38.20	4,500,000
1930	709-113	29,500	1,230	5,980	2.71	36.76	4,340,000	29,500	1,280	5,900	2.67	36.25	4,270,000
1931	724-112	63,200	1,280	6,300	2.85	38.78	4,570,000	63,200	1,270	7,430	3.36	45.66	5,380,000
1932	739-105	49,200	1,270	9,710	4.39	59.77	7,050,000	52,200	1,340	11,300	5.11	69.59	8,210,000
1933	754-110	52,200	1,430	11,500	5.20	70.41	8,300,000	134,000	2,640	14,100	6.38	86.42	10,200,000
1934	769-110	134,000	1,290	12,680	5.74	77.86	9,182,000	71,700	1,260	10,350	4.68	63.52	7,490,000
1935	794-114	58,100	1,260	10,140	4.59	62.24	7,339,000	42,900	1,050	7,114	3.22	43.70	5,150,000
1936	814-129	39,800	1,050	8,075	3.65	49.72	5,862,000	39,800	1,110	8,290	3.75	51.04	6,018,000
1937	834-119	47,200	1,110	7,726	3.50	47.45	5,593,000	60,500	1,520	10,130	4.58	62.21	7,331,000
1938	864-129	60,500	1,520	9,851	4.46	60.52	7,131,000	40,700	1,540	8,148	3.69	50.04	5,899,000
1939	884-131	39,800	1,540	7,728	3.50	47.46	5,595,000	-	-	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Cowlitz River Basin--Continued

Clear Fork of Cowlitz River near Packwood (Lewis), Wash.
(Drainage area, 56 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off		Maximum day	Minimum day	Mean	Per square mile	Run-off	
						Inches	Acre-feet					Inches	Acre-feet
1908	312-607	1,480	53	218	3.89	52.95	158,000	1,480	53	206	3.68	50.09	149,000
1909	312-607	860	49	165	2.95	40.04	120,000	2,530	49	221	3.95	53.62	160,000
1910	312-607	2,530	49	307	5.48	74.39	222,000	1,350	66	295	5.27	71.54	213,000
1911	312-607	1,350	61	228	4.07	55.24	165,000	1,700	56	208	3.71	50.36	150,000
1912	332-694	1,700	56	257	4.59	62.47	187,000	900	77	257	4.59	62.48	187,000
1931	724-113	803	42	171	3.05	41.36	124,000	803	-	186	3.32	45.16	135,000
1932	739-106	-	-	257	4.59	62.35	186,000	1,970	-	302	5.39	73.34	219,000
1933	754-111	1,970	59	318	5.68	77.06	230,000	5,700	76	407	7.27	98.66	295,000
1934	769-111	5,700	41	388	6.93	94.14	281,100	2,280	34	306	5.46	74.01	221,200
1935	814-130	2,110	34	281	5.02	68.17	203,700	890	33	211	3.77	51.07	152,600
1936	814-130	1,020	33	216	3.86	52.55	157,000	1,020	30	221	3.95	53.80	160,800
1937	834-120	1,200	30	216	3.86	52.30	156,200	1,200	50	268	4.79	65.07	194,300
1938	864-130	1,980	52	276	4.93	66.90	199,800	1,980	50	247	4.41	59.79	178,500
1939	884-132	948	50	222	3.96	53.87	161,000	-	-	-	-	-	-

Lake Creek near Packwood, Wash.
(published as Lake Creek at outlet of Packwood Lake, near Lewis, 1912-24)
(Drainage area, 18.8 square miles)

1912	394-145	324	40	107	5.69	77.45	77,600	324	45	103	5.48	74.59	74,500
1913	394-145	452	45	112	5.96	80.91	81,200	452	46	113	6.01	81.58	82,200
1914	394-145	229	46	93.0	4.95	67.19	67,300	247	46	97.4	5.18	70.32	70,500
1915	414-143	247	33	70.7	3.76	51.04	51,200	152	33	69.1	3.68	49.95	50,000
1916	444-155	562	36	124	6.60	89.84	89,700	562	33	116	6.17	83.98	84,400
1917	464-117	482	33	106	5.64	76.56	77,000	-	36	129	6.86	93.12	93,400
1918	484-104	-	29	124	6.60	89.59	89,600	403	29	109	5.80	78.73	78,800
1919	514-153	389	33	96.4	5.13	69.64	69,800	389	30	90.4	4.81	65.29	65,500
1920	514-153	248	30	88.0	4.68	63.70	63,900	302	38	97.9	5.21	70.89	71,100
1921	534-135	430	38	136	7.23	97.95	98,200	609	34	145	7.71	104.87	105,000
1922	554-138	609	33	101	5.37	72.46	72,700	368	32	79.5	4.23	57.37	57,600
1923	574-138	521	32	107	5.69	77.69	77,800	521	33	110	5.85	79.65	79,700
1924	594-146	-	33	84.8	4.51	61.42	61,600	-	-	-	-	-	-
1931	739-107	238	30	69.5	3.70	50.21	50,400	238	-	71.0	3.78	51.24	51,400
1932	739-107	354	-	97.5	5.19	70.71	70,800	770	38	121	6.44	87.43	87,600
1933	754-112	770	44	125	6.65	90.40	90,700	1,300	-	146	7.77	105.30	106,000
1934	769-112	1,300	33	134	7.13	96.81	97,030	590	26	106	5.64	76.35	76,510
1935	794-116	450	26	98.8	5.26	71.35	71,530	317	23	79.9	4.25	57.67	57,810
1936	814-132	493	23	86.8	4.62	62.87	63,000	493	20	88.2	4.69	63.86	63,990
1937	834-121	511	20	86.5	4.60	62.38	62,600	511	25	101	5.37	72.63	72,860
1938	864-131	379	27	99.2	5.28	71.70	71,840	379	27	91.4	4.86	66.04	66,180
1939	884-133	352	27	86.3	4.59	62.37	62,470	-	-	-	-	-	-

Johnson Creek at mouth, near Lewis, Wash.
(Drainage area, about 30 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1908	312-621	1,510	37	198	144,000	1,510	37	188	136,000
1909	312-621	770	37	151	110,000	1,830	37	200	145,000
1910	312-621	1,830	33	243	176,000	1,310	33	228	165,000
1911	312-621	1,030	44	183	133,000	730	36	163	118,000
1912	332-700	810	36	210	153,000	810	51	208	151,000
1913	362-705	1,120	51	243	176,000	1,120	50	241	175,000
1919	514-156	1,980	32	183	132,000	1,980	32	178	129,000
1920	514-156	597	32	147	106,000	1,560	44	174	126,000
1921	534-137	1,560	45	247	179,000	2,800	32	270	196,000
1922	554-140	2,800	32	197	143,000	812	27	139	101,000
1923	574-140	2,540	27	225	163,000	2,540	31	234	170,000
1924	594-148	740	24	152	110,000	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Cowlitz River Basin--Continued

Cispus River near Randle, Wash.
(Drainage area, 323 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off		Maximum day	Minimum day	Mean	Per square mile	Run-off	
						Inches	Acre-feet					Inches	Acre-feet
1911	312-627	6,400	325	1,330	3.90	52.95	963,000	3,890	295	1,130	3.50	47.51	818,000
1930	709-114	4,620	242	930	2.88	39.05	672,000	4,620	261	897	2.78	37.69	649,000
1931	724-155	5,560	261	919	2.85	38.56	665,000	5,560	261	1,020	3.16	42.72	736,000
1932	739-109	4,940	261	1,360	4.21	57.34	986,000	6,440	296	1,580	4.89	66.56	1,150,000
1933	754-113	7,450	296	1,670	5.17	70.11	1,210,000	19,000	450	1,960	6.07	82.16	1,420,000
1934	794-117	19,000	250	1,797	5.56	75.42	1,301,000	10,400	226	1,526	4.72	64.11	1,105,000
1935	794-117	9,130	226	1,403	4.34	58.98	1,016,000	3,780	205	1,057	3.27	44.44	765,600
1936	814-133	5,600	205	1,230	3.81	51.87	892,600	5,600	235	1,265	3.92	53.34	918,200
1937	834-122	7,840	235	1,198	3.71	50.32	867,200	8,600	260	1,478	4.58	62.12	1,070,000
1938	864-132	8,600	339	1,494	4.63	62.78	1,082,000	6,710	309	1,288	3.99	54.12	932,200
1939	884-134	3,480	292	1,116	3.46	46.91	808,200	-	-	-	-	-	-

Toutle River near Silver Lake, Wash.
(published as Toutle River near Castle Rock, 1910-12; drainage area, 474 square miles)
(Drainage area, 472 square miles)

1910	292-586	35,600	330	2,600	5.49	74.47	1,880,000	35,600	330	2,320	4.89	66.47	1,680,000
1911	312-629	20,600	320	1,690	3.57	48.37	1,220,000	11,400	320	1,490	3.14	42.63	1,080,000
1920	514-158	-	299	1,710	3.62	49.28	1,240,000	13,700	299	2,100	4.45	60.61	1,530,000
1921	534-139	13,700	601	2,720	5.76	78.15	1,970,000	-	-	-	-	-	-
1923	574-142	-	334	1,990	4.22	57.40	1,440,000	-	334	1,910	4.05	55.01	1,380,000
1930	754-115	8,360	255	1,370	2.90	39.30	990,000	6,790	270	1,340	2.84	38.52	970,000
1931	754-115	15,000	275	1,410	2.99	40.44	1,020,000	15,000	295	1,710	3.62	49.20	1,240,000
1932	754-115	11,400	295	2,230	4.72	64.39	1,620,000	11,400	325	2,520	5.34	72.81	1,830,000
1933	754-115	10,800	325	2,620	5.55	75.36	1,900,000	31,000	539	3,240	6.86	93.31	2,350,000
1934	769-114	31,000	305	2,783	5.90	80.01	2,015,000	18,000	305	2,230	4.72	64.10	1,614,000
1935	794-119	15,200	315	2,201	4.66	63.33	1,594,000	10,400	342	1,537	3.26	44.24	1,113,000
1936	814-134	12,000	342	1,786	3.78	51.51	1,296,000	12,000	354	1,852	3.92	53.43	1,345,000
1937	834-123	11,400	355	1,726	3.66	49.66	1,250,000	17,100	439	2,245	4.76	64.55	1,625,000
1938	864-133	17,100	328	2,136	4.53	61.42	1,546,000	9,700	328	1,756	3.72	50.49	1,271,000
1939	884-135	13,100	313	1,675	3.55	48.15	1,212,000	-	-	-	-	-	-

YOUNGS RIVER BASIN

Youngs River near Astoria, Oreg.*

1928	674-101	3,600	5.8	190	6.33	86.48	138,000	-	5.8	138	4.60	62.64	100,100
1929	694-110	901	4.7	113	3.77	51.10	81,700	901	4.7	98.2	3.27	44.43	70,970
1930	709-117	714	5	102	3.40	46.22	73,900	714	5	110	3.67	49.92	79,830
1931	724-118	4,540	4	149	4.97	67.22	107,000	4,540	4	202	6.73	91.21	146,000
1932	739-112	2,620	5	216	7.20	98.01	157,000	2,620	5	224	7.47	101.49	162,500
1933	754-119	2,060	5	233	7.77	105.15	168,000	3,650	7	267	8.90	120.58	193,100
1934	769-115	3,650	5.9	214	6.93	94.13	154,700	1,970	5.9	190	5.94	80.82	138,000
1935	794-120	2,610	5.9	200	6.25	84.68	145,000	2,610	5.9	127	3.97	53.65	91,630
1936	814-135	2,400	7.5	155	4.84	65.79	112,200	2,400	6.9	153	4.78	65.23	111,200
1937	834-124	1,700	6.9	140	4.38	59.67	101,700	2,680	8.2	223	6.97	94.45	161,200
1938	864-134	2,680	3.7	203	6.34	85.87	146,700	1,250	3.7	140	4.38	59.45	101,500
1939	884-136	1,900	4	145	4.53	61.56	105,100	-	-	-	-	-	-

*At two sites near Astoria, Oreg.; drainage areas, August 1937 to December 1933, 30 square miles and January 1934 to September 1939, 32 square miles.

STREAMS BETWEEN COLUMBIA RIVER AND KLAMATH RIVER

NESTUCCA RIVER BASIN

Nestucca River near McMinnville, Oreg.
(Drainage area, 12 square miles)

1929	694-146	*220	1.2	31.0	2.58	35.06	22,400	203	1.0	26.7	2.22	30.17	19,310
1930	709-153	215	1.0	25.1	2.09	28.40	18,200	215	1.7	24.3	2.02	27.52	17,590
1931	724-157	†1,080	1.3	†34.0	†2.83	†38.41	†24,590	1,080	1.3	47.1	3.92	53.26	34,120
1932	739-115	533	1.7	55.5	4.62	62.97	40,300	654	1.6	60.6	5.05	68.70	43,910
1933	754-122	654	1.6	66.6	5.55	75.14	48,100	1,330	3.3	75.9	6.32	85.69	54,920
1934	769-118	†1,330	1.5	†54.0	†4.50	†61.20	†39,140	612	1.5	54.1	4.51	61.31	39,200
1935	794-123	612	1.5	61.5	5.12	69.58	44,550	449	1.5	35.6	2.97	40.31	25,810
1936	814-138	954	1.8	43.6	3.63	49.49	31,640	954	2.0	41.6	3.47	47.23	30,190
1937	834-127	562	2.0	37.9	3.16	42.91	27,460	1,180	3.1	61.5	5.12	69.51	44,500
1938	864-137	1,180	2.2	60.6	5.05	68.53	43,860	484	2.2	42.0	3.50	47.51	30,400
1939	884-139	545	1.7	33.3	2.78	37.64	24,110	-	-	-	-	-	-

*Estimated figure not previously published.
†Revised figure not previously published.

Summary of yearly discharge, in second-feet, at stations in SILETZ RIVER BASIN

Siletz River at Siletz, Oreg.*

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1906	370-592	-	-	-	-	-	-	21,700	132	1,989	9.75	132.35	1,440,000
1907	370-592	22,200	83	2,030	9.95	135.08	1,450,000	22,000	83	1,864	9.14	124.03	1,350,000
1908	370-592	29,000	113	1,970	9.66	131.45	1,430,000	29,000	98	1,608	7.88	107.29	1,167,000
1909	370-592	18,200	83	1,780	8.73	118.44	1,270,000	29,300	83	2,357	11.6	156.84	1,706,000
1910	370-592	29,300	70	2,400	11.8	159.70	1,720,000	21,600	70	2,066	10.1	137.47	1,496,000
1911	312-48	21,600	112	1,750	8.58	116.45	1,260,000	-	112	-	-	-	-
1925	614-189	-	-	-	-	-	-	14,400	53	1,616	7.92	107.49	1,170,000
1926	634-226	15,100	53	1,230	6.03	81.85	891,000	15,100	69	1,955	9.58	130.07	1,417,000
1927	654-134	14,100	88	2,230	10.9	148.10	1,610,000	30,700	88	2,045	10.0	136.10	1,480,000
1928	674-143	30,700	63	2,100	10.3	140.05	1,520,000	11,200	63	1,560	7.65	104.19	1,134,000
1929	694-145	8,900	67	1,250	6.13	83.08	904,000	9,160	51	1,081	5.30	71.88	782,600
1930	709-152	11,000	51	1,200	5.86	79.78	867,000	11,000	60	1,128	5.53	75.05	816,000
1931	724-156	20,000	60	988	4.84	65.69	715,000	20,000	86	1,438	7.05	95.77	1,042,000
1932	739-116	21,800	72	1,750	8.58	117.26	1,270,000	21,800	69	1,841	9.02	122.93	1,335,000
1933	754-123	19,800	69	2,160	10.6	143.88	1,570,000	28,700	100	2,368	11.6	157.43	1,715,000
1934	769-119	28,700	56	1,666	8.17	110.81	1,206,000	12,600	56	1,597	7.83	106.28	1,156,000
1935	814-139	12,600	52	1,592	7.80	106.05	1,153,000	8,860	52	962	4.72	64.07	696,400
1936	814-139	19,600	76	1,227	6.01	81.92	891,000	19,600	68	1,234	6.05	82.36	895,700
1937	834-128	16,100	68	1,318	6.46	87.84	954,500	30,100	85	1,998	9.79	133.10	1,447,000
1938	864-138	30,100	65	1,927	9.45	128.21	1,395,000	20,400	59	1,367	6.77	91.19	989,900
1939	884-140	15,000	59	1,116	5.52	74.98	807,800	-	-	-	-	-	-

*At two sites near Siletz, Oreg.; drainage areas, 1906-38, 204 square miles and 1939, 202 square miles.

UMPQUA RIVER BASIN

Umpqua River near Elkton, Oreg.
(Drainage area, 3,680 square miles)

1906	370-607	61,400	-	6,882	1.87	25.39	4,983,000	61,400	1,290	7,649	2.08	28.22	5,538,000
1907	370-607	-	1,290	9,808	2.67	36.18	7,101,000	-	1,290	10,570	2.87	38.98	7,650,000
1908	370-607	84,600	-	7,782	2.12	28.82	5,657,000	33,500	-	7,034	1.91	26.02	5,107,000
1909	370-307	93,000	990	8,366	2.27	30.86	6,057,000	136,000	990	9,923	2.70	36.60	7,184,000
1910	370-607	136,000	960	7,680	2.09	28.33	5,530,000	66,200	960	6,540	1.79	24.08	4,748,000
1911	312-43	66,200	960	6,320	1.72	23.35	4,360,000	61,900	980	5,550	1.51	20.48	4,016,000
1912	332-725	86,800	1,060	7,960	2.16	29.44	5,770,000	86,800	1,060	8,370	2.27	30.98	6,080,000
1913	362-737	46,300	1,150	7,200	1.96	26.57	5,220,000	46,300	1,140	6,750	1.83	24.89	4,891,000
1914	414-158	57,100	1,040	6,690	1.82	24.68	4,850,000	57,100	1,040	6,532	1.78	24.11	4,734,000
1915	414-158	29,100	950	4,790	1.30	17.70	3,470,000	29,100	950	5,908	1.61	21.83	4,282,000
1916	444-173	111,000	950	9,520	2.59	35.21	6,910,000	111,000	1,140	8,622	2.34	31.86	6,255,000
1917	464-136	38,700	1,140	8,550	2.32	31.55	6,180,000	38,700	1,070	8,606	2.34	31.80	6,226,000
1918	484-133	58,000	930	7,050	1.92	26.04	5,110,000	58,000	930	6,658	1.81	24.55	4,822,000
1919	514-193	76,000	960	8,870	2.41	32.75	6,420,000	76,000	1,200	10,380	2.82	38.31	7,512,000
1920	514-193	45,100	1,160	6,780	1.84	25.03	4,910,000	69,200	1,160	8,428	2.29	31.13	6,110,000
1921	534-164	69,200	1,120	12,100	3.29	44.67	8,770,000	64,800	1,120	10,490	2.85	38.70	7,601,000
1922	554-175	64,800	1,040	8,910	2.42	32.89	6,460,000	39,100	1,040	7,532	2.05	27.79	5,454,000
1923	574-184	93,500	1,040	6,440	1.75	23.74	4,650,000	93,500	1,040	6,533	1.79	24.10	4,723,000
1924	594-193	37,100	680	3,950	1.07	14.65	2,870,000	96,500	680	6,037	1.64	22.38	4,388,000
1925	614-181	96,500	830	9,600	2.61	35.41	6,960,000	69,700	1,080	7,047	1.91	25.97	5,104,000
1926	634-218	60,200	670	4,040	1.10	14.89	2,920,000	69,500	670	5,499	1.49	20.29	3,975,000
1927	654-128	157,000	920	8,720	2.37	32.13	6,300,000	157,000	1,050	8,237	2.24	30.37	5,956,000
1928	674-134	61,600	870	6,720	1.83	24.84	4,880,000	61,600	870	5,543	1.51	20.47	4,022,000
1929	694-136	43,600	790	4,270	1.16	15.76	3,100,000	57,600	788	4,865	1.32	17.92	3,522,000
1930	709-144	57,600	756	4,420	1.20	16.29	3,190,000	28,100	756	3,834	1.04	14.16	2,776,000
1931	724-147	43,600	663	3,150	.856	11.63	2,280,000	43,600	663	4,055	1.10	14.97	2,939,000
1932	739-119	92,000	706	7,530	2.05	27.85	5,460,000	92,000	850	7,388	2.01	27.31	5,358,000
1933	754-126	84,600	850	7,590	2.06	28.00	5,500,000	84,600	1,010	7,099	1.93	26.18	5,140,000
1934	769-122	45,300	754	3,287	.893	12.12	2,380,000	62,800	754	5,072	1.38	18.70	3,672,000
1935	794-127	62,800	786	7,432	2.02	27.40	5,380,000	33,100	904	5,564	1.51	20.52	4,028,000
1936	814-143	87,000	895	6,766	1.84	25.04	4,912,000	87,000	762	6,366	1.73	23.55	4,622,000
1937	834-131	84,500	762	5,918	1.61	21.81	4,284,000	84,500	931	8,070	2.19	29.76	5,842,000
1938	864-141	104,000	940	10,650	2.89	39.30	7,710,000	104,000	940	9,310	2.53	34.35	6,740,000
1939	884-143	52,800	834	5,662	1.54	20.89	4,099,000	-	-	-	-	-	-

North Umpqua River below Lake Creek, Oreg.
(Drainage area, 175 square miles)

1928	674-136	656	312	413	2.36	32.16	300,000	656	282	398	2.27	31.01	289,200
1929	694-138	574	270	344	1.97	26.69	249,200	*600	270	340	1.94	26.31	245,700
1930	709-146	*600	271	338	1.93	26.19	244,000	*500	260	334	1.91	25.89	241,600
1931	724-149	410	237	295	1.69	22.91	214,000	410	216	279	1.59	21.63	201,900
1932	739-121	717	216	341	1.95	26.56	248,000	717	244	362	2.07	28.15	263,000
1933	754-128	1,100	267	406	2.32	31.50	294,000	1,100	300	418	2.39	32.37	302,400
1934	769-124	463	279	348	1.99	27.00	252,100	463	271	336	1.92	26.06	243,300
1935	794-129	647	271	368	2.10	28.57	266,600	647	287	366	2.09	28.41	264,900
1936	814-145	690	287	369	2.11	28.69	267,600	690	266	368	2.10	28.67	267,500
1937	834-133	539	266	337	1.93	26.12	243,900	539	273	349	1.99	27.07	252,900
1938	864-143	792	296	430	2.46	33.37	311,600	792	324	454	2.48	33.63	314,000
1939	884-145	533	289	372	2.13	28.85	269,200	-	-	-	-	-	-

*Estimated figure not previously published.

Summary of yearly discharge, in second-feet, at stations in Umpqua River Basin--Continued

North Umpqua River at Toketee Falls, Oreg.
(Drainage area, 337 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off		Maximum day	Minimum day	Mean	Per square mile	Run-off	
						Inches	Acre-feet					Inches	Acre-feet
1926	634-221	1,530	530	746	2.21	30.06	540,000	1,760	530	750	2.23	30.21	543,000
1927	654-130	*3,000	530	975	2.89	39.36	707,000	*3,000	640	1,027	3.05	41.35	742,900
1928	674-137	2,990	640	1,010	3.00	40.85	734,000	2,480	604	946	2.81	38.20	686,800
1929	694-139	1,780	570	765	2.27	30.80	554,000	2,480	560	770	2.28	31.04	557,600
1930	709-147	2,480	550	758	2.25	30.52	548,000	*1,800	540	726	2.15	29.23	525,200
1931	724-150	2,350	496	635	1.88	25.57	459,000	2,350	475	620	1.84	24.99	448,900
1932	739-122	3,260	475	902	2.68	36.43	655,000	3,260	535	951	2.82	38.40	689,900
1933	754-129	3,240	598	994	2.95	40.05	720,000	3,240	650	1,001	2.97	40.34	725,000
1934	769-125	2,010	560	769	2.28	31.00	556,700	2,170	560	788	2.34	31.77	570,700
1935	794-130	2,170	560	901	2.67	36.28	652,400	1,580	575	852	2.53	34.29	616,600
1936	814-146	1,940	575	873	2.59	35.26	633,900	1,940	545	869	2.58	35.10	631,000
1937	834-134	2,170	545	799	2.37	32.21	578,600	2,170	550	867	2.57	34.94	627,700
1938	864-144	2,330	600	1,051	3.12	42.32	760,600	2,330	645	1,015	3.01	40.89	735,000
1939	884-146	1,660	600	850	2.52	34.21	615,100	-	-	-	-	-	-

*Estimated figure not previously published.

North Umpqua River above Rock Creek, near Glide, Oreg.
(Drainage area, 886 square miles)

1925	614-184	27,400	730	3,120	3.52	47.88	2,260,000	24,700	818	2,565	2.90	39.30	1,858,000
1926	634-223	12,900	649	1,510	1.70	23.05	1,090,000	19,600	649	1,831	2.07	28.02	1,326,000
1927	654-131	42,400	710	2,950	3.33	45.09	2,130,000	42,400	-	3,008	3.40	46.05	2,175,000
1928	674-138	-	733	2,630	2.97	40.40	1,910,000	-	733	2,159	2.44	33.19	1,568,000
1929	694-140	12,900	657	1,670	1.88	25.63	1,210,000	16,200	637	1,815	2.05	27.77	1,313,000
1930	709-148	16,200	622	1,680	1.90	25.68	1,210,000	11,100	563	1,547	1.75	23.68	1,120,000
1931	724-151	18,200	556	1,380	1.56	21.21	1,000,000	18,200	524	1,491	1.68	22.85	1,080,000
1932	739-123	32,200	524	2,590	2.92	39.78	1,880,000	32,200	700	2,658	3.00	40.85	1,930,000
1933	754-130	13,300	700	2,680	3.02	41.06	1,940,000	13,300	770	2,587	2.92	39.62	1,873,000
1934	769-126	13,700	640	1,549	1.75	23.72	1,121,000	18,300	619	1,964	2.22	30.08	1,422,000
1935	794-131	18,300	619	2,522	2.85	38.61	1,826,000	8,170	696	2,061	2.33	31.55	1,492,000
1936	814-147	17,400	696	2,374	2.68	36.49	1,725,000	17,400	623	2,272	2.56	34.92	1,650,000
1937	834-135	22,100	600	2,091	2.36	32.01	1,514,000	22,100	600	2,621	2.96	40.13	1,897,000
1938	864-145	20,700	725	3,163	3.57	48.46	2,290,000	20,700	766	2,878	3.25	44.10	2,083,000
1939	884-147	11,800	673	2,128	2.40	32.60	1,541,000	-	-	-	-	-	-

North Umpqua River near Glide, Oreg.
(Drainage area, 1,210 square miles)

1916	444-177	37,000	750	3,980	3.29	44.77	2,890,000	37,000	890	3,565	2.95	40.16	2,592,000
1917	464-140	17,400	890	3,920	3.24	43.96	2,840,000	17,400	980	4,066	3.36	45.64	2,943,000
1918	484-135	29,700	850	3,270	2.69	36.57	2,360,000	-	-	-	-	-	-
1928	674-139	29,700	763	3,270	2.70	36.78	2,370,000	29,700	754	2,647	2.19	29.77	1,922,000
1929	694-141	21,100	683	2,210	1.83	24.80	1,600,000	23,900	615	2,415	2.00	27.10	1,750,000
1930	709-149	23,900	615	2,230	1.84	25.01	1,610,000	15,600	632	2,067	1.71	23.20	1,497,000
1931	724-152	28,400	552	1,880	1.55	21.08	1,360,000	28,400	552	2,128	1.76	23.88	1,542,000
1932	739-124	57,500	568	3,650	3.02	41.03	2,650,000	57,500	-	3,750	3.10	42.13	2,720,000
1933	754-131	23,500	-	3,790	3.13	42.46	2,740,000	23,500	819	3,542	2.93	39.73	2,563,000
1934	769-127	19,500	664	1,902	1.57	21.33	1,377,000	31,000	664	2,563	2.12	28.75	1,856,000
1935	794-132	31,000	672	3,360	2.78	37.72	2,432,000	12,700	720	2,634	2.18	29.56	1,907,000
1936	814-148	25,600	720	3,090	2.55	34.75	2,243,000	25,600	672	2,939	2.43	33.05	2,133,000
1937	834-136	38,500	672	2,800	2.31	31.40	2,027,000	38,500	700	3,591	2.97	40.27	2,600,000
1938	864-146	33,800	760	4,283	3.54	48.05	3,101,000	-	-	-	-	-	-

North Umpqua River at Winchester, Oreg.
(Drainage area, 1,290 square miles)

1909	370-619	-	-	-	-	-	-	53,900	825	4,165	3.23	43.87	3,017,000
1910	370-619	53,900	860	3,800	2.95	40.07	2,760,000	32,800	860	3,315	2.57	34.88	2,400,000
1911	362-739	32,800	930	3,090	2.40	32.54	2,240,000	20,900	700	2,850	2.21	29.98	2,063,000
1912	362-739	35,500	700	4,070	3.16	42.90	2,950,000	35,500	895	4,246	3.29	44.77	3,080,000
1913	362-739	24,800	895	3,810	2.95	40.10	2,760,000	24,800	1,090	3,589	2.78	37.77	2,599,000
1924	594-196	16,300	688	2,160	1.67	22.79	1,570,000	38,500	688	2,896	2.24	30.53	2,101,000
1925	614-186	38,500	715	4,190	3.25	44.11	3,030,000	24,000	715	3,259	2.53	34.30	2,359,000
1926	634-224	19,200	616	2,000	1.55	20.98	1,440,000	19,200	616	2,567	1.99	27.01	1,859,000
1927	654-132	51,400	700	3,960	3.07	41.66	2,870,000	51,400	840	3,916	3.04	41.24	2,837,000
1928	674-140	31,100	775	3,350	2.60	35.33	2,430,000	31,100	775	2,715	2.10	28.64	1,971,000
1929	694-142	21,600	688	2,260	1.75	23.71	1,630,000	-	-	-	-	-	-

Lake Creek at Diamond Lake, near Fort Klamath, Oreg.
(Drainage area, 57 square miles)

*1925	614-188	146	-	-	-	-	-	-	-	-	-	-	-
1927	654-133	137	1.0	60.2	1.06	14.34	43,600	137	-	61.8	1.08	14.71	44,720
1928	674-141	89	3	52.8	.926	12.59	38,300	89	3	50.7	.889	12.09	36,770
1929	694-143	75	†6	45.6	.800	10.85	33,000	-	-	-	-	-	-
1931	724-153	-	0	26.1	.458	6.21	18,900	-	0	22.6	.396	5.40	16,400
1932	739-125	-	-	39.1	.686	9.34	28,400	-	-	52.2	.916	12.44	37,870
1933	754-132	-	-	70.7	1.24	16.81	51,200	-	-	65.7	1.15	15.64	47,600
1934	769-128	82	11	37.1	.651	8.83	26,860	100	4	38.8	.681	9.24	28,080
1935	794-133	100	4	48.4	.849	11.53	35,050	93	16	43.4	.761	10.32	31,420
1936	814-149	94	16	43.7	.767	10.42	31,730	94	2	42.4	.744	10.11	30,770
1937	834-137	80	1	36.9	.647	8.79	26,680	107	1	44.7	.784	10.65	32,320
1938	864-147	112	3	61.2	1.07	14.57	44,300	112	3	58.7	1.03	13.97	42,510
1939	884-148	84	11	44.7	.784	10.66	32,400	-	-	-	-	-	-

*Year incomplete.
†Revised figure not previously published.

Summary of yearly discharge, in second-feet, at stations in Umpqua River Basin--Continued

Clearwater River above Trap Creek, Oreg.
(Drainage area, 40 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1929	694-144	254	123	148	3.70	50.30	107,000	254	115	144	3.60	48.96	104,400
1930	709-151	235	113	135	3.38	45.87	97,800	202	110	132	3.30	44.69	95,330
1931	724-154	173	98	114	2.85	38.73	82,600	173	91	110	2.75	37.19	79,380
1932	739-126	286	91	135	3.38	45.82	97,800	286	92	142	3.55	48.43	103,300
1933	754-133	358	115	150	3.75	50.99	109,000	358	115	153	3.82	52.00	111,000
1934	769-129	200	125	144	3.60	48.90	104,400	200	125	143	3.58	48.38	103,200
1935	794-134	212	125	145	3.62	49.08	104,600	212	123	142	3.55	48.38	103,200
1936	814-150	246	123	144	3.60	48.92	104,400	246	120	145	3.62	49.20	104,900
1937	834-138	255	111	132	3.30	45.05	95,900	261	111	134	3.35	45.43	96,750
1938	864-148	305	114	164	4.10	55.64	118,600	305	140	167	4.18	56.73	121,000
1939	884-149	226	126	152	3.80	51.60	110,000	-	-	-	-	-	-

COQUILLE RIVER BASIN

South Fork of Coquille River at Powers, Oreg.*

1917	464-134	5,300	23	757	4.51	61.11	548,000	8,050	27	791	4.71	63.82	571,900
1918	484-130	8,650	18	692	4.12	55.95	502,000	8,650	18	573	3.41	46.26	415,000
1919	514-191	12,000	18	863	5.14	69.80	626,000	12,000	22	972	5.79	78.60	704,200
1920	514-191	8,050	-	515	3.07	41.73	373,000	9,680	-	804	4.80	65.25	584,800
1921	534-163	9,680	28	1,030	6.13	83.29	746,000	6,690	28	730	4.35	59.03	529,000
1922	554-174	6,690	24	796	4.74	64.41	577,000	9,260	24	778	4.63	62.97	564,300
1923	574-182	9,260	24	558	3.32	45.04	404,000	8,310	24	519	3.09	41.87	375,400
1924	594-189	6,310	17	399	2.38	32.11	288,000	20,300	17	672	4.00	54.37	487,200
1925	614-178	20,300	25	1,000	5.95	80.81	724,000	17,600	22	698	4.15	56.38	505,300
1926	634-215	12,600	17	501	2.98	40.41	363,000	-	-	-	-	-	-
1929	694-133	-	-	-	-	-	-	12,500	13	531	3.14	42.61	384,100
1930	709-141	12,500	13	419	2.48	33.61	303,000	3,810	21	340	2.01	27.26	246,100
1931	724-142	5,870	14	396	2.34	31.81	287,000	10,200	14	611	3.62	49.11	442,900
1932	739-127	10,200	15	786	4.65	63.32	571,000	7,300	13	690	4.08	55.58	500,800
1933	754-134	11,300	13	922	5.46	74.10	667,000	11,300	26	946	5.60	76.01	684,600
1934	769-130	10,400	14	442	2.62	35.50	320,000	5,990	14	555	3.28	44.61	401,800
1935	794-135	5,990	15	800	4.73	64.34	579,400	5,780	15	605	3.58	48.66	438,300
1936	814-151	18,500	18	767	4.54	61.85	556,900	18,500	13	667	3.95	53.79	484,300
1937	834-139	9,860	13	527	3.12	42.36	381,500	14,000	30	946	5.60	76.01	684,850
1938	864-149	14,000	16	1,313	7.77	105.45	950,600	11,900	16	997	5.90	80.05	821,600
1939	884-150	7,410	12	493	2.92	39.62	357,100	-	-	-	-	-	-

*At two sites at Powers, Oreg.; drainage areas, 1916-26, 168 square miles and 1929-39, 169 square miles.

North Fork of Coquille River near Myrtle Point, Oreg.*

1929	694-135	-	-	-	-	-	-	5,700	17	653	2.30	31.17	472,500
1930	709-143	5,700	17	537	1.89	25.69	389,000	3,170	18	494	1.75	23.72	357,400
1931	724-146	5,940	22	517	1.87	25.41	374,000	8,120	22	819	2.97	40.32	593,000
1932	739-131	8,920	20	1,110	4.02	54.54	802,000	8,920	20	936	3.40	46.27	679,700
1933	754-136	9,320	20	1,180	4.28	57.82	851,000	9,320	51	1,155	4.18	56.82	836,600
1934	769-132	6,800	19	554	2.01	27.28	401,400	7,880	19	844	3.06	41.54	610,700
1935	794-137	7,880	20	1,098	3.98	54.03	794,500	6,180	20	722	2.62	35.53	522,600
1936	814-153	9,500	20	883	3.20	43.62	641,200	9,500	17	804	2.91	39.70	593,900
1937	834-142	8,300	17	865	3.13	42.49	626,200	8,300	42	1,249	4.53	61.42	904,000
1938	864-151	9,160	16	1,368	4.96	67.32	990,300	9,160	16	1,150	4.17	56.58	832,900
1939	884-152	7,060	15	802	2.91	39.47	580,700	-	-	-	-	-	-

*At two sites near Myrtle, Oreg.; drainage areas, 1929-30, 284 square miles and 1931-39, 275 square miles.

ROGUE RIVER BASIN

Rogue River above (near) Prospect, Oreg.
(Drainage area, 332 square miles)

1908	370-626	-	-	-	-	-	-	1,700	360	722	2.17	29.54	524,300
1910	370-626	-	-	-	-	-	-	2,760	420	872	2.63	35.70	631,800
1911	332-706	2,760	420	787	2.37	32.17	570,000	1,790	380	707	2.13	28.91	512,000
1924	594-150	1,660	278	511	1.54	20.96	371,000	5,060	278	558	1.68	22.87	404,900
1925	614-155	5,060	291	823	2.48	33.67	595,000	4,840	362	764	2.30	31.19	552,200
1926	634-157	1,960	268	501	1.51	20.49	363,000	3,420	268	560	1.69	22.90	405,800
1927	654-94	5,390	283	869	2.62	35.56	630,000	5,390	430	907	2.73	37.10	657,000
1928	674-102	5,180	380	840	2.53	34.38	609,000	3,590	380	742	2.23	30.38	538,100
1929	694-111	3,060	318	590	1.78	24.11	427,000	3,520	295	611	1.84	24.98	442,400
1930	709-119	3,520	283	569	1.71	23.28	412,000	2,130	259	512	1.54	20.97	370,700
1931	724-120	3,120	213	411	1.24	16.83	298,000	3,120	213	410	1.23	16.75	296,500
1932	739-133	6,470	217	754	2.27	30.89	547,000	6,470	265	793	2.39	32.51	576,000
1933	754-139	6,080	-	830	2.50	33.93	600,000	6,080	330	829	2.50	33.87	599,300
1934	769-134	3,080	285	563	1.70	23.02	407,600	3,380	285	636	1.92	26.00	460,300
1935	794-139	3,380	285	766	2.31	31.30	554,500	2,080	277	678	2.04	27.70	490,800
1936	814-155	2,780	277	726	2.19	29.76	527,000	2,780	299	711	2.14	29.15	516,200
1937	834-144	3,900	210	673	2.03	27.52	487,600	3,900	210	790	2.38	32.30	572,000
1938	864-153	3,380	324	1,003	3.02	41.02	725,900	3,380	400	960	2.89	39.26	694,800
1939	884-154	2,760	324	710	2.14	29.04	514,100	-	-	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Rogue River Basin--Continued

Rogue River below Prospect power plant No. 1, Oreg.
(published as Rogue River below Prospect, Oreg., 1914-28)
(Drainage area, 387 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet	Maximum day	Minimum day	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
1914	414-147	*2,860	*635	1,150	2.97	40.32	839,000	*2,860	*605	1,134	2.93	39.77	820,900
1915	414-147	*2,480	557	935	2.42	32.85	676,000	2,190	544	945	2.44	33.12	684,200
1916	444-157	3,050	544	1,260	3.26	44.37	915,000	3,050	573	1,238	3.20	43.56	898,600
1917	464-120	3,680	573	1,230	3.18	43.17	887,000	3,680	594	1,275	3.29	44.66	922,700
1918	484-107	3,580	554	1,100	2.84	38.55	799,000	3,580	478	1,033	2.67	36.24	747,800
1919	514-160	2,910	478	972	2.51	34.07	704,000	2,910	487	1,026	2.65	35.97	742,600
1920	514-160	2,080	530	883	2.28	31.03	640,000	3,630	534	941	2.43	33.08	683,400
1921	534-141	3,630	602	1,340	3.46	46.97	973,000	4,580	790	1,364	3.52	47.78	987,700
1922	554-143	4,580	720	1,190	3.07	41.67	862,000	3,080	620	1,105	2.86	38.82	799,900
1923	574-144	2,520	582	964	2.49	33.80	699,000	2,520	525	948	2.45	33.26	686,500
1924	594-151	2,060	457	738	1.91	26.00	536,000	6,310	456	784	2.03	27.63	569,100
1925	614-136	6,310	456	1,180	3.05	41.40	851,000	5,920	621	1,127	2.91	39.50	815,900
1926	634-161	2,220	470	751	1.94	26.33	544,000	3,570	468	800	2.07	28.10	579,000
1927	654-94	6,310	468	1,140	2.95	40.04	830,000	7,850	528	1,201	3.10	42.08	869,500
1928	674-104	7,850	528	1,170	3.02	41.03	847,000	5,220	545	1,049	2.71	36.92	762,400
1929	694-112	3,400	500	826	2.13	28.97	598,000	3,820	456	849	2.19	29.76	614,100
1930	709-120	3,820	456	806	2.08	28.28	583,000	-	-	-	-	-	-

*Figures include estimated mean monthly discharge of The California Oregon Power Co.'s flume.
Note.- All records include flow of The California Oregon Power Co.'s flume.

Rogue River below South Fork of Rogue River, near Prospect, Oreg.
(Drainage area, 643 square miles)

1930	709-121	-	665	1,190	1.85	25.19	864,000	-	665	1,103	1.72	23.24	797,200
1931	724-121	5,500	-	930	1.45	19.60	673,000	5,500	-	921	1.43	19.45	666,800
1932	739-134	11,000	-	1,610	2.50	34.17	1,170,000	11,000	-	1,700	2.64	35.99	1,236,000
1933	754-139	9,130	-	1,800	2.80	37.97	1,300,000	9,130	860	1,787	2.78	37.75	1,294,000
1934	769-135	5,470	692	1,192	1.85	25.18	863,200	6,370	686	1,319	2.05	27.88	955,200
1935	794-140	6,370	686	1,680	2.61	35.47	1,216,000	4,140	782	1,530	2.38	32.29	1,108,000
1936	814-156	5,020	782	1,635	2.54	34.63	1,187,000	5,020	800	1,615	2.51	34.23	1,173,000
1937	834-145	7,480	670	1,533	2.38	32.41	1,110,000	7,480	670	1,736	2.70	36.68	1,257,000
1938	864-154	7,000	867	2,193	3.41	46.32	1,587,000	7,000	993	2,122	3.30	44.82	1,536,000
1939	884-155	5,200	842	1,566	2.44	33.07	1,134,000	-	-	-	-	-	-

Rogue River at Raygold, near Central Point (Tolo), Oreg.
(Drainage area, 2,020 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1906	370-631	27,800	1,230	2,810	2,030,000	27,800	1,230	2,931	2,122,000
1907	370-631	48,300	1,270	4,250	3,030,000	48,300	1,190	4,395	3,182,000
1908	370-631	29,400	1,190	3,140	2,280,000	12,900	1,400	2,969	2,156,000
1909	370-631	29,800	1,320	3,550	2,560,000	48,300	1,320	4,313	3,122,000
1910	370-631	48,300	1,180	3,670	2,650,000	31,000	1,120	3,238	2,344,000
1911	312-25	31,000	1,120	3,110	2,250,000	19,800	1,120	2,652	1,920,000
1912	332-710	35,000	1,120	3,530	2,570,000	35,000	1,250	3,613	2,622,000
1913	362-708	11,300	1,180	3,050	2,210,000	11,300	1,180	3,050	2,209,000
1914	394-157	21,200	1,180	2,850	2,060,000	21,200	1,100	2,728	1,974,000
1915	414-149	9,700	960	1,920	1,390,000	9,700	960	1,983	1,436,000
1916	444-159	15,800	962	2,840	2,070,000	15,800	1,170	2,743	1,992,000
1917	464-122	9,100	1,010	3,110	2,250,000	9,100	1,010	3,251	2,354,000
1918	484-109	16,700	1,060	2,430	1,760,000	16,700	1,060	2,309	1,669,000
1919	514-163	12,700	948	2,820	2,040,000	12,700	948	2,967	2,149,000
1920	514-163	7,480	937	2,050	1,490,000	19,300	937	2,399	1,741,000
1921	534-143	19,300	1,220	4,110	2,980,000	18,300	1,430	3,904	2,828,000
1922	554-145	15,400	1,200	2,880	2,080,000	15,600	1,200	2,707	1,958,000
1923	574-146	15,600	1,050	2,240	1,620,000	8,720	1,050	2,173	1,571,000
1924	594-153	9,200	813	1,670	1,220,000	33,900	813	2,033	1,475,000
1925	614-138	33,900	875	3,190	2,310,000	18,800	1,110	2,797	2,024,000
1926	634-163	6,020	770	1,520	1,100,000	18,900	777	1,893	1,371,000
1927	654-96	45,900	840	3,440	2,490,000	48,900	1,020	3,323	2,407,000
1928	674-105	17,400	1,010	2,780	2,020,000	17,400	1,010	2,501	1,817,000
1929	694-114	7,160	822	1,820	1,320,000	12,400	822	1,919	1,391,000
1930	709-122	12,400	740	1,780	1,290,000	11,500	740	1,596	1,156,000
1931	724-122	6,450	616	1,160	839,000	8,360	616	1,238	897,400
1932	739-135	28,400	698	2,680	1,940,000	28,400	*900	2,749	1,994,000
1933	754-140	9,450	*900	2,770	2,010,000	9,450	1,110	2,717	1,967,000
1934	769-136	7,830	734	1,521	1,101,000	10,200	734	1,844	1,335,000
1935	794-141	10,200	808	2,731	1,977,000	8,890	936	2,389	1,730,000
1936	814-157	17,800	960	2,673	1,940,000	17,800	968	2,624	1,905,000
1937	834-146	19,500	900	2,445	1,770,000	20,500	900	2,936	2,126,000
1938	864-155	23,900	1,060	4,128	2,988,000	23,900	1,190	3,848	2,786,000
1939	884-157	11,200	904	2,354	1,704,000	-	-	-	-

*Revised figure not previously published.

Summary of yearly discharge, in second-feet, at stations in Rogue River Basin--Continued

Mill Creek near Prospect, Oreg.
(Drainage area, 32 square miles)

Year	W.S.P. (no. and page)	Water year ending Sept. 30						Calendar year					
		Maximum day	Minimum day	Mean	Per square mile	Run-off		Maximum day	Minimum day	Mean	Per square mile	Run-off	
						Inches	Acre-feet					Inches	Acre-feet
1926	634-166	-	-	53.0	1.66	22.49	38,300	-	-	55.2	1.72	23.42	39,950
1927	654-98	-	-	78.5	2.45	33.30	56,800	-	-	82.1	2.57	34.84	59,470
1928	674-106	-	-	73.9	2.31	31.45	53,700	-	-	67.4	2.11	28.67	48,910
1929	694-115	-	-	57.6	1.80	23.95	40,800	-	-	58.5	1.83	24.82	42,320
1930	709-123	-	-	54.7	1.71	23.22	39,600	-	-	51.2	1.60	21.75	37,100
1931	724-123	-	-	40.8	1.28	17.32	29,600	-	-	38.9	1.22	16.52	28,190
1932	739-136	-	-	59.2	1.85	25.18	42,900	-	-	61.0	1.91	25.96	44,290
1933	754-141	-	-	61.7	1.93	26.18	44,700	-	-	62.9	1.97	26.68	45,510
1934	769-137	200	25	46.6	1.46	19.76	33,730	200	25	48.8	1.52	20.68	35,310
1935	794-142	200	25	62.6	1.96	26.51	45,300	-	-	-	-	-	-

Middle Fork of Rogue River near Prospect, Oreg.
(Drainage area, 57 square miles)

1926	634-167	264	83	133	2.33	31.62	96,200	596	83	136	2.39	32.44	98,570
1927	654-99	600	84	196	3.44	46.60	142,000	600	110	203	3.56	48.29	146,800
1928	674-107	500	110	195	3.42	46.52	141,000	485	103	178	3.12	42.37	128,800
1929	694-116	545	99	148	2.60	35.23	107,000	800	95	153	2.68	36.51	111,000
1930	709-125	800	93	143	2.51	34.06	104,000	500	93	134	2.35	32.00	97,320
1931	724-125	482	72	110	1.93	26.20	79,700	482	72	106	1.86	25.32	76,970
1932	739-140	1,100	77	178	3.12	42.45	129,000	1,100	84	189	3.32	45.24	137,400
1933	754-145	680	104	199	3.49	47.39	144,000	680	111	197	3.46	46.87	142,700
1934	769-141	591	88	137	2.40	32.68	99,430	657	88	147	2.58	35.04	106,600
1935	794-146	657	89	181	3.18	43.20	131,300	387	102	169	2.96	40.25	122,400
1936	814-161	448	102	181	3.18	43.23	131,400	448	107	181	3.18	43.17	131,200
1937	834-150	616	85	171	3.00	40.70	123,800	635	85	187	3.28	44.46	135,200
1938	864-159	647	106	212	3.72	50.59	153,800	647	119	208	3.65	49.53	150,500
1939	884-163	514	109	178	3.12	42.36	128,700	-	-	-	-	-	-

Note.- Records include flow of Middle Fork Power canal, which began diverting Nov. 19, 1931.

Red Blanket Creek near Prospect, Oreg.*

1926	634-170	-	-	72.2	1.72	23.35	52,400	-	-	78.1	1.86	25.25	56,560
1927	654-100	-	-	127	3.02	40.99	92,000	-	-	132	3.14	42.62	95,270
1928	674-108	-	-	127	3.02	41.11	91,900	-	-	112	2.70	36.75	81,610
1929	694-117	-	-	84.0	2.10	28.51	60,800	-	-	90.3	2.26	30.68	65,340
1930	709-126	-	-	76.6	1.92	25.97	55,400	-	-	69.2	1.73	23.48	50,070
1931	724-126	-	-	59.8	1.50	20.30	43,300	-	-	57.8	1.44	19.55	41,860
1932	739-142	-	-	108	2.70	36.90	78,600	-	-	114	2.85	38.79	82,800
1933	754-147	-	-	114	2.85	38.84	82,700	-	-	114	2.85	38.69	82,610
1934	769-143	350	40	75.9	1.90	25.74	54,940	380	40	80.9	2.02	27.45	58,570
1935	794-148	380	40	103	2.58	35.13	74,870	240	55	96.3	2.41	32.69	69,700
1936	814-163	335	56	108	2.70	36.78	78,450	335	49	106	2.65	35.95	76,680
1937	834-152	500	40	107	2.68	36.39	77,730	500	40	125	3.12	42.43	90,590
1938	864-161	550	56	150	3.75	51.08	108,900	550	60	144	3.60	48.94	104,400
1939	884-165	450	54	101	2.52	34.30	73,120	-	-	-	-	-	-

*At two sites near Prospect, Oreg.; drainage area, 1925-28, 42 square miles and 1928-39, 40 square miles.

South Fork of Big Butte Creek near Butte Falls, Oreg.

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1911	312-28	1,520	102	235	170,000	-	-	-	-
1918	484-122	1,280	92	170	123,000	1,280	92	165	119,200
1919	514-167	900	-	173	125,000	900	-	181	131,200
1920	514-167	465	83	137	99,200	1,080	83	148	107,400
1921	534-146	1,380	93	271	196,000	1,380	120	269	194,900
1922	554-148	900	104	184	133,000	-	-	-	-
1926	634-173	-	61	99.2	71,800	558	61	107	77,490
1927	654-102	1,500	73	192	139,000	1,500	78	190	131,400
1928	674-110	-	73	163	118,000	-	73	152	110,400
1929	694-119	499	61	136	98,300	499	61	138	100,100
1930	709-127	435	47	98.7	71,500	435	47	94.9	68,820
1931	724-127	289	44	79.0	57,200	289	42	77.0	55,790
1932	739-145	1,190	42	149	108,000	1,190	65	155	112,100
1933	754-150	504	-	168	122,000	504	67	164	118,800
1934	769-146	280	51	77.4	56,050	484	51	92.0	66,580
1935	794-151	484	58	166	120,100	418	58	150	108,800
1936	814-166	970	58	148	107,500	970	63	148	107,500
1937	834-155	884	61	128	92,630	887	61	144	104,200
1938	864-164	1,120	76	210	152,300	1,120	74	202	146,100
1939	884-168	599	63	140	101,700	-	-	-	-

Summary of yearly discharge, in second-feet, at stations in Rogue River Basin--Continued

South Fork of Little Butte Creek near Lake Creek, Oreg.

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1911	312-30	-	-	-	-	365	5	68.1	49,300
1912	332-712	1,580	5	118	86,100	1,580	14	164	92,630
1922	554-150	698	13	105	76,200	698	13	106	77,020
1923	574-152	622	11	66.9	48,400	261	11	70.3	50,840
1924	594-161	460	9.1	63.4	46,000	1,040	9.1	73.3	53,170
1925	614-146	1,040	13	124	90,100	615	13	107	77,730
1926	634-176	233	7	32.2	23,300	1,020	7	53.7	38,880
1927	654-105	1,270	14	174	126,000	1,270	-	162	117,700
1928	674-113	840	12	105	76,300	840	12	94.0	68,200
1929	694-121	460	10	80.6	58,400	460	10	83.5	60,540
1930	709-129	296	7	50.1	36,200	296	7	45.9	33,220
1931	724-129	108	3	21.0	15,200	264	3	23.8	17,210
1932	739-146	1,350	-	120	87,300	1,350	8	121	88,100
1933	754-151	465	-	105	76,300	465	16	103	74,670
1934	769-147	185	6	30.2	21,880	403	6	43.3	31,360
1935	794-152	654	10	114	82,440	654	14	101	73,260
1936	814-167	681	13	109	79,210	681	12	107	77,710
1937	834-156	990	11	91.0	65,900	990	11	107	77,600
1938	864-165	840	17	166	120,500	840	18	155	112,000
1939	884-169	404	12	78.2	56,630	-	-	-	-

Little Butte Creek above Eagle Point, Oreg.

1908	370-641	3,890	43	238	173,000	1,730	43	233	169,100
1909	370-641	3,450	43	313	225,000	3,890	43	359	259,800
1910	370-641	3,890	40	309	222,000	4,410	40	283	205,000
1911	312-32	4,490	34	247	180,000	4,490	34	192	138,900
1912	332-714	5,280	63	358	260,000	5,280	63	368	267,000
1913	362-711	2,340	48	278	201,000	2,340	48	263	190,500
1914	394-159	2,920	29	204	148,000	2,920	29	198	143,100
1915	414-152	950	7	102	73,800	950	7	103	74,340
1917	464-126	1,200	30	257	186,000	1,200	38	264	190,800
1918	484-116	2,600	10	141	102,000	2,600	10	137	99,470
1919	514-172	2,390	17	220	160,000	2,390	18	230	166,800
1920	514-172	1,340	14	128	93,000	1,620	14	155	112,300
1921	534-149	2,150	45	349	253,000	2,150	59	324	234,800
1922	554-152	1,290	7.4	194	140,000	3,070	7.4	202	146,000
1923	574-154	3,070	10	116	83,600	720	10	98.0	70,930
1924	594-163	1,540	7.1	94.4	68,400	2,940	7.1	122	88,910
1925	614-148	2,940	8	221	160,000	1,480	10	183	132,400

North Fork of Little Butte Creek at Fish Lake, near Lake Creek, Oreg.

1917	484-120	-	-	42.5	30,800	-	-	43.4	31,450
1918	484-120	54	5.4	29.4	21,300	68	5.4	27.8	20,120
1919	514-177	68	16	31.2	22,600	58	16	32.9	23,830
1920	514-177	68	3	24.3	17,600	68	3	22.2	16,140
1921	534-151	108	5.8	46.9	34,000	108	5.8	51.8	37,460
1922	554-155	102	5.3	34.9	25,300	102	-	29.5	21,320
1923	574-157	89	-	24.7	17,900	89	0	21.4	15,460
1924	594-166	97	0	28.3	20,500	97	0	26.2	18,940
1925	614-151	112	0	26.0	18,800	112	1.3	27.6	20,000
1926	634-181	142	2.4	28.4	20,600	142	0	26.5	19,240
1927	654-107	153	0	26.1	18,900	153	.1	28.4	20,600
1928	674-115	114	.1	34.0	24,700	114	9	34.3	24,940
1929	694-123	137	9	34.8	25,200	137	-	33.6	24,330
1930	709-131	152	0	25.3	18,300	152	0	23.6	17,130
1931	724-131	86	-	15.3	11,000	86	1	16.3	11,790
1932	739-148	130	1	28.9	21,000	130	-	30.1	21,860
1933	754-153	123	-	34.3	24,800	123	7	35.7	25,830
1934	769-149	125	10	37.4	27,060	125	0	35.1	25,400
1935	794-154	111	0	33.1	24,010	111	0	33.6	24,330
1936	814-169	122	0	34.2	24,840	122	7	35.8	25,970
1937	834-158	137	0	32.8	23,780	137	0	30.8	22,320
1938	864-167	127	0	38.8	28,060	127	10	41.8	30,280
1939	884-170	146	7.2	45.8	33,120	-	-	-	-

North Fork of Little Butte Creek above Medford intake, near Lake Creek, Oreg.

1912	332-716	410	43	83.8	60,900	410	44	85.9	62,380
1923	574-159	-	21	60.5	43,800	-	-	-	-
1929	(*)	166	31	70.5	51,000	166	17	68.2	49,350
1930	(*)	170	16	47.8	34,600	170	14	45.7	33,110
1931	(*)	111	14	33.9	24,600	111	-	34.0	24,630
1932	739-149	216	-	62.8	45,600	216	-	66.7	48,430
1933	754-154	156	-	69.4	50,200	156	29	70.5	51,070
1934	769-150	164	32	62.2	45,040	164	15	61.3	44,350
1935	794-155	144	15	70.5	51,060	144	22	69.7	50,480
1936	814-170	147	22	69.4	50,410	147	30	70.7	51,360
1937	834-159	174	22	65.3	47,300	174	22	64.9	47,020
1938	864-168	164	23	78.1	56,580	164	36	80.4	58,180
1939	884-171	165	25	77.6	56,180	-	-	-	-

*From reports of State Engineer.

Summary of yearly discharge, in second-feet, at stations in Rogue River Basin--Continued

North Fork of Little Butte Creek above intake of Rogue River Valley canal, near Lake Creek, Oreg.

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1918	484-124	520	27	59.9	43,400	520	27	54.7	39,590
1919	514-180	288	33	66.7	48,300	-	-	-	-
1922	554-158	268	37	80.8	58,500	295	18	75.8	54,830
1923	574-161	295	18	53.9	39,000	153	15	50.0	36,250
1924	594-170	169	15	53.7	39,000	601	9	54.3	39,430
1925	614-154	601	9	69.2	50,100	193	14	66.2	47,920
1926	634-185	152	10	42.2	30,600	276	8	42.9	31,100
1927	654-109	350	8	68.2	49,400	350	14	73.8	53,440
1928	674-117	204	14	75.0	54,400	204	23	69.9	50,740
1929	694-124	195	29	63.8	46,200	195	13	60.8	44,030
1930	709-132	144	12	38.4	27,800	144	9	36.0	26,110
1931	724-132	114	5	23.8	17,200	-	-	-	-
Bear Creek at Medford, Oreg.									
1921	534-159	1,210	1.2	154	112,000	1,210	1.2	143	103,100
1922	554-167	509	.2	70.1	50,700	862	.2	74.7	54,010
1923	574-173	862	1.3	44.2	32,000	428	1.3	43.4	31,430
1924	594-190	328	.2	31.1	22,500	1,310	.2	46.9	34,020
1925	614-165	1,310	2.9	123	89,100	1,180	2.9	105	76,320
1926	634-196	206	-	19.8	14,300	-	-	-	-
1928	674-124	1,240	6.8	68.7	49,800	1,240	6.8	64.2	46,520
1929	694-127	-	8	45.9	33,300	-	8	49.2	35,600
1930	709-135	277	1	40.1	29,100	277	1	33.4	24,220
1931	724-136	-	-	8.42	6,100	-	-	9.03	6,538
1932	739-152	790	1.8	76.6	55,600	790	3.9	76.8	55,740
1933	754-158	254	3.9	58.3	42,200	254	4.0	57.9	41,890
1934	769-153	91	1.8	15.8	11,430	140	1.8	19.1	13,830
1935	794-158	408	2.7	53.4	38,680	408	5.8	50.0	36,200
1936	814-173	1,140	5.9	89.4	64,890	1,140	6.1	88.1	63,920
1937	834-162	900	6.1	65.0	47,030	1,100	7.0	86.5	62,580
1938	864-172	1,520	11	226	163,300	1,520	11	210	152,000
1939	884-174	547	6.5	48.1	34,790	-	-	-	-
Applegate River near Ruch (Buncom), Oreg.									
1912	332-719	3,380	38	374	271,000	3,380	38	413	299,600
1913	394-162	1,490	38	338	245,000	2,750	38	320	231,800
1914	394-162	2,750	37	498	361,000	-	-	-	-
1926	634-212	2,560	8	164	119,000	6,580	8	309	223,500
1928	674-131	4,510	16	311	226,000	4,510	16	299	216,800
1929	694-131	790	7	189	137,000	2,590	7	213	154,200
1930	709-139	2,590	15	236	171,000	1,450	15	200	144,400
1931	724-140	1,320	9	143	104,000	1,320	9	154	111,000
1932	739-156	3,180	15	312	226,000	3,180	18	310	225,200
1933	754-162	2,050	18	369	267,000	2,050	27	377	272,700
1934	769-155	1,500	9	173	125,500	1,500	9	195	140,900
1935	794-160	1,560	12	325	235,200	1,560	16	290	209,900
1936	814-175	2,600	19	345	250,500	2,600	16	332	241,300
1937	834-164	5,400	16	297	215,200	7,640	30	464	335,600
1938	864-174	7,640	41	862	624,100	4,990	41	724	523,800
1939	884-177	1,260	15	200	145,000	-	-	-	-
Illinois River at Kerby, Oreg.*									
1927	654-127	30,000	34	1,730	1,250,000	30,000	34	1,426	1,033,000
1928	674-133	23,500	26	1,020	740,000	23,500	26	1,021	742,000
1929	694-132	9,880	24	744	539,000	17,100	24	836	605,200
1930	709-140	17,100	29	820	594,000	7,800	29	583	422,200
1931	724-141	9,000	15	539	389,000	9,650	15	769	555,900
1932	739-157	11,600	17	1,040	758,000	11,600	23	1,002	726,800
1933	754-163	10,200	23	1,250	905,000	9,960	49	1,187	860,000
1934	769-156	7,160	13	586	424,500	7,160	13	754	545,900
1935	794-161	7,370	20	1,149	831,700	7,370	20	935	676,800
1936	814-176	15,800	20	1,066	†774,100	15,800	30	945	†686,400
1937	834-165	21,200	31	†874	†632,400	21,200	33	1,302	942,500
1938	864-175	21,000	32	1,861	1,348,000	21,000	32	1,557	1,127,400
1939	884-180	9,160	19	632	457,600	-	-	-	-

*At two sites at Kirby, Oreg.; drainage areas, 1927-34, 363 square miles and 1935-39, 367 square miles.

†Revised figures not previously published.

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