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HAROLD L. ICKES, Secretary
GEOLOGICAL SURVEY
W. C. MENDENHALL, Director

Water-Supply Paper 904

SURFACE WATER SUPPLY *of the* UNITED STATES

1940

PART 14

PACIFIC SLOPE BASINS IN OREGON AND LOWER COLUMBIA RIVER BASIN

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ILLUSTRATION

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, 1940. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of the flow of streams and of the stage and contents of lakes and reservoirs have been made at about 8,800 gaging stations in the United States and also at many gaging stations in Alaska and Hawaii. In July 1940, 4,760 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. Cooperation of the first kind is acknowledged in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 11.

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 a stream whose channel is 1 square foot in cross-sectional area and whose 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 draining 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" is the quantity of water required to cover an acre to the depth of 1 foot and is equivalent to 43,560 cubic feet. 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 a feature below the gage that defines the stage-discharge relation at the gage. This feature may be a natural section, a reach of the channel, or an artificial structure.

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 records of stage 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 structures in use at gaging stations 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.

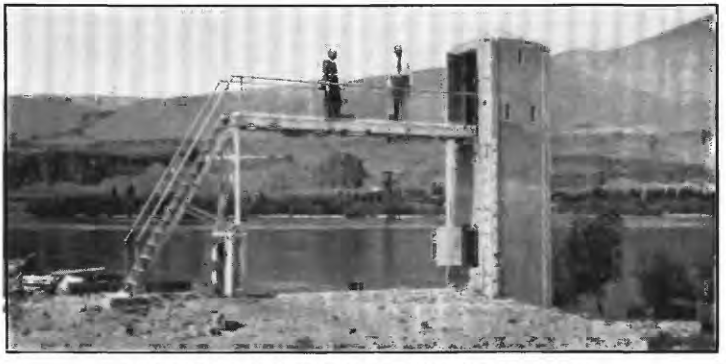
For most of the gaging stations in the area covered by this report the data presented comprise a description of the station, a table showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off. Skeleton rating tables are published except for those stations whose 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 (unless 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 discharge represents the lowest stage, 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 on 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.

At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources, which necessitates the use of the slope or fall in a reach of the stream as a factor in the determination of discharge. Information requisite for determining the slope or fall is obtained by means of an auxiliary

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.

gage set at some distance from the base gage. The auxiliary gage, if one is used, is described under "Location." At some stations the stage-discharge relation is affected by changing stage, and for them the rate of change of stage is used as a factor in the determination of discharge.

At most gaging stations in the northern part of the United States and at some in the mountainous regions of other parts the stage-discharge relation is affected by ice during the winter, which makes it impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of occasional winter discharge measurements and gage heights, consideration being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for stations in the same or nearby basins. The days included in the periods of ice effect and the days during the winter period on which discharge measurements were made are indicated in the table by symbols referring to footnotes.

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 instantaneous discharge when the water surface was at crest stage. Likewise, in the column headed "Minimum" the quantity 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 at some stations as indicated by monthly means may vary widely from natural yield, owing to diversion, consumption, 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 storage or diversion records are included indicating the extent of the regulation or diversion or unless 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, and therefore 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., 5 North Rhodes Center.
Augusta, Maine, Statehouse.
Boston, Mass., 945 Post Office Building.
Charlottesville, Va., House G, Dawson 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., 225 Capitol Building, 410 Asylum Street.
Indianapolis, Ind., 316 Federal Building.
Louisville, Ky., 652 Federal Building.
Madison, Wis., 666 State Office Building.
Montgomery, Ala., 507 Post Office Building.
Ocala, Fla., 302 Post Office Building.
St. Paul, Minn., 808 New Post Office Building.
South Charleston, W. Va., Armor Park School Building.
Trenton, N. J., 228 Federal Building.
Urbana, Ill., 14 Post Office Annex, Elm Street.

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 United States 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., 926 New Federal Building.
Salt Lake City, Utah, 303 Federal Building.
San Francisco, Calif., 465 Federal Office Building.
Santa Fe, N. Mex., 204 United States Courthouse.
Tacoma, Wash., 1100 Washington 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.
W 15.....	Descriptions, measurements, and gage heights of streams east of the Mississippi River and Missouri River and tributaries above Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights of 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 of streams east of the Mississippi River and Missouri River and tributaries.	
W 28.....	Measurements, ratings, and gage heights of 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.- Reports containing records for years after 1901 are given in 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 1940. 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, 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, 1899-1940

(For basins included see p. 4)

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1899 a...	35	b35, 36	36	36	36	c36, 37	37	37	d37, 38	38, e39	38, f39	38	38	38
1900 g...	47, h48	48	48, 149	49	49	49, j50	50	50	50	51	51	51	51	51
1901.....	65, 75	65, 75	65, 75	65, 75	k65, 66, 75	66, 75	k65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902.....	82	b82, 83	83	m82, 83	k83, 85	84	k83, 84	84	85	85	85	85	85	85
1903.....	97	b97, 98	98	97	k98, 99, n100	99	k98, 99	99	100	100	100	100	100	100
1904.....	o124, p125, q126	q126, 127	128	129	k128, 130	130, r131	k128, 131	132	133	133, s134	134	135	135	135
1905.....	o165, p166, q167	q167, 168	169	170	171	172	k169, 173	174	175, t177	176, s177	177	178	178	u177, 178
1906.....	o201, p202, q203	q203, 204	205	206	207	208	k205, 209	210	211, t213	212, s213	213	214	214	214
1907-8...	241	242	243	244	245	246	247	248	249	250, s251	251	252	252	252
1909.....	261	262	263	264	265	266	267	268	269	270, s271	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
1940.....	891	892	893	894	895	896	897	898	899	900	901	902	903	904

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 mouth of 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, southern, Surface water supply of 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, southern, 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.
850	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.
617	1927	Colorado River, upper (Colo., Utah), and its utilization.
517	1920	Great Salt Lake Basin, Water powers of.
618	1926	Green River (Utah, Wyo.) and its utilization.
198	1906	Kennebec River Basin (Maine), Water resources of.
491	1917	Milk River. (See St. Mary and Milk Rivers.)
536	1920	New-Kanawha River Basin (N. C., Va., W. Va.), Surface water supply of.
279	1909	Penobscot River Basin (Maine), Water resources of.
192	1906	Potomac River Basin (D. C., Md., W. Va.)
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.
109	1904	Susquehanna River Basin (Pa., Md.), Hydrography of.

Records of discharge have been published also 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.
Do.....	1933[a]	5th biennial report.....	Connecticut State Water Commission.
Georgia.....	1907	Bull. 16, Water powers of Georgia....	Geological Survey of Georgia.
Do.....	1920[b]	Bull. 38, Water powers of Georgia....	Do.

a Includes records of monthly discharge in second-feet per square mile for years 1912-33.
b Includes records for years 1907-18.

State reports containing compilation of records of discharge--Continued

State	Year ending	Report	Issued by
Illinois....	1911	Water resources of Illinois.....	Rivers and Lakes Commission.
Do.....	1934	Stream-flow data of Illinois.....	Division of Waterways.
Indiana.....	1927	Pub. 72, Surface water supply of Indiana.	Department of Conservation.
Do.....	1930[c]	Pub. 112, Surface water supply of Indiana.	Do.
Iowa.... ...	1932	Stream-flow records of Iowa.....	Iowa State Planning Board.
Kansas.....	1919	Surface waters of Kansas.....	Kansas Water Commission.
Do.....	1924[d]	....do.....	Do.
Do.....	1928[e]	....do.....	Kansas State Board of Agriculture.
Do.....	1935[f]	Stream-flow data of Kansas.....	Do.
Do.....	1939[g]	....do.....	Do.
Kentucky....	1920	Surface waters of Kentucky.....	Kentucky Geological Survey.
Minnesota...	1912	Water-resources investigation of Minnesota.	State Drainage Commission.
Missouri....	1926	Vol. 20, 2d series, Water Resources of Missouri.	Missouri Geological Survey and Water Resources.
Do.....	1939[h]	Vol. 26, 2d series, Surface waters of Missouri.	Do.
Nebraska....	1914	1st hydrographic report.....	Bureau of Water Power, Irrigation, and Drainage.
Do.....	1928[i]	2d hydrographic report.....	Do.
New Jersey..	1928	Bull. 33, Surface water supply of New Jersey.	Department of Conservation and Development.
Do.....	1934[j]	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.....	1936[k]	Bull. 39, Discharge records of North Carolina streams.	Do.
Ohio.....	1921[l]	Bull. 73, Ohio stream flow.....	Engineering Experiment Station, Ohio State University.
Do.....	1939[m]	Bull. 200, Compilation of stream-flow records of Ohio.	Department of Agriculture, Division of Conservation and Natural Resources.
Oregon.....	1914	Bull. 4, Water resources of the State of Oregon.	Office of the State Engineer.
Do.....	1924[n]	Bull. 7, Water resources of the State of Oregon.	Do.
Do.....	1930[o]	Bull. 8, Water resources of the State of Oregon.	Do.
Do.....	1936[p]	Bull. 9, Water resources of the State of Oregon.	Do.
Pennsylvania	1911	Report of the Water Supply Commission of Pennsylvania.	Water Supply Commission of Pennsylvania.
Do.....	1932[q]	Stream-flow records of Pennsylvania..	Department of Forests and Waters.
Tennessee...	1924	Bull. 34, Water resources of Tennessee.	Department of Education.
Do.....	1930[r]	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.....	1923[s]	2d report of Railroad Commission of Wisconsin to Legislature on water powers.	Do.

c Includes records for years 1927-30.
d Includes records for years 1919-24.
e Includes records for years 1924-28.
f Includes records for years 1928-35.
g Includes records for years 1935-39.
h Includes records for years 1927-39.
i Includes records for years 1914-28.
j Includes records for years 1928-34.
k Includes records for years 1889-1936; records of daily and monthly discharge are not included.
l Includes all available records prior to 1921.
m Includes records for years 1902-39.
n Includes records for years 1914-24.
o Includes records for years 1924-30.
p Includes records for years 1930-36.
q Includes records for years 1928-32.
r Includes average weekly discharge for years 1920-30.
s Includes records for 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, Connecticut, 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.

The reports listed in the foregoing tables contain the customary records of discharge collected during the systematic operation of gaging stations. Detailed information on the stage and discharge of many streams during major floods has been included in special reports on these floods published by the Geological Survey. The more recent of these reports also contain other pertinent hydrologic information and analyses and compilations of data relating to earlier noteworthy floods. The following list gives the numbers and titles of these reports.

Water-Supply Paper	Title
88	The Passaic flood of 1902.
92	The Passaic flood of 1903.
96	Destructive floods in the United States in 1903.
147	Destructive floods in the United States in 1904.
162	Destructive floods in the United States in 1905.
334	The Ohio Valley flood of March-April 1913.
426	Southern California floods of January 1916.
487	The Arkansas River flood of June 3-5, 1921.
488	The floods in central Texas in September 1921.
520-G	Some floods in the Rocky Mountain region.
636-C	The New England flood of November 1927.
771	Floods in the United States, magnitude and frequency.
773-E	The New York State flood of July 1935.
796-B	Flood on Republican and Kansas Rivers, May and June 1935.
796-C	Flood in La Canada Valley, California, January 1, 1934.
798	The floods of March 1936, Part 1, New England Rivers.
799	The floods of March 1936, Part 2, Hudson River to Susquehanna River region.
800	The floods of March 1936, Part 3, Potomac, James and upper Ohio Rivers.
816	Major Texas floods of 1936.
836-A	Stages and flood discharges of the Connecticut River at Hartford, Conn.
838	Floods of Ohio and Mississippi Rivers, January-February 1937.
842	Floods in Canadian and Pecos River Basins of New Mexico, May and June 1937.
843	Floods of December 1937 in northern California.
847	Maximum discharges at stream-measurement stations through September 1938.
867	Hurricane floods of September 1938.
869	Flood of August 1935 in Muskingum River Basin, Ohio.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The following table 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 1939 to September 1940 by agencies other than the Geological Survey. The records for these stations are not contained in the publications of the Geological Survey. Records on many canals, not here listed, have been collected by the Oregon State engineer and the Bureau of Reclamation in connection with the operation of irrigation projects.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
Big Butte Creek, North Fork of.	SW¼ sec. 2, T. 35 S., R. 2 E., 1 mile north of Butte Falls, Oreg.	1928-40	Oregon State engineer.
Big Butte Springs.....	Sec. 17, T. 35 S., R. 3 E., 6 miles east of Butte Falls, Oreg.	1930-40	Do.
Big Marsh Creek.....	NE¼ sec. 20, T. 24 S., R. 7 E., at Hoey Ranch, near Crescent, Oreg.	1924, 1928-40*	Do.
Brown Creek.....	SW¼SW¼ sec. 29, T. 21 S., R. 8 E., near Lapine, Oreg.	1938-40*	Do.
Butter Creek.....	SE¼ sec. 22, T. 2 N., R. 27 E., at Foley Bridge, 15 miles southwest of Hermiston, Oreg.	1933-40	Do.
Do.....	SE¼ sec. 22, T. 1 N., R. 28 E., 1 mile upstream from Vey Ranch, Oreg.	1921-40	Do.
Cable Creek.....	NE¼ sec. 9, T. 5 S., R. 32 E., 6 miles east of Ukiah, Oreg.	1932-40*	Do.
Camas Creek.....	SE¼ sec. 4, T. 5 S., R. 32 E., 200 feet upstream from Cable Creek, near Ukiah, Oreg.	1932-40*	Do.
Charlton Creek.....	Sec. 1, T. 21 S., R. 7 E., near Lapine, Oreg.	1924, 1938-40	Do.

*Records for some earlier years published in water-supply papers of the Geological Survey.

Records of discharge collected by agencies other than the Geological Survey--Continued

Stream	Location	Period	Collected by
Coyote Creek	Fern Ridge dam site, Oreg.	1939-40	Corps of Engineers, U. S. Army.
Cultus Creek	Sec. 19, T. 20 S., R. 8 E., upstream from Crane Prairie, near Lapine, Oreg.	1938-40*	Oregon State engineer.
Dairy Creek	Centerville Bridge, Oreg.	1940	Corps of Engineers, U. S. Army.
Davis Creek	NE¼NE¼ sec. 9, T. 22 S., R. 8 E., near Lapine, Oreg.	1924, 1938-40	Oregon State engineer.
Deer Creek	Sec. 36, T. 20 S., R. 7 E., near Lapine, Oreg.	1938-40*	Do.
Deschutes River	NE¼ sec. 14, T. 15 S., R. 12 E., 1,500 feet upstream from dam at Cline Falls, Oreg.	1928-40*	Do.
Do	NW¼NW¼ sec. 28, T. 21 S., R. 8 E., below Sheep Springs, near Lapine, Oreg.	1938-40	Do.
Evans Creek	Sec. 34, T. 34 S., R. 3 W., at Bybee Springs, near Wimer, Oreg.	1925-27, 1940	Do.
Fish Lake Dam, tunnel at	SW¼ sec. 3, T. 37 S., R. 4 E., 18 miles east of Lake Creek, Oreg.	1929-40	Do.
Grave Creek	NW¼SW¼ sec. 5, T. 34 S., R. 4 W., at Pease Bridge, near Grants Pass, Oreg.	1940	Do.
Do	NE¼SW¼ sec. 12, T. 34 S., R. 6 W., 13 miles north of Grants Pass, Oreg.	1929-40*	Do.
Illinois River, East Fork of.	NW¼ sec. 10, T. 41 S., R. 8 W., below Estenly middle canal, near Takilma, Oreg.	1940	Do.
Do	SW¼NW¼ sec. 26, T. 40 S., R. 8 W., at Takilma, Oreg.	1940	Do.
Johnson Creek	Sycamore, Oreg.	1940	Corps of Engineers, U. S. Army.
Jumpoff Joe Creek	Sec. 32, T. 34 S., R. 5 W., 7 miles northwest of Merlin, Oreg.	1929-40*	Oregon State engineer.
Klickitat River	Sec. 32, T. 11 N., R. 13 E., upstream from Diamond Fork, Wash.	1930-40	U. S. Office of Indian Affairs.
Klickitat River, Diamond Fork of.	Sec. 34, T. 11 N., R. 13 E., 1 mile upstream from mouth, Wash.	1930-40	Do.
Little Applegate River	NW¼NE¼ sec. 4, T. 40 S., R. 1 W., below Greeley Creek, 9 miles south of Talent, Oreg.	1940	Oregon State engineer.
Do	NE¼NW¼ sec. 27, T. 39 S., R. 2 W., above Yale Creek, near Ruch, Oreg.	1940	Do.
Little Butte Creek	SE¼ sec. 19, T. 36 S., R. 2 E., at Lake Creek, Oreg.	1922-24, 1927-40	Do.
Little Butte Creek, North Fork of.	Sec. 21, T. 36 S., R. 2 E., above Rogue River Valley canal intake, near Lake Creek, Oreg.	1916-19, 1921-40	Do.
Little Butte Creek, South Fork of.	NW¼ sec. 21, T. 37 S., R. 4 E., near Lake Creek, Oreg.	1926-40*	Do.
Little Walla Walla River	George Street, in Milton, Oreg.	1916, 1932-40	Do.
Mill Creek	NW¼NE¼ sec. 18, T. 8 S., R. 2 W., at State penitentiary annex near Salem, Oreg.	1939-40	Do.
North Mill Creek	SW¼NE¼ sec. 26, T. 7 W., R. 3 W., below 19th Street at Salem, Oreg.	1938-40	Do.
Ochoco Creek	NE¼ sec. 6, T. 15 S., R. 17 E., below Ochoco Reservoir, 6 miles east of Prineville, Oreg.	1919-40	Do.
Ochoco Reservoir	SW¼ sec. 5, T. 15 S., R. 17 E., 6 miles east of Prineville, Oreg.	1918-40	Do.
Ochoco Springs	NE¼ sec. 6, T. 15 S., R. 17 E., 6 miles east of Prineville, Oreg.	1920-40	Do.
Rancheria Creek	SE¼ sec. 17, T. 35 S., R. 3 E., 10 miles northeast of Lake Creek, Oreg.	1935-40	Do.
Rough and Ready Creek	SE¼NE¼ sec. 15, T. 40 S., R. 9 W., 3 miles west of O'Brien, Oreg.	1940	Do.
Salt Creek	SE¼ sec. 30, T. 22 S., R. 6 E., at Gold Lake, Oreg.	1939-40	Do.
Sucker Creek	SW¼ sec. 30, T. 39 S., R. 6 W., below Grayback Creek, 10 miles southeast of Kerby, Oreg.	1940	Do.
Tualatin River	Gaston, Oreg.	1939-40	Corps of Engineers, U. S. Army.
Do	Dilley Bridge, below Scoggins Creek, Oreg.	1939-40	Do.
Walla Walla River, North Fork of.	NE¼ sec. 22, T. 5 N., R. 36 E., 5 miles southeast of Milton, Oreg.	1929-40	Oregon State engineer.
Walla Walla River, South Fork of.	Above power diversion dam, near Milton, Oreg.	1929-40*	Do.

*Records for some earlier years published in water-supply papers of the Geological Survey.

Note.- Records prior to 1936 indicated above as collected by the Oregon State engineer are contained in bulletins of the State engineer as follows: For 1915-24, in Bulletin 7; for 1925-30, in Bulletin 8; and for 1931-36 (some to December 1936) in Bulletin 9. Records subsequent to 1936 collected by the officer mentioned and all other records here listed have not been published.

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

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

Funds were furnished by the Corps of Engineers, U. S. Army, for the construction and maintenance of 21 gaging stations in Oregon and 3 in Washington.

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

DIVISION OF WORK

The stream-gaging work was conducted by the water resources branch of the Geological Survey--Glenn L. Parker, chief hydraulic engineer, Carl G. Paulsen, assistant chief hydraulic engineer, and Rudolph G. Kasel, chief of the division of surface waters. The data for the stations in the two States were collected and prepared for publication under supervision of district engineers as follows: In Oregon, G. H. Canfield, the work being done in collaboration with Charles E. Stricklin, State engineer; in Washington, G. L. Parker until Oct. 17, 1939, succeeded by F. M. Veatch.

The records were reviewed and the manuscript prepared for publication under the direction of B. J. Peterson, engineer in charge, and M. C. Boyer, associate engineer, section of reports.

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. Datum of gage is at mean sea level (general adjustment of 1929).
Drainage area.- 237,000 square miles.
Records available.- June 1878 to September 1940. 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.- 62 years, 196,900 second-feet.
Extremes.- Maximum discharge during year, 370,000 second-feet June 5 (elevation, 138.46 feet); minimum, 61,000 second-feet Feb. 2 (elevation, 128.20 feet).
1858-1940: Maximum discharge, 1,170,000 second-feet June 6, 1894 (elevation, 106.5 feet on gage at The Dalles, 160.1 feet, present site); minimum observed, 35,000 second-feet Jan. 12, 1937 (elevation, 126.0 feet).
Remarks.- Records good. Records since January 1937 are based on discharge measurements made at gaging cable 9 miles upstream with flow of Deschutes River added. Storage and diversions for irrigation are only a small part of total run-off. Some regulation at Coulee Dam during year, the total increase in contents above the dam during the water year ending Sept. 30, 1940, being 1,308,000 acre-feet.
Cooperation.- Recorder inspected and staff gage read twice daily by Corps of Engineers, U. S. Army.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

128.0	57,500	132	153,000	136	282,000
129.0	77,300	133	181,000	137	318,000
130	101,000	134	212,000	138	354,000
131	126,000	135	247,000	139	390,000

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82,700	98,800	f72,500	72,900	63,000	147,000	h175,000	224,000	337,000	254,000	160,000	102,000
2	81,800	98,800	70,200	74,700	61,700	h173,000	f202,000	223,000	348,000	251,000	156,000	102,000
3	81,300	99,000	68,700	79,300	61,900	h183,000	231,000	224,000	358,000	248,000	154,000	102,000
4	80,900	99,200	68,900	84,600	63,800	h180,000	204,000	224,000	366,000	245,000	154,000	102,000
5	80,400	99,000	69,300	87,400	66,700	h175,000	192,000	234,000	369,000	242,000	154,000	102,000
6	79,700	99,000	69,500	90,500	70,200	f163,000	211,000	235,000	365,000	239,000	153,000	102,000
7	78,000	99,200	70,000	90,500	76,400	150,000	204,000	224,000	362,000	235,000	152,000	102,000
8	76,900	h96,000	70,000	88,600	85,500	140,000	201,000	229,000	359,000	233,000	149,000	104,000
9	78,600	h97,200	f70,200	83,400	105,000	135,000	199,000	232,000	351,000	230,000	144,000	107,000
10	80,400	h99,800	f71,600	80,000	106,000	138,000	201,000	228,000	347,000	227,000	137,000	109,000
11	80,900	f97,200	f73,800	76,900	108,000	135,000	204,000	234,000	341,000	221,000	132,000	109,000
12	80,200	f90,000	76,400	75,100	106,000	129,000	206,000	250,000	332,000	219,000	130,000	107,000
13	78,400	84,100	79,300	74,900	104,000	124,000	203,000	277,000	328,000	214,000	126,000	105,000
14	76,200	f83,600	81,300	76,400	101,000	122,000	f203,000	288,000	325,000	188,000	123,000	105,000
15	75,100	h85,200	82,300	74,700	95,300	122,000	h200,000	295,000	322,000	186,000	122,000	107,000
16	74,200	h86,400	e4,300	72,100	91,400	115,000	f204,000	295,000	320,000	205,000	122,000	108,000
17	73,800	h85,200	87,600	71,600	89,500	110,000	210,000	290,000	n312,000	204,000	122,000	108,000
18	73,100	h84,100	8e,600	71,200	89,000	105,000	215,000	282,000	f307,000	202,000	121,000	111,000
19	72,900	he1,800	91,700	68,700	88,100	105,000	216,000	280,000	300,000	200,000	122,000	114,000
20	72,100	h79,500	95,300	67,300	91,200	107,000	211,000	280,000	299,000	19e,000	122,000	114,000
21	71,600	h79,500	96,800	66,100	94,300	106,000	213,000	286,000	298,000	194,000	122,000	115,000
22	70,800	h77,300	95,300	64,700	92,400	102,000	214,000	294,000	295,000	187,000	119,000	117,000
23	70,400	h75,100	95,000	63,400	87,400	101,000	218,000	299,000	288,000	183,000	115,000	119,000
24	69,800	h74,000	97,800	65,100	82,700	102,000	217,000	303,000	281,000	182,000	111,000	120,000
25	f69,800	h71,800	99,500	67,100	82,500	104,000	218,000	307,000	276,000	181,000	107,000	120,000
26	f69,800	h70,800	98,000	66,900	84,300	108,000	223,000	315,000	274,000	180,000	103,000	117,000
27	f69,800	h72,900	94,100	65,500	90,000	117,000	223,000	321,000	273,000	176,000	105,000	109,000
28	h70,800	h71,800	84,100	63,800	112,000	135,000	224,000	321,000	268,000	175,000	103,000	105,000
29	f73,300	h72,900	76,400	62,600	129,000	156,000	222,000	314,000	263,000	170,000	106,000	102,000
30	93,100	h72,900	74,900	63,200	-	172,000	221,000	312,000	258,000	168,000	102,000	101,000
31	97,200	-	73,800	64,100	-	f175,000	-	325,000	-	167,000	102,000	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,384,000	97,200	69,800	76,900	0.324	0.37	4,729,000
November	2,582,100	99,800	70,800	86,070	.363	.41	5,122,000
December	2,527,200	99,500	68,700	81,520	.344	.40	5,013,000
Calendar year 1939	54,882,500	387,000	61,000	150,400	.635	8.62	108,900,000
January	2,273,300	90,500	62,600	73,330	.309	.36	4,509,000
February	2,578,300	129,000	61,700	88,910	.375	.40	5,114,000
March	4,136,000	183,000	101,000	133,400	.563	.65	8,204,000
April	6,285,000	231,000	175,000	209,500	.884	.99	12,470,000
May	8,445,000	325,000	223,000	272,400	1.15	1.33	16,750,000
June	9,522,000	369,000	258,000	317,400	1.34	1.49	18,890,000
July	6,404,000	254,000	167,000	206,600	.872	1.00	12,700,000
August	3,950,000	160,000	102,000	127,400	.538	.62	7,835,000
September	3,247,000	120,000	101,000	108,200	.457	.51	6,440,000
Water year 1939-40	54,333,900	369,000	61,700	148,500	.627	8.53	107,800,000

f Discharge computed from elevations based on partial recorder record.
h Discharge computed from staff-gage reading or mean of twice-daily staff-gage readings.

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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. Altitude of gage, about 2,050 feet above mean sea level (from 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 1940. November 1903 to May 1906, at site 7 miles downstream.

Average discharge.- 17 years (1904-5, 1908-15, 1931-40), 166 second-feet.

Extremes.- Maximum discharge during year, 790 second-feet Feb. 28 (gage height, 2.49 feet); minimum, 79 second-feet Aug. 30 to Sept. 2 (gage height, 0.93 foot).
1903-17, 1931-40: 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. No diversion or regulation above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	89	89	88	168	120	366	351	259	137	96	86	80
2	90	88	88	190	114	395	351	277	133	95	86	80
3	89	88	88	199	111	356	305	263	129	95	85	80
4	91	88	88	190	114	281	266	256	125	96	84	88
5	96	88	88	163	133	236	252	227	121	95	81	85
6	90	89	88	141	475	215	233	213	120	95	81	82
7	88	104	88	129	382	213	233	204	125	94	82	82
8	88	91	102	121	263	233	259	204	120	94	82	81
9	88	90	109	118	256	218	351	218	116	94	82	81
10	88	89	104	114	407	207	366	249	112	94	81	82
11	88	88	101	107	346	190	326	263	111	94	80	82
12	88	88	95	107	263	178	313	246	111	94	80	82
13	88	86	92	106	230	168	335	230	111	91	80	90
14	88	86	98	104	204	161	335	224	111	91	80	86
15	88	86	125	102	188	166	292	218	109	91	80	86
16	89	86	173	102	173	193	263	213	107	91	80	88
17	89	86	170	104	207	199	249	201	106	92	80	91
18	89	88	135	102	224	190	263	199	104	a92	80	95
19	90	88	116	101	196	186	252	199	102	a93	80	89
20	89	88	120	100	176	186	243	193	102	a93	80	88
21	89	88	125	100	166	188	230	190	102	a92	80	88
22	89	88	120	98	163	193	230	186	101	a91	80	88
23	89	88	114	96	152	199	252	183	100	a89	80	86
24	89	89	109	95	147	207	270	183	100	a89	80	86
25	89	88	102	95	207	281	263	183	98	a89	80	86
26	90	88	101	96	475	395	259	170	98	a91	80	86
27	91	88	100	101	596	562	249	159	98	a92	80	86
28	92	88	100	114	652	414	288	152	98	a92	80	90
29	90	88	102	129	546	340	281	147	96	a93	80	88
30	89	89	114	131	-	309	266	143	96	a90	80	88
31	89	-	131	127	-	301	-	139	-	88	80	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,769	96	88	89.3	1.33	1.54	5,490
November	2,656	104	86	88.5	1.32	1.47	5,270
December	3,374	173	88	109	1.63	1.87	6,690
Calendar year 1939	55,494	600	86	152	2.27	30.78	110,100
January	3,750	199	95	121	1.81	2.08	7,440
February	7,686	652	111	265	3.96	4.27	15,240
March	7,926	562	161	256	3.82	4.40	15,720
April	8,426	366	230	281	4.19	4.68	16,710
May	6,391	277	139	206	3.07	3.55	12,680
June	3,299	137	96	110	1.64	1.83	6,540
July	2,866	96	88	92.5	1.38	1.59	5,680
August	2,510	86	80	81.0	1.21	1.39	4,980
September	2,570	95	80	85.7	1.28	1.43	5,100
Water year 1939-40	54,223	652	80	148	2.21	30.10	107,500

Peak discharge.- Feb. 6 (1:30 p.m.) 700 sec.-ft.; Feb. 28 (4 p.m.) 790 sec.-ft.
a No gage-height record; discharge computed on basis of unpublished records for station above power diversion dam near Milton.

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Mill Creek near Walla Walla, Wash.

Location.- Water-stage recorder, lat. 46°00', long. 118°07', in SE¼SE¼ sec. 12, T. 6 N., R. 37 E., 4 miles downstream from city of Walla Walla diversion dam (revised), 4½ miles upstream from Blue Creek, and 11½ miles southeast of Walla Walla. Datum of gage is 2,000 feet above mean sea level (unadjusted). Prior to Nov. 15, 1939, staff gage at same site but at datum 13.24 feet higher.

Records available.- August 1913 to September 1917, April to September 1938, October 1939 to September 1940.

Extremes.- Maximum discharge during year, 763 second-feet Feb. 28 (gage height, 16.13 feet); minimum discharge observed, 16 second-feet Oct. 11-15; minimum gage height observed, 14.06 feet Oct. 11; but may have been less during period of no gage-height record, Oct. 1-10.

1913-17, 1938, 1939-40: Maximum discharge observed, 1,120 second-feet May 13, 1917 (gage height, 4.09 feet, site and datum then in use); minimum observed, that of Oct. 11-15, 1939.

Remarks.- Records excellent except those for period of staff-gage record, which are good, and those for periods of no gage-height record, which are poor. City of Walla Walla diverts about 22 second-feet 4 miles above the gage for municipal supply.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		a24	25	71	57	350	199	162	40	29	28	26
2		a24	24	77	53	429	212	149	39	27	27	26
3		h24	24	87	50	346	194	134	38	27	26	26
4		h24	24	91	59	244	169	130	38	27	26	34
5	a18	a24	24	81	88	188	152	116	38	27	26	32
6		h23	24	68	464	154	136	105	37	27	26	29
7		h23	23	57	352	149	133	96	42	27	26	28
8		h29	29	51	218	185	147	90	39	28	26	27
9		h27	32	46	205	177	265	87	36	28	26	26
10		h24	37	46	312	152	307	89	34	27	26	27
11	h16	h24	33	40	241	129	247	89	34	27	26	27
12	h16	a24	29	40	166	113	196	83	33	26	26	27
13	h17	h24	27	38	136	102	174	74	32	26	26	30
14	h16	h24	28	37	115	96	164	71	31	26	26	30
15	h16	f23	36	36	100	95	142	66	31	27	26	30
16	h18	23	57	37	91	119	125	61	31	27	26	29
17	h19	23	69	39	121	129	111	58	36	26	26	30
18	h18	23	47	40	152	121	105	56	31	26	26	35
19	h18	23	39	40	127	115	104	54	31	26	26	30
20	h18	23	57	39	109	109	96	54	31	26	26	29
21	h18	23	71	36	100	104	91	53	31	26	26	29
22	a18	25	56	34	93	102	88	52	31	26	28	29
23	h18	25	47	32	85	100	120	50	30	26	29	28
24	h27	25	40	32	78	100	227	50	30	26	29	28
25	h19	24	36	31	143	127	195	50	30	26	f30	28
26	h23	23	33	31	429	178	167	48	30	30	a29	27
27	h27	23	31	37	472	292	144	45	30	46	a28	30
28	a26	25	31	48	596	269	165	43	29	32	f27	30
29	a25	24	33	68	548	227	184	42	29	29	27	30
30	a25	25	44	71	-	185	176	42	30	28	26	30
31	a24	-	53	66	-	172	-	40	-	28	26	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	602	27	-	19.4	1,190
November	722	29	23	24.1	1,430
December	1,163	71	23	37.5	2,310
Calendar year	-	-	-	-	-
January	1,547	91	31	49.9	3,070
February	5,760	596	50	199	11,420
March	5,358	429	95	173	10,630
April	4,935	307	88	164	9,790
May	2,339	162	40	75.5	4,640
June	1,002	42	29	33.4	1,990
July	860	46	26	27.7	1,710
August	828	30	26	26.7	1,640
September	867	35	26	28.9	1,720
Water year 1939-40	25,983	596	-	71.0	51,540

a No gage-height record; discharge interpolated or computed on basis of records for Asotin Creek near Asotin.
f Fragmentary gage-height record; discharge computed from partly estimated gage heights.
h Discharge computed from once or twice-daily staff-gage readings.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Blue Creek near Walla Walla, Wash.

Location.- Water-stage recorder, lat. 46°03'40", long. 118°07'50", in SE¼NW¼ sec. 25, T. 7 N., R. 37 E., 1 mile upstream from mouth and 10 miles east of Walla Walla. Datum of gage is at mean sea level (unadjusted).

Drainage area.- 17.0 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during year, 226 second-feet Feb. 28 (elevation, 1,742.2 feet); minimum discharge observed, 0.1 second-foot Oct. 14, but may have been less during period of no gage-height record, Oct. 1-11.

Remarks.- Records excellent except those for periods of no gage-height record, which are poor, and those below 3 second-feet, which are fair. No diversion or regulation.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 12 to Feb. 28 (1:30 p.m.)

1,740.38	0.2	1,741.1	27.5	1,740.1	0.3	1,740.9	25.3
1,740.4	.4	1,741.3	44.7	1,740.2	1.0	1,741.1	41.1
1,740.5	1.4	1,741.5	68.5	1,740.3	2.2	1,741.3	62.0
1,740.7	5.5	1,742.0	168	1,740.5	6.4	1,741.5	88.2
1,740.9	14.5			1,740.7	14.0	1,742.0	174

(1:30 p.m.) Feb. 28 to Sept. 30

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		a0.7	0.9	8.5	9.4	94	64	24	2.0	0.7	1.0	0.8
2		a.6	.9	9.8	8.1	139	73	21	1.9	.6	1.0	.9
3		h.6	.9	13	7.3	109	56	18	1.7	.6	f.9	.8
4		h.8	.9	12	8.9	72	45	18	1.6	.6	a.8	1.7
5		a.7	.8	10	14	50	42	f15	1.6	.6	f.8	1.7
6	a0.4	h.6	.8	8.1	69	39	39	f15	1.5	.6	.7	1.4
7		h1.1	.8	6.9	59	38	36	f13	2.0	.6	.7	1.2
8		h1.4	1.1	5.8	44	42	36	11	1.9	.6	.7	1.1
9		h1.2	1.3	5.2	40	38	62	9.4	1.5	.6	.6	1.1
10		h.9	1.6	5.8	50	33	66	8.4	1.3	.6	.7	1.2
11		h.6	2.5	5.5	45	29	56	7.1	1.3	.6	.6	1.2
12	h.3	a.6	1.8	5.8	35	26	47	6.4	1.2	.6	.6	1.3
13	h.2	h.6	1.4	5.2	32	22	38	5.6	1.0	.6	.6	1.7
14	h.1	h.6	1.4	4.6	27	19	31	5.1	1.1	.7	.7	f1.7
15	a.1	f.6	1.8	4.6	f24	17	25	4.6	1.0	.7	.7	a1.7
16	a.5	.8	4.4	5.2	22	19	20	3.9	1.0	.7	.7	a1.7
17	h.6	.9	6.5	6.5	30	18	17	3.7	1.0	.7	.7	a1.6
18	h.6	.9	4.1	6.9	45	f16	14	3.5	.8	.6	.7	a2.5
19	h.8	.9	3.4	6.2	39	f15	12	3.3	.8	.6	.7	a2.0
20	h.8	.9	4.4	f5.2	34	13	11	3.1	.8	.7	.8	f1.9
21	h.9	.9	6.9	f4.4	30	12	9.4	2.8	.8	.7	.8	1.9
22		1.0	5.8	3.9	28	11	8.7	2.6	.8	.6	.8	1.9
23		1.0	4.9	3.4	25	11	15	2.4	.8	.6	.8	1.6
24		1.0	4.1	2.8	25	11	31	2.4	.8	.6	.8	1.5
25		1.0	3.4	f2.5	59	15	29	2.4	.8	.7	.7	1.4
26	a1.0	1.0	3.0	f2.5	152	20	26	2.3	.7	1.2	.6	1.3
27		.9	2.8	3.9	136	30	22	2.0	.7	3.0	.8	1.9
28		.9	2.6	7.7	139	32	25	1.9	.7	1.7	.8	2.3
29		.9	2.8	11	127	33	27	1.9	.7	1.3	.8	2.3
30		.9	3.9	12	-	31	26	1.9	.7	1.2	.8	2.2
31		-	5.5	11	-	36	-	1.9	-	1.1	.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	19.3	-	-	0.62	38
November	25.5	1.4	0.6	.85	51
December	87.4	6.9	.8	2.82	173
Calendar year	-	-	-	-	-
January	205.9	13	2.5	6.64	408
February	1,363.7	152	7.3	47.0	2,700
March	1,090	139	11	35.2	2,160
April	1,009.1	73	8.7	33.6	2,000
May	223.6	24	1.9	7.21	444
June	34.5	2.0	.7	1.15	68
July	25.3	3.0	.6	.82	50
August	23.2	1.0	.6	.75	46
September	47.5	2.5	.8	1.58	94
Water year 1939-40	4,155.0	152	-	11.4	8,230

a No gage-height record; discharge interpolated or computed on basis of records for Mill Creek near Walla Walla and Asotin Creek near Asotin.
f Fragmentary gage-height record; discharge computed from partly or wholly estimated gage heights.
h Computed from once or twice-daily staff-gage readings.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 2½ miles northeast of Gibbon. Datum of gage is 1,855.25 feet above mean sea level (general adjustment of 1929).

Drainage area.- 125 square miles.

Records available.- June 1939 to September 1940. April 1933 to June 1939, at site 1 mile downstream.

Extremes.- Maximum discharge during year, 1,450 second-feet Mar. 27 (gage height, 5.23 feet); minimum, 33 second-feet July 14, 15, Aug. 11, 12.
1933-40: Maximum discharge, 2,120 second-feet Apr. 12, 1936 (gage height, 2.95 feet, site and datum then in use); minimum, 28 second-feet Sept. 27, 1935, Jan. 9, 1937 (site and datum then in use).

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

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 17 to Dec. 31, Feb. 7 to Mar. 14, Sept. 14-30)

2.0	51	2.8	225	3.9	695
2.2	82	3.0	290	4.2	850
2.4	119	3.3	415	4.5	1,015
2.6	167	3.6	550	5.0	1,310

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	44	40	192	157	828	993	374	104	48	43	38
2	45	43	40	213	142	1,080	894	388	100	47	43	38
3	44	41	38	243	133	883	705	366	95	47	40	38
4	47	41	37	255	142	640	572	354	89	45	40	50
5	52	41	37	225	164	514	492	318	84	45	40	54
6	45	43	37	178	891	420	438	283	80	44	40	45
7	44	44	37	150	785	384	438	269	93	43	38	41
8	43	44	47	130	595	536	532	255	89	41	37	41
9	41	44	57	119	577	496	710	255	77	41	36	41
10	41	44	66	115	785	428	700	276	74	38	36	40
11	40	44	60	113	655	362	620	280	71	37	35	41
12	40	44	52	113	469	314	577	262	69	36	35	43
13	40	44	54	108	370	262	605	237	66	35	35	51
14	40	44	54	102	310	266	600	225	64	35	35	45
15	41	44	62	98	266	269	528	210	64	34	35	43
16	43	44	89	96	234	366	456	195	63	36	35	43
17	40	44	100	96	302	410	406	184	63	36	35	43
18	40	44	84	96	338	379	397	173	62	36	35	57
19	40	44	72	91	290	350	384	170	58	38	35	47
20	40	43	79	86	258	338	362	164	56	38	35	41
21	40	43	87	82	246	342	330	160	57	38	36	41
22	41	43	82	79	231	354	310	154	54	36	37	41
23	41	41	77	76	204	342	338	150	56	37	37	41
24	44	41	72	74	192	415	420	147	54	37	38	40
25	43	41	68	71	434	590	397	150	52	40	37	38
26	43	41	64	76	944	922	388	133	51	50	38	38
27	44	40	63	82	1,040	1,270	362	124	51	62	38	40
28	44	40	66	137	1,230	971	406	117	51	50	37	44
29	45	40	69	204	1,110	800	420	111	50	44	38	43
30	45	41	84	198	-	695	392	111	50	44	37	-
31	44	-	111	175	-	720	-	108	-	43	37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,323	52	40	42.7	0.342	0.39	2,620
November	1,279	44	40	42.6	.341	.38	2,540
December	1,985	111	37	64.0	.512	.59	3,940
Calendar year 1939	69,628	1,840	35	191	-	-	138,100
January	4,073	255	71	131	1.05	1.21	8,080
February	13,494	1,230	133	465	3.72	4.01	26,760
March	16,946	1,270	262	547	4.38	5.04	33,610
April	15,172	993	310	506	4.05	4.51	30,090
May	6,703	388	108	216	1.73	1.99	13,300
June	2,047	104	50	68.2	.546	.61	4,060
July	1,281	62	34	41.3	.330	.38	2,540
August	1,153	43	35	37.2	.298	.34	2,290
September	1,289	57	38	43.0	.344	.38	2,560
Water year 1939-40	66,745	1,270	34	182	1.46	19.83	132,400

Peak discharge.- Feb. 6 (3 p.m.) 1,150 sec.-ft.; Feb. 25 (11 p.m.) 938 sec.-ft.; Feb. 28 (9:30 p.m.) 1,390 sec.-ft.; Mar. 2 (12 m.) 1,150 sec.-ft.; Mar. 27 (2:30 p.m.) 1,450 sec.-ft.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum 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 1940. May 1921 to September 1934, at site about 2¼ miles downstream.

Average discharge.- 17 years (1923-40), 436 second-feet.

Extremes.- Maximum discharge during year, 4,420 second-feet Feb. 28 (gage height, 4.30 feet); minimum, 10 second-feet July 13-16.

1891-92, 1903-5, 1921-40: Maximum discharge, 13,500 second-feet (estimated), Apr 1, 1931 (gage height, 10.7 feet, site and datum then in use); minimum, 7 second-feet Aug. 14, 1924 (site and datum then in use).

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 fair except those below 80 second-feet, which are poor. Small diversions above station for irrigation; no regulation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	45	61	187	387	2,620	2,750	607	127	29	19	26
2	31	45	61	270	345	3,530	2,650	594	127	22	19	26
3	35	45	61	320	305	3,070	2,080	587	112	22	19	26
4	35	45	61	370	305	2,130	1,640	568	98	24	21	29
5	35	45	63	387	320	1,630	1,310	542	95	24	21	31
6	35	48	66	355	1,250	1,280	1,060	517	92	19	21	35
7	35	48	63	305	2,160	1,080	925	458	92	19	21	38
8	35	48	63	275	1,620	1,350	1,060	420	98	21	19	38
9	35	48	79	251	1,340	1,450	2,000	404	85	18	18	36
10	35	48	85	223	1,600	1,230	1,980	392	88	17	16	33
11	35	50	92	218	1,670	1,040	1,760	404	72	14	16	31
12	35	50	88	218	1,210	898	1,510	398	66	12	16	27
13	35	50	82	205	1,020	784	1,420	370	63	10	14	31
14	35	50	79	196	853	718	1,390	355	58	10	13	33
15	35	50	82	183	734	686	1,190	330	56	10	13	36
16	36	53	95	178	649	818	1,000	305	56	12	14	36
17	36	53	116	178	1,000	1,050	862	280	56	16	16	36
18	36	53	123	178	1,060	1,020	767	246	48	19	16	58
19	36	53	109	170	880	944	726	227	48	18	18	66
20	36	53	105	162	734	889	678	227	43	17	18	61
21	36	56	112	154	656	871	621	223	43	24	18	56
22	36	56	112	138	607	862	574	200	43	21	18	50
23	36	56	112	130	561	853	561	196	45	22	21	45
24	36	56	109	123	511	916	656	183	36	21	21	38
25	40	56	105	120	656	1,190	649	183	35	18	21	40
26	43	58	98	112	2,500	1,860	628	183	33	17	24	36
27	43	58	98	112	3,110	3,430	600	174	33	19	26	38
28	43	58	95	205	3,450	2,890	594	146	31	29	26	40
29	43	58	95	350	3,610	2,460	642	120	27	29	26	45
30	43	58	102	398	-	2,040	614	120	26	26	26	48
31	43	-	123	404	-	1,880	-	120	-	21	26	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,141	43	31	36.8	2,260
November	1,550	58	45	51.7	3,070
December	2,795	123	61	90.2	5,540
Calendar year 1939	152,486	5,200	13	418	302,400
January	7,075	404	112	228	14,030
February	35,103	3,610	305	1,210	69,630
March	47,469	3,530	686	1,531	94,150
April	34,897	2,750	561	1,163	69,220
May	10,079	607	120	325	19,990
June	1,931	127	26	64.4	3,830
July	600	29	10	19.4	1,190
August	601	26	13	19.4	1,190
September	1,169	66	26	39.0	2,320
Water year 1939-40	144,410	3,610	10	395	286,400

Peak discharge.- Feb. 6 (11 p.m.) 2,480 sec.-ft.; Feb. 28 (8 p.m.) 4,420 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 regulated by storage in Furnish Reservoir 1910-16) and October 1934 to September 1940. June 1915 to September 1934, at site 5 miles upstream, above old Furnish Reservoir.

Average discharge.- 37 years, 658 second-feet.

Extremes.- Maximum discharge during year, 4,460 second-feet Feb. 29 (gage height, 6.01 feet); minimum, 22 second-feet Oct. 1.
1903-40: Maximum discharge, about 20,000 second-feet May 30, 1906 (gage height, about 15.0 feet, datum then in use, from floodmarks); minimum, 12 second-feet Aug. 10-12, 1908.

Remarks.- Records good. Diversions above station for irrigation. Flow regulated to some extent by mills at Pendleton and, since 1927, by McKay Reservoir.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 6				Feb. 7 to Sept. 30			
1.2	151	2.0	466	0.7	43	2.6	790
1.4	215	2.5	770	.8	59	3.0	1,090
1.6	287	3.0	1,140	1.0	98	3.5	1,510
1.8	368			1.2	151	4.0	2,000
				1.4	213	4.5	2,530
Note.- Same as following table below 1.2 feet.				1.7	322	5.0	3,130
				2.0	452	5.5	3,770
				2.3	610	6.0	4,450

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	56	64	170	406	3,110	3,290	676	367	376	269	145
2	32	56	64	246	368	3,820	3,210	658	351	372	276	143
3	46	59	64	299	339	3,610	2,510	676	351	359	283	143
4	45	56	64	355	322	2,730	2,000	640	338	351	283	145
5	46	54	63	382	f339	2,260	1,650	628	a330	347	283	160
6	48	56	64	360	1,100	1,840	1,400	545	a340	334	287	166
7	48	56	64	322	2,240	1,560	1,260	486	a350	330	291	70
8	45	56	64	295	1,710	1,520	1,380	452	f342	330	302	49
9	45	56	79	280	1,410	1,680	2,320	429	330	326	299	42
10	43	61	88	257	1,600	1,480	2,140	457	322	326	295	37
11	42	64	103	f254	1,800	1,270	1,900	520	322	322	a295	33
12	40	61	92	a252	1,380	1,100	1,650	486	338	322	295	29
13	39	56	81	a245	1,150	958	1,530	486	359	318	299	35
14	40	57	79	a235	972	868	1,480	481	355	314	295	39
15	40	59	83	f222	825	818	1,310	490	363	322	295	39
16	f42	59	92	212	718	898	1,130	462	376	318	295	36
17	a41	59	120	215	995	1,220	950	438	367	322	295	36
18	a41	59	137	218	1,240	1,220	839	424	376	f322	216	61
19	a41	63	123	212	f988	1,130	778	402	380	f330	166	59
20	a41	57	116	205	868	1,070	724	397	376	326	157	54
21	a41	57	118	185	748	1,040	658	393	376	310	181	49
22	a43	59	120	182	700	1,030	592	389	376	302	184	48
23	f45	61	118	173	670	1,010	562	420	386	295	233	43
24	42	61	116	166	598	1,050	694	359	380	272	269	43
25	43	59	116	163	670	1,300	694	384	380	279	272	42
26	48	61	116	154	f2,790	2,060	670	402	376	291	272	42
27	56	61	106	154	3,180	3,860	646	351	380	291	272	40
28	57	61	103	f198	3,510	3,540	628	351	376	258	261	42
29	57	63	106	334	4,180	2,770	724	380	372	244	145	46
30	56	64	116	415	-	2,240	700	380	372	247	131	49
31	54	-	129	425	-	1,980	-	376	-	272	143	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,372	57	25	44.3	2,720
November	1,767	64	54	58.9	3,500
December	2,968	137	63	95.7	5,890
Calendar year 1939	198,956	5,760	18	545	394,600
January	7,785	425	154	251	15,440
February	37,816	4,180	322	1,304	75,010
March	56,062	3,860	818	1,808	111,200
April	40,019	3,290	562	1,334	79,380
May	14,418	676	351	465	28,600
June	10,807	386	322	360	21,440
July	9,728	376	244	314	19,300
August	7,839	302	131	253	15,550
September	1,965	166	29	65.5	3,900
Water year 1939-40	192,546	4,180	25	526	381,900

Peak discharge.- Feb. 7 (4 a.m.) 2,530 sec.-ft.; Feb. 18 (4 a.m.) 1,470 sec.-ft.; Feb. 29 (1 a.m.) 4,460 sec.-ft.; Mar. 2 (9 a.m.) 4,310 sec.-ft.; Mar. 27 (4 p.m.) 4,280 sec.-ft.
a No gage-height record; discharge computed on basis of records for stations at Pendleton and near Gibbon and on McKay Creek near Pendleton.
f Computed on basis of partly estimated gage-height record.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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., 1½ miles downstream from West Division main canal of Umatilla project and 2 miles upstream from Umatilla and mouth of river. Datum 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 1940.

Average discharge.- 37 years, 500 second-feet.

Extremes.- Maximum discharge during year, 3,740 second-feet Feb. 29 (gage height, 5.46 feet); minimum, 10 second-feet July 3 (gage height, 2.10 feet).
1903-40: Maximum discharge, 19,600 second-feet May 31, 1906 (gage height, 11.0 feet); no flow at times.

Remarks.- Records good except those for low-water periods, which are fair. Many diversions above station for irrigation; Brownell canal diverts below station. Flow regulated by McKay and Cold Springs Reservoirs.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

2.1	10.2	3.5	605
2.3	24	4.0	1,160
2.5	52	4.5	1,930
2.8	130	5.0	2,830
3.1	280	5.5	3,820

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	100	127	120	226	3,150	1,930	12	14	14	13	14
2	18	154	120	120	210	3,060	2,790	12	14	14	14	14
3	19	150	111	124	185	3,490	2,230	12	19	32	13	14
4	18	146	117	315	170	2,740	1,650	12	14	196	13	14
5	17	138	104	238	162	2,020	1,290	36	14	28	13	15
6	16	142	108	256	175	1,560	994	74	21	18	13	14
7	16	138	104	238	1,710	1,270	833	31	25	21	13	14
8	15	138	108	210	1,630	1,170	822	14	21	20	13	14
9	14	134	104	185	1,290	1,510	1,440	12	23	18	13	14
10	16	134	101	158	1,230	1,360	1,660	12	18	16	13	14
11	14	130	104	142	1,580	1,150	1,440	12	15	14	13	15
12	14	142	101	134	1,330	934	1,220	12	14	13	14	15
13	15	158	98	127	1,020	800	1,040	12	13	13	14	15
14	14	158	101	124	877	710	982	12	13	13	14	15
15	14	158	101	124	730	643	877	12	13	13	14	15
16	14	162	98	120	634	587	672	12	13	13	14	15
17	14	158	101	120	672	800	506	12	13	13	14	15
18	15	154	120	117	1,040	866	350	12	13	13	14	15
19	15	154	117	117	934	770	244	12	13	13	14	15
20	14	146	117	114	770	690	127	12	13	13	14	15
21	13	146	117	111	652	624	44	12	14	13	14	15
22	13	142	114	114	587	569	13	12	14	13	14	15
23	13	134	114	114	551	524	12	13	14	13	14	15
24	13	127	111	114	481	490	12	13	15	13	14	15
25	13	117	117	104	447	596	12	12	14	13	16	15
26	13	108	111	108	1,580	1,200	12	13	14	13	16	15
27	19	117	111	108	2,660	2,370	11	30	14	14	15	15
28	38	111	111	101	3,000	3,060	12	22	16	50	14	15
29	38	117	111	104	3,530	2,370	12	14	16	18	14	15
30	31	130	114	150	-	1,860	12	13	15	14	15	15
31	28	-	111	210	-	1,480	-	13	-	14	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	538	38	13	17.4	1,070
November	4,143	162	100	138	8,220
December	3,404	127	98	110	6,750
Calendar year 1939	98,928	4,420	12	271	196,200
January	4,541	315	101	146	9,010
February	30,063	3,530	162	1,037	59,630
March	44,423	3,490	490	1,433	88,110
April	23,249	2,790	11	775	46,110
May	514	74	12	16.6	1,020
June	462	25	13	15.4	916
July	696	196	13	22.5	1,380
August	430	16	13	13.9	853
September	441	15	14	14.7	875
Water year 1939-40	112,904	3,530	11	308	223,900

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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, October 1926 to September 1940 (1927-29 incomplete).

Average discharge.- 12 years (1926-27, 1929-40), 78.8 second-feet.

Extremes.- Maximum discharge during year, 1,780 second-feet Mar. 2 (gage height, 4.35 feet), from rating curve extended above 800 second-feet; no flow at times.
1921, 1926-40: Maximum discharge, 6,000 second-feet Apr. 1, 1931 (gage height, 7.4 feet, present datum); no flow at times.

Remarks.- Records fair. Many small diversions above station for irrigation; none between station and McKay Reservoir.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		a0	2.4	12	55	475	610	72	3.4			
2		a0	2.4	16	47	1,340	662	70				
3		a0	2.0	20	42	922	508	68				
4		a0	2.0	26	44	640	415	66	a2.8			
5		a0	2.0	34	48	469	371	64				
6		a0	2.0	34	403	360	315	55				
7		a.2	2.1	30	317	315	288	45				
8		a.4	2.2	27	329	393	296	44	2.2			
9		a.6	2.6	26	345	340	534	40				
10		a.8	a2.8	24	448	301	488	32				
11		a1.0	a3.0	24	361	257	410	26				
12		a1.2	a3.2	27	269	218	335	26				
13		a1.4	a3.5	26	211	190	274	a26				
14		a1.6	a3.8	26	181	174	229	27	a1.6			
15		a1.8	a4.0	26	154	164	197	a24				
16		a1.8	4.2	26	148	197	180	a22				
17		1.8	4.3	28	194	233	132	20				
18		1.7	4.7	30	253	237	114	21				
19		1.7	4.7	31	218	211	97	18				
20		1.7	5.3	29	184	197	87	17	1.2			
21		1.7	6.5	26	160	180	74	15				
22		2.1	6.2	23	142	170	70	14				
23		2.5	6.5	21	125	160	68	14				
24		2.7	7.4	20	110	157	82	12				
25		2.8	9.0	19	183	225	72	11	a.6			
26		2.8	8.1	18	859	320	68	8.3				
27		2.6	7.4	18	765	463	62	4.4				
28		2.2	7.4	48	782	433	66	3.0				
29		2.2	7.1	94	632	382	74	1.4				
30		2.2	7.4	73	-	330	72	1.9				
31		-	9.0	64	-	320	-	2.6	-			

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	41.5	2.8	0	1.38	82
December	145.2	9.0	2.0	4.68	288
Calendar year 1939	27,770.9	1,090	0	76.1	55,090
January	936	84	12	30.2	1,860
February	8,009	859	42	276	15,890
March	10,773	1,340	157	348	21,370
April	7,230	662	62	241	14,340
May	870.6	72	1.4	28.1	1,730
June	47.2	3.4	-	1.57	94
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1939-40	28,052.5	1,340	0	76.6	55,650

Peak discharge.- Feb. 6 (7 a.m.) 520 sec.-ft.; Mar. 2 (11 a.m.) 1,780 sec.-ft.; Apr. 1 (6 p.m.) 765 sec.-ft.; Apr. 9 (9 a.m.) 733 sec.-ft.
a No gage-height record; discharge computed or interpolated on basis of information furnished by watermaster.
Note.- No flow, Oct. 1 to Nov. 6 and July 1 to Sept. 30, based on information furnished by watermaster.

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McKay Reservoir near Pendleton, Oreg.

Staff gage, lat. 45°36', long. 118°48', at 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 1940. Maximum contents observed during year, 60,950 acre-feet June 1 (elevation, 1,311 feet); minimum, 5,821 acre-feet (interpolated) Sept. 30. Maximum contents observed during period 1930-40, 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 (elevation, 1,217.6 feet).

Reservoir is formed by gravel-fill dam with concrete facing completed in 1926; storage began in 1927. Capacity, 73,660 acre-feet between elevations 1,182 feet (floor of trash-rack structure) and 1,322 feet (top of spillway gates). Dead storage not known. Water is used for irrigation of lands along Umatilla River near Echo, Stanfield, and Hermiston. Gage read to nearest foot or half-foot on first day of each month; readings furnished by Bureau of Reclamation.

Monthly elevation and contents, water year October 1939 to September 1940

Month	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 1	1,248.2	14,720	-
Nov. 1	-	-	-
Dec. 1	-	-	-
Calendar year 1939	-	-	-2,470
Jan. 1	1,248	14,640	-80
Feb. 1	1,249.0	15,120	+480
Mar. 1	1,279	32,840	+17,720
Apr. 1	1,304.5	54,160	+21,320
May 1	-	†67,660	+13,500
June 1	1,311	60,950	-6,710
July 1	1,289.5	40,720	-20,230
Aug. 1	1,261.5	21,720	-19,000
Sept.1	1,230	7,115	-14,605
Oct. 1	-	‡5,776	-1,339
Water year 1939-40	-	-	-8,944

†Computed from record of inflow and 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 1940 (diversions by irrigation canal at gage not included since 1932).

Average discharge.- 19 years (1919-23, 1924-27, 1928-40, 88.5 second-feet (unadjusted).

Extremes.- Maximum daily discharge during year, 364 second-feet June 26 to July 2 (gage height, 1.40 feet); no flow Oct. 1 to Mar. 31, Sept. 7-30.
1918-40: Maximum discharge observed, 3,250 second-feet Feb. 10, 1921, (gage height, 4.4 feet, site and datum then in use) from rating curve extended above 1,110 second-feet; no flow at times.

Remarks.- Records fair. Total summer flow diverted above McKay Reservoir for irrigation. Flow completely regulated since 1927 by McKay Reservoir.

Rating-table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.0	0	0.8	120
.2	10	1.0	183
.4	37	1.2	264
.6	73		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								39	222	364	264	123
2								39	218	364	274	123
3								40	222	a338	269	123
4								40	210	a338	269	123
5								19	222	a338	278	123
6								3.0	230	317	283	82
7								4.4	239	322	288	0
8								4.4	230	317	302	0
9							a6.0	37	230	317	298	0
10								84	235	312	302	0
11								118	251	312	302	0
12								102	283	312	298	0
13								108	274	307	298	0
14								152	269	312	293	0
15								166	302	317	293	0
16								169	307	312	288	0
17								173	322	312	269	0
18							6.5	180	333	312	176	0
19							a6.5	183	343	a312	137	0
20							a6.5	206	348	317	169	0
21							a6.5	a169	354	312	173	0
22							a6.5	a191	354	317	235	0
23							a6.5	a183	354	278	251	0
24							a6.5	a169	359	269	264	0
25							a6.5	214	359	269	256	0
26							6.5	210	364	278	256	0
27							6.5	173	364	264	251	0
28							19	206	364	218	191	0
29							58	230	364	218	110	0
30							46	235	364	251	123	0
31							-	235	-	264	123	-

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 1939	27,512	310	0	75.4	54,560
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	290.0	58	-	9.67	575
May	4,081.8	235	3.0	132	8,100
June	8,890	364	210	296	17,630
July	9,390	364	218	303	18,620
August	7,583	302	110	245	15,040
September	697	123	0	23.2	1,380
Water year 1939-40	30,931.8	364	0	84.5	61,340

a No gage-height record; discharge computed on basis of information furnished by watermaster.
Note.- No flow, Oct. 1 to Mar. 31 and Sept. 7-30, based on information furnished by watermaster.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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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 1940 (incomplete prior to October 1929).

Average discharge.- 11 years (1929-40), 27.7 second-feet.

Extremes.- Maximum discharge during year, 534 second-feet Apr. 16 (gage height, 3.83 feet); no flow at times.
1921-23, 1927-40: Maximum discharge, 1,640 second-feet Jan. 29, 1928 (gage height, 6.00 feet, site and datum then in use, from rating curve extended above 300 second-feet; no flow at times.

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

Rating-tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Jan. 2 to Feb. 25		Feb. 26 to June 17					
0.7	3.7	0.4	0.1	1.4	30	2.6	169
.9	9.4	.6	1.0	1.6	45	2.9	233
1.1	18	.8	3.0	1.8	62	3.2	314
1.3	30	1.0	7.1	2.0	84	3.5	410
		1.2	17	2.3	121		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	2.4	12	238	208	0.3	0			
2			0	2.4	13	317	272	.3	0			
3			0	2.6	14	236	224	.3	0			
4			0	3.0	14	187	193	.3	0			
5			0	3.0	15	151	179	.2	0			
6			0	3.5	17	128	151	.2	.1			
7			0	4.0	33	112	137	.3	.1			
8			0	4.7	42	124	160	.6	.1			
9			0	6.2	38	122	253	.6	0			
10			0	7.5	43	114	173	.6	0			
11			0	7.5	48	104	149	.7	0			
12			0	7.5	50	95	131	.6	0			
13			0	7.8	48	85	112	1.1	0			
14			0	8.1	44	76	97	1.4	0			
15			0	8.1	39	72	89	1.5	0			
16			0	8.4	37	74	76	1.4	0			
17			0	8.8	41	89	56	.5	0			
18			0	8.8	48	91	43	.6	0			
19			0	8.8	46	86	34	.7	0			
20			0	8.8	44	82	24	.2	0			
21			0	8.8	42	78	16	.4	0			
22			0	9.4	42	74	8.7	.1	0			
23			0	9.4	42	72	2.9	0	0			
24			0	10	41	72	4.4	0	0			
25			0	10	41	106	3.3	0	0			
26			0	10	128	164	1.3	0	0			
27			0	10	138	193	.6	0	0			
28			0	11	224	169	.4	.1	0			
29			0	11	314	167	.5	.1	0			
30			1.2	11	-	125	.5	.1	0			
31			2.4	11	-	118	-	0	-			

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	3.6	2.4	0	.12	7.1
Calendar year 1939	7,821.3	414	0	21.4	15,510
January	233.5	11	2.4	7.53	463
February	1,698	314	12	58.6	3,370
March	3,921	317	72	126	7,780
April	2,799.6	272	.4	93.3	5,550
May	13.2	1.5	0	.43	26
June	.3	.1	0	.01	.6
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1939-40	8,669.2	317	0	23.7	17,200

Peak discharge.- Feb. 26 (1 a.m.) 476 sec.-ft.; Feb. 28 (10 p.m.) 446 sec.-ft.; Mar. 2 (4 a.m.) 450 sec.-ft.; Apr. 16 (1 a.m.) 468 sec.-ft.; Apr. 16 (9 a.m.) 534 sec.-ft.
Note.- No gage-height record Oct. 1 to Jan. 1 and June 17 to Sept. 30; discharge computed on basis of information furnished by watermaster.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 canal (formerly published as Western Land & 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 canal, half a mile downstream from headgate 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 1940; records for some of the canals published separately prior to 1926.

Diversions, in acre-feet, water year October 1939 to September 1940

Month	Furnish canal	Umatilla project feed canal	Western Land canal	Allen canal	Maxwell canal	West Division main canal	Brownell canal
October	0	0	693	1,220	2,020	7,080	0
November	0	0	318	*296	†121	75	0
December	0	5,080	0	-	-	0	0
January	0	11,970	0	-	-	0	0
February	0	15,240	0	-	-	0	0
March	902	16,770	3,250	‡487	-	4,100	0
April	5,750	14,110	8,540	1,190	2,760	8,260	796
May	7,660	6,650	11,810	1,240	3,130	8,740	938
June	9,070	0	10,510	1,110	2,130	9,610	1,250
July	8,160	0	9,730	865	1,870	9,970	1,000
August	6,070	0	7,810	900	1,900	9,500	1,070
September	1,710	0	294	1,110	1,690	7,280	1,050
The year or period	39,322	69,820	52,955	-	-	64,615	6,104

*Nov. 1-9; no record Nov. 10-30.
†Nov. 1-6; no record Nov. 7-30.
‡Mar. 15-31; no record Mar. 1-14.
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. Datum of gage is 3,492.06 feet above mean sea level (general adjustment of 1929).

Records available.- October 1926 to September 1940. October 1916 to September 1917 (gage heights only) and March 1925 to September 1926, at site below outlet of Prairie power canal.

Average discharge.- 15 years (1925-40), 99.2 second-feet, including flow of Prairie power canal.

Extremes.- Maximum discharge observed during year, 383 second-feet Mar. 27 (gage height, 2.84 feet); minimum observed, 2.8 second-feet Aug. 14.
1926-40: Maximum discharge, 1,550 second-feet Mar. 19, 1932 (gage height, 4.7 feet), from rating curve extended above 500 second-feet; minimum, 2 second-feet Dec. 8, 21, 22, 1932, Aug. 10, 1934.

Remarks.- Records good. Diversions above station for irrigation and for power. (See record for Prairie power canal at Prairie City.)

Cooperation.- Staff gage read twice daily by employee of West Coast Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.5	9.9	5.8	31	12	119	228	77	86	12	6.4	3.5
2	11	8.7	5.8	37	11	259	228	67	110	13	5.8	3.5
3	14	8.7	5.8	53	12	148	204	77	85	12	5.2	3.5
4	15	8.3	5.8	46	13	122	219	93	68	12	4.8	11
5	23	7.7	21	37	12	102	173	95	62	13	4.6	15
6	31	7.7	7.1	25	28	88	148	89	47	12	4.6	8.7
7	25	7.1	6.4	19	31	85	148	64	44	11	4.8	7.1
8	22	7.1	6.8	17	34	132	157	50	41	11	4.3	6.1
9	22	7.1	7.7	21	35	100	171	40	35	9.9	3.9	5.8
10	21	6.8	11	21	46	95	149	48	32	12	5.0	6.4
11	18	5.8	11	13	44	88	139	56	26	9.9	4.6	5.8
12	17	6.4	7.7	13	35	79	137	79	18	7.7	4.3	5.8
13	17	6.1	7.7	9.9	35	69	160	105	13	6.4	3.9	12
14	16	5.8	7.1	9.5	35	64	198	99	15	7.1	3.5	15
15	15	5.8	8.3	9.9	31	59	208	96	14	7.1	3.9	25
16	15	5.8	11	12	27	67	184	90	14	8.0	3.5	13
17	14	5.8	12	12	30	69	149	77	14	9.1	3.7	16
18	12	5.8	8.7	14	30	67	130	74	13	9.9	3.7	22
19	10	5.8	8.3	9.1	29	68	134	68	12	9.1	3.5	22
20	9.9	5.8	9.1	13	20	72	160	72	9.9	11	3.5	20
21	9.9	5.8	8.3	13	16	76	141	67	11	9.5	3.5	20
22	9.5	5.8	7.7	11	21	82	129	62	12	8.3	3.5	16
23	10	5.8	7.7	8.7	14	88	129	67	11	7.4	3.2	12
24	9.9	5.8	7.1	9.9	18	96	119	69	10	6.4	3.5	9.5
25	9.9	5.8	6.1	9.1	50	164	111	99	9.1	5.8	3.5	9.1
26	10	5.9	6.4	13	108	239	110	100	11	7.1	3.2	9.1
27	9.9	5.2	7.4	16	130	371	99	92	11	12	3.2	8.3
28	11	5.5	7.4	15	158	302	98	77	11	11	3.2	8.3
29	10	5.5	9.1	12	148	261	100	65	9.9	8.7	3.2	9.9
30	9.1	5.8	23	12	-	243	93	76	12	7.7	3.2	8.3
31	9.5	-	27	11	-	285	-	62	-	7.1	3.5	-

Month	River only				River and Prairie power canal			
	Maximum	Minimum	Mean	Run-off in acre-feet	Maximum	Minimum	Mean	Run-off in acre-feet
October	31	9.1	14.4	885	62	38	53.3	3,280
November	9.9	5.2	6.49	386	64	56	58.3	3,470
December	28	5.8	9.56	588	94	37	64.2	3,950
Calendar year 1939	1,020	5.0	53.3	38,583	1,070	6	94.9	68,690
January	53	8.7	17.8	1,100	115	52	76.1	4,680
February	158	11	41.8	2,410	221	68	103	5,920
March	371	59	134	8,250	435	119	196	12,060
April	228	93	152	9,030	296	155	217	12,940
May	105	40	75.9	4,670	173	106	142	8,760
June	110	9.1	28.9	1,720	173	16	59.7	3,550
July	13	5.8	9.49	584	71	22	44.9	2,760
August	6.4	3.2	4.01	246	59	5.5	18.1	1,110
September	25	3.5	11.4	680	80	14	57.0	3,390
Water year 1939-40	371	3.2	42.1	30,549	435	5.5	90.7	65,870

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. Datum of gage is 2,232.10 feet above mean sea level (general adjustment of 1929).

Records available.- April 1926 to September 1940.

Average discharge.- 14 years, 338 second-feet.

Extremes.- Maximum discharge during year, 3,270 second-feet Mar. 27 (gage height, 10.27 feet), from rating curve extended above 2,300 second-feet; minimum, 4.9 second-feet Aug. 29-31 (gage height, 1.14 feet).

1926-40: Maximum discharge, 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 below 10 second-feet, which are fair. Many diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Aug. 9-24)

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
1.8	65	4.0	413	10.0	3,090

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	93	110	245	229	1,280	2,510	666	303	14	24	5.3
2	8.0	93	114	273	227	1,450	2,140	621	335	16	23	5.7
3	8.0	100	115	347	223	1,370	1,860	639	345	19	21	6.2
4	7.1	100	115	385	236	1,080	1,720	651	331	14	19	8.6
5	8.6	101	114	357	247	942	1,550	651	305	14	17	10
6	12	104	114	313	410	834	1,380	603	284	12	12	10
7	16	103	111	279	487	768	1,300	549	275	12	14	8.6
8	32	103	112	256	406	826	1,500	494	254	11	12	8.6
9	42	104	124	271	409	834	1,530	451	238	11	11	9.2
10	43	106	152	294	458	774	1,470	426	221	8.6	9.2	10
11	49	109	156	263	475	717	1,340	465	194	7.5	7.1	12
12	46	110	154	238	413	663	1,270	489	158	6.6	7.1	12
13	46	110	147	218	387	615	1,270	511	124	8.6	7.1	12
14	44	107	144	202	406	577	1,400	499	87	6.6	7.1	14
15	41	109	148	194	398	557	1,450	489	63	5.7	7.1	23
16	41	111	151	192	370	563	1,330	475	54	8.6	7.5	48
17	39	111	163	190	372	645	1,180	446	54	9.7	8.0	55
18	38	111	166	190	395	636	1,080	417	47	9.2	9.7	80
19	42	107	163	185	362	627	1,040	387	43	7.5	8.6	98
20	42	104	156	174	331	636	1,100	374	38	8.0	9.7	112
21	45	109	156	174	311	663	1,050	366	39	7.5	8.0	115
22	55	123	154	174	315	693	970	355	34	6.2	6.2	116
23	54	118	148	172	313	723	900	345	26	7.5	5.3	112
24	57	116	145	174	298	765	868	339	25	7.5	5.3	110
25	60	114	137	177	412	1,070	830	333	22	7.5	6.2	111
26	64	112	127	182	1,350	1,740	806	366	18	9.2	6.6	109
27	74	111	130	202	1,760	2,950	756	364	16	22	6.2	109
28	89	115	140	218	1,880	2,580	726	343	15	21	7.1	109
29	93	105	147	225	1,660	2,270	744	319	14	22	7.1	116
30	94	103	166	229	-	2,280	796	315	14	24	4.9	121
31	94	-	211	229	-	2,450	-	313	-	26	4.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,391.7	94	7.1	44.9	2,760
November	3,222	123	93	107	6,390
December	4,390	211	110	142	8,710
Calendar year 1939	108,905.1	3,090	2.7	298	216,000
January	7,222	385	172	233	14,320
February	15,540	1,880	223	536	30,820
March	34,578	2,950	557	1,115	68,580
April	37,866	2,510	726	1,262	75,110
May	14,061	666	313	454	27,890
June	3,976	345	14	133	7,890
July	370	26	5.7	11.9	734
August	309	24	4.9	9.97	613
September	1,676.2	121	5.3	55.9	3,320
Water year 1939-40	124,601.9	2,950	4.9	340	247,100

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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. Datum of gage is 1,635.83 feet above mean sea level (general adjustment of 1929).

Records available.- October 1929 to September 1940.

Average discharge.- 11 years, 1,286 second-feet.

Extremes.- Maximum discharge during year, 12,900 second-feet Feb. 29, Mar. 27 (gage height, 11.30 feet); minimum, 26 second-feet Sept. 3, 4 (gage height, 0.02 foot).
1929-40: Maximum discharge, 28,900 second-feet Mar. 19, 1932 (gage height, 16.75 feet), from rating curve extended above 11,000 second-feet; minimum, 20 second-feet Sept. 6, 1931.

Remarks.- Records good except those for period of doubtful or no gage-height record, which are poor. Many diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0	25	2.0	400	6.0	3,150
.4	59	2.5	600	8.0	5,780
.7	96	3.0	840	10.0	9,600
1.0	144	4.0	1,440	12.0	14,800
1.5	250	5.0	2,200		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	248	233	578	750	6,910	8,750	2,780	1,140	165	d132	29
2	57	233	236	715	720	6,600	7,910	2,620	1,110	159	a108	31
3	62	219	268	785	676	6,510	6,510	2,760	1,230	154	a90	28
4	64	215	270	1,070	750	4,920	6,040	2,900	1,110	150	a76	30
5	74	213	258	1,100	1,010	4,130	5,620	2,890	989	144	a64	34
6	86	215	248	923	1,130	3,820	4,990	2,690	912	142	a55	35
7	93	206	240	755	3,670	3,170	4,540	2,460	860	146	a48	41
8	100	194	250	609	2,460	3,230	4,950	2,320	815	137	a44	80
9	129	211	265	535	2,040	3,530	5,420	2,200	815	137	a42	82
10	132	240	327	705	2,260	3,170	5,600	2,280	740	124	a41	70
11	127	236	487	705	2,490	2,860	5,040	2,550	681	119	40	67
12	127	224	499	604	2,070	2,540	4,750	2,780	614	113	41	63
13	127	219	426	495	1,660	2,270	4,820	2,730	547	110	38	62
14	127	226	365	459	1,680	2,080	5,360	2,540	487	106	38	64
15	127	226	340	443	1,640	2,040	5,750	2,370	428	100	37	78
16	124	215	362	519	1,520	2,200	5,220	2,250	393	100	36	122
17	117	202	390	507	1,400	2,940	4,520	2,060	362	99	33	148
18	121	191	439	519	1,530	3,050	4,170	1,960	344	96	32	183
19	116	191	447	483	1,460	2,920	4,110	1,840	315	106	33	215
20	117	198	410	455	1,310	2,890	4,130	1,750	282	125	33	226
21	125	185	378	414	1,160	2,960	4,130	1,710	268	146	32	262
22	127	194	379	421	1,110	3,020	3,760	1,640	252	144	30	250
23	134	240	365	439	1,210	3,080	3,580	1,610	245	136	30	233
24	139	231	337	443	1,030	3,170	3,530	1,600	231	124	28	233
25	139	233	288	404	1,060	4,040	3,300	1,590	219	110	23	231
26	144	238	231	368	3,610	6,780	3,250	1,670	200	106	28	222
27	154	260	231	499	8,500	11,800	3,180	1,510	189	111	27	236
28	181	262	240	604	10,500	9,780	2,960	1,360	183	121	27	222
29	204	252	300	676	10,700	7,600	3,060	1,230	175	136	28	219
30	208	248	393	745	-	7,180	2,940	1,200	169	167	28	233
31	248	-	443	760	-	7,380	-	1,200	-	d144	28	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,886	248	56	125	7,710
November	6,665	262	185	222	13,220
December	10,348	499	231	334	20,520
Calendar year 1939	465,820	14,000	26	1,276	923,900
January	18,737	1,100	368	604	37,160
February	71,106	10,700	676	2,452	141,000
March	138,350	11,800	2,040	4,463	274,400
April	141,870	8,750	2,940	4,729	281,400
May	65,050	2,900	1,200	2,098	129,000
June	16,305	1,230	169	544	32,340
July	3,977	167	96	128	7,890
August	1,375	132	27	44.4	2,730
September	4,029	262	28	134	7,990
Water year 1939-40	481,698	11,800	27	1,316	955,400

Peak discharge.- Feb. 7 (9 a.m.) 4,470 sec.-ft.; Feb. 29 (6 to 7 a.m.) 12,900 sec.-ft.; Mar. 27 (12 m. to 3 p.m.) 12,900 sec.-ft.

a No gage-height record; discharge computed on basis of records for station at McDonald Ferry and North Fork of John Day River at Monument.

d Doubtful gage-height record.

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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. Datum 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 1940.
Average discharge.- 35 years (1905-40), 1,877 second-feet.
Extremes.- Maximum discharge during year, 12,500 second-feet Mar. 1 (gage height, 7.28 feet); minimum, 11 second-feet Sept. 3 (gage height, 0.83 foot).
1904-40: Maximum discharge, 24,900 second-feet Mar. 20, 1932 (gage height, 10.6 feet), from rating curve extended above 14,000 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 period July to September and those for period of ice effect, which are fair. Diversions above station for irrigation.

Rating table, water year 1939-40, except period of ice effect (gage height, in feet, and discharge, in second-feet)

0.8	9	2.5	915	4.5	4,290
1.2	65	3.0	1,520	5.0	5,490
1.6	215	3.5	2,310	6.0	8,270
2.0	470	4.0	3,230	7.0	11,550

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	168	254	306	b720	10,500	8,240	3,290	1,240	160	84	16
2	40	182	248	414	b780	7,610	9,660	3,050	1,240	156	89	15
3	40	210	242	522	796	7,500	8,550	2,900	1,170	152	120	14
4	43	220	232	693	777	7,010	7,410	2,920	1,180	139	106	14
5	49	215	226	788	739	5,460	6,950	3,090	1,240	131	89	16
6	51	206	254	1,040	1,030	4,680	6,370	3,070	1,120	127	81	16
7	51	206	259	1,040	1,460	4,140	5,690	2,940	1,030	131	70	16
8	49	206	254	905	3,200	3,700	5,320	2,660	957	124	63	17
9	51	201	248	796	2,790	3,580	5,840	2,480	895	120	59	22
10	57	196	248	648	2,280	3,960	6,310	2,330	855	116	53	85
11	68	187	264	570	2,310	3,640	6,290	2,310	835	120	49	176
12	78	187	270	657	2,640	3,270	5,690	2,520	768	110	45	102
13	89	215	379	702	2,360	2,950	5,290	2,840	693	102	42	120
14	106	220	508	588	1,930	2,640	5,220	2,880	630	92	39	87
15	106	210	463	522	1,820	2,410	5,820	2,710	579	84	35	153
16	110	206	414	478	1,790	2,310	6,210	2,500	522	78	35	124
17	110	206	365	456	1,780	2,380	5,660	2,380	470	76	35	87
18	110	210	344	492	1,900	3,030	4,970	2,190	428	73	34	124
19	113	206	365	492	1,730	3,370	4,570	2,060	379	73	31	139
20	113	201	407	485	1,720	3,170	4,470	1,930	351	76	32	160
21	106	192	449	570	1,560	3,070	4,470	1,800	324	78	28	182
22	106	182	435	530	1,420	3,130	4,500	1,760	306	84	28	182
23	106	196	400	456	1,280	3,210	4,160	1,700	288	106	29	201
24	106	187	379	414	1,280	3,290	3,960	1,640	270	131	25	232
25	113	187	372	485	1,300	3,390	3,960	1,660	254	124	22	232
26	116	210	365	435	1,480	4,200	3,680	1,600	232	124	18	220
27	124	232	330	b380	4,090	7,290	3,540	1,660	210	120	16	232
28	131	237	300	b410	9,860	11,200	3,490	1,620	206	106	16	226
29	131	232	259	b500	11,600	9,630	3,270	1,460	187	92	18	215
30	135	248	242	b580	-	7,880	3,330	1,340	177	96	17	226
31	139	-	242	b660	-	7,520	-	1,280	-	92	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,789	139	40	90.0	5,530
November	6,161	248	168	205	12,220
December	10,017	508	226	323	19,870
Calendar year 1939	462,464	13,000	16	1,267	917,400
January	18,050	1,040	306	582	35,800
February	68,422	11,600	720	2,359	135,700
March	151,120	11,200	2,310	4,875	299,700
April	162,890	9,660	3,270	5,430	323,100
May	70,570	3,290	1,280	2,276	140,000
June	19,036	1,240	177	635	37,760
July	3,393	160	73	109	6,730
August	1,424	120	16	45.9	2,820
September	3,651	232	14	122	7,240
Water year 1939-40	517,523	11,600	14	1,414	1,026,000

Peak discharge.- Feb. 8 (11 a.m.) 4,400 sec.-ft.; Feb. 29 (1 a.m.) 12,300 sec.-ft.; Mar. 1 (12:30 a.m.) 12,500 sec.-ft.; Mar. 28 (12 m.) 11,800 sec.-ft.; Apr. 2 (11 a.m.) 10,000 sec.-ft.
b Stage-discharge relation affected by ice.

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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 1940.

Average discharge.- 15 years, 43.3 second-feet.

Extremes.- Maximum discharge observed during year, 74 second-feet Apr. 8 (gage height, 2.70 feet); minimum observed, 1 second-foot Aug. 18, 19.
1925-40: Maximum discharge, 92 second-feet May 5, 1939; no flow at times.

Remarks.- Records good except those for May to September, which are fair. Canal diverts from John Day River in SE¼ sec. 7, T. 13 S., R. 34 E. Water is used by power plant at Prairie City and is returned to river below station on John Day River at Prairie City. Staff gage read once daily.

Cooperation.- Gage read by employee of West Coast Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	50	51	63	63	59	66	64	65	10	53	11
2	33	51	51	63	59	61	68	66	63	12	52	10
3	33	55	52	62	60	59	66	67	63	14	50	11
4	35	53	52	62	60	62	64	71	60	14	34	28
5	35	51	52	63	62	60	64	62	58	21	28	51
6	34	52	52	62	66	58	66	65	58	16	19	51
7	33	55	56	63	62	56	64	62	57	18	19	38
8	34	52	58	63	62	59	70	62	57	18	19	37
9	34	52	60	63	66	63	66	63	52	18	18	34
10	37	52	62	62	64	59	67	66	51	21	15	44
11	33	53	60	60	345	60	68	64	45	23	10	40
12	37	52	53	60	62	59	66	36	39	23	8	40
13	35	52	53	63	62	60	64	68	31	23	8	59
14	34	52	55	52	62	59	64	66	27	24	5	40
15	34	51	59	50	63	60	66	70	22	32	5	53
16	34	51	59	53	62	63	67	70	19	40	4	52
17	35	50	59	47	63	64	67	68	18	44	3	49
18	38	51	56	38	58	62	67	66	12	50	2	58
19	41	51	58	51	59	59	67	70	11	52	2	56
20	42	50	58	56	48	61	67	68	11	52	4	55
21	40	51	53	58	55	64	66	68	12	52	4	56
22	38	52	53	53	56	63	67	67	14	50	5	52
23	33	52	53	56	53	60	66	68	12	47	6	54
24	41	51	40	56	56	66	65	68	13	46	5	56
25	44	51	31	58	66	68	66	68	13	48	6	54
26	47	52	52	59	64	64	62	66	8	52	9	54
27	51	52	53	63	62	64	64	68	8	59	8	54
28	51	52	56	62	63	63	64	64	8	56	9	55
29	52	52	59	60	63	67	65	67	6	56	9	56
30	48	52	66	63	-	66	62	67	10	53	9	57
31	42	-	63	60	-	67	-	66	-	53	9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,203	52	29	38.8	2,390
November	1,553	55	50	51.8	3,080
December	1,695	66	31	54.7	3,360
Calendar year 1939	15,179	86	1	41.6	30,110
January	1,804	63	38	58.2	3,580
February	1,768	66	48	61.0	3,510
March	1,923	68	56	62.0	3,810
April	1,971	70	62	65.7	3,910
May	2,064	71	62	66.6	4,090
June	923	65	8	30.8	1,830
July	1,097	59	10	35.4	2,180
August	437	53	2	14.1	867
September	1,365	59	10	45.5	2,710
Water year 1939-40	17,303	71	2	48.6	35,320

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

U. S. GOVERNMENT PRINTING OFFICE 1936—O 18205.

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 1940.

Average discharge.- 10 years, 10.4 second-feet.

Extremes.- Maximum discharge during year, 71 second-feet May 25 (gage height, 1.94 feet); minimum, 1.4 second-feet Nov. 19.
1930-40: 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, and 1937, and Nov. 19, 1939.

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

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	2.0	1.7	3.8	2.7	4.0	10	17	56	14	6.3	3.6
2	2.4	2.0	1.7	4.2	2.7	4.0	10	19	56	14	6.3	3.6
3	2.4	2.0	1.7	4.2	2.7	3.8	9.3	22	53	13	6.3	3.4
4	2.4	1.8	1.7	4.0	2.7	3.6	8.9	22	48	13	5.7	4.4
5	2.5	1.8	1.7	3.8	2.8	3.4	8.2	22	45	12	5.7	3.6
6	2.4	1.8	1.7	3.4	3.4	3.4	7.8	23	42	12	5.7	3.6
7	2.4	1.8	1.5	3.6	3.0	3.4	7.8	24	40	12	5.4	3.6
8	2.4	1.8	2.0	3.6	3.0	3.4	7.8	24	36	11	5.4	3.6
9	2.2	1.8	2.4	3.4	3.0	3.6	7.8	27	35	11	5.4	3.8
10	2.2	1.8	2.1	3.4	3.0	3.6	7.8	33	33	11	5.1	3.8
11	2.2	1.8	1.8	3.2	3.0	3.6	7.8	43	32	10	5.1	3.6
12	2.2	1.8	1.8	3.2	2.8	3.6	8.2	59	32	10	4.8	3.6
13	2.1	1.8	1.7	3.2	2.8	3.4	10	64	34	10	4.6	3.8
14	2.1	1.8	1.8	3.2	2.8	3.2	15	64	35	10	4.6	3.6
15	2.1	1.7	2.1	3.2	2.8	3.2	16	62	35	9.7	4.4	3.6
16	2.1	1.7	2.2	3.2	2.8	3.4	15	61	33	9.3	a4.4	3.6
17	2.1	1.7	2.2	3.2	2.8	3.4	14	58	30	8.9	a4.4	3.8
18	2.1	1.7	2.1	3.0	2.8	3.4	14	56	28	9.3	a4.3	4.0
19	2.1	1.5	2.1	3.0	2.8	3.4	15	56	27	8.6	a4.3	4.0
20	2.1	1.5	2.1	3.0	2.7	3.6	16	58	26	8.2	a4.2	4.2
21	2.1	1.5	2.0	3.0	2.7	3.8	16	59	26	7.8	a4.2	4.2
22	2.1	1.5	1.8	3.0	2.7	4.0	17	59	24	7.5	a4.2	4.2
23	2.1	1.5	2.0	2.8	2.7	4.2	17	62	22	7.5	a4.1	4.2
24	2.1	1.5	1.8	2.8	2.7	5.1	17	66	20	7.2	a4.1	4.0
25	2.1	1.5	b1.8	2.8	2.8	6.9	17	69	19	7.2	a4.0	4.0
26	2.1	1.5	1.8	2.8	3.0	11	17	68	18	7.5	4.0	4.0
27	2.1	1.5	1.8	2.8	3.4	16	17	62	17	7.5	4.0	4.0
28	2.2	1.5	1.8	2.8	4.2	14	17	59	16	6.9	3.8	3.8
29	2.1	1.7	2.0	2.8	4.4	12	17	54	16	6.9	3.8	3.8
30	2.1	1.7	2.2	2.8	-	10	16	54	15	6.6	3.8	3.8
31	2.1	-	3.0	2.7	-	10	-	54	-	6.3	3.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	68.1	2.5	2.1	2.20	135
November	51.0	2.0	1.5	1.70	101
December	60.1	3.0	1.5	1.94	119
Calendar year 1939	3,254.3	4.8	1.5	8.92	6,450
January	99.9	4.2	2.7	3.22	198
February	85.7	4.4	2.7	2.96	170
March	167.4	16	3.2	5.40	332
April	384.4	17	7.8	12.8	762
May	1,480	69	17	47.7	2,940
June	949	56	15	31.6	1,880
July	295.9	14	6.3	9.55	587
August	146.2	6.3	3.8	4.72	290
September	114.8	4.4	3.4	3.83	228
Water year 1939-40	3,902.5	69	1.5	10.7	7,740

a No gage-height record; discharge interpolated.
b Stage-discharge relation affected by ice.

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North Fork of John Day River near Dale, Oreg.

Location.- Water-stage recorder, lat. 45°00', long. 118°57', in SE¼ sec. 35, T. 6 S., R. 31 E., three-eighths of a mile downstream from Desolation Creek and 1½ miles northeast of Dale. Datum 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 1940.

Average discharge.- 11 years, 306 second-feet.

Extremes.- Maximum discharge during year, 1,720 second-feet Apr. 14 (gage height, 5.67 feet); minimum recorded, 16 second-feet Nov. 6 (gage height, 1.65 feet).
1929-40: 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 fair except those for periods of ice effect and those for period March to May, which are poor. Small diversions above station for irrigation and mining, which cause diurnal fluctuation at low stages.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Mar. 3 to June 17)

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	5.5	1,750
2.7	159	4.2	765		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	58	b60	206	113	454	856	874	590	94	51	25
2	41	56	b66	184	100	470	776	989	670	88	47	24
3	45	58	65	195	109	366	685	1,170	556	86	44	24
4	46	55	59	179	113	314	635	1,210	488	107	42	36
5	55	27	61	141	109	289	575	1,080	454	88	40	73
6	74	29	55	86	203	250	524	947	418	79	37	65
7	64	85	66	34	254	247	542	922	402	74	35	51
8	52	72	83	b50	223	310	640	928	410	72	34	42
9	46	61	172	b100	200	306	770	1,060	358	70	33	38
10	44	41	214	b90	208	286	743	1,370	330	67	32	37
11	43	b40	141	b65	195	240	754	1,610	306	66	31	38
12	41	b42	82	b60	141	206	838	1,560	292	62	31	37
13	40	b45	62	b58	157	176	1,210	1,390	286	59	30	40
14	39	b40	77	b64	162	187	1,690	1,240	261	58	28	64
15	41	b34	85	b74	148	192	1,530	1,150	237	55	28	70
16	40	b28	115	b80	121	223	1,200	1,050	217	61	27	58
17	41	b23	134	b80	128	272	1,050	982	198	79	27	53
18	42	b30	93	b70	128	292	1,170	922	189	91	27	67
19	44	b27	76	b60	123	296	1,250	904	172	93	26	83
20	44	b39	82	b55	93	322	1,350	904	159	88	26	64
21	44	b50	74	b67	106	366	1,170	844	148	77	a25	60
22	41	b60	53	b70	134	390	1,070	832	141	65	a26	62
23	41	b50	a35	b66	93	378	1,090	838	136	59	26	55
24	43	b60	b30	b70	113	406	1,000	868	130	54	27	48
25	46	b70	b25	b60	176	720	982	996	121	51	27	44
26	54	b68	b30	b80	314	1,250	1,140	809	111	56	27	43
27	51	b66	b45	b100	398	1,570	1,070	700	102	93	27	48
28	67	b60	b70	b110	470	1,140	1,050	640	98	102	30	54
29	90	b43	102	b120	556	886	1,070	620	94	73	28	62
30	76	b50	128	b115	-	798	947	645	93	60	27	66
31	62	-	179	b110	-	826	-	610	-	55	27	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,532	90	35	49.4	3,040
November	1,467	85	23	48.9	2,910
December	2,619	214	25	84.5	5,190
Calendar year 1939	106,459	2,470	23	292	211,200
January	2,899	206	34	93.5	5,750
February	5,383	556	93	186	10,690
March	14,428	1,570	176	465	28,620
April	29,377	1,690	524	979	58,270
May	30,664	1,610	610	989	60,820
June	8,167	670	93	272	16,200
July	2,282	107	51	73.6	4,530
August	973	51	25	31.4	1,930
September	1,531	83	24	51.0	3,040
Water year 1939-40	101,327	1,690	23	277	201 000

a No gage-height record; discharge interpolated or computed on basis of weather records and records for station at Monument.
b Stage-discharge relation affected by ice.

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 and three-quarters of a mile west of Monument.

Drainage area.- 2,520 square miles.

Records available.- March 1925 to September 1940.

Average discharge.- 14 years (1925-27, 1928-40), 913 second-feet.

Extremes.- Maximum discharge during year, 10,200 second-feet Feb. 28 (gage height, 9.80 feet); minimum, 11 second-feet Dec. 25 (gage height, 1.01 feet).
1925-40: 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 no gage-height record, which are fair. Several small diversions above station for irrigation.

Rating table, water year 1939-40, except periods of ice effect, (gage height, in feet, and discharge, in second-feet)

1.2	26	3.0	680	6.0	3,900
1.5	70	3.5	1,060	7.0	5,330
1.8	134	4.0	1,520	8.0	6,920
2.2	252	4.5	2,040	9.0	8,680
2.6	430	5.0	2,620		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	107	90	400	452	4,460	a5,600	a1,850	852	a128	82	32
2	57	98	113	430	415	5,450	a5,000	a1,800	884	125	74	32
3	65	94	113	a545	410	4,070	a4,000	2,040	884	122	70	30
4	72	90	100	a700	666	3,170	a3,500	2,020	750	116	65	34
5	80	86	94	a660	722	2,610	a3,200	1,960	624	132	63	49
6	84	70	98	a500	2,000	2,170	2,920	1,790	578	118	59	78
7	103	61	96	a350	2,600	a2,000	2,800	1,700	533	105	57	111
8	105	92	116	a270	1,740	a2,200	3,250	1,630	533	98	54	84
9	90	107	146	a280	1,630	2,250	3,690	1,670	503	94	52	70
10	82	94	260	a420	1,860	1,980	3,460	1,850	452	90	52	68
11	78	82	333	a400	1,790	1,750	3,170	2,120	415	86	52	65
12	76	78	242	a330	1,360	1,550	3,040	2,200	385	84	49	63
13	74	84	179	a280	1,220	1,380	3,280	2,070	356	80	47	68
14	74	80	146	252	1,200	1,320	3,900	1,900	333	78	46	68
15	70	74	159	249	1,100	1,360	3,840	1,800	312	72	44	82
16	72	54	181	256	996	1,680	3,290	1,670	286	72	44	118
17	70	41	228	271	948	2,240	2,800	1,550	267	76	42	100
18	70	59	245	271	1,020	a2,200	2,720	1,470	249	78	41	118
19	70	54	209	215	956	a2,000	2,740	1,400	235	96	36	120
20	72	66	173	187	844	a1,950	2,820	1,390	215	136	34	144
21	72	68	176	206	729	2,020	2,610	1,340	199	127	32	125
22	72	100	167	232	813	2,030	2,420	1,280	187	113	31	105
23	72	90	144	221	750	2,040	2,390	1,270	181	96	32	109
24	70	90	103	225	617	2,180	a2,350	1,280	176	84	31	98
25	68	94	38	179	924	3,590	a2,200	1,350	167	74	30	90
26	78	113	39	209	4,470	5,960	a2,120	1,280	156	78	31	80
27	94	107	61	316	7,580	7,940	2,060	1,080	144	100	32	84
28	94	105	118	405	8,120	5,830	1,970	972	136	129	31	84
29	100	100	193	441	7,040	4,640	a2,100	924	a133	144	32	94
30	129	90	221	491	-	4,380	a1,950	924	a130	111	35	107
31	120	-	307	480	-	4,730	-	908	-	92	33	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,485	129	52	80.2	4,930
November	2,528	113	41	84.3	5,010
December	4,888	333	38	158	9,700
Calendar year 1939	314,907	9,440	36	863	624,600
January	10,671	700	179	344	21,170
February	54,972	8,120	410	1,896	109,000
March	93,130	7,940	1,320	3,004	184,700
April	91,190	5,600	1,950	3,040	180,900
May	48,488	2,200	908	1,564	96,170
June	11,255	884	130	375	22,320
July	3,134	144	72	101	6,220
August	1,413	82	30	45.6	2,800
September	2,510	144	30	83.7	4,980
Water year 1939-40	326,664	8,120	30	893	647,900

Peak discharge.- Feb. 6 (11:30 p.m.) 4,080 sec.-ft.; Feb. 27 (1 a.m.) 8,730 sec.-ft.; Feb. 27 (10 p.m.) 9,240 sec.-ft.; Feb. 28 (10 p.m.) 10,200 sec.-ft.; Mar. 2 (1 p.m.) 6,210 sec.-ft.; Mar. 27 (6 a.m.) 8,570 sec.-ft.

a No gage-height record; discharge computed on basis of weather records and record for John Day River at Service Creek.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 11 years, 183 second-feet.

Extremes.- Maximum discharge during year, 1,670 second-feet Mar. 27 (gage height, 5.42 feet); minimum, 5 second-feet Aug. 23, 24, Sept. 1 (gage height, 1.53 feet).
1929-40: 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 period November to February, which are poor. A few small diversions above station for irrigation.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.5	4.5	2.6	106	4.2	655
1.7	10	3.0	186	4.6	930
2.0	28	3.4	295	5.0	1,290
2.3	60	3.8	455	5.4	1,650

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	34	33	110	91	697	1,140	370	175	28	20	6
2	24	33	34	113	78	822	975	378	210	30	19	6
3	26	32	34	179	86	650	822	402	179	27	18	6
4	26	32	34	158	106	535	748	398	158	27	17	10
5	27	27	34	126	101	482	661	378	146	27	17	21
6	32	27	33	101	175	419	595	342	134	24	16	35
7	34	31	35	59	250	390	580	330	130	23	16	24
8	30	35	34	58	208	478	655	334	138	22	16	21
9	28	34	50	89	208	486	709	362	120	20	14	18
10	27	32	82	84	238	432	673	432	111	19	14	18
11	26	29	82	56	235	370	622	500	99	18	12	17
12	25	32	61	35	177	323	611	515	84	19	12	20
13	25	32	48	b35	171	289	661	478	73	19	12	20
14	26	32	46	b40	162	277	754	437	70	17	10	29
15	25	b27	46	b42	152	292	722	419	64	16	10	30
16	25	b22	54	b46	136	370	628	382	60	16	9	33
17	25	b17	67	b42	130	460	560	362	58	24	8	31
18	25	b25	67	b35	132	491	550	342	54	30	7	38
19	25	b23	54	b31	126	486	555	323	50	46	6	54
20	25	b28	52	b30	104	491	575	323	44	37	6	44
21	26	39	49	b55	99	510	525	302	40	33	6	35
22	26	32	42	b52	126	535	486	292	39	29	6	39
23	26	34	28	b50	96	540	486	286	38	24	6	33
24	26	32	b20	b47	108	580	460	286	38	22	5	30
25	27	32	b12	b45	263	914	437	289	37	20	6	27
26	31	32	b13	60	628	1,240	442	259	34	23	6	25
27	32	34	b20	67	882	1,580	410	232	31	35	6	27
28	36	33	b45	74	1,060	1,260	406	215	30	40	8	32
29	46	33	58	92	1,030	1,050	414	203	28	32	6	36
30	42	30	70	94	-	1,050	382	203	28	27	6	37
31	36	-	108	89	-	1,140	-	184	-	22	7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	880	46	20	28.4	1,750
November	915	39	17	30.5	1,810
December	1,445	108	12	46.6	2,870
Calendar year 1939	68,108	1,830	6	187	135,100
January	2,194	179	30	70.8	4,350
February	7,358	1,060	78	254	14,590
March	19,639	1,580	277	634	38,950
April	18,244	1,140	382	608	36,190
May	10,558	515	184	341	20,940
June	2,500	210	28	83.3	4,960
July	796	46	16	25.7	1,580
August	327	20	5	10.5	649
September	802	54	6	26.7	1,590
Water year 1939-40	65,658	1,580	5	179	130,200

b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
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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 1940.

Average discharge.- 10 years, 16.9 second-feet.

Extremes.- Maximum discharge during year, 316 second-feet Feb. 27 (gage height, 3.05 feet), from rating curve extended above 180 second-feet; practically no flow at times.
1930-40: 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 period December to February, which are poor. Several diversions for irrigation in valley above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	0.1	1.6	4.6	51	203	26	2.2			
2	0	.1	.1	2.5	4.4	109	134	22	4.1			
3	0	.1	.1	2.9	6.2	63	93	24	4.3			
4	0	.1	.1	3.3	6.8	44	97	22	2.5			
5	0	.1	.1	1.8	6.8	34	99	21	1.7			
6	0	.1	.1	1.4	22	28	66	18	1.3			
7	0	.1	.1	1.3	23	26	62	16	1.3			
8	0	.1	.1	.7	11	32	69	14	1.3			
9	0	.1	.2	1.9	18	26	76	12	1.0			
10	0	.1	.2	2.2	14	23	64	11	.7			
11	0	.1	.1	1.5	12	22	58	9.6	.5			
12	0	.1	.1	.8	9.5	19	56	8.4	.3			
13	0	.1	.1	.7	6.5	15	62	7.3	.2			
14	0	.1	.1	.7	7.3	14	74	6.8	.1			
15	0	.1	.5	.4	6.8	13	75	4.0	.1			
16	0	.1	.4	.8	5.9	17	65	1.4	.1			
17	0	.1	.4	.8	5.1	21	54	2.7	.1			
18	0	.1	.2	.8	5.6	18	50	3.2	.1			
19	0	.1	.2	.6	5.4	17	47	2.7	.1			
20	0	.1	.3	.8	6.2	17	48	2.5	.1			
21	0	.1	.4	1.1	5.9	16	44	2.4	.1			
22	0	.1	.4	.9	5.1	19	40	2.2	.1			
23	0	.1	.3	.8	5.6	22	38	1.7	.1			
24	0	.1	.3	1.0	5.1	28	36	1.7	.1			
25	0	.1	.2	1.0	40	81	35	2.4	0			
26	0	.1	.1	1.9	223	138	36	2.1	0			
27	.1	.1	.1	b5.0	253	179	33	2.0	0			
28	.1	.1	.1	b10	176	122	33	1.8	0			
29	.1	.1	.3	b9.0	93	117	33	1.7	0			
30	.1	.1	1.3	b7.0	-	164	29	2.4	0			
31	.1	-	1.6	b5.0	-	207	-	2.2	-			

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.5	0.1	0	0.02	1
November	3.0	.1	.1	.10	6
December	8.7	1.6	.1	.28	17
Calendar year 1939	6,135.6	460	0	16.8	12,170
January	70.2	10	.4	2.26	139
February	993.8	253	.4.4	34.3	1,970
March	1,702	207	13	54.9	3,380
April	1,909	203	29	63.6	3,790
May	257.2	26	1.4	8.30	510
June	22.5	4.3	0	.75	45
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1939-40	4,966.9	253	0	13.6	9,860

b Stage-discharge relation affected by ice.

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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, upstream from flowline of Crane Prairie Reservoir, and 17 miles northwest of Lapine. Altitude of gage, about 4,448 feet above mean sea level (from reservoir surveys by Bureau of Reclamation).

Records available.- November 1937 to September 1940.

Extremes.- Maximum discharge during year, 118 second-feet Oct. 5 (gage height, 1.49 feet); minimum, 70 second-feet Feb. 21 (gage height, 1.27 feet).
1937-40: Maximum discharge, 291 second-feet July 27, 1938 (gage height, 1.96 feet, former datum); minimum, that of Feb. 21, 1940.

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

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	111	96	83	83	76	83	78	83	81	78	87	89
2	111	94	83	81	76	81	78	83	81	78	87	89
3	111	94	83	81	76	81	81	81	78	78	85	89
4	111	92	81	81	76	81	81	81	78	78	85	89
5	114	92	81	81	78	78	78	81	78	74	83	89
6	111	92	81	78	81	81	78	81	78	74	83	89
7	108	92	81	81	78	85	81	81	78	74	83	89
8	108	92	83	81	76	83	85	81	78	76	83	92
9	108	92	85	81	76	81	85	81	78	76	83	92
10	108	89	85	81	78	81	83	78	78	76	83	92
11	106	89	83	78	76	81	83	78	78	78	83	92
12	104	89	81	78	74	76	85	78	78	81	83	92
13	104	89	83	78	76	76	87	78	78	81	85	92
14	104	89	83	78	76	76	85	78	78	81	85	92
15	104	87	85	78	76	78	95	78	81	81	85	92
16	104	87	87	78	76	81	83	78	81	81	85	92
17	101	87	85	78	76	76	83	78	81	81	85	89
18	101	87	83	78	76	76	85	78	81	83	85	89
19	101	85	83	78	76	76	85	78	81	85	85	89
20	101	83	83	78	76	76	85	78	83	87	87	89
21	98	83	83	78	76	76	83	78	83	89	89	89
22	98	83	81	78	76	76	83	78	83	89	89	89
23	98	83	81	76	76	76	83	78	83	89	89	89
24	96	83	81	78	78	78	83	78	83	89	89	89
25	96	83	81	78	81	78	83	78	83	89	89	89
26	101	83	81	78	83	85	83	78	83	87	89	89
27	104	83	81	78	81	81	83	78	81	87	89	89
28	98	83	85	76	83	81	85	78	81	87	89	89
29	98	83	83	76	81	81	83	81	81	87	89	89
30	96	83	83	76	-	83	85	81	81	87	89	89
31	96	-	83	76	-	81	-	81	-	87	89	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,210	111	96	104	6,370
November	2,627	96	83	87.6	5,210
December	2,565	87	81	82.7	5,090
Calendar year 1939	38,402	130	81	105	76,170
January	2,437	83	76	78.6	4,830
February	2,244	83	74	77.4	4,450
March	2,463	85	76	79.5	4,890
April	2,488	87	78	82.9	4,930
May	2,458	83	78	79.3	4,880
June	2,408	83	78	80.3	4,780
July	2,548	89	74	82.2	5,050
August	2,669	89	83	86.1	5,290
September	2,697	92	89	89.9	5,350
Water year 1939-40	30,814	111	74	84.2	61,120

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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 1940.

Average discharge.- 19 years (1914-15, 1922-40), 197 second-feet (unadjusted).

Extremes.- Maximum discharge during year, 481 second-feet July 2 (gage height, 2.19 feet); minimum, 6 second-feet Nov. 19 (gage height, 0.31 foot).
1914-17, 1922-40: Maximum discharge, 659 second-feet Aug. 3, 1938 (gage height, 2.58 feet); minimum, 2.5 second-feet (regulated) Apr. 24, 1923 (gage height, 0.05 foot).

Remarks.- Records good except those below 30 second-feet and those for periods of backwater from debris on control, which are fair. No diversion above station; flow partly regulated since Nov. 4, 1922 by Crane Prairie Reservoir (see p. 44).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	151	9	7	15	21	24	18	22	378	470	245	192
2	151	10	7	16	21	24	18	22	315	474	245	192
3	149	9	7	16	20	24	20	22	319	474	245	192
4	149	9	7	17	20	24	20	23	319	470	241	192
5	159	9	7	17	20	24	20	23	322	466	241	192
6	162	8	7	17	20	24	20	24	319	390	241	192
7	162	8	7	17	20	24	20	25	319	302	241	192
8	80	8	8	18	20	24	20	25	315	305	222	192
9	11	8	9	18	20	23	20	25	288	305	184	190
10	11	8	9	20	21	22	20	25	278	302	195	190
11	10	7	9	20	21	22	20	26	285	312	195	187
12	10	7	9	20	21	22	20	27	360	329	195	187
13	9	7	10	20	21	22	20	29	392	322	195	187
14	9	7	10	20	21	22	18	83	392	319	192	184
15	10	7	10	20	21	22	16	235	403	315	187	175
16	10	7	11	20	21	21	17	238	440	322	187	170
17	10	7	11	20	21	21	17	238	440	329	187	170
18	10	7	11	21	21	21	17	248	440	261	187	178
19	10	7	12	21	22	21	17	315	425	261	187	167
20	10	7	12	20	22	21	18	332	432	261	187	154
21	10	7	12	20	22	21	20	339	432	261	187	156
22	10	7	13	20	22	20	18	346	432	261	192	156
23	10	7	13	20	23	20	20	353	432	261	192	151
24	10	7	13	20	23	20	20	360	432	268	192	151
25	10	7	13	20	23	20	21	364	428	251	192	151
26	10	7	13	20	23	20	20	364	428	248	192	151
27	10	7	14	20	24	20	20	374	432	248	192	154
28	9	8	14	21	24	20	21	378	462	248	192	154
29	9	8	14	21	24	20	21	381	470	248	192	151
30	9	8	14	21	-	20	22	381	474	248	192	151
31	9	-	15	21	-	20	-	388	-	245	192	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,389	162	9	44.8	2,760
November	229	10	7	7.6	454
December	328	15	7	10.6	651
Calendar year 1939	52,643	474	7	144	104,400
January	597	21	15	19.3	1,180
February	623	24	20	21.5	1,240
March	673	24	20	21.7	1,330
April	579	22	16	19.3	1,150
May	6,035	388	22	195	11,970
June	11,603	474	278	387	23,010
July	9,776	474	245	315	19,390
August	6,306	245	184	203	12,510
September	5,201	192	151	173	10,320
Water year 1939-40	43,339	474	7	118	85,960

Peak discharge.- July 2 (6 p.m.) 481 sec.-ft.
Note.- Backwater from debris on control Oct. 1-8, June 15-27, July 13-15, July 30 to Sept. 30.

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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, 1938-40) and 9 miles west of Lapine.

Records available.- June 1938 to September 1940.

Extremes.- Maximum discharge during year, 1,030 second-feet June 20-23, July 3; maximum gage height, 5.01 feet July 3; minimum discharge, 507 second-feet Jan. 14 (gage height, 3.53 feet).
1938-40: Maximum discharge, 1,340 second-feet Aug. 4, 1938 (gage height, 6.15 feet); minimum, that of Jan. 14, 1940.

Remarks.- Records good. Flow regulated by Crane Prairie Reservoir (see p. 44); no regulation at Wickiup Reservoir in 1940.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

3.4	480	4.3	746
3.6	523	4.6	863
3.8	577	4.9	984
4.0	639	5.2	1,070

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	649	521	521	528	526	544	546	552	947	1,020	746	680
2	649	521	518	526	528	544	541	552	875	1,020	746	680
3	649	521	518	523	528	544	546	549	855	1,030	746	684
4	653	518	518	526	531	544	546	552	851	1,020	742	680
5	663	521	518	526	533	544	544	549	847	1,020	739	677
6	663	521	518	523	546	544	541	549	847	1,000	739	673
7	663	521	518	523	539	546	546	549	847	891	739	677
8	639	523	523	526	533	549	544	546	847	811	739	677
9	528	521	544	528	533	544	544	544	835	807	698	677
10	523	521	541	526	541	544	541	549	804	800	698	677
11	523	521	523	523	533	544	541	546	804	796	702	670
12	523	521	518	523	533	544	541	549	843	815	698	673
13	523	523	518	523	544	544	541	549	915	831	695	673
14	523	523	518	518	533	544	544	549	927	819	695	666
15	523	523	523	521	533	546	541	720	927	823	684	663
16	523	523	528	521	536	555	541	761	1,000	831	684	659
17	523	523	528	521	536	544	544	761	1,000	835	680	653
18	518	521	521	521	531	541	544	765	1,010	807	680	666
19	518	521	521	521	531	541	544	804	1,010	773	680	656
20	518	521	521	521	531	541	544	863	1,030	780	680	646
21	516	521	521	521	528	541	544	871	1,030	773	680	636
22	516	521	518	521	528	541	544	879	1,030	769	680	633
23	521	521	521	521	528	541	546	899	1,030	761	680	633
24	521	521	518	523	528	541	546	903	1,020	765	680	633
25	518	523	518	528	533	541	552	907	1,020	757	680	633
26	521	523	521	528	541	557	546	907	1,010	750	680	633
27	521	523	523	528	549	557	546	911	1,000	754	680	636
28	521	523	528	526	557	549	549	919	1,010	750	680	636
29	521	523	526	526	549	555	546	927	1,010	746	680	636
30	521	523	526	526	-	555	557	927	1,020	750	680	636
31	521	-	528	526	-	555	-	927	-	750	680	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	17,212	663	516	555	34,140
November	15,651	523	518	522	31,040
December	16,204	544	518	523	32,140
Calendar year 1939	254,459	-	-	697	504,700
January	16,242	528	518	524	32,220
February	15,520	557	526	535	30,780
March	16,924	557	541	546	33,570
April	16,340	557	541	545	32,410
May	22,335	927	544	720	44,300
June	28,201	1,030	804	940	55,940
July	25,854	1,030	746	834	51,280
August	21,690	746	680	700	43,020
September	19,752	684	633	658	39,180
Water year 1939-40	231,925	1,030	516	634	460,000

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 1940.

Average discharge.- 17 years (1923-40), 720 second-feet.

Extremes.- Maximum discharge during year, 1,020 second-feet June 20 (gage height, 2.27 feet); minimum, 513 second-feet Dec. 4-7 (gage height, 1.32 feet).
1915-17, 1922-40: 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 except those for period of no gage-height record, which are fair. No diversion above station. Flow regulated somewhat since 1922 by Crane Prairie Reservoir (see p. 44).

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.2	470	1.8	750
1.3	505	2.0	860
1.4	545	2.2	975
1.6	640	2.3	1,035

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	678	529	517	550	541	558	558	554	957	999	739	684
2	678	529	517	545	541	558	554	554	893	1,000	739	684
3	678	529	517	545	541	558	558	550	871	1,000	734	695
4	678	525	513	545	545	558	558	554	871	999	734	684
5	695	525	513	541	550	558	554	554	871	993	734	684
6	695	525	513	537	568	558	554	550	871	975	734	684
7	695	525	513	537	558	558	558	550	871	827	734	684
8	684	525	517	541	550	563	554	550	866	816	734	690
9	541	525	545	550	545	558	554	550	849	810	695	690
10	533	525	550	541	558	558	554	554	827	810	695	684
11	529	525	529	537	550	558	554	554	827	810	700	680
12	525	525	517	537	545	554	554	554	860	827	700	680
13	525	525	517	537	558	550	554	554	921	838	695	680
14	525	525	513	537	550	550	554	554	933	827	695	675
15	529	525	517	537	545	554	550	717	933	838	684	670
16	529	521	525	537	550	563	550	778	993	832	684	665
17	529	521	537	537	550	554	550	778	999	838	684	660
18	529	521	521	537	545	550	554	778	999	800	684	680
19	529	521	521	537	541	550	554	827	999	766	684	670
20	525	521	521	541	541	550	558	876	1,010	766	684	660
21	529	517	521	537	541	554	558	893	1,010	761	684	650
22	529	517	521	541	545	554	558	898	1,010	756	684	645
23	529	517	521	541	541	554	558	915	1,000	756	684	645
24	533	517	521	541	545	554	563	921	1,000	761	684	645
25	529	517	525	550	550	554	568	921	999	744	684	645
26	533	517	521	550	563	576	563	921	993	739	684	645
27	537	517	525	545	572	572	563	927	993	739	684	645
28	533	517	541	541	581	563	563	933	993	739	684	645
29	529	517	541	541	572	568	563	939	993	739	684	645
30	529	521	541	541	-	572	568	939	1,000	739	684	645
31	529	-	545	541	-	572	-	933	-	739	684	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	17,668	695	525	570	35,040
November	15,666	529	517	522	31,070
December	16,256	550	513	524	32,240
Calendar year 1939	251,782	-	513	690	499,400
January	16,775	550	537	541	33,270
February	15,982	581	541	551	31,700
March	17,311	576	550	558	34,340
April	16,713	568	550	557	33,150
May	22,630	939	550	730	44,890
June	28,212	1,010	827	940	55,960
July	25,583	1,000	739	825	50,740
August	21,690	739	684	700	43,020
September	20,038	695	645	668	39,740
Water year 1939-40	234,524	1,010	513	641	465,200

Note.- No gage-height record Apr. 9, Sept. 11-30; discharge computed on basis of records for station below Wickiup Reservoir.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940. July 1906 to February 1909 and April to September 1914, at West ranch, 7 miles upstream.

Average discharge.- 23 years (1906-13, 1924-40), 1,348 second-feet.

Extremes.- Maximum discharge during year, 1,550 second-feet June 25, 26, July 1, 3, 4 (gage height, 1.83 feet); minimum, 783 second-feet Jan. 25 (gage height, 0.18 foot), probably caused by ice jam upstream.

1906-13, 1920-21, 1924-40: 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. Small diversions above station for irrigation. Some regulation since 1922 by Crane Prairie and Crescent Lake Reservoirs (see p. 44).

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.4	865	1.2	1,220
.5	905	1.4	1,320
.6	945	1.6	1,420
.8	1,030	1.8	1,530
1.0	1,120	1.9	1,590

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,030	913	893	994	945	1,160	1,270	1,100	1,400	1,550	1,220	1,060
2	1,040	913	893	1,020	953	1,160	1,270	1,110	1,400	1,540	1,220	1,050
3	1,040	905	893	1,010	957	1,140	1,260	1,120	1,330	1,550	1,200	1,030
4	1,040	905	893	994	965	1,100	1,230	1,100	1,320	1,550	1,200	1,030
5	1,050	897	893	994	969	1,080	1,200	1,100	1,300	1,540	1,200	1,030
6	1,060	897	893	965	998	1,070	1,180	1,090	1,300	1,530	1,200	1,020
7	1,060	897	897	933	1,030	1,060	1,180	1,090	1,300	1,510	1,200	1,010
8	1,060	897	901	925	1,040	1,070	1,170	1,080	1,280	1,400	1,180	1,020
9	1,060	897	945	917	1,040	1,060	1,160	1,070	1,280	1,340	1,180	1,020
10	953	897	977	929	1,060	1,070	1,180	1,060	1,260	1,340	1,140	1,020
11	921	897	985	941	1,060	1,080	1,170	1,050	1,230	1,340	1,130	1,020
12	917	897	973	937	1,030	1,070	1,160	1,040	1,230	1,330	1,140	1,020
13	913	893	977	933	1,020	1,050	1,160	1,040	1,260	1,340	1,120	1,020
14	913	893	965	913	1,010	1,030	1,140	1,040	1,320	1,350	1,120	1,010
15	913	893	953	897	1,010	1,030	1,140	1,060	1,320	1,340	1,120	1,010
16	913	893	957	913	994	1,040	1,140	1,240	1,330	1,340	1,110	998
17	909	889	973	909	1,000	1,050	1,140	1,280	1,360	1,340	1,100	998
18	913	885	985	905	998	1,050	1,140	1,280	1,380	1,340	1,100	1,000
19	913	885	994	905	977	1,060	1,140	1,280	1,380	1,340	1,100	1,010
20	909	881	981	909	957	1,050	1,140	1,320	1,430	1,300	1,100	994
21	905	885	965	917	953	1,040	1,130	1,360	1,510	1,300	1,090	985
22	905	885	917	917	957	1,040	1,130	1,360	1,520	1,290	1,080	977
23	905	885	901	913	965	1,040	1,120	1,380	1,540	1,280	1,080	973
24	909	885	905	917	965	1,050	1,120	1,380	1,540	1,280	1,080	973
25	909	889	901	921	977	1,060	1,130	1,400	1,550	1,270	1,080	973
26	913	893	905	949	1,010	1,100	1,130	1,400	1,550	1,250	1,080	969
27	917	893	905	937	1,060	1,130	1,120	1,390	1,540	1,250	1,070	973
28	917	889	925	929	1,100	1,150	1,100	1,400	1,540	1,240	1,070	973
29	913	889	937	933	1,160	1,200	1,100	1,400	1,540	1,240	1,070	973
30	913	893	937	933	-	1,240	1,100	1,400	1,540	1,230	1,070	965
31	913	-	949	945	-	1,260	-	1,400	-	1,230	1,070	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	29,546	1,060	905	953	58,600
November	26,810	913	881	894	53,180
December	28,968	994	893	934	57,460
Calendar year 1939	436,024	1,600	881	1,195	864,800
January	29,054	1,020	897	937	57,630
February	29,160	1,160	945	1,006	57,840
March	33,790	1,260	1,030	1,090	67,020
April	34,750	1,270	1,100	1,158	68,930
May	37,820	1,400	1,040	1,220	75,010
June	41,780	1,550	1,230	1,393	82,870
July	42,070	1,550	1,230	1,357	83,440
August	34,920	1,220	1,070	1,126	69,260
September	30,104	1,060	965	1,003	59,710
Water year 1939-40	398,772	1,550	881	1,090	791,000

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 14 years, 1,064 second-feet.

Extremes.- Maximum discharge during year, 1,350 second-feet July 4 (gage height, 1.24 feet); minimum, 776 second-feet Dec. 2, 3 (gage height, 0.44 foot).
1926-40: 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 no gage-height record, which are good. Arnold canal diverts water above station for irrigation. Flow regulated by Crescent Lake and Crane Prairie Reservoirs (see p. 44).

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 13 to July 21)

0.4	750	1.0	1,210
.6	880	1.2	1,390
.8	1,040	1.4	1,580

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	896	815	782	888	854	1,060	1,170	944	1,230	1,330	1,100	960
2	912	815	776	920	860	1,060	1,160	944	1,220	1,330	1,100	936
3	912	815	789	928	860	1,050	1,160	952	1,160	1,340	1,090	928
4	920	828	815	912	860	992	1,100	944	1,140	1,340	1,090	928
5	920	828	815	896	848	968	1,060	936	1,130	1,340	1,080	912
6	928	828	808	880	874	968	1,040	928	1,130	1,340	1,080	904
7	920	828	808	854	912	984	1,040	928	1,120	1,340	1,070	912
8	920	828	808	828	944	992	1,040	920	1,110	1,240	1,070	912
9	912	828	848	828	960	992	992	912	1,110	1,190	1,060	f912
10	828	828	880	834	976	1,000	992	904	1,090	1,180	1,030	a912
11	796	828	880	848	976	1,010	992	896	1,060	1,180	1,020	f912
12	789	828	874	848	960	992	992	888	1,060	1,180	1,020	912
13	789	822	874	841	936	976	a992	944	1,090	1,190	1,020	904
14	789	822	867	822	928	960	a1,010	976	1,120	1,220	1,010	896
15	789	822	854	802	928	960	a1,050	944	1,140	1,210	1,010	928
16	789	822	860	834	920	960	a1,040	1,060	1,140	1,210	1,000	928
17	789	822	874	828	920	976	a1,040	1,110	1,160	1,210	992	920
18	789	815	880	815	920	976	a1,020	1,120	1,180	1,210	992	928
19	796	815	896	815	888	984	1,000	1,120	1,190	1,200	992	912
20	789	808	888	815	874	984	984	1,140	1,210	1,170	984	888
21	789	808	848	815	867	976	968	1,180	1,290	1,170	984	874
22	789	808	815	815	874	976	1,000	1,190	1,320	1,170	984	874
23	789	808	815	815	874	976	976	1,200	1,320	1,160	984	867
24	789	808	815	815	867	968	960	1,210	1,330	1,160	976	867
25	782	808	815	808	874	968	960	1,220	1,340	1,150	976	867
26	782	808	808	834	904	1,020	952	1,220	1,320	1,140	976	867
27	789	808	802	841	968	1,040	952	1,220	1,320	1,130	968	874
28	789	808	802	828	1,020	1,060	952	1,220	1,320	1,130	968	867
29	782	796	815	815	1,060	1,100	936	1,230	1,320	1,120	960	867
30	782	782	808	808	-	1,130	936	1,230	1,320	1,120	960	860
31	789	-	841	828	-	1,160	-	1,220	-	1,110	960	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	25,623	928	782	827	50,820
November	24,487	828	782	816	48,570
December	25,860	896	776	834	51,290
Calendar year 1939	389,949	1,440	776	1,068	773,400
January	26,058	928	802	841	51,690
February	26,506	1,060	848	914	52,570
March	31,218	1,160	960	1,007	61,920
April	30,466	1,170	936	1,016	60,430
May	32,850	1,230	888	1,060	65,160
June	35,990	1,340	1,060	1,200	71,390
July	37,510	1,340	1,110	1,210	74,400
August	31,506	1.100	960	1,016	62,490
September	27,028	960	860	901	53,610
Water year 1939-40	335,102	1,340	776	970	704,300

a No gage-height record; discharge computed on basis of records for station above Benham Falls and Arnold canal near Bend.
f Computed from gage height based on partial record.

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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 Co. dam and 2 miles north of Bend.

Records available.- October 1914 to September 1940.

Average discharge.- 26 years, 670 second-feet.

Extremes.- Maximum discharge during year, 1,160 second-feet Mar. 29 (gage height, 3.12 feet); minimum, 17 second-feet July 27, Sept. 11-13.
1914-40: Maximum discharge, 2,500 second-feet Dec. 7, 1921 (gage height, 3.9 feet); minimum, 1 second-foot Aug. 25, 1930.
Maximum discharge known near this site since 1905, 4,820 second-feet Nov. 27, 1909.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Six large canals divert water above station. Flow regulated by hydroelectric plant at Bend, and since 1922 by Crescent Lake and Crane Prairie Reservoirs (see p. 44).

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Sept. 3-12, 16, 17)

Oct. 1 to Feb. 27				Feb. 28 to Sept. 30			
1.5	89	2.4	520	0.9	16	1.9	235
1.6	109	2.6	670	1.0	22	2.2	405
1.8	175	2.8	835	1.2	43	2.5	625
2.0	270	3.0	1,010	1.4	78	2.8	870
2.2	385			1.6	125	3.1	1,140

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	95	164	492	903	648	649	828	112	110	105	21	21
2	93	153	694	947	686	641	761	120	112	108	20	54
3	93	255	826	965	878	802	794	122	85	108	21	21
4	93	411	860	947	860	1,000	737	120	100	108	21	21
5	103	361	860	947	860	996	721	115	98	108	21	20
6	105	355	860	947	920	978	705	112	105	105	20	20
7	105	361	844	903	965	1,010	705	108	102	98	20	19
8	109	355	844	878	983	1,010	697	108	f100	91	19	20
9	109	361	860	894	992	1,000	665	100	f105	82	20	19
10	99	355	894	894	1,010	1,000	649	89	102	96	19	18
11	101	331	903	912	1,000	1,020	625	98	102	102	18	17
12	101	331	903	920	965	1,010	558	93	108	96	21	f17
13	99	325	912	920	920	987	461	112	112	100	21	a17
14	101	325	912	894	920	969	412	108	112	105	21	a30
15	99	337	903	869	920	996	412	98	112	109	21	a70
16	103	343	894	886	947	1,000	392	125	93	f100	20	98
17	103	349	903	894	947	1,020	386	149	115	f100	20	f87
18	103	337	920	869	938	1,020	280	118	100	100	20	a155
19	103	337	869	869	912	1,030	199	108	100	96	20	a205
20	91	418	702	869	903	1,020	140	120	115	78	20	a185
21	91	670	648	878	894	987	122	131	146	53	21	a185
22	95	686	640	878	894	969	140	110	110	36	21	a195
23	93	686	662	878	903	969	131	118	112	31	21	a195
24	95	f686	852	869	903	969	118	120	115	29	f21	a180
25	91	f686	860	886	920	960	125	122	115	22	a21	a185
26	95	580	718	894	956	1,030	120	108	108	19	a21	a170
27	99	632	595	792	1,010	1,050	120	105	105	20	f21	a195
28	103	610	588	694	870	1,070	108	102	105	21	21	a180
29	101	565	610	595	657	1,120	108	105	102	20	21	a190
30	103	506	625	464	-	1,060	110	108	102	20	21	a190
31	105	-.	844	595	-	1,000	-	100	-	20	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,079	109	91	99.3	6,110
November	12,871	686	153	429	25,530
December	24,497	920	492	790	48,590
Calendar year 1939	144,261	1,160	72	395	286,100
January	26,550	965	464	856	52,660
February	26,181	1,010	648	903	51,930
March	30,342	1,120	641	979	60,180
April	12,329	828	108	411	24,450
May	3,464	149	89	112	6,870
June	3,208	146	85	107	6,360
July	2,286	109	19	73.7	4,530
August	635	21	18	20.5	1,260
September	2,979	205	17	99.3	5,910
Water year 1939-40	148,421	1,120	17	406	294,400

a No gage-height record; discharge computed on basis of records for stations at Benham Falls, above Lava Island, and diversions.
f Computed from gage heights based on partial record.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 Shitike Creek, and 9 miles northwest of Madras. Altitude of gage, about 1,404 feet above mean sea level (from river-profile map).

Records available.- October 1923 to September 1940.

Average discharge.- 17 years, 4,144 second-feet.

Extremes.- Maximum discharge during year, 8,960 second-feet Mar. 29 (gage height, 4.94 feet); minimum, 2,950 second-feet Aug. 25 (gage height, 1.43 feet).
1923-40: Maximum discharge, 11,300 second-feet Apr. 20, 1938 (gage height, 5.99 feet); minimum, that of Aug. 25, 1940.

Remarks.- Records excellent except those for periods of no gage-height record, which are good. Diversions for irrigation in upper river basin.

Rating table, 1939-40 (gage height, in feet, and discharge, in second-feet)

1.5	3,030	2.7	4,800	4.4	7,880
1.8	3,430	3.0	5,310	4.8	8,680
2.1	3,860	3.5	6,210		
2.4	4,320	4.0	7,120		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,240	3,290	3,650	a4,200	3,960	7,460	7,060	3,920	3,390	3,220	3,120	3,130
2	3,240	3,350	3,640	a4,400	4,000	6,740	6,690	3,900	3,370	3,240	3,110	3,130
3	3,240	3,360	3,900	a4,480	4,080	6,020	6,430	3,940	3,360	3,220	3,110	3,130
4	3,250	3,430	3,960	a4,480	4,220	6,150	5,910	3,880	3,360	3,220	3,120	3,150
5	3,330	3,560	3,980	a4,460	4,180	5,790	5,620	3,840	3,330	3,210	3,120	3,120
6	3,260	3,530	4,000	a4,440	4,660	5,500	5,460	3,800	3,330	3,210	3,130	3,110
7	3,260	3,530	4,000	h4,430	4,700	5,340	5,210	3,760	3,330	3,200	3,130	3,130
8	3,280	3,540	4,010	a4,350	5,220	5,310	5,120	3,700	3,320	3,210	3,130	3,130
9	3,280	3,530	4,060	a4,300	4,970	5,450	5,530	3,670	3,290	3,210	3,130	3,150
10	3,280	3,510	4,140	a4,200	4,780	5,500	5,660	3,680	3,320	3,200	3,120	3,160
11	3,250	3,510	f4,100	a4,150	4,750	5,280	5,610	3,660	3,320	3,200	3,120	3,160
12	3,250	3,510	a4,100	a4,100	4,780	5,110	5,290	3,630	3,330	3,210	3,130	3,170
13	3,250	3,510	a4,050	h4,130	4,720	4,940	5,110	3,580	3,330	3,210	3,120	3,170
14	3,250	3,510	a4,050	h4,100	4,540	4,850	5,000	3,540	3,330	3,200	3,120	3,160
15	3,240	3,500	a4,100	a4,100	4,500	4,750	4,950	3,530	3,290	3,210	3,120	3,170
16	3,250	3,560	a4,300	a4,100	4,510	4,850	4,880	3,490	3,300	3,210	3,120	3,200
17	3,250	3,530	a4,450	a4,100	4,480	5,120	4,720	3,440	3,280	3,220	3,120	3,300
18	3,250	3,530	a4,350	f4,120	4,450	5,480	4,540	3,500	3,280	3,200	3,130	3,300
19	3,250	3,530	a4,200	4,080	4,420	5,340	4,380	3,440	3,260	3,200	3,120	3,320
20	3,250	3,540	a4,100	4,070	4,400	5,240	4,240	3,430	3,260	3,280	3,130	3,330
21	3,240	3,650	a4,000	4,070	4,370	5,260	4,130	3,400	3,250	3,240	3,130	3,320
22	3,250	3,830	a3,900	4,070	4,350	5,290	4,060	3,420	3,280	3,200	3,120	3,300
23	3,260	3,830	a3,800	4,060	4,270	5,330	4,010	3,390	3,250	3,190	3,120	3,290
24	3,280	3,840	h3,830	4,060	4,270	5,340	3,950	3,430	3,250	3,160	3,120	3,290
25	3,260	3,840	a3,900	4,040	4,320	5,430	3,980	3,420	3,260	3,150	3,120	3,290
26	3,280	3,830	a3,950	4,120	4,460	5,840	3,890	3,360	3,260	3,160	3,120	3,290
27	3,300	3,740	a3,900	4,210	5,290	6,470	3,940	3,350	3,240	3,200	3,130	3,320
28	3,330	3,760	f3,900	4,040	6,430	8,160	3,980	3,350	3,220	3,130	3,150	3,360
29	3,300	3,720	a3,950	4,020	6,870	8,520	3,860	3,330	3,220	3,130	3,130	3,320
30	3,300	3,680	a4,100	3,940	-	7,010	3,880	3,360	3,220	3,150	3,130	3,320
31	3,290	-	a4,100	3,830	-	7,010	-	3,360	-	3,130	3,130	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	101,240	3,330	3,240	3,266	200,800
November	107,550	3,840	3,290	3,585	213,300
December	124,470	4,450	3,640	4,015	246,900
Calendar year 1939	1,405,710	7,540	3,240	3,851	2,788,000
January	129,250	4,480	3,830	4,169	256,400
February	134,950	6,870	3,960	4,653	267,700
March	179,880	8,520	4,750	5,803	356,800
April	147,090	7,060	3,860	4,903	291,700
May	110,520	3,940	3,330	3,565	219,200
June	98,830	3,390	3,220	3,294	196,000
July	99,120	3,280	3,130	3,197	196,600
August	96,850	3,150	3,110	3,124	192,100
September	96,720	3,360	3,110	3,224	191,800
Water year 1939-40	1,426,470	8,520	3,110	3,897	2,829,000

a No gage-height record; discharge computed on basis of known range of stage and records for station at Moody.
f Discharge computed from daily gage height based on partial record.
h Discharge computed from staff-gage reading.

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. Datum 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 1940. October 1897 to December 1899 at site near Moro, 10 miles above mouth.

Average discharge.- 35 years (1898-99, 1906-40), 5,793 second-feet.

Extremes.- Maximum discharge during year, 11,500 second-feet Feb. 28 (gage height, 4.40 feet); minimum, 3,510 second-feet Aug. 26 (gage height, 2.11 feet).
1897-99, 1906-40: Maximum discharge, 43,600 second-feet Jan. 7, 1923 (gage height, 10.2 feet), from rating table extended above 15,000 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.

Cooperation.- Water-stage recorder inspected by agent of Eastern Oregon Land Co.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

2.1	3,490	2.5	4,490	3.2	6,720	4.0	9,800
2.3	3,950	2.8	5,380	3.6	8,210	4.4	11,500

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,710	3,780	4,110	4,900	4,410	9,840	9,800	5,050	4,000	3,730	3,600	3,560
2	3,730	3,810	4,080	5,110	4,490	9,580	9,240	5,110	4,000	3,730	3,600	3,560
3	3,730	3,630	4,110	5,200	4,520	8,640	8,600	5,080	3,980	3,730	3,580	3,580
4	3,730	3,830	4,380	5,200	4,660	8,060	8,130	4,990	3,930	3,730	3,580	3,580
5	3,780	3,950	4,380	5,170	4,810	7,940	7,680	4,900	3,930	3,710	3,580	3,580
6	3,830	4,000	4,380	5,080	6,450	7,380	7,260	4,870	3,880	3,710	3,580	3,560
7	3,780	3,980	4,380	5,020	7,490	7,010	6,940	4,750	3,880	3,690	3,580	3,560
8	3,780	4,000	4,410	4,960	6,580	7,120	6,720	4,660	3,880	3,690	3,580	3,580
9	3,780	4,000	4,460	4,900	6,720	7,080	6,940	4,550	3,850	3,690	3,560	3,580
10	3,780	3,980	4,610	4,810	6,510	7,150	7,450	4,520	3,850	3,690	3,580	3,620
11	3,760	3,980	4,660	4,750	6,370	6,900	7,300	4,550	3,850	3,690	3,560	3,620
12	3,760	3,980	4,580	4,660	6,000	6,580	6,970	4,550	3,850	3,690	3,560	3,600
13	3,760	3,980	4,550	4,660	5,900	6,270	6,650	4,460	3,850	3,690	3,560	3,640
14	3,760	3,980	4,580	4,660	5,800	6,060	6,480	4,380	3,850	3,690	3,560	3,640
15	3,730	3,980	4,610	4,610	5,600	5,930	6,400	4,320	3,830	3,690	3,560	3,640
16	3,760	3,980	4,960	4,610	5,540	5,860	6,340	4,270	3,810	3,690	3,560	3,670
17	3,760	3,980	5,260	4,640	5,900	6,060	6,100	4,210	3,830	3,690	3,560	3,710
18	3,760	3,980	5,020	4,640	6,200	6,480	5,860	4,180	3,810	3,690	3,560	3,780
19	3,760	3,980	4,810	4,610	5,640	6,580	5,640	4,210	3,810	3,670	3,560	3,760
20	3,760	3,980	4,780	4,580	5,440	6,440	5,440	4,160	3,780	3,690	3,560	3,780
21	3,760	3,980	4,640	4,580	5,320	6,340	5,290	4,130	3,780	3,780	3,560	3,780
22	3,730	4,160	4,490	4,580	5,290	6,400	5,170	4,110	3,780	3,730	3,560	3,760
23	3,730	4,270	4,410	4,580	5,230	6,510	5,140	4,110	3,810	3,670	3,560	3,760
24	3,760	4,270	4,410	4,550	5,110	6,580	5,080	4,050	3,780	3,640	3,560	3,730
25	3,760	4,240	4,460	4,610	5,170	6,680	5,110	4,080	3,760	3,640	3,560	3,730
26	3,760	4,270	4,490	4,550	6,270	6,860	5,080	4,030	3,760	3,640	3,560	3,730
27	3,780	4,270	4,520	4,660	7,490	7,940	4,900	3,980	3,760	3,670	3,560	3,780
28	3,880	4,160	4,410	4,780	10,100	9,120	4,960	3,950	3,760	3,690	3,560	3,850
29	3,850	4,180	4,520	4,550	10,700	10,900	4,960	3,930	3,760	3,640	3,560	3,850
30	3,810	4,160	4,720	4,550	-	9,960	4,900	3,930	3,730	3,620	3,560	3,780
31	3,780	-	4,690	4,460	-	9,040	-	3,950	-	3,620	3,560	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	116,800	3,880	3,710	3,768	231,700
November	120,920	4,270	3,780	4,031	239,800
December	140,870	5,260	4,080	4,544	279,400
Calendar year 1939	1,654,880	9,480	3,690	4,534	3,282,000
January	147,220	5,200	4,460	4,749	292,000
February	175,710	10,700	4,410	6,059	348,500
March	229,590	10,900	5,860	7,406	455,400
April	192,530	9,800	4,900	6,418	381,900
May	136,020	5,110	3,930	4,388	269,800
June	115,130	4,000	3,730	3,838	228,400
July	114,320	3,780	3,620	3,688	226,800
August	110,580	3,600	3,560	3,567	219,300
September	110,350	3,850	3,560	3,678	218,900
Water year 1939-40	1,710,040	10,900	3,560	4,672	3,392,000

Peak discharge.- Feb. 7 (1 a.m.) 8,680 sec.-ft.; Feb. 28 (11 to 12 p.m.) 11,500 sec.-ft.; Mar. 29 (2 to 9 p.m.) 11,100 sec.-ft.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Reservoirs in Deschutes River Basin above Bend, Oreg.

Crane Prairie Reservoir.- Staff gage, lat. 43°45', long. 121°47', at dam on Deschutes River in NW¼ sec. 16, T. 21 S., R. 8 E., 15 miles northwest of Lapine. Datum of gage is 4,400.0 feet above mean sea level (Bureau of Reclamation bench mark). Records available, November 1922 to September 1940. Maximum contents observed during year, 41,080 acre-feet May 14 (gage height, 41.99 feet); minimum, 4 acre-feet Sept. 14 (gage height, 26.47 feet). Maximum contents observed during period 1922-40, 50,830 acre-feet Jan. 10-13, 1924 (gage height, 44.10 feet); no usable contents at times.

Reservoir is formed by earth dam completed by North Canal Co. in 1922; gates were first closed Nov. 22, 1922; reconstructed as rock-faced earth dam with concrete control works by Bureau of Reclamation in 1939-40. Capacity, 55,340 acre-feet between gage heights 24.0 feet (lip of fish-screen structure) and 45 feet (crest of spillway). Capacity was increased slightly in September 1940 by removal of old dam and use of new dam with lower outlet. Dead storage negligible. Water used for irrigation near Bend and Redmond. Gage read once daily Oct. 1 to Dec. 31, Jan. 4, 10, 31, Feb. 1, 2, twice daily Apr. 1 to July 4, July 6 to Sept. 30.

Crescent Lake Reservoir.- Staff gage, lat. 43°30', long. 121°58', at head of spillway on dam at lake outlet in sec. 11, T. 24 S., R. 6 E., and auxiliary staff gage at boat dock 100 yards south, 14 miles west of Crescent. Datum of gage is 4,826.0 feet above mean sea level (levels of Deschutes County Municipal Improvement District). Records available, August 1922 to September 1940. Maximum contents observed during year, 41,500 acre-feet June 18, 19 (gage height, 11.49 feet); minimum observed, 18,190 acre-feet Aug. 29 (gage height, 5.15 feet). Maximum contents observed during period 1922-40, 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).

Reservoir is formed by dam of earth and logs, completed and storage begun in 1922. Capacity, 86,050 acre-feet between gage heights, 0.0 foot (sill of outlet gate) and 23.0 feet (crest of spillway). Dead storage not known; records given herein represent usable contents. Water is diverted from Deschutes River at Bend and used by Deschutes County Municipal Improvement District for irrigation near Tumalo. Gage read once daily, Oct. 1 to Jan. 6, Apr. 1 to Aug. 17, Aug. 24 to Sept. 7.

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

Capacity table for Crane Prairie Reservoir applicable from Sept. 14, 1940 (gage height, in feet, and contents, in acre-feet)
(Revised on basis of reconstructed dam with lowest outlet at gage height, 24.0 feet, and resurvey by Deschutes County watermaster in October 1940)

24.0	0	29	302	33	8,043	39	28,620
26	2	30	1,428	34	10,940	41	36,870
27	7	31	3,200	35	14,110	43	45,780
28	45	32	5,440	37	21,020	45	55,340

Gage height and contents, water year October 1939 to September 1940

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	29.24	401	-	6.57	23,310	-
Oct. 31	32.90	7,649	+7,248	6.96	24,730	+1,420
Nov. 30	35.40	15,310	+7,661	7.2	25,600	+870
Dec. 31	37.80	23,860	+8,550	7.92	28,240	+2,640
Calendar year 1939	-	-	-	-	-	-25,340
Jan. 31	39.18	29,210	+5,350	-	30,300	+2,060
Feb. 29	-	a32,120	+2,910	-	a32,020	+1,720
Mar. 31	-	a36,240	+4,120	9.6	a34,440	+2,420
Apr. 30	41.66	39,620	+3,380	10.4	37,430	+2,990
May 31	39.87	32,010	-7,610	11.35	40,980	+3,550
June 30	35.08	14,250	-17,760	9.76	35,570	-5,410
July 31	31.40	3,925	-10,325	6.82	24,210	-11,360
Aug. 31	29.22	382	-3,543	5.2	18,370	-5,840
Sept.30	27.61	28	-354	-	a18,860	+490
Water year 1939-40	-	-	-373	-	-	-4,450

*Time of day variable.
a No gage-height record; contents interpolated.

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., upstream from flow line of Crane Prairie Reservoir, 2 miles upstream from Cultus Creek, and 18 miles northwest of Lapine. Altitude of gage, about 4,450 feet.

Records available.- June 1923 to September 1925, November 1937 to September 1940.

Extremes.- Maximum discharge during year, 61 second-feet July 15 (gage height, 0.61 foot); minimum, 36 second-feet Mar. 9-25 (gage height, 0.68 foot).
1923-25, 1937-40: Maximum discharge, 118 second-feet May 16, 1938 (gage height, 0.99 foot); minimum, that of Mar. 9-25, 1940.

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

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	43	41	41	41	38	41	53	51	57	55	47
2	55	43	41	41	41	38	41	53	53	57	55	47
3	53	43	39	41	41	38	41	53	53	57	53	47
4	53	43	39	41	41	38	43	53	53	57	53	47
5	51	43	39	41	41	38	41	51	53	57	51	45
6	49	43	39	41	41	38	41	51	53	57	51	45
7	49	43	39	41	41	38	45	51	53	57	51	45
8	49	43	39	41	41	38	45	51	53	57	51	45
9	49	43	39	41	41	36	47	51	53	57	51	45
10	47	45	39	41	41	36	47	51	53	57	51	45
11	47	45	39	41	41	36	47	51	53	57	49	45
12	45	45	41	41	41	36	a47	51	53	57	49	45
13	43	45	41	41	41	36	a47	51	53	57	49	45
14	43	45	41	41	41	36	a47	51	53	57	49	45
15	43	45	41	41	41	36	a47	49	53	59	49	45
16	43	45	41	41	41	36	47	49	53	59	49	45
17	43	45	41	41	39	36	47	51	53	59	49	45
18	43	45	41	41	39	36	47	51	53	57	49	45
19	43	45	41	41	39	36	49	51	53	59	51	43
20	43	43	41	41	39	36	49	51	53	57	51	43
21	43	43	41	41	39	36	49	51	53	59	51	43
22	43	43	43	41	39	36	49	51	53	59	51	43
23	43	43	43	41	39	36	51	51	53	59	51	43
24	43	43	43	41	39	36	51	51	53	57	51	43
25	43	43	41	41	38	36	51	51	53	57	51	43
26	43	43	41	41	38	38	51	51	53	57	51	43
27	43	43	41	41	38	39	49	51	53	57	51	43
28	43	43	41	41	38	41	51	51	53	57	51	43
29	43	43	41	41	38	41	51	53	53	57	49	43
30	43	41	41	41	-	41	51	53	53	57	49	43
31	43	-	41	41	-	41	-	53	-	57	49	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,419	55	43	45.8	2,810
November	1,308	45	41	43.6	2,590
December	1,259	43	39	40.6	2,500
Calendar year 1939	19,505	70	39	53.4	38,670
January	1,271	41	41	41.0	2,520
February	1,158	41	38	39.9	2,300
March	1,157	41	36	37.3	2,290
April	1,410	51	41	47.0	2,800
May	1,591	53	49	51.3	3,160
June	1,588	53	51	52.9	3,150
July	1,781	59	57	57.5	3,530
August	1,571	55	49	50.7	3,120
September	1,334	47	43	44.5	2,650
Water year 1939-40	16,847	59	36	46.0	33,420

a No gage-height record; discharge interpolated.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

U.S. GOVERNMENT PRINTING OFFICE 1936—O.-162062

Quinn River near Lapine, Oreg.

Location.- Water-stage recorder and wooden control, 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 1940.

Extremes.- Maximum discharge during year, 20 second-feet May 19-26 (gage height, 1.79 feet); minimum, 8.5 second-feet Sept. 30.
1922-25, 1937-40: Maximum discharge, 47 second-feet July 14-16, 1938; minimum, 3 second-feet Jan. 7, 15, 21, 1925.

Remarks.- Records excellent except those for period of no gage-height record, which are good. No diversion or regulation above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.6	5
.7	12
.8	21

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	12	11	11		all	11	16	18	16	13	9.0
2	14	11	11	11		all	12	16	18	16	13	9.0
3	13	11	11	11		all	12	16	18	16	13	9.0
4	13	11	11	11		all	12	16	18	17	13	10
5	13	11	11	11		all	12	16	18	16	13	10
6	13	11	11	11		11	12	16	18	16	13	10
7	13	11	11	11		11	12	16	18	17	12	10
8	13	11	11	11		11	12	16	18	17	12	11
9	13	11	11	11		11	11	16	18	17	12	11
10	12	11	11	11		11	12	16	18	17	12	11
11	12	11	11	11		10	12	16	18	17	13	12
12	12	11	11	11		10	12	17	18	17	13	12
13	12	11	11	11		10	13	17	18	16	13	12
14	12	11	11	11		10	13	18	18	16	14	12
15	12	11	11			10	13	18	18	16	14	12
					all							
16	12	11	11			9.0	13	18	18	16	13	12
17	12	11	11			9.0	14	18	18	16	14	12
18	13	11	11			10	14	19	19	16	15	11
19	13	12	11			10	14	19	18	15	15	11
20	13	12	11			10	14	19	19	14	14	11
21	13	12	11			11	15	19	19	14	14	11
22	14	12	11			11	15	19	18	14	14	11
23	14	11	11		all	11	15	19	18	14	13	11
24	14	12	11			11	15	19	18	14	13	10
25	13	12	11			11	16	19	17	14	12	9.0
26	13	12	11			11	16	19	16	14	11	9.0
27	12	12	11			11	16	19	16	14	11	9.0
28	12	11	11			11	16	19	16	14	10	9.0
29	12	11	11			11	16	19	16	14	10	9.0
30	12	11	11		-	11	16	19	16	14	9	8.5
31	12	-	11		-	11	-	18	-	13	9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	395	14	12	12.7	783
November	339	12	11	11.3	672
December	341	11	11	11.0	676
Calendar year 1939	5,875	28	11	16.1	11,660
January	341	11	11	11.0	676
February	319	-	-	11	633
March	329.0	11	9.0	10.6	653
April	406	16	11	13.5	805
May	547	19	16	17.6	1,080
June	532	19	16	17.7	1,060
July	477	17	13	15.4	946
August	390	15	9	12.6	774
September	313.5	12	8.5	10.4	622
Water year 1939-40	4,729.5	19	8.5	12.9	9,380

a No gage-height record; discharge interpolated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog al Survey

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, 3½ miles north of Crescent Lake and 14 miles northwest of Crescent. Datum 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 1940.

Extremes.- Maximum discharge during year, 107 second-feet Mar. 31, Apr. 1 (gage height, 0.74 foot); minimum, 18 second-feet Aug. 27-29, Sept. 2 (gage height, 0.28 foot).
1911-14, 1923-24, 1933-40: Maximum discharge, 390 second-feet June 14, 1912, Jan. 4, 1936; minimum, 12 second-feet sometime in period September 7-30, 1934.

Remarks.- Records good except those for period of no gage-height record, which are poor. No diversions 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 levels; slightly affected at times by seiches on Odell Lake.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	41	30	76	46	96	104	88	76	38	26	19
2	25	41	32	79	46	98	101	88	76	38	25	19
3	26	39	32	79	49	92	98	88	74	38	25	19
4	26	36	32	79	49	88	95	92	74	36	24	20
5	32	36	32	79	50	86	95	92	66	35	23	19
6	32	35	32	71	62	82	88	88	64	34	24	19
7	32	35	32	69	74	82	92	86	62	34	24	21
8	30	36	36	71	71	86	92	82	59	32	24	21
9	30	35	57	74	71	79	96	82	57	29	24	22
10	30	34	74	74	79	74	88	86	57	28	23	23
11	29	34	76	69	82	71	86	88	57	29	24	23
12	29	33	71	66	79	66	82	92	57	30	24	23
13	29	33	69	62	92	62	82	96	57	28	23	23
14	29	33	69	57	96	59	82	96	57	28	23	24
15	29	33	74	54	92	59	82	96	57	28	23	25
16	28	32	86	52	92	64	79	96	52	29	21	26
17	28	32	92	50	96	62	76	92	52	29	21	28
18	29	32	88	49	92	59	74	92	50	27	21	32
19	29	32	82	47	86	57	76	92	54	27	22	30
20	29	32	86	46	76	54	74	92	49	27	21	29
21	29	32	82	44	71	54	71	88	47	28	21	29
22	29	30	76	42	69	52	71	92	44	29	21	29
23	30	30	71	42	64	a51	74	92	42	29	21	29
24	32	30	66	42	62	a51	76	96	44	29	20	29
25	30	29	64	49	66	a53	76	92	44	28	20	29
26	35	29	59	54	71	a70	76	86	42	28	19	29
27	44	29	57	57	79	a90	76	82	38	28	19	33
28	46	29	66	52	96	a94	82	79	38	28	19	36
29	44	29	71	52	101	a98	86	79	38	27	19	35
30	42	30	71	50	-	a100	88	74	38	27	19	35
31	42	-	74	49	-	f104	-	74	-	26	19	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	980	46	25	31.6	0.810	0.93	1,940
November	991	41	29	33.0	.846	.95	1,970
December	1,937	92	30	62.5	1.60	1.85	3,840
Calendar year 1939	21,490	170	19	58.9	1.51	20.48	42,620
January	1,836	79	42	59.2	1.52	1.75	3,640
February	2,155	101	46	74.3	1.91	2.05	4,270
March	2,290	104	51	73.9	1.89	2.18	4,540
April	2,515	104	71	83.8	2.15	2.40	4,990
May	2,730	95	74	88.1	2.26	2.60	5,410
June	1,622	76	38	54.1	1.39	1.55	3,220
July	931	38	26	30.0	0.769	0.89	1,850
August	682	26	19	22.0	.564	.65	1,350
September	778	36	19	25.9	.664	.74	1,540
Water year 1939-40	19,447	104	19	53.1	1.36	18.54	38,560

a No gage-height record; discharge computed on basis of weather records and records for Waldo Lake outlet near Oakridge.
f Computed from gage height based on partial record.

9-233 April 1936
UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. Survey
101604-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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 1940, 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, 134 second-feet Sept. 17 (gage height, 1.46 feet), caused by release of water from fish hatchery; minimum, 113 second-feet Sept. 30 (gage height, 1.22 feet).
1938-40: Maximum discharge, 157 second-feet Aug. 19-21, 26, Oct. 28, 1938; minimum, that of Sept. 30, 1940.
Extremes not determined for 1912, 1923-24.

Remarks.- Records good except those for period Aug. 14 to Sept. 30, which are fair. Water diverted above station only to ponds at fish hatcheries, from which water returns to river above station; no regulation.

Cooperation.- Recorder inspected by employees of Oregon State Game Commission.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-30, Aug. 14 to Sept. 30)

1.1	110	1.3	123
1.2	116	1.4	130

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	126	120	117	117	116	115	116	117	117	123	125	117
2	126	120	117	117	116	115	116	117	117	123	124	115
3	126	120	117	117	116	115	116	117	119	123	124	115
4	126	120	117	117	115	115	117	116	119	123	124	115
5	126	120	117	117	115	115	116	116	120	123	125	115
6	126	120	117	117	115	115	116	116	120	123	126	115
7	126	120	118	117	115	115	116	116	120	124	126	115
8	126	120	119	117	115	114	115	116	120	124	126	115
9	125	120	120	116	115	114	115	116	120	124	126	115
10	124	120	120	116	115	114	115	116	120	124	126	115
11	124	120	118	116	115	114	116	116	120	124	126	115
12	124	120	118	116	115	114	116	116	120	124	126	115
13	124	120	118	116	116	114	116	116	120	124	126	115
14	124	120	118	116	115	114	116	116	120	124	126	115
15	124	119	118	116	115	115	116	116	120	124	126	114
16	124	119	118	115	115	114	116	116	120	124	125	114
17	124	119	117	115	115	114	116	116	120	124	124	115
18	123	119	117	116	115	114	116	115	120	124	123	114
19	123	119	117	116	115	114	116	116	120	125	123	114
20	122	119	117	116	115	114	116	116	120	125	122	114
21	122	119	117	115	115	114	116	116	120	126	122	114
22	122	119	117	115	115	114	117	116	120	126	122	114
23	122	119	117	115	115	114	117	116	120	126	122	114
24	122	118	117	114	115	114	117	116	121	125	121	114
25	122	118	117	115	115	114	117	116	122	125	121	114
26	122	118	117	115	116	116	117	116	122	125	120	115
27	122	118	117	115	116	115	117	116	121	124	120	114
28	121	118	117	115	115	116	117	117	121	125	119	114
29	121	117	117	116	115	116	117	117	120	125	118	114
30	121	117	117	116	-	116	117	117	120	124	117	114
31	120	-	117	116	-	116	-	117	-	125	117	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,830	126	120	124	7,600
November	3,575	120	117	119	7,090
December	3,642	120	117	117	7,220
Calendar year 1939	47,112	141	117	129	93,430
January	3,593	117	114	116	7,130
February	3,341	116	115	115	6,630
March	3,553	116	114	115	7,050
April	3,487	117	115	116	6,920
May	3,602	117	115	116	7,140
June	3,599	122	117	120	7,140
July	3,852	126	123	124	7,640
August	3,818	126	117	123	7,570
September	3,438	117	114	115	6,820
Water year 1939-40	43,330	126	114	118	85,950

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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. Datum 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 1940.

Average discharge.- 16 years (1924-40), 146 second-feet.

Extremes.- Maximum discharge during year, 382 second-feet Mar. 31 (gage height, 4.19 feet); minimum, 15 second-feet Sept. 26 (gage height, 0.98 foot).
1910-13, 1918, 1920, 1924-40: 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 backwater from aquatic vegetation, June 27 to Sept. 30, which are fair, and those for period of ice effect, which are poor. Small diversions for irrigation above station. Flow regulated since August 1922 by Crescent Lake Reservoir (see p. 44).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	41	36		b57	225	369	210	117	226	150	45
2	33	40	36		b56	207	337	210	119	226	147	36
3	33	38	36		b57	183	296	201	116	221	143	29
4	33	37	37		b58	169	278	193	111	219	139	27
5	34	36	36		b62	159	280	189	106	214	135	24
6	38	33	29		b68	157	267	186	102	210	130	24
7	43	36	35		b75	149	250	174	97	205	128	24
8	44	40	37		b85	152	255	161	93	214	126	22
9	41	38			b97	187	275	147	90	214	123	22
10	38	37			121	189	273	139	87	208	120	22
11	37	34			116	165	262	135	84	205	118	20
12	35	37			111	146	255	136	77	202	115	20
13	33	36			102	136	247	143	73	201	111	19
14	33	36			99	132	242	153	71	196	108	18
15	33	37		(*) b48	89	131	242	168	69	192	107	18
16	32	a38			106	140	243	167	68	191	105	19
17	33	a32			97	161	249	160	66	196	102	20
18	33	f27			84	166	247	153	65	201	101	24
19	33	33			76	154	241	147	173	195	99	26
20	33	34	b31		76	147	233	140	221	197	97	26
21	33	37			77	147	229	136	229	193	96	24
22	33	31			83	150	223	134	233	195	94	21
23	33	37			75	153	220	135	236	185	92	19
24	34	36			79	159	215	141	236	180	91	18
25	f34	32			87	173	217	146	236	174	90	17
26	a36	31			116	187	220	137	232	171	88	16
27	a40	37			154	240	209	132	227	169	86	17
28	a46	36			197	313	199	127	225	169	85	17
29	a48	34			223	323	189	122	222	166	84	17
30	f49	35			-	337	195	119	222	162	82	24
31	45	-			-	372	-	117	-	157	63	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,135	49	32	36.6	2,250
November	1,066	41	27	35.5	2,110
December	995	37	29	32.1	1,970
Calendar year 1939	53,774	420	27	147	106,700
January	1,488	-	-	48	2,950
February	2,783	223	56	96	5,520
March	5,809	372	131	187	11,520
April	7,457	369	189	249	14,790
May	4,758	210	117	153	9,440
June	4,303	236	65	143	8,530
July	6,054	226	157	195	12,010
August	3,355	150	63	108	6,650
September	675	45	16	22.5	1,340
Water year 1939-40	39,878	372	16	109	79,080

*Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Deschutes River at Benham Falls.
b Stage-discharge relation affected by ice.
f Discharge computed from gage height based on partial record.

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

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 1940.

Average discharge.- 15 years (1911-14, 1928-40), 37.0 second-feet.

Extremes.- Maximum discharge during year, 208 second-feet June 18, 19 (gage height, 2.54 feet); minimum, 3 second-feet (estimated) Oct. 1 to June 17, Sept. 6-30.
1911-15, 1927-40: Maximum discharge, 313 second-feet July 9, 1929, Aug. 9, 1936; no flow at times.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Flow regulated since 1922 by Crescent Lake Reservoir, storage being released Apr. 18 to Sept. 6, 1939, June 17 to Sept. 6, 1940, for diversion through Deschutes County Municipal Improvement District canal at Bend.

Rating table, June to August, 1940 (gage height, in feet, and discharge, in second-feet)

0	0	1.0	46.8
.2	4.0	1.5	89.3
.4	10.8	2.0	142
.7	26.4	2.6	216

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a3	a3	a3	a3	a3	a3	a3	a3		199	133	10
2										198	131	10
3										195	129	10
4										195	126	10
5										191	122	10
6										198	121	5
7										202	119	
8										199	116	
9									a3	198	113	
10										196	111	
11										194	109	
12										193	106	
13										189	102	
14										187	100	
15										186	99	
16										185	97	
17									104	182	95	
18									208	180	92	a3
19									207	177	90	
20									206	173	87	
21									204	171	84	
22									200	167	82	
23									200	165	80	
24									199	163	78	
25									198	159	76	
26									196	155	76	
27									194	152	74	
28									191	149	73	
29									196	145	36	
30					-				202	139	10	
31					-	-			-	135	10	-

Month	5econd-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	93	-	-	3	184
November	90	-	-	3	179
December	93	-	-	3	184
Calendar year 1939	24,557.5	250	-	67.3	48,700
January	93	-	-	3	184
February	87	-	-	3	173
March	93	-	-	3	184
April	90	-	-	3	179
May	93	-	-	3	184
June	2,753	208	-	91.8	5,460
July	5,517	202	135	178	10,940
August	2,877	133	10	92.8	5,710
September	127	10	-	4.2	252
Water year 1939-40	12,006	208	-	32.8	23,810

a No gage-height record; discharge computed on basis of information furnished by watermaster.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Diversions from Deschutes River near Bend, Oreg.

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

Arnold canal diverts 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 diverts from right bank in NE¼ sec. 13, T. 18 S., R. 11 E.; water used for irrigation of lands east of Bend. (Beginning Oct. 1, 1932, record obtained upstream from intake of Pilot Butte canal.)

Deschutes County Municipal Improvement District canal diverts from left bank in NE¼ sec. 32, T. 17 S., R. 12 E., at Bend; water used to supplement flow of Tumalo project feed canal for irrigation of lands near Tumalo; water stored at Crescent Lake Reservoir is diverted by this canal.

North and Swalley canals divert from right bank in NE¼ sec. 29, T. 17 S., R. 12 E.; water used to irrigate lands north of Bend, mostly near Redmond.

Records of monthly discharge of these canals, published as a group, are available from October 1926 to September 1940; records for each canal published separately prior to 1926.

Diversions in acre-feet, water year October 1939 to September 1940

Month	Arnold canal	Central Oregon canal	Deschutes County Municipal Improvement District canal	North canal	Swalley canal	Total
October	3,870	23,660	0	16,160	2,980	46,670
November	147	3,760	5,930	11,100	2,730	23,667
December	551	2,760	0	1,560	1,590	6,371
January	119	893	0	1,130	718	2,860
February	175	1,460	0	474	301	2,410
March	153	1,000	0	1,520	1,550	4,223
April	2,630	16,390	587	15,120	2,980	37,707
May	3,770	26,870	12	23,550	5,450	59,652
June	3,320	29,450	2,840	26,330	6,520	68,460
July	3,530	27,730	9,140	24,940	6,670	72,010
August	3,590	25,120	5,020	22,280	6,420	62,430
September	2,980	21,260	282	18,640	4,490	47,652
Water year 1939-40	24,835	180,263	23,811	162,804	42,399	434,112

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 1940.

Average discharge.- 25 years (1913-21, 1923-40), 77.8 second-feet, excluding flow of Columbia Southern canal.

Extremes.- Maximum discharge during year, 233 second-feet May 10 (gage height, 2.21 feet); minimum (estimated), 1 second-foot June 28 to July 3.
1906-8, 1911-40: Maximum discharge, 1,420 second-feet about Jan. 6, 1923 (gage height, 4.55 feet), from rating curve extended above 200 second-feet; minimum, that of June 28 to July 3, 1940.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Crater Creek canal diverts flow of tributaries of Soda Creek into head of Tumalo Creek. Columbia Southern canal diverts from creek above station. Canal records poor. Records of daily discharge do not include diversion by Columbia Southern canal.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51		43	73	54	65	81	117	98	1	57	55
2	52		26	71	52	64	78	123	78	1	57	55
3	52		8	64	54	62	78	117	73	1	55	59
4	56		8.2	61	54	62	76	119	73	2	55	57
5	68		8.2	58	54	62	73	108	75	3	55	57
6	56		7.8	57	90	62	72	106	75	2	54	52
7	54		7.8	54	70	65	70	110	75	2	54	55
8	53		9.0	55	65	76	75	126	62	2	54	55
9	53		11	55	62	67	81	154	68	2	54	55
10	53		14	52	61	64	74	188	83	2	54	59
11	52		9.4	52	58	62	81	194	108	2	54	54
12	52		8.2	51	55	61	94	170	132	2	54	57
13	51		7.8	49	58	60	110	170	121	2	54	58
14	51		8.2	48	55	60	119	149	96	2	54	58
15	52		9.0	50	55	62	106	149	85	2	54	59
16	52	48	13	54	55	65	100	139	76	34	54	58
17	53		13	56	54	64	100	139	71	65	54	59
18	56		9.0	54	54	64	117	144	75	62	54	64
19	54		8.6	52	54	64	121	152	85	59	55	58
20	56		8.6	49	62	65	115	137	61	68	55	57
21	53		7.5	46	57	67	117	137	57	65	55	55
22	52		11	44	54	70	117	168	39	64	55	55
23	53		7.1	42	54	71	119	168	7.1	64	54	54
24	53		7.1	47	55	81	108	162	5.9	64	54	55
25	49		47	50	61	85	106	148	6.7	61	54	54
26	53		23	52	65	96	100	128	6.3	65	57	54
27	75		54	53	65	92	102	92	2	70	54	58
28	66		58	54	68	87	104	82	1	62	55	58
29	58		62	54	65	87	100	87	1	59	54	57
30	55		64	54	-	87	104	92	1	61	57	55
31	53		65	54	-	85	-	87	-	58	54	-

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	1,697	75	49	54.7	3,370	0	3,370
November	1,440	-	-	48.0	2,860	0	2,860
December	643.5	65	7.1	20.8	1,280	1,990	3,270
Calendar year 1939	17,798.0	200	4.7	48.8	35,320	21,630	56,950
January	1,665	73	42	53.7	3,300	0	3,300
February	1,720	90	52	59.3	3,410	0	3,410
March	2,184	96	60	70.5	4,330	0	4,330
April	2,898	121	70	96.6	5,750	0	5,750
May	4,162	134	82	134	8,260	2,210	10,470
June	1,797.0	132	1	59.9	3,560	4,210	7,770
July	1,009	70	1	32.5	2,000	1,950	3,950
August	1,694	57	54	54.6	3,360	0	3,360
September	1,696	64	52	56.5	3,360	0	3,360
Water year 1939-40	22,605.5	194	1	61.8	44,840	10,360	55,200

Note.- No gage-height record Oct. 1, Oct. 24 to Dec. 3, Jan. 11-29, Mar. 9-14, Apr. 6-11, May 22 to June 2, June 27 to July 15; discharge computed on basis of records for Squaw Creek near Sisters, Columbia Southern and Tumalo feed canals near Bend.

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 1940. July 1906 to May 1913 at site 700 feet downstream, below intake of McCallister ditch.

Average discharge.- 28 years (1906-18, 1919-20, 1925-40), 103 second-feet.

Extremes.- Maximum discharge during year, 285 second-feet June 12 (gage height, 1.75 feet); minimum, 32 second-feet Nov. 4 (gage height, 0.69 foot).
1906-40: Maximum gage height, about 8.75 feet (over top of gage), Nov. 22, 1909, site and datum then in use (discharge not determined); minimum discharge, 19 second-feet Dec. 6, 1922.

Remarks.- Records good except those for period of ice effect, which are poor. 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 1939-40, except for period of ice effect (gage height, in feet, and discharge, in second-feet)

0.7	33	1.2	98
.8	40	1.4	155
1.0	62	1.6	227

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	36	39	94	40	54	62	92	166	139	76	61
2	44	36	39	84	39	54	60	94	155	139	76	60
3	42	36	36	67	40	52	60	90	149	129	78	54
4	50	35	36	62	39	52	58	84	145	126	76	48
5	54	36	36	57	47	51	56	75	145	116	76	47
6	44	36	36	51	103	50	56	73	142	103	80	50
7	42	36	36	55	65	56	62	76	133	100	80	58
8	42	39	42	54	56	62	67	84	118	100	80	58
9	41	36	43	52	54	55	73	103	126	106	80	65
10	40	37	60	52	58	52	65	133	149	110	78	61
11	40	37	45	52	52	51	67	155	183	110	80	62
12	41	36	39	b49	52	51	72	145	223	110	82	73
13	41	37	39	b46	50	50	84	133	220	106	70	56
14	41	37	42	b45	50	50	86	139	183	106	68	58
15	41	36	56	b47	48	51	76	139	176	103	70	62
16	40	36	82	b48	48	56	73	136	172	103	72	55
17	40	36	60	b50	48	52	75	136	172	96	73	50
18	42	36	48	b47	47	51	86	139	172	88	75	60
19	41	36	49	b44	45	50	88	145	186	92	75	45
20	44	36	47	b40	47	51	82	145	180	94	75	45
21	43	36	43	b38	46	52	80	145	149	98	73	47
22	39	37	39	b34	44	54	80	162	136	90	68	50
23	39	37	44	b33	44	56	80	186	136	96	68	50
24	39	36	42	b34	46	61	73	194	149	94	67	49
25	35	36	49	b36	55	62	70	176	172	96	68	52
26	39	36	58	b39	58	82	70	155	158	96	68	48
27	65	36	48	b40	54	75	70	145	129	96	65	48
28	55	36	68	*b40	58	70	73	145	120	82	65	43
29	39	37	98	b40	54	70	68	149	123	86	64	43
30	37	41	82	b41	-	67	80	155	123	90	68	45
31	37	-	88	b41	-	65	-	149	-	76	62	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,324	65	35	42.7	2,630
November	1,094	41	35	36.5	2,170
December	1,569	98	36	50.6	3,110
Calendar year 1939	28,137	341	35	77.1	55,810
January	1,512	94	33	48.8	3,000
February	1,487	103	39	51.3	2,950
March	1,765	82	50	56.9	3,500
April	2,152	88	56	71.7	4,270
May	4,077	194	73	132	8,090
June	4,690	223	118	156	9,300
July	3,176	139	76	102	6,300
August	2,256	82	62	72.8	4,470
September	1,603	73	43	53.4	3,180
Water year 1939-40	26,705	223	33	73.0	52,970

Peak discharge.- Feb. 6 (7:30 a.m.) 145 sec.-ft.; June 12 (8 p.m.) 285 sec.-ft.
*Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Crooked River near Post, Oreg.

Location.- Water-stage recorder, lat. 44°07', long. 120°16'. in NE¼ sec. 12, T. 17 S., R. 20 E., half a mile downstream from site of dam for proposed Post reservoir, 1 mile downstream from North Fork, and 11½ miles southeast of Post. Datum of gage is 3,461.72 feet above mean sea level (general adjustment of 1929). Prior to Dec. 30, 1939, staff gage at same site and datum.

Drainage area.- 2,160 square miles.

Records available.- November 1908 to August 1911, December 1939 to September 1940.

Extremes.- Maximum discharge during period, 5,540 second-feet Mar. 26 (gage height, 6.22 feet); minimum, 4.4 second-feet July 12.
1908-11,1939-40: Maximum discharge recorded, that of Mar. 26, 1940; minimum recorded, that of July 12, 1940.

Remarks.- Records good except those for periods of ice effect and May 15 to Sept. 24, which are poor. Several small diversions above station for irrigation, one small canal diverting on right bank 800 feet above station; no regulation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-	175	180	1,850	2,100	410	32	6	7	8
2			-	202	165	1,840	1,700	316	33	6	7	8
3			-	273	146	1,490	1,280	342	36	6	7	8
4			-	245	242	1,130	1,220	316	32	6	7	10
5			-	221	236	934	1,060	304	30	6	6	11
6			-	137	845	820	850	264	28	6	6	11
7			-	88	912	780	945	230	22	6	7	11
8			58	106	437	1,130	1,380	212	20	7	7	11
9			71	106	385	956	1,490	201	18	7	7	10
10			106	b100	459	714	1,270	196	16	6	7	13
11			94	b60	442	528	1,070	190	16	6	8	15
12			a80	b50	274	448	1,000	182	14	5	11	14
13			67	b60	248	395	1,040	165	13	5	10	12
14			71	b70	236	437	1,080	146	12	6	11	13
15			73	b80	224	627	912	123	12	6	9	13
16			90	b80	198	1,080	742	108	11	7	8	14
17			94	b75	201	1,100	636	92	10	9	8	18
18			90	b70	218	945	588	86	8	9	9	18
19			74	*b67	188	901	558	76	7	8	8	23
20			69	b65	163	978	528	67	6	9	8	30
21			65	b70	158	1,020	476	60	6	10	7	28
22			a65	b70	175	1,070	432	51	6	10	7	23
23			a65	b70	155	1,020	476	50	6	8	7	23
24			a60	b65	155	1,140	416	50	6	7	7	22
25			a50	b60	372	1,550	448	52	5	6	7	21
26			b55	100	1,540	3,350	437	54	5	7	7	20
27			b70	143	2,420	4,770	356	46	5	8	7	21
28			90	170	3,340	2,760	324	40	5	9	8	24
29			86	160	2,950	2,120	352	37	6	9	7	25
30			80	163	-	2,400	320	37	6	9	7	24
31			156	151	-	2,240	-	36	-	7	8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-	-
November	-	-	-	-	-
December 8-31	1,879	156	50	78.3	3,730
Calendar year	-	-	-	-	-
January	3,552	273	50	115	7,050
February	17,664	3,340	146	609	35,040
March	42,503	4,770	395	1,371	84,300
April	25,485	2,100	320	850	50,550
May	4,539	410	36	146	9,000
June	432	36	5	14.4	857
July	222	10	5	7.2	440
August	237	11	6	7.6	470
September	502	30	8	16.7	996
The period	-	-	-	-	192,400

Peak discharge.- Feb. 6 (7 p.m.) 1,380 sec.-ft.; Feb. 28 (9 p.m.) 3,700 sec.-ft.; Mar. 26 (10:30 p.m.) 5,540 sec.-ft.

*Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated or computed on basis of records for John Day River at Service Creek and weather records.

b Stage-discharge relation affected by ice.

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 3 miles northwest of Culver. Altitude of gage, about 1,722 feet (from river-profile map).

Drainage area.- 4,330 square miles.

Records available.- October 1917 to September 1940.

Average discharge.- 23 years, 1,398 second-feet.

Extremes.- Maximum discharge during year, 6,010 second-feet Mar. 29 (gage height, 5.15 feet, observed at peak); minimum observed, 1,170 second-feet June 22 to Aug. 26 (gage height, 0.50 foot).
1917-40: 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. Flow slightly regulated by Ochoco Reservoir. Summer flow above Prineville diverted for irrigation. Springs increase flow about 1,000 second-feet within an area extending a few miles above station. Gage read once daily.

Cooperation.- Gage readings furnished by Pacific Power & Light Co.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.5	1,170	1.6	1,930	3.5	3,830
.7	1,280	2.0	2,280	4.0	4,440
1.0	1,470	2.3	2,740	4.5	5,100
1.3	1,690	3.0	3,260	5.0	5,800

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,230	1,240	1,260	1,300	1,380	4,700	3,830	1,610	1,200	1,170	1,170	1,180
2	1,220	1,260	1,260	1,300	1,410	3,830	3,710	1,580	1,200	1,170	1,170	1,180
3	1,220	1,260	1,260	1,390	1,390	3,150	3,480	1,610	1,220	1,170	1,170	1,180
4	1,220	1,270	1,260	1,380	1,430	3,150	2,940	1,650	1,220	1,170	1,170	1,190
5	1,230	1,260	1,260	1,470	1,390	2,740	2,640	1,610	1,200	1,170	1,170	1,180
6	1,240	1,260	1,240	1,440	1,480	2,460	2,550	1,580	1,210	1,170	1,170	1,180
7	1,230	1,260	1,240	1,440	1,750	2,280	2,320	1,500	1,200	1,170	1,170	1,180
8	1,240	1,260	1,240	1,380	2,240	2,100	2,240	1,470	1,190	1,170	1,170	1,180
9	1,240	1,260	1,240	1,320	1,870	2,320	2,690	1,440	1,190	1,170	1,170	1,180
10	1,240	1,260	1,260	1,320	1,640	2,420	2,840	1,400	1,190	1,170	1,170	1,210
11	1,230	1,260	1,240	1,290	1,690	2,140	2,790	1,370	1,190	1,170	1,170	1,210
12	1,230	1,260	1,240	1,290	1,750	1,930	2,550	1,290	1,190	1,170	1,170	1,210
13	1,230	1,260	1,290	1,290	1,660	1,850	2,420	1,330	1,190	1,170	1,170	1,220
14	1,230	1,260	1,330	1,280	1,510	1,690	2,370	1,320	1,190	1,170	1,170	1,220
15	1,230	1,260	1,330	1,270	1,480	1,650	2,460	1,300	1,190	1,170	1,170	1,220
16	1,230	1,260	1,270	1,270	1,470	1,690	2,320	1,290	1,190	1,170	1,170	1,210
17	1,240	1,270	1,270	1,260	1,470	2,050	2,140	1,280	1,180	1,170	1,170	1,260
18	1,240	1,270	1,260	1,270	1,440	2,570	1,970	1,270	1,180	1,170	1,170	1,260
19	1,240	a1,270	1,280	1,270	1,440	2,370	1,890	1,230	1,180	1,170	1,170	1,260
20	1,230	1,270	1,280	1,270	1,460	2,240	1,850	1,220	1,180	1,170	1,170	1,260
21	1,220	1,270	1,280	1,270	1,400	2,260	1,850	1,220	1,180	1,170	1,170	1,260
22	1,220	1,260	1,280	1,270	1,380	2,350	1,810	1,200	1,170	1,170	1,170	1,230
23	1,240	1,260	1,280	1,270	1,360	2,420	1,750	1,200	1,170	1,170	1,170	1,220
24	1,240	1,260	1,280	1,270	1,380	2,370	1,690	1,190	1,170	1,170	1,170	1,220
25	1,240	1,260	1,280	1,270	1,360	2,420	1,730	1,190	1,170	1,170	a1,170	1,240
26	1,240	1,270	1,260	1,280	1,360	2,670	1,650	1,200	1,170	1,170	1,170	1,240
27	1,240	1,270	1,240	1,290	2,400	3,360	1,730	1,190	1,170	1,170	1,180	1,240
28	1,240	1,270	1,260	1,290	3,420	5,130	1,640	1,200	1,170	1,170	1,190	1,280
29	1,240	1,270	1,290	1,350	4,070	5,690	1,610	1,200	1,170	1,170	1,190	1,290
30	1,240	1,260	1,290	1,380	-	4,900	1,610	1,190	1,170	1,170	1,190	1,280
31	1,240	-	1,300	1,380	-	3,830	-	1,180	-	1,170	1,190	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	38,240	1,240	1,220	1,234	75,850
November	37,880	1,270	1,240	1,263	75,130
December	39,350	1,330	1,240	1,269	78,050
Calendar year 1939	490,990	4,310	1,130	1,345	973,800
January	40,820	1,470	1,260	1,317	80,970
February	49,480	4,070	1,360	1,706	98,140
March	86,730	5,690	1,650	2,798	172,000
April	69,070	3,830	1,610	2,302	137,000
May	41,510	1,650	1,180	1,339	82,330
June	35,590	1,220	1,170	1,186	70,590
July	36,270	1,170	1,170	1,170	71,940
August	36,360	1,190	1,170	1,173	72,120
September	36,670	1,290	1,180	1,222	72,730
Water year 1939-40	547,970	5,690	1,170	1,497	1,087,000

a No gage-height record; discharge interpolated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 19 years, 1,433 second-feet.

Extremes.- Maximum discharge observed during year, 1,640 second-feet Feb. 6 (gage height, 0.68 foot); minimum observed, 1,140 second-feet Oct. 21 to Dec. 9 (gage height, 0.20 foot).

1921-40: 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. No diversion or regulation above station.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 5		Feb. 6 to Sept. 30	
0.2	1,140	0.2	1,100
.4	1,340	.4	1,310
.6	1,560	.6	1,540
.8	1,800	.8	1,790

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,200	1,140	1,140	1,320	1,180	1,400	1,400	1,350	1,310	1,220	1,200	1,180
2	1,200	1,140	1,140	1,320	1,180	1,400	1,380	1,350	1,310	1,220	1,200	1,180
3	1,200	1,140	1,140	1,280	1,180	1,350	1,380	1,310	1,310	1,220	1,200	1,180
4	1,200	1,140	1,140	1,280	1,180	1,350	1,380	1,310	1,310	1,220	1,200	1,180
5	1,200	1,140	1,140	1,260	1,200	1,330	1,380	1,310	1,290	1,220	1,200	1,180
6	1,180	1,140	1,140	1,240	1,640	1,330	1,350	1,310	1,270	1,220	1,200	1,180
7	1,180	1,140	1,140	1,240	1,380	1,350	1,350	1,310	1,270	1,220	1,200	1,180
8	1,180	1,140	1,140	1,240	1,290	1,400	1,380	1,310	1,270	1,200	1,200	1,180
9	1,180	1,140	1,140	1,220	1,270	1,400	1,440	1,330	1,270	1,200	1,200	1,180
10	1,180	1,140	1,220	1,220	1,310	1,380	1,380	1,380	1,270	1,200	1,200	1,180
11	1,180	1,140	1,180	1,200	1,310	1,330	1,350	1,380	1,310	1,200	1,200	1,180
12	1,180	1,140	1,180	1,200	1,290	1,330	1,350	1,350	1,310	1,200	1,180	1,180
13	1,180	1,140	1,200	1,200	1,290	1,330	1,350	1,380	1,310	1,200	1,180	1,180
14	1,160	1,140	1,240	1,200	1,290	1,310	1,350	1,330	1,310	1,200	1,180	1,180
15	1,160	1,140	1,280	1,200	1,240	1,310	1,350	1,330	1,290	1,200	1,180	1,180
16	1,160	1,140	1,450	1,200	1,240	1,310	1,350	1,330	1,270	1,200	1,160	1,180
17	1,160	1,140	1,340	1,200	1,240	1,310	1,350	1,310	1,270	1,200	1,180	1,180
18	1,160	1,140	1,300	1,200	1,240	1,290	1,330	1,310	1,270	1,200	1,180	1,180
19	1,160	1,140	1,240	1,180	1,240	1,290	1,330	1,310	1,270	1,200	1,180	1,180
20	1,160	1,140	1,240	1,180	1,220	1,290	1,330	1,310	1,270	1,240	1,180	1,180
21	1,140	1,140	1,200	1,180	1,220	1,290	1,330	1,310	1,270	1,240	1,180	1,180
22	1,140	1,140	1,200	1,180	1,220	1,290	1,330	1,310	1,240	1,240	1,180	1,180
23	1,140	1,140	1,200	1,180	1,200	1,290	1,310	1,310	1,240	1,220	1,180	1,180
24	1,140	1,140	1,200	1,180	1,200	1,290	1,310	1,310	1,240	1,220	1,180	1,180
25	1,140	1,140	1,180	1,180	1,290	1,310	1,310	1,310	1,240	1,220	1,180	1,180
26	1,140	1,140	1,180	1,180	1,350	1,540	1,310	1,310	1,240	1,240	1,180	1,180
27	1,140	1,140	1,180	1,220	1,420	1,470	1,310	1,310	1,220	1,270	1,180	1,180
28	1,140	1,140	1,240	1,200	1,420	1,420	1,310	1,310	1,220	1,200	1,180	1,180
29	1,140	1,140	1,260	1,200	1,420	1,470	1,310	1,310	1,220	1,200	1,180	1,180
30	1,140	1,140	1,280	1,180	-	1,420	1,380	1,310	1,220	1,200	1,180	1,180
31	1,140	-	1,280	1,180	-	1,420	-	1,310	-	1,200	1,180	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	36,100	1,200	1,140	1,165	71,600
November	34,200	1,140	1,140	1,140	67,830
December	37,530	1,450	1,140	1,211	74,440
Calendar year 1939	468,160	1,630	1,140	1,283	928,600
January	37,640	1,320	1,180	1,214	74,660
February	37,150	1,640	1,180	1,281	73,690
March	42,000	1,540	1,290	1,355	83,310
April	40,470	1,440	1,310	1,349	80,270
May	41,050	1,380	1,310	1,324	81,420
June	38,110	1,310	1,220	1,270	75,590
July	37,630	1,270	1,200	1,214	74,640
August	36,900	1,200	1,180	1,187	72,990
September	35,400	1,180	1,180	1,180	70,210
Water year 1939-40	454,080	1,640	1,140	1,241	900,600

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 of gage, about 3,430 feet (from topographic map).
Drainage area.- 20.5 square miles.
Records available.- 1911 to 1913 (occasional readings during summers), April 1915 to September 1940.
Average discharge.- 24 years (1915-18, 1919-40), 49.9 second-feet.
Extremes.- Maximum discharge during year, 86 second-feet Mar. 31 (gage height, 1.82 feet); minimum, 19 second-feet Sept. 1, 2 (gage height, 0.87 foot).
1911-13, 1915-40: 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 no gage-height record or backwater, which are fair. No diversion above station; occasional regulation by Suttle Lake.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used June 9 to Sept. 30)

0.8	18
1.0	26
1.2	35
1.4	48
1.6	65
1.9	95

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	28	f28	30	26	51	84	50	30	26	24	20
2	27	27	28	30	26	55	82	50	29	26	24	20
3	27	27	27	29	27	54	79	50	31	25	24	f22
4	27	27	28	33	29	56	77	47	32	24	24	a24
5	28	27	30	34	34	57	74	47	30	25	24	f24
6	29	28	30	34	39	56	70	45	31	24	24	24
7	f28	28	29	33	41	56	68	45	31	25	24	25
8	a28	27	30	32	39	57	67	46	31	25	24	26
9	a26	27	32	32	39	56	68	47	31	26	24	26
10	a26	28	32	34	41	57	68	42	31	24	24	25
11	a27	27	32	31	41	58	69	41	31	24	24	24
12	a28	26	31	32	42	56	69	35	31	24	24	24
13	a28	27	30	28	42	54	67	34	30	23	23	25
14	a28	26	30	26	42	53	68	38	30	24	23	25
15	a28	27	32	29	45	53	62	42	30	24	24	26
16	a27	27	34	28	44	54	63	36	30	24	24	26
17	a26	27	37	28	42	53	61	34	28	24	23	26
18	f28	27	35	28	44	52	61	34	29	24	23	25
19	27	27	34	27	44	52	60	34	28	25	24	24
20	27	28	36	27	42	52	58	32	27	28	23	23
21	27	28	34	26	41	51	55	37	27	26	23	23
22	26	26	33	25	40	50	51	36	25	26	23	23
23	26	27	32	26	40	50	47	36	25	27	24	23
24	27	27	f29	27	37	51	47	35	26	27	24	25
25	27	27	a28	a28	36	50	50	34	27	27	28	26
26	26	27	a30	a30	39	56	52	32	26	26	24	25
27	28	25	a32	a31	46	57	52	32	24	26	23	26
28	28	22	a30	f30	50	66	50	33	24	25	23	25
29	29	21	f28	29	51	76	50	34	25	24	24	25
30	28	a25	26	29	-	82	51	34	26	24	24	24
31	28	-	27	29	-	85	-	34	-	24	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	846	29	26	27.3	1,680
November	798	28	21	26.6	1,580
December	954	37	26	30.8	1,890
Calendar year 1939	13,412	83	21	36.7	26,610
January	915	34	25	29.5	1,810
February	1,149	51	26	39.6	2,280
March	1,766	85	50	57.0	3,500
April	1,880	84	47	62.7	3,730
May	1,206	50	32	38.9	2,390
June	856	32	24	28.5	1,700
July	776	28	23	25.0	1,540
August	737	28	22	23.8	1,460
September	729	28	20	24.3	1,450
Water year 1939-40	12,612	85	20	34.5	25,010

a No gage-height record; discharge computed on basis of records for Squaw Creek near Sisters.
f Computed from gage height based on partial record.
Note.- Backwater from aquatic vegetation June 9 to Sept. 30.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 below Pacific Power & Light Co.'s plant at White River Falls and 4½ miles below Tygh Valley.

Drainage area.- 393 square miles.

Records available.- October 1917 to September 1940.

Average discharge.- 23 years, 415 second-feet.

Extremes.- Maximum discharge during year, 2,260 second-feet Feb. 6 (gage height, 5.07 feet); minimum, 50 second-feet Sept. 20 (gage height, 0.21 foot); minimum daily, 77 second-feet Aug. 31.

1917-40: 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 period of no gage-height record, which are fair. Diversions above station for irrigation. Low flow regulated somewhat by power plant.

Cooperation.- Water-stage recorder inspected by employees of Pacific Power & Light Co.

Rating table, 1939-40 (gage height, in feet, and discharge, in second-feet)

0.5	67	1.6	210	2.8	650	4.0	1,300
.8	90	2.0	330	3.2	840	4.4	1,620
1.2	135	2.4	480	3.6	1,050		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	93	117	121	285	168	1,060	1,000	a700	188	99	94	80
2	95	114	121	310	164	1,040	912	a580	180	101	94	80
3	95	115	120	297	164	870	825	508	174	100	91	80
4	97	111	111	297	168	770	815	480	168	100	91	84
5	138	110	112	278	193	726	790	468	163	100	90	82
6	116	111	112	240	1,380	672	672	452	159	97	88	81
7	110	115	114	224	1,290	659	650	420	158	97	88	85
8	108	118	118	210	896	815	650	390	158	96	87	87
9	103	122	139	200	790	718	718	362	145	96	85	86
10	102	117	158	198	845	654	654	365	142	96	85	94
11	100	114	166	172	672	600	614	368	139	96	84	90
12	100	114	146	178	552	540	600	358	136	97	84	87
13	100	111	138	180	556	500	618	334	132	98	83	96
14	98	112	136	174	476	464	618	327	132	96	83	91
15	99	110	178	172	424	460	587	310	130	97	83	93
16	100	110	358	170	432	500	548	300	126	94	83	100
17	99	110	358	170	610	484	520	291	125	96	84	94
18	112	109	257	170	512	468	508	275	120	94	80	92
19	107	111	215	166	420	464	492	272	116	94	81	89
20	118	110	232	158	379	468	468	263	114	98	81	90
21	110	110	243	159	358	476	440	254	112	98	81	91
22	109	112	210	158	340	512	432	243	110	95	80	89
23	110	111	193	152	320	532	452	234	108	98	80	88
24	120	111	176	151	307	587	444	229	107	94	80	87
25	112	111	158	143	512	614	500	213	106	93	80	86
26	112	110	172	159	1,020	765	456	208	104	96	81	86
27	139	114	163	172	1,220	1,020	a450	203	102	106	80	114
28	164	114	174	178	1,470	1,020	a540	198	102	99	80	128
29	136	112	243	164	1,290	1,020	a520	191	100	95	80	102
30	123	115	278	168	-	1,010	a600	184	101	95	78	98
31	117	-	269	170	-	1,030	-	193	-	95	77	-

Month	Second-feet-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,442	164	93	111	6,830
November	3,381	122	109	113	6,710
December	5,689	358	111	184	11,280
Calendar year 1939	100,416	1,170	91	275	199,200
January	6,013	310	143	194	11,930
February	17,928	1,470	164	618	35,560
March	21,518	1,060	460	694	42,680
April	18,093	1,000	432	603	35,890
May	10,173	700	184	328	20,180
June	3,957	188	100	132	7,850
July	3,006	106	93	97.0	5,960
August	2,596	94	77	83.7	5,150
September	2,730	128	80	91.0	5,410
Water year 1939-40	98,526	1,470	77	269	195,400

Peak discharge.- Feb. 6 (7 p.m.) 2,260 sec.-ft.; Feb. 27 (11 a.m.) 1,720 sec.-ft.; Feb. 28 (2 p.m.) 1,830 sec.-ft.

a No gage-height record; discharge computed on basis of records for West Fork of Hood River near Dee.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog al Survey

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. Datum 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 1940 (incomplete). October 1909 to December 1910, at site 1 mile upstream.

Average discharge.- 23 years (1909-20, 1928-40), 833 second-feet.

Extremes.- Maximum discharge during year, 2,040 second-feet May 10, 11 (gage height, 4.65 feet); minimum, 287 second-feet Nov. 28 (gage height, 2.23 feet).
1909-40: 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 good except those for period of no gage-height record, which are poor. All of the low flow of Hellroaring Creek, a tributary of Big Muddy River, is diverted for irrigation.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Jan. 7-23, June 23 to Sept. 30)

Oct. 1 to Dec. 12		Jan. 7 to Sept. 30			
2.3	315	2.5	325	3.6	1,020
2.5	410	2.7	420	4.0	1,360
2.7	520	3.0	580	4.3	1,660
2.9	640	3.3	780	4.6	1,990

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	303	307	324	a640	366	820	1,510	1,720	1,100	592	405	380
2	299	303	360	a760	361	828	1,460	1,820	1,060	586	415	366
3	299	299	346	a760	370	773	1,360	1,770	996	574	415	361
4	315	295	324	a800	370	752	1,320	1,720	964	562	415	352
5	320	295	320	a600	430	745	1,270	1,660	932	550	415	352
6	303	299	324	a560	990	717	1,220	1,560	900	538	425	366
7	299	342	333	f532	988	759	1,270	1,510	868	526	435	366
8	299	338	490	526	868	844	1,320	1,510	836	526	430	370
9	299	320	514	510	828	812	1,360	1,610	820	520	415	385
10	299	311	682	495	820	780	1,360	1,880	844	515	410	455
11	303	311	544	440	738	745	1,360	1,880	868	538	415	420
12	303	311	f455	460	682	717	1,360	1,770	924	538	420	400
13	303	307	a420	460	682	689	1,560	1,610	940	520	405	400
14	299	307	a400	455	628	689	1,660	1,560	868	505	415	375
15	295	303	a800	430	604	717	1,660	1,510	828	495	395	370
16	299	299	a1,250	445	610	788	1,610	1,460	788	500	395	370
17	299	299	a1,200	435	610	812	1,560	1,410	745	485	385	361
18	295	299	a1,000	415	574	828	1,660	1,460	745	460	390	366
19	303	299	a840	390	544	844	1,660	1,510	766	480	405	352
20	307	295	a720	390	526	884	1,610	1,510	745	475	410	352
21	307	299	a630	385	526	932	1,510	1,410	703	455	385	361
22	303	303	a560	390	520	980	1,510	1,410	668	450	375	361
23	307	299	a500	385	510	1,020	1,720	1,460	640	465	375	366
24	303	299	a440	f334	505	1,180	1,610	1,510	654	445	375	356
25	295	295	a380	f301	598	1,270	1,720	1,410	675	435	380	356
26	299	295	a390	f348	675	1,460	1,610	1,270	654	480	385	361
27	320	295	a410	385	675	1,560	1,560	1,140	610	465	370	385
28	324	295	a430	385	820	1,510	1,510	1,100	586	420	380	385
29	320	299	a460	375	844	1,560	1,460	1,100	592	415	380	370
30	315	311	a510	370	-	1,660	1,460	1,100	592	410	385	366
31	311	-	a560	366	-	1,610	-	1,180	-	400	370	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	9,445	324	295	305	0.847	0.98	18,730
November	9,129	342	295	304	.844	.94	18,110
December	16,916	1,250	320	546	1.52	1.75	33,550
Calendar year 1939	228,358	2,080	295	626	1.74	23.59	453,000
January	14,527	800	301	469	1.30	1.50	28,810
February	18,262	990	361	630	1.75	1.89	36,220
March	30,285	1,660	689	977	2.71	3.13	60,070
April	44,820	1,720	1,220	1,494	4.15	4.63	88,900
May	46,530	1,880	1,100	1,501	4.17	4.81	92,290
June	23,911	1,100	586	797	2.21	2.47	47,430
July	15,325	592	400	494	1.37	1.58	30,400
August	12,375	435	370	399	1.11	1.28	24,550
September	11,176	455	352	373	1.04	1.15	22,170
Water year 1939-40	252,701	1,880	295	690	1.92	26.11	501,200

a No gage-height record; discharge computed on basis of weather records and records for station near Pitt.
f Computed from partly estimated gage height.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Klickitat River near Pitt, Wash.

Location.- Water-stage recorder, lat. 45°45', long. 120°12', in SW¼ sec. 8, T. 3 N., R. 13 E., 3⅛ miles south of Pitt, 5 miles upstream from Silvias Creek, and 7 miles upstream from mouth at Lyle. Altitude of gage, 225 feet (from river profile map).
Drainage area.- 1,170 square miles.
Records available.- October 1935 to September 1940. July 1909 to January 1912 at site at Klickitat, 7 miles upstream, published as Klickitat River at Klickitat. October 1928 to September 1935 at Pitt, 3⅛ miles upstream, published as Klickitat River at Pitt.
Average discharge.- 14 years (1909-11, 1928-40), 1,485 second-feet.
Extremes.- Maximum discharge during year, 7,330 second-feet Feb. 28 (gage height, 8.07 feet), from rating curve extended above 3,000 second-feet; minimum, 535 second-feet Nov. 29 (gage height, 3.43 feet).
1909-12, 1928-40: Maximum discharge observed, 21,000 second-feet Dec. 22, 1933 (gage height, 12.5 feet, site and datum then in use), from rating curve extended above 3,000 second-feet; minimum discharge, 466 second-feet Feb. 4, 1937 (gage height, 3.32 feet).
Remarks.- Records excellent except those above 4,000 second-feet, which are fair. Small diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

3.5	570	5.0	1,990
3.7	680	6.0	3,300
4.0	910	7.0	5,000
4.5	1,410	8.0	7,100

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	600	570	565	937	668	4,360	2,730	2,230	1,520	886	701	638
2	590	565	585	1,130	674	4,100	2,600	2,350	1,460	870	694	644
3	590	560	605	1,120	674	3,610	2,410	2,290	1,370	862	708	632
4	590	560	585	1,200	680	3,300	2,350	2,230	1,310	830	708	620
5	615	555	570	1,120	857	3,010	2,230	2,170	1,270	806	701	610
6	595	555	580	1,000	4,770	2,800	2,110	2,110	1,230	790	701	615
7	585	585	575	928	4,020	2,870	2,110	1,990	1,210	790	715	626
8	575	600	644	910	2,940	3,080	2,110	1,930	1,170	790	708	626
9	575	590	790	870	2,660	2,800	2,230	1,930	1,140	798	708	638
10	575	575	937	830	2,660	2,600	2,170	2,230	1,160	782	694	694
11	575	570	902	750	2,350	2,410	2,110	2,470	1,190	806	687	694
12	580	570	750	736	2,110	2,290	2,050	2,410	1,200	806	701	694
13	580	565	694	736	2,470	2,110	2,170	2,230	1,290	798	694	687
14	580	560	680	750	2,050	1,990	2,290	2,110	1,220	766	687	656
15	575	560	1,040	708	1,870	1,990	2,230	2,050	1,160	774	674	638
16	570	555	1,690	715	2,050	1,990	2,170	1,990	1,130	766	668	638
17	570	555	1,630	715	2,730	1,990	2,050	1,990	1,090	766	674	632
18	565	560	1,230	694	2,350	1,990	2,110	1,930	1,090	743	674	626
19	565	555	1,050	656	2,050	1,930	2,110	1,990	1,090	729	687	620
20	570	555	937	650	1,810	1,930	2,050	2,050	1,070	774	687	620
21	575	560	870	650	1,690	1,930	1,990	1,930	1,030	750	680	620
22	570	565	798	638	1,630	1,990	1,930	1,930	1,000	743	668	626
23	570	560	758	644	1,630	1,990	2,110	1,930	982	750	662	626
24	575	550	708	632	1,690	2,110	2,170	1,990	991	750	662	620
25	560	550	650	600	2,860	2,230	2,170	1,930	1,000	736	656	620
26	560	550	668	620	4,180	2,600	2,170	1,750	1,000	758	662	620
27	570	550	687	650	4,810	3,010	2,050	1,630	946	814	674	662
28	595	540	694	674	6,000	2,800	1,990	1,520	919	750	644	656
29	585	540	729	662	5,390	2,870	1,930	1,460	919	729	656	632
30	580	550	822	662	-	3,010	1,930	1,460	910	729	662	620
31	575	-	854	668	-	2,870	-	1,580	-	701	662	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	17,935	615	560	579	0.495	0.57	35,570
November	16,835	600	540	561	.479	.54	33,390
December	25,277	1,690	565	815	.697	.80	50,140
Calendar year 1939	362,332	2,540	540	993	.849	11.53	718,600
January	24,255	1,200	600	782	.668	.77	48,110
February	72,323	6,000	668	2,494	2.13	2.30	143,500
March	80,560	4,360	1,930	2,599	2.22	2.56	159,800
April	64,830	2,730	1,930	2,161	1.85	2.06	128,600
May	61,790	2,470	1,460	1,993	1.70	1.96	122,600
June	34,067	1,520	910	1,136	.971	1.08	67,570
July	24,142	886	701	779	.666	.77	47,880
August	21,159	715	644	683	.584	.67	41,970
September	19,150	694	610	638	.545	.61	37,980
Water year 1939-40	462,323	6,000	540	1,263	1.08	14.69	917,100

Peak discharge.- Feb. 6 (5 p.m.) 6,650 sec.-ft.; Feb. 17 (4 to 6 p.m.) 3,080 sec.-ft.; Feb. 25 (11:15 p.m.) 4,270 sec.-ft.; Feb. 26 (4:30 p.m.) 4,810 sec.-ft.; Feb. 27 (9:30 a.m.) 5,590 sec-ft.; Feb. 28 (3 p.m.) 7,330 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101604-O U S GOVERNMENT PRINTING OFFICE 1935

Hood River near Hood River, Oreg.

Location.- Water-stage recorder, lat. 45°42', 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. Datum 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 1940.
Average discharge.- 27 years, 1,059 second-feet (including flow of Pacific Power & Light Co.'s conduit).
Extremes.- Maximum discharge during year (river only), 5,520 second-feet Feb. 6 (gage height, 5.64 feet); minimum, 15 second-feet Nov. 24 (gage height, 0.94 foot); minimum daily, 28 second-feet Aug. 11.
1913-40: 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. Diversions above station for irrigation. Daily discharge regulated by pondage at sawmill at Dee and by Pacific Power & Light Co.'s conduit, which diverts water around gage.
Cooperation.- Water-stage recorder inspected by employees of Pacific Power & Light Co.

Rating table, water year 1939-40 (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	5.4	4,930
2.2	198	4.0	2,030		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a43	52	46	571	79	2,570	1,340	1,860	82	48	34	38
2	a49	37	95	576	73	2,870	1,120	1,580	58	46	37	38
3	48	62	66	526	74	2,130	986	1,400	56	43	34	36
4	118	38	72	794	105	1,830	950	1,300	58	43	34	41
5	154	38	35	666	768	1,760	834	1,280	60	47	30	44
6	50	45	55	516	4,830	1,450	764	1,200	51	108	31	46
7	55	41	44	442	3,230	1,980	800	1,100	52	50	32	49
8	a38	33	89	390	2,260	2,210	990	1,040	46	49	30	45
9	a52	48	140	328	2,200	1,660	1,460	1,020	50	48	30	44
10	a53	42	520	326	2,890	1,400	1,150	1,030	80	52	32	55
11	a63	46	422	264	2,020	1,100	933	1,030	47	50	28	60
12	a42	36	220	230	1,480	930	876	945	48	48	30	94
13	49	54	155	202	1,450	828	868	860	52	50	36	68
14	40	34	500	192	1,140	745	842	808	48	47	30	62
15	54	39	2,290	160	936	778	738	778	46	52	30	64
16	43	36	2,880	147	984	1,040	660	737	48	46	32	50
17	44	44	2,340	134	898	900	615	690	51	50	37	37
18	52	30	1,390	124	906	808	628	670	48	52	38	44
19	54	39	874	102	762	754	590	660	80	50	40	41
20	34	30	1,100	93	680	723	539	629	73	66	39	38
21	36	30	976	100	616	729	501	590	40	96	38	40
22	44	34	682	86	608	723	478	581	48	64	41	37
23	46	30	520	92	608	785	694	590	44	55	37	34
24	42	32	482	76	666	857	686	600	45	55	40	35
25	42	30	300	92	1,770	882	817	560	46	52	40	35
26	70	133	232	104	2,370	1,610	667	516	42	58	42	34
27	102	80	190	150	2,290	2,230	582	478	44	51	43	65
28	223	36	253	119	2,750	1,850	850	439	43	54	29	82
29	81	33	578	100	2,380	1,820	752	390	44	46	31	41
30	58	51	558	86	-	1,540	1,440	258	81	48	34	42
31	50	-	687	86	-	1,520	-	133	-	46	34	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,929	223	34	62.2	3,830
November	1,313	133	30	43.8	2,600
December	18,794	2,880	35	606	37,280
Calendar year 1939	125,100	4,480	30	343	248,100
January	8,173	826	75	264	16,210
February	41,823	4,830	73	1,442	82,950
March	43.012	2,870	723	1,387	85,310
April	25,150	1,460	478	838	49,880
May	25,752	1,860	133	831	51,080
June	1,611	82	40	53.7	3,200
July	1,670	108	43	53.9	3,310
August	1,073	43	28	34.6	2,130
September	1,439	94	34	48.0	2,850
Water year 1939-40	171,739	4,830	28	469	340,600

a No gage-height record; discharge computed on basis of records for West Fork of Hood River near Lee.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Combined discharge, in second-feet, of Hood River and Pacific Power & Light Co.'s conduit near Hood River, Oreg., water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	270	402	438	1,000	529	3,000	1,780	1,860	526	315	231	234
2	263	396	508	1,010	523	3,300	1,560	1,580	493	336	222	250
3	263	402	446	1,260	524	2,560	1,440	1,400	463	315	228	279
4	386	389	409	1,220	553	2,270	1,400	1,300	446	306	231	243
5	550	390	402	1,100	1,210	2,190	1,280	1,280	421	283	233	255
6	360	385	410	952	5,240	1,850	1,210	1,200	402	285	224	235
7	352	437	393	880	3,650	2,420	1,210	1,100	422	264	234	250
8	350	453	516	821	2,700	2,640	1,430	1,040	399	259	226	274
9	335	438	590	767	2,650	2,090	1,840	1,020	374	262	223	315
10	325	413	970	776	3,330	1,780	1,540	1,030	405	267	220	395
11	320	405	863	714	2,450	1,540	1,380	1,030	395	284	213	356
12	320	406	671	680	1,920	1,360	1,310	945	415	299	224	414
13	319	374	604	652	1,890	1,250	1,320	860	468	299	216	414
14	313	394	935	638	1,590	1,180	1,290	808	415	274	204	387
15	312	376	2,720	608	1,380	1,220	1,190	778	404	286	204	410
16	315	382	3,280	597	1,410	1,480	1,110	737	403	284	199	408
17	349	387	2,750	584	1,330	1,340	1,060	690	384	272	214	382
18	396	388	1,810	574	1,270	1,230	1,080	670	383	246	227	422
19	390	385	1,320	552	1,200	1,190	1,040	660	402	248	249	370
20	393	367	1,540	543	1,120	1,160	989	629	442	287	258	352
21	367	376	1,420	531	1,060	1,170	951	590	372	300	240	370
22	366	403	1,110	524	1,050	1,170	928	581	345	283	228	364
23	351	390	948	512	1,040	1,210	1,140	590	334	286	221	369
24	426	372	810	501	1,100	1,300	1,140	600	347	282	236	377
25	356	378	727	488	2,210	1,320	1,270	560	378	262	244	385
26	451	368	671	523	2,790	2,040	1,120	516	380	317	229	382
27	544	394	640	598	2,720	2,670	1,030	478	324	381	270	507
28	673	371	703	569	3,180	2,290	1,280	439	308	290	235	482
29	500	362	1,030	542	2,810	2,280	1,190	390	317	285	229	401
30	448	454	1,010	536	-	1,980	1,550	461	298	277	237	392
31	423	-	1,120	536	-	1,960	-	583	-	250	243	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	11,786	673	263	380	23,380
November	11,837	454	362	395	23,480
December	31,754	3,280	393	1,024	62,980
Calendar year 1939	261,046	4,900	205	715	517,800
January	21,788	1,260	488	703	43,220
February	64,429	5,240	523	1,877	108,000
March	56,420	3,300	1,160	1,820	111,900
April	38,058	1,840	928	1,269	75,490
May	26,405	1,860	390	852	52,370
June	11,865	526	298	396	23,530
July	8,864	381	246	286	17,580
August	7,094	270	199	229	14,070
September	10,654	507	234	355	21,130
Water year 1939-40	290,954	5,240	199	795	577,100

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. al Survey

9-232 February 1936

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. Datum of gage is 802.1 feet above mean sea level (general adjustment of 1929).

Drainage area.- 96 square miles.

Records available.- September 1913 to February 1916 (incomplete), June 1932 to September 1940.

Extremes.- Maximum discharge during year, 4,720 second-feet Feb. 6 (gage height, 7.67 feet); minimum, 108 second-feet Aug. 15-17 (gage height, 1.49 feet).
1913-15, 1932-40: 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 fair. Diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.5	109	3.0	585	5.0	1,840
1.7	143	3.5	845	5.5	2,260
2.0	209	4.0	1,135	6.0	2,720
2.5	365	4.5	1,460	6.9	3,700

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	139	159	450	217	1,770	967	1,040	268	149	127	112
2	109	138	202	504	214	2,130	828	872	250	157	127	117
3	109	149	165	685	214	1,480	735	752	236	149	122	115
4	194	136	149	615	259	1,250	695	675	225	147	122	111
5	170	132	139	560	845	1,210	630	695	f214	143	122	111
6	130	130	149	490	3,680	985	580	635	a210	141	122	111
7	130	155	139	437	2,250	1,470	625	560	f228	139	122	112
8	125	181	228	397	1,660	1,550	796	522	a215	141	122	115
9	123	167	271	361	1,870	1,140	1,060	499	a210	143	122	127
10	120	151	517	389	2,160	928	867	490	a220	141	120	134
11	117	143	481	347	1,410	774	752	463	f217	145	119	125
12	117	138	343	319	1,050	660	695	425	222	147	119	127
13	115	136	303	306	979	595	675	393	f231	139	117	127
14	115	136	650	290	834	555	630	373	a215	139	115	125
15	117	132	2,010	271	700	600	570	354	a200	138	112	119
16	117	130	2,440	262	645	796	517	343	a190	138	111	125
17	132	129	1,930	253	595	680	499	326	f176	136	112	119
18	139	130	1,100	248	600	630	499	319	174	134	112	152
19	151	127	812	236	560	590	468	312	181	132	117	115
20	143	123	1,010	231	508	580	445	303	178	136	114	112
21	129	123	904	222	472	580	421	287	165	136	114	115
22	123	147	670	214	454	590	417	284	157	134	112	112
23	136	132	540	209	445	620	615	284	159	134	112	114
24	149	129	441	202	468	695	590	277	161	134	114	117
25	129	127	381	197	1,250	690	635	259	172	132	112	115
26	194	127	343	204	1,590	1,470	550	242	165	151	112	117
27	217	132	312	274	1,490	1,560	508	231	151	161	122	197
28	284	129	336	245	1,860	1,340	720	225	149	138	115	149
29	190	125	433	231	1,610	1,230	640	225	149	136	115	136
30	163	163	472	225	-	1,090	886	239	149	134	115	129
31	149	-	504	222	-	1,080	-	303	-	130	114	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,448	284	109	143	8,820
November	4,136	181	123	138	8,200
December	18,533	2,440	139	598	36,760
Calendar year 1939	133,451	3,330	108	366	264,700
January	10,116	685	197	326	20,060
February	30,889	3,680	214	1,065	61,270
March	31,318	2,130	555	1,010	62,120
April	19,515	1,060	417	650	38,710
May	13,207	1,040	225	426	26,200
June	5,837	268	149	195	11,580
July	4,354	161	130	140	8,640
August	3,633	127	111	117	7,210
September	3,692	197	111	123	7,320
Water year 1939-40	149,678	3,680	109	409	296,900

Peak discharge.- Dec. 15 (5 p.m.) 3,140 sec.-ft.; Feb. 6 (8 a.m.) 4,720 sec.-ft.; Feb. 10 (12:30 a.m.) 2,900 sec.-ft.

a No gage-height record; discharge computed on basis of records for Hood River near Hood River and White River below Tygh Valley.
f Computed from gage height based on partial record.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 town of Hood River.

Records available.- October 1922 to September 1940. October 1913 to September 1914, and January 1916 to July 1922 at site in tailrace of former plant.

Average discharge.- 18 years (1922-40), 348 second-feet.

Extremes.- Maximum discharge observed during year, 451 second-feet Dec. 12; no flow occasionally when power plant was shut down.
1913-14, 1916-40: 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. Pacific Power & Light Co.'s conduit diverts from Hood River in SE¼ sec. 11, T. 2 N., R. 10 E., just below mouth of Neal Creek. Water is diverted around the station on Hood River near town of Hood River and returned to river in NE¼ sec. 36, T. 3 N., R. 10 E.

Cooperation.- Hourly readings of Venturi meter and record of daily electrical output furnished by Pacific Power & Light Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	227	350	392	433	450	433	440	0	444	267	197	196
2	214	359	413	436	450	433	443	0	435	290	185	212
3	215	340	380	437	450	434	450	0	407	272	194	243
4	268	351	337	422	448	439	450	0	388	263	197	202
5	396	352	367	433	438	433	450	0	361	236	203	191
6	310	340	355	436	408	401	450	0	351	177	193	189
7	297	396	349	438	424	437	414	0	370	214	202	201
8	312	420	427	431	443	430	436	0	363	210	196	229
9	283	390	450	439	449	434	385	0	324	214	193	271
10	272	371	450	450	440	382	386	0	325	215	188	340
11	257	359	431	450	433	437	450	0	348	234	185	296
12	278	370	451	450	444	435	431	0	367	251	194	320
13	270	320	446	450	436	422	450	0	416	249	180	346
14	273	360	435	446	450	437	450	0	367	227	174	325
15	258	337	429	448	443	438	450	0	358	234	174	346
16	272	346	396	450	427	441	450	0	355	238	167	358
17	305	343	414	450	435	441	450	0	333	222	177	345
18	344	358	417	450	365	425	450	0	335	194	189	378
19	336	346	447	450	435	433	450	0	322	198	209	329
20	359	337	440	450	443	436	450	0	369	221	219	314
21	331	346	440	431	442	443	450	0	332	204	202	330
22	322	369	427	438	443	448	450	0	297	219	187	327
23	305	360	428	420	434	428	450	0	290	231	184	335
24	384	340	328	426	438	445	450	0	302	227	198	342
25	314	348	427	396	444	437	450	0	332	210	204	350
26	381	235	439	419	422	430	450	0	338	259	187	348
27	442	314	450	448	432	440	450	0	280	330	227	442
28	450	335	450	450	435	440	435	0	265	236	206	400
29	419	329	450	442	434	440	437	0	273	219	198	360
30	390	403	450	450	-	440	110	203	217	229	203	350
31	373	-	432	450	-	440	-	450	-	204	209	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	9,857	450	214	318	19,550
November	10,524	420	235	351	20,870
December	12,947	451	328	418	25,680
Calendar year 1939	135,935	451	0	372	269,600
January	13,619	450	396	439	27,010
February	12,635	450	365	436	25,060
March	13,432	448	382	433	26,640
April	12,917	450	110	431	25,620
May	653	450	203	21.1	1,300
June	10,254	444	217	342	20,340
July	7,194	330	177	232	14,270
August	6,021	227	167	194	11,940
September	9,215	442	189	307	18,280
Water year 1939-40	119,268	451	110	326	236,600

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940 in reports of Geological Survey. November 1919 to September 1920 (monthly discharge) in State Water-Supply Bulletin 5.

Average discharge.- 22 years (1909-20, 1929-40), 962 second-feet.

Extremes.- Maximum discharge during year, 2,180 second-feet Mar. 1, 30 (gage height, 4.71 feet); minimum, 405 second-feet Nov. 29.
1909-19, 1929-40: 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 good. Many diversions for irrigation near Trout Lake. Springs a few miles above station greatly increase flow.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Feb. 6)

1.0	400	2.0	659	4.0	1,620
1.2	435	2.5	849	4.5	2,000
1.4	479	3.0	1,070	5.0	2,440
1.7	560	3.5	1,320		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	433	465	429	759	546	2,020	1,860	1,540	945	710	576	465
2	435	461	450	829	543	2,100	1,750	1,590	932	706	572	463
3	433	454	454	865	546	1,940	1,640	1,530	928	699	563	458
4	443	452	435	903	548	1,750	1,560	1,470	898	702	557	463
5	474	446	416	874	628	1,620	1,500	1,480	882	695	548	463
6	472	441	411	813	1,510	1,520	1,440	1,460	865	677	543	461
7	468	454	413	770	1,770	1,550	1,420	1,390	861	670	543	458
8	468	456	479	736	1,540	1,670	1,480	1,350	857	663	537	463
9	463	458	569	714	1,400	1,610	1,630	1,330	845	656	540	472
10	461	456	695	691	1,450	1,490	1,670	1,350	833	648	534	496
11	458	450	710	659	1,360	1,380	1,560	1,360	821	652	531	496
12	461	446	601	642	1,250	1,320	1,510	1,340	821	645	523	512
13	461	441	523	628	1,220	1,270	1,540	1,280	821	634	520	540
14	458	435	523	611	1,160	1,240	1,550	1,220	813	624	512	531
15	458	431	1,020	588	1,080	1,230	1,510	1,170	797	624	509	528
16	456	426	1,930	585	1,080	1,260	1,460	1,120	793	621	502	528
17	461	420	1,800	572	1,100	1,280	1,410	1,100	778	617	499	520
18	468	416	1,290	560	1,050	1,260	1,410	1,080	774	621	494	520
19	470	411	1,030	543	1,000	1,240	1,420	1,070	778	611	492	518
20	472	406	919	537	967	1,240	1,380	1,040	778	604	494	515
21	477	406	849	528	945	1,250	1,340	999	770	608	492	509
22	477	411	770	523	932	1,260	1,300	972	766	611	484	502
23	477	414	706	509	915	1,280	f1,340	967	743	611	484	504
24	477	418	652	509	907	1,320	f1,420	967	736	604	477	502
25	477	416	608	496	1,160	1,360	1,480	976	740	611	479	499
26	477	413	579	509	1,520	1,620	1,440	936	740	614	477	496
27	479	410	554	551	1,640	2,020	1,390	915	721	621	477	507
28	486	408	546	566	2,040	2,000	1,370	890	706	614	472	520
29	482	406	611	560	2,070	2,040	1,360	882	714	604	468	512
30	477	411	648	554	-	2,150	1,380	882	717	598	465	502
31	470	-	706	548	-	2,020	-	936	-	588	465	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	14,429	486	433	465	28,620
November	12,938	465	406	431	25,660
December	22,326	1,930	411	720	44,280
Calendar year 1939	262,744	1,930	406	720	521,200
January	19,732	903	496	637	39,140
February	33,877	2,070	543	1,168	67,190
March	48,330	2,150	1,230	1,559	95,860
April	44,520	1,860	1,300	1,484	88,300
May	36,592	1,590	882	1,180	72,580
June	24,173	945	706	806	47,950
July	19,763	710	588	638	39,200
August	15,829	576	465	511	31,400
September	14,923	540	458	497	29,600
Water year 1939-40	307,432	2,150	406	840	609,800

f Computed from gage height based on partial record.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940. October 1912 to February 1913 at site at Condit Dam, 1 mile upstream.

Average discharge.- 20 years (1915-30, 1935-40), 1,040 second-feet.

Extremes.- Maximum discharge during year, 3,920 second-feet Feb. 28 (gage height, 6.91 feet); minimum, 38 second-feet July 4 (gage height, 1.02 feet); minimum daily, 350 second-feet Nov. 21.
1915-30, 1935-40: Maximum discharge, 9,700 second-feet Dec. 29, 1917 (gage height, 9.5 feet, datum then in use, relation to present datum unknown); practically no flow at times when power plant is shut down.

Remarks.- Records excellent. Many diversions for irrigation near Trout Lake. Flow regulated by power plant.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

2.6	240	4.5	1,180	6.0	2,800
3.0	365	5.0	1,660	6.5	3,400
4.0	820	5.5	2,200		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	†442	448	426	756	574	2,900	2,220	1,830	981	726	605	†460
2	451	476	455	869	586	2,900	2,060	1,860	†960	712	596	469
3	452	448	†478	914	618	†2,630	1,910	1,770	960	750	574	502
4	496	462	427	952	†531	2,380	1,870	1,670	898	654	†577	482
5	486	†433	404	974	798	2,150	1,770	†1,720	894	736	614	533
6	482	444	404	868	2,420	1,970	1,670	1,670	850	696	592	497
7	468	432	442	†775	2,540	2,000	†1,660	1,570	862	†662	562	511
8	†500	443	418	814	2,110	2,140	1,710	1,510	889	684	552	†548
9	484	426	706	724	1,870	2,000	1,900	1,470	†880	670	548	400
10	482	480	†723	682	1,850	†1,840	1,950	1,500	827	734	562	620
11	486	420	692	736	†1,800	1,710	1,800	1,520	848	656	†454	525
12	476	†418	600	722	1,560	1,590	1,760	†1,470	848	611	638	516
13	488	505	532	699	1,580	1,490	1,760	1,490	834	689	532	576
14	513	428	538	†561	1,420	1,440	†1,770	1,310	925	†574	542	490
15	†484	434	974	677	1,300	1,390	1,740	1,260	786	709	550	†524
16	408	407	2,130	576	1,360	1,490	1,670	1,200	†806	604	468	652
17	474	392	†2,000	658	1,390	†1,440	1,610	1,160	800	648	576	554
18	476	474	1,370	606	†1,290	1,410	1,590	1,110	791	596	†570	522
19	478	†396	1,190	606	1,230	1,380	1,600	†1,100	784	694	640	536
20	474	446	921	504	1,220	1,370	1,540	1,060	783	495	477	515
21	478	350	870	†558	1,200	1,360	†1,480	1,060	779	†682	540	539
22	†476	498	822	626	1,000	1,390	1,430	1,030	768	638	510	†400
23	487	425	782	575	1,050	1,400	1,480	1,020	†775	618	506	638
24	460	406	†524	a557	1,080	†1,430	1,560	1,020	723	588	464	519
25	494	376	574	a540	†1,550	1,520	1,660	1,020	757	633	†507	490
26	500	†424	744	522	2,340	1,900	1,600	†981	784	666	542	487
27	434	379	572	602	2,620	2,370	1,530	946	708	624	430	552
28	486	424	601	†579	3,160	2,320	†1,510	911	721	†617	494	548
29	†448	412	668	624	3,100	2,400	1,490	918	750	638	509	†456
30	546	425	760	644	-	2,550	1,560	911	†707	623	524	566
31	420	-	†798	569	-	†2,400	-	960	-	565	606	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	14,729	546	408	475	29,210
November	12,931	505	350	431	25,650
December	23,545	2,130	404	760	46,700
Calendar year 1939	279,113	2,130	316	765	553,600
January	21,069	974	504	680	41,790
February	45,147	3,160	531	1,557	89,550
March	58,660	2,900	1,360	1,892	116,400
April	50,860	2,220	1,430	1,695	100,900
May	40,027	1,860	911	1,291	79,390
June	24,678	981	707	823	48,950
July	20,192	750	495	651	40,050
August	16,661	640	370	537	33,050
September	15,597	652	400	520	30,940
Water year 1939-40	344,096	3,160	350	940	682,600

† Sunday.
a No gage-height record; discharge interpolated.

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 Little Wind River.
Drainage area.- 224 square miles, including that of Little Wind River.
Records available.- December 1934 to September 1940 (include flow of Little Wind River).
Extremes.- Maximum discharge during year, 10,100 second-feet Feb. 6 (gage height, 13.7 feet), from rating curve extended above 5,000 second-feet, on basis of velocity-area studies; minimum, 141 second-feet Oct. 2, 3; minimum gage height, 2.47 feet Sept. 25, 26.

1934-40: 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 no gage-height record and those above 5,000 second-feet, which are poor. Flow occasionally affected by pondage at Forest Service power plant on Trout Creek. No diversions.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 15				Dec. 16 to Sept. 30			
2.5	130	5.0	744	2.4	136	5.0	797
2.6	144	5.5	925	2.6	161	5.5	996
2.8	175	6.0	1,140	2.8	192	6.0	1,220
3.0	210	7.0	1,710	3.0	227	7.0	1,780
3.3	270	8.0	2,420	3.3	287	8.0	2,560
3.6	339	9.0	3,400	3.6	359	9.0	3,500
4.0	443	10.0	4,640	4.0	468	11.0	6,000
4.5	584	11.0	6,000	4.5	619	13.0	9,000

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	146	180	257	2,390	759	5,040	2,390	2,390	a420	246	a195	149
2	143	175	352	2,470	740	5,720	1,990	1,710	f412	240	a192	153
3	143	172	327	2,560	722	4,170	1,710	1,420	412	236	a190	154
4	165	167	290	2,830	928	3,300	1,590	1,320	398	233	a188	154
5	175	162	268	2,920	2,080	3,010	1,420	1,590	385	231	a186	154
6	170	161	290	2,310	8,570	2,560	1,320	1,530	385	229	a184	154
7	192	167	277	1,850	6,280	3,000	1,320	1,370	385	227	a181	154
8	156	189	676	1,590	4,410	3,720	1,530	1,220	372	225	a179	153
9	156	206	1,000	1,370	4,170	2,920	2,310	1,120	359	222	a177	157
10	153	196	1,980	1,270	4,530	2,390	1,990	1,060	359	220	a175	167
11	153	192	1,590	1,120	3,720	1,990	1,650	976	346	218	a172	157
12	150	189	1,040	1,040	2,920	1,710	1,530	915	334	214	a170	160
13	152	184	833	976	2,920	1,530	1,420	856	322	211	f168	162
14	148	190	1,320	915	2,560	1,420	1,320	797	322	209	168	164
15	148	182	5,520	856	2,150	1,270	1,220	759	310	207	167	160
16	148	178	7,000	797	2,070	1,530	1,100	704	308	207	166	157
17	150	173	6,000	759	2,230	1,420	1,040	669	303	206	164	153
18	215	177	3,610	722	2,070	1,320	996	636	301	204	162	156
19	239	173	f2,560	686	1,920	1,270	935	619	294	202	162	154
20	169	170	a2,700	652	1,650	1,220	S95	619	289	202	161	153
21	159	169	a2,600	619	1,530	1,170	856	572	285	206	160	153
22	154	178	a2,200	603	1,420	1,170	S16	556	283	202	158	151
23	156	178	a1,750	572	1,320	1,120	895	541	279	f199	157	149
24	169	173	a1,450	556	1,320	1,170	976	497	272	f192	156	148
25	165	169	a1,100	541	2,990	1,170	935	322	268	192	153	146
26	199	172	a920	541	4,530	2,100	S75	468	264	199	152	149
27	241	203	a800	759	4,290	3,610	S36	f468	262	233	156	248
28	245	192	a1,000	778	6,000	3,610	915	a460	260	222	153	260
29	227	185	f1,470	759	5,440	3,610	915	a420	252	206	152	197
30	206	221	1,530	778	-	3,500	1,270	a400	250	199	151	166
31	190	-	2,080	778	-	2,920	-	a430	-	a197	149	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	5,382	245	143	174	0.777	0.89	10,680
November	5,423	221	161	181	.808	.90	10,760
December	54,790	7,000	257	1,767	7.89	9.10	108,700
Calendar year 1939	291,413	7,000	141	798	3.56	48.37	578,000
January	37,367	2,920	541	1,205	5.38	6.20	74,120
February	86,239	8,570	722	2,974	13.3	14.32	171,100
March	75,760	5,720	1,120	2,444	10.9	12.58	150,300
April	38,965	2,390	S16	1,299	5.80	6.47	77,290
May	27,414	2,390	322	884	3.95	4.55	54,370
June	9,691	420	250	323	1.44	1.61	19,220
July	6,636	246	192	214	.955	1.10	13,160
August	5,204	195	149	168	.750	.86	10,320
September	4,892	260	146	163	.728	.81	9,700
Water year 1939-40	357,763	8,570	143	977	4.36	59.39	709,700

a No gage-height record; discharge interpolated or computed on basis of records for East Fork of Lewis River near Heisson and White Salmon River at Husum.
f Computed from gage height based on partial record.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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.- 282 square miles.

Records available.- August 1911 to December 1915, July 1919 to September 1940. 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.- 29 years, 1,319 second-feet.

Extremes.- Maximum discharge during year, 7,580 second-feet Feb. 6 (gage height, 8.44 feet); minimum, 205 second-feet Sept. 21-24 (gage height, 2.00 feet).
1911-40: Maximum discharge, about 29,200 second-feet Jan. 6, 1923 (gage height, 17.5 feet, former site and datum), by computation of flow over dam; minimum, that of Sept. 21-24, 1940.

Remarks.- Records good except those for periods of no gage-height record or doubtful stage-discharge relation, which are fair. No diversion or regulation above station.

Cooperation.- Water-stage recorder inspected by employee of Portland General Electric Co.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

2.0	205	3.5	960	7.0	5,030
2.3	325	4.0	1,300	8.0	6.750
2.6	460	5.0	2,220		
3.0	665	6.0	3,520		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	289	406	433	1,560	714	3,180	2,760	3,010	643	428	285	229
2	289	388	480	1,390	676	4,010	2,420	2,290	595	438	277	265
3	265	451	424	1,300	692	3,100	2,040	1,880	550	424	281	273
4	513	402	392	1,400	780	2,640	1,930	1,720	545	415	285	237
5	643	374	374	1,250	1,250	2,540	1,790	1,610	525	406	281	241
6	397	a370	384	1,100	6,350	2,130	1,600	1,510	510	397	281	221
7	338	a370	370	1,010	4,440	2,720	1,600	1,370	580	397	277	237
8	301	470	451	936	3,900	3,490	1,720	1,250	565	397	273	245
9	289	500	560	900	4,160	2,610	2,460	1,190	510	402	277	269
10	277	446	756	948	4,850	2,130	2,140	1,160	510	402	277	305
11	273	415	e960	870	3,530	1,810	1,820	1,090	520	406	273	265
12	273	388	e876	834	2,630	1,600	1,660	1,010	540	410	285	269
13	265	374	e816	786	2,840	1,450	1,580	954	550	397	273	273
14	257	366	e894	756	2,420	1,350	1,480	912	505	384	265	265
15	257	338	e1,930	714	2,010	1,370	1,400	876	495	a364	257	241
16	257	330	e3,450	682	2,000	1,760	1,270	840	495	a345	261	269
17	305	321	e3,240	665	2,110	1,610	1,170	810	490	325	261	241
18	379	330	e2,220	660	2,000	1,480	1,170	786	490	309	265	285
19	356	317	e1,690	632	1,830	1,400	1,110	768	490	317	281	249
20	397	305	e1,920	610	1,610	1,320	1,080	750	490	352	281	221
21	334	305	1,900	590	1,450	1,260	1,020	726	480	348	265	217
22	305	384	1,520	570	1,320	1,220	978	714	470	325	253	213
23	325	338	1,250	555	1,220	1,190	1,300	714	470	317	253	217
24	470	321	1,060	540	1,200	1,270	1,370	698	475	321	253	221
25	384	309	930	520	2,500	1,270	1,440	660	480	305	253	221
26	586	309	852	565	3,720	2,500	1,320	626	465	384	249	241
27	744	334	804	698	3,180	3,380	1,280	600	446	475	281	595
28	852	321	1,310	670	3,660	2,780	2,200	590	442	374	249	485
29	616	309	2,270	709	3,250	2,610	2,130	585	438	338	253	330
30	515	442	2,120	762	-	2,400	2,740	600	424	325	257	289
31	442	-	1,800	750	-	2,580	-	720	-	301	249	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	12,193	852	257	393	1.50	1.73	24,180
November	11,033	500	305	368	1.40	1.57	21,880
December	38,436	3,450	370	1,240	4.73	5.46	76,240
Calendar year 1939	376,970	7,310	253	1,033	3.94	53.54	747,600
January	25,932	1,560	520	837	3.19	3.68	51,440
February	72,292	6,350	675	2,493	9.52	10.26	143,400
March	66,160	4,010	1,190	2,134	8.15	9.39	131,200
April	49,978	2,760	978	1,666	6.36	7.09	99,130
May	33,019	3,010	585	1,065	4.06	4.69	65,490
June	15,198	643	424	507	1.94	2.16	30,140
July	11,528	475	301	372	1.42	1.64	22,870
August	8,311	285	249	268	1.02	1.18	16,480
September	8,129	595	215	271	1.03	1.15	16,120
Water year 1939-40	352,209	6,350	213	962	3.67	50.00	698,800

Peak discharge.- Feb. 6 (10 a.m.) 7,580 sec.-ft.; Feb. 25 (11:30 p.m.) 4,370 sec.-ft.
a No gage-height record; discharge interpolated or computed on basis of records for station below Bull Run River, near Bull Run and Salmon River above Boulder Creek, near Brightwood.
e Doubtful stage-discharge relation because of passing sand waves.

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. Altitude of gage, about 202 feet (from river-profile map).

Drainage area.- 440 square miles.

Records available.- October 1929 to September 1940. April 1910 to September 1914, at site three-quarters of a mile upstream.

Average discharge.- 14 years (1910-11, 1912-14, 1929-40), 2,194 second-feet.

Extremes.- Maximum discharge during year, 17,800 second-feet Feb. 6 (gage height, 11.10 feet); minimum, 99 second-feet Aug. 7 (gage height, 0.87 foot); minimum daily, 208 second-feet Sept. 22.

1910-14, 1929-40: 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, 128 second-feet Oct. 9, 1938.

Remarks.- Records good except those for period of doubtful gage-height record, which are fair. No diversion above station for irrigation; 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 fluctuation by Bull Run power plant of Portland General Electric Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	280	762	840	3,100	1,180	6,370	4,930	5,430	1,000	430	359	244
2	365	690	978	2,820	1,180	8,540	4,150	4,010	592	430	350	298
3	339	762	838	2,580	1,200	6,270	3,440	3,520	674	445	332	394
4	526	738	753	2,910	1,280	5,180	3,390	2,940	673	354	279	308
5	1,040	593	644	2,550	2,150	4,920	2,980	2,750	626	434	336	308
6	478	566	692	2,190	13,700	4,070	2,540	2,870	642	452	344	289
7	468	619	716	1,780	10,200	4,960	2,690	2,300	706	378	307	298
8	297	776	918	1,800	7,800	6,970	3,400	2,050	770	391	330	333
9	372	856	1,390	1,580	9,020	4,880	4,730	1,860	571	412	319	312
10	311	768	2,130	1,720	9,050	3,870	4,040	1,850	601	384	332	407
11	328	741	3,000	1,610	7,200	3,380	3,340	1,710	592	383	298	339
12	328	658	2,280	1,580	5,310	2,890	2,860	1,270	694	378	330	318
13	332	606	1,820	1,420	5,890	2,500	2,410	1,460	582	426	337	382
14	340	602	2,040	1,270	5,330	2,320	2,360	1,270	572	359	324	296
15	290	552	6,320	1,200	4,330	2,200	2,310	1,280	590	378	296	307
16	322	514	9,390	1,200	4,090	2,940	2,050	1,230	458	393	320	378
17	365	508	8,840	1,170	4,750	2,620	1,730	1,240	572	396	346	344
18	505	584	5,520	1,080	4,400	2,450	1,710	992	490	354	266	342
19	390	532	3,690	1,070	4,140	2,250	1,710	818	564	364	333	358
20	539	471	4,180	994	3,320	2,100	1,550	1,040	550	412	347	350
21	454	536	4,250	974	2,580	1,910	1,240	922	542	428	280	318
22	332	600	3,200	923	2,450	1,880	1,470	900	491	396	292	208
23	412	567	2,380	853	2,280	1,680	2,000	824	395	374	338	360
24	638	498	1,750	836	d2,490	1,870	2,530	862	494	364	309	278
25	468	542	1,660	812	d6,350	2,020	2,380	794	484	386	325	282
26	674	426	1,580	814	7,830	5,220	2,160	744	501	448	313	336
27	1,050	621	1,320	1,140	6,330	6,500	1,940	787	458	638	338	858
28	2,170	539	2,530	1,110	7,260	5,420	3,150	679	486	423	342	778
29	1,580	494	4,410	1,040	6,460	4,770	3,680	738	398	438	318	314
30	1,120	806	4,400	1,360	-	4,000	4,400	680	446	396	293	392
31	890	-	3,430	1,200	-	4,760	-	888	-	389	352	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	18,003	2,170	280	581	1.32	1.52	35,710
November	18,527	856	426	618	1.40	1.57	36,750
December	87,689	9,390	644	2,829	6.43	7.41	173,900
Calendar year 1939	656,974	18,100	280	1,800	4.09	55.55	1,303,000
January	46,686	3,100	812	1,506	3.42	3.95	92,600
February	149,510	13,700	1,180	5,156	11.7	12.64	296,500
March	121,710	8,540	1,680	3,926	8.92	10.29	241,400
April	83,270	4,930	1,240	2,776	6.31	7.04	165,200
May	50,508	5,430	679	1,629	3.70	4.27	100,200
June	17,114	1,000	395	570	1.30	1.45	33,950
July	12,633	638	354	408	.927	1.07	25,060
August	9,985	359	266	322	.732	.84	19,800
September	10,729	858	208	358	.814	.91	21,280
Water year 1939-40	626,364	13,700	208	1,711	3.89	52.96	1,242,000

d Doubtful gage-height record; discharge computed on basis of records for station at Marmot.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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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. Datum 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 1940.

Average discharge.- 15 years (1910-11, 1926-40), 40.6 second-feet.

Extremes.- Maximum discharge during year, 156 second-feet Feb. 6 (gage height, 1.75 feet); minimum, 14 second-feet Nov. 21, 25, 26.
1910-12, 1926-40: 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 good. No diversion or regulation above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	18	18	42	22	f57	72	68	35	23	20	16
2	18	18	18	39	21	a70	60	61	33	23	20	19
3	16	18	16	39	23	a56	55	55	32	21	20	18
4	36	17	16	41	24	a52	59	54	31	21	20	18
5	24	16	16	35	52	f51	54	53	31	21	20	18
6	20	16	16	31	110	47	50	50	30	21	20	17
7	18	17	16	28	53	68	53	47	40	21	19	18
8	18	18	20	27	46	64	55	46	33	21	19	17
9	18	18	21	26	62	50	67	47	30	21	19	18
10	18	18	27	25	71	46	54	48	29	21	19	18
11	18	18	24	24	46	41	52	46	29	21	19	17
12	17	17	20	23	40	39	54	44	29	21	19	18
13	16	17	20	22	38	37	54	43	28	21	19	18
14	16	16	28	22	35	38	53	43	27	21	19	18
15	16	16	60	22	31	42	52	42	27	21	18	18
16	16	16	73	22	32	49	48	39	27	21	18	18
17	19	16	54	21	34	42	47	39	27	20	18	18
18	18	16	40	21	30	42	49	39	27	20	18	18
19	18	16	38	21	28	43	46	39	27	23	18	17
20	16	15	40	21	28	44	46	38	27	24	18	16
21	16	16	35	21	27	45	44	37	25	23	18	16
22	16	16	29	21	27	46	46	36	24	21	18	16
23	18	16	27	20	26	48	58	36	24	20	18	16
24	18	16	24	20	27	53	52	35	24	20	18	16
25	18	15	23	20	64	51	55	35	25	20	18	15
26	27	16	23	21	64	96	49	35	24	25	18	17
27	35	16	23	26	58	82	49	34	22	26	18	36
28	27	16	43	24	69	71	68	33	22	23	18	21
29	20	15	59	24	57	77	55	33	22	21	18	18
30	18	20	42	24	-	69	71	35	22	21	18	18
31	18	-	44	23	-	77	-	38	-	20	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	606	36	16	19.5	2.24	2.59	1,200
November	499	20	15	16.6	1.91	2.13	990
December	953	73	18	30.7	3.53	4.07	1,890
Calendar year 1939	13,390	92	15	36.7	4.22	57.23	26,560
January	796	42	20	25.7	2.95	3.40	1,580
February	1,245	110	21	42.9	4.93	5.32	2,470
March	1,693	96	37	54.6	6.28	7.24	3,360
April	1,627	72	44	54.2	6.23	6.95	3,230
May	1,328	68	33	42.8	4.92	5.68	2,630
June	833	40	22	27.8	3.20	3.56	1,650
July	667	26	20	21.5	2.47	2.85	1,320
August	577	20	17	18.6	2.14	2.47	1,140
September	542	36	15	18.1	2.08	2.32	1,080
Water year 1939-40	11,366	110	15	31.1	3.57	48.58	22,540

a No gage-height record; discharge computed on basis of records for station below Linney Creek.
f Computed from gage-height based on partial record.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 13 years, 200 second-feet.

Extremes.- Maximum discharge during year, 779 second-feet Feb. 6 (gage height 2.68 feet); minimum, 44 second-feet Sept. 23-26 (gage height, 0.35 foot).
1927-40: 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 no gage-height record, which are fair. No diversion or regulation above station.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 4		Jan. 5 to Sept. 30					
0.4	53	0.3	43	1.0	144	1.9	421
.7	92	.5	64	1.3	216	2.2	540
1.0	144	.7	92	1.6	310	2.5	685

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	64	65	185	99	445	507	356	125	72	54	46
2	62	62	67	175	96	523	437	313	118	72	53	51
3	58	66	62	170	100	445	405	295	115	70	52	52
4	91	62	60	190	118	417	413	282	112	69	52	50
5	102	60	58	183	203	413	398	275	108	69	51	49
6	70	58	58	162	680	360	345	255	105	66	51	47
7	64	58	56	140	474	409	342	236	125	66	51	48
8	62	68	70	140	398	465	345	221	113	66	50	47
9	61	70	85	136	449	353	413	209	104	66	50	50
10	60	66	120	132	545	342	356	203	99	65	50	57
11	58	63	130	118	398	306	324	196	96	65	50	48
12	58	61	95	122	331	282	316	185	93	65	50	50
13	57	60	80	116	302	258	309	178	92	64	50	51
14	57	59	100	112	275	252	302	173	92	63	50	49
15	58	58	170	107	259	262	299	168	90	61	50	51
16	58	57	400	107	271	302	278	162	88	61	49	57
17	69	57	350	105	258	268	258	155	87	60	49	51
18	72	58	240	100	227	258	255	151	86	59	48	57
19	74	57	180	98	206	252	242	146	86	61	48	50
20	70	56	200	96	193	252	236	142	86	73	49	48
21	62	56	200	94	183	249	221	138	84	63	49	46
22	60	62	170	93	173	246	215	132	83	59	48	45
23	64	58	140	90	162	252	268	131	81	58	48	45
24	76	57	120	86	157	275	249	127	80	58	48	44
25	68	56	100	88	309	275	285	127	79	57	48	44
26	100	57	94	92	405	496	246	123	79	64	48	47
27	115	62	90	113	425	523	233	120	76	70	49	120
28	105	58	150	104	515	474	313	118	74	60	48	77
29	77	57	250	102	474	507	288	116	73	58	47	56
30	70	70	210	104	-	465	342	118	73	57	47	51
31	66	-	195	102	-	523	-	134	-	56	47	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	2,182	115	57	70.4	1.30	1.50	4,330
November	1,813	70	56	60.4	1.12	1.25	3,600
December	4,365	400	56	141	2.61	3.01	8,660
Calendar year 1939	60,192	600	55	165	3.06	41.44	119,400
January	3,771	190	86	122	2.26	2.60	7,480
February	8,665	680	98	299	5.54	5.97	17,190
March	11,179	523	246	361	6.69	7.70	22,170
April	9,440	507	215	315	5.83	6.50	18,720
May	5,685	356	116	183	3.39	3.92	11,280
June	2,802	125	73	93.4	1.73	1.93	5,560
July	1,973	73	56	63.6	1.18	1.36	3,910
August	1,534	54	47	49.5	.917	1.06	3,040
September	1,584	120	44	52.8	.978	1.09	3,140
Water year 1939-40	54,993	680	44	150	2.78	37.89	109,100

Note.- No gage-height record for periods Oct. 30 to Nov. 16, Dec. 5 to Jan. 4; discharge computed on basis of records for stations near Government Camp and above Boulder Creek, near Brightwood.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 2¼ miles upstream from mouth. Datum of gage is 1,089.2 feet above mean sea level (general adjustment of 1929), levels by Corps of Engineers, U. S. Army.

Drainage area.- 106 square miles.

Records available.- August 1936 to September 1940. October 1912 to March 1913 (gage heights only), at site at fish hatchery below 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 above present site.

Extremes.- Maximum discharge during year, 3,140 second-feet Feb. 6 (gage height, 4.07 feet); minimum, 59 second-feet Sept. 25, 26 (gage height, 0.54 foot).
1913-14, 1920-21, 1925-40: 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, Sept. 25, 26, 1940.

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

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 6				Feb. 7 to Sept. 30			
0.6	65	2.5	1,020	0.5	52	1.6	410
1.0	162	3.0	1,560	.7	92	2.0	625
1.5	350	3.5	2,260	1.0	171	2.5	1,025
2.0	610	4.0	3,030	1.3	276	3.0	1,560

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	121	131	460	221	1,050	1,070	1,020	203	104	83	65
2	79	113	134	425	210	1,360	910	740	193	102	81	68
3	75	129	124	410	214	1,030	762	613	184	102	79	79
4	136	121	113	470	246	884	718	571	177	99	79	72
5	244	108	106	425	528	850	661	548	171	97	77	74
6	126	103	106	415	2,640	718	601	526	165	97	74	66
7	106	106	101	332	1,560	884	583	470	190	94	74	66
8	92	137	134	301	1,310	1,170	607	430	190	94	72	66
9	87	145	181	285	1,380	667	850	405	165	92	72	66
10	81	129	289	305	1,750	710	732	382	154	90	72	85
11	79	121	386	277	1,160	607	625	358	148	92	72	70
12	77	113	285	269	850	543	565	336	142	92	72	68
13	75	108	224	250	826	495	538	318	139	92	72	74
14	75	103	239	235	725	465	505	305	137	90	72	74
15	73	99	704	221	607	475	495	293	132	88	72	68
16	73	96	1,450	218	583	583	455	284	129	88	72	81
17	87	92	1,350	210	646	543	420	268	129	88	70	70
18	118	94	720	210	625	500	415	261	126	85	68	79
19	106	92	506	196	577	470	391	253	124	85	66	77
20	126	87	524	187	510	450	382	242	126	104	70	68
21	9	87	64.	184	455	435	358	234	124	102	70	65
22	90	106	485	178	420	425	350	228	121	90	68	63
23	92	99	386	171	386	425	475	217	119	85	68	61
24	151	92	314	156	377	450	510	214	116	85	68	61
25	124	90	273	154	838	450	538	206	114	83	68	59
26	238	87	254	165	1,330	858	485	203	111	94	66	63
27	281	96	235	218	1,140	1,220	460	197	109	129	68	182
28	301	92	395	214	1,310	998	810	190	106	104	66	162
29	200	87	704	224	1,150	971	770	184	106	94	66	97
30	154	137	638	239	-	910	935	190	106	90	66	83
31	129	-	522	235	-	989	-	220	-	88	66	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	3,845	301	71	124	1.17	1.35	7,630
November	3,190	145	87	106	1.00	1.12	6,330
December	12,758	1,450	101	412	3.89	4.48	25,310
Calendar year 1939	126,462	2,710	67	346	3.26	44.37	250,800
January	8,239	470	154	266	2.51	2.89	16,340
February	24,574	2,640	210	847	7.99	8.62	48,740
March	22,785	1,360	425	735	6.93	7.99	45,190
April	17,996	1,070	350	600	5.66	6.31	35,690
May	10,906	1,020	184	352	3.32	3.83	21,630
June	4,256	203	106	142	1.34	1.49	8,440
July	2,919	129	83	94.2	.889	1.02	5,790
August	2,213	83	66	71.4	.674	.78	4,390
September	2,332	182	59	77.7	.733	.82	4,630
Water year 1939-40	116,013	2,640	59	317	2.99	40.70	230,100

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog al Survey

9-233 April 1936

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, 8¾ miles northeast of Bull Run. Datum of gage is at mean sea level (levels by Portland Water Bureau).

Records available.- October 1928 to September 1940.

Extremes.- Maximum contents during year, 29,330 acre-feet Feb. 6 (gage height, 1,042.05 feet); minimum, 17,270 acre-feet Sept. 26 (gage height, 1,007.78 feet).
1928-40: Maximum contents, 31,600 acre-feet Mar. 31, 1931 (gage height, 1,047.40 feet); minimum after first filling in May 1929, that of Sept. 26, 1940.

Remarks.- Reservoir is formed by concrete dam known as Bear Creek Dam on Bull Run River; dam completed in March 1929; storage began about Apr. 28, 1929. Capacity, 26,717 acre-feet between elevations 890.0 feet (center of outlet valves) and 1,036.0 feet (crest of spillway) above mean sea level. Dead storage, 213 acre-feet below elevation 890.0 feet. Figures given herein represent total contents at midnight. Water is used for municipal supply in city of Portland.

Cooperation.- Water-stage recorder graph and table of contents furnished by Portland Water Bureau.

Elevation and contents, water year October 1939 to September 1940

Date	Elevation (feet)*	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	1,019.66	21,060	-
Oct. 31	1,036.83	27,250	+6,190
Nov. 30	1,036.88	27,270	+20
Dec. 31	1,037.87	27,660	+390
Calendar year 1939	-	-	+10
Jan. 31	1,036.93	27,290	-370
Feb. 29	1,038.61	27,950	+660
Mar. 31	1,038.02	27,720	-230
Apr. 30	1,038.76	28,010	+290
May 31	1,036.53	27,140	-870
June 30	1,032.73	25,690	-1,450
July 31	1,024.75	22,810	-2,880
Aug. 31	1,014.06	19,230	-3,580
Sept.30	1,010.67	18,160	-1,070
Water year 1939-40	-	-	-2,900

*Beginning Oct. 1, 1939, month-end stage is that for midnight of last day, from water-stage recorder.

Bull Run River below Lake Ben Morrow Reservoir, Oreg.

Location.- Water-stage recorder above crest of spillway and scales indicating 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, 500 feet downstream from Bear Creek, 1,000 feet upstream from Fivemile Creek, and 8⅝ miles northeast of Bull Run. Gage readings are elevations above mean sea level (Surveys of Portland Water Bureau); crest of spillway at elevation 1,036 feet.

Drainage area.- 74 square miles. At former site, half a mile downstream, 75 square miles (revised).

Records available.- October 1934 to September 1940. October 1929 to September 1934 at site half a mile downstream.

Average discharge.- 11 years, 549 second-feet.

Extremes.- Maximum discharge during year, 5,920 second-feet Feb. 6 (elevation, 1,042.05 feet); no flow part of Oct. 27.
1929-40: Maximum discharge at dam, 16,100 second-feet (revised), Mar. 31, 1931 (elevation, 1,047.40 feet with one valve open 30 turns); minimum, that of Oct. 27, 1939.

Remarks.- Records good. Daily discharge determined by combining flow through valves near base of dam and that over crest of spillway. No diversion above station. Flow regulated by Bull Run Lake and Lake Ben Morrow Reservoir.

Cooperation.- Water-stage recorder graph of reservoir and record of valve openings furnished by Portland Water Bureau.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	248	294	882	321	1,990	1,060	1,430	128	111	92	103
2	90	215	377	753	299	2,800	866	976	124	111	92	94
3	90	220	316	728	294	1,730	693	768	116	114	92	88
4	90	205	272	832	425	1,280	648	669	110	111	92	91
5	79	182	235	739	1,290	1,270	581	704	109	110	103	88
6	66	169	243	600	4,760	987	503	676	102	100	120	88
7	66	178	220	503	2,970	1,590	496	555	110	94	114	87
8	66	238	383	432	2,370	1,900	746	473	106	99	111	87
9	66	277	562	389	2,550	1,200	1,200	413	99	102	113	87
10	66	245	1,070	410	2,610	908	1,000	365	113	105	106	87
11	68	210	1,330	407	1,820	725	746	339	96	102	106	89
12	66	187	925	348	1,240	620	627	288	97	102	106	87
13	66	160	693	332	1,850	545	522	260	92	102	106	87
14	66	164	995	326	1,380	490	458	240	114	102	108	87
15	66	155	2,970	288	1,050	470	413	223	112	102	105	87
16	66	136	3,300	272	1,100	641	371	215	112	101	105	87
17	66	128	2,990	253	1,330	594	335	205	112	104	105	87
18	68	144	1,740	235	1,200	516	321	192	112	101	111	81
19	66	144	1,120	215	1,060	451	288	182	115	101	118	74
20	66	132	1,370	200	800	416	277	174	112	101	110	74
21	66	128	1,440	192	630	389	266	160	102	101	109	74
22	66	172	993	182	542	365	240	155	96	101	104	74
23	66	156	718	178	484	343	458	148	96	100	104	74
24	48	140	562	159	484	360	637	136	115	106	104	74
25	32	136	458	148	1,730	377	516	128	125	108	104	76
26	32	132	395	156	2,230	1,140	464	128	119	102	104	74
27	17	174	341	240	1,780	1,840	432	124	111	92	104	48
28	798	169	568	255	2,150	1,570	824	120	111	92	98	45
29	662	147	1,210	266	1,770	1,230	816	116	111	92	94	75
30	432	250	1,180	294	-	1,000	1,080	113	111	92	104	75
31	316	-	976	324	-	1,080	-	124	-	95	103	-

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	798	17	128	7,870	+6,190	14,060	229	3.09	3.56
November	277	128	178	10,590	+20	10,610	178	2.41	2.69
December	3,300	220	976	59,990	+390	60,380	982	13.3	15.33
Calendar year 1939	5,050	17	463	335,160	+10	335,170	463	6.26	84.98
January	882	148	372	22,890	-370	22,520	366	4.95	5.71
February	4,760	294	1,466	84,340	+660	85,000	1,478	20.0	21.57
March	2,800	343	993	61,080	-230	60,850	990	13.4	15.45
April	1,200	240	596	35,470	+290	35,760	601	8.12	9.06
May	1,430	113	348	21,420	-870	20,550	334	4.51	5.20
June	128	92	110	6,520	-1,450	5,070	85.2	1.15	1.28
July	114	92	102	6,260	-2,880	3,380	55.0	.743	.86
August	120	92	105	6,440	-3,580	2,860	46.5	.628	.72
September	103	45	81.0	4,820	-1,070	3,750	63.0	.851	.95
Water year 1939-40	4,760	17	451	327,690	-2,900	324,790	447	6.04	82.38

‡ Adjusted for change in contents in Lake Ben Morrow only.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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., 1¼ 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 1940.

Average discharge.- 33 years (1907-40), 738 second-feet.

Extremes.- Maximum discharge during year, 6,930 second-feet Feb. 6 (gage height, 7.44 feet); minimum, 64 second-feet Sept. 28 (gage height, 0.49 foot).
1895-1940: 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 excellent. No diversion above station. Flow regulated by 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.

Cooperation.- Water-stage recorder graph furnished by Portland Water Bureau.

Rating table, water year 1939-40 (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	7.0	6,110

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	111	354	378	1,130	410	2,420	1,300	1,640	183	130	106	113
2	109	314	474	980	374	3,450	1,090	1,180	166	130	106	113
3	106	338	410	961	378	2,100	911	948	155	132	104	109
4	166	288	354	1,090	528	1,580	851	851	147	132	104	109
5	152	250	314	942	1,360	1,530	744	875	147	132	109	102
6	109	231	334	788	5,500	1,200	650	815	137	125	132	102
7	100	237	296	660	3,640	1,840	690	685	152	118	127	102
8	94	314	468	578	2,990	2,280	1,020	592	152	118	122	102
9	91	362	690	528	3,180	1,500	1,500	524	140	125	122	102
10	89	322	1,320	569	3,260	1,140	1,240	470	152	127	120	104
11	91	285	1,640	533	2,320	911	961	430	142	122	118	104
12	87	254	1,180	479	1,600	776	776	390	137	122	118	102
13	87	237	905	454	2,320	685	665	362	127	122	118	102
14	85	243	1,160	438	1,790	610	582	334	127	122	120	102
15	83	218	3,410	406	1,360	596	528	314	134	122	118	102
16	83	197	4,050	378	1,440	788	474	288	134	122	118	100
17	94	186	3,750	358	1,710	738	434	274	134	122	120	100
18	120	215	2,230	350	1,540	640	414	257	132	118	122	102
19	111	194	1,480	322	1,340	574	374	240	134	118	127	91
20	120	177	1,720	303	1,040	528	362	228	134	118	122	89
21	111	169	1,740	281	833	488	346	221	130	118	120	89
22	106	231	1,210	267	705	458	314	209	120	118	118	89
23	118	212	911	247	645	434	614	197	120	118	118	89
24	137	189	710	247	655	454	760	189	130	120	118	87
25	98	174	587	231	1,970	454	660	183	142	125	118	89
26	162	172	510	240	2,730	1,330	574	177	142	134	118	94
27	183	243	458	338	2,180	2,210	524	172	132	118	120	172
28	1,040	218	805	334	2,630	1,890	996	169	132	111	113	89
29	861	197	1,560	346	2,170	1,490	974	166	132	111	109	106
30	592	333	1,500	390	-	1,220	1,330	160	132	109	113	102
31	438	-	1,260	418	-	1,340	-	186	-	111	113	-

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	1,040	83	192	11,810	+6,190	18,000	293	2.87	3.31
November	362	169	245	14,590	+20	14,610	246	2.41	2.69
December	4,050	296	1,220	75,040	+390	75,430	1,227	12.0	13.83
Calendar year 1939	6,290	83	590	427,140	+10	427,150	590	5.78	78.49
January	1,130	231	503	30,910	-370	30,540	497	4.87	5.62
February	5,500	374	1,814	104,300	+660	104,960	1,825	17.9	19.31
March	3,450	434	1,215	74,690	-230	74,460	1,211	11.9	13.72
April	1,500	314	755	44,940	+290	45,230	760	7.45	8.31
May	1,640	160	443	27,230	-870	26,360	429	4.21	4.85
June	183	120	139	8,290	-1,450	6,840	115	1.13	1.26
July	134	109	122	7,480	-2,880	4,600	74.8	.733	.85
August	132	104	117	7,200	-3,580	3,620	58.9	.577	.67
September	172	87	102	6,070	-1,070	5,000	84.0	.824	.92
Water year 1939-40	5,500	83	568	412,550	-2,900	409,650	564	5.53	75.34

Peak discharge.- Dec. 16 (3 a.m.) 4,500 sec.-ft.; Feb. 6 (7 a.m.) 6,930 sec.-ft.; Feb. 8 (11 a.m.) 3,700 sec.-ft.; Feb. 10 (3 a.m.) 3,760 sec.-ft.; Feb. 25 (10 p.m.) 3,360 sec.-ft.; Mar. 2 (1 a.m.) 3,870 sec.-ft.

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41066-0 U.S. GOVERNMENT PRINTING OFFICE, 1941

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. Datum of gage is 710.51 feet above mean sea level (adjustment of 1924), surveys of Portland General Electric Co.
Drainage area.- 23 square miles
Records available.- May 1911 to April 1913 (fragmentary), July 1919 to September 1940.
Average discharge.- 21 years (1919-40), 137 second-feet.
Extremes.- Maximum discharge during year, 1,130 second-feet Feb. 6 (gage height, 5.43 feet); minimum 8 second-feet Aug. 20, Sept. 16, 17.
1911-13, 1919-40: Maximum discharge, 3,950 second-feet Nov. 20, 1921 (gage height, 9.18 feet), from rating curve extended above 2,000 second-feet; minimum, that of Aug. 20, Sept. 16, 17, 1940.
Remarks.- Records fair except those for low-water periods, which are poor. No diversion or regulation above station.
Cooperation.- Water-stage recorder graph furnished by Portland General Electric Co.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 5				Feb. 6 to Sept. 30			
1.9	12	3.2	151	1.8	7.2	2.9	95
2.1	22	3.6	247	2.0	16	3.2	144
2.3	35	4.0	380	2.2	27	3.6	240
2.6	62	4.4	535	2.4	42	4.4	530
2.9	99	4.8	725	2.6	59	5.2	970

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	53	70	202	78	422	270	285	37	15	12	9
2	17	55	83	168	72	516	218	224	32	14	12	11
3	14	77	64	168	75	321	183	181	29	14	12	11
4	64	58	56	206	104	291	183	174	27	14	12	10
5	70	48	50	155	253	276	158	165	26	14	12	10
6	37	45	57	130	880	216	133	144	25	14	12	9
7	28	50	50	112	548	384	154	121	28	14	11	9
8	22	68	73	102	670	377	224	102	28	14	10	9
9	20	72	99	102	635	255	321	90	25	13	10	9
10	19	62	187	130	544	203	240	80	23	13	10	12
11	18	52	250	112	384	167	183	72	21	12	10	10
12	16	47	183	102	288	148	148	64	20	12	10	10
13	16	44	155	96	394	135	128	60	20	12	10	11
14	16	44	187	89	318	126	113	56	19	12	10	11
15	15	40	475	83	255	135	107	54	18	12	10	9
16	15	36	616	79	297	206	96	50	18	12	9	8
17	20	34	566	74	324	156	87	48	18	12	9	8
18	25	43	338	71	294	135	87	44	18	12	9	12
19	37	37	225	68	249	123	77	42	17	12	9	12
20	46	34	352	62	200	112	76	40	16	12	9	11
21	34	33	274	58	167	102	70	39	16	14	9	10
22	27	55	194	56	144	94	64	38	16	13	9	10
23	36	43	153	54	126	90	144	36	16	12	9	9
24	73	37	122	52	123	110	133	34	15	12	9	9
25	48	33	102	50	362	104	123	33	14	11	9	9
26	108	33	91	59	449	360	102	31	14	20	9	13
27	146	60	84	91	366	413	92	30	16	24	11	94
28	262	46	246	74	457	307	256	30	16	19	12	51
29	127	40	427	77	352	264	183	28	16	16	10	23
30	84	75	324	80	-	208	332	29	16	15	9	18
31	64	-	259	83	-	270	-	38	-	14	9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	1,542	262	14	49.7	2.16	2.49	3,060
November	1,454	77	33	48.5	2.11	2.35	2,880
December	6,412	616	50	207	9.00	10.37	12,720
Calendar year 1939	42,261	1,210	12	116	5.04	68.37	83,810
January	3,045	206	50	98.2	4.27	4.92	6,040
February	9,408	880	72	324	14.1	15.21	18,660
March	7,026	516	90	227	9.87	11.36	13,940
April	4,685	332	64	156	6.78	7.58	9,290
May	2,462	285	28	79.4	3.45	3.98	4,880
June	620	37	14	20.7	.900	1.00	1,230
July	429	24	11	13.8	.600	.69	851
August	313	12	9	10.1	.439	.51	621
September	447	94	8	14.9	.648	.72	887
Water year 1939-40	37,843	880	8	103	4.48	61.18	75,060

Peak discharge.- Feb. 6 (5 a.m.) 1,130 sec.-ft.; Feb. 8 (8 p.m.) 1,010 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
9-233 April 1936
101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum 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 1940.

Extremes.- Maximum discharge during year, 5,530 second-feet Mar. 26 (gage height, 5.42 feet); minimum, 217 second-feet at times during Aug. 30 to Sept. 2 (gage height, 1.65 feet).

1913-14, 1935-40: 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, 10.8 feet (date unknown), determined in 1935 from floodmarks.

Remarks.- Records good except those for periods of no gage-height record, which are fair. No diversion or regulation above station.

Cooperation.- Water-stage recorder inspected by employee of Forest Service.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.6	203	2.6	660	4.5	3,100
1.7	231	3.0	980	5.0	4,300
2.0	338	3.5	1,480	5.5	5,790
2.3	480	4.0	2,150		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	243	259	234	1,140	716	a3,200	2,170	1,070	496	276	259	220
2	259	253	334	1,090	674	a3,500	1,870	1,030	470	269	253	225
3	240	262	334	1,100	688	a2,900	1,650	980	429	273	253	240
4	240	256	331	1,180	762	a2,400	1,490	1,070	415	276	250	243
5	424	246	231	1,100	1,020	a2,000	1,360	1,100	396	273	246	237
6	347	243	231	a930	2,890	a1,700	1,220	1,020	391	269	243	231
7	298	240	231	a800	3,170	1,570	1,210	962	378	266	240	228
8	266	250	298	a780	2,300	2,500	1,500	890	373	266	237	228
9	256	246	810	a1,200	a2,200	a2,300	1,700	874	369	266	234	237
10	243	240	1,350	a1,130	a3,200	a2,000	1,600	890	364	269	237	250
11	240	237	953	971	a2,900	a1,720	1,450	899	356	262	237	231
12	237	237	588	842	a2,500	a1,500	1,380	882	347	262	234	243
13	234	234	470	730	a3,000	a1,320	1,380	826	351	262	231	287
14	234	234	523	653	a2,900	a1,240	1,360	786	342	259	231	256
15	234	231	1,020	594	a2,300	a1,180	1,250	738	338	259	231	259
16	231	231	1,850	540	a2,100	a1,560	1,140	709	334	262	228	256
17	231	234	2,720	512	a2,300	a1,580	1,030	674	330	266	228	253
18	243	231	1,410	485	a2,000	a1,370	989	647	322	266	225	364
19	246	231	1,030	470	a1,600	a1,230	971	634	318	269	225	302
20	243	231	1,070	444	a1,350	1,130	917	601	314	287	228	259
21	240	231	1,040	424	a1,150	1,120	874	588	306	334	228	243
22	237	231	842	410	h1,050	1,120	834	576	298	291	228	237
23	237	231	702	420	a970	1,120	826	576	294	273	228	234
24	280	231	607	449	a910	1,200	810	540	291	269	228	234
25	256	231	512	640	a1,200	1,230	802	523	291	262	225	234
26	302	231	475	1,120	a2,400	2,830	778	491	287	269	225	250
27	601	231	454	1,520	a3,100	4,540	730	475	280	298	223	543
28	429	231	634	1,190	a3,800	3,410	826	465	276	284	223	745
29	318	231	1,080	980	a3,900	2,870	890	449	276	269	223	382
30	287	234	1,140	850	-	2,600	1,010	449	273	269	223	306
31	266	-	1,130	786	-	2,390	-	454	-	262	220	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	8,642	601	231	279	0.712	0.82	17,140
November	7,139	262	231	238	.607	.68	14,160
December	24,334	2,720	231	785	2.00	2.31	48,270
Calendar year 1939	286,235	4,300	231	784	2.00	27.15	567,800
January	25,490	1,520	410	822	2.10	2.42	50,560
February	59,050	3,900	674	2,036	5.19	5.60	117,100
March	62,330	4,540	1,120	2,011	5.13	5.91	123,600
April	36,017	2,170	730	1,201	3.06	3.42	71,440
May	22,868	1,100	449	738	1.88	2.17	45,360
June	10,305	496	273	344	.878	.98	20,440
July	8,437	334	259	272	.694	.80	16,730
August	7,224	259	220	233	.594	.69	14,330
September	8,457	745	220	282	.719	.80	16,770
Water year 1939-40	280,293	4,540	220	766	1.95	26.60	555,900

Peak discharge.- Feb. 28 (time uncertain, clock stopped), 4,570 sec.-ft.; Mar. 26 (11 p.m.) 5,530 sec.-ft.

a No gage-height record; discharge computed on basis of records for station at Eula and stati on intervening tributaries.

h Computed from staff-gage reading.

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. Datum of gage is 861.65 feet above mean sea level (general adjustment of 1929).

Drainage area.- 941 square miles.

Records available.- July 1923 to September 1940.

Average discharge.- 16 years (1923-26, 1927-40), 2,353 second-feet.

Extremes.- Maximum discharge during year, 9,350 second-feet Feb. 28 (gage height, 7.34 feet); minimum, 476 second-feet Aug. 25 (gage height, 0.73 foot).
1923-40: 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 excellent. No large diversions above station. Occasional diurnal fluctuation during periods of low water caused by logging operations upstream.

Cooperation.- Gage-height record collected in cooperation with U. S. Weather Bureau.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.7	460	2.5	1,930	5.0	5,350
1.0	630	3.0	2,520	6.0	6,960
1.3	815	3.5	3,170	7.0	8,700
1.6	1,040	4.0	3,870		
2.0	1,405	4.5	4,600		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	606	720	624	2,480	1,540	7,100	5,100	2,600	1,210	660	588	488
2	666	696	618	2,380	1,460	7,420	4,510	2,390	1,160	666	576	515
3	624	702	600	2,410	1,480	6,520	4,000	2,280	1,060	660	564	570
4	624	690	594	2,520	1,560	5,590	3,590	2,420	1,020	654	554	588
5	1,070	666	588	2,410	1,900	5,040	3,160	2,500	968	642	554	576
6	908	654	600	2,140	5,330	4,360	2,830	2,290	945	648	537	542
7	770	636	594	1,900	6,960	4,210	2,730	2,110	915	624	537	532
8	696	648	720	1,850	5,730	6,530	3,510	2,000	915	630	532	526
9	648	660	1,500	2,720	5,180	5,780	4,150	1,940	885	624	532	532
10	630	636	2,810	2,530	8,000	4,930	3,940	1,940	864	624	526	570
11	618	630	2,300	2,160	7,660	4,160	3,530	1,940	850	618	520	532
12	606	630	1,500	1,930	5,810	3,560	3,280	1,890	843	618	520	554
13	594	624	1,230	1,730	6,690	3,090	3,240	1,800	822	612	520	648
14	600	618	1,230	1,600	6,860	2,770	3,140	1,720	815	612	520	612
15	576	612	1,880	1,500	5,510	2,600	2,910	1,670	808	606	515	642
16	594	606	3,370	1,420	4,930	3,560	2,560	1,600	802	606	515	624
17	594	600	5,940	1,340	5,350	3,530	2,340	1,540	789	606	510	612
18	624	594	3,530	1,290	5,060	3,300	2,210	1,480	776	600	504	796
19	612	594	2,440	1,220	4,200	2,950	2,120	1,440	763	600	504	744
20	624	588	2,450	1,180	3,550	2,750	2,040	1,400	763	642	498	624
21	630	588	2,480	1,120	3,040	2,620	1,940	1,360	756	726	510	570
22	600	582	2,010	1,120	2,740	2,610	1,890	1,310	750	654	510	542
23	606	582	1,750	1,080	2,450	2,570	1,860	1,290	738	618	510	532
24	756	582	1,540	1,130	2,290	2,720	1,850	1,270	726	606	498	526
25	702	576	1,360	1,420	2,870	2,870	1,850	1,220	714	594	510	548
26	802	576	1,260	1,980	5,650	4,990	1,790	1,210	696	612	498	570
27	1,690	576	1,210	2,650	7,200	6,540	1,710	1,150	684	756	498	1,070
28	1,400	570	1,600	2,220	8,290	7,080	1,930	1,120	684	678	498	1,640
29	960	570	2,450	1,910	8,560	6,200	2,160	1,090	678	624	493	945
30	829	588	2,600	1,750	-	5,700	2,410	1,100	702	612	488	763
31	763	-	2,450	1,640	-	5,350	-	1,130	-	606	488	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	23,022	1,690	576	743	0.790	0.91	45,660
November	18,594	720	570	620	.659	.73	36,880
December	55,828	5,940	588	1,801	1.91	2.21	110,700
Calendar year 1939	750,484	9,850	560	2,056	2.18	29.66	1,488,000
January	56,730	2,720	1,080	1,830	1.94	2.24	112,500
February	137,850	8,560	1,460	4,753	5.05	5.45	273,400
March	141,100	8,540	2,570	4,552	4.84	5.58	279,900
April	84,320	5,100	1,710	2,811	2.99	3.33	167,200
May	52,200	2,600	1,090	1,684	1.79	2.06	103,500
June	25,101	1,210	678	837	.889	.99	49,790
July	19,620	738	594	633	.673	.78	38,920
August	16,127	588	488	520	.553	.64	31,990
September	19,533	1,640	488	651	.692	.77	36,740
Water year 1939-40	650,025	8,560	488	1,776	1.89	25.69	1,289,000

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum of gage is 423.47 feet 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 1940. 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.- 22 years (1912-13, 1919-40), 4,915 second-feet.

Extremes.- Maximum discharge during year, 26,800 second-feet Feb. 29 (gage height, 10.20 feet); minimum, 504 second-feet Aug. 28 (gage height, 1.17 feet).
1911-13, 1919-40: 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. Small diversion above station.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 29

1.4	700	3.5	3,360	S.0	17,300
1.7	930	4.0	4,380	9.0	21,500
2.0	1,220	5.0	6,930	10.0	26,000
2.5	1,S30	6.0	9,930		
3.0	2,530	7.0	13,400		

Mar. 1 to Sept. 30

1.1	465	2.5	1,780
1.4	645	3.0	2,510
1.7	S80	3.5	3,360
2.0	1,170		

Note.- Same as preceding table above.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	e680	1,050	794	4,400	3,010	16,900	10,100	4,310	1,770	779	645	514
2	770	975	S1S	4,380	2,760	1S,300	9,180	3,970	1,S60	771	632	520
3	7S6	939	794	4,590	2,740	15,100	7,940	3,S10	1,610	771	619	550
4	763	966	77e	4,960	3,440	12,200	6,990	3,970	1,4S0	771	606	606
5	1,190	930	770	5,580	3,850	10,400	6,100	4,750	1,400	755	580	619
6	1,620	874	770	5,630	9,320	S,740	5,400	4,360	1,340	755	586	600
7	1,280	858	786	a4,600	1S,300	S,200	5,130	3,910	1,300	763	562	580
8	1,060	650	S74	a4,200	15,900	12,000	5,810	3,530	1,280	e750	568	580
9	914	882	2,530	a6,100	13,100	11,200	7,1S0	3,290	1,250	e740	550	580
10	S58	S74	5,900	a5,700	15,900	9,610	7,210	3,150	1,180	e730	562	600
11	S26	842	9,1S0	a4,900	20,700	8,050	6,320	3,060	1,160	e720	556	606
12	794	826	4,840	a4,200	14,200	6,S70	5,630	2,960	1,130	e710	538	593
13	778	810	3,220	a3,700	15,800	6,050	5,230	2,770	1,110	e700	538	659
14	770	S10	2,680	a3,300	18,400	5,380	4,940	2,620	1,140	e700	538	755
15	778	S10	3,220	a3,000	14,700	5,010	4,610	2,4S0	1,070	e690	538	739
16	756	802	5,580	a2,700	12,100	5,S90	4,200	2,370	961	673	532	755
17	770	786	10,400	2,520	14,900	6,S70	3,830	2,2S0	9S0	659	526	739
18	770	786	8,080	2,380	15,S00	6,130	3,550	2,170	9S0	645	526	820
19	77S	77S	5,330	2,280	12,000	5,530	3,360	2,050	970	645	520	1,050
20	7S6	770	5,080	2,130	9,420	4,960	3,250	1,990	970	659	538	872
21	7S6	770	6,430	2,030	7,730	4,630	3,080	1,920	952	739	514	739
22	77e	770	5,200	1,930	6,650	4,430	2,940	1,S40	925	804	520	773
23	763	770	4,120	1,900	5,e40	4,310	2,910	1,790	916	779	520	732
24	948	763	3,360	1,990	5,300	4,340	2,S70	1,750	S5O	731	520	605
25	1,140	763	2,S70	2,680	6,710	4,380	2,S20	1,730	S72	687	520	619
26	1,010	763	2,530	4,470	11,900	5,530	2,690	1,650	S54	652	520	632
27	2,100	749	2,310	7,590	17,200	16,700	2,610	1,560	S46	708	520	1,000
28	3,030	756	2,300	6,050	21,400	15,400	2,790	1,520	S12	S46	509	2,660
29	1,910	756	3,440	4,610	23,400	12,300	3,590	1,4S0	804	771	520	1,980
30	1,400	756	4,270	3,850	-	10,700	3,610	1,470	829	708	520	1,250
31	1,200	-	4,340	3,360	-	10,000	-	1,610	-	680	514	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	32,792	3,030	680	1,058	0.521	0.60	65,040
November	24,S34	1,050	749	S2S	.408	.45	49,260
December	113,594	10,400	770	3,664	1.80	2.08	225,300
Calendar year 1939	1,378,133	27,800	645	3,776	1.86	25.24	2,733,000
January	121,710	7,590	1,900	3,926	1.93	2.23	241,400
February	342,470	23,400	2,740	11,810	5.82	6.27	679,300
March	276,110	18,300	4,310	S,907	4.39	5.06	547,700
April	145,S70	10,100	2,610	4,S62	2.40	2.67	289,300
May	S2,120	4,750	1,470	2,649	1.30	1.50	162,900
June	33,631	1,S60	804	1,121	.552	.62	66,710
July	22,491	846	645	726	.358	.41	44,610
August	16,957	645	509	547	.269	.31	33,630
September	24,32S	2,660	514	811	.400	.45	48,250
Water year 1939-40	1,236,907	23,400	509	3,380	1.67	22.65	2,453,000

Peak discharge.- Feb. 29 (12:01 to 2 a.m.) 26,800 sec.-ft.
a No gage-height record; discharge computed on basis of recorded range of stage and records for Middle Fork of Willamette River at Eula and Coast Fork of Willamette River at Saginaw.
e Intake action faulty; discharge computed on basis of records for Middle Fork of Willamette River at Eula and Coast Fork of Willamette River 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. Datum 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 1940.

Average discharge.- 45 years (1895-1940), 13,660 second-feet.

Extremes.- 1938-39: Maximum discharge during year, 61,000 second-feet Feb. 17 (gage height, 15.55 feet); minimum, 2,230 second-feet Sept. 26, 27 (gage height, 0.20 foot).

1939-40: Maximum discharge during year, 59,000 second-feet Mar. 1 (gage height, 15.56 feet); minimum, 1,840 second-feet Sept. 1, 2 (gage height, 0.01 foot).

1878-82, 1892-1940: Maximum discharge, 229,000 second-feet Jan. 14, 1881 (gage height, 32.8 feet); minimum, that of Sept. 1, 2, 1940.

Maximum stage known, 36.0 feet Dec. 4, 1861 (discharge, 274,000 second-feet, estimated on basis of rating curve extended above 200,000 second-feet in 1923).

Remarks.- Records good. No regulation. Albany power canal diverts water from South Santiam River into Willamette River above station; small diversions for irrigation.

Cooperation.- Gage-height record collected in cooperation with U. S. Weather Bureau.

Revisions.- Revised figures of discharge for the water year 1939, superseding those published in Water-Supply Paper 884, are given herein.

Rating tables, water years 1938-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 1938, to Feb. 17, 1939						Feb. 18, 1939, to Sept. 30, 1940					
0.4	2,660	3.2	10,280	8.0	26,950	0	1,820	3.0	9,020	10.0	33,100
.8	3,560	4.0	12,820	10.0	34,800	.5	2,860	4.0	11,820	12.0	41,800
1.4	5,040	5.0	16,140	12.0	43,300	1.0	3,950	5.0	14,820	14.0	51,200
2.0	6,680	6.0	19,600	14.0	52,600	1.5	5,160	6.0	18,040	16.0	61,200
2.6	8,440	7.0	23,200	16.0	63,200	2.0	6,400	8.0	25,160		

Discharge, in second-feet, 1938-40

1938-39

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,860	4,110	5,900	15,800	21,700	15,800	15,400	10,500	6,810	4,800	2,880	2,780
2	2,840	4,660	9,350	15,800	18,600	14,800	15,400	9,980	6,380	4,630	2,860	3,040
3	2,810	5,840	22,500	18,200	17,500	15,800	16,100	9,700	6,080	4,580	2,860	3,080
4	3,030	11,100	38,100	23,200	17,500	17,400	16,100	9,560	5,920	4,630	2,840	2,880
5	3,190	28,500	39,400	27,700	17,200	17,400	15,800	9,420	5,980	4,920	2,820	2,730
6	3,080	19,600	35,200	30,800	21,000	17,000	15,000	9,160	6,550	4,870	2,780	2,650
7	2,970	12,300	28,500	26,600	32,000	17,700	14,000	8,620	6,600	4,680	2,760	2,570
8	2,860	9,500	23,200	21,700	35,200	17,400	13,800	8,340	6,200	4,490	2,690	2,500
9	2,810	8,290	20,000	19,200	29,200	16,400	14,400	8,210	5,920	4,370	2,670	2,480
10	2,750	10,300	17,200	17,200	24,700	15,000	13,900	8,480	5,900	4,210	2,650	2,460
11	2,730	12,800	15,100	15,300	21,700	14,200	13,200	8,620	5,880	4,100	2,650	2,480
12	2,900	10,900	13,300	14,000	22,100	16,700	12,600	8,620	5,680	4,070	2,650	2,500
13	3,260	9,350	11,900	12,800	30,800	34,400	12,400	8,480	5,450	4,000	2,690	2,540
14	3,170	8,140	10,700	12,000	37,300	47,400	11,800	8,340	5,300	3,590	2,630	2,570
15	3,120	7,990	9,820	11,200	41,500	39,600	11,000	8,340	5,210	3,840	2,590	2,590
16	3,010	8,740	9,200	11,100	53,100	30,600	10,400	8,620	5,260	3,770	2,610	2,590
17	2,920	10,100	8,590	10,700	58,900	27,400	9,980	8,620	6,350	3,820	2,590	2,500
18	2,840	14,300	8,140	10,400	43,200	28,600	9,980	8,210	7,170	3,750	2,570	2,440
19	2,770	12,300	7,700	11,200	31,800	31,400	10,800	7,950	8,340	3,660	2,520	2,420
20	2,700	10,400	7,400	12,000	26,700	33,100	12,000	7,950	8,620	3,610	2,540	2,400
21	2,700	9,350	7,140	11,700	23,000	33,500	12,600	7,950	8,750	3,480	2,480	2,380
22	2,660	8,290	7,200	11,100	19,400	33,900	13,000	7,820	7,950	3,390	2,460	2,360
23	2,680	7,550	7,260	10,600	17,400	35,200	13,000	7,820	7,170	3,370	2,500	2,310
24	2,680	6,970	6,970	9,970	16,400	34,800	12,600	7,820	6,650	3,280	2,500	2,290
25	2,700	6,480	6,820	9,500	15,800	33,500	12,000	7,430	6,220	3,230	2,540	2,270
26	2,750	6,090	6,770	9,200	15,800	31,000	11,800	7,040	5,880	3,170	2,630	2,250
27	2,750	5,790	6,820	9,820	15,300	28,200	11,100	7,040	5,550	3,120	2,610	2,230
28	2,920	5,540	8,290	13,600	15,300	24,400	10,500	7,170	5,300	3,060	2,570	2,250
29	3,100	5,380	15,100	18,900	-	20,400	10,400	6,910	5,110	2,990	2,590	2,270
30	3,380	5,380	18,900	23,200	-	18,000	10,800	6,910	4,940	2,930	2,610	2,270
31	3,700	-	17,800	24,300	-	16,100	-	7,300	-	2,900	2,670	-

UNITED STATES DEPARTMENT OF THE INTERIOR
Geologi l Survey

Discharge, in second-feet, of Willamette River at Albany, Oreg., 1938-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,270	3,410	2,650	13,400	11,000	58,300	27,700	9,810	4,800	2,840	2,420	1,860
2	2,310	3,280	2,780	13,400	9,840	51,800	25,500	10,900	4,990	2,800	2,380	1,860
3	2,380	3,150	2,800	13,500	9,180	47,500	22,900	10,300	5,020	2,730	2,290	1,900
4	2,520	3,060	2,760	15,300	11,000	42,500	20,300	10,100	4,730	2,670	2,230	2,000
5	2,650	2,970	2,760	17,000	15,900	34,500	18,000	11,100	4,510	2,650	2,190	2,060
6	3,300	2,880	2,760	17,100	22,800	29,100	16,200	12,400	4,350	2,630	2,150	2,060
7	3,770	2,650	2,690	15,600	36,600	24,900	15,100	12,000	4,260	2,630	2,100	2,060
8	3,410	2,630	2,860	13,900	48,400	23,800	14,800	11,100	4,160	2,610	2,060	2,040
9	3,100	2,630	3,210	13,500	47,500	28,300	16,000	10,200	4,100	2,570	2,020	2,080
10	2,840	2,780	6,780	15,400	40,600	27,400	17,900	9,340	3,980	2,520	2,020	2,120
11	2,630	2,760	13,300	16,000	40,800	24,100	17,300	8,750	3,910	2,520	2,040	2,150
12	2,520	2,730	15,700	14,500	46,000	20,900	15,600	8,430	3,800	2,480	2,020	2,170
13	2,460	2,690	10,900	12,900	40,400	18,300	14,300	8,030	3,700	2,460	2,020	2,170
14	2,440	2,670	8,430	11,400	40,400	16,400	13,400	7,640	3,640	2,460	2,020	2,250
15	2,420	2,710	8,000	10,300	44,200	15,000	12,600	7,330	3,590	2,440	2,000	2,380
16	2,380	2,760	13,200	9,320	39,300	14,000	12,000	6,990	3,540	2,420	1,980	2,360
17	2,400	2,690	20,000	8,620	37,900	15,000	11,200	6,700	3,430	2,420	1,980	2,380
18	2,440	2,650	24,000	8,050	41,900	15,600	10,500	6,450	3,370	2,420	1,960	2,400
19	2,460	2,690	20,200	7,610	43,200	14,400	9,920	6,180	3,370	2,400	1,940	2,500
20	2,460	2,650	15,700	7,170	34,900	13,400	9,510	5,950	3,340	2,380	1,940	2,710
21	2,480	2,650	15,400	6,810	27,800	12,600	9,130	5,720	3,320	2,420	1,960	2,540
22	2,480	2,630	15,600	6,480	23,000	12,000	8,670	5,580	3,280	2,570	1,960	2,310
23	2,500	2,610	13,200	6,150	19,700	11,600	8,320	5,380	3,260	2,610	1,940	2,210
24	2,540	2,610	11,300	6,050	17,400	11,200	8,180	5,210	3,170	2,480	1,940	2,100
25	2,690	2,610	9,620	6,620	18,800	11,200	8,130	5,110	3,120	2,400	1,940	2,080
26	2,970	2,610	8,400	10,100	28,300	13,500	8,080	4,970	3,060	2,380	1,940	2,100
27	2,930	2,610	7,640	16,500	40,500	22,800	7,820	4,850	3,040	2,380	1,940	2,290
28	4,540	2,630	7,250	20,200	49,900	37,600	7,590	4,700	2,970	2,610	1,940	2,780
29	6,120	2,630	8,260	17,800	55,400	39,600	8,000	4,610	2,820	2,730	1,920	4,440
30	4,700	2,610	11,600	14,900	-	35,200	9,290	4,490	2,860	2,650	1,920	4,190
31	3,770	-	13,000	12,700	-	30,600	-	4,680	-	2,480	1,900	-

Monthly discharge, in second-feet, 1938-40

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October 1938	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 1939	488,790	30,800	9,200	15,770	3.26	3.76	969,500
February	740,100	58,900	15,300	26,430	5.46	5.69	1,468,000
March	777,100	47,400	14,200	25,070	5.18	5.97	1,541,000
April	381,860	16,100	9,980	12,730	2.63	2.93	757,400
May	256,930	10,500	6,910	8,288	1.71	1.97	509,600
June	189,120	8,750	4,940	6,304	1.30	1.45	375,100
July	119,610	4,920	2,900	3,858	.797	.92	237,200
August	82,010	2,880	2,460	2,645	.546	.63	162,700
September	75,080	3,080	2,230	2,503	.517	.58	148,900
Water year 1938-39	3,937,550	58,900	2,230	10,790	2.23	30.26	7,810,000
October 1939	90,880	6,120	2,270	2,932	.606	.70	180,300
November	82,640	3,410	2,610	2,755	.569	.63	163,900
December	302,750	24,000	2,650	9,766	2.02	2.33	600,500
Calendar year 1939	3,586,870	58,900	2,230	9,827	2.03	27.56	7,114,000
January 1940	378,280	20,200	6,050	12,200	2.52	2.91	750,300
February	942,620	55,400	9,180	32,500	6.71	7.24	1,870,000
March	773,100	58,300	11,200	24,940	5.15	5.94	1,533,000
April	403,940	27,700	7,590	13,460	2.78	3.10	801,200
May	235,000	12,400	4,490	7,581	1.57	1.81	466,100
June	111,490	5,020	2,820	3,716	.768	.86	221,100
July	78,760	2,840	2,380	2,541	.525	.61	156,200
August	63,060	2,420	1,900	2,034	.420	.48	125,100
September	70,550	4,440	1,860	2,352	.486	.54	139,900
Water year 1939-40	3,533,070	58,300	1,860	9,653	1.99	27.15	7,008,000

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. Datum 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 1940.

Average discharge.- 20 years, 21,830 second-feet.

Extremes.- Maximum discharge during year, 100,000 second-feet Feb. 29 (gage height, 14.79 feet); minimum, 2,470 second-feet Aug. 27 (gage height, -4.45 feet).
1909-16, 1927-40: Maximum discharge observed, 315,000 second-feet Nov. 25, 1909 (gage height, 30.5 feet); minimum discharge, that of Aug. 27, 1940.
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. Many small diversions above station for irrigation; part of flow of Salem canal, which diverts water from North Santiam River, returns to Willamette River below station. No regulation.

Cooperation.- Gage-height record collected in cooperation with U. S. Weather Bureau.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

-4.5	2,400	-3.0	4,840	0	12,300	8.0	49,100	16.0	112,000
-4.3	2,680	-2.5	5,850	2.0	19,500	10.0	62,500		
-4.0	3,120	-2.0	6,990	4.0	28,000	12.0	76,700		
-3.5	3,940	-1.0	9,500	6.0	37,300	14.0	93,000		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,900	5,920	3,770	29,100	18,500	97,100	49,800	18,500	6,990	3,670	3,170	2,530
2	2,940	5,310	4,240	28,000	16,400	93,400	44,500	20,700	a7,100	3,620	3,080	2,510
3	2,970	4,900	4,380	26,600	14,900	85,500	39,000	19,300	a7,200	3,580	2,970	2,510
4	3,100	4,670	4,340	29,400	17,000	74,800	34,800	17,900	6,800	3,520	2,900	2,540
5	3,340	4,520	4,220	33,200	26,600	62,800	30,900	19,300	6,450	3,470	2,860	2,620
6	4,820	4,360	4,090	32,500	47,700	52,100	27,400	23,100	6,180	3,440	2,810	2,690
7	5,390	4,160	4,060	29,200	83,900	43,800	25,200	22,300	5,960	3,410	2,760	2,720
8	5,230	4,060	4,290	a26,000	91,300	45,000	24,900	19,800	5,810	3,390	2,690	2,740
9	4,580	3,940	5,330	23,900	88,200	48,400	27,000	17,700	5,720	3,360	2,650	2,740
10	4,150	4,020	11,200	a27,000	80,300	47,000	31,100	15,800	5,560	3,340	2,640	2,780
11	3,820	4,010	25,000	a30,000	79,800	40,800	29,800	14,600	5,370	3,310	2,640	2,820
12	3,630	3,890	29,000	a27,000	77,300	35,500	26,600	13,600	5,210	3,230	2,650	2,840
13	3,470	3,800	21,300	a25,000	74,000	31,200	24,000	12,800	5,090	3,170	2,620	2,860
14	3,410	3,720	15,900	a22,000	74,000	27,600	22,000	12,000	4,950	3,170	2,640	2,910
16	3,330	3,820	17,500	a19,400	71,700	24,800	20,500	11,400	4,840	3,120	2,580	2,970
16	3,280	3,800	41,800	a16,400	66,100	23,400	19,000	10,800	4,740	3,080	2,570	3,060
17	3,250	3,740	56,800	14,900	62,200	24,500	17,600	10,300	4,610	3,060	2,570	3,090
18	3,280	3,680	56,400	13,700	73,600	24,900	16,300	9,810	4,450	3,040	2,570	3,140
19	3,440	3,620	44,200	12,800	71,500	23,300	15,100	9,370	4,420	3,040	2,550	3,150
20	3,600	3,600	34,500	12,000	61,000	21,400	14,300	8,980	4,400	3,040	2,540	3,260
21	3,740	3,570	34,100	11,300	48,700	20,000	13,600	8,720	4,330	3,060	2,550	3,380
22	3,910	3,570	32,000	10,600	39,700	18,700	12,800	8,380	4,250	3,120	2,540	3,380
23	3,750	3,550	27,200	10,200	34,100	17,900	12,300	8,140	4,200	3,280	2,540	3,230
24	3,720	3,600	22,500	9,840	30,300	17,300	12,500	7,860	4,150	3,230	2,530	3,220
25	3,970	3,580	18,900	10,100	32,300	17,300	12,600	7,660	4,040	3,090	2,530	3,200
26	4,450	3,570	16,100	13,200	60,900	20,900	12,400	7,470	3,970	3,040	2,530	3,180
27	4,800	3,550	14,300	24,600	75,900	45,100	11,800	7,180	3,910	3,060	2,480	3,150
28	8,510	3,600	13,800	32,200	86,400	67,400	11,400	6,990	3,860	3,340	2,500	3,490
29	10,900	3,770	19,600	29,200	97,900	70,600	13,500	6,660	3,750	3,630	2,530	5,250
30	9,140	3,740	27,700	24,700	-	66,200	15,300	6,520	3,630	3,570	2,530	6,160
31	7,040	-	28,800	21,200	-	56,900	-	6,570	-	3,340	2,530	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	137,660	10,900	2,900	4,447	0.611	0.70	273,400
November	119,640	5,920	3,550	3,988	.548	.61	237,300
December	646,320	56,800	3,770	20,850	2.86	3.30	1,282,000
Calendar year 1939	5,827,950	93,900	2,890	15,970	2.19	29.79	11,560,000
January	675,240	33,200	9,840	21,780	2.99	3.45	1,339,000
February	1,708,200	97,900	14,900	58,900	8.09	8.73	3,388,000
March	1,345,600	97,100	17,300	43,410	5.96	6.87	2,669,000
April	668,000	49,800	11,400	22,270	3.06	3.41	1,325,000
May	390,210	23,100	6,520	12,590	1.73	1.99	774,000
June	151,940	7,200	3,630	5,065	.696	.78	301,400
July	101,870	3,680	3,040	3,286	.451	.52	202,100
August	82,250	3,170	2,480	2,653	.364	.42	163,100
September	94,120	6,160	2,510	3,137	.431	.48	186,700
Water year 1939-40	6,121,250	97,900	2,480	16,720	2.30	31.26	12,140,000

a No gage-height record; discharge computed on basis of records for tributaries and once-daily staff-gage readings.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

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 1940.

Extremes.- Maximum discharge observed during year, 859 second-feet Mar. 26 (gage height, 4.26 feet); minimum observed, 12 second-feet Aug. 26 to Sept. 2.
1935-40: Maximum discharge, 2,120 second-feet Apr. 14, 1937 (gage height, 4.02 feet, site and datum then in use), from rating curve extended above 900 second-feet; minimum observed, that of Aug. 26 to Sept. 2, 1940.

Remarks.- Records good; they include flow to small diversion about 1,000 feet upstream and return flow from another, half a mile upstream. No regulation. Gage read once daily; twice daily when stage is over 2.0 feet.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.7	10	1.7	107	3.0	395
.9	23	2.0	155	3.4	530
1.1	38	2.3	212	3.9	715
1.4	68	2.6	281		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	24	18	160	90	425	350	175	59	24	20	12
2	35	26	19	145	90	481	307	171	55	24	20	12
3	22	26	19	145	85	401	257	157	51	23	19	17
4	20	24	18	159	88	329	221	182	49	23	18	19
5	75	22	17	152	99	289	188	186	45	22	18	18
6	47	21	17	122	432	246	164	157	45	22	17	17
7	35	20	17	104	407	234	182	152	43	22	17	15
8	27	22	19	99	307	484	230	138	43	22	17	14
9	24	24	113	157	267	392	271	132	42	21	17	14
10	22	22	241	145	439	299	243	138	40	21	16	20
11	20	20	130	122	389	239	206	132	37	21	16	16
12	20	20	83	104	291	194	200	125	35	21	15	15
13	20	20	61	90	548	184	202	113	35	20	15	26
14	19	19	66	80	428	164	198	104	34	20	15	26
15	18	19	188	73	318	145	173	99	33	20	14	17
16	17	18	368	66	294	274	148	93	32	20	14	17
17	17	17	495	61	356	257	138	88	32	20	14	20
18	20	17	241	57	279	214	135	83	31	20	14	57
19	18	17	177	56	219	188	128	78	30	19	14	35
20	18	17	173	54	179	179	125	73	30	21	14	23
21	18	18	145	52	155	179	113	70	29	30	14	20
22	17	17	122	49	128	179	104	68	29	22	13	17
23	17	17	96	47	119	173	104	66	28	21	13	17
24	36	17	83	53	122	198	107	64	28	20	13	16
25	24	17	66	78	162	202	113	60	27	19	13	16
26	e35	16	61	155	484	579	101	59	26	19	12	16
27	104	16	78	194	600	691	96	55	26	31	12	61
28	56	16	225	148	671	478	101	51	26	24	12	110
29	47	16	181	125	624	413	145	49	25	22	12	47
30	32	17	162	113	-	395	181	49	24	21	12	33
31	26	-	152	101	-	383	-	55	-	20	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	926	104	17	29.9	0.507	0.58	1,840
November	582	26	16	19.4	.329	.37	1,150
December	3,851	495	17	124	2.10	2.43	7,640
Calendar year 1939	39,049	755	16	107	1.81	24.59	77,450
January	3,266	194	47	105	1.78	2.06	6,480
February	8,670	671	85	299	5.07	5.47	17,200
March	9,488	691	145	306	5.19	5.98	18,820
April	5,231	350	96	174	2.95	3.30	10,380
May	3,222	186	49	104	1.76	2.03	6,390
June	1,069	59	24	35.6	.603	.67	2,120
July	675	31	19	21.8	.369	.43	1,340
August	462	20	12	14.9	.253	.29	916
September	763	110	12	25.4	.431	.48	1,510
Water year 1939-40	38,205	691	12	104	1.76	24.09	75,790

e Gage reading not representative of average for day; discharge computed on basis of records for Salt Creek near Oakridge.

9-233 April 1936

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum 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 1940.

Extremes.- Maximum discharge during year, 775 second-feet Mar. 26 (gage height, 3.65 feet); minimum, 77 second-feet Aug. 27 (gage height, 1.41 feet).
1913-14, 1933-40: 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 excellent. No diversion above station; slight regulation.

Cooperation.- Water-stage recorder inspected by employee of U. S. Forest Service.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 16				Dec. 17 to Sept 30					
1.5	88	2.4	295	1.4	76	2.0	176	2.9	445
1.8	144	2.7	395	1.6	99	2.3	252	3.2	560
2.1	210	3.1	550	1.8	134	2.6	343	3.5	700

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	111	120	100	264	150	552	459	343	165	94	87	78
2	116	116	102	269	150	578	428	337	156	92	86	81
3	107	120	100	264	158	516	396	324	146	92	85	84
4	109	114	98	255	163	466	363	340	140	91	84	85
5	159	111	96	236	198	434	337	321	134	91	83	84
6	136	111	100	218	393	386	308	299	130	90	83	81
7	122	109	98	202	466	400	314	284	128	90	82	81
8	114	113	122	195	417	564	376	278	126	90	82	81
9	109	111	192	228	390	492	428	287	123	89	82	83
10	105	107	325	212	540	434	393	311	121	89	81	85
11	103	105	253	195	508	383	369	314	117	89	81	81
12	102	105	194	183	431	337	366	305	115	87	81	82
13	102	103	169	167	528	311	386	284	113	87	81	86
14	100	103	174	152	508	287	396	272	112	87	81	86
15	100	103	232	152	434	275	369	261	110	87	80	91
16	98	102	402	148	390	373	333	249	109	87	80	90
17	100	102	528	142	390	353	308	236	107	87	80	89
18	103	102	350	140	369	333	308	230	105	87	80	126
19	100	102	281	136	330	311	308	222	105	87	79	102
20	103	100	278	130	293	299	299	215	104	94	79	91
21	102	100	252	128	269	290	287	208	102	96	79	86
22	102	100	220	124	249	296	281	200	102	91	79	83
23	102	98	195	124	230	299	284	202	101	89	79	82
24	120	98	176	124	222	327	281	198	99	87	79	82
25	111	98	161	130	258	346	275	188	98	86	80	82
26	159	96	156	167	420	536	261	176	96	91	79	86
27	274	96	150	186	512	670	252	167	96	109	78	132
28	198	96	178	169	628	552	299	158	95	95	78	186
29	157	96	220	161	660	520	330	154	95	91	78	115
30	138	100	233	158	-	488	337	154	95	90	78	109
31	126	-	247	154	-	480	-	156	-	89	78	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	3,788	274	98	122	1.08	1.25	7,510
November	3,137	120	96	105	.929	1.03	6,220
December	6,382	528	96	206	1.82	2.10	12,660
Calendar year 1939	92,165	864	96	253	2.24	30.34	182,800
January	5,513	269	124	178	1.58	1.81	10,930
February	10,654	660	150	367	3.25	3.51	21,130
March	12,888	670	275	416	3.68	4.24	25,560
April	10,131	459	252	338	2.99	3.33	20,090
May	7,673	343	154	248	2.19	2.53	15,220
June	3,445	165	95	115	1.02	1.13	6,830
July	2,801	109	86	90.4	.800	.92	5,560
August	2,502	87	78	80.7	.714	.82	4,960
September	2,790	186	78	93.0	.823	.92	5,530
Water year 1939-40	71,704	670	78	196	1.73	23.59	142,200

Peak discharge.- Dec. 17 (3 a.m.) 665 sec.-ft.; Mar. 26 (10 p.m.) 775 sec.-ft.

9-233 April 1936
UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101604-O U S GOVERNMENT PRINTING OFFICE 1936

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 station, where all discharge measurements are made.

Records available.- October 1933 to September 1940. 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, 1,150 second-feet Feb. 10 (gage height, 3.76 feet), from rating curve extended above 500 second-feet; minimum, 90 second-feet Aug. 30 to Sept. 2 (gage height, 1.11 feet).
1913-19, 1933-40: Maximum discharge, 6,400 second-feet (estimated) Jan. 12, 1918; minimum, 63 second-feet Jan. 8, 1937 (gage height, 0.87 foot).

Remarks.- Records fair to Apr. 10, excellent thereafter. No regulation above station. Village of Oakridge has diverted water around station in an 8-inch pipe since 1936. 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 3 second-feet.

Cooperation.- Water-stage recorder inspected by employee of U. S. Forest Service.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	117	127	104	361	193	799	532	377	182	117	106	90
2	125	121	103	338	188	823	496	360	172	117	104	96
3	112	127	104	353	196	728	464	346	163	115	102	101
4	123	121	104	338	198	655	431	356	160	115	102	106
5	218	117	106	320	260	610	400	346	156	113	101	99
6	155	113	108	292	509	532	374	326	154	113	99	94
7	135	112	104	275	653	576	381	306	151	111	99	94
8	121	119	144	272	604	775	464	293	149	111	98	94
9	117	113	207	353	587	685	536	287	147	111	98	98
10	112	112	338	324	1,040	605	504	287	144	109	98	99
11	112	110	279	289	853	532	468	280	142	109	98	94
12	110	110	212	266	675	473	443	274	140	109	96	96
13	108	108	188	241	740	431	439	262	138	109	98	106
14	108	106	193	224	718	400	427	252	138	108	96	102
15	108	106	238	212	615	388	400	240	136	108	96	108
16	108	104	365	201	568	514	370	232	136	108	96	101
17	108	104	604	190	572	482	342	223	134	108	96	102
18	110	104	404	185	545	455	326	217	130	108	94	149
19	110	103	335	178	491	431	319	209	130	108	94	117
20	117	103	345	172	439	411	303	201	128	117	94	102
21	106	106	338	168	435	400	290	198	128	118	94	98
22	110	104	292	160	381	400	283	195	126	111	93	98
23	112	104	260	160	352	396	287	193	124	108	93	94
24	144	103	226	162	335	415	283	190	122	108	94	94
25	123	101	207	185	374	427	280	182	120	106	93	101
26	205	101	193	226	635	601	271	178	120	113	93	106
27	317	101	188	256	787	712	262	175	120	140	91	188
28	221	104	298	238	884	640	322	170	118	117	91	204
29	172	103	404	221	904	610	342	170	118	111	91	128
30	148	110	400	207	-	572	370	172	118	109	91	111
31	135	-	372	198	-	558	-	172	-	108	90	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	4,227	317	106	136	1.16	1.34	8,380
November	3,277	127	101	109	.932	1.04	6,500
December	7,764	604	103	250	2.14	2.47	15,400
Calendar year 1939	117,195	1,600	101	321	2.74	37.25	232,500
January	7,565	361	160	244	2.09	2.40	15,000
February	15,731	1,040	188	542	4.63	5.00	31,200
March	17,036	823	388	550	4.70	5.42	33,790
April	11,409	536	262	380	3.25	3.63	22,630
May	7,669	377	170	247	2.11	2.44	15,210
June	4,144	182	118	138	1.18	1.32	8,220
July	3,473	140	106	112	.957	1.10	6,890
August	2,979	106	90	96.1	.821	.95	5,910
September	3,270	204	90	109	.932	1.04	6,490
Water year 1939-40	88,544	1,040	90	242	2.07	28.15	175,600

Peak discharge.- Feb. 10 (12 m.) 1,150 sec.-ft.
Note.- Backwater from log on control Dec. 10 to Apr. 10; discharge computed on basis of discharge measurements made on Mar. 28, and Apr. 11, and records for Salt Creek near Oakridge.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101604-O U S GOVERNMENT PRINTING OFFICE 1936

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. Altitude of water surface of lake and of gage, 5,410 feet (from topographic map).

Drainage area.- 30 square miles.

Records available.- October 1936 to September 1940.

Extremes.- Maximum discharge during year, 40 second-feet Apr. 9, May 3-5 (maximum gage height, 1.19 feet May 4, disregarding peaks of momentary duration caused by seiches); no flow at times.
1936-40: Maximum discharge, 92 second-feet Mar. 29, 1938 (gage height, 2.15 feet); no flow at times.

Remarks.- Records good except those below 1 second-foot, which are poor. 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. (See miscellaneous measurement, page 202).

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.0	0	0.6	15.9
.1	1.2	.9	27.8
.2	3.4	1.2	40.9
.4	9.0		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	2.9	3.8	32	38	38	27	8.3	0.2	
2			0	2.9	3.6	33	37	38	27	7.7	.1	
3			0	3.6	3.6	33	37	39	26	7.1	0	
4			0	3.8	3.6	33	37	40	26	6.8	0	
5			0	4.4	4.9	33	36	40	25	6.5	0	
6			0	4.4	7.1	32	36	39	24	6.0	0	
7			0	4.4	10	33	36	38	24	5.5	0	
8			0	4.4	11	36	38	38	23	5.2	0	
9			0	4.9	12	36	39	37	22	5.2	0	
10			0	5.2	16	35	39	37	22	4.6	0	
11			0	5.2	17	35	38	37	21	4.4	0	
12			0	5.2	17	34	38	37	21	3.8	0	
13			0	5.2	20	34	37	36	20	3.6	0	
14			0	4.6	22	33	37	36	20	3.2	0	
15			0	4.4	22	34	37	36	19	2.7	0	
16			0	4.1	23	35	36	35	18	2.5	0	
17			0	4.1	24	35	36	35	18	2.0	0	
18			0	4.1	24	34	36	34	18	1.6	0	
19			0	3.4	24	33	35	33	17	1.4	0	
20			.1	3.4	24	32	35	32	16	1.4	0	
21			.2	2.9	23	32	34	32	15	1.4	0	
22			.2	2.7	23	31	34	32	15	1.2	0	
23			.2	2.7	22	31	34	31	14	1.0	0	
24			0	2.9	23	31	33	31	13	.8	0	
25			0	3.6	24	31	34	30	12	.7	0	
26			0	4.4	26	33	34	29	12	.7	0	
27			0	4.9	28	36	33	28	11	1.0	0	
28			.8	4.9	30	36	36	28	9.9	.8	0	
29			1.8	4.6	31	36	37	27	9.0	.7	0	
30			2.3	4.4	-	37	38	27	8.7	.6	0	
31			2.5	4.1	-	38	-	27	-	.4	0	

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0
December	8.1	2.5	0	.26	.0087	.01	16
Calendar year 1939	8,548.6	65	0	23.4	.780	10.59	16,950
January	126.7	5.2	2.7	4.09	.136	.16	251
February	522.6	31	3.6	18.0	.600	.65	1,040
March	1,047	38	31	33.8	1.13	1.30	2,080
April	1,085	39	33	36.2	1.21	1.35	2,150
May	1,057	40	27	34.1	1.14	1.31	2,100
June	563.6	27	8.7	18.8	.617	.69	1,100
July	98.8	8.3	.4	3.19	.106	.12	196
August	.3	.2	0	.01	.00033	.0004	.6
September	0	0	0	0	0	0	0
Water year 1939-40	4,499.1	40	0	12.3	.410	5.59	8,930

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is 1,029.6 feet above mean sea level (river-profile survey).

Drainage area.- 246 square miles.

Records available.- October 1909 to September 1912 (fragmentary), September 1935 to September 1940. October 1913 to February 1916, at site half a mile upstream, above a small tributary.

Extremes.- Maximum discharge during year, 3,400 second-feet (regulated) Feb. 10 (gage height, 5.82 feet); minimum, 26 second-feet (regulated) Oct. 14 (gage height, 0.25 foot); minimum daily discharge, 93 second-feet Aug. 19-23, 25-27, Aug. 30 to Sept. 1. 1909-16, 1935-40: Maximum gage height observed, 12.4 feet, Nov. 22, 1909 (site and datum then in use, discharge not determined); minimum discharge, that of Oct. 14, 1939.

Remarks.- Records good. 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 3 second-feet. Occasional diurnal fluctuation during periods of low water by log pond upstream.

Rating table, water year 1939-40 (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	5.5	3,080
1.6	334	3.5	1,380		
1.9	460	4.0	1,740		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	106	162	143	752	402	2,060	1,250	791	295	138	112	93
2	116	154	131	708	386	2,160	1,130	720	271	140	110	98
3	114	152	129	736	369	1,850	1,050	670	252	140	108	112
4	121	145	125	747	407	1,610	950	692	242	136	108	121
5	305	136	123	730	520	1,480	e79	681	236	131	104	112
6	201	134	127	664	681	1,300	802	642	230	123	102	104
7	164	131	123	582	1,750	1,310	802	604	221	121	100	102
8	143	136	154	582	1,530	1,920	956	560	227	127	100	104
9	134	138	354	818	1,510	1,650	1,130	520	218	127	97	104
10	129	134	588	774	2,770	1,370	1,080	500	213	123	97	110
11	123	129	566	681	2,360	1,190	986	470	207	118	95	104
12	118	127	386	604	1,720	1,060	914	451	207	112	95	104
13	116	127	316	535	1,890	944	879	428	201	114	98	127
14	128	125	327	485	1,780	874	830	407	201	114	97	121
15	110	123	540	460	1,500	818	780	386	199	114	97	129
16	116	121	992	428	1,430	1,030	720	373	199	114	97	121
17	110	118	1,300	402	1,550	1,030	659	361	196	114	97	134
18	123	116	908	381	1,440	938	615	338	188	112	95	164
19	121	116	703	365	1,240	874	593	342	185	112	93	147
20	134	114	736	334	1,100	e46	560	330	185	129	93	121
21	134	114	720	334	992	796	520	320	180	150	93	108
22	102	118	598	327	926	e02	500	309	177	129	93	104
23	121	116	525	305	852	786	495	302	177	118	93	102
24	177	118	446	309	830	818	4e5	295	172	114	95	104
25	152	116	394	394	986	e30	490	288	167	112	93	106
26	221	116	361	500	1,620	1,350	460	278	164	116	93	118
27	520	121	346	566	2,030	2,070	446	271	162	157	93	278
28	369	118	615	530	2,370	1,740	566	264	160	140	95	323
29	256	118	857	485	2,360	1,520	636	261	160	127	95	177
30	201	131	835	451	-	1,350	764	264	149	114	93	150
31	180	-	764	424	-	1,300	-	274	-	114	93	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	5,145	520	102	166	0.675	0.78	10,200
November	3,826	162	114	128	.520	.58	7,590
December	15,232	1,300	123	491	2.00	2.30	30,210
Calendar year 1939	207,692	3,230	100	569	2.31	31.40	411,900
January	16,393	818	305	529	2.15	2.48	32,520
February	39,301	2,770	369	1,355	5.51	5.94	77,950
March	39,696	2,180	786	1,281	5.21	6.00	78,740
April	22,923	1,250	446	764	3.11	3.47	45,470
May	13,392	791	261	432	1.76	2.02	26,560
June	6,041	295	149	201	.817	.91	11,980
July	3,850	157	112	124	.504	.58	7,640
August	3,024	112	93	97.5	.396	.46	6,000
September	3,902	323	93	130	.528	.59	7,740
Water year 1939-40	172,725	2,770	93	472	1.92	26.11	342,600

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., 2⅞ miles upstream from Winberry Creek and 4½ miles northeast of Lowell. Datum of gage is 727.99 feet above mean sea level (general adjustment of 1929).

Drainage area.- 131 square miles.

Records available.- September 1935 to September 1940.

Extremes.- Maximum discharge during year, 2,340 second-feet Feb. 10 (gage height, 4.90 feet, from graph based on gage readings); minimum observed, 16 second-feet Oct. 1.
1935-40: 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 observed, 14 second-feet Dec. 1, 1936.
Maximum stage known, about 11 feet (date unknown), from floodmarks observed in 1935.

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

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	60	56	301	132	1,230	769	358	139	35	30	18
2	25	53	43	286	122	1,460	646	275	104	34	28	18
3	18	59	40	331	120	1,000	515	275	76	33	27	27
4	28	62	35	386	166	888	428	323	70	33	26	26
5	302	50	32	406	202	776	374	323	64	32	26	23
6	147	45	39	350	1,040	658	320	282	60	32	25	20
7	66	42	40	286	1,650	582	312	243	58	31	24	19
8	50	45	35	257	1,230	1,040	406	205	61	31	24	20
9	42	56	260	331	916	847	658	180	56	31	23	22
10	34	47	1,070	414	1,900	646	535	166	55	31	23	27
11	31	42	730	331	1,460	560	410	150	53	31	23	21
12	30	39	394	282	944	446	347	137	53	31	22	21
13	28	35	222	222	1,600	390	289	127	52	31	22	32
14	26	45	160	189	1,280	335	257	120	51	30	22	39
15	25	40	286	166	986	301	250	110	49	30	21	46
16	25	35	450	155	1,000	455	215	104	49	30	21	30
17	26	33	847	134	1,460	446	192	102	47	30	21	28
18	33	33	446	127	1,230	370	183	93	45	30	21	44
19	30	32	293	115	902	289	169	89	45	30	20	35
20	47	31	354	104	730	286	157	87	44	31	20	26
21	35	33	495	93	594	261	147	84	43	64	19	22
22	30	33	339	87	419	246	139	78	42	38	19	21
23	26	33	257	82	386	215	137	75	41	32	19	20
24	203	31	189	84	378	250	137	75	40	30	19	20
25	73	30	166	163	658	212	157	71	38	28	19	19
26	134	30	150	215	1,110	670	137	70	37	28	19	25
27	616	35	115	406	1,360	1,360	120	68	36	50	18	110
28	295	33	192	293	1,750	958	230	65	36	34	18	130
29	150	30	410	219	1,410	750	257	64	36	34	18	50
30	96	33	398	183	-	640	325	63	35	32	18	35
31	69	-	323	157	-	756	-	102	-	31	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,756	616	16	88.9	0.679	0.78	5,470
November	1,205	62	30	40.2	.307	.34	2,390
December	8,866	1,070	32	286	2.18	2.52	17,590
Calendar year 1939	106,824	4,500	15	293	2.24	30.32	211,900
January	7,155	414	82	231	1.76	2.03	14,190
February	27,135	1,900	120	936	7.15	7.70	53,820
March	19,323	1,460	212	623	4.76	5.49	38,330
April	9,218	769	120	307	2.34	2.62	18,280
May	4,565	358	63	147	1.12	1.30	9,050
June	1,615	139	35	53.8	.411	.46	3,200
July	1,034	64	28	33.4	.255	.29	2,050
August	673	30	18	21.7	.166	.19	1,330
September	994	130	18	33.1	.253	.28	1,970
Water year 1939-40	84,539	1,900	16	231	1.76	24.00	167,700

Note.- Discharge for periods of backwater, Oct. 1-4, July 12-17, and for periods of doubtful gage-height record Apr. 28, 30, June 12 to July 9, July 27-29, Sept. 5-8, 11, 12, 18-30, computed on basis of three discharge measurements, engineers' notes, and records for station below Winberry Creek.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

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 2½ miles southeast of Fall Creek. Datum of gage is 637.80 feet above mean sea level (general adjustment of 1929).

Drainage area.- 190 square miles.

Records available.- October to December 1911 (gage heights only), September 1935 to September 1940.

Extremes.- Maximum discharge observed during year, 2,830 second-feet Feb. 28 (gage height, 6.82 feet); minimum observed, 20 second-feet Aug. 21, Aug. 23 to Sept. 1 (gage height, 0.52 foot).

1935-40: 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), determined in 1935 from floodmarks.

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

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-4)

Oct. 1 to Dec. 9				Dec. 10 to Sept. 30					
0.5	20	1.8	179	0.5	19	1.8	164	4.0	880
.7	31	2.3	305	.7	28	2.3	282	4.5	1,140
1.0	54	2.8	475	1.0	49	2.8	423	5.5	1,790
1.4	108	3.2	630	1.4	82	3.4	630	6.5	2,560

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	67	51	384	203	1,410	1,030	420	152	40	32	20
2	30	60	47	378	192	2,080	858	356	140	37	29	a25
3	30	80	43	445	179	1,440	706	314	113	37	28	29
4	31	72	39	490	187	1,200	588	381	98	37	27	34
5	270	59	36	518	282	956	500	426	90	35	26	28
6	124	51	43	449	1,080	812	449	381	87	35	25	24
7	102	47	44	408	2,160	766	420	326	87	35	25	22
8	50	49	70	367	1,820	1,440	511	282	85	35	24	23
9	50	65	308	730	1,480	1,110	750	248	a78	35	24	24
10	37	50	1,140	556	2,080	858	616	231	75	35	24	29
11	36	45	858	455	1,760	718	514	196	70	35	24	24
12	34	43	436	378	1,340	595	433	185	68	35	24	22
13	33	40	312	314	2,560	536	358	179	63	35	23	43
14	31	45	244	272	1,860	449	342	168	61	a34	22	40
15	30	44	304	241	1,510	423	320	152	59	34	22	55
16	30	39	662	217	1,580	790	298	144	57	34	22	33
17	32	38	930	196	2,000	623	266	140	55	35	22	27
18	35	38	553	183	1,790	532	246	133	53	36	21	46
19	35	37	367	164	1,110	466	231	126	53	35	21	49
20	45	36	393	146	956	420	207	120	51	38	21	30
21	41	35	630	131	750	376	198	120	49	75	20	27
22	35	38	476	124	650	347	194	116	47	43	21	23
23	33	37	342	126	553	320	185	113	47	37	20	22
24	141	36	314	124	511	331	194	107	46	35	20	22
25	75	35	205	241	835	312	212	104	44	33	a20	21
26	72	35	185	414	1,260	754	177	101	43	37	20	26
27	610	40	174	522	2,080	1,820	168	98	40	70	20	156
28	342	37	458	384	2,560	1,340	287	98	41	a45	20	198
29	163	36	469	309	2,000	1,000	320	98	41	38	20	75
30	108	38	480	261	-	812	396	104	40	33	20	47
31	82	-	399	226	-	905	-	140	-	33	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	2,789	610	22	90.0	0.474	0.55	5,530
November	1,372	80	35	45.7	.241	.27	2,720
December	11,012	1,140	36	355	1.87	2.16	21,840
Calendar year 1939	143,701	5,690	20	394	2.07	28.13	285,000
January	10,153	730	124	328	1.73	1.99	20,140
February	37,327	2,560	179	1,287	6.77	7.31	74,040
March	25,940	2,080	312	837	4.41	5.08	51,450
April	11,974	1,030	168	399	2.10	2.34	23,750
May	6,106	426	98	197	1.04	1.20	12,110
June	2,033	152	40	67.8	.357	.40	4,030
July	1,191	75	33	38.4	.202	.23	2,360
August	707	32	20	22.8	.120	.14	1,400
September	1,244	198	20	41.5	.218	.24	2,470
Water year 1939-40	111,848	2,560	20	306	1.61	21.91	221,800

a No gage-height record; discharge computed on basis of records for Fall Creek above Winberry Creek, Little Fall Creek near Fall Creek, and North Fork of Middle Fork of Willamette River near Oakridge.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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 1940.

Extremes.- Maximum discharge observed during year, 820 second-feet Feb. 10 (gage height, 4.32 feet); minimum observed, 10 second-feet Aug. 26, 27, Aug. 30 to Sept. 1 (gage height, 1.15 feet).

1935-40: 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 discharge observed, 10 second-feet Dec. 1, 1936, Aug. 26, 27, Aug. 30 to Sept. 1, 1940.

Remarks.- Records good except those for periods of doubtful gage-height record, which are fair. No regulation or diversion above station. Gage read once daily; oftener during periods of high water or rapidly changing stage.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Mar. 30 to Apr. 10)

1.1	8	1.6	28	2.4	125	3.2	345	4.0	660
1.3	14	2.0	63	2.8	225	3.6	490	4.4	880

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	35	28	157	78	530	276	106	73	26	17	10
2	17	34	26	143	75	638	240	125	54	24	17	16
3	20	34	21	140	73	510	214	106	50	24	16	16
4	24	29	21	154	83	426	189	125	47	24	16	14
5	d80	28	21	187	147	373	171	129	45	23	16	13
6	44	26	22	154	638	315	164	117	45	23	16	12
7	d34	24	23	140	660	306	171	110	43	22	16	12
8	26	24	24	145	592	432	181	99	43	22	15	12
9	20	d30	96	187	638	336	219	92	41	21	14	13
10	19	d25	342	166	620	300	192	89	40	21	13	13
11	18	d23	300	152	685	264	171	83	40	20	13	13
12	16	22	189	138	592	234	154	81	38	20	13	13
13	16	21	119	123	710	208	143	75	37	20	13	19
14	16	22	106	110	615	189	129	75	37	20	13	27
15	15	21	189	101	530	181	125	73	36	20	13	17
16	15	20	231	92	510	167	116	70	35	20	13	14
17	16	20	270	89	615	164	108	68	34	19	13	14
18	22	d18	243	85	570	154	104	65	34	19	12	43
19	18	d17	176	79	466	145	101	63	34	18	12	21
20	35	d16	273	74	367	136	94	61	32	19	12	17
21	22	d16	249	69	336	127	91	61	32	21	12	16
22	19	d17	214	64	294	121	88	59	31	20	12	13
23	17	d16	159	63	252	116	91	56	29	19	12	12
24	73	d15	127	64	240	121	88	54	29	18	11	12
25	35	d15	112	98	309	112	89	52	28	19	11	11
26	35	15	99	110	510	176	83	52	28	21	10	15
27	140	15	91	149	615	265	79	50	28	23	10	43
28	129	15	112	123	685	312	154	50	27	21	11	70
29	81	16	159	99	615	264	112	50	27	20	11	26
30	52	16	157	88	-	258	149	52	26	18	10	22
31	40	-	154	82	-	282	-	65	-	18	10	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,128	140	14	36.4	0.758	0.87	2,240
November	645	35	15	21.5	.448	.50	1,280
December	4,353	342	21	140	2.92	3.37	8,630
Calendar year 1939	49,906	1,760	11	137	2.85	38.68	98,980
January	3,625	187	63	117	2.44	2.81	7,190
February	13,340	820	73	460	9.58	10.34	26,460
March	8,202	638	112	265	5.52	6.35	16,270
April	4,286	276	79	143	2.98	3.32	8,500
May	2,413	129	50	77.8	1.62	1.87	4,790
June	1,123	73	26	37.4	.779	.87	2,230
July	643	26	18	20.7	.431	.50	1,280
August	403	17	10	13.0	.271	.31	799
September	569	70	10	19.0	.396	.44	1,130
Water year 1939-40	40,730	820	10	111	2.31	31.55	80,800

d Doubtful gage-height record; discharge computed on basis of weather records and records for Fall Creek below Winberry Creek, near Fall Creek.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum of gage is 852.65 feet above mean sea level (general adjustment of 1929, levels by Corps of Engineers, U. S. Army).

Drainage area.- 69 square miles.

Records available.- September 1935 to September 1940.

Extremes.- Maximum discharge during year, 1,850 second-feet Feb. 28 (gage height, 5.38 feet); minimum, 10 second-feet Aug. 21 to Sept. 2 (gage height, 0.90 foot).
1935-40: Maximum discharge, 3,820 second-feet Apr. 14, 1937, Mar. 18, 1938; minimum, 10 second-feet on several days in 1936, 1938, 1939, and 1940.

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

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.9	10	1.8	108	2.8	430	4.0	1,000
1.2	27	2.1	183	3.2	600	4.4	1,230
1.5	57	2.4	279	3.6	790	4.8	1,470

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	20	a14	135	96	715	371	119	67	22	16	10
2	14	19	f15	158	86	740	315	119	55	22	15	12
3	14	23	14	186	86	550	276	110	47	22	14	17
4	14	20	14	213	108	450	242	186	45	21	14	19
5	54	19	14	242	132	371	207	204	43	20	14	16
6	37	17	17	198	560	315	186	166	42	20	14	12
7	29	16	16	161	855	326	213	140	41	20	13	12
8	22	17	201	148	591	422	252	119	40	20	13	14
9	19	18	203	a190	462	363	283	106	39	20	13	14
10	17	16	790	a240	728	308	252	98	37	20	14	16
11	17	16	a315	a200	725	269	210	88	35	19	14	14
12	16	15	a200	a170	498	229	183	83	33	19	13	13
13	16	15	a140	a140	880	204	161	78	33	18	13	17
14	15	19	a110	a130	695	183	148	73	33	19	13	28
15	14	17	a200	h98	555	177	138	70	32	18	12	28
16	12	16	315	a89	474	252	123	65	30	18	12	20
17	14	15	470	a82	825	239	115	64	30	19	12	16
18	15	14	272	f71	740	213	108	61	29	18	12	26
19	14	14	189	67	510	189	102	58	29	17	12	22
20	12	14	360	61	386	169	96	57	29	18	12	16
21	12	14	311	57	315	152	92	55	28	19	11	14
22	12	14	210	55	272	140	88	53	27	17	11	14
23	15	14	158	56	229	130	86	51	26	16	11	13
24	49	a15	119	64	207	142	86	50	26	16	11	13
25	25	a14	96	100	283	130	88	49	25	16	11	13
26	20	a14	85	334	532	393	81	47	24	17	11	16
27	84	a14	76	334	725	690	80	46	24	26	11	96
28	49	a14	78	223	1,340	578	104	46	24	22	11	127
29	30	a14	78	163	994	426	102	45	23	19	11	44
30	25	a14	100	132	-	345	117	47	23	17	10	26
31	22	-	110	112	-	375	-	60	-	16	10	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	720	84	12	23.2	0.336	0.39	1,430
November	481	23	14	16.0	.232	.26	954
December	5,290	790	14	171	2.48	2.85	10,490
Calendar year 1939	47,400	1,930	10	130	1.88	25.58	94,020
January	4,609	334	55	149	2.16	2.48	9,140
February	14,889	1,340	86	513	7.43	8.02	29,530
March	10,185	740	130	329	4.77	5.49	20,200
April	4,905	371	80	164	2.38	2.64	9,730
May	2,613	204	45	84.3	1.22	1.41	5,180
June	1,019	67	23	34.0	.493	.55	2,020
July	591	26	16	19.1	.277	.32	1,170
August	384	16	10	12.4	.180	.21	762
September	718	127	10	23.9	.346	.39	1,420
Water year 1939-40	46,404	1,340	10	127	1.84	25.01	92,030

Peak discharge.- Dec. 10 (1 to 2 a.m.) 1,250 sec.-ft.; Feb. 13 (12 m. to 1 p.m.) 1,120 sec.-ft.; Feb. 28 (2:30 p.m.) 1,850 sec.-ft.

a No gage-height record; discharge computed on basis of range of stage and records for station near Cottage Grove.
f Computed from gage height based on partial record.
h Computed from staff-gage reading.

Coast Fork of Willamette River near Cottage Grove, Oreg.

Location.- Water-stage recorder, 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 dam site and 4½ miles south of Cottage Grove. Datum of gage is 695.07 feet above mean sea level (levels by Corps of Engineers, U. S. Army). Prior to Oct. 13, 1939, staff gage at site 30 feet downstream with datum 0.11 foot higher.

Drainage area.- 108 square miles.

Records available.- January 1939 to September 1940.

Extremes.- Maximum discharge during year, 2,820 second-feet Feb. 28 (gage height, 8.44 feet); minimum, 6 second-feet Aug. 16 (gage height, 2.04 feet).
1939-40: Maximum discharge observed, 3,260 second-feet Mar. 12, 1939 (gage height, 9.20 feet, site and datum then in use); minimum observed, 5 second-feet Aug. 16-18, Sept. 15, 21-25, 28, 29, 1939.

Remarks.- Records excellent except those for low-water periods, which are fair. Logging flume on right bank diverted up to 15 second-feet around station until Aug. 22, when flume was cut for construction of Cottage Grove Reservoir. Log pond upstream causes slight regulation. Staff gage read once daily Oct. 1-12.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1-12		Oct. 13 to Sept. 30					
1.9	7	2.0	5	3.0	114	5.0	830
2.1	17	2.1	8	3.3	165	5.6	1,100
2.3	31	2.3	17	3.6	274	6.2	1,400
2.5	52	2.5	35	4.0	411	6.8	1,735
2.7	77	2.7	61	4.5	605	7.4	2,110

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	16	11	185	162	1,110	553	141	72	15	13	12
2	8	16	11	199	143	1,200	471	141	67	14	12	12
3	10	19	12	255	138	906	404	136	54	13	12	16
4	10	20	11	300	180	722	350	231	50	14	12	19
5	65	23	10	364	213	585	300	287	47	14	12	18
6	37	13	12	306	880	490	265	222	45	14	11	16
7	26	14	14	240	1,450	467	267	185	43	12	11	12
8	23	12	96	216	1,000	628	337	155	48	14	10	10
9	15	14	219	358	762	545	404	134	48	12	e	12
10	13	12	1,080	372	1,090	467	358	121	35	12	8	16
11	12	14	614	300	1,180	400	306	110	33	12	10	17
12	13	18	287	249	812	337	258	98	32	12	9	16
13	13	12	168	202	1,340	293	228	92	29	12	8	16
14	16	12	150	185	1,120	265	202	87	29	12	8	30
15	15	14	207	138	906	243	191	81	32	12	8	35
16	10	12	382	129	772	326	170	78	25	12	7	23
17	10	10	641	116	1,380	330	158	74	20	13	8	19
18	14	9	407	104	1,190	290	146	72	22	12	9	25
19	12	8	262	96	839	255	134	67	22	12	8	28
20	11	8	463	89	641	222	127	66	23	12	8	19
21	12	8	463	81	517	202	116	61	22	14	7	16
22	14	8	306	76	430	185	114	58	20	14	7	16
23	14	15	222	78	361	172	112	57	20	12	16	16
24	45	11	170	83	320	182	110	54	19	12	15	14
25	29	13	136	138	444	168	112	51	18	13	12	16
26	19	8	116	472	839	439	100	50	17	13	12	12
27	68	9	104	541	1,180	978	96	50	16	16	12	60
28	66	9	104	375	2,010	866	116	48	16	21	12	191
29	35	9	104	274	1,620	646	127	47	17	16	12	58
30	24	10	134	219	-	521	136	48	17	14	12	35
31	19	-	162	185	-	567	-	68	-	14	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	692	68	8	22.3	1,370
November	376	23	8	12.5	746
December	7,098	1,080	10	229	14,080
Calendar year 1939	62,778	3,080	5	172	124,500
January	6,925	541	76	223	13,740
February	23,919	2,010	138	825	47,440
March	15,007	1,200	168	484	29,770
April	6,788	553	96	226	13,460
May	3,170	287	47	102	6,290
June	958	72	16	31.9	1,900
July	414	21	12	13.4	821
August	321	16	7	10.4	637
September	805	191	10	26.8	1,600
Water year 1939-40	66,473	2,010	7	182	131,900

Peak discharge.- Dec. 10 (3 p.m.) 1,920 sec.-ft.; Feb. 10 (10:30 p.m.) 1,480 sec.-ft.; Feb. 13 (2:30 p.m.) 1,710 sec.-ft.; Feb. 17 (11 a.m.) 1,630 sec.-ft.; Feb. 28 (4:30 p.m.) 2,820 sec.-ft.
Note.- Discharge computed from staff-gage readings made once daily Oct. 1-12.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is 595.47 feet above mean sea level (general adjustment of 1929).

Drainage area.- 529 square miles.

Records available.- October 1923 to September 1940 (1924-27 incomplete).

Average discharge.- 14 years (1925-26, 1927-40), 1,102 second-feet.

Extremes.- Maximum discharge during year, 11,200 second-feet Feb. 28 (gage height, 8.34 feet); minimum, 19 second-feet Sept. 2 (gage height, 0.62 foot).
1923-40: 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. Small diversions and regulation by log ponds above station.

Cooperation.- Gage-height record collected in cooperation with Weather Bureau.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 10				Dec. 11 to Sept. 30					
0.7	26	2.5	825	0.6	17	2.0	575	5.0	4,410
1.0	68	3.0	1,330	.7	27	2.5	960	6.0	6,200
1.5	230	4.0	2,680	1.0	85	3.0	1,460	7.0	8,140
2.0	475	5.0	4,290	1.5	285	4.0	2,780	8.1	10,570

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	93	61	875	698	4,680	2,640	1,000	310	80	52	26
2	43	88	64	960	617	5,580	2,190	811	325	75	49	27
3	44	90	59	1,190	589	4,260	1,790	750	240	70	47	33
4	52	104	64	1,290	758	3,160	1,530	1,080	204	68	43	43
5	167	86	57	1,630	918	2,540	1,280	1,730	167	65	41	50
6	239	81	59	1,310	4,120	2,060	1,080	1,300	175	62	37	47
7	166	70	72	1,040	6,580	1,860	1,080	969	171	60	38	40
8	112	70	161	934	4,770	3,020	1,440	750	163	60	35	35
9	79	77	878	1,620	3,780	2,620	1,800	603	155	60	33	41
10	66	75	3,940	1,690	5,590	2,140	1,670	510	151	56	34	41
11	63	66	2,850	1,320	5,920	1,800	1,450	450	144	56	31	50
12	55	64	1,350	1,080	3,630	1,530	1,290	402	136	54	35	45
13	54	66	851	867	5,650	1,330	1,130	368	128	54	33	49
14	49	64	720	758	5,380	1,190	952	340	125	56	31	75
15	47	68	1,060	645	3,950	1,100	867	325	121	54	31	98
16	50	66	1,950	582	3,190	1,570	750	300	117	52	30	117
17	50	61	3,430	530	5,250	1,800	645	285	104	52	28	88
18	50	59	1,890	492	5,070	1,520	568	276	101	52	27	98
19	52	55	1,200	456	3,420	1,290	523	258	101	47	27	144
20	50	57	1,540	420	2,510	1,100	504	244	107	49	30	101
21	43	55	1,900	390	1,990	943	450	240	101	70	27	72
22	42	57	1,310	362	1,710	827	420	231	98	68	28	58
23	52	55	978	352	1,460	742	402	218	95	58	25	50
24	130	63	765	390	1,270	765	396	213	95	50	34	45
25	151	61	610	617	1,780	728	408	200	91	47	30	41
26	96	55	523	1,760	4,050	1,790	379	195	85	47	27	47
27	540	52	462	2,760	5,760	5,130	368	195	85	60	28	144
28	502	57	468	1,770	10,400	4,070	438	187	82	98	28	1,220
29	244	52	596	1,250	7,440	2,980	788	179	82	75	27	335
30	155	55	720	969	-	2,470	758	179	82	65	25	187
31	121	-	795	803	-	2,440	-	244	-	54	27	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	3,597	540	33	116	0.219	0.25	7,130
November	2,022	104	52	67.4	.127	.14	4,010
December	31,383	3,940	57	1,012	1.91	2.21	62,250
Calendar year 1939	307,091	10,700	30	841	1.59	21.60	609,100
January	31,112	2,760	352	1,004	1.90	2.19	61,710
February	108,250	10,400	589	3,733	7.06	7.61	214,700
March	69,035	5,580	728	2,227	4.21	4.85	136,900
April	29,986	2,640	368	1,000	1.89	2.11	59,480
May	15,032	1,730	179	485	.917	1.06	29,820
June	4,161	325	82	139	.263	.29	8,250
July	1,874	98	47	60.5	.114	.13	3,720
August	1,018	52	25	32.8	.062	.07	2,020
September	3,447	1,220	26	115	.217	.24	6,840
Water year 1939-40	300,917	10,400	25	822	1.55	21.15	596,800

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. Survey
101804-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum of gage is 856.16 feet above mean sea level (general adjustment of 1929).

Drainage area.- 211 square miles.

Records available.- September 1935 to September 1940.

Extremes.- Maximum discharge during year, 4,980 second-feet Feb. 28 (gage height, 8.56 feet); minimum, 12 second-feet Aug. 29, Sept. 1, 2; minimum gage height, 1.30 feet, Sept. 2.

1935-40: Maximum discharge, 15,000 second-feet Apr. 13, 1937 (gage height, 12.85 feet, site and datum then in use, from floodmark), from rating curve extended above 7,000 second-feet; minimum, that of Aug. 29, Sept. 1, 2, 1940. (Maximum gage height of Apr. 13, 1937, erroneously published as 11.40 feet in Water-Supply Papers 864 and 884.)

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 log ponds.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.3	12	2.3	76	3.8	395	5.5	1,330
1.5	17	2.6	112	4.2	555	6.0	1,720
1.7	25	3.0	182	4.6	755	7.0	2,660
2.0	46	3.4	274	5.0	990	8.0	3,970

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	45	27	378	247	1,920	1,120	475	214	32	20	12
2	19	41	26	463	218	2,400	930	395	166	30	20	13
3	22	51	24	560	205	1,840	760	358	127	31	19	14
4	21	48	24	605	232	1,360	665	500	93	28	18	18
5	149	39	22	733	369	1,100	568	660	84	27	18	22
6	104	35	26	534	2,170	870	487	516	76	26	17	18
7	70	32	28	399	2,490	810	475	414	74	26	16	16
8	44	34	120	368	1,950	1,680	700	342	69	26	16	22
9	34	39	431	834	1,720	1,290	828	293	66	25	16	19
10	28	33	1,750	700	2,910	990	716	259	63	24	16	21
11	26	30	1,070	521	2,360	810	573	232	58	23	16	20
12	24	29	492	402	1,500	695	483	205	55	21	16	19
13	23	29	304	318	2,410	596	417	184	53	22	16	20
14	21	30	298	266	2,130	534	361	170	52	21	15	30
15	20	30	610	230	1,520	496	327	153	50	20	14	38
16	19	27	1,170	205	1,270	980	290	141	48	20	14	55
17	20	26	1,800	182	1,860	1,030	259	132	47	20	14	34
18	22	26	810	164	1,730	794	235	124	45	20	14	57
19	22	25	492	151	1,220	640	227	118	45	20	14	69
20	20	25	675	136	906	546	223	111	47	37	13	39
21	20	24	788	122	728	479	197	103	45	39	13	27
22	20	24	512	114	640	432	184	99	42	30	13	23
23	20	24	364	114	555	385	180	95	41	24	13	20
24	71	24	274	144	479	399	176	89	41	22	13	18
25	50	22	216	280	798	378	180	86	40	20	14	17
26	57	22	182	884	2,050	1,530	178	85	37	21	14	19
27	546	22	155	1,270	2,480	2,460	174	80	35	45	13	214
28	262	21	184	695	3,550	1,850	267	77	34	39	13	603
29	118	21	285	467	2,900	1,340	414	75	34	29	12	146
30	78	23	346	358	-	1,100	434	79	33	24	13	80
31	56	-	355	293	-	1,050	-	127	-	22	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	2,022	546	16	65.2	0.309	0.36	4,010
November	901	51	21	30.0	.142	.16	1,790
December	13,860	1,750	22	447	2.12	2.44	27,490
Calendar year 1939	144,577	5,360	15	396	1.88	25.48	286,800
January	12,690	1,270	114	416	1.97	2.27	25,570
February	43,597	3,550	205	1,503	7.12	7.68	86,470
March	32,784	2,460	378	1,058	5.01	5.78	65,030
April	13,028	1,120	174	434	2.06	2.30	25,840
May	6,777	660	75	219	1.04	1.19	13,440
June	1,914	214	33	63.8	.302	.34	3,800
July	814	45	20	26.3	.125	.14	1,610
August	466	20	12	15.0	.071	.08	924
September	1,723	603	12	57.4	.272	.30	3,420
Water year 1939-40	130,776	3,550	12	357	1.69	23.04	259,400

Peak discharge.- Dec. 10 (2 p.m.) 2,940 sec.-ft.; Feb. 10 (3 to 5 p.m.) 3,490 sec.-ft.; Feb. 28 (2 to 3 p.m.) 4,980 sec.-ft.; Mar. 26 (9 p.m.) 3,680 sec.-ft.

101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

Row River near Dorena, Oreg.

Location.- Water-stage recorder, lat. 43°48', long. 122°57', in NE¼ sec. 36, T. 20 S., R. 3 W., 1½ miles upstream from Mosby Creek and 3½ miles northwest of Dorena. Datum of gage is 685.24 feet above mean sea level (general adjustment of 1929, levels by Corps of Engineers, U. S. Army). Prior to Oct. 13, 1939, staff gage at site 60 yards upstream with datum 1.00 foot higher.

Drainage area.- 270 square miles.

Records available.- January 1939 to September 1940.

Extremes.- Maximum discharge during year, 5,680 second-feet Feb. 28 (gage height, 8.82 feet); minimum, 14 second-feet Aug. 29 to Sept. 2 (gage height, 1.23 feet).
1939-40: Maximum discharge observed, 8,770 second-feet Mar. 12, 1939 (gage height, 10.2 feet, site and datum then in use); minimum, that of Aug. 29 to Sept. 2, 1940.

Remarks.- Records excellent. No diversion or regulation above station. Gage read once daily until replaced by recorder.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1-12, Nov. 1-8, 19-21		Oct. 13-31, Nov. 9-18, Nov. 22 to Sept. 30					
0.4	21	1.2	12	3.0	520	5.5	2,210
.6	43	1.5	34	3.5	790	6.5	3,100
.8	75	1.8	78	4.0	1,095	7.6	4,350
1.0	117	2.2	182	4.5	1,430		
1.2	172	2.6	335	5.0	1,805		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	h21	h58	36	452	307	2,380	1,430	545	236	45	30	14
2	h27	h52	35	535	271	2,930	1,170	456	210	41	29	15
3	h33	h58	34	653	255	2,310	958	430	139	40	29	19
4	h33	h65	32	697	291	1,700	826	565	117	39	26	22
5	h79	h55	30	S62	434	1,390	698	772	100	38	26	29
6	hl72	h49	34	664	2,410	1,100	615	620	96	36	24	28
7	hll7	h43	39	510	3,130	1,000	590	510	92	36	23	22
8	h75	h43	78	456	2,520	1,930	802	425	88	36	22	29
9	h55	f52	540	976	2,200	1,540	976	358	84	35	22	27
10	h46	49	2,220	S92	3,480	1,220	880	315	80	34	21	29
11	h41	44	1,410	670	3,020	1,000	714	287	75	33	22	29
12	h31	41	658	535	1,940	850	605	251	71	30	22	26
13	f31	f39	416	425	2,940	730	525	228	70	30	22	28
14	28	f40	358	353	2,760	653	452	206	68	31	22	45
15	26	40	631	311	2,060	605	412	189	66	30	19	58
16	26	f38	1,280	271	1,630	1,020	366	176	64	30	18	68
17	29	34	2,090	240	2,460	1,180	323	166	63	30	17	45
18	30	34	1,000	214	2,350	922	291	156	60	30	18	61
19	30	h31	620	196	1,640	760	275	150	60	29	17	90
20	30	h31	793	176	1,220	642	275	142	60	39	17	54
21	29	h30	976	153	958	575	240	133	60	50	16	38
22	28	f33	675	144	832	520	221	125	56	44	15	32
23	29	34	495	147	714	456	214	120	55	34	16	29
24	86	33	371	179	626	475	210	117	52	31	16	25
25	73	32	279	315	940	452	221	108	52	29	16	24
26	55	32	232	954	2,420	1,440	210	100	49	30	17	26
27	629	31	210	1,460	3,060	2,790	203	100	48	56	16	157
28	371	30	217	880	4,170	2,140	287	96	46	58	15	773
29	156	30	335	595	3,600	1,560	480	94	46	44	14	217
30	96	32	407	448	-	1,280	466	96	46	35	14	105
31	f73	-	425	366	-	1,320	-	160	-	32	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,585	629	21	83.4	0.309	0.36	5,130
November	1,213	65	30	40.4	.150	.17	2,410
December	16,956	2,220	30	547	2.03	2.34	33,630
Calendar year 1939	178,789	7,870	21	490	1.81	24.64	354,600
January	15,729	1,460	144	507	1.88	2.17	31,200
February	54,688	4,170	265	1,886	6.99	7.53	108,500
March	38,870	2,930	452	1,254	4.64	5.35	77,100
April	15,935	1,430	203	531	1.97	2.19	31,610
May	8,196	772	94	264	.978	1.13	16,260
June	2,409	236	46	80.3	.297	.33	4,780
July	1,135	58	29	36.6	.136	.16	2,250
August	615	30	14	19.8	.073	.08	1,220
September	2,144	773	14	71.5	.265	.30	4,250
Water year 1939-40	160,475	4,170	14	438	1.62	22.11	318,300

Peak discharge.- Dec. 10 (3 p.m.) 3,630 sec.-ft.; Feb. 10 (6 to 7 p.m.) 4,300 sec.-ft.; Feb. 13 (2 p.m.) 3,770 sec.-ft.; Feb. 28 (3:30 p.m.) 5,680 sec.-ft.; Mar. 26 (10 p.m.) 3,870 sec.-ft.
f Computed from gage height based on partial record.
h Computed from staff-gage reading.

9-933-April 1936
Geolog.

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 1940.

Extremes.- Maximum discharge observed during year, 2,140 second-feet Feb. 28 (gage height, 4.40 feet); minimum, 3 second-feet Aug. 15 to Sept. 2.
1936-40: Maximum discharge, 5,480 second-feet Mar. 18, 1938 (gage height, 7.8 feet, from floodmark), from rating curve extended above 2,100 second-feet; minimum, that of Aug. 15 to Sept. 2, 1940.

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

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 9		Dec. 10 to Sept. 30			
0.3	3.0	0.3	1.8	2.2	535
.5	9.5	.5	7.2	2.6	760
.7	27	.7	22	3.0	1,010
.9	56	.9	51	3.4	1,300
1.2	128	1.2	122	3.9	1,710
1.3	225	1.8	340		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	9	7	140	85	808	435	106	28	10	6	a3
2	7	18	7	185	71	1,010	340	100	43	10	a6	3
3	8	12	8	213	67	678	271	85	34	8	6	a4
4	9	9	8	227	85	455	185	165	26	8	a6	6
5	53	9	9	241	152	313	185	172	23	7	a6	a6
6	27	9	10	220	820	255	165	159	23	7	6	a6
7	23	8	13	172	1,220	248	159	122	21	7	a6	6
8	12	10	g143	128	748	505	227	95	21	7	6	a5
9	9	9	g225	313	535	415	271	81	a20	7	a5	5
10	8	8	g1,190	287	971	313	234	71	a19	7	5	a5
11	8	8	g672	220	971	234	185	59	18	7	a4	5
12	7	7	g220	172	568	199	152	51	a17	6	4	a5
13	7	8	g122	152	1,150	165	140	48	a16	6	a4	6
14	6	9	g122	111	971	140	111	45	a15	6	4	a10
15	6	9	g202	81	590	146	95	38	a15	6	a3	a20
16	6	8	g385	67	485	234	81	35	14	6	3	32
17	7	9	g645	59	984	271	76	32	14	6	a3	a12
18	7	9	g340	51	945	206	71	32	14	6	a3	15
19	7	8	g178	48	515	165	67	30	12	6	3	a35
20	7	7	g385	41	395	146	63	30	12	a9	a3	8
21	7	7	g340	35	349	122	55	27	12	d10	3	a7
22	7	8	206	32	304	106	51	25	11	d8	a3	a6
23	8	7	152	35	185	95	51	25	11	6	a3	6
24	d25	7	140	41	159	106	51	25	11	a5	3	a5
25	18	7	90	85	206	90	48	22	10	8	a3	5
26	51	7	76	d400	844	880	45	22	10	a11	3	a6
27	104	7	51	579	1,040	1,010	45	22	8	13	a3	38
28	84	7	63	304	1,710	784	85	20	8	11	3	63
29	36	7	90	206	1,190	535	76	20	8	a9	a3	a40
30	16	7	95	134	-	485	140	18	8	7	a3	a25
31	13	-	117	106	-	405	-	27	-	a6	3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	598	104	5	19.3	0.227	0.26	1,190
November	254	18	7	8.47	.100	.11	504
December	6,311	1,190	7	204	2.40	2.76	12,520
Calendar year 1939	49,508	3,950	4	136	1.60	21.66	98,190
January	5,085	579	32	164	1.93	2.22	10,090
February	18,315	1,710	67	632	7.44	8.01	36,330
March	11,524	1,010	90	372	4.38	5.04	22,860
April	4,160	435	45	139	1.64	1.82	8,250
May	1,809	172	18	58.4	.687	.79	3,590
June	502	43	8	16.7	.196	.22	996
July	236	13	5	7.61	.090	.10	468
August	125	6	3	4.03	.047	.05	248
September	398	63	3	13.3	.156	.17	789
Water year 1939-40	49,317	1,710	3	135	1.59	21.55	97,840

a No gage-height record; discharge interpolated or computed on basis of records for Coast Fork of Willamette River at London and Row River at Star.
d Doubtful gage-height record; discharge computed on basis of records for Coast Fork of Willamette River at London and Row River at Star.
g Computed from graph based on gage readings.

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. Datum 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 above gage.

Records available.- August 1910 to September 1940.

Average discharge.- 24 years (1910-14, 1915-16, 1918-21, 1923-25, 1926-40), 1,610 second-feet.

Extremes.- Maximum discharge during year, 3,000 second-feet Mar. 26 (gage height, 2.82 feet); minimum, 853 second-feet Sept. 21-26, 30 (gage height, 0.88 foot).
1910-40: 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.

Cooperation.- Water-stage recorder inspected by employee of U. S. Forest Service.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.8	805	1.4	1,260	2.3	2,290
1.0	930	1.7	1,560	2.7	2,830
1.2	1,080	2.0	1,910		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	937	904	872	1,480	1,220	2,550	2,100	1,470	1,120	986	924	872
2	937	904	878	1,520	1,210	2,730	1,990	1,420	1,120	986	917	878
3	930	898	878	1,480	1,210	2,510	1,920	1,390	1,110	979	917	878
4	958	898	872	1,480	1,260	2,360	1,850	1,410	1,090	979	917	872
5	979	891	872	1,470	1,430	2,250	1,790	1,430	1,080	972	917	872
6	951	891	878	1,410	2,500	2,120	1,730	1,420	1,070	965	910	865
7	937	891	878	1,370	2,220	2,240	1,740	1,400	1,080	965	910	872
8	930	891	930	1,350	1,970	2,520	1,830	1,370	1,060	965	910	872
9	930	891	986	1,350	1,980	2,320	1,990	1,350	1,060	965	910	872
10	924	891	1,130	1,400	2,580	2,150	1,870	1,330	1,060	965	904	872
11	924	884	1,120	1,370	2,300	2,010	1,780	1,320	1,060	958	904	865
12	924	884	1,060	1,330	2,120	1,890	1,730	1,300	1,060	958	904	872
13	917	884	1,020	1,300	2,210	1,800	1,690	1,290	1,050	951	904	865
14	917	878	1,070	1,280	2,110	1,730	1,650	1,280	1,050	951	898	865
15	917	878	1,420	1,250	1,980	1,710	1,600	1,260	1,040	958	898	878
16	910	878	1,910	1,230	1,950	1,860	1,560	1,250	1,030	958	898	878
17	917	878	1,790	1,220	1,930	1,770	1,500	1,240	1,030	951	898	872
18	917	878	1,450	1,220	1,850	1,710	1,480	1,230	1,020	951	891	878
19	917	878	1,350	1,200	1,770	1,660	1,450	1,220	1,020	951	891	865
20	917	872	1,450	1,180	1,690	1,640	1,420	1,210	1,020	958	891	859
21	917	872	1,400	1,170	1,640	1,620	1,390	1,200	1,020	944	891	859
22	910	872	1,310	1,170	1,580	1,600	1,370	1,200	1,010	944	891	853
23	917	872	1,260	1,160	1,530	1,590	1,360	1,190	1,000	937	884	853
24	930	872	1,220	1,150	1,540	1,630	1,350	1,190	1,000	937	884	853
25	917	872	1,190	1,150	1,910	1,630	1,330	1,170	1,000	930	884	853
26	944	872	1,170	1,180	2,450	2,360	1,310	1,150	1,000	944	884	859
27	1,000	872	1,160	1,290	2,540	2,730	1,300	1,140	993	951	884	898
28	965	872	1,320	1,240	2,680	2,580	1,380	1,140	986	937	878	878
29	930	872	1,580	1,240	2,680	2,450	1,360	1,130	986	930	878	859
30	917	884	1,560	1,240	-	2,320	1,450	1,130	986	930	878	853
31	910	-	1,500	1,230	-	2,210	-	1,140	-	924	878	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	28,847	1,000	910	931	2.70	3.11	57,220
November	26,474	904	872	882	2.56	2.85	52,510
December	37,484	1,910	872	1,209	3.50	4.04	74,350
Calendar year 1939	480,215	2,620	872	1,316	3.81	51.74	952,500
January	40,110	1,520	1,150	1,294	3.75	4.32	79,560
February	56,040	2,680	1,210	1,932	5.60	6.04	111,200
March	64,250	2,730	1,590	2,073	6.01	6.93	127,400
April	48,270	2,100	1,300	1,609	4.66	5.20	95,740
May	39,370	1,470	1,130	1,270	3.68	4.24	78,090
June	31,211	1,120	986	1,040	3.01	3.36	61,910
July	29,580	986	924	954	2.77	3.19	58,670
August	27,827	924	878	898	2.60	3.00	55,190
September	26,040	898	853	868	2.52	2.81	51,650
Water year 1939-40	455,503	2,730	853	1,246	3.61	49.09	903,500

Peak discharge.- Feb. 6 (10 a.m.) 2,860 sec.-ft.; Feb. 28 (11 a.m.) 2,830 sec.-ft.; Mar. 1 (10 p.m.) 2,880 sec.-ft.; Mar. 26 (8 p.m.) 3,000 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101604-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum 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 1940. June 1910 to March 1911 (gage heights only), at site at Martin Rapids.

Average discharge.- 16 years, 3,594 second-feet.

Extremes.- Maximum discharge during year, 11,200 second-feet Feb. 10 (gage height, 4.85 feet); minimum, 1,300 second-feet Sept. 22-26 (gage height, 0.40 foot).

1924-40: 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 (discharge, 60,000 second-feet, estimated).

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

Cooperation.- Water-stage recorder inspected by employee of Eugene Water Board.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.4	1,300	1.3	2,510	2.5	4,730	4.0	8,600
.7	1,630	1.6	3,010	3.0	5,950	4.6	10,400
1.0	2,050	2.0	3,720	3.5	7,240		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a1,480	1,510	1,470	3,930	2,640	8,520	5,720	3,890	2,140	1,590	1,420	1,310
2	a1,480	1,490	1,460	3,910	2,560	9,260	5,180	3,540	2,050	1,570	1,410	1,330
3	a1,480	1,490	1,430	3,930	2,540	7,830	4,730	3,360	1,960	1,580	1,410	1,370
4	a1,540	1,470	1,420	3,970	2,740	6,800	4,400	3,450	1,920	1,560	1,410	1,370
5	a2,030	1,460	1,400	3,930	3,340	6,280	4,100	3,540	1,870	1,560	1,400	1,350
6	a1,770	1,440	1,420	3,590	7,950	5,580	3,850	3,490	1,860	1,560	1,400	1,340
7	a1,660	1,430	1,390	3,320	8,630	5,790	3,910	3,290	1,860	1,550	1,390	1,340
8	a1,600	1,470	1,660	3,180	7,060	8,080	4,530	3,110	1,840	1,530	1,380	1,340
9	a1,540	1,470	2,320	3,670	6,670	6,770	5,480	2,990	1,800	1,520	1,370	1,340
10	a1,500	1,430	3,660	3,990	10,300	5,850	4,960	2,920	1,790	1,510	1,380	1,360
11	a1,480	1,440	3,110	3,610	8,630	5,130	4,470	2,840	1,770	1,520	1,380	1,330
12	a1,480	1,420	2,350	3,290	6,880	4,620	4,220	2,790	1,760	1,510	1,380	1,350
13	1,440	1,420	2,050	3,010	8,350	4,240	4,060	2,700	1,750	1,510	1,370	1,380
14	1,430	1,420	2,160	2,820	7,400	3,990	3,890	2,640	1,720	1,500	1,360	1,360
15	1,430	1,420	4,220	2,700	6,150	3,890	3,700	2,570	1,720	1,480	1,360	1,400
16	1,430	1,410	6,670	2,570	5,880	4,730	3,500	2,510	1,700	1,480	1,350	1,400
17	1,440	1,400	6,640	2,490	6,640	4,490	3,340	2,460	1,700	1,480	1,350	1,380
18	1,460	1,400	4,470	2,460	6,150	4,160	3,230	2,400	1,700	1,470	1,350	1,480
19	1,470	1,390	3,630	2,380	5,280	3,950	3,160	2,370	1,700	1,470	1,340	1,390
20	1,480	1,390	4,140	2,300	4,640	3,820	3,040	2,320	1,680	1,530	1,340	1,330
21	1,460	1,400	3,950	2,240	4,260	3,740	2,960	2,290	1,670	1,520	1,340	1,310
22	1,440	1,400	3,360	2,180	4,020	3,700	2,870	2,240	1,640	1,480	1,330	1,300
23	1,440	1,390	2,960	2,160	3,760	3,670	2,870	2,230	1,630	1,460	1,330	1,300
24	1,620	1,380	2,670	2,140	3,820	3,760	2,840	2,220	1,620	1,440	1,330	1,300
25	1,510	1,380	2,460	2,290	5,800	3,800	2,870	2,170	1,620	1,440	1,330	1,300
26	1,700	1,380	2,350	2,890	8,970	6,480	2,770	2,120	1,620	1,470	1,340	1,360
27	2,620	1,390	2,320	3,760	9,590	9,410	2,690	2,080	1,610	1,560	1,340	1,670
28	2,200	1,390	3,450	3,270	10,200	8,320	3,180	2,060	1,590	1,490	1,330	1,770
29	1,760	1,380	4,820	2,990	9,710	7,160	3,310	2,040	1,590	1,460	1,330	1,440
30	1,610	1,460	4,580	2,860	-	6,460	3,760	2,060	1,610	1,430	1,320	1,380
31	1,550	-	4,060	2,740	-	6,120	-	2,140	-	1,420	1,310	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	49,530	2,620	1,430	1,598	1.72	1.98	98,240
November	42,720	1,510	1,380	1,424	1.53	1.71	84,730
December	94,050	6,670	1,390	3,034	3.26	3.76	186,500
Calendar year 1939	1,111,170	11,900	1,380	3,044	3.27	44.42	2,204,000
January	94,570	3,990	2,140	3,051	3.28	3.78	187,600
February	180,560	10,300	2,540	6,226	6.69	7.22	358,100
March	176,400	9,410	3,670	5,690	6.12	7.05	349,900
April	113,590	5,720	2,690	3,786	4.07	4.54	225,300
May	82,830	3,890	2,040	2,672	2.87	3.31	164,300
June	52,490	2,140	1,590	1,750	1.88	2.10	104,100
July	46,650	1,590	1,420	1,505	1.62	1.87	92,530
August	42,180	1,420	1,310	1,361	1.46	1.69	83,660
September	41,380	1,770	1,300	1,379	1.48	1.65	82,080
Water year 1939-40	1,016,950	10,300	1,300	2,779	2.99	40.66	2,017,000

a No gage-height record; discharge computed on basis of gage heights at Leaburg power plant 13 miles downstream and records for station at McKenzie Bridge and Blue River near Blue River.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. .l Survey

101604-0 U. S. GOVERNMENT PRINTING OFFICE 1936

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 Blue River post office.

Drainage area.- 75 square miles.

Records available.- September 1935 to September 1940.

Extremes.- Maximum discharge during year, 2,350 second-feet Feb. 28 (gage height, 4.04 feet); minimum, 15 second-feet Aug. 30 to Sept. 2 (gage height, 1.01 feet).
1935-40: 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 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Nov. 8, May 12-17)

1.0	14	2.0	403	3.6	1,820
1.2	49	2.4	675	4.0	2,300
1.4	120	2.8	1,000		
1.7	249	3.2	1,390		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	43	34	565	240	1,500	615	375	89	32	24	15
2	21	38	34	579	222	1,530	517	306	81	30	22	18
3	20	38	32	537	218	1,110	446	256	75	28	22	22
4	56	36	27	537	287	870	386	291	71	28	22	21
5	107	34	25	530	511	750	337	358	68	28	21	21
6	45	32	27	446	1,880	608	306	364	65	27	20	20
7	34	30	25	375	1,510	776	342	316	65	27	20	20
8	27	36	119	337	1,090	1,070	434	277	65	27	20	21
9	24	36	318	465	1,090	774	593	244	62	27	18	20
10	22	32	586	652	1,920	608	484	218	59	25	18	21
11	21	30	364	498	1,300	491	397	200	55	25	18	18
12	21	28	236	392	919	409	353	182	52	25	17	20
13	20	28	187	332	1,180	358	316	170	47	25	17	22
14	20	28	318	287	982	327	291	157	45	24	17	22
15	18	28	1,210	254	735	322	268	145	45	24	17	24
16	18	25	1,570	231	750	446	240	136	43	22	17	24
17	20	25	1,180	213	1,050	381	218	128	43	22	17	28
18	24	25	690	195	854	337	208	120	41	22	17	36
19	24	25	491	187	660	316	191	112	41	24	17	27
20	30	25	705	170	537	306	178	108	41	25	17	24
21	24	24	579	161	459	301	170	104	38	28	17	20
22	21	24	422	153	415	291	157	101	36	25	17	20
23	22	24	332	140	369	277	165	97	36	24	17	18
24	49	24	263	136	428	287	161	93	36	22	17	18
25	30	24	222	165	1,230	282	161	89	34	22	17	18
26	121	24	195	415	1,870	1,180	145	85	32	25	17	22
27	286	24	191	698	1,920	1,630	140	78	32	36	17	112
28	204	22	630	472	2,080	1,360	236	75	32	30	17	93
29	101	22	991	364	1,830	1,030	231	75	32	27	17	38
30	68	36	782	311	-	854	381	81	32	25	15	28
31	49	-	622	277	-	712	-	104	-	25	15	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	1,565	286	18	50.5	0.673	0.78	3,100
November	870	43	22	29.0	.387	.43	1,730
December	13,407	1,570	25	432	5.76	6.65	26,590
Calendar year 1939	97,756	2,060	16	268	3.57	48.42	193,900
January	11,074	698	136	357	4.76	5.49	21,960
February	28,536	2,080	218	984	13.1	14.15	56,600
March	21,493	1,630	277	693	9.24	10.66	42,630
April	9,067	615	140	302	4.03	4.50	17,980
May	5,447	375	75	176	2.35	2.70	10,800
June	1,493	89	32	49.8	.664	.74	2,960
July	806	36	22	26.0	.347	.40	1,600
August	561	24	15	15.1	.241	.28	1,110
September	831	112	15	27.7	.369	.41	1,650
Water year 1939-40	95,150	2,080	15	260	3.47	47.19	188,700

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

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 1940.

Extremes.- Maximum discharge observed during year, 2,880 second-feet Feb. 28 (gage height, 10.13 feet); minimum observed, 14 second-feet Aug. 20 (gage height, 0.99 foot).
1935-40: Maximum discharge observed, 6,480 second-feet Mar. 18, 1938 (gage height, about 18.0 feet, from floodmark); minimum observed, 11 second-feet Sept. 17, 1938.

Remarks.- Records fair. No diversion above station. Possibly some regulation caused by operation of log ponds. Gage read once daily during low-water periods; twice daily at other times.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.0	15	2.2	208	4.0	685	7.0	1,640
1.2	31	2.6	307	4.5	830	8.0	2,030
1.5	67	3.0	410	5.0	980	9.0	2,430
1.8	118	3.5	545	6.0	1,300	10.0	2,840

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	68	79	478	330	1,990	950	345	159	43	23	17
2	32	64	63	478	284	2,390	830	332	124	35	23	18
3	29	94	60	478	320	1,910	772	327	128	32	21	29
4	32	64	56	587	478	1,570	728	450	126	40	21	21
5	141	60	51	643	559	1,330	643	464	124	36	21	21
6	80	57	51	587	1,470	1,110	657	424	114	39	18	21
7	60	51	49	532	2,720	1,110	643	384	120	37	19	23
8	42	51	84	504	2,510	1,300	601	358	114	37	18	27
9	38	54	284	601	2,190	1,110	685	330	108	37	19	25
10	34	51	1,110	573	2,230	950	615	307	108	39	18	26
11	32	51	1,040	518	2,230	860	545	280	99	36	16	24
12	31	47	518	478	1,750	743	518	257	92	32	18	22
13	31	54	424	437	2,390	671	491	260	87	31	18	28
14	32	57	371	410	2,270	615	450	242	82	33	18	30
15	28	54	384	384	2,070	573	437	232	76	28	20	30
16	29	49	1,270	332	1,990	587	397	220	72	34	17	25
17	37	45	1,240	320	2,640	518	384	220	68	36	18	22
18	64	46	890	312	2,430	478	371	198	64	29	a18	40
19	46	46	671	287	1,870	450	358	198	67	27	17	35
20	64	47	516	307	1,470	424	327	184	63	36	14	33
21	42	47	671	260	1,200	410	310	179	57	34	15	30
22	36	49	559	252	1,040	384	307	168	53	30	16	28
23	35	49	491	234	890	371	312	161	51	25	16	25
24	152	49	397	250	830	371	302	159	56	28	16	20
25	61	45	345	532	1,270	358	294	159	47	25	15	27
26	63	52	314	587	2,270	424	284	148	48	28	15	24
27	437	63	292	685	2,270	1,750	277	146	46	52	16	112
28	213	51	424	532	2,550	1,370	358	137	46	49	16	120
29	154	47	464	450	2,550	1,370	292	146	45	33	16	63
30	97	57	464	410	-	1,170	450	139	42	29	17	32
31	78	-	518	358	-	1,040	-	177	-	34	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,278	437	28	73.5	0.408	0.47	4,520
November	1,619	94	45	54.0	.300	.33	3,210
December	14,450	1,270	49	466	2.59	2.99	28,660
Calendar year 1939	137,959	4,310	22	378	2.10	28.51	273,600
January	13,796	685	234	445	2.47	2.85	27,360
February	49,071	2,720	284	1,692	9.40	10.14	97,330
March	30,207	2,390	358	974	5.41	6.24	59,910
April	14,588	950	277	486	2.70	3.01	28,930
May	7,731	464	137	249	1.38	1.60	15,330
June	2,486	159	42	82.9	.461	.51	4,930
July	1,064	52	25	34.3	.191	.22	2,110
August	551	23	14	17.8	.099	.11	1,090
September	998	120	17	33.3	.185	.21	1,980
Water year 1939-40	138,839	2,720	14	379	2.11	28.68	275,400

a No gage-height record; discharge interpolated.

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Geological Survey

101604-0 U. S. GOVERNMENT PRINTING OFFICE 1936

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 1⅛ miles southeast of Noti. Datum of gage is 388.76 feet above mean sea level (levels by Corps of Engineers, U. S. Army).

Drainage area.- 88 square miles.

Records available.- October 1935 to September 1940.

Extremes.- Maximum discharge observed during year, 2,120 second-feet Feb. 7 (gage height, 14.06 feet); minimum observed, 8 second-feet Oct. 1 (gage height, 0.70 foot).
1935-40: Maximum discharge, 3,970 second-feet Jan. 13, 1936 (gage height, 18.3 feet, from graph based on gage readings); minimum observed, 7 second-feet Sept. 25-27, 1939 (gage height, 0.66 foot).

Remarks.- Records good except those below 50 second-feet, which are fair. No diversion above station, slight diurnal fluctuation caused by log pond above Noti. Gage read twice a day, oftener during periods of high water.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Nov. 3)

0.6	5.6	1.6	59	5.0	533	9.0	1,050
.8	11.5	2.0	106	6.0	635	10.0	1,210
1.0	19	3.0	260	7.0	755	12.0	1,590
1.3	34	4.0	404	8.0	900	14.0	2,090

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8	19	24	196	217	g1,080	490	155	82	35	21	14
2	12	19	23	233	196	g1,070	425	138	78	32	22	14
3	10	19	26	250	196	g855	376	134	74	32	18	16
4	12	17	23	g418	g680	668	345	202	71	28	19	17
5	49	17	19	g533	g680	565	305	418	70	30	20	17
6	23	20	26	g383	g1,450	484	275	390	67	29	19	18
7	15	18	29	268	g1,980	458	298	275	66	29	20	15
8	14	19	66	238	g1,300	497	275	215	62	30	17	13
9	16	19	120	239	g825	425	298	185	59	29	17	21
10	13	16	521	290	g755	383	268	167	61	28	15	17
11	12	16	260	260	755	348	246	149	58	26	14	21
12	14	18	134	234	625	305	230	143	55	28	15	17
13	12	21	93	180	885	282	212	134	54	26	18	22
14	10	21	93	156	900	260	204	128	51	25	17	25
15	10	22	g275	142	680	255	199	120	49	26	16	22
16	15	19	742	131	g595	242	183	114	47	25	16	22
17	14	17	538	120	g1,050	212	175	112	47	27	15	21
18	14	17	362	113	g975	199	164	105	46	26	13	25
19	17	19	231	106	g680	190	158	103	46	25	17	26
20	17	22	218	98	550	183	155	97	46	24	14	23
21	15	20	209	92	464	177	155	93	44	26	15	17
22	14	20	170	88	404	170	146	93	41	26	14	17
23	17	21	142	85	348	162	143	88	41	23	14	17
24	19	19	117	91	327	161	136	86	41	24	14	17
25	23	19	100	172	g615	155	134	83	38	23	14	17
26	21	20	91	369	g1,150	g390	131	82	38	24	18	17
27	45	21	83	900	g1,130	g783	120	77	38	26	15	24
28	40	24	97	585	g1,510	g1,110	127	77	37	26	15	42
29	24	21	117	404	g1,550	g797	120	79	34	27	16	28
30	24	22	146	305	-	742	146	74	33	23	12	25
31	21	-	152	250	-	615	-	83	-	21	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	570	49	8	18.4	0.209	0.24	1,130
November	582	24	16	19.4	.220	.25	1,150
December	5,247	742	19	169	1.92	2.22	10,410
Calendar year 1939	51,224	1,300	8	140	1.59	21.66	101,600
January	7,929	900	85	256	2.91	3.35	15,730
February	23,472	1,980	196	809	9.19	9.92	46,560
March	14,223	1,110	155	459	5.22	6.01	28,210
April	6,642	490	120	221	2.51	2.81	13,170
May	4,399	418	74	142	1.61	1.86	8,730
June	1,574	82	33	52.5	0.597	0.67	3,120
July	829	35	21	26.7	.303	.35	1,640
August	502	22	12	16.2	.184	.21	996
September	607	42	13	20.2	.230	.26	1,200
Water year 1939-40	66,576	1,980	8	182	2.07	28.15	132,000

g Computed from graph based on gage readings.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

Long Tom River at Smithfield, Oreg.

Location.- Water-stage recorder, lat. 44°09'22", long. 123°17'15", in NW¼ sec. 27, T. 16 S., R. 5 W., at road crossing 100 feet downstream from Coyote Creek, 1 mile east of Smithfield, and 2½ miles downstream from Fern Ridge Dam site. Datum of gage is 320.91 feet above mean sea level (general adjustment of 1929). Prior to Sept. 21, 1939, staff gage at same site and datum.

Drainage area.- 263 square miles.

Records available.- August 1939 to September 1940.

Extremes.- 1939: Maximum discharge observed during period Aug. 1 to Sept. 30, 19 second-feet Sept. 5 (gage height, 3.1 feet); minimum discharge, 5 second-feet Sept. 26-28 (gage height, 2.59 feet Sept. 27).
1939-40: Maximum discharge during year, 4,360 second-feet Feb. 8, 29 (gage height, 13.69 feet); minimum, 7 second-feet Oct. 1-4.

Remarks.- Records good except those for periods Aug. 1 to Nov. 30, 1939, Sept. 17-30, 1940, which are poor. A few small diversions above station; no regulation. Staff gage used Aug. 1 to Sept. 20, 1939, read once daily.

Rating tables, 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Sept. 21 to Nov. 17, 1939)

Aug. 1 to Feb. 8

2.4	4.0	5.0	126
2.6	6.7	6.0	195
3.0	16	7.0	268
3.5	35	8.0	345
4.0	62		

Note.- Same as following table above 8.0 feet.

Feb. 9 to Sept. 16

2.5	12	7.0	270	12.5	1,480
3.0	29	8.0	345	13.0	2,310
3.5	53	9.0	431	13.4	3,360
4.0	78	10.0	539	13.8	4,780
5.0	138	11.0	682		
6.0	200	12.0	1,050		

Discharge, in second-feet, 1939-40

1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1											7	13
2											8	14
3											10	13
4											10	16
5											10	19
6											10	13
7											10	13
8											10	16
9											10	16
10											8	16
11											10	13
12											10	10
13											10	10
14											10	10
15											10	12
16											10	10
17											10	10
18											8	10
19											8	a9
20											8	8
21											e	10
22											8	9
23											10	8
24											10	8
25											10	6
26											10	5
27											10	5
28											10	5
29											10	6
30											16	7
31											16	-

a No gage-height record; discharge interpolated.

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Discharge, in second-feet, of Long Tom River at Smithfield, Oreg., 1939-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7	21	25	325	637	3,640	1,730	235	122	40	23	15
2	7	20	26	365	513	3,110	1,300	244	122	40	21	14
3	7	18	28	458	475	2,720	992	257	113	38	21	15
4	8	18	29	652	1,040	2,270	828	292	105	36	20	15
5	10	18	30	924	1,840	1,790	725	394	97	34	17	17
6	18	18	31	1,140	2,770	1,440	616	490	94	34	17	19
7	24	17	35	919	3,940	1,180	582	563	91	34	17	19
8	17	18	42	751	4,110	1,170	608	453	86	33	17	21
9	12	19	67	715	3,140	1,120	606	348	83	33	16	19
10	11	19	166	698	2,490	952	555	292	80	32	15	18
11	10	18	274	631	2,230	810	489	270	78	31	14	23
12	10	18	371	573	2,080	706	438	248	73	29	14	23
13	10	16	311	498	2,120	613	400	225	70	29	13	25
14	10	18	206	422	2,540	550	370	212	68	29	14	25
15	10	20	178	362	2,570	486	353	195	65	27	16	31
16	8	21	310	317	2,160	459	332	184	62	28	16	31
17	8	22	555	282	2,470	433	307	174	60	27	15	c10
18	8	22	723	256	2,910	397	291	168	59	28	14	c12
19	10	20	659	237	2,700	359	275	172	58	20	14	c15
20	10	a21	520	218	2,100	335	260	154	56	23	14	c20
21	12	a21	495	198	1,550	317	249	143	55	27	17	c19
22	12	22	466	182	1,180	300	239	137	54	27	16	c18
23	13	22	396	173	902	288	231	131	53	27	16	c10
24	15	22	321	187	791	281	227	124	52	25	15	c12
25	17	22	262	367	1,270	280	220	119	50	23	15	c14
26	20	22	218	782	2,570	411	215	114	48	23	15	c15
27	25	21	189	1,550	3,170	1,100	207	112	45	24	16	c16
28	29	22	182	2,080	3,800	2,250	199	108	44	26	17	c25
29	42	23	201	1,950	4,220	2,640	194	105	44	29	16	c45
30	34	25	246	1,300	-	2,520	214	103	42	28	16	c30
31	24	-	285	818	-	2,100	-	110	-	26	16	-

a No gage-height record; discharge interpolated.
c Backwater from obstructions on control; discharge computed on basis of records for station at Monroe.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
August 1939	305	16	7	9.84	0.037	0.04	605
September	320	19	5	10.7	.041	.05	635
Water year	-	-	-	-	-	-	-
October 1939	458	42	7	14.8	.056	.06	908
November	604	25	16	20.1	.076	.09	1,200
December	7,847	723	25	253	.962	1.11	15,560
Calendar year	-	-	-	-	-	-	-
January 1940	20,330	2,080	173	656	2.49	2.87	40,320
February	64,288	4,220	475	2,217	8.43	9.09	127,500
March	37,027	3,640	280	1,194	4.54	5.24	73,440
April	14,252	1,730	194	475	1.81	2.02	28,270
May	6,876	563	103	222	.844	.97	13,640
June	2,129	122	42	71.0	.270	.30	4,220
July	910	40	20	29.4	.112	.13	1,800
August	503	23	13	16.2	.062	.07	998
September	589	45	10	19.6	.075	.08	1,170
Water year 1939-40	155,813	4,220	7	426	1.62	22.03	309,000

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. Datum 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 1940 (1925-27 incomplete).

Average discharge.- 17 years (1921-25, 1927-40), 703 second-feet.

Extremes.- Maximum discharge observed during year, 5,790 second-feet Feb. 29 (gage height, 13.04 feet); minimum observed, 7 second-feet Oct. 1 (gage height, 0.32 foot).
1929-40: Maximum discharge, about 18,600 second-feet Jan. 7, 1923 (gage height, 14.4 feet, site and datum then in use); minimum observed, 7 second-feet Sept. 29, Oct. 1, 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. A few small diversions 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 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Dec. 8)

0.3	7	1.2	112	3.0	399	6.0	1,100	10.0	2,440
.5	19	1.6	172	3.5	490	7.0	1,400	11.0	2,990
.7	40	2.0	234	4.0	590	8.0	1,720	12.0	3,980
.9	67	2.5	314	5.0	825	9.0	2,070	13.1	5,910

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7	27	24	506	g1,100	5,750	2,650	308	151	48	24	13
2	10	22	25	570	860	4,540	2,140	314	160	45	24	13
3	10	20	25	636	g825	3,980	1,650	321	154	43	23	12
4	10	18	27	g950	g1,400	3,480	1,310	348	145	43	23	13
5	13	18	27	g1,370	g2,280	2,850	1,120	482	136	43	21	13
6	19	18	36	1,580	g3,710	2,240	962	681	124	43	19	13
7	18	18	32	g1,620	4,910	1,830	865	710	121	43	18	15
8	23	18	46	g1,340	5,710	1,720	850	715	116	40	18	16
9	24	17	73	1,170	5,210	1,670	865	566	112	40	18	16
10	18	18	157	1,210	4,010	1,580	855	448	109	38	18	16
11	16	18	301	g1,100	3,290	1,360	750	392	103	38	16	15
12	11	17	358	g925	2,930	1,150	654	355	100	36	16	19
13	14	17	434	815	2,990	962	586	321	91	38	15	19
14	11	17	351	700	3,060	825	530	295	88	33	15	23
15	13	17	263	590	3,500	725	498	276	85	33	15	23
16	12	18	396	498	3,360	658	463	256	82	33	16	26
17	12	20	720	438	3,380	615	438	240	76	33	16	26
18	11	22	915	392	3,690	578	406	228	73	30	15	24
19	10	20	998	355	3,980	530	385	218	73	33	13	26
20	12	20	900	324	3,380	479	362	218	70	24	13	a26
21	13	18	735	298	g2,530	448	341	196	70	26	13	26
22	13	18	686	276	g1,930	423	324	187	67	30	13	24
23	15	20	636	256	1,570	399	311	178	64	30	13	19
24	18	20	526	250	1,300	382	301	169	64	33	13	18
25	15	20	420	g416	g1,820	375	295	160	64	26	12	12
26	18	22	338	g1,010	g3,130	g590	285	154	61	24	12	15
27	21	22	288	g2,210	4,380	g1,430	279	148	56	24	13	19
28	30	22	266	g2,800	4,990	2,500	269	145	53	24	12	23
29	28	22	292	g2,740	5,790	3,210	260	142	53	26	15	24
30	40	24	338	g2,240	-	3,310	266	139	50	28	13	38
31	35	-	399	g1,580	-	3,100	-	142	-	26	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	520	40	7	16.8	0.043	0.05	1,030
November	588	27	17	19.6	.050	.06	1,170
December	11,032	998	24	356	.910	1.05	21,880
Calendar year 1939	155,378	4,280	7	426	1.09	14.78	308,200
January	31,165	2,800	260	1,005	2.57	2.96	61,810
February	91,035	5,790	825	3,139	8.03	8.66	180,600
March	53,989	5,750	375	1,742	4.46	5.14	107,100
April	21,290	2,650	260	710	1.82	2.03	42,230
May	9,452	715	139	305	.780	.90	18,750
June	2,770	160	50	92.3	.236	.26	5,490
July	1,053	48	24	34.0	.087	.10	2,090
August	498	24	12	16.1	.041	.05	988
September	585	38	12	19.5	.050	.06	1,160
Water year 1939-40	223,977	5,790	7	612	1.57	21.32	444,300

a No gage-height record; discharge interpolated.
g Computed from graph based on gage readings.

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Coyote Creek near Crow, Oreg.

Location.- Water-stage recorder and concrete control, lat. 44°01'19", long. 123°15'17", in NE¼ sec. 11, T. 18 S., R. 5 W., just upstream from backwater of Fern Ridge Reservoir (under construction in 1940), 1 mile downstream from Spencer Creek, and 5 miles northeast of Crow. Datum of gage is 374.0 feet above mean sea level (bench mark of Corps of Engineers, U. S. Army). Prior to Aug. 30, 1940, staff gage at practically same site.

Drainage area.- 94 square miles.

Records available.- June to September 1940.

Extremes.- Maximum discharge observed during period, 9.3 second-feet June 11; (discharge measurement); no flow at times.

Remarks.- Records fair except those for periods of no gage-height record, which are poor. Small diversions above station for irrigation; no regulation. Staff gage read twice daily July 15-20, July 22 to Aug. 3, Aug. 5-10, 12-17, 27-30. Discharge retained by temporary dam Aug. 18-25.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										a3.0	0.8	0.1
2										a2.9	.6	.1
3										a2.8	.5	.1
4										a2.7	a.5	.1
5										a2.7	.5	0
6										a2.6	.4	0
7										a2.5	.3	0
8										a2.4	.2	0
9										a2.4	.2	.1
10										a2.3	.2	.2
11									†9.3	a2.2	a.2	.5
12										a2.2	.2	.6
13										a2.1	.2	.8
14										a2.0	.2	1.1
15										2.0	.2	1.2
16										2.4	.2	1.2
17										2.1	.2	1.3
18										1.e	0	1.2
19										1.8	0	1.2
20										1.8	0	1.6
21										a1.6	0	2.0
22										1.2	0	1.4
23										1.6	0	.9
24										1.6	0	.8
25										1.6	0	.7
26										1.4	a.2	.7
27										1.6	0	.9
28										1.2	0	2.0
29										1.4	0	3.1
30										1.2	0	3.4
31										1.0	.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October							
November							
December							
Calendar year							
January	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-
July	62.1	3.0	1.0	2.00	0.021	0.025	123
August	5.9	0.8	0	.19	.0020	.002	12
September	27.3	3.4	0	.91	.010	.011	54
The period	-	-	-	-	-	-	189

† Discharge measurement.
a No gage-height record; discharge interpolated or computed on basis of discharge measurement made on July 2, records for station near Elmira, and notes of engineer on construction work at site.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum 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 1939 to September 1940 (discontinued).

Extremes.- Maximum discharge observed during year, 1,970 second-feet Feb. 29 (gage height, 8.14 feet); practically no flow Oct. 1-7, Aug. 14 to Sept. 15.
1935-36, 1939-40: Maximum discharge observed, 5,000 second-feet Jan. 13, 1936 (gage height, 10.0 feet); no flow at times.

Remarks.- Records fair except those for periods of doubtful gage-height record, which are poor. 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.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	2.9	1.6	120	199	1,320	545	54	26	2.1	0.7	0
2	0	1.8	1.6	141	159	1,190	410	62	20	1.8	.7	0
3	0	1.6	1.6	196	g178	962	310	74	14	1.5	.7	0
4	0	1.4	1.8	380	g645	708	290	98	13	1.5	.5	0
5	0	1.1	1.8	493	827	530	233	160	13	1.5	.5	0
6	0	1.6	1.8	356	1,140	394	194	146	12	1.3	.5	0
7	0	1.6	2.1	141	1,720	352	201	104	d12	1.3	.4	0
8	.1	1.6	2.9	287	g1,370	496	208	92	d11	1.3	.3	0
9	.3	1.4	8	324	g930	354	208	71	d10	1.3	.3	0
10	.7	1.1	26	274	693	322	177	65	d10	1.5	.1	0
11	1.1	1.1	112	248	788	262	146	57	9.0	1.5	.1	0
12	.7	.9	98	196	590	215	130	49	d8.0	1.5	.1	0
13	.7	1.4	57	165	886	190	117	41	d7.5	1.5	.1	0
14	.6	1.6	39	156	1,010	163	104	37	d7.0	1.3	0	0
15	.6	1.6	43	112	906	153	101	30	6.2	1.3	0	0
16	.6	1.6	84	96	627	146	101	28	5.6	1.3	0	.3
17	.5	1.6	153	84	1,110	133	83	26	5.6	1.3	0	.9
18	.5	1.6	156	74	1,260	111	77	24	5.0	1.1	0	.9
19	.5	1.6	141	72	950	104	65	22	5.0	1.1	0	.7
20	.5	1.6	107	69	592	95	62	20	4.6	1.1	0	.7
21	.5	1.6	141	69	396	89	57	17	4.6	1.1	0	.5
22	.6	1.4	186	69	336	80	51	17	4.6	.9	0	1.3
23	.7	1.4	141	69	239	74	49	16	4.2	.9	0	1.1
24	.7	1.4	96	72	219	71	46	16	4.2	.9	0	.9
25	.7	1.6	67	g171	768	74	50	14	3.8	.7	0	.7
26	2.1	1.6	60	g630	1,180	g197	51	12	3.0	.9	0	.9
27	3.2	1.6	50	1,030	1,350	g802	51	11	2.7	.9	0	1.3
28	2.9	1.6	55	906	1,700	1,030	46	10	2.7	.9	0	1.1
29	2.6	1.6	62	g588	1,770	950	41	10	2.4	.9	0	1.1
30	2.9	1.6	86	360	-	824	39	10	2.4	.9	0	3.0
31	3.2	-	84	251	-	720	-	20	-	.7	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	27.5	3.2	0	0.89	0.0072	0.008	55
November	46.1	2.9	.9	1.54	.013	.01	91
December	2,067.2	186	1.6	66.7	.542	.63	4,100
Calendar year 1939	38,133.0	1,470	0	104	.846	11.54	75,640
January	8,199	1,030	69	264	2.15	2.48	16,260
February	24,538	1,770	159	846	6.88	7.42	48,670
March	13,111	1,320	71	423	3.44	3.96	26,010
April	4,243	545	39	141	1.15	1.28	8,420
May	1,413	160	10	45.6	.371	.43	2,800
June	239.1	26	2.4	7.97	.065	.07	474
July	37.8	2.1	.7	1.22	.0099	.01	75
August	5.0	.7	0	.16	.0013	.002	9.9
September	15.4	3.0	0	.51	.0041	.005	31
Water year 1939-40	53,942.1	1,770	0	147	1.20	16.30	107,000

d Doubtful gage-height record; discharge computed on basis of records for Long Tom River at Smithfield.
g Computed from graph based on gage readings.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101684-O U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum of gage is 527.30 feet above mean sea level (general adjustment of 1929).

Drainage area.- 99 square miles.

Records available.- September 1935 to September 1940.

Extremes.- Maximum discharge observed during year, 2,400 second-feet Feb. 6 (gage height, 5.48 feet); minimum observed, 13 second-feet (regulated) Sept. 8 (gage height, 0.52 foot).

1935-40: Maximum discharge, 6,200 second-feet Jan. 4, 1936 (gage height, about 9.2 feet, from graph based on gage readings); minimum observed, that of Sept. 8, 1940.

Maximum stage known, 10.6 feet, probably in February 1927, from floodmarks noted in 1935 (discharge not determined).

Remarks.- Records good except that for Sept. 8, which was regulated by log pond above and may not represent accurately the daily average discharge. No diversion above station; slight regulation at times during low-water periods by small dam upstream. Gage read once daily; oftener during periods of high water.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.5	12	1.5	140	3.5	975
.6	15	1.8	219	4.0	1,280
.8	28	2.1	321	4.5	1,620
1.0	50	2.5	480	5.0	2,000
1.2	80	3.0	710	5.5	2,400

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	67	64	460	225	1,480	735	392	114	44	28	18
2	22	60	53	480	204	1,620	660	306	106	42	26	18
3	22	70	50	489	196	1,250	570	267	93	40	26	26
4	44	58	45	516	302	1,040	525	306	87	40	25	26
5	190	51	40	579	525	854	464	376	84	38	25	22
6	77	49	43	516	1,770	735	408	416	80	37	24	20
7	63	46	45	432	2,040	695	392	360	77	36	23	19
8	44	45	75	400	1,480	1,040	476	310	84	36	22	13
9	35	57	380	448	1,280	800	570	270	77	36	22	22
10	31	46	948	624	1,660	685	525	244	72	35	22	22
11	29	43	785	516	1,340	592	448	219	69	35	21	21
12	27	42	460	456	1,060	507	392	202	67	34	21	20
13	26	39	321	384	1,960	456	344	190	64	34	20	20
14	26	49	257	337	1,380	408	306	180	64	33	20	27
15	25	43	865	302	1,120	376	284	169	61	32	20	30
16	24	39	1,480	277	1,100	420	267	159	60	32	20	26
17	24	37	1,340	257	1,700	408	250	150	58	32	20	23
18	42	37	887	234	1,410	368	231	145	57	31	20	39
19	35	37	638	219	1,000	329	219	136	57	30	19	39
20	39	35	785	207	800	302	204	129	57	31	19	27
21	43	34	690	195	710	277	190	127	56	36	19	22
22	33	40	570	182	615	264	185	118	53	36	19	22
23	29	42	460	169	543	244	180	114	53	31	19	20
24	94	37	380	167	498	257	187	110	50	29	19	20
25	63	35	321	213	1,060	231	190	108	48	28	19	20
26	72	34	284	302	1,620	606	169	104	48	29	18	22
27	314	40	250	615	1,810	1,620	164	98	46	48	18	114
28	284	37	284	416	2,160	1,440	207	94	45	45	20	190
29	154	35	502	329	1,840	1,060	284	91	45	34	20	74
30	104	36	570	284	-	931	360	94	45	32	19	46
31	80	-	489	247	-	800	-	122	-	28	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,115	314	20	68.2	0.689	0.79	4,200
November	1,320	70	34	44.0	.444	.50	2,620
December	14,361	1,480	40	463	4.68	5.39	28,480
Calendar year 1939	111,185	3,550	19	305	3.08	41.75	220,500
January	11,242	624	167	363	3.67	4.22	22,300
February	33,408	2,160	196	1,152	11.6	12.55	66,260
March	22,095	1,620	231	713	7.20	8.30	43,820
April	10,386	735	164	346	3.49	3.90	20,600
May	6,106	416	91	197	1.99	2.29	12,110
June	1,977	114	45	65.9	.666	.74	3,920
July	1,084	48	28	35.0	.354	.41	2,150
August	651	28	18	21.0	.212	.24	1,290
September	1,028	190	13	34.3	.346	.39	2,040
Water year 1939-40	105,773	2,160	13	289	2.92	39.72	209,800

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

North Santiam River at Detroit, Oreg.

Location.- Water-stage recorder, lat. 44°43', long. 122°08', in NE¼ sec. 12, T. 10 S., R. 5 E., 1 mile east of Detroit. Datum of gage is 1,475.68 feet above mean sea level (general adjustment of 1929).

Drainage area.- 224 square miles.

Records available.- January 1907 to October 1909, October 1928 to September 1940. August 1910 to October 1913, at site above Boulder Creek (records not equivalent).

Average discharge.- 13 years (1907-8, 1928-40), 914 second-feet.

Extremes.- Maximum discharge during year, 4,820 second-feet Feb. 6 (gage height, 5.67 feet); minimum, 290 second-feet (regulated) Aug. 26 (gage height, 0.37 foot); minimum daily, 315 second-feet Sept. 1, 6.

1907-9, 1910-11, 1928-40: 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, that of Aug. 26, 1940.

Remarks.- Records good except those for periods of no gage-height record, which are fair. No diversion above station; slight diurnal fluctuation beginning in June 1940 from power plant at Idanha.

Cooperation.- Water-stage recorder inspected by employees of U. S. Forest Service.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.5	315	1.7	770	3.5	2,020
.8	392	2.1	990	4.0	2,520
1.1	500	2.5	1,220	4.6	3,220
1.4	625	3.0	1,590	5.4	4,380

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	343	367	372	1,260	842	2,400	1,650	1,030	552	392	359	315
2	346	361	372	1,220	814	2,550	1,470	968	528	389	356	320
3	343	364	356	1,220	e25	2,090	1,350	908	504	389	354	324
4	378	359	348	1,260	952	1,840	1,260	913	488	384	351	320
5	500	354	348	1,180	1,260	1,720	1,170	918	476	378	351	317
6	430	351	351	1,060	4,380	1,520	1,090	886	468	370	348	315
7	400	351	351	968	2,990	1,650	1,140	836	476	370	346	326
8	380	364	424	902	2,270	1,930	1,260	808	460	370	338	322
9	370	361	556	896	1,950	1,670	1,540	808	453	370	338	333
10	360	356	781	968	2,500	1,480	1,370	e14	446	367	336	338
11	355	351	652	891	1,990	1,320	1,260	798	449	372	338	331
12	350	348	536	830	1,760	1,190	1,210	770	460	370	338	343
13	345	348	492	770	1,920	1,110	1,190	730	460	370	333	343
14	340	351	596	720	1,670	1,050	1,130	700	435	370	329	336
15	340	351	1,280	685	1,450	1,040	1,060	670	435	372	329	348
16	340	351	2,020	656	1,430	1,180	984	652	428	370	326	359
17	350	351	1,850	625	1,490	1,090	930	638	424	364	331	346
18	360	356	1,300	616	1,360	1,040	908	625	424	361	331	386
19	350	354	1,130	598	1,230	1,000	874	612	435	364	333	350
20	361	351	1,220	576	1,130	984	836	602	424	369	331	335
21	354	351	1,100	564	1,060	974	798	584	405	378	329	330
22	348	359	957	548	1,010	968	776	580	402	367	317	325
23	348	356	836	540	940	974	803	589	402	364	320	320
24	381	351	740	536	940	1,020	776	584	408	364	320	325
25	364	348	666	540	1,640	1,050	792	560	414	361	320	320
26	395	351	630	666	2,450	1,900	740	536	405	392	320	340
27	520	356	612	891	2,500	2,450	715	524	392	435	324	440
28	464	351	891	825	2,760	2,120	830	512	389	381	324	430
29	405	348	1,320	820	2,630	2,010	830	508	392	370	322	370
30	386	370	1,340	847	-	1,910	984	512	389	370	322	350
31	372	-	1,280	858	-	1,800	-	564	-	361	320	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	11,678	520	340	377	1.68	1.94	23,160
November	10,641	370	348	355	1.58	1.77	21,110
December	25,709	2,020	348	829	3.70	4.27	50,990
Calendar year 1939	283,652	2,430	338	777	3.47	47.10	562,600
January	25,536	1,260	536	824	3.68	4.24	50,650
February	50,143	4,380	814	1,729	7.72	8.33	99,460
March	47,030	2,550	968	1,517	6.77	7.81	93,280
April	31,726	1,650	715	1,058	4.72	5.27	62,930
May	31,739	1,030	508	701	3.13	3.61	43,120
June	13,223	552	389	441	1.97	2.20	26,230
July	11,624	435	361	375	1.67	1.93	23,060
August	10,334	359	317	333	1.49	1.72	20,500
September	10,257	440	315	342	1.53	1.70	20,340
Water year 1939-40	269,640	4,380	315	737	3.29	44.79	534,800

Peak discharge.- Feb. 6 (11:30 a.m.) 4,820 sec.-ft.; Feb. 28 (6 p.m.) 3,050 sec.-ft.; Mar. 26 (9 p.m.) 2,670 sec.-ft.

Note.- No gage-height record for periods Oct. 5-19, Sept. 19-30; discharge computed on basis of records for station above Mayflower Creek, near Detroit.

9-233 April 1936

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

North Santiam River above Mayflower Creek, near Detroit, Oreg.

Location.- Water-stage recorder, lat. 44°44', long. 122°15', in NW¼ sec. 7, T. 10 S., R. 5 E., 850 feet downstream from axis of Detroit dam site, 0.3 mile upstream from mouth of Mayflower Creek, and 5 miles west of Detroit. Datum of gage is 1,192.06 feet above mean sea level (bench mark of Corps of Engineers, U. S. Army). Prior to Oct. 1, 1939, staff gage at site a quarter of a mile upstream, at different datum.

Drainage area.- 438 square miles.

Records available.- October 1938 to September 1940.

Extremes.- Maximum discharge during year, 13,600 second-feet Feb. 6 (gage height, 10.52 feet); minimum, 416 second-feet Sept. 22 (gage height, 2.94 feet).
1938-40: Maximum discharge, that of Feb. 6, 1940; minimum, that of Sept. 22, 1940.

Remarks.- Records good except those for period Oct. 1 to Nov. 16, which are fair. No diversion above station; slight diurnal fluctuation from power plant at Idanha.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

2.9	400	4.0	990	5.6	2,640	7.5	6,000
3.1	480	4.4	1,300	6.0	3,200	8.0	7,100
3.4	620	4.8	1,680	6.5	4,020	9.0	9,500
3.7	790	5.2	2,140	7.0	4,980	10.0	12,100

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a470	585	590	2,820	1,730	5,640	3,520	2,530	997	580	512	432
2	a475	565	600	2,700	1,620	6,150	3,090	2,220	934	560	504	440
3	a470	570	565	2,570	1,630	4,820	2,780	1,950	857	575	496	468
4	565	535	540	2,780	2,140	4,070	2,500	1,910	832	570	488	452
5	857	a525	525	2,680	3,170	3,700	2,280	2,070	802	560	484	444
6	635	516	535	2,320	11,350	3,200	2,100	2,010	784	550	480	436
7	600	516	525	2,030	7,820	3,540	2,180	1,800	802	550	480	448
8	a525	535	848	1,830	5,640	4,440	2,500	1,680	778	550	476	452
9	512	535	1,290	1,800	5,160	5,620	3,360	1,640	754	550	472	456
10	508	516	2,530	2,200	6,620	3,070	2,910	1,690	754	545	468	512
11	500	516	1,900	2,000	5,140	2,710	2,570	1,640	766	545	468	468
12	492	a505	1,340	1,740	4,020	2,380	2,430	1,530	766	540	468	464
13	492	500	1,120	1,580	4,620	2,160	2,360	1,420	784	535	456	500
14	484	508	1,480	1,450	3,930	2,010	2,200	1,330	742	530	452	492
15	a480	500	4,450	1,340	3,220	1,960	2,000	1,280	724	530	448	488
16	476	492	6,680	1,260	3,230	2,400	1,790	1,230	712	520	448	580
17	492	488	5,380	1,200	3,710	2,220	1,680	1,180	682	516	452	508
18	530	488	3,490	1,170	3,300	2,040	1,640	1,170	676	508	448	565
19	565	492	2,780	1,120	2,880	1,910	1,600	1,130	688	512	456	520
20	575	480	3,200	1,070	2,530	1,880	1,510	1,110	682	580	448	480
21	525	472	2,920	1,020	2,280	1,830	1,430	1,050	645	560	452	464
22	a490	492	2,320	997	2,130	1,800	1,370	1,070	630	525	444	448
23	492	484	1,910	969	1,920	1,790	1,480	1,070	620	516	444	440
24	600	480	1,630	934	1,910	1,910	1,450	1,060	620	512	444	444
25	545	476	1,430	934	5,190	1,960	1,470	997	630	512	440	440
26	676	484	1,290	1,180	7,270	4,250	1,360	927	615	540	440	448
27	1,260	520	1,220	2,100	6,550	5,780	1,300	892	595	688	452	820
28	1,080	496	2,130	1,840	7,010	4,820	1,690	871	590	570	444	802
29	796	488	3,680	1,860	6,420	4,620	1,730	871	590	545	440	585
30	682	560	3,420	1,900	-	4,310	2,230	885	585	530	440	530
31	620	-	2,990	1,840	-	3,840	-	1,000	-	520	436	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	18,469	1,260	470	596	1.36	1.57	36,630
November	15,319	585	472	511	1.17	1.30	30,380
December	65,308	6,680	525	2,107	4.81	5.55	129,500
Calendar year 1939	569,606	6,910	470	1,561	3.56	48.37	1,130,000
January	53,234	2,820	934	1,717	3.92	4.52	105,600
February	124,140	11,300	1,620	4,281	9.77	10.54	246,200
March	100,830	6,150	1,790	3,253	7.43	8.56	200,000
April	62,510	3,520	1,300	2,084	4.76	5.31	124,000
May	43,213	2,530	871	1,394	3.18	3.67	85,710
June	21,636	997	585	721	1.65	1.84	42,910
July	16,944	688	508	547	1.25	1.44	33,610
August	14,280	512	436	461	1.05	1.21	28,320
September	15,046	820	432	502	1.15	1.28	29,840
Water year 1939-40	550,929	11,300	432	1,505	3.44	46.79	1,093,000

Peak discharge.- Dec. 16 (12:30 a.m.) 8,350 sec.-ft.; Feb. 6 (11 a.m.) 13,600 sec.-ft.; Feb. 25 (9 p.m.) 8,660 sec.-ft.
a No gage-height record; discharge computed on basis of records for station at Detroit and Brietenbush River above French Creek near Detroit.
Note.- Staff-gage readings twice daily Oct. 4-7, 9-14, 16-21, Oct. 23-Nov. 4, Nov. 6-11, 13-16.

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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 Little North Santiam River. Datum 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 1940.

Average discharge.- 24 years (1905-6, 1910-14, 1921-40), 3,200 second-feet.

Extremes.- Maximum discharge during year, 19,900 second-feet Feb. 6 (gage height, 8.76 feet); minimum, 434 second-feet Aug. 26 (gage height, 1.48 feet).
1905-7, 1910-14, 1921-40: 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. Slight regulation of low flow by mill dam at Mill City. No diversion above station for irrigation.

Cooperation.- Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	554	900	990	4,530	2,390	8,970	a5,800	4,320	1,280	642	596	484
2	540	852	920	4,140	2,220	10,200	5,230	3,890	1,220	650	589	484
3	519	861	852	3,930	2,170	7,940	4,550	3,320	1,110	626	582	519
4	616	798	789	4,200	2,930	6,680	4,000	3,130	1,060	610	575	505
6	1,530	762	753	4,250	4,640	6,160	3,630	3,530	1,010	603	554	505
6	960	735	762	3,670	17,300	5,230	3,240	3,570	980	589	547	491
7	825	708	735	3,200	13,600	5,630	3,190	3,150	1,000	589	540	491
8	699	735	1,070	2,860	10,400	7,770	3,930	2,800	1,010	596	533	519
9	642	753	2,120	2,770	9,580	6,020	5,720	2,580	930	596	533	519
10	610	717	5,210	3,830	11,800	4,960	4,930	2,510	890	589	533	589
11	582	682	4,510	3,450	9,240	4,270	4,120	2,390	890	589	519	533
12	568	666	3,000	2,970	7,170	3,710	3,710	2,220	890	582	519	526
13	561	666	2,310	a2,600	8,590	3,320	3,510	2,030	890	582	512	582
14	547	682	2,530	a2,300	7,360	3,000	3,220	1,880	861	603	512	582
15	547	658	8,710	a2,100	5,890	2,910	2,930	1,800	816	603	505	547
16	540	634	12,900	1,960	5,740	3,830	2,610	1,720	798	596	505	634
17	575	634	10,700	1,860	7,200	3,570	2,390	1,610	780	603	505	603
18	717	634	7,030	1,790	6,450	3,170	2,280	1,530	771	596	505	674
19	674	618	5,210	1,720	5,400	2,860	2,220	1,460	771	589	498	674
20	825	603	6,060	1,720	4,620	2,730	2,090	1,410	771	658	512	582
21	735	596	5,740	1,560	4,040	2,660	1,940	1,340	735	682	498	547
22	658	626	4,350	1,510	3,590	2,610	1,860	1,350	708	626	491	526
23	642	634	3,490	1,460	3,170	2,530	2,110	1,330	690	603	491	505
24	861	603	2,880	1,410	3,090	2,660	2,360	1,310	690	596	484	505
25	798	596	2,440	1,410	9,050	2,700	2,230	1,270	690	596	484	498
26	1,020	596	2,150	1,610	12,600	5,810	2,060	1,250	682	658	477	526
27	2,410	674	1,980	3,170	10,600	9,360	1,960	1,170	666	920	491	1,040
28	2,460	658	3,710	2,890	11,400	8,480	3,110	1,150	658	753	491	1,560
29	1,580	626	6,610	2,730	10,300	7,690	3,320	1,100	650	650	484	920
30	1,220	780	6,240	2,700	-	7,280	3,360	1,110	650	618	477	735
31	1,030	-	5,000	2,600	-	a6,300	-	1,260	-	610	477	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	27,045	2,460	519	872	1.31	1.51	53,640
November	20,687	900	596	690	1.04	1.16	41,030
December	121,751	12,900	735	3,927	5.91	6.81	241,500
Calendar year 1939	884,604	14,800	519	2,424	3.65	49.47	1,755,000
January	82,920	4,530	1,410	2,675	4.02	4.64	164,500
February	212,530	17,300	2,170	7,329	11.0	11.89	421,500
March	161,010	10,200	2,530	5,194	7.81	9.00	319,400
April	98,110	5,800	1,860	3,270	4.92	5.49	194,600
May	64,990	4,820	1,100	2,096	3.15	3.63	128,900
June	25,547	1,280	650	852	1.28	1.43	50,670
July	19,403	920	582	626	.941	1.09	38,490
August	16,019	596	477	517	.777	.90	31,770
September	18,405	1,560	484	614	.923	1.03	36,510
Water year 1939-40	868,417	17,300	477	2,373	3.57	48.58	1,723,000

Peak discharge.- Dec. 16 (2 a.m.) 15,900 sec.-ft.; Feb. 6 (11:30 p.m.) 19,900 sec.-ft.; Feb. 25 (10 p.m.) 15,900 sec.-ft.

a No gage-height record; discharge computed on basis of records for station above Mayflower Creek, near Detroit.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

Santiam River at Jefferson, Oreg.

Location.- Staff gage, lat. 44°42'55", long. 123°00'45", in E½ sec. 11, T. 10 S., R. 3 W., in Jefferson, at railroad bridge, 2 miles downstream from confluence of North Santiam and South Santiam Rivers and 9 miles upstream from mouth. Datum of gage is 202.63 feet above mean sea level.

Drainage area.- 1,790 square miles.

Records available.- July 1905 to July 1906 (gage heights only), October 1907 to September 1916, October 1939 to September 1940, in reports of Geological Survey. April 1904 to September 1937 (gage heights only, incomplete 1904-7, 1923-28) in reports of U. S. Weather Bureau.

Extremes.- Maximum discharge during year, 52,700 second-feet Feb. 6 or 7 (gage height, 11.5 feet, from floodmark); minimum observed, 260 second-feet Aug. 15-22, Aug. 24 to Sept. 2 (gage height, -1.00 foot).

1905-6, 1907-16, 1939-40: Maximum discharge observed, 108,000 second-feet during night of Nov. 22, 1909 (gage height, 18.2 feet), from poorly defined extension of rating curve above 54,000 second-feet; minimum observed, that of Aug. 15-22, Aug. 24 to Sept. 2, 1940.

Maximum stage known, 19.5 feet Nov. 21, 1921.

Remarks.- Records fair to Aug. 22, good thereafter. Salem canal diverts from North Santiam River at Salem for irrigation and power use, most of this water reaching Willamette River through Mill Creek at Salem. Stayton canal diverts from North Santiam River at Stayton for irrigation of lands near West Stayton; some return flow reaches North Santiam River above station. Albany power canal diverts from South Santiam River at Lebanon, return flow reaching Willamette River at Albany. No regulation. Staff gage read once daily, oftener during floods, from Oct. 1 to Sept. 20; water-stage recorder used September 21 to September 30.

Cooperation.- Gage readings furnished by U. S. Weather Bureau.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

-1.0	260	1.0	2,400	4.0	8,900	8.0	26,800
-.5	570	1.5	3,280	5.0	12,100	9.0	33,400
0.	1,020	2.0	4,250	6.0	16,100	10.0	40,700
+.5	1,640	3.0	6,400	7.0	21,000	11.0	48,560

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	310	1,930	1,020	10,700	5,080	26,200	15,200	10,400	1,930	500	500	260
2	310	1,500	1,250	9,770	4,660	29,300	13,200	8,100	1,930	500	430	260
3	310	1,500	1,130	8,900	4,250	24,400	10,700	7,110	1,640	486	430	310
4	365	1,310	1,020	9,770	5,080	18,400	10,100	6,400	1,500	500	365	354
5	1,020	1,130	1,020	10,400	8,630	16,100	8,900	7,350	1,500	500	365	354
6	2,240	1,020	920	9,180	30,700	14,000	7,600	8,360	1,370	500	365	338
7	1,780	1,020	920	8,100	41,500	11,700	7,110	7,350	1,370	500	365	321
8	1,020	1,020	1,020	7,600	30,300	21,000	7,850	6,400	1,370	430	365	321
9	d850	1,130	2,920	7,110	28,000	16,100	9,770	5,290	1,250	430	365	360
10	d750	1,020	6,870	9,180	30,000	13,600	11,000	5,080	1,250	430	365	354
11	d690	920	15,200	8,900	30,300	11,400	8,900	4,660	1,130	430	310	398
12	d650	S25	9,470	8,630	22,600	d9,500	8,100	4,250	1,020	430	310	365
13	d620	735	6,400	7,350	21,500	d8,400	7,350	4,050	1,020	430	310	348
14	d590	S25	5,080	6,400	26,800	d7,400	6,400	3,470	1,020	430	310	372
15	570	S25	9,470	5,950	19,400	6,630	6,170	3,280	920	430	260	398
16	570	735	35,200	5,080	15,200	7,350	5,510	3,100	920	430	260	378
17	570	735	29,000	4,660	21,000	8,360	5,080	2,920	825	430	260	500
18	650	735	23,200	4,250	23,800	7,350	4,660	2,740	825	430	260	535
19	650	650	14,800	4,250	18,000	6,400	4,250	2,400	S25	430	260	610
20	825	650	13,200	3,850	14,000	5,950	4,050	2,400	S25	430	260	570
21	920	d640	15,700	3,280	11,700	5,950	4,050	2,240	S25	430	260	486
22	1,020	d660	12,100	3,100	10,100	5,510	3,660	2,240	735	430	260	410
23	920	d720	9,470	3,100	8,900	5,290	3,470	2,080	735	430	265	398
24	920	d820	7,350	2,740	8,900	5,080	3,470	2,080	735	430	260	391
25	1,500	d790	6,400	2,740	9,470	5,080	4,050	1,930	650	365	260	378
26	1,500	d760	5,730	4,250	38,100	6,400	3,850	1,930	650	500	260	378
27	2,740	735	5,080	6,400	30,700	23,800	3,660	1,780	570	570	260	626
28	7,350	735	5,080	7,600	31,300	26,800	3,470	1,640	570	920	260	2,180
29	4,660	S25	11,400	6,400	33,000	19,400	8,100	1,640	570	735	260	1,780
30	2,740	735	15,700	5,730	-	20,000	5,950	1,500	500	570	260	1,090
31	2,240	-	12,100	5,290	-	16,100	-	1,640	-	500	260	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	41,850	7,350	310	1,350	83,010
November	27,635	1,930	640	921	54,810
December	285,220	35,200	920	9,201	565,700
Calendar year	-	-	-	-	-
January	200,660	10,700	2,740	6,473	398,000
February	582,970	41,500	4,250	20,100	1,156,000
March	408,950	29,300	5,080	13,190	811,100
April	205,630	15,200	3,470	6,854	407,900
May	125,810	10,400	1,500	4,058	249,500
June	30,980	1,930	500	1,033	61,450
July	14,956	920	365	482	29,660
August	9,580	500	260	309	19,000
September	15,823	2,180	260	527	31,380
Water year 1939-40	1,950,064	41,500	260	5,328	3,868,000

d Doubtful gage height record; discharge computed on basis of records for North Santiam river at Waterloo and South Santiam River at Waterloo.

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. Datum of gage is 1,559.64 feet above mean sea level (general adjustment of 1929).

Drainage area.- 108 square miles.

Records available.- June 1932 to September 1940. October 1910 to October 1913 (fragmentary), at site below French Creek; records equivalent except for inflow from French Creek.

Extremes.- Maximum discharge during year, 4,420 second-feet Feb. 6 (gage height, 6.45 feet); minimum, 87 second-feet Sept. 2 (gage height, 0.36 foot).
1932-40: Maximum discharge, 8,100 second-feet Dec. 22, 1933 (gage height, 9.08 feet), from rating curve extended above 4,700 second-feet; minimum, that of Sept. 2, 1940.

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

Cooperation.- Water-stage recorder inspected by employee of U. S. Forest Service.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.3	80	2.0	520	5.0	2,720
.6	117	2.5	765	5.5	3,270
.9	166	3.0	1,060	6.0	3,870
1.2	235	3.5	1,400		
1.6	360	4.0	1,780		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	98	128	130	804	452	1,470	922	809	318	140	116	90
2	101	123	134	743	416	1,600	798	710	292	139	114	93
3	99	126	122	670	428	1,270	721	606	262	137	111	101
4	143	120	104	732	578	1,070	660	583	257	134	109	96
5	224	116	110	700	1,020	970	560	592	240	132	106	96
6	146	113	111	596	3,690	832	565	574	235	130	103	91
7	129	110	109	529	2,160	964	596	524	248	129	103	96
8	117	118	198	476	1,530	1,170	695	492	228	128	102	95
9	111	114	315	460	1,450	928	952	520	228	126	101	97
10	107	110	640	508	1,900	782	770	578	235	126	99	109
11	104	107	448	476	1,400	700	695	570	243	124	99	95
12	103	106	312	424	1,070	625	680	512	240	124	99	101
13	101	104	257	384	1,200	574	685	444	238	123	99	109
14	99	106	378	353	1,020	534	630	416	218	122	98	107
15	98	103	1,230	328	832	534	560	404	209	122	98	124
16	98	102	1,360	312	844	655	500	380	202	120	97	137
17	110	101	1,410	299	1,010	592	468	368	193	120	95	114
18	118	102	868	292	868	547	476	372	191	118	95	130
19	116	99	700	280	754	512	472	364	191	120	95	117
20	129	98	814	265	685	500	440	356	183	158	93	103
21	114	97	743	254	625	492	404	336	174	135	95	97
22	109	104	583	246	583	488	388	353	166	124	93	95
23	110	101	476	235	534	488	456	353	162	122	93	92
24	146	98	396	230	538	534	420	350	160	118	93	90
25	123	97	346	228	1,660	552	428	318	158	117	92	90
26	167	103	315	324	2,230	1,240	392	280	155	137	91	96
27	299	111	299	529	1,870	1,530	372	262	151	181	95	234
28	292	103	712	452	1,940	1,220	520	259	147	139	95	204
29	198	101	1,300	484	1,680	1,250	504	265	144	126	91	140
30	160	128	1,010	500	-	1,130	733	277	142	123	90	122
31	140	-	868	484	-	1,020	-	322	-	120	89	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	4,209	299	98	136	1.26	1.45	8,350
November	3,249	128	97	108	1.00	1.12	6,440
December	17,298	1,860	104	558	5.17	5.96	34,310
Calendar year 1939	146,480	1,880	97	401	3.71	50.44	290,600
January	13,597	804	228	439	4.06	4.68	26,970
February	34,967	3,690	416	1,206	11.2	12.04	69,360
March	26,773	1,600	488	864	8.00	9.22	53,100
April	17,462	952	372	582	5.39	6.01	34,640
May	13,549	809	259	437	4.05	4.67	26,870
June	6,210	318	142	207	1.92	2.14	12,320
July	4,014	181	117	129	1.19	1.38	7,960
August	3,049	116	89	98.4	.911	1.05	6,050
September	3,361	234	90	112	1.04	1.16	6,670
Water year 1939-40	147,738	3,690	89	404	3.74	50.88	293,000

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
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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. Datum 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 1940. July to September 1924 and July to September 1931, at site 4 miles upstream.

Extremes.- Maximum discharge observed during year, 8,200 second-feet Feb. 6 (gage height, 10.0 feet, from graph based on staff-gage readings); minimum observed, 21 second-feet Sept. 1 (gage height, 2.09 feet).

1924, 1931-40: Maximum discharge, 18,900 second-feet Dec. 22, 1933 (gage height, 14.7 feet, from floodmark), from rating curve extended above 10,000 second-feet; minimum observed, 21 second-feet Sept. 11, 1934, Sept. 27, 28, 1938, Sept. 1, 1940.

Remarks.- Records fair. No regulation or diversion above station. Gage read twice daily, October to June; once daily, July to September.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

2.0	16	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	10.0	8,200
4.0	398	6.5	2,140		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	212	340	983	390	1,790	1,250	1,900	147	44	41	21
2	25	132	275	829	322	1,600	961	1,100	128	44	38	27
3	25	d190	207	774	344	1,420	878	796	120	44	38	28
4	55	171	150	917	530	1,400	605	752	111	43	35	26
5	326	d150	117	862	g1,520	1,390	620	834	106	42	34	23
6	250	133	120	660	g7,080	1,160	546	862	101	41	32	23
7	182	d120	117	595	g4,270	1,100	650	807	111	41	31	23
8	149	130	226	560	3,070	1,940	873	695	106	40	30	26
9	106	118	g508	551	2,700	1,140	1,900	595	101	39	29	28
10	91	114	g1,520	1,130	g2,870	978	1,210	556	97	38	28	35
11	81	111	1,630	873	2,310	807	878	503	90	38	27	31
12	72	108	1,110	660	2,080	685	710	423	85	36	27	28
13	69	105	752	595	2,800	580	680	337	81	37	26	38
14	64	131	752	512	1,720	512	551	302	78	35	26	43
15	53	114	2,680	458	1,280	458	475	275	73	35	26	34
16	51	100	5,480	406	1,390	512	411	238	70	34	26	32
17	66	97	3,650	382	1,440	774	319	210	67	34	26	39
18	175	92	3,750	371	1,510	650	337	185	66	34	24	69
19	202	90	1,330	352	1,320	551	298	169	67	38	24	67
20	192	87	2,310	319	1,110	517	329	177	65	45	23	45
21	145	87	1,940	282	1,000	484	202	177	64	53	23	34
22	128	92	1,160	269	790	449	285	158	61	42	23	29
23	120	90	922	226	675	436	415	156	58	34	23	28
24	218	90	730	215	605	462	610	147	56	33	23	26
25	164	90	620	199	4,230	489	517	140	54	33	23	26
26	177	88	551	d350	3,820	1,400	419	136	52	44	23	25
27	1,070	92	522	d800	2,740	2,490	398	130	50	147	23	134
28	1,020	95	2,300	d500	3,070	2,410	1,160	126	50	88	23	390
29	560	97	2,770	d350	2,680	1,940	1,120	123	48	53	22	150
30	363	229	2,250	d380	-	1,600	1,440	120	46	47	22	108
31	272	-	1,230	390	-	1,400	-	149	-	43	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	6,497	1,070	24	210	1.91	2.20	12,890
November	3,605	229	87	120	1.09	1.22	7,150
December	42,019	5,480	117	1,355	12.3	14.21	83,340
Calendar year 1939	201,849	6,980	23	553	5.03	68.23	400,400
January	16,750	1,130	199	540	4.91	5.66	33,220
February	59,716	7,080	322	2,059	18.7	20.19	118,400
March	33,524	2,490	436	1,081	9.83	11.33	66,490
April	21,047	1,900	202	702	6.38	7.12	41,750
May	13,278	1,900	120	428	3.89	4.49	26,340
June	2,408	147	46	80.3	.730	.81	4,780
July	1,399	147	33	45.1	.410	.47	2,770
August	841	41	22	27.1	.246	.28	1,670
September	1,636	390	21	54.5	.495	.55	3,240
Water year 1939-40	202,720	7,080	21	554	5.04	68.53	402,000

d Doubtful gage-height record; discharge computed on basis of records for North Santiam River at Mehama.

g Computed from graph based on gage readings.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. al Survey

101664-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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 1⅛ miles southwest of Cascadia. Gaging cable is 0.7 mile upstream, above Tollgate Creek. Datum of gage is 759.27 feet above mean sea level (general adjustment of 1929).

Drainage area.- 174 square miles, at gaging cable.

Records available.- September 1935 to September 1940. Records do not include the runoff from 3 square miles between cable and gage.

Extremes.- Maximum discharge during year, 4,550 second-feet Feb. 28 (gage height, 8.04 feet); minimum, 29 second-feet Sept. 1 (gage height, 1.54 feet).
1935-40: 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 diversions or regulation above station.

Cooperation.- Water-stage recorder inspected by employees of U. S. Forest Service.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 5

1.3	44	2.5	275	4.0	1,000
1.6	79	3.0	490	5.0	1,660
2.0	138	3.5	735	6.0	2,460

Feb. 6 to Sept. 30

1.5	23	3.0	455	6.0	2,410
1.8	79	3.5	690	7.0	3,380
2.2	178	4.0	970	8.0	4,500
2.6	305	5.0	1,620		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	133	105	1,010	454	2,600	1,500	940	229	52	54	29
2	56	123	100	1,010	409	2,900	1,260	778	195	50	52	36
3	58	124	93	995	414	2,200	1,080	655	164	50	50	43
4	72	114	84	1,040	530	1,760	928	696	148	48	48	41
5	279	106	82	1,080	720	1,520	822	816	144	48	47	41
6	126	102	88	928	3,230	1,260	728	866	134	48	45	39
7	106	98	87	785	3,060	1,380	740	750	138	50	45	37
8	88	106	339	705	2,480	1,910	904	650	136	50	43	47
9	79	106	604	834	2,340	1,520	1,070	581	124	50	43	41
10	71	96	1,620	1,200	3,570	1,260	946	514	116	52	43	41
11	67	91	1,020	1,280	2,700	1,080	828	460	112	52	43	39
12	65	88	645	856	1,920	940	745	427	104	54	41	37
13	62	84	476	715	2,720	838	675	395	102	54	41	41
14	61	84	575	620	2,080	756	625	368	100	54	41	56
15	60	79	1,480	545	1,570	723	595	336	97	54	39	48
16	59	76	2,230	494	1,540	916	545	319	93	50	39	47
17	64	74	2,190	450	2,200	855	509	302	90	50	39	50
18	72	74	1,420	409	1,870	767	482	274	86	50	37	66
19	74	74	1,030	373	1,470	696	455	257	84	50	36	64
20	99	71	1,330	a350	1,190	660	435	248	81	54	36	47
21	86	70	1,290	a340	1,010	640	419	235	79	73	34	39
22	72	76	980	a330	888	620	391	226	75	48	34	37
23	75	76	765	a320	778	600	411	213	73	43	34	36
24	130	72	625	a310	772	635	423	204	68	43	33	33
25	100	70	517	a330	1,750	615	427	195	62	43	31	31
26	245	69	468	635	2,980	1,490	387	184	60	47	31	39
27	738	75	445	1,160	3,190	2,680	383	175	58	100	31	226
28	522	74	811	812	3,880	2,250	605	170	58	86	33	232
29	275	71	1,210	655	3,300	1,880	690	159	56	64	34	109
30	189	86	1,280	570	-	1,650	877	167	54	58	31	75
31	151	-	1,090	504	-	1,600	-	244	-	54	31	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	4,253	738	52	137	0.787	0.91	8,440
November	2,642	133	69	88.1	.506	.56	5,240
December	25,079	2,230	82	809	4.65	5.36	49,740
Calendar year 1939	208,571	4,980	51	571	3.28	44.55	413,700
January	21,645	1,280	310	698	4.01	4.63	42,930
February	55,015	3,880	409	1,897	10.9	11.76	109,100
March	41,201	2,900	600	1,329	7.64	8.81	81,720
April	20,885	1,500	383	696	4.00	4.46	41,420
May	12,804	940	159	413	2.37	2.74	25,400
June	3,120	229	54	104	.598	.67	6,190
July	1,679	100	43	54.2	.311	.36	3,330
August	1,219	54	31	39.3	.226	.26	2,420
September	1,747	232	29	58.2	.334	.37	3,470
Water year 1939-40	191,289	3,880	29	523	3.01	40.89	379,400

Peak discharge.- Feb. 6 (11 a.m.) 4,110 sec.-ft.; Feb. 28 (2 p.m.) 4,550 sec.-ft.
a No gage-height record; discharge computed on basis of stations at Waterloo and near Foster.

9-233 April 1936
UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum 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 1940.

Average discharge.- 18 years (1905-6, 1923-40), 2,692 second-feet.

Extremes.- Maximum discharge during year, 16,600 second-feet Feb. 6 (gage height, 9.55 feet); minimum, 96 second-feet Sept. 1, 2 (gage height, 1.98 feet).
1905-7, 1910-11, 1923-40: Maximum discharge, 70,000 second-feet Mar. 31, 1931 (gage height, 22.0 feet), from rating curve extended above 31,000 second-feet; minimum, that of Sept. 1, 2, 1940.

Remarks.- Records excellent except those for periods of no gage-height record, which are good. No diversion or regulation above station.

Cooperation.- Gage-height record collected in cooperation with U. S. Weather Bureau.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

2.0	101	3.5	1,260	7.0	8,500
2.2	167	4.0	1,950	8.0	11,600
2.4	253	4.5	2,780	8.5	13,200
2.7	465	5.0	3,690		
3.0	730	6.0	5,810		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	626	599	a3,900	1,590	9,820	5,160	3,610	825	253	196	98
2	136	545	521	a3,350	1,460	11,100	4,460	2,800	749	253	179	104
3	150	529	497	3,500	1,440	8,560	3,860	2,390	654	248	167	136
4	167	497	428	3,730	1,890	6,720	3,340	2,340	608	243	160	146
5	1,080	450	376	4,060	2,700	5,860	2,940	2,800	581	233	153	136
6	711	412	376	3,560	12,900	4,880	2,580	3,070	554	228	146	129
7	563	383	390	3,050	12,800	4,750	2,510	2,610	545	218	139	120
8	398	376	427	2,700	10,100	7,560	3,070	2,210	563	218	132	136
9	308	435	2,030	2,850	9,640	5,810	4,000	1,920	521	213	132	153
10	258	390	5,920	5,160	12,800	4,800	3,690	1,690	489	213	132	142
11	223	355	5,080	4,340	10,700	4,040	3,090	1,520	465	208	132	160
12	208	327	3,210	3,540	7,750	3,460	2,660	1,390	450	204	129	139
13	196	320	2,240	2,920	10,300	3,050	2,420	1,270	428	204	126	136
14	188	341	1,970	2,520	8,500	2,700	2,160	1,180	412	200	129	160
15	175	334	6,330	2,240	a7,200	2,470	1,980	1,110	405	192	126	171
16	175	307	11,300	1,980	a7,000	3,030	1,790	1,030	390	188	123	153
17	179	289	9,250	1,790	8,740	2,920	1,620	988	383	188	120	167
18	301	295	6,400	1,660	7,560	2,610	1,520	936	376	183	120	204
19	295	295	4,520	1,550	6,000	2,370	1,420	895	362	179	113	248
20	420	277	5,300	1,430	4,880	2,220	1,320	855	362	183	110	204
21	412	264	5,360	1,300	4,140	2,110	1,240	816	341	238	107	164
22	308	289	4,140	1,240	3,650	2,010	1,150	778	327	253	107	139
23	264	348	3,270	1,150	3,180	1,920	1,190	749	320	204	107	126
24	505	308	a2,600	1,130	3,050	1,950	1,360	720	320	188	104	120
25	537	277	a2,200	1,240	7,680	1,900	1,290	692	308	175	104	116
26	545	264	a1,920	1,650	12,400	3,680	1,180	664	295	179	101	126
27	2,640	314	a1,760	3,580	11,200	8,980	1,120	644	283	333	101	442
28	2,780	327	a3,100	2,910	12,800	8,410	1,690	626	277	420	104	1,070
29	1,470	295	a5,500	2,320	11,800	6,770	2,370	608	270	277	107	545
30	978	308	a5,200	2,010	-	6,120	2,540	617	258	223	107	334
31	758	-	a4,500	1,790	-	5,550	-	768	-	200	101	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	17,457	2,780	129	563	0.880	1.01	34,630
November	10,777	626	264	359	.561	.63	21,380
December	106,784	11,300	376	3,445	5.38	6.21	211,800
Calendar year 1939	747,177	19,900	126	2,047	3.20	43.44	1,482,000
January	80,200	5,160	1,130	2,587	4.04	4.66	159,100
February	215,850	12,900	1,440	7,443	11.6	12.54	428,100
March	148,130	11,100	1,900	4,778	7.47	8.61	293,800
April	70,720	5,160	1,120	2,357	3.68	4.11	140,300
May	44,296	3,610	608	1,429	2.23	2.57	87,860
June	13,121	825	258	437	.683	.76	26,030
July	6,939	420	175	224	.350	.40	13,760
August	3,914	196	101	126	.197	.23	7,760
September	6,224	1,070	98	207	.323	.36	12,350
Water year 1939-40	724,412	12,900	98	1,979	3.09	42.09	1,437,000

Peak discharge.- Dec. 16 (3 a.m.) 13,700 sec.-ft.; Feb. 6 (3 p.m.) 16,600 sec.-ft.; Feb. 10 (11 a.m.) 14,200 sec.-ft.; Feb. 25 (11:30 p.m.) 15,300 sec.-ft.; Mar. 28 (4 p.m.) 15,500 sec.-ft.

a No gage-height record; discharge computed on basis of records for station at Cascadia and Middle Santiam River near Foster.

9-233 April 1936
UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
103604-O U. S. GOVERNMENT PRINTING OFFICE 1936

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 Green Peter Creek and 8 miles northeast of Foster. Datum of gage is 733.44 feet above mean sea level (Northern Pacific Ry. bench mark).

Drainage area.- 271 square miles.

Records available.- August 1931 to September 1940.

Extremes.- Maximum discharge during year, 11,300 second-feet Feb. 6 (gage height, 11.26 feet); minimum, 64 second-feet Sept. 1, 2 (gage height, 1.26 feet).
1931-40: 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 1939-40 (gage height, in feet, and discharge, in second-feet)

1.2	59	3.0	427	7.0	3,600
1.3	68	3.5	615	8.0	4,980
1.6	102	4.0	870	9.0	6,650
2.0	167	5.0	1,540	10.0	8,550
2.5	278	6.0	2,450	11.0	10,700

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	334	414	2,090	906	5,470	2,470	1,940	398	144	109	66
2	81	297	346	1,900	820	6,150	2,120	1,470	355	137	103	70
3	81	286	308	1,930	798	4,410	1,790	1,230	322	134	99	88
4	198	256	266	2,070	1,060	3,480	1,570	1,220	297	130	96	81
5	782	231	239	2,180	1,970	3,060	1,390	1,560	283	129	93	80
6	352	218	243	1,830	9,520	2,500	1,240	1,600	270	127	90	76
7	278	207	231	1,560	7,030	2,970	1,310	1,310	263	126	88	75
8	194	216	576	1,400	5,450	4,110	1,650	1,100	260	122	88	92
9	156	229	1,390	1,680	5,420	2,980	2,400	972	248	119	86	86
10	137	207	3,420	3,320	7,760	2,370	1,940	870	239	116	85	101
11	126	190	2,550	2,420	5,390	1,960	1,590	776	229	115	84	93
12	118	182	1,560	1,880	3,920	1,670	1,380	715	222	115	81	80
13	112	178	1,140	1,550	5,610	1,460	1,240	656	216	113	80	87
14	105	207	1,430	1,340	4,190	1,310	1,100	611	209	110	79	93
15	101	186	5,640	1,180	3,180	1,250	1,020	572	207	109	79	87
16	98	171	6,920	1,070	3,170	1,580	924	544	203	108	78	102
17	139	165	5,450	978	4,110	1,440	837	517	196	105	77	115
18	211	171	3,500	924	3,550	1,280	788	492	192	102	76	135
19	190	163	2,480	854	2,880	1,170	735	467	188	101	74	147
20	317	154	3,350	793	2,360	1,100	690	450	184	113	73	105
21	220	151	3,000	740	1,990	1,060	651	427	180	147	72	89
22	171	192	2,220	700	1,760	1,030	611	411	175	121	71	80
23	162	190	1,740	675	1,540	978	695	389	171	109	70	78
24	358	171	1,400	646	1,560	1,000	710	376	167	102	69	76
25	268	160	1,180	690	5,700	966	685	358	162	99	68	73
26	701	167	1,030	972	6,850	2,650	620	349	158	124	68	81
27	1,780	218	948	1,980	5,880	4,760	602	337	154	273	69	346
28	1,340	201	2,380	1,480	6,700	4,220	1,180	328	151	186	71	484
29	735	180	3,680	1,240	6,100	3,530	1,190	320	149	140	71	225
30	514	293	3,100	1,100	-	3,170	1,740	320	146	124	68	156
31	401	-	2,420	1,010	-	2,770	-	401	-	118	67	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	10,503	1,780	77	339	1.25	1.44	20,830
November	6,171	334	151	206	.760	.85	12,240
December	64,551	6,920	231	2,082	7.68	8.86	128,000
Calendar year 1939	404,043	11,900	77	1,107	4.08	55.42	801,400
January	44,182	3,320	646	1,425	5.26	6.06	87,630
February	117,184	9,520	798	4,041	14.91	16.08	232,400
March	77,854	6,150	966	2,511	9.27	10.68	154,400
April	36,868	2,470	602	1,229	4.54	5.06	73,130
May	23,088	1,940	320	745	2.75	3.17	45,790
June	6,594	398	146	220	.812	.90	13,080
July	3,918	273	99	126	.465	.54	7,770
August	2,482	109	67	80.1	.296	.34	4,920
September	3,547	484	66	118	.435	.49	7,040
Water year 1939-40	396,942	9,520	66	1,085	4.00	54.47	787,200

Peak discharge.- Dec. 15 (11 p.m.) 10,200 sec.-ft.; Feb. 6 (11 a.m.) 11,300 sec.-ft.; Feb. 25 (8 p.m.) 10,100 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. al Survey

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 1940. February to December 1919 at site near Albany.

Average discharge.- 14 years, 216 second-feet.

Extremes.- Maximum discharge during year, 307 second-feet Dec. 9 (gage height, 3.79 feet); minimum, 4 second-feet June 2 (gage height, 0.01 foot).
1919, 1926-40: Maximum discharge, 342 second-feet Nov. 3, 1938; no flow at times.

Remarks.- Records good. Canal diverts from South Santiam River at Lebanon and discharges into Calapooya River at mouth. Lebanon ditch discharges into canal just below canal intake. Water is used for power and water supply at Albany.

Cooperation.- Recorder inspected by employee of Mountain States Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	111	149	255	263	268	256	244	289	180	204	137	51
2	104	204	262	266	273	261	210	281	199	199	128	56
3	120	202	267	269	283	255	288	276	270	194	118	61
4	129	198	261	271	218	253	283	275	271	189	112	86
5	224	148	259	273	202	254	280	281	269	186	106	91
6	240	85	259	272	155	257	281	282	266	182	103	95
7	234	15	261	268	158	261	276	279	266	180	102	92
8	223	12	267	268	219	266	277	277	265	174	99	92
9	225	106	214	268	240	257	277	277	264	172	98	112
10	109	220	245	272	241	251	277	275	263	169	98	110
11	34	217	247	266	229	257	277	276	264	165	97	103
12	34	217	245	274	231	261	278	277	257	159	95	114
13	34	119	246	269	195	261	278	274	255	159	97	105
14	34	206	244	266	207	262	277	270	250	157	91	116
15	34	234	236	265	239	261	272	273	248	152	78	122
16	35	238	196	271	252	266	272	282	244	147	82	120
17	35	238	239	273	199	268	268	276	240	146	81	110
18	35	229	260	272	214	261	269	269	239	146	75	127
19	36	234	275	271	241	258	271	269	232	142	75	155
20	36	228	274	270	255	257	277	269	231	146	71	148
21	36	224	274	267	257	260	274	269	233	165	70	118
22	52	223	274	271	257	270	275	267	240	205	70	97
23	83	237	264	271	261	274	274	264	235	176	66	80
24	45	240	258	271	263	274	277	265	231	154	66	70
25	30	228	256	272	190	274	276	269	226	150	68	66
26	37	218	274	237	141	218	275	271	218	130	66	81
27	83	229	270	226	221	161	274	266	216	165	74	160
28	127	240	270	219	200	199	281	263	213	228	70	277
29	95	228	275	259	214	197	287	266	146	202	70	259
30	75	232	267	277	-	228	281	273	206	177	68	223
31	59	-	263	276	-	228	-	281	-	154	48	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,788	240	30	89.9	5,530
November	5,798	240	12	193	11,500
December	7,957	275	196	257	15,780
Calendar year 1939	86,155	315	12	236	170,900
January	8,233	277	219	266	16,330
February	6,523	283	141	225	12,940
March	7,766	274	161	251	15,400
April	8,206	288	210	274	16,280
May	8,481	289	263	274	16,820
June	7,137	271	146	238	14,160
July	5,274	228	130	170	10,460
August	2,679	137	48	86.4	5,310
September	3,497	277	51	117	6,940
Water year 1939-40	74,339	289	12	204	147,400

9-232 February 1936

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog al Survey

U. S. GOVERNMENT PRINTING OFFICE 1936—O-163002

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 3⅜ miles northwest of Hoskins. Datum of gage is 378.7 feet above mean sea level (river-profile survey).

Drainage area.- 34 square miles.

Records available.- May 1934 to September 1940.

Extremes.- Maximum discharge during year, 2,420 second-feet Feb. 6 (gage height, 7.63 feet); minimum, 8 second-feet Oct. 1, 3, Aug. 30, Sept. 1, 2, 7.
1934-40: 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 1939-40 (gage height, in feet, and discharge, in second-feet)

0.7	7	2.6	291	5.5	1,380
1.0	19	3.0	412	6.5	1,830
1.4	54	3.5	576	7.5	2,340
1.8	111	4.0	750		
2.2	188	4.5	945		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9	35	67	406	154	901	384	341	52	21	15	8
2	9	33	76	400	148	821	314	266	51	a20	14	8
3	9	30	65	372	150	620	277	218	50	a20	14	9
4	65	28	59	539	350	492	239	300	46	a20	13	10
5	45	27	54	614	626	400	211	489	45	a19	12	10
6	27	25	55	492	2,120	332	193	428	44	19	12	9
7	20	25	52	390	1,430	412	204	326	43	18	11	9
8	18	27	153	362	1,020	428	200	258	41	18	11	16
9	15	28	261	303	833	369	263	211	39	18	11	10
10	14	25	648	274	825	323	239	184	37	18	11	10
11	14	25	447	247	708	280	216	162	36	17	10	10
12	12	24	294	224	586	244	195	144	35	17	10	9
13	12	24	214	206	750	221	179	130	35	18	10	13
14	12	26	266	193	607	200	164	121	34	16	10	18
15	12	24	1,290	175	479	195	148	111	32	16	10	12
16	12	23	1,880	160	638	177	137	105	31	16	10	10
17	23	23	1,100	148	869	162	128	98	30	16	10	10
18	27	24	652	139	662	150	126	92	29	16	9	14
19	34	24	454	128	516	141	114	84	29	16	9	12
20	38	22	466	121	415	132	108	82	28	16	10	10
21	27	23	378	111	350	125	101	77	27	16	10	10
22	24	32	320	106	300	116	97	72	27	15	9	9
23	24	27	263	101	274	113	113	67	27	14	10	9
24	26	25	221	103	269	111	98	65	26	14	10	9
25	23	24	193	105	480	120	94	64	25	14	10	9
26	83	36	170	190	393	560	88	61	24	18	9	11
27	100	79	164	344	593	877	84	59	24	25	9	45
28	79	58	255	269	873	817	116	56	23	20	10	26
29	56	48	323	221	985	648	97	54	23	18	9	18
30	45	66	332	190	-	600	269	54	22	18	8	14
31	39	-	353	173	-	483	-	55	-	16	9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	953	100	9	30.7	0.903	1.04	1,890
November	940	79	22	31.3	.921	1.03	1,860
December	11,525	1,880	52	372	10.9	12.61	22,860
Calendar year 1939	52,274	1,880	8	143	4.21	57.19	103,700
January	7,806	614	101	252	7.41	8.54	15,480
February	18,623	2,120	148	642	18.9	20.37	36,940
March	11,570	901	111	373	11.0	12.66	22,950
April	5,195	384	84	173	5.09	5.68	10,300
May	4,834	489	54	156	4.59	5.29	9,590
June	1,015	52	22	33.8	.994	1.11	2,010
July	543	25	14	17.5	.515	.59	1,080
August	325	15	8	10.5	.309	.36	645
September	377	45	8	12.6	.371	.41	748
Water year 1939-40	63,706	2,120	8	174	5.12	69.69	126,400

Peak discharge.- Dec. 16 (9 a.m.) 2,180 sec.-ft.; Feb. 6 (6 a.m.) 2,420 sec.-ft.
a No gage-height record; discharge computed on basis of records for Willamina Creek near Willamina and Siletz River near Siletz.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

159-233 April 1936

Luckiamute River near Suver, Oreg.

Location.- Staff gage, lat. 44°47'00", long. 123°14'00", in SW¼SW¼ sec. 18, T. 9 S., R. 4 W., at highway bridge at Helmick State Park, 3 miles downstream from Little Luckiamute River, and 3 miles northwest of Suver. Datum of gage is 171.37 feet above mean sea level (general adjustment of 1929).

Drainage area.- 236 square miles (revised).

Records available.- August 1905 to October 1911, July to September 1940.

Extremes.- Maximum discharge observed during period, 86 second-feet July 1 (discharge measurement), Sept. 28; minimum observed, 23 second-feet Aug. 30 to Sept. 1.

1905-11, 1940: Maximum discharge observed, 9,970 second-feet Jan. 19, 1911 (gage height, 30.9 feet, site and datum then in use); minimum observed, that of Aug. 30 to Sept. 1, 1940.

Maximum stage known at present site, 33.5 feet from floodmark, probably on Dec. 29, 1937 (discharge not determined).

Remarks.- Records poor to Sept. 2, fair thereafter. No regulation. A few small diversions above station for irrigation; no diversion around station. Gage read twice daily.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										86	50	23
2										82	46	24
3										78	43	28
4										74	40	29
5										70	38	31
6										68	36	31
7										66	34	29
8										64	32	30
9										62	31	34
10										60	31	37
11										58	30	35
12										56	29	34
13										56	29	31
14										58	29	31
15										56	28	43
16										54	28	37
17										53	28	32
18										52	27	34
19										51	27	34
20										50	27	33
21										49	27	32
22										48	26	30
23										47	26	27
24										46	25	26
25										45	25	26
26										48	25	24
27										58	24	32
28										70	24	86
29										66	24	56
30										58	23	47
31										56	23	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October							
November							
December							
Calendar year							
January	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-
July	1,845	86	45	59.5	0.252	0.29	3,660
August	935	50	23	30.2	.128	.15	1,850
September	1,026	86	23	34.2	.145	.16	2,040
The period	-	-	-	-	-	-	7,550

Note.- No gage-height record July 1-17, July 19 to Aug. 19, Aug. 21 to Sept. 2, Sept. 8, 15, 22, 29; discharge computed on basis of discharge measurement made on July 1 and records for station near Hoskins.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum 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 1940.

Extremes.- Maximum discharge during year, 9,680 second-feet Feb. 6 (gage height, 11.20 feet); minimum, 5.6 second-feet (regulated), July 6.
1934-40: 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 except those for days of no gage-height record, which are fair. Slight regulation occasionally during summer due to millpond upstream; no diversion above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.6	12	1.6	230	3.5	1,150	7.0	4,270
.8	28	2.0	380	4.0	1,480	8.0	5,430
1.0	64	2.5	595	5.0	2,240	10.0	8,030
1.3	138	3.0	850	6.0	3,190		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	56	194	2,510	618	2,600	1,220	1,380	116	28	19	13
2	15	50	290	2,330	550	2,420	988	982	111	27	17	14
3	14	52	214	2,040	618	1,790	839	778	108	27	17	14
4	71	46	169	3,140	1,630	1,510	725	952	101	27	16	15
5	152	41	144	2,690	2,140	1,220	618	1,870	98	34	15	16
6	73	39	158	1,910	8,030	1,010	550	1,300	94	17	13	14
7	56	39	155	1,460	5,250	1,220	600	1,030	91	19	13	14
8	38	46	931	1,170	3,500	1,250	554	839	88	24	13	23
9	31	64	918	1,050	2,640	1,110	768	695	86	22	13	20
10	28	50	2,380	964	2,600	970	650	595	84	21	13	16
11	26	44	1,340	817	2,200	839	577	518	75	22	13	16
12	25	42	862	778	1,830	735	514	452	71	19	13	16
13	24	39	655	710	2,560	665	464	400	73	20	13	16
14	25	71	996	660	1,940	586	428	364	62	19	13	17
15	25	52	4,630	595	1,560	568	388	324	60	18	13	19
16	26	44	6,560	550	2,180	546	352	293	58	18	13	17
17	30	42	4,000	500	2,600	482	328	272	56	18	13	17
18	54	48	2,330	456	1,940	440	300	248	54	18	13	17
19	33	48	1,620	420	1,510	404	293	227	52	18	13	20
20	62	41	1,550	380	1,210	364	290	210	50	19	13	20
21	42	39	1,290	356	1,000	340	282	191	48	21	13	17
22	34	60	1,070	328	839	312	268	182	48	21	13	16
23	31	66	892	304	795	293	360	166	46	19	13	15
24	50	54	730	296	795	293	a270	158	44	17	13	15
25	50	50	626	308	1,940	286	a240	152	42	17	13	14
26	97	64	536	1,100	2,080	1,170	230	144	39	18	14	17
27	141	220	500	2,160	1,980	1,820	a265	138	38	30	14	30
28	133	133	735	1,350	3,090	1,760	300	133	38	30	13	48
29	96	108	1,100	1,060	2,990	2,080	a265	124	34	22	14	24
30	73	155	1,090	850	-	1,940	862	127	31	22	14	18
31	60	-	1,870	715	-	1,540	-	130	-	19	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,628	152	13	52.5	0.395	0.46	3,230
November	1,903	220	39	63.4	.477	.53	3,770
December	40,535	6,560	144	1,308	9.83	11.33	80,400
Calendar year 1939	157,801	6,560	11	432	3.25	44.16	313,000
January	33,957	3,140	296	1,095	8.23	9.50	67,350
February	62,615	8,030	550	2,159	16.2	17.51	124,200
March	32,563	2,600	286	1,050	7.89	9.11	64,590
April	14,788	1,220	230	493	3.71	4.14	29,330
May	15,374	1,870	124	496	3.73	4.30	30,490
June	1,996	116	31	66.5	.500	.56	3,960
July	671	34	17	21.6	.162	.19	1,330
August	427	19	13	13.8	.104	.12	847
September	548	48	13	18.3	.138	.15	1,090
Water year 1939-40	207,005	8,030	13	566	4.26	57.90	410,600

Peak discharge.- Dec. 16 (10 a.m.) 7,760 sec.-ft.; Feb. 6 (7 a.m.) 9,680 sec.-ft.
a No gage-height record; discharge computed on basis of records for Willamina Creek near Willamina.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

9-233 April 1936

101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

South Yamhill River near Whiteson, Oreg.

Location.- Water-stage recorder, lat. 45°10'10", long. 123°12'25", in NW¼ sec. 5, T. 5 S., R. 4 W., at Whiteson Bridge on Pacific Highway West, 1 mile downstream from Salt Creek, and 1½ miles northwest of Whiteson. Datum of gage is 82.30 feet above mean sea level (general adjustment of 1929). Prior to Sept. 20, 1940, staff gage at same site and datum.

Drainage area.- 502 square miles.

Records available.- July to September 1940.

Extremes.- Maximum discharge recorded during period, 111 second-feet Sept. 29 (gage height, 2.33 feet); minimum observed, 21 second-feet Aug. 23.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Slight regulation during low-water periods from log ponds upstream. Small diversions above station for irrigation. Wire-weight gage read once daily to Sept. 20.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										84	48	22
2										82	46	23
3										80	42	24
4										81	39	24
5										78	36	25
6										82	33	26
7										68	29	28
8										70	28	26
9										74	29	25
10										69	29	37
11										66	29	32
12										67	28	39
13										61	27	28
14										62	27	31
15										57	27	36
16										54	26	35
17										54	25	33
18										54	24	35
19										54	23	32
20										54	22	33
21										60	24	33
22										61	24	31
23										58	21	28
24										54	23	27
25										49	24	26
26										48	24	26
27										54	24	28
28										70	22	49
29										67	24	96
30										54	24	64
31										53	23	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October							
November							
December							
Calendar year							
January	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-
July	1,979	84	48	63.8	0.127	0.15	3,930
August	874	48	21	28.2	.056	.06	1,730
September	1,002	96	22	33.4	.067	.07	1,990
The period	-	-	-	-	-	-	7,650

Note.- No gage-height record, July 2-17, July 19 to Aug. 19, Sept. 1, 2, 8, 15; discharge computed on basis of record for station near Willamina. Shifting-control method used Sept. 16-30.

9-233 April 1936

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-O U S GOVERNMENT PRINTING OFFICE 1936

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. Datum of gage is 315.1 feet above mean sea level (river-profile survey). Prior to Oct. 1, 1939, at datum 1.00 foot higher.

Drainage area.- 62 square miles.

Records available.- June 1934 to September 1940.

Extremes.- Maximum discharge during year, 4,150 second-feet Feb. 6 (gage height, 8.62 feet); minimum, 9.0 second-feet Aug. 17, 18 (gage height, 1.15 feet).
1934-40: 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, Aug. 17, 18, 1940.

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

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 6						Feb. 7 to Sept. 30			
1.1	9	2.6	170	5.0	1,075	1.1	8	2.6	163
1.4	19	3.0	270	5.5	1,350	1.4	17	3.0	260
1.7	37	3.5	425	6.0	1,670	1.7	34	3.5	415
2.0	67	4.0	605	6.6	2,120	2.0	64	4.0	605
2.3	110	4.5	825	7.7	3,110	2.3	106		

Note.- Same as preceding table above 4.0 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	20	62	537	245	1,110	468	311	76	27	18	10
2	11	20	71	558	225	1,090	401	245	74	26	18	10
3	12	20	54	554	242	865	365	225	73	26	16	11
4	42	20	44	890	565	717	332	308	69	25	15	12
5	45	19	40	875	1,040	589	293	601	67	24	14	12
6	26	20	39	676	3,100	493	266	485	64	23	13	11
7	20	19	39	540	1,990	549	281	394	65	23	12	9.8
8	17	22	158	453	1,430	525	263	335	63	24	13	11
9	15	24	206	387	1,140	471	290	290	60	24	13	10
10	15	22	502	351	1,050	422	269	255	56	23	13	12
11	14	20	273	312	910	380	248	228	52	23	12	11
12	14	19	182	285	780	347	230	208	50	23	11	11
13	14	19	140	268	1,080	317	212	188	52	23	12	13
14	13	21	197	250	875	287	198	174	50	22	12	16
15	13	20	1,140	235	717	269	185	161	47	21	11	13
16	14	19	1,490	220	816	248	174	150	46	21	11	13
17	17	19	965	205	975	228	167	140	44	21	9.8	12
18	18	19	637	190	802	212	159	131	43	21	9.4	14
19	23	18	481	178	668	198	152	121	42	21	10	12
20	26	18	506	166	561	185	142	116	42	24	11	11
21	18	18	432	157	578	174	136	109	39	23	11	11
22	17	21	366	150	418	165	131	104	39	21	11	10
23	16	22	312	142	408	159	146	98	38	20	11	9.4
24	19	20	262	138	412	152	131	94	35	19	11	9.6
25	19	19	230	134	772	152	125	92	33	19	11	11
26	47	27	205	252	835	410	120	88	33	24	11	12
27	58	72	195	512	802	645	116	85	32	26	11	25
28	42	43	268	394	1,030	633	134	81	31	23	11	25
29	30	34	348	342	1,110	663	123	80	30	21	11	16
30	24	43	342	300	-	658	283	80	28	21	10	14
31	21	-	397	268	-	561	-	83	-	19	10	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	690	58	10	22.3	0.360	0.41	1,370
November	717	72	18	23.9	.385	.43	1,420
December	10,583	1,490	39	341	5.50	6.35	20,990
Calendar year 1939	64,468	2,680	9	177	2.85	38.68	127,900
January	10,919	890	134	352	5.68	6.55	21,660
February	25,476	3,100	225	878	14.2	15.28	50,530
March	13,874	1,110	152	448	7.23	8.32	27,520
April	6,540	468	116	218	3.52	3.92	12,970
May	6,060	601	80	195	3.15	3.64	12,020
June	1,473	76	28	49.1	.792	.88	2,920
July	701	27	19	22.6	.365	.42	1,390
August	373.2	18	9.4	12.0	.194	.22	740
September	337.8	25	9.4	12.6	.203	.23	749
Water year 1939-40	77,784	3,100	9.4	213	3.44	46.65	154,300

Peak discharge.- Dec. 16 (8 a.m.) 1,780 sec.-ft.; Feb. 6 (5 to 6 a.m.) 4,150 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-O U. S. GOVERNMENT PRINTING OFFICE 1936

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 1940.
Average discharge.- 12 years, 25.8 second-feet (adjusted for diversion, 1937-40).
Extremes (not adjusted for diversion).- Maximum discharge during year, 290 second-feet Feb. 6 (gage height, 3.20 feet); minimum, 0.1 second-foot at times during Aug. 8-11, 16-21 (gage height, 1.13 feet).
1928-40: 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 (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.
Cooperation.- Water-stage recorder inspected by employees of city of McMinnville.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 5

1.1	0	1.5	9.8	2.2	82
1.2	.7	1.7	24	2.4	113
1.3	2.2	1.8	34	2.8	192
1.4	5.2	2.0	57	3.1	264

Feb. 6 to Sept. 30

1.7	24	2.0	55
1.8	33	2.2	82

Note.- Same as preceding table below 1.7 feet and above 2.2 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	2.4	3.6	59	27	117	49	32	8.8	2.4	1.6	0.2
2	1.0	2.4	8.8	58	24	107	42	30	8.3	2.4	1.2	.2
3	1.3	2.4	6.0	57	28	90	37	28	7.8	2.4	.7	.7
4	6.8	2.1	3.6	96	52	78	33	36	7.8	2.2	.4	1.2
5	3.3	1.5	3.0	91	91	64	30	58	a7.6	2.2	.4	1.2
6	2.4	1.5	3.0	68	213	55	28	47	7.3	2.2	.3	.9
7	2.2	1.5	3.3	53	164	64	31	39	7.3	2.2	.3	.9
8	2.2	1.9	22	45	139	60	30	33	6.8	2.2	.2	.9
9	2.1	2.1	29	40	126	53	29	29	6.8	2.2	.3	.9
10	2.1	1.8	56	36	131	47	28	27	6.4	2.1	.3	1.2
11	2.1	1.3	28	31	110	42	25	24	6.0	1.9	.3	1.2
12	1.9	1.0	18	28	96	38	24	22	6.0	1.9	.3	1.2
13	1.9	1.3	14	27	129	35	22	21	6.0	1.9	.2	1.6
14	1.8	1.6	31	24	105	32	22	19	6.4	1.9	.2	1.6
15	1.9	1.2	139	22	85	30	20	18	4.8	1.8	.3	1.8
16	1.9	1.0	170	21	120	28	19	16	4.4	1.8	.2	2.2
17	2.6	1.0	103	20	124	25	18	14	4.4	1.8	.2	1.8
18	2.4	1.3	64	18	102	23	18	14	4.0	1.9	.2	1.9
19	3.6	1.2	47	17	82	22	16	13	4.4	1.8	.2	1.5
20	2.8	1.0	45	16	67	22	15	13	5.2	2.1	.2	1.3
21	2.4	1.0	42	15	55	20	14	12	5.2	1.8	.2	1.2
22	2.2	a1.2	36	14	48	19	14	12	4.8	1.5	.4	1.0
23	2.2	1.3	30	14	48	18	16	11	4.4	1.2	.7	.9
24	2.2	1.3	25	13	47	18	14	11	4.0	1.2	.7	.7
25	1.5	1.2	22	13	84	18	14	10	3.6	1.5	.7	.9
26	6.8	3.3	19	29	91	43	13	9.8	3.6	2.1	.4	1.0
27	5.6	6.4	19	51	88	63	13	9.8	3.3	1.9	.6	2.2
28	4.0	2.8	27	41	113	60	16	9.3	2.8	1.6	.7	1.6
29	3.0	2.1	34	40	117	81	16	8.8	2.4	1.6	.3	1.0
30	2.6	3.3	33	35	-	68	32	8.8	2.4	1.6	.3	1.2
31	2.4	-	47	31	-	59	-	8.8	-	1.5	.4	-

Month	Observed				Diversion for McMinnville water supply (second-feet)	Adjusted for diversion			
	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	6.8	0.2	2.63	161	0.69	204	3.32	0.582	0.67
November	6.4	1.0	1.85	110	1.25	184	3.10	.544	.61
December	170	3.0	36.5	2,240	1.33	2,320	37.8	6.63	7.64
Calendar year 1939	237	.2	16.2	11,690	-	-	-	-	-
January	96	13	36.2	2,230	1.85	2,340	38.0	6.67	7.69
February	213	24	93.3	5,370	.60	5,400	93.9	16.5	17.80
March	117	18	48.4	2,970	1.57	3,070	50.0	8.77	10.11
April	49	13	23.3	1,380	1.80	1,490	25.1	4.40	4.91
May	58	8.8	20.8	1,280	.94	1,340	21.7	3.81	4.39
June	8.8	2.4	5.43	323	1.52	413	6.95	1.22	1.36
July	2.4	1.2	1.90	117	1.43	205	3.33	.584	.67
August	1.6	.2	.43	27	1.30	107	1.73	.304	.35
September	2.2	.2	1.20	72	.97	130	2.17	.381	.43
Water year 1939-40	213	.2	22.4	16,280	1.27	17,200	23.7	4.16	56.63

Peak discharge.- Dec. 16 (4 a.m.) 227 sec.-ft.; Feb. 6 (4 a.m.) 290 sec.-ft.
a No gage-height record; discharge interpolated.

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~~UNITED STATES DEPARTMENT OF THE INTERIOR~~
~~Geological Survey~~

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 1940.

Extremes.- Maximum discharge during year, 5,620 second-feet Feb. 6 (gage height, 6.59 feet), from rating curve extended above 4,000 second-feet by velocity-area studies; minimum, 19 second-feet Aug. 30 to Sept. 2 (gage height, 0.84 foot).
1935-40: 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, that of Aug. 30 to Sept. 2, 1940.

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

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 5

0.8	17	2.5	505	5.0	2,950
1.0	36	3.0	800	5.5	3,710
1.3	84	3.5	1,200	6.1	4,710
1.6	158	4.0	1,700		
2.0	290	4.5	2,280		

Feb. 6 to Sept. 30

0.8	15	2.0	278
1.0	35	2.5	480
1.3	84	3.0	780
1.6	153	3.5	1,200

Note.- Same as preceding table above 3.5 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	104	124	761	320	1,920	1,360	1,090	138	42	32	19
2	30	93	139	645	290	2,060	1,130	780	121	41	31	20
3	29	99	114	593	301	1,470	887	627	112	41	30	26
4	95	82	95	699	527	1,200	717	609	105	39	28	24
5	233	74	84	699	1,190	1,060	591	871	99	38	27	21
6	124	69	95	604	4,730	863	505	795	94	38	26	20
7	99	65	84	516	3,000	1,160	568	633	101	36	25	20
8	73	76	274	455	2,120	1,430	773	520	99	36	24	27
9	59	73	551	460	1,960	1,060	1,360	444	88	35	24	26
10	51	65	1,250	633	1,970	818	1,150	388	84	35	24	36
11	46	62	870	549	1,500	352	848	344	80	34	23	27
12	42	59	549	470	1,190	541	671	310	74	34	22	33
13	39	57	437	410	2,110	471	563	285	71	34	22	43
14	36	71	918	368	1,530	418	485	264	69	33	22	42
15	35	62	3,300	332	1,080	414	458	243	67	33	22	34
16	35	57	4,060	305	1,240	495	401	224	65	32	21	28
17	40	54	3,160	286	1,630	458	364	208	63	32	21	27
18	93	55	1,700	276	1,330	414	341	196	62	31	20	45
19	73	52	1,100	261	1,050	380	307	187	62	31	20	48
20	84	49	1,390	240	810	360	289	175	60	36	20	33
21	69	46	1,220	227	671	337	268	164	57	49	20	28
22	59	60	885	214	574	322	250	156	55	38	20	25
23	60	57	681	204	495	310	318	148	54	33	20	23
24	116	52	532	198	476	322	364	138	52	32	20	22
25	91	49	442	194	2,110	318	356	136	49	32	20	22
26	131	49	385	286	2,480	1,440	333	130	48	36	20	25
27	325	74	352	657	1,920	2,370	333	126	46	65	21	149
28	336	65	720	505	2,480	2,110	564	121	46	46	23	157
29	223	59	1,150	437	2,120	1,780	603	114	45	39	20	78
30	161	101	1,080	397	-	1,550	986	114	43	35	20	57
31	126	-	885	360	-	1,370	-	146	-	34	19	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,039	336	26	98.0	1.02	1.18	6,030
November	1,990	104	46	66.3	.691	.77	3,950
December	28,626	4,060	84	923	9.61	11.09	56,780
Calendar year 1939	141,655	4,060	24	388	4.04	54.90	281,000
January	13,241	761	194	427	4.45	5.13	26,260
February	43,204	4,730	290	1,490	15.5	16.74	85,690
March	29,873	2,370	310	964	10.0	11.57	59,250
April	18,143	1,360	250	605	6.30	7.03	35,990
May	10,686	1,090	114	345	3.59	4.14	21,200
June	2,209	138	43	73.6	.767	.86	4,380
July	1,150	65	31	37.1	.386	.45	2,280
August	707	32	19	22.8	.238	.27	1,400
September	1,185	157	19	39.5	.411	.46	2,350
Water year 1939-40	154,053	4,730	19	421	4.39	59.69	305,600

Peak discharge.- Dec. 15 (8 p.m.) 4,890 sec.-ft.; Feb. 6 (6 a.m.) 5,620 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

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 1940 (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, 350 second-feet Sept. 28 (gage height, 2.40 feet); minimum observed, 24 second-feet Aug. 17-22.
1905-9, 1938-40: Maximum daily discharge, 9,800 second-feet (estimated) Feb. 5, 1907; minimum observed, that of Aug. 17-22, 1940.

Remarks.- Records poor. Gage read once daily. Two small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	52	43	26
2									-	50	41	29
3									-	50	41	33
4									-	48	41	35
5									-	48	39	34
6									-	48	37	34
7									-	48	34	39
8									-	48	34	39
9									-	45	32	41
10									-	41	32	48
11									†129	41	32	46
12									-	41	32	42
13									-	43	32	60
14									-	41	29	69
15									-	41	26	45
16									-	41	26	33
17									-	41	24	33
18									-	41	24	45
19									-	39	24	67
20									-	45	24	55
21									-	54	24	51
22									-	48	24	42
23									-	44	24	40
24									-	42	28	40
25									-	42	28	40
26									-	44	26	46
27									-	68	26	152
28									-	54	26	350
29									†55	48	23	152
30									-	45	28	100
31									-	45	26	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	-	-	-	-	-
June	-	-	-	-	-
July	1,426	68	39	46.0	2,830
August	935	43	24	30.2	1,850
September	1,866	350	26	62.2	3,700
The period	-	-	-	-	8,380

†Discharge measurement.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum 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 1940.

Average discharge.- 12 years, 974 second-feet.

Extremes.- Maximum discharge during year, 8,080 second-feet Feb. 6 (gage height, 8.20 feet); minimum, 32 second-feet Aug. 18 (gage height, 1.77 feet).
1928-40: 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 above station for irrigation.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 5						Feb. 6 to Sept. 30			
1.9	42	4.0	1,680	6.5	5,120	0.8	36	2.6	385
2.2	135	4.5	2,280	7.0	5,950	2.0	86	3.0	665
2.6	345	5.0	2,920	7.5	7,000	2.3	210	3.5	1,140
3.0	660	5.5	3,610			Note.- Same as preceding table above 3.5 feet.			
3.5	1,140	6.0	4,340						

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	183	178	1,700	606	3,610	3,270	2,020	349	66	69	47
2	79	165	188	1,460	554	4,010	2,860	1,600	313	83	69	54
3	79	178	198	1,300	546	3,130	2,280	1,450	265	83	61	64
4	66	169	174	1,460	696	2,580	1,940	1,380	254	80	58	58
5	366	144	165	1,460	1,080	2,400	1,610	1,550	226	83	61	64
6	262	135	156	1,280	6,310	2,040	1,380	1,530	216	80	56	56
7	245	131	165	1,130	5,900	2,020	1,380	1,320	210	76	47	58
8	183	124	228	1,030	4,420	2,750	1,660	1,130	221	83	51	51
9	156	139	669	960	4,130	2,230	2,380	960	210	80	47	80
10	116	135	1,600	1,350	3,980	1,900	2,400	850	200	80	51	80
11	95	124	1,660	1,270	3,440	1,570	1,940	750	175	72	45	80
12	82	105	1,140	1,170	2,740	1,330	1,590	665	170	61	58	69
13	73	105	840	1,020	3,810	1,160	1,350	601	156	66	49	86
14	70	116	850	920	3,440	1,020	1,180	571	152	64	49	117
15	62	120	3,160	831	2,600	940	1,130	522	148	72	47	96
16	64	105	6,780	750	2,460	1,070	1,020	489	136	66	43	83
17	64	98	6,120	678	3,690	1,060	900	450	148	66	43	69
18	82	102	3,500	651	3,410	940	822	430	136	61	38	80
19	116	105	2,280	597	2,700	880	750	398	132	64	43	136
20	116	95	2,290	562	2,160	822	682	379	132	69	43	106
21	116	92	2,410	506	1,800	759	649	361	113	75	43	86
22	105	96	2,020	475	1,560	724	585	349	110	93	43	69
23	98	105	1,590	445	1,340	674	657	325	106	72	38	72
24	188	102	1,250	430	1,200	682	920	307	106	66	45	64
25	188	95	1,020	422	2,530	665	890	289	96	66	43	61
26	156	89	880	506	4,930	1,780	831	265	96	64	49	75
27	303	102	777	910	3,960	4,520	822	265	96	93	49	128
28	562	131	1,050	890	4,950	4,160	1,130	254	86	113	49	437
29	394	116	1,840	813	4,640	3,530	1,430	243	86	100	54	243
30	285	120	2,150	741	-	3,180	1,470	260	83	78	58	175
31	218	-	1,910	669	-	3,090	-	313	-	75	51	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	5,073	562	62	164	0.508	0.58	10,060
November	3,628	183	89	121	.375	.42	7,200
December	49,238	6,780	156	1,588	4.92	5.67	97,660
Calendar year 1939	276,939	8,080	54	759	2.35	31.89	549,300
January	28,386	1,700	422	916	2.84	3.27	56,300
February	85,582	6,310	546	2,951	9.14	9.85	169,700
March	61,226	4,520	665	1,975	6.11	7.05	121,400
April	41,908	3,270	585	1,397	4.33	4.83	82,120
May	22,276	2,020	243	719	2.23	2.56	44,180
June	4,927	349	83	164	.508	.57	9,770
July	2,372	113	61	76.5	.237	.27	4,700
August	1,550	69	38	50.0	.155	.18	3,070
September	2,944	437	47	98.1	.304	.34	5,840
Water year 1939-40	309,110	6,780	38	845	2.62	35.59	613,000

Peak discharge.- Dec. 16 (5 a.m.) 7,220 sec.-ft.; Feb. 6 (2 p.m.) 8,080 sec.-ft.; Feb. 28 (5 p.m.) 5,950 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. Survey

104604-O U. S. GOVERNMENT PRINTING OFFICE 1936

Pudding River near Mount Angel, Oreg.

Location.- Wire-weight gage, lat. 45°03'49", long. 122°49'45", in SE¼ sec. 8, T. 6 S., R. 1 W., at Cline Bridge, 2 miles west of Mount Angel, and 4 miles upstream from Little Pudding River. Datum of gage is 119.76 feet above mean sea level (general adjustment of 1929).

Drainage area.- 207 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during year, 3,590 second-feet Dec. 17 (gage height, 20.8 feet, from graph based on gage readings); minimum observed, 10 second-feet Aug. 23-26 (gage height, 0.57 foot).

Remarks.- Records fair. Small diversions above station for irrigation. No regulation. Gage read twice daily to July 11, once daily July 12 to Sept. 30.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.5	9	2.0	75	5.0	384	13.0	1,615
.7	14	2.5	110	6.0	522	15.0	1,955
1.0	24	3.0	152	7.0	667	17.0	2,315
1.3	36	3.5	202	9.0	975	19.0	2,975
1.6	51	4.0	259	11.0	1,295	21.0	3,710

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a20	132	187	1,230	494	2,400	1,780	720	166	34	20	12
2	a22	113	173	1,150	452	2,400	1,470	682	155	34	20	13
3	a25	129	173	1,120	473	2,150	1,260	734	125	32	18	14
4	a35	123	152	1,150	550	1,850	1,120	764	110	31	18	15
5	a70	104	139	1,170	802	1,770	991	772	116	29	18	19
6	a150	97	125	1,100	1,890	1,500	959	802	112	28	16	19
7	a140	89	152	959	3,110	1,340	975	787	106	27	14	18
8	a110	89	187	879	3,230	1,550	1,090	690	112	26	14	16
9	a90	103	397	863	2,770	1,460	1,150	614	103	26	14	18
10	a75	89	780	1,040	2,550	1,280	1,200	536	94	26	14	23
11	a65	82	1,020	991	2,500	1,120	1,090	487	83	26	a14	24
12	a60	78	911	943	2,360	975	927	438	76	24	a13	32
13	a56	75	802	847	2,180	863	863	410	73	24	a13	36
14	a53	82	674	772	2,440	832	682	378	70	24	a12	38
15	a51	93	1,040	704	2,090	780	704	a350	68	23	11	33
16	a50	81	2,240	652	1,840	720	637	a320	66	23	a11	31
17	a55	76	3,490	592	2,380	652	578	a290	63	23	a11	28
18	89	76	3,030	564	2,550	607	529	265	59	26	11	25
19	85	82	2,240	529	2,300	557	487	253	58	26	11	67
20	75	74	1,960	487	1,960	522	438	230	58	27	11	47
21	79	72	1,920	452	1,600	480	410	213	56	32	11	26
22	69	83	1,600	424	1,360	452	397	202	52	34	11	a24
23	65	102	1,360	404	1,180	431	397	185	50	39	10	a23
24	113	85	1,170	384	1,140	424	522	173	48	32	10	a22
25	127	81	1,040	410	1,250	417	487	163	44	29	10	a22
26	109	79	810	501	2,080	704	404	156	41	31	10	a33
27	236	89	734	712	2,200	2,130	390	148	39	34	15	61
28	332	92	802	712	2,470	3,070	550	143	39	46	12	208
29	247	92	1,060	592	2,640	2,740	557	135	38	34	12	78
30	191	91	1,220	543	-	2,340	794	134	36	28	12	65
31	152	-	1,180	529	-	2,020	-	173	-	23	12	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	3,096	332	20	99.9	0.483	0.56	6,140
November	2,733	132	72	91.1	.440	.49	5,420
December	32,768	3,490	125	1,057	5.11	5.89	64,990
Calendar year	-	-	-	-	-	-	-
January	23,405	1,230	384	755	3.65	4.20	46,420
February	55,041	3,230	452	1,898	9.17	9.89	109,200
March	40,536	3,070	417	1,308	6.32	7.28	80,400
April	23,838	1,780	390	795	3.84	4.28	47,280
May	12,347	802	134	398	1.92	2.22	24,490
June	2,336	186	36	77.9	.376	.42	4,630
July	901	46	23	29.1	.141	.16	1,790
August	409	20	10	13.2	.064	.07	611
September	1,090	208	12	36.3	.175	.20	2,160
Water year 1939-40	198,500	3,490	10	542	2.62	35.66	393,700

a No gage-height record; discharge computed on basis of records for station at Aurora.

9-233 April 1936

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

161604-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum 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 1940.

Average discharge.- 12 years, 1,069 second-feet.

Extremes.- Maximum discharge observed during year, 5,380 second-feet Feb. 29 (gage height, 16.31 feet); minimum observed, 43 second-feet Aug. 24 (gage height, 0.03 foot).
1928-40: Maximum discharge, 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, 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 except those below 400 second-feet, which are fair. Small diversions 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 tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 29

0.1	42	2.5	400	10.0	2,480
.4	68	3.0	502	12.0	3,230
.8	112	4.0	724	14.0	4,130
1.2	167	5.0	960	16.3	5,380
1.6	232	6.0	1,210		
2.0	304	8.0	1,810		

Mar. 1 to Sept. 30

0.0	41	1.6	241
.2	58	2.0	312
.4	77	2.5	408
.8	122	3.0	509
1.2	177	4.0	724

Note.- Same as preceding table above 4.0 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	254	145	2,380	864	5,140	4,180	1,110	301	83	67	49
2	50	215	220	2,300	793	4,960	3,830	1,210	318	80	62	48
3	52	198	246	2,060	736	4,910	3,150	1,160	285	77	59	50
4	57	195	246	2,100	782	4,480	2,410	1,140	251	73	57	51
6	73	205	222	2,300	1,060	4,130	1,960	1,180	227	72	56	56
6	190	176	208	2,160	2,660	3,600	1,660	1,360	214	72	55	55
7	230	162	215	1,870	4,740	2,870	1,480	1,330	205	70	54	57
8	210	152	252	1,600	5,140	2,830	1,660	1,180	198	68	51	56
9	168	144	372	1,480	5,020	2,760	1,840	1,060	200	68	47	55
10	138	158	736	1,660	4,860	2,480	2,130	936	189	67	47	61
11	115	152	1,330	1,840	4,740	2,160	2,020	840	174	62	47	67
12	104	137	1,450	1,660	4,580	1,840	1,780	758	158	61	47	73
13	96	132	1,210	1,510	4,380	1,600	1,540	691	145	62	47	79
14	89	128	1,040	1,360	4,480	1,420	1,360	636	136	61	47	78
15	85	130	1,140	1,210	4,330	1,270	1,210	582	135	58	47	79
16	82	141	2,660	1,110	4,080	1,210	1,140	551	130	58	47	79
17	80	133	3,980	1,040	4,480	1,210	1,010	509	128	58	47	82
18	82	126	4,640	948	4,960	1,080	936	478	125	56	47	73
19	92	125	4,430	888	4,690	985	864	438	116	56	46	71
20	130	128	4,030	828	4,280	912	804	408	110	58	46	83
21	125	126	3,780	770	3,830	864	747	384	115	60	46	105
22	125	121	3,470	712	3,270	804	702	361	115	62	46	87
23	122	124	2,950	666	2,580	758	658	339	110	66	45	73
24	122	138	2,300	633	2,020	724	724	318	105	65	43	68
25	173	138	1,750	622	1,930	736	782	298	103	62	47	64
26	222	130	1,390	690	3,350	840	724	297	97	58	47	83
27	185	126	1,180	1,010	3,980	3,030	680	272	91	62	46	82
28	290	134	1,110	1,330	4,430	4,230	658	262	87	66	47	125
29	428	155	1,420	1,210	5,380	4,480	793	251	86	83	49	238
30	372	146	1,840	1,060	-	4,530	876	241	85	88	49	222
31	304	-	2,100	948	-	4,380	-	251	-	77	51	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	4,640	428	49	150	0.304	0.35	9,200
November	4,529	254	121	151	.306	.34	8,980
December	52,062	4,640	145	1,679	3.41	3.93	103,300
Calendar year 1939	289,299	5,020	41	793	1.61	21.82	573,800
January	41,955	2,380	622	1,353	2.74	3.16	83,220
February	102,425	5,380	736	3,532	7.16	7.73	203,200
March	77,223	5,140	724	2,491	5.05	5.83	153,200
April	44,308	4,180	658	1,477	3.00	3.34	87,880
May	20,821	1,360	241	672	1.36	1.57	41,300
June	4,739	318	85	158	.320	.36	9,400
July	2,069	88	56	66.7	.135	.16	4,100
August	1,539	67	43	49.6	.101	.12	3,050
September	2,429	238	48	81.0	.164	.18	4,820
Water year 1939-40	358,739	5,380	43	980	1.99	27.07	711,600

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. Survey

Tualatin River at Farmington, Oreg.

Location.- Staff gage, lat. 45°27'00", long. 122°57'00", in SE¼ sec. 29, T. 1 S., R. 2 W., at highway bridge at Farmington, 7⅞ miles southwest of Beaverton. Auxiliary staff gage at highway bridge 6⅛ miles downstream, 1 mile northeast of Scholls. Datum of gage at Farmington is 102.58 feet above mean sea level (general adjustment of 1929). Datum of gage near Scholls is at same elevation (surveys of Corps of Engineers, U. S. Army); prior to July 16, 1940, datum of gage near Scholls was 0.61 foot lower. All discharge measurements made at Farmington.

Drainage area.- 568 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge observed during year, 8,890 second-feet Feb. 8; maximum gage height observed, 29.2 feet Feb. 9; minimum daily discharge observed, 37 second-feet Aug. 10.

Remarks.- Records fair. Daily discharge ascertained from stage at Farmington and fall in water surface between gages at Farmington and near Scholls. Stage-discharge relation affected at times by flashboards on low dam 30 miles downstream. Slight regulation by log ponds and dam below Gaston have little effect at this station; considerable pondage between this station and the one near Willamette. Some diversions by pumping for irrigation above station, chiefly at Wapato Lake, near Gaston. Staff gages read twice daily.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	89	110	2,460	2,250	6,320	3,210	988	350	105	77	50
2	40	80	134	2,820	1,950	6,580	3,170	1,440	340	105	66	50
3	43	73	149	3,100	1,590	6,520	2,930	1,380	313	103	78	50
4	59	75	190	3,220	1,510	6,160	2,810	1,220	303	108	72	50
5	72	75	173	3,750	2,140	5,740	2,360	1,350	288	103	63	61
6	84	75	144	3,890	3,820	5,260	2,020	1,840	270	97	62	59
7	77	75	135	4,230	5,450	4,740	1,710	2,160	263	100	47	59
8	65	75	151	4,140	8,600	4,180	1,700	2,150	258	108	40	58
9	56	75	361	3,920	8,470	3,790	1,710	1,960	247	105	42	58
10	52	75	910	3,590	7,690	3,410	1,640	1,690	234	97	37	70
11	51	72	1,370	3,240	7,230	3,160	1,560	1,390	222	90	39	78
12	50	72	1,160	2,890	6,790	2,780	1,440	1,210	212	81	46	91
13	48	72	980	2,440	6,550	2,600	1,320	1,030	196	74	52	80
14	47	73	733	1,990	6,440	2,290	1,180	887	178	71	45	71
15	47	75	788	1,470	6,370	1,980	1,090	827	174	82	45	82
16	47	75	1,890	1,250	6,210	1,720	1,010	751	175	91	46	87
17	49	75	2,670	1,130	6,320	1,500	938	678	180	74	40	67
18	52	75	3,390	1,010	6,460	1,300	862	632	172	75	40	63
19	65	75	3,840	923	6,300	1,210	813	592	160	86	45	57
20	70	75	3,990	870	5,950	1,110	780	533	156	79	48	61
21	68	74	3,770	770	5,400	1,010	746	514	148	94	47	59
22	81	74	3,390	715	4,760	978	686	484	144	109	50	53
23	78	74	3,000	686	4,120	917	666	447	145	109	50	49
24	78	79	2,830	653	3,680	872	691	420	149	96	54	46
25	70	84	2,110	623	3,450	889	684	395	138	76	62	43
26	78	82	1,510	674	3,690	937	625	389	126	73	60	49
27	84	79	1,130	1,260	3,990	1,900	606	372	127	85	62	61
28	146	147	1,030	2,420	4,670	2,390	570	350	127	104	57	94
29	145	213	1,300	2,560	5,640	2,630	602	331	115	101	55	154
30	123	147	1,800	2,440	-	2,910	609	313	108	90	50	132
31	100	-	2,000	2,380	-	3,090	-	321	-	84	49	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	2,165	146	40	69.8	0.123	0.14	4,290
November	2,559	213	72	85.3	.150	.17	5,080
December	47,138	3,990	110	1,521	2.68	3.09	93,500
Calendar year	-	-	-	-	-	-	-
January	67,514	4,230	623	2,178	3.83	4.42	133,900
February	147,490	8,600	1,510	5,086	8.95	9.66	292,500
March	90,873	6,580	872	2,931	5.16	5.95	180,200
April	40,738	3,210	570	1,358	2.39	2.67	80,800
May	29,044	2,160	313	937	1.65	1.90	57,610
June	6,018	350	108	201	.354	.39	11,940
July	2,855	109	71	92.1	.162	.19	5,660
August	1,626	78	37	52.5	.092	.11	3,230
September	2,042	154	43	68.1	.120	.13	4,050
Water year 1939-40	440,062	8,600	37	1,202	2.12	28.82	872,800

WSP 9-233 April 1936

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101804-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum of gage is 86.63 feet 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 1940.
Average discharge.- 12 years, 1,361 second-feet (including flow of Oswego canal).
Extremes (river only).- Maximum discharge observed during year, 8,160 second-feet Feb. 11 (gage height, 9.91 feet); minimum observed, 6 second-feet Oct. 1, 2, Aug. 23-28; minimum gage height observed, 0.36 foot Aug. 23-28.
1928-40: 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 river good; records of Oswego canal good except those for periods of no gage-height record Apr. 22-24, 26-30, May 6, 7, Sept. 22-24 and those for the month of June, when there may have been slight backwater effect, all of which are fair. 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; also small diversions above station for irrigation. Some regulation in low-water season by flashboards on crest of Oswego canal diversion dam. Gage read twice daily.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 11						Feb. 12 to Sept. 30			
0.4	4	1.6	160	4.0	1,320	0.3	3.5	1.3	104
.6	16	1.9	244	5.0	2,040	.4	7.5	1.6	166
.8	31	2.2	350	6.0	2,910	.6	20	1.9	247
1.0	52	2.6	520	8.0	5,130	.8	37	2.2	350
1.3	96	3.2	825	10.0	8,320	1.0	59		

Note.- Same as preceding table above 2.2 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6	79	142	2,820	2,410	5,960	3,480	885	370	101	37	8
2	6	68	122	3,220	2,180	6,370	3,420	1,290	390	94	32	9
3	8	60	122	3,440	1,880	6,470	3,300	1,430	370	87	30	9
4	14	53	135	3,810	1,840	6,470	3,100	1,310	346	92	25	9
5	21	50	158	4,030	2,290	6,310	2,800	1,430	328	81	21	9
6	30	50	155	4,150	5,090	5,900	2,440	1,710	310	76	14	9
7	66	50	142	4,290	5,780	5,570	2,110	2,090	299	81	12	9
8	75	50	155	4,390	6,160	5,090	1,930	2,200	286	94	11	8
9	66	45	370	4,340	7,180	4,570	1,890	2,110	279	92	11	10
10	55	46	786	4,180	7,830	4,130	1,820	1,890	266	60	10	9
11	41	48	1,060	3,780	8,090	3,710	1,770	1,640	260	28	10	9
12	d40	50	1,240	3,320	7,630	3,330	1,650	1,390	247	16	9	9
13	d40	52	1,130	2,890	7,590	3,020	1,520	1,230	229	11	9	12
14	d40	82	879	2,420	7,410	2,700	1,380	1,080	217	9	9	17
15	39	66	831	1,920	7,100	2,340	1,280	963	201	7	8	25
16	39	61	1,760	1,580	7,020	2,020	1,160	873	190	8	8	32
17	64	62	2,790	1,370	7,390	1,780	1,070	803	190	8	8	33
18	69	61	3,290	1,190	7,150	1,590	1,030	742	185	8	8	29
19	41	53	3,840	1,080	6,790	1,420	969	680	183	8	7	23
20	41	50	4,080	981	6,470	1,270	915	635	173	8	7	22
21	39	51	3,900	879	6,120	1,160	873	590	166	9	8	19
22	45	56	3,760	849	5,620	1,080	825	556	159	10	7	15
23	51	55	3,400	786	5,060	1,010	781	520	157	23	6	16
24	50	53	2,960	748	4,450	969	764	493	155	35	6	17
25	50	57	2,480	737	4,220	933	770	457	153	33	6	14
26	49	72	1,870	726	4,380	1,130	748	439	144	30	6	13
27	55	91	1,420	1,120	4,520	1,960	705	418	136	31	7	23
28	71	91	1,190	1,930	5,340	2,790	680	398	125	43	7	49
29	108	144	1,310	2,470	5,780	3,100	655	374	119	52	8	78
30	112	163	1,730	2,610	-	3,360	715	350	115	49	8	97
31	94	-	2,230	2,620	-	3,440	-	366	-	42	7	-

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	112	6	49.2	3,020	168	57	104	0.146	0.17	6,370
November	163	45	65.6	3,910	232	99	120	.169	.19	7,160
December	4,080	122	1,595	98,060	4,210	189	1,678	2.36	2.72	103,200
Calendar year 1939	7,120	4	855	619,100	7,130	38	908	1.28	17.36	657,200
January	4,390	726	2,409	148,100	4,390	745	2,421	3.41	3.93	148,900
February	8,090	1,840	5,544	318,900	8,100	1,880	5,647	7.95	8.57	324,800
March	6,470	933	3,257	200,200	6,660	972	3,358	4.73	5.45	206,500
April	3,480	655	1,552	92,330	3,590	683	1,608	2.26	2.52	95,690
May	2,200	350	1,011	62,170	2,280	370	1,052	1.48	1.71	64,680
June	390	115	225	13,380	411	128	240	.338	.38	14,300
July	101	7	42.8	2,630	127	59	93.4	.132	.15	5,740
August	37	6	11.7	718	110	60	73.0	.103	.12	4,490
September	97	8	21.4	1,270	175	65	88.0	.124	.14	5,230
Water year 1939-40	8,090	6	1,301	944,700	8,100	57	1,360	1.92	26.05	987,000

d Doubtful gage-height record; discharge interpolated.

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. Datum of gage is 449.5 feet above mean sea level (river-profile survey).

Drainage area.- 33 square miles.

Records available.- September 1935 to September 1940.

Extremes.- Maximum discharge observed during year, 1,690 second-feet Feb. 6 (gage height, 5.55 feet); minimum observed, 3.7 second-feet (regulated) Sept. 24.
1935-40: Maximum discharge, 3,540 second-feet Dec. 27, 1937 (gage height, 8.10 feet, from floodmark); minimum observed, 3.4 second-feet (regulated) Sept. 28, 1939.

Remarks.- Records good except those for Oct. 11, July 30, Sept. 24, which are poor. No diversion above station; slight regulation at times caused by log pond 3 miles upstream. Gage read twice daily Oct. 1 to June 12, once daily June 13 to Sept. 30.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 5				Feb. 6 to Sept. 30			
0.9	4.0	3.0	280	1.0	3.1	3.0	285
1.1	6.8	3.5	465	1.2	9.8	3.5	475
1.4	17	4.0	720	1.4	19	4.0	720
1.7	37	4.5	1,015	1.7	38	4.5	1,015
2.0	65	5.0	1,330	2.0	70	5.0	1,330
2.5	146	5.5	1,655	2.5	150	5.5	1,655

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.2	6.9	20	510	148	556	246	222	37	16	13	7.2
2	6.2	a8.6	42	465	122	575	203	181	37	16	12	7.2
3	6.3	a8.4	35	378	126	447	176	144	36	16	11	10
4	42	a8.2	25	626	267	387	154	169	35	16	9.8	9.1
5	11	a8.0	24	605	449	302	135	313	34	16	9.8	8.0
6	14	a7.8	25	425	1,520	275	122	268	33	16	9.4	7.6
7	9.4	7.8	34	329	1,170	265	140	217	35	16	9.1	7.2
8	8.9	9.1	126	261	704	265	127	178	31	16	9.1	7.2
9	8.1	9.4	126	213	615	237	167	154	30	15	9.4	7.6
10	8.6	8.9	322	181	570	211	150	135	29	14	8.7	8.7
11	5.0	8.9	167	154	493	193	139	118	27	14	8.3	12
12	7.3	8.6	112	138	439	176	127	105	30	14	8.3	11
13	6.8	8.9	89	122	585	154	117	97	26	14	8.0	11
14	6.8	9.1	204	112	493	142	107	89	26	13	8.0	13
15	5.8	8.6	1,030	103	395	140	100	82	24	13	7.6	9.8
16	6.8	8.9	1,400	95	524	124	94	76	24	16	7.6	9.1
17	9.7	8.9	775	89	524	111	89	71	24	13	6.5	5.2
18	9.1	9.4	474	83	399	103	84	65	24	13	6.8	8.7
19	14	8.9	318	78	330	97	79	63	23	12	6.8	8.3
20	10	8.4	280	73	268	93	75	59	22	13	6.8	8.0
21	9.4	8.4	230	70	231	89	70	56	21	16	7.6	7.6
22	8.4	12	196	67	200	86	68	52	21	13	7.2	7.2
23	8.4	11	169	64	206	80	60	49	20	13	7.6	6.8
24	8.4	9.4	140	63	183	76	66	49	20	12	7.6	3.7
25	8.4	9.4	119	62	403	75	62	47	19	15	7.2	8.0
26	21	12	105	108	498	148	59	46	18	16	7.6	7.6
27	14	32	98	371	431	237	58	43	18	14	7.6	19
28	12	18	165	280	506	272	65	40	17	14	7.6	15
29	10	14	274	236	542	344	58	38	17	13	7.6	11
30	8.9	24	261	196	-	367	156	38	16	7.6	7.6	9.1
31	8.9	-	465	165	-	288	-	40	-	13	7.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	319.8	42	6.2	10.3	0.312	0.36	634
November	323.9	32	7.8	10.8	.327	.37	642
December	7,850	1,400	20	253	7.67	8.85	15,570
Calendar year 1939	33,588.4	1,400	3.4	92.0	2.79	37.90	66,620
January	6,722	626	62	217	6.58	7.58	13,330
February	13,341	1,520	122	460	13.9	15.03	26,460
March	6,915	575	75	223	6.76	7.79	13,720
April	3,373	246	58	112	3.39	3.80	6,690
May	3,304	313	38	107	3.24	3.72	6,550
June	774	37	16	25.8	.782	.87	1,540
July	438.6	16	7.6	14.1	.427	.49	870
August	258.8	13	6.5	8.35	.253	.29	513
September	270.9	19	3.7	9.03	.274	.31	537
Water year 1939-40	43,891.0	1,520	3.7	120	3.64	49.46	87,060

a No gage-height record; discharge computed on basis of records for Wilson River near Tillamook.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is 96.50 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 1940.

Average discharge.- 12 years, 60.1 second-feet.

Extremes.- Maximum discharge observed during year, 204 second-feet Feb. 12, 13 (gage height, 8.71 feet); practically no flow part of Jan. 16-20, 22-26.
1928-40: Maximum discharge, about 6,000 second-feet Dec. 23, 1933 (gage height, 16.1 feet, site and datum then in use), computed from slope, area, and lake-spillway data; practically no flow at times.

Remarks.- Records good except those for periods of no gage-height record and those for month of June (when there may have been slight backwater effect), all of which are fair. 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 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	54	67	50	87	173	111	37	21	14	73	57
2	51	54	67	1	79	181	108	51	21	16	73	58
3	51	54	69	1	72	186	102	54	21	17	72	57
4	54	54	72	2	41	181	100	54	20	19	72	57
5	56	54	74	2	84	181	92	54	19	21	71	57
6	56	54	74	2	140	173	82	a62	19	25	70	58
7	61	54	72	1	148	160	74	a69	19	26	69	59
8	64	54	72	1	128	148	69	77	18	26	68	59
9	64	54	72	1	152	136	69	74	18	24	66	60
10	61	54	72	1	124	126	67	68	18	26	65	62
11	61	54	82	1	6	114	64	60	18	36	63	63
12	59	54	87	1	113	105	61	54	17	45	61	66
13	59	54	84	1	127	97	56	49	16	48	60	70
14	59	54	72	1	13	87	54	45	16	50	60	71
15	56	51	69	1	13	79	51	41	15	54	59	73
16	56	51	82	0	13	69	49	38	14	58	58	74
17	54	51	100	0	13	64	46	35	14	60	57	73
18	51	51	111	0	11	56	42	34	14	61	57	72
19	49	51	120	0	118	51	39	32	13	63	56	70
20	49	51	126	16	181	49	39	30	12	65	56	70
21	49	51	126	37	173	46	37	29	12	68	55	70
22	49	54	120	12	164	44	a36	26	12	71	55	a69
23	51	54	111	19	148	42	a34	24	11	75	54	a69
24	51	54	100	11	133	42	a33	23	12	76	54	a69
25	49	56	87	9	126	39	32	22	12	76	55	68
26	49	56	72	19	129	46	a31	22	11	75	56	69
27	51	59	56	28	133	69	a30	21	11	75	57	71
28	51	59	51	69	156	92	a29	21	14	75	57	74
29	56	67	56	44	168	102	a28	20	14	75	57	76
30	56	69	67	30	-	108	a30	20	13	75	57	78
31	56	-	79	25	-	108	-	20	-	74	57	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,690	64	49	54.5	3,350
November	1,641	69	51	54.7	3,250
December	2,569	126	51	82.9	5,100
Calendar year 1939	19,190	126	4	52.6	38,060
January	386	69	0	12.5	766
February	2,991	181	6	103	5,930
March	3,154	186	39	102	6,260
April	1,695	111	28	56.5	3,360
May	1,266	77	20	40.8	2,510
June	465	21	11	15.5	922
July	1,569	76	14	50.6	3,110
August	1,900	73	54	61.3	3,770
September	1,999	78	57	66.6	3,960
Water year 1939-40	21,325	186	0	58.3	42,290

a No gage-height record; discharge interpolated or computed on basis of records for Tualatin River near Willamette.

W-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

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 1940.

Average discharge.- 20 years, 449 second-feet.

Extremes.- Maximum discharge during year, 2,250 second-feet Feb. 6 (gage height, 4.95 feet), from rating curve extended above 1,000 second-feet; minimum, 214 second-feet Aug. 29 to Sept. 2, Sept. 6-7 (gage height, 1.57 feet).
1920-40: 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 except those for period of no gage-height record, which are poor. No regulation or diversion above station.

Cooperation.- Gage-height record and results of discharge measurements furnished by Portland General Electric Co.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used June 6 to Sept. 30)

1.6	206	2.2	395	2.8	640	3.4	970	4.2	1,550
1.9	290	2.5	510	3.1	795	3.8	1,235	4.6	1,910

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	222	227	224	550	290	1,120	880	577	297	240	227	214
2	222	227	227	559	287	1,190	768	518	287	235	227	219
3	219	227	222	526	304	958	700	482	275	235	224	224
4	252	227	222	582	374	862	655	490	266	235	222	219
5	297	224	219	534	500	812	613	506	263	235	222	216
6	243	224	222	470	1,870	730	568	474	263	232	222	214
7	235	222	222	430	1,360	800	582	446	266	232	222	216
8	229	227	263	409	946	922	622	423	263	232	219	216
9	227	224	284	388	874	778	768	412	257	232	219	219
10	224	222	353	378	1,080	690	670	402	254	232	219	229
11	224	222	297	360	844	622	613	392	254	232	219	219
12	222	222	260	342	710	572	582	378	254	229	219	219
13	222	222	249	328	784	538	577	370	252	229	219	227
14	222	a219	304	318	710	514	559	360	249	229	219	229
15	219	a219	577	308	622	518	538	350	249	229	216	222
16	219	a219	868	300	595	595	506	342	249	227	216	235
17	222	a219	778	294	645	542	478	332	246	227	216	227
18	229	a219	526	287	582	510	466	328	246	227	216	227
19	227	a219	442	284	538	494	454	322	246	229	216	227
20	227	a219	498	278	502	486	438	311	243	257	216	222
21	224	a219	454	275	478	482	423	308	246	238	216	219
22	222	a219	395	269	462	478	416	300	246	232	216	219
23	224	a219	360	266	438	482	438	297	243	229	216	219
24	238	a216	332	263	430	506	426	294	243	229	216	216
25	229	a216	311	260	874	518	446	290	240	227	216	216
26	238	a216	297	281	1,370	937	416	287	243	232	216	219
27	263	a216	290	367	1,280	1,220	402	284	243	240	216	263
28	252	a216	360	318	1,370	1,010	450	281	243	235	216	266
29	235	a219	502	304	1,250	1,060	446	275	240	229	216	232
30	229	a224	538	300	-	1,000	538	275	240	227	214	227
31	227	-	530	294	-	928	-	300	-	227	214	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	7,184	297	219	232	1.76	2.02	14,250
November	6,630	227	216	221	1.67	1.87	13,150
December	11,626	868	219	375	2.84	3.28	23,060
Calendar year 1939	134,508	874	216	369	2.80	37.89	266,800
January	11,122	582	260	359	2.72	3.13	22,060
February	22,369	1,870	287	771	5.84	6.30	44,370
March	22,874	1,220	478	738	5.59	6.44	45,370
April	16,438	880	402	548	4.15	4.63	32,600
May	11,406	577	275	368	2.79	3.21	22,620
June	7,606	297	240	254	1.92	2.14	15,090
July	7,200	257	227	232	1.76	2.03	14,280
August	6,767	227	214	218	1.65	1.91	13,420
September	6,736	266	214	225	1.70	1.90	13,360
Water year 1939-40	137,958	1,870	214	377	2.86	38.86	273,600

Peak discharge.- Feb. 6 (12 m.) 2,250 sec.-ft.; Feb. 25 (10 p.m.) 1,490 sec.-ft.; Mar. 7 (10 p.m.) 1,080 sec.-ft.; Mar. 26 (9 p.m.) 1,390 sec.-ft.

a No gage-height record; discharge computed on basis of records for stations above Three Lynx Creek and on Oak Grove Fork above power-plant intake.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is 1,098 feet above mean sea level (levels by Portland General Electric Co.)

Drainage area.- 488 square miles.

Records available.- October 1911 to December 1913, October 1921 to September 1940.

Average discharge.- 21 years (1911-13, 1921-40), 1,833 second-feet.

Extremes.- Maximum discharge during year, 14,600 second-feet Feb. 6 (gage height, 9.26 feet), from rating curve extended above 11,000 second-feet; minimum, about 383 second-feet Aug. 13 (stage below inlet pipe); minimum daily, 612 second-feet Aug. 13.
1911-13, 1921-40: 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, 536 second-feet Oct. 22, 1930.

Remarks.- Records good except that for Aug. 13, which is fair. Water diverted from Oak Grove Fork is used in power plant on Clackamas River just above station.

Cooperation.- Gage-height record and results of discharge measurements furnished by Portland General Electric Co.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.8	585	2.0	1,300	3.5	2,760	5.0	4,750	6.5	7,580		
1.1	720	2.5	1,730	4.0	3,360	5.5	5,580	7.5	9,950		
1.5	950	3.0	2,220	4.5	4,020	6.0	6,520	8.5	12,540		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	652	731	731	2,720	1,280	4,830	3,950	3,020	1,070	736	675	625
2	670	710	736	2,410	1,240	5,410	3,450	2,550	1,010	742	680	630
3	670	705	710	2,200	1,300	4,270	3,100	2,250	956	731	680	656
4	742	695	690	2,430	1,840	3,740	2,820	2,160	944	726	666	656
5	974	675	675	2,320	2,910	3,590	2,600	2,250	926	742	670	643
6	775	675	685	2,020	12,300	3,170	2,360	2,140	902	731	666	634
7	753	675	685	1,780	7,490	3,300	2,360	2,000	932	720	666	643
8	710	700	830	1,620	4,860	4,240	2,700	1,820	932	726	661	652
9	700	710	1,120	1,530	4,340	3,560	3,570	1,730	896	720	661	648
10	680	680	1,860	1,550	5,140	3,110	3,290	1,680	866	715	656	700
11	680	680	1,600	1,460	4,190	2,730	2,860	1,600	872	715	656	652
12	685	661	1,240	1,380	3,450	2,430	2,650	1,480	860	705	695	648
13	678	666	1,040	1,300	3,780	2,310	2,560	1,460	836	710	612	670
14	670	670	1,310	1,220	3,410	2,070	2,390	1,380	836	695	648	680
15	661	666	4,260	1,170	2,880	2,040	2,300	1,320	854	705	648	670
16	670	666	6,520	1,130	2,810	2,390	2,110	1,300	814	705	648	720
17	685	661	5,410	1,090	3,260	2,290	1,950	1,250	814	695	643	670
18	700	666	3,360	1,050	2,980	2,150	1,870	1,220	814	695	634	685
19	710	661	2,450	1,020	2,650	2,020	1,810	1,160	808	700	634	666
20	695	656	2,650	1,000	2,340	1,950	1,740	1,150	802	792	643	648
21	680	656	2,560	968	2,120	1,950	1,630	1,120	797	742	638	638
22	680	661	2,100	956	2,000	1,910	1,630	1,100	792	705	643	630
23	690	661	1,750	938	1,840	1,910	1,710	1,070	775	695	634	621
24	742	652	1,490	932	1,780	1,990	1,750	1,060	775	695	638	621
25	705	656	1,330	908	4,060	2,100	1,780	1,030	764	690	634	625
26	764	670	1,240	980	6,560	4,770	1,700	1,020	764	720	634	638
27	938	670	1,170	1,470	5,690	5,580	1,610	998	764	742	638	S84
28	968	666	1,680	1,320	6,130	4,750	1,830	980	758	720	638	890
29	802	666	3,100	1,340	5,550	4,700	1,960	980	758	695	630	720
30	775	690	3,140	1,340	-	4,500	2,350	974	753	690	630	661
31	736	-	2,740	1,340	-	4,130	-	1,080	-	685	634	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	22,640	974	652	730	1.50	1.73	44,910
November	20,257	731	652	675	1.38	1.54	40,180
December	60,862	6,520	675	1,963	4.02	4.64	120,700
Calendar year 1939	543,307	6,520	652	1,489	3.05	41.39	1,078,000
January	44,892	2,720	908	1,448	2.97	3.42	89,040
February	110,180	12,300	1,240	3,799	7.78	8.40	218,500
March	99,890	5,580	1,910	3,222	6.60	7.61	198,100
April	70,390	3,950	1,610	2,346	4.81	5.36	139,600
May	46,332	3,020	974	1,495	3.06	3.53	91,900
June	25,444	1,070	753	848	1.74	1.94	50,470
July	22,185	792	685	716	1.47	1.69	44,000
August	20,133	695	612	649	1.33	1.53	39,930
September	20,124	S90	621	671	1.37	1.53	39,920
Water year 1939-40	563,329	12,300	612	1,539	3.15	42.92	1,117,000

Peak discharge.- Dec. 15 (11:30 p.m.) 7,560 sec.-ft.; Feb. 6 (9 to 10 a.m.) 14,600 sec.-ft.; Feb. 26 (1 a.m.) 7,560 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is 532.0 feet above mean sea level (levels of Portland General Electric Co.); gage readings have been reduced to elevations above mean sea level.
Drainage area.- 665 square miles.
Records available.- January 1909 to September 1940.
Average discharge.- 31 years, 2,586 second-feet.
Extremes.- Maximum discharge during year, 19,000 second-feet Feb. 6 (elevation, 544.03 feet); minimum, 440 second-feet (regulated) Aug. 13; minimum daily, 650 second-feet Aug. 31.
1909-40: Maximum discharge, 60,800 second-feet Mar. 31, 1931 (elevation, 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 (elevation, 532.03 feet); minimum daily, 587 second-feet Aug. 17, 1930.
Remarks.- Records excellent. Some diurnal fluctuation during low water due to Oak Grove power plant. No diversion or regulation.
Cooperation.- Gage-height record and results of discharge measurements furnished by Portland General Electric Co.

Rating table, water year 1939-40 (elevation, in feet, and discharge, in second-feet)

532.8	630	535.0	2,070	539.0	7,310
533.1	770	535.5	2,540	540.0	9,260
533.5	990	536.0	3,070	541.0	11,500
534.0	1,300	537.0	4,260	543.0	16,400
534.5	1,660	538.0	5,660		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	730	870	860	3,640	1,720	7,130	6,450	4,720	1,340	835	750	662
2	770	860	882	3,180	1,620	8,050	5,510	3,880	1,260	820	740	666
3	760	894	845	2,900	1,660	6,450	4,650	3,400	1,210	815	740	705
4	888	860	825	3,290	2,220	5,510	4,130	3,180	1,120	800	720	705
5	1,340	830	790	3,180	3,260	5,140	3,700	3,240	1,110	805	725	685
6	978	825	810	2,740	15,800	4,520	3,340	3,070	1,100	795	715	662
7	912	810	810	2,410	11,000	4,650	3,290	2,800	1,150	775	715	670
8	820	825	1,030	2,180	7,960	6,290	3,760	2,520	1,150	775	710	680
9	755	855	1,450	2,040	7,310	5,210	5,210	2,330	1,100	770	710	680
10	780	815	2,590	2,170	8,050	4,460	4,860	2,240	1,060	765	710	760
11	760	785	2,420	2,070	6,790	3,880	4,260	2,120	1,060	750	705	695
12	760	780	1,800	1,920	5,360	3,400	3,880	1,960	1,030	760	720	690
13	760	780	1,470	1,770	6,130	3,070	3,640	1,910	1,010	745	700	735
14	730	790	1,560	1,660	5,440	2,850	3,340	1,820	990	755	705	755
15	730	775	5,600	1,570	4,390	2,740	3,180	1,720	990	760	705	710
16	760	765	9,690	1,500	4,260	3,290	2,900	1,680	960	755	700	775
17	780	760	8,540	1,440	5,140	3,180	2,690	1,610	936	755	700	720
18	810	765	5,140	1,420	4,720	2,900	2,540	1,540	930	750	680	775
19	810	770	3,520	1,370	4,060	2,690	2,450	1,470	924	760	670	745
20	820	765	3,820	1,320	3,520	2,590	2,340	1,470	912	840	670	700
21	780	765	3,880	1,270	3,070	2,520	2,140	1,410	918	845	670	675
22	760	780	3,120	1,230	2,850	2,450	2,100	1,370	906	780	670	662
23	800	775	2,540	1,210	2,540	2,440	2,320	1,320	876	770	666	654
24	978	775	2,120	1,180	2,390	2,520	2,490	1,300	870	765	666	654
25	870	760	1,860	1,130	5,260	2,640	2,540	1,280	870	760	666	654
26	918	760	1,710	1,230	9,470	5,090	2,410	1,250	870	800	666	666
27	1,210	800	1,570	1,830	8,440	8,440	2,300	1,220	865	876	666	1,120
28	1,400	785	2,390	1,740	9,260	7,220	2,900	1,210	855	835	670	1,160
29	1,110	770	4,320	1,740	8,440	6,880	3,180	1,180	860	780	662	830
30	978	825	4,580	1,810	-	6,700	3,640	1,180	850	775	658	750
31	912	-	3,880	1,790	-	6,290	-	1,380	-	765	650	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	27,199	1,400	730	877	1.32	1.52	53,950
November	23,974	894	760	799	1.20	1.34	47,550
December	86,422	9,690	790	2,788	4.19	4.83	171,400
Calendar year 1939	742,606	10,400	720	2,035	3.06	41.52	1,473,000
January	59,930	3,640	1,130	1,933	2.91	3.35	118,900
February	162,130	15,800	1,620	5,691	8.41	9.07	321,600
March	141,190	8,440	2,440	4,555	6.85	7.90	280,000
April	102,140	6,450	2,100	3,405	5.12	5.71	202,600
May	62,780	4,720	1,180	2,025	3.05	3.51	124,500
June	30,082	1,340	850	1,003	1.51	1.68	59,670
July	24,336	876	745	785	1.18	1.36	48,270
August	21,500	750	650	694	1.04	1.20	42,640
September	22,000	1,160	654	733	1.10	1.23	43,640
Water year 1939-40	763,683	15,800	650	2,087	3.14	42.70	1,515,000

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. al Survey

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 1940. 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.- 16 years (1924-40), 460 second-feet.

Extremes.- Maximum discharge during year, 1,050 second-feet Mar. 26 (gage height, 2.98 feet); minimum, 287 second-feet Sept. 5, (gage height, 1.75 feet).
1909-40: 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.

Cooperation.- Gage-height record and results of discharge measurements furnished by Portland General Electric Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	307	303	h291	405	320	803	915	616	380	324	307	291
2	307	299	295	400	320	873	845	580	375	320	303	291
3	307	299	291	405	324	803	796	562	365	320	303	295
4	338	295	291	410	351	768	782	556	360	320	303	291
5	333	295	291	421	426	747	754	550	356	320	303	291
6	311	295	291	395	930	705	705	526	356	320	303	291
7	307	295	295	380	824	754	705	509	360	320	303	295
8	307	299	315	365	719	817	719	487	356	320	303	291
9	307	299	315	356	719	740	824	482	351	320	303	295
10	303	295	333	356	789	692	761	470	346	315	303	299
11	303	295	328	346	698	646	712	460	342	315	303	295
12	303	295	311	342	634	610	686	448	342	311	303	291
13	299	295	307	333	628	592	679	443	338	311	303	299
14	299	295	324	328	592	574	666	432	338	311	299	299
15	299	295	438	324	550	580	653	426	338	311	299	307
16	299	295	604	324	538	622	616	416	338	311	299	307
17	303	295	616	320	544	592	604	410	333	311	299	299
18	303	h295	470	320	520	574	598	405	333	315	299	299
19	307	h295	410	315	504	562	580	400	333	311	295	295
20	303	h295	438	315	482	556	562	395	333	328	295	291
21	303	h295	421	311	470	550	544	395	333	320	295	291
22	303	h295	385	311	465	544	526	390	328	311	295	291
23	303	h295	370	311	443	550	556	385	328	307	295	291
24	307	h291	346	307	432	562	550	380	328	307	295	291
25	303	h291	338	307	580	580	574	380	324	307	291	295
26	315	h291	338	315	754	845	544	375	324	311	291	299
27	328	h291	333	338	775	982	526	375	324	311	291	360
28	320	h291	346	328	852	901	556	370	324	311	291	315
29	307	h295	410	324	838	915	532	370	324	307	291	299
30	303	h299	405	324	-	901	580	370	324	307	291	295
31	303	-	410	320	-	930	-	385	-	307	291	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	9,540	338	299	308	2.44	2.82	18,920
November	8,858	303	291	295	2.34	2.61	17,570
December	11,356	616	291	366	2.90	3.35	22,520
Calendar year 1939	156,098	859	291	428	3.40	46.09	309,600
January	10,656	421	307	344	2.73	3.15	21,140
February	17,021	930	320	587	4.66	5.02	33,760
March	21,870	932	544	705	5.60	6.46	43,380
April	19,650	915	526	655	5.20	5.80	38,980
May	13,748	616	370	443	3.52	4.06	27,270
June	10,234	380	324	341	2.71	3.02	20,300
July	9,740	328	307	314	2.49	2.87	19,320
August	9,245	307	291	298	2.37	2.73	18,340
September	8,939	360	291	298	2.37	2.64	17,730
Water year 1939-40	150,857	982	291	412	3.27	44.53	299,200

h Computed from staff-gage reading.

9-233 April 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey 161684-O U.S. GOVERNMENT PRINTING OFFICE 1936

·Johnson Creek at Sycamore, Oreg.

Location.- Water-stage recorder and concrete control with steel weir for low flows, lat. 45°28'40", long. 122°30'30", in lot 2, SW¼ sec. 13, T. 1 S., R. 2 E., a third of a mile southwest of Sycamore station. Datum of gage is 228.03 feet above mean sea level (general adjustment of 1929). Prior to Aug. 26, 1940, staff gage at same site and datum.

Drainage area.- 28.2 square miles.

Records available.- June to September 1940.

Extremes.- Maximum discharge recorded during period, 5 second-feet Sept. 26 (gage height, 1.10 feet); minimum daily, 0.2 second-foot Aug. 14-16, 18-22.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Small diversions above station for irrigation; no regulation. Staff gage read once daily Aug. 15-17, 19-24.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1												0.5
2												.7
3												1.0
4												.7
5												.7
6												.7
7											a0.3	.6
8												.5
9												.8
10												1.5
11												.9
12												a.8
13										a0.3		a1.0
14											a.2	1.4
15											.2	1.0
16											.2	.9
17											.3	.8
18											a.2	.9
19											.2	1.0
20											.2	.9
21											.2	.8
22											.2	a.7
23											.3	a.6
24											.6	.6
25										a0.3	a.6	.7
26									†0.5		.6	a2.4
27											.7	4.2
28										a0.4	.8	3.1
29											1.0	1.7
30											.6	1.2
31											.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October							
November							
December							
Calendar year							
January	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-
July	9.9	0.4	0.3	0.32	0.011	0.01	20
August	11.5	1.0	.2	.37	.013	.02	23
September	33.3	4.2	.5	1.11	.039	.04	66
The period	-	-	-	-	-	-	109

†Discharge measurement.
a No gage-height record; discharge interpolated or computed on basis of discharge measurements made on June 26 and July 25 and weather records.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is 576.4 feet above mean sea level (from river-profile survey).

Drainage area.- 483 square miles.

Records available.- July 1910 to March 1912 (gage heights only), June 1924 to September 1940. July 1909 to June 1910 at site 1,000 feet upstream from Swift Creek.

Average discharge.- 16 years (1924-40), 2,760 second-feet.

Extremes.- Maximum discharge during year, 20,200 second-feet Dec. 15 (gage height, 10.78 feet); minimum, 602 second-feet Sept. 23, 24, 25, 26; minimum gage height, 3.06 feet Oct. 16, 17.

1910-12, 1924-40: 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).

Revisions.- The minimum discharge for the water year 1939 has been revised to 614 second-feet Oct. 8, 9; minimum gage height, 3.08 feet Sept. 29, 30; superseding figures published in Water-Supply Paper 884.

Remarks.- Records good. No diversion or regulation.

Revisions.- Revised figures of discharge for the water year 1939, superseding those published in Water-Supply Paper 884, are given herein.

Discharge, in second-feet, 1938-40

1938-39

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	630	1,400	2,760	4,850	2,110	1,730	3,580	3,860	2,530	1,610	924	1,020
2	638	1,290	4,490	9,120	2,040	1,730	3,860	3,860	2,390	1,500	924	895
3	742	3,160	5,200	8,810	1,920	1,730	4,060	3,860	2,320	1,560	924	838
4	679	2,530	5,700	7,320	1,850	1,670	3,960	3,960	2,250	1,610	924	838
5	679	1,850	7,610	f5,830	1,920	1,610	3,760	3,670	2,250	1,440	895	810
6	679	1,500	5,960	f4,720	1,920	1,610	3,490	3,400	2,250	1,390	895	783
7	630	1,340	5,080	f3,960	1,920	1,560	3,320	3,150	2,180	1,340	866	783
8	622	1,340	4,600	3,580	1,730	1,500	3,400	3,320	2,110	1,290	866	783
9	622	1,290	4,270	3,240	1,560	1,440	3,400	3,490	2,180	1,240	866	783
10	769	1,200	3,760	3,070	1,560	1,440	3,320	3,580	2,110	1,290	895	756
11	1,590	1,120	3,320	2,910	1,670	1,610	3,400	3,760	2,180	1,290	866	783
12	1,300	1,080	2,910	2,760	2,760	1,730	3,400	3,960	2,250	1,240	866	756
13	1,760	1,080	2,680	2,600	2,390	1,730	3,240	4,270	2,320	1,200	866	756
14	1,090	1,080	2,460	2,460	2,810	1,670	3,070	4,720	2,250	1,160	838	756
15	900	1,160	2,390	2,600	5,700	1,730	2,990	4,960	2,250	1,160	838	756
16	814	2,730	2,110	2,390	4,380	1,920	2,910	4,840	2,250	1,160	838	756
17	760	2,830	1,920	2,530	3,580	2,180	3,070	4,160	2,180	1,080	838	756
18	733	2,320	1,790	3,400	3,240	2,320	3,490	3,760	2,180	1,050	838	730
19	697	2,040	1,730	4,600	2,830	2,600	3,960	3,240	2,390	1,050	810	730
20	679	2,040	1,670	4,060	2,600	2,910	4,160	2,910	2,390	1,050	810	730
21	670	1,850	1,610	3,580	2,390	3,400	4,600	3,240	2,250	1,020	810	756
22	654	1,670	1,560	3,240	2,250	4,160	4,720	3,070	2,180	1,020	810	730
23	654	1,440	1,670	2,990	2,110	5,320	4,490	2,910	2,110	1,020	810	730
24	679	1,500	1,850	2,760	2,040	5,960	4,160	2,830	1,920	985	810	730
25	697	1,390	2,040	2,530	2,040	5,960	4,060	2,910	1,790	1,020	838	704
26	724	1,340	1,790	2,460	1,920	5,700	3,760	2,990	1,730	985	810	704
27	930	1,290	1,790	2,680	1,850	4,600	3,670	2,910	1,670	985	810	704
28	850	1,240	2,040	2,600	1,790	4,060	3,860	2,910	1,670	985	838	704
29	1,050	1,240	3,070	2,530	-	3,670	4,270	3,860	1,790	954	838	704
30	1,250	1,560	3,240	2,390	-	3,490	4,160	3,400	1,730	954	810	704
31	1,480	-	3,150	2,250	-	3,400	-	2,910	-	924	866	-

f Fragmentary gage-height record; discharge computed from partly or wholly estimated gage heights.

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Discharge, in second-feet, of Lewis River near Cougar, Wash., 1938-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	704	756	1,160	6,620	1,850	9,770	5,800	4,780	1,810	946	808	657
2	704	756	1,790	7,040	1,920	11,400	5,000	4,380	1,640	946	776	715
3	679	756	1,560	6,760	1,920	9,140	4,480	3,920	1,590	946	776	715
4	810	730	1,290	6,360	2,460	7,370	4,010	3,840	1,540	910	776	686
5	895	730	1,160	5,830	3,810	6,180	3,660	4,580	1,490	910	776	657
6	810	730	1,290	5,080	14,500	5,330	3,420	4,290	1,440	910	776	657
7	756	838	1,200	4,490	11,400	6,180	3,500	4,010	1,440	910	776	657
8	730	895	2,560	3,960	8,380	6,560	3,750	3,750	1,390	910	746	657
9	730	895	3,160	3,580	8,080	5,680	4,780	3,660	1,390	876	746	686
10	704	838	5,830	3,320	9,140	5,000	4,480	3,750	1,340	876	746	841
11	704	866	4,960	2,990	7,370	4,380	4,100	3,660	1,340	876	746	715
12	704	838	3,670	2,760	5,920	3,920	3,920	3,340	1,340	876	746	715
13	704	838	3,070	2,530	5,440	3,500	4,010	3,040	1,340	876	715	746
14	704	838	4,210	2,390	4,680	3,260	3,920	2,890	1,260	841	715	715
15	679	810	13,500	2,250	4,100	3,260	3,580	2,680	1,220	841	715	686
16	679	810	18,500	2,110	3,920	3,500	3,260	2,610	1,220	841	715	657
17	730	783	16,600	2,040	3,920	3,260	3,040	2,540	1,140	841	686	657
18	730	783	11,100	1,920	3,680	3,180	3,040	2,540	1,140	841	686	657
19	756	783	7,900	1,850	3,340	3,110	2,890	2,540	1,140	808	715	630
20	783	756	7,320	1,750	3,110	3,040	2,750	2,480	1,140	841	f746	630
21	730	783	5,960	1,670	2,890	2,960	2,610	2,340	1,100	876	a715	630
22	730	866	5,200	1,610	2,750	2,960	2,540	2,340	1,060	841	a690	630
23	756	838	4,490	1,560	2,680	3,040	2,820	2,340	1,060	841	a675	630
24	810	783	3,860	1,500	2,610	3,260	2,890	2,340	1,060	808	a665	630
25	756	783	3,400	1,440	5,090	3,340	2,820	2,160	1,020	808	a655	630
26	866	783	3,070	1,500	6,560	5,000	2,680	1,920	1,020	910	a670	630
27	924	783	2,830	2,180	6,560	7,510	2,540	1,810	982	946	a800	776
28	985	783	2,990	1,980	8,530	7,370	2,820	1,760	982	876	a765	746
29	866	783	4,160	1,920	9,770	7,370	2,610	1,700	982	841	a735	686
30	810	1,050	4,270	1,920	-	7,510	3,140	1,700	982	841	a710	657
31	783	-	5,200	1,920	-	6,690	-	1,920	-	808	f686	-

Peak discharge.- Dec. 15 (8 p.m.) 20,200 sec.-ft.; Feb. 6 (2 to 3 p.m.) 17,000 sec.-ft.

a No gage-height record; discharge computed on basis of records for Toutle River near Silver Lake and Cispus River near Randle.

f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

Monthly discharge, in second-feet, 1938-40

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October 1938	26,651	1,760	622	860	1.78	2.05	52,860
November	48,900	3,160	1,080	1,630	3.37	3.77	96,990
December	96,220	7,610	1,560	3,104	6.43	7.41	190,800
Calendar year 1938	949,374	15,900	622	2,601	5.39	73.09	1,883,000
January 1939	114,820	9,120	2,250	3,704	7.67	8.84	227,700
February	66,880	5,700	1,560	2,389	4.95	5.15	132,700
March	86,140	5,960	1,440	2,779	5.75	6.63	170,900
April	111,590	4,720	2,910	3,720	7.70	8.59	221,300
May	110,670	4,960	2,830	3,570	7.39	8.52	219,500
June	64,050	2,530	1,670	2,135	4.42	4.93	127,000
July	36,562	1,610	924	1,179	2.44	2.82	72,520
August	26,457	924	810	853	1.77	2.04	52,440
September	22,968	1,020	704	766	1.59	1.77	45,560
Water year 1938-39	811,888	9,120	622	2,224	4.60	62.52	1,610,000
October 1939	23,711	985	679	765	1.58	1.83	47,030
November	24,264	1,050	730	809	1.67	1.87	48,130
December	157,250	18,500	1,160	5,073	10.5	12.11	311,900
Calendar year 1939	845,342	18,500	679	2,316	4.80	65.10	1,677,000
January 1940	94,810	7,040	1,440	3,058	6.33	7.30	188,100
February	156,280	14,500	1,850	5,389	11.2	12.03	310,000
March	164,030	11,400	2,960	5,291	11.0	12.63	325,300
April	104,860	5,800	2,540	3,495	7.24	8.07	208,000
May	91,610	4,780	1,700	2,955	6.12	7.05	181,700
June	37,598	1,810	982	1,253	2.59	2.89	74,570
July	27,018	946	808	872	1.81	2.08	53,590
August	22,653	808	655	731	1.51	1.74	44,930
September	20,381	841	630	679	1.41	1.57	40,450
Water year 1939-40	924,465	18,500	630	2,526	5.23	71.17	1,834,000

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. Datum of gage is 44 feet above mean sea level (subject to correction for general adjustment of 1929); based on surveys of Northwestern Electric Co.

Drainage area.- 733 square miles.

Records available.- July 1922 to September 1940. July to November 1909, at site 3 miles upstream.

Average discharge.- 17 years (1923-40), 4,513 second-feet (adjusted for storage since March 1931).

Extremes (regulated).- Maximum discharge during year, 36,900 second-feet Feb. 6 (gage height, 15.8 feet); minimum, 401 second-feet Sept. 13; minimum daily, 594 second-feet Sept. 13.

1909, 1922-40: 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 discharge, 1 second-foot July 6, 1931.

Remarks.- Records good except those above 20,000 second-feet and those below 2,000 second-feet, which are fair. 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 165 feet (set by Federal Power Commission) and 235 feet (spillway crest) above mean sea level. Water is used for development of power.

Cooperation.- Gage-height record collected in cooperation with Inland Power & Light Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	†2,590	2,130	1,900	9,110	3,190	16,900	8,580	8,580	2,060	1,130	655	†1,110
2	2,660	2,570	1,560	9,340	3,230	21,100	7,680	7,090	†1,760	940	1,040	965
3	2,640	2,770	†1,010	9,180	2,580	†14,400	6,600	6,000	2,500	805	1,350	738
4	2,590	2,640	1,720	8,610	†1,490	11,700	5,970	6,230	2,020	754	†1,310	760
5	2,460	†2,560	1,890	7,760	3,000	9,770	5,670	†7,730	1,850	741	1,310	638
6	2,970	2,890	1,900	7,400	25,300	8,260	4,640	6,940	2,030	940	1,220	684
7	3,140	2,450	1,780	†6,580	22,300	11,700	†5,600	6,350	1,910	†1,420	1,020	714
8	†2,490	2,220	1,740	5,350	16,700	12,800	5,760	5,830	1,750	1,140	794	†818
9	3,030	2,520	2,130	4,630	17,300	9,560	7,770	5,130	†946	764	832	956
10	3,070	2,560	†1,490	4,950	20,400	†8,510	7,240	4,810	2,030	704	808	676
11	2,940	3,070	1,950	4,000	†14,200	7,130	6,400	5,200	1,800	716	†800	715
12	2,500	†2,560	2,270	3,750	10,600	6,810	5,800	†4,080	1,780	768	1,280	672
13	2,340	2,900	2,440	3,540	10,700	5,200	5,770	4,280	1,550	726	1,010	594
14	2,220	3,170	2,490	†3,270	9,600	4,940	†5,390	3,880	1,580	†749	922	925
15	†1,880	2,590	3,230	3,850	7,790	5,020	4,780	3,250	1,660	1,230	811	†978
16	2,960	1,940	3,380	3,280	7,640	5,550	4,490	3,200	†1,050	1,190	1,010	672
17	2,480	1,990	†18,700	3,290	8,640	†4,870	4,150	3,690	1,660	1,130	858	964
18	2,170	1,930	16,900	3,250	†7,720	4,840	3,990	3,510	1,490	880	†1,390	945
19	2,090	†1,870	12,600	3,460	7,200	4,170	3,270	†2,370	1,440	933	1,160	813
20	2,000	2,450	10,900	3,390	6,170	4,190	2,750	3,210	1,340	726	1,090	814
21	1,960	3,010	9,600	†2,310	4,580	4,160	†2,880	3,500	1,410	†1,370	852	858
22	†2,000	2,030	6,880	3,440	5,240	4,110	3,280	3,460	1,400	1,080	880	†1,420
23	2,770	2,650	7,490	3,360	4,720	4,060	3,070	3,280	†1,150	806	860	924
24	2,290	2,330	†6,070	3,760	4,510	†4,390	2,670	3,180	1,520	736	707	971
25	2,380	2,300	5,160	3,440	†10,000	4,220	2,970	2,820	1,360	671	†726	1,010
26	2,410	†1,380	4,300	3,760	12,500	6,990	3,080	†2,540	1,280	764	1,350	958
27	2,450	2,020	4,030	2,860	11,500	11,400	3,140	3,000	1,400	921	1,070	791
28	1,940	2,110	4,040	†1,900	16,100	12,000	†3,530	2,870	1,370	†784	908	738
29	†1,280	1,960	5,480	3,280	17,000	11,100	3,430	2,720	918	1,060	822	†780
30	2,410	1,840	7,990	3,260	-	11,000	4,770	2,090	†820	654	768	1,210
31	2,140	-	†7,460	3,210	-	†10,400	-	2,640	-	692	930	-

Month	Observed: Discharge in second-feet: Maximum	Observed: Discharge in second-feet: Minimum	Observed: Discharge in second-feet: Mean	Observed: Run-off in acre-feet	Change in contents in Lake Merwin* in acre-feet	Adjusted for change in reservoir contents: Run-off in acre-feet	Adjusted for change in reservoir contents: Discharge in second-feet: Mean	Adjusted for change in reservoir contents: Discharge in second-feet: Per square mile	Adjusted for change in reservoir contents: Run-off in inches
October	3,140	1,280	2,427	149,300	-75,300	74,000	1,203	1.64	1.89
November	3,170	1,380	2,390	142,200	-58,400	83,800	1,408	1.92	2.14
December	18,700	1,010	5,177	318,300	+216,100	534,400	8,691	11.9	13.72
Calendar year 1939	19,200	705	3,824	2,768,000	+600	2,769,000	3,825	5.22	70.86
January	9,340	1,900	4,599	282,800	-21,300	261,500	4,253	5.80	6.69
February	25,300	1,490	10,070	579,000	+20,300	599,300	10,420	14.2	15.31
March	21,100	4,060	8,427	518,200	+400	518,600	8,434	11.5	13.26
April	8,580	2,670	4,837	287,800	+13,600	301,400	5,065	6.91	7.71
May	8,580	2,090	4,305	264,700	-9,700	255,000	4,147	5.66	6.52
June	2,500	820	1,564	93,090	-1,000	92,090	1,548	2.11	2.35
July	1,420	654	901	55,390	+12,600	67,890	1,104	1.51	1.74
August	1,390	655	985	60,580	-2,400	58,180	946	1.29	1.49
September	1,420	594	860	51,200	-17,300	33,900	570	.778	.87
Water year 1939-40	25,300	594	3,861	2,803,000	+77,500	2,880,000	3,967	5.41	73.69

†Sunday. *Reservoir contents based on elevations at midnight.

9-237 September 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey 101695-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum of gage is 366.8 feet above mean sea level (from river-profile surveys).

Drainage area.- 124 square miles.

Records available.- September 1929 to September 1940.

Average discharge.- 11 years, 727 second-feet.

Extremes.- Maximum discharge during year, 7,670 second-feet Dec. 15 (gage height, 8.80 feet); minimum, 39 second-feet Aug. 30 (gage height, 0.13 foot).
1929-40: 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 tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 30				May 1 to Sept. 30					
0.5	70	1.4	215	0.1	37	1.1	147	4.0	1,310
.7	92	1.7	287	.3	50	1.4	207	5.0	2,040
.9	118	2.0	368	.5	67	1.7	280	6.0	3,130
1.1	152	2.5	526	.7	88	2.0	364	7.0	4,550
				.9	114	3.0	741	8.0	6,200

Note.- Same as following table above 2.5 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	248	508	1,430	474	2,650	1,600	1,820	188	70	65	41
2	74	229	716	1,310	474	3,000	1,310	1,370	205	69	62	47
3	66	224	624	1,190	491	2,180	1,130	1,070	176	70	57	57
4	234	193	526	1,490	881	1,820	1,010	1,040	164	67	55	45
5	231	176	458	1,490	1,800	1,560	872	1,560	158	67	52	46
6	223	170	458	1,190	6,030	1,370	741	1,370	153	67	49	44
7	158	185	412	982	4,240	2,160	900	1,100	153	65	49	40
8	118	252	1,070	818	3,260	2,280	1,070	900	147	65	51	43
9	100	280	1,430	716	3,800	1,700	1,460	766	137	62	49	43
10	92	260	2,330	692	3,800	1,370	1,280	669	127	61	51	70
11	85	277	2,230	603	2,820	1,160	1,040	583	122	61	49	51
12	80	255	1,520	563	2,130	982	900	526	116	61	47	49
13	76	250	1,190	544	2,480	845	766	491	111	61	50	63
14	72	274	1,600	526	2,000	741	692	441	111	60	49	63
15	72	243	5,420	491	1,660	766	603	410	107	59	49	52
16	74	229	5,190	458	1,600	900	508	382	106	60	46	47
17	99	220	3,940	442	2,280	818	458	355	106	61	44	46
18	122	252	2,430	442	2,000	741	412	327	99	58	40	.74
19	143	222	1,740	412	1,700	669	382	307	100	56	41	61
20	160	211	1,900	382	1,400	603	382	294	100	59	42	51
21	129	211	1,780	368	1,190	563	337	272	96	83	44	46
22	115	303	1,430	357	1,040	526	318	254	94	63	43	43
23	146	257	1,160	343	928	491	686	242	89	57	42	41
24	272	245	928	321	872	508	900	230	85	57	43	41
25	195	233	766	316	2,300	491	741	223	80	58	42	42
26	426	252	692	348	2,650	1,110	624	214	80	135	42	45
27	491	412	603	579	2,280	1,860	563	205	80	215	44	222
28	669	354	792	544	3,260	1,860	831	196	77	93	48	148
29	491	329	1,100	526	2,820	1,660	766	186	74	79	42	80
30	360	474	1,280	526	-	1,520	1,300	186	73	78	39	68
31	292	-	1,280	508	-	1,660	-	207	-	67	42	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	5,945	669	66	192	1.55	1.78	11,790
November	7,720	474	170	257	2.07	2.32	15,310
December	47,503	5,420	412	1,532	12.4	14.25	94,220
Calendar year 1939	227,051	6,340	51	622	5.02	68.20	450,300
January	20,907	1,490	316	674	5.44	6.27	41,470
February	62,660	6,030	474	2,161	17.4	18.79	124,300
March	40,564	3,000	491	1,309	10.6	12.17	80,460
April	24,582	1,600	318	819	6.60	7.37	48,760
May	18,196	1,820	186	587	4.73	5.46	36,090
June	3,514	205	73	117	.944	1.05	6,970
July	2,244	215	56	72.4	.584	.67	4,450
August	1,468	65	39	47.4	.382	.44	2,910
September	1,809	222	40	60.3	.486	.54	3,590
Water year 1939-40	237,112	6,030	39	648	5.23	71.11	470,300

Peak discharge.- Dec. 15 (5 p.m.) 7,670 sec.-ft.; Feb. 6 (7 a.m.) 7,290 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog al Survey

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 1940. July 1911 to December 1919, at site 1 mile upstream, published as Cowlitz River at Lewis, Wash.

Average discharge.- 19 years, 1,598 second-feet.

Extremes.- Maximum discharge during year, 9,420 second-feet Dec. 15 (gage height, 8.72 feet); minimum, 228 second-feet Oct. 16, 18; minimum gage height, 3.08 feet Sept. 5. 1911-19, 1929-40: Maximum discharge, 36,600 second-feet Dec. 21, 1933 (gage height, 13.0 feet), from rating curve extended above 12,600 second-feet; minimum, 160 second-feet Nov. 21, 1929 (gage height, 2.10 feet).

Remarks.- Records good. No diversion or regulation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	330	428	900	4,020	782	2,220	1,720	3,260	2,020	976	524	440
2	288	362	1,480	3,820	745	2,420	1,620	3,620	1,840	968	518	445
3	273	324	1,100	2,860	738	2,020	1,460	2,860	1,720	912	558	390
4	564	288	575	2,280	731	1,840	1,310	2,490	1,620	873	587	326
5	540	278	758	1,900	1,030	1,780	1,220	2,220	1,410	834	630	326
6	405	368	790	1,560	4,870	1,560	1,120	1,960	1,360	790	669	363
7	362	1,200	850	1,410	3,920	2,200	1,180	1,900	1,310	767	656	374
8	304	1,070	1,980	1,220	2,780	2,710	1,410	1,960	1,220	767	637	430
9	298	987	1,800	1,140	2,860	2,150	1,620	2,490	1,410	774	593	490
10	298	824	2,910	1,050	3,100	1,840	1,460	3,440	1,720	774	552	587
11	298	1,040	2,080	952	2,420	1,460	1,460	3,260	1,840	842	570	502
12	324	1,000	1,530	881	1,960	1,360	1,670	2,710	2,080	897	575	518
13	335	824	1,290	827	1,720	1,220	2,280	2,220	1,960	842	529	430
14	314	681	1,470	774	1,510	1,110	2,220	2,220	1,560	790	524	386
15	278	578	5,820	717	1,360	1,130	1,900	2,150	1,460	790	512	370
16	253	509	6,530	695	1,260	1,460	1,620	2,020	1,410	797	534	382
17	309	456	5,030	654	1,180	1,410	1,460	2,150	1,360	731	552	359
18	253	444	3,100	621	1,110	1,360	1,780	2,420	1,460	675	552	340
19	546	400	2,640	582	1,040	1,310	1,670	2,710	1,460	681	552	326
20	433	372	2,490	563	968	1,360	1,510	2,490	1,260	717	570	344
21	389	410	2,020	545	912	1,360	1,410	2,420	1,120	790	490	399
22	340	734	1,720	527	865	1,410	1,460	2,860	1,040	709	485	417
23	439	521	1,460	509	834	1,460	2,020	3,260	1,080	717	502	404
24	439	444	1,260	475	797	1,780	1,960	3,020	1,220	654	529	399
25	324	416	1,120	464	1,100	1,900	1,840	2,350	1,260	595	485	370
26	340	372	1,030	486	1,460	2,020	1,720	1,780	1,130	745	470	367
27	484	345	960	641	1,560	2,220	1,620	1,560	1,000	642	558	417
28	918	330	984	647	1,840	2,020	1,670	1,620	944	731	485	344
29	688	319	2,100	731	2,080	1,960	1,560	1,720	976	717	480	344
30	559	956	2,280	804	-	2,280	1,640	2,020	1,000	675	502	323
31	480	-	2,800	812	-	2,020	-	2,560	-	564	502	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	12,405	918	253	400	1.39	1.61	24,600
November	17,280	1,200	278	576	2.01	2.24	34,270
December	63,157	6,530	758	2,037	7.10	8.18	125,300
Calendar year 1939	524,813	9,040	253	1,438	5.01	68.06	1,041,000
January	35,167	4,020	464	1,134	3.95	4.56	69,750
February	47,532	4,870	731	1,639	5.71	6.16	94,280
March	54,350	2,710	1,110	1,753	6.11	7.04	107,800
April	48,590	2,280	1,120	1,620	5.64	6.30	96,380
May	75,720	3,620	1,560	2,443	8.51	9.81	150,200
June	42,250	2,080	944	1,408	4.91	5.47	83,800
July	23,936	976	564	772	2.69	3.10	47,480
August	16,882	669	470	545	1.90	2.19	33,480
September	11,912	587	323	397	1.38	1.54	23,630
Water year 1939-40	449,181	6,530	253	1,227	4.28	58.20	891,000

Peak discharge.- Dec. 15 (3:55 p.m.) 9,420 sec.-ft.; Feb. 6 (3 p.m.) 6,140 sec.-ft.

9-233 April 1936

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

501604-O U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum 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 1940. August 1910 to November 1911, at site 2½ miles upstream, published as Cowlitz River at Mayfield, Wash.

Extremes.- Maximum discharge during year, 25,900 second-feet Dec. 17 (gage height, 17.26 feet); minimum, 989 second-feet Sept. 6, 7 (gage height, 7.51 feet).
1910-11, 1934-40: 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 excellent except those above 20,000 second-feet, which are good. No diversion or regulation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

7.5	980	8.3	1,830	9.5	3,620	12.0	8,850	15.0	17,800
7.7	1,170	8.6	2,220	10.0	4,500	13.0	11,600	16.0	21,200
8.0	1,480	9.0	2,800	11.0	6,460	14.0	14,600	17.0	24,900

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,190	1,750	2,350	10,100	3,140	12,800	9,360	10,800	5,080	2,190	1,540	1,250
2	1,170	1,650	2,860	11,800	3,090	14,700	8,320	12,300	4,570	2,180	1,470	1,250
3	1,080	1,610	3,450	11,200	3,140	13,300	7,390	11,600	4,250	2,160	1,420	1,300
4	1,270	1,500	2,980	9,740	3,230	11,900	6,700	10,100	4,010	2,060	1,410	1,210
5	1,840	1,410	2,660	8,620	3,860	11,200	6,200	10,100	3,770	2,010	1,410	1,090
6	1,840	1,390	2,620	7,490	13,000	9,870	5,740	9,820	3,540	1,960	1,460	1,020
7	1,560	1,930	2,680	6,590	20,900	10,300	5,740	8,800	3,470	1,910	1,480	1,030
8	1,370	3,250	3,540	5,920	17,000	12,800	6,140	8,080	3,400	1,840	1,480	1,090
9	1,270	3,300	6,390	5,420	16,900	11,900	7,140	7,920	3,220	1,830	1,460	1,130
10	1,210	2,740	7,440	5,140	19,000	10,400	7,440	8,600	3,310	1,820	1,410	1,400
11	1,180	2,580	9,470	4,700	16,600	8,950	6,910	9,470	3,550	1,810	1,350	1,490
12	1,150	2,640	7,090	4,360	13,400	7,900	6,640	8,800	3,690	1,830	1,370	1,410
13	1,150	2,540	5,720	4,190	11,800	7,060	7,190	7,730	4,000	1,880	1,360	1,570
14	1,140	2,460	5,250	4,090	10,200	6,390	7,920	6,980	3,770	1,820	1,300	1,470
15	1,120	2,250	10,800	3,820	8,880	6,030	7,560	6,700	3,310	1,780	1,300	1,280
16	1,110	2,090	23,600	3,620	8,020	6,460	6,680	6,420	3,200	1,750	1,280	1,190
17	1,090	1,960	24,600	3,450	7,780	6,680	6,010	6,140	3,070	1,760	1,290	1,160
18	1,150	1,920	18,300	3,280	7,090	6,280	5,760	6,110	2,960	1,690	1,300	1,210
19	1,310	1,820	13,600	3,120	6,570	6,010	5,950	6,390	3,010	1,630	1,310	1,140
20	1,660	1,730	12,400	2,980	6,030	5,820	5,700	6,480	3,060	1,610	1,340	1,040
21	1,470	1,710	11,000	2,880	5,600	5,740	5,400	6,110	2,830	1,820	1,330	1,040
22	1,360	2,050	9,100	2,780	5,250	5,720	5,080	6,030	2,620	1,780	1,280	1,080
23	1,330	2,170	7,710	2,680	5,170	5,740	5,620	6,420	2,500	1,660	1,230	1,100
24	1,610	1,960	6,690	2,560	5,040	6,030	7,070	6,800	2,460	1,640	1,250	1,090
25	1,610	1,830	5,800	2,470	6,460	6,680	6,840	6,200	2,540	1,570	1,260	1,100
26	1,650	1,730	5,270	2,490	9,200	7,370	6,610	5,380	2,620	1,710	1,250	1,090
27	1,870	1,670	4,860	2,990	9,410	9,260	6,220	4,680	2,470	1,960	1,290	1,270
28	2,210	1,600	4,900	3,180	10,400	9,600	6,640	4,300	2,320	1,950	1,390	1,420
29	2,580	1,550	5,340	3,090	12,700	8,980	7,260	4,180	2,220	1,770	1,280	1,220
30	2,190	1,810	7,660	3,140	-	9,980	7,320	4,300	2,220	1,710	1,250	1,150
31	1,910	-	7,830	3,170	-	10,500	-	4,990	-	1,640	1,280	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	45,330	2,580	1,080	1,462	1.04	1.20	89,910
November	60,600	3,300	1,390	2,020	1.44	1.61	120,200
December	243,660	24,600	2,350	7,860	5.61	6.47	483,300
Calendar year 1939	1,864,880	24,600	1,080	5,082	3.63	49.26	3,679,000
January	161,060	11,800	2,470	4,873	3.48	4.01	299,600
February	268,760	20,900	3,090	9,268	6.62	7.14	533,100
March	272,340	14,700	5,720	8,786	6.28	7.23	540,200
April	200,550	9,360	5,080	6,685	4.78	5.33	397,800
May	228,630	12,300	4,180	7,375	5.27	6.07	453,500
June	97,040	5,080	2,220	3,235	2.31	2.58	192,500
July	56,720	2,190	1,570	1,830	1.31	1.51	112,600
August	41,830	1,640	1,230	1,349	.964	1.11	82,970
September	36,290	1,570	1,020	1,210	.864	.96	71,980
Water year 1939-40	1,702,810	24,600	1,020	4,652	3.32	45.22	3,378,000

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum 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 1940.

Average discharge.- 13 years, 8,728 second-feet.

Extremes.- Maximum discharge during year, 41,900 second-feet Dec. 16 (gage height, 17.0 feet); minimum, 1,440 second-feet Sept. 22, 25, 26 (gage height 6.03 feet); minimum gage height, 5.90 feet Oct. 4.

1926-40: 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 tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 16				Dec. 17 to Sept. 30					
6.0	1,700	6.6	2,740	6.2	1,700	8.0	4,920	13.0	21,800
6.2	1,940	7.1	3,210	6.5	2,170	9.0	7,300	14.0	26,700
6.5	2,320	7.5	3,910	6.8	2,660	10.0	10,200	15.0	31,600
Note.- Same as following table above 7.5 feet.				7.1	3,170	11.0	13,600	16.0	36,600
				7.5	3,910	12.0	17,600	17.0	41,900

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,700	a2,350	2,890	15,900	5,050	21,100	17,800	18,800	6,580	2,690	2,070	1,680
2	1,720	f2,220	3,770	18,000	4,880	18,200	14,800	18,500	6,050	2,640	2,010	1,620
3	1,630	2,190	4,500	17,400	5,250	20,600	12,600	17,100	5,570	2,630	1,950	1,730
4	1,680	2,090	4,140	15,900	5,840	19,900	11,200	15,600	5,250	2,560	1,910	1,720
5	2,560	1,980	3,640	14,600	8,020	19,300	10,300	17,700	5,010	2,490	1,910	1,600
6	2,660	1,930	3,640	12,500	30,200	16,500	9,350	18,000	4,630	2,430	1,910	1,520
7	2,420	2,240	3,770	10,800	36,400	16,600	9,890	14,900	4,540	2,380	1,930	1,490
8	2,060	3,560	5,660	9,650	29,300	20,000	10,900	12,900	4,480	2,330	1,930	1,520
9	1,890	4,500	9,650	8,820	28,300	19,300	12,300	11,800	4,180	2,300	1,900	1,560
10	1,780	a4,600	12,400	8,210	34,100	17,200	12,700	11,800	4,180	2,280	1,900	1,790
11	1,740	a3,300	15,000	7,570	29,200	14,800	11,400	12,600	4,380	2,270	1,820	1,960
12	1,690	a3,400	11,500	6,960	22,900	12,800	10,500	12,000	4,580	2,270	1,800	1,880
13	1,660	f3,330	9,170	6,600	21,200	11,300	10,400	10,600	4,710	2,300	1,790	1,980
14	1,650	a3,200	8,500	6,510	18,500	10,200	11,100	9,560	4,860	2,300	1,740	2,040
15	1,640	a3,000	18,800	6,190	16,000	9,470	10,900	9,050	4,300	2,230	1,720	1,820
16	1,530	f2,780	38,700	5,820	14,300	9,770	9,740	8,640	4,000	2,200	1,680	1,670
17	1,520	2,610	40,500	5,520	16,500	9,890	8,790	8,190	3,910	2,170	1,700	1,600
18	1,660	2,560	31,100	5,250	14,300	9,380	8,240	8,020	3,700	2,150	1,720	1,680
19	1,700	2,460	22,100	4,960	12,700	8,960	8,330	8,100	3,740	2,090	1,720	1,700
20	1,960	2,330	19,800	4,690	11,100	8,580	8,130	8,350	3,820	2,040	1,730	1,550
21	2,020	2,260	18,400	4,480	10,000	8,330	7,770	7,960	3,640	2,220	1,740	1,490
22	1,890	2,610	15,400	4,320	9,200	8,160	7,250	7,630	3,370	2,310	1,740	1,480
23	1,830	2,800	12,800	4,180	9,110	8,130	7,680	7,880	3,120	2,140	1,670	1,500
24	2,040	2,660	10,800	4,000	9,560	8,410	9,770	8,240	3,050	2,070	1,660	1,490
25	2,110	2,490	9,320	3,830	13,000	8,930	9,500	8,070	3,030	2,070	1,660	1,490
26	2,070	2,380	8,350	3,870	18,600	10,400	9,290	7,170	3,120	2,170	1,680	1,500
27	2,450	2,320	7,650	5,770	17,900	10,900	8,760	6,220	3,030	2,540	1,780	1,700
28	2,700	2,230	7,770	6,170	19,700	12,000	9,290	5,680	2,680	2,580	1,820	2,040
29	3,100	2,160	8,640	5,520	23,200	15,100	10,400	5,450	2,780	2,380	1,780	1,850
30	2,950	2,330	11,500	5,290	-	17,800	10,700	5,450	2,710	2,250	1,700	1,670
31	a2,500	-	13,200	5,210	-	18,800	-	6,150	-	2,220	1,670	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	62,510	3,100	1,520	2,016	0.912	1.05	124,000
November	80,870	4,600	1,930	2,696	1.22	1.36	160,400
December	393,060	40,500	2,890	12,680	5.74	6.61	779,600
Calendar year 1939	2,753,910	40,500	1,520	7,545	3.41	46.33	5,462,000
January	244,490	18,000	3,830	7,887	3.57	4.11	484,900
February	494,310	36,400	4,880	17,050	7.71	8.32	980,400
March	420,810	21,100	8,130	13,570	6.14	7.08	834,700
April	309,780	17,800	7,250	10,330	4.67	5.21	614,400
May	328,110	18,800	5,450	10,580	4.79	5.52	650,800
June	123,200	6,580	2,710	4,107	1.86	2.07	244,400
July	71,700	2,690	2,040	2,313	1.05	1.21	142,200
August	55,740	2,070	1,660	1,798	.814	.94	110,600
September	50,320	2,040	1,480	1,677	.759	.85	99,810
Water year 1939-40	2,634,900	40,500	1,480	7,199	3.26	44.33	5,226,000

a No gage-height record; discharge computed on basis of records for station near Mayfield.
f Computed from gage height based on partial record.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. al Survey

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 1940.

Average discharge.- 15 years (1907-12, 1930-40), 246 second-feet.

Extremes.- Maximum discharge during year, 1,410 second-feet Dec. 15 (gage height, 5.80 feet); minimum, 42 second-feet Sept. 24, 25, 26 (gage height, 2.33 feet).
1907-17, 1930-40: 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 excellent except those for period of no gage-height record, which are poor. No regulation. Small diversion a few hundred feet above gage for fish hatchery.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

2.3	40	3.0	121	3.8	319	4.6	647
2.4	48	3.2	159	4.0	389	4.8	749
2.6	66	3.4	203	4.2	467	5.0	859
2.8	90	3.6	257	4.4	553	5.2	980

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	71	126	393	104	343	297	505	263	104	66	50
2	54	66	229	427	102	367	263	522	243	102	64	51
3	53	66	167	371	102	313	237	431	229	98	62	52
4	90	62	135	319	102	284	221	375	208	93	60	50
5	98	60	119	275	162	275	206	346	187	92	60	50
6	72	65	123	235	f718	246	194	309	182	89	60	49
7	64	199	113	211	a570	356	198	287	187	87	60	48
8	60	161	287	196	a415	423	232	300	165	86	58	47
9	58	121	251	180	a430	353	269	364	182	84	58	48
10	58	104	454	167	f484	303	246	480	211	83	54	60
11	56	110	329	153	a335	257	232	467	226	82	56	48
12	56	108	237	143	a280	226	257	385	237	83	56	65
13	55	98	201	137	a250	203	336	326	229	83	56	58
14	54	93	232	130	a230	187	343	316	185	80	55	51
15	53	87	853	121	a210	189	297	313	170	78	54	49
16	53	80	949	119	a200	224	254	303	161	77	53	47
17	58	76	776	115	a185	211	235	309	151	76	52	46
18	56	77	518	107	a175	201	269	343	155	72	52	48
19	72	71	404	99	a170	198	260	389	163	71	51	45
20	66	68	375	99	a160	198	240	360	151	71	51	44
21	62	69	316	98	a155	201	219	343	132	76	52	44
22	58	102	266	96	a150	206	216	378	121	70	51	44
23	64	82	235	96	a145	211	309	427	121	68	51	43
24	76	77	203	87	a145	275	297	404	125	66	51	43
25	64	71	182	87	a185	300	297	319	134	66	51	42
26	71	68	170	92	f224	322	275	235	121	82	51	42
27	83	66	159	108	237	360	254	208	111	86	62	73
28	172	64	156	101	297	333	266	208	105	77	60	56
29	113	62	214	104	329	319	246	226	107	73	54	49
30	89	136	243	107	-	357	282	269	107	71	51	48
31	79	-	281	107	-	326	-	339	-	66	51	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,170	172	53	70	1.25	1.44	4,300
November	2,640	199	60	88	1.57	1.75	5,240
December	9,302	949	113	300	5.36	6.18	18,450
Calendar year 1939	79,312	949	52	217	3.88	52.65	157,300
January	5,080	427	87	164	2.93	3.37	10,080
February	7,251	718	102	250	4.46	4.82	14,380
March	8,567	423	187	276	4.93	5.69	16,990
April	7,747	343	194	258	4.61	5.14	15,370
May	10,786	522	208	348	6.21	7.16	21,390
June	5,069	263	105	169	3.02	3.37	10,050
July	2,492	104	66	80.4	1.44	1.65	4,940
August	1,723	66	51	55.6	.993	1.14	3,420
September	1,490	73	42	49.7	.888	.99	2,960
Water year 1939-40	64,317	949	42	176	3.14	42.70	127,600

a No gage-height record; discharge computed on basis of range of stage and records for Cowlitz River at Packwood.
f Computed from partly estimated gage height.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 23 years, 101 second-feet.

Extremes.- Maximum discharge during year, 234 second-feet Dec. 17 (gage height, 2.94 feet); minimum, 24 second-feet Sept. 25, 26.
1911-24, 1930-40: 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. No diversion. Natural regulation in Packwood Lake.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Feb. 7-15, Sept. 12-30)

1.6	28	2.4	113
1.8	41	2.6	152
2.0	59	2.8	199
2.2	81		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	41	a45	144	45	86	93	148	161	90	59	42
2	32	38	f52	177	45	92	87	189	154	88	57	42
3	31	36	49	173	46	87	81	192	144	87	54	42
4	40	34	44	157	46	84	77	175	131	82	52	40
5	54	33	40	139	54	84	75	164	120	80	51	38
6	50	33	40	118	142	80	71	146	113	77	50	37
7	45	a55	39	103	168	92	70	129	111	73	50	35
8	40	a70	59	92	150	111	71	120	104	71	48	34
9	37	a65	79	86	150	110	80	126	103	69	47	35
10	35	a60	117	81	166	103	80	159	113	69	46	43
11	34	a65	122	75	150	93	77	182	129	69	45	42
12	33	a65	94	71	124	86	77	180	146	70	45	40
13	31	a60	79	69	106	77	90	161	164	71	43	44
14	30	a55	75	66	88	73	108	148	157	71	40	40
15	29	a50	120	63	79	69	110	139	142	69	38	37
16	29	a50	189	60	74	71	103	133	135	68	37	34
17	31	a45	226	58	70	69	93	129	120	66	37	33
18	30	a45	192	52	66	67	96	135	120	62	37	34
19	35	a40	164	52	62	65	94	152	127	59	37	31
20	40	a35	159	52	58	64	93	166	122	58	38	29
21	40	a35	142	52	55	63	88	168	110	59	37	27
22	37	a45	122	51	54	63	82	175	104	59	37	26
23	37	a50	106	50	55	63	99	194	99	59	36	25
24	42	a45	93	48	55	68	108	206	98	58	35	25
25	38	a40	84	49	63	75	110	192	108	55	34	24
26	38	a40	76	50	69	84	101	166	113	58	34	24
27	40	a35	71	54	71	96	96	139	108	79	42	31
28	66	a35	73	52	77	98	101	124	99	84	50	33
29	66	a30	82	51	82	94	106	118	93	79	48	31
30	55	a35	99	49	-	101	106	127	92	71	46	29
31	46	-	106	47	-	98	-	159	-	64	45	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,222	66	29	39.4	2.10	2.42	2,420
November	1,365	70	30	45.5	2.42	2.70	2,710
December	3,038	226	39	98.0	5.21	6.01	6,030
Calendar year 1939	31,671	352	29	86.8	4.62	62.71	62,810
January	2,441	177	47	78.7	4.19	4.83	4,840
February	2,470	168	45	85.2	4.53	4.89	4,900
March	2,566	111	63	82.8	4.40	5.08	5,090
April	2,723	110	70	90.8	4.83	5.39	5,400
May	4,841	206	118	156	8.30	9.58	9,600
June	3,640	164	92	121	6.44	7.20	7,220
July	2,174	90	55	70.1	3.73	4.30	4,310
August	1,355	59	34	43.7	2.32	2.68	2,690
September	1,027	44	24	34.2	1.82	2.03	2,040
Water year 1939-40	28,862	226	24	78.9	4.20	57.11	57,250

a No gage-height record; discharge computed on basis of records for Clear Fork of Cowlitz River near Packwood.
f Fragmentary gage-height record; discharge computed from partly estimated gage height.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940.

Average discharge.- 12 years (1910-11, 1929-40), 1,294 second-feet.

Extremes.- Maximum discharge during year, 7,120 second-feet Dec. 16 (gage height, 7.88 feet); minimum, 266 second-feet Sept. 23, 24 (gage height, 2.73 feet).
1910-12, 1929-40: 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; minimum gage height, that of Sept. 23, 24, 1940.

Remarks.- Records good except those for periods of shifting control, Oct. 1 to Dec. 14 and June 23 to Aug. 21, which are fair. No diversion or regulation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	292	317	368	1,980	847	2,740	2,440	2,440	1,170	604	408	344
2	283	313	549	2,520	839	2,880	2,180	2,660	1,130	598	403	355
3	279	313	506	2,310	870	2,520	1,980	2,520	1,070	581	412	352
4	304	304	453	2,180	940	2,180	1,850	2,310	1,040	560	403	312
5	354	304	431	1,980	1,090	2,040	1,730	2,310	965	538	416	285
6	313	304	464	1,730	3,960	1,850	1,610	2,110	940	528	416	291
7	300	399	459	1,560	4,000	1,920	1,560	1,980	949	523	420	322
8	288	425	1,290	1,390	2,960	2,110	1,730	1,920	909	513	408	340
9	279	388	1,600	1,340	2,660	1,980	2,040	1,980	877	523	420	375
10	279	349	2,680	1,230	2,740	1,790	2,040	2,380	893	528	403	479
11	271	358	2,280	1,130	2,380	1,610	1,920	2,380	916	533	403	375
12	288	354	1,550	1,070	2,040	1,440	1,980	2,110	940	549	420	416
13	288	349	1,210	1,020	1,920	1,340	2,240	1,920	990	523	387	395
14	292	335	1,330	974	1,730	1,290	2,240	1,850	909	503	375	348
15	275	322	4,140	924	1,560	1,340	1,980	1,790	862	498	371	322
16	283	317	6,430	901	1,440	1,560	1,850	1,670	839	488	375	312
17	288	317	5,370	870	1,390	1,560	1,670	1,670	781	479	383	308
18	283	309	3,580	825	1,340	1,500	1,730	1,670	788	460	387	312
19	300	304	2,740	781	1,250	1,440	1,730	1,730	803	451	412	291
20	304	300	2,360	761	1,170	1,440	1,610	1,730	781	465	408	288
21	309	292	2,040	740	1,140	1,500	1,500	1,610	733	498	387	302
22	292	288	1,730	720	1,080	1,500	1,440	1,610	694	456	367	302
23	296	283	1,560	713	1,060	1,560	1,790	1,610	675	451	359	295
24	322	292	1,390	675	1,010	1,730	1,790	1,610	682	447	363	295
25	292	279	1,260	656	1,310	1,850	1,850	1,440	707	429	355	291
26	309	283	1,190	694	1,790	2,240	1,730	1,270	694	503	363	315
27	340	292	1,110	825	1,850	2,740	1,670	1,150	638	549	391	367
28	420	288	1,090	796	2,440	2,520	1,670	1,080	615	474	348	337
29	388	288	1,220	788	2,960	2,520	1,610	1,070	598	438	352	315
30	354	331	1,390	825	-	2,960	1,790	1,100	604	438	359	298
31	331	-	1,440	839	-	2,740	-	1,260	-	416	348	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	9,496	420	271	306	0.947	1.09	18,840
November	9,597	425	279	320	.991	1.10	19,040
December	55,230	6,430	368	1,782	5.52	6.36	109,500
Calendar year 1939	410,502	6,430	271	1,125	3.48	47.25	814,200
January	35,747	2,520	656	1,153	3.57	4.12	70,900
February	51,766	4,000	839	1,785	5.53	5.96	102,700
March	60,390	2,960	1,290	1,948	6.03	6.95	119,800
April	54,950	2,440	1,440	1,832	5.67	6.33	109,000
May	55,940	2,660	1,070	1,805	5.59	6.44	111,000
June	25,192	1,170	598	840	2.60	2.90	49,970
July	15,544	604	416	501	1.55	1.79	30,830
August	12,022	420	348	388	1.20	1.38	23,850
September	9,939	479	285	331	1.02	1.14	19,710
Water year 1939-40	395,813	6,430	271	1,081	3.35	45.56	785,100

Peak discharge.- Dec. 15 (6:30 to 7:50 p.m.) 6,180 sec.-ft.; Dec. 16 (1 to 3 p.m.) 7,120 sec.-ft.; Feb. 6 (6 to 7 p.m.) 5,170 sec.-ft.

9-233 April 1936

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101664-O U.S. GOVERNMENT PRINTING OFFICE 1936

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. Datum of gage is 407.3 feet above mean sea level (from river-profile survey).

Drainage area.- 472 square miles.

Records available.- October 1919 to December 1923, September 1929 to September 1940. September 1909 to August 1912, at site 2 miles downstream, published as Toutle River near Castle Rock, Wash.

Average discharge.- 16 years (1909-11, 1919-21, 1922-23, 1929-40), 2,020 second-feet.

Extremes.- Maximum discharge during year, 12,800 second-feet Dec. 15 (gage height, 9.86 feet); minimum, 323 second-feet Aug. 23, 24, 25, 26 (gage height, 1.68 feet).
1909-12, 1919-23, 1929-40: 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. No diversion or regulation.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 6

1.8	347	3.0	1,110	6.0	5,750
2.0	432	3.5	1,600	7.0	7,800
2.2	530	4.0	2,160	8.0	9,580
2.5	710	4.5	2,800	9.0	11,200
2.7	855	5.0	3,600		

Feb. 7 to Sept. 30

1.8	373	2.7	901
2.0	466	3.0	1,140
2.2	571	3.5	1,610
2.5	755	4.0	2,160

Note.- Same as preceding table above 4.0 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	384	460	664	3,170	1,170	6,610	4,410	4,200	1,050	471	432	331
2	368	451	911	3,170	1,150	7,020	3,600	3,600	988	466	428	339
3	336	499	848	3,020	1,350	5,420	3,090	2,940	948	466	409	409
4	512	456	745	3,090	1,710	4,740	2,800	2,940	901	456	396	360
5	783	432	690	3,090	2,530	4,200	2,530	4,680	864	447	396	348
6	702	428	879	2,660	10,300	3,600	2,340	4,410	826	437	386	339
7	574	721	855	2,400	9,070	4,410	2,600	3,510	878	428	382	344
8	460	898	2,030	2,160	6,820	4,740	2,940	2,940	864	423	378	356
9	419	952	2,600	1,980	7,800	4,200	3,420	2,600	798	418	373	365
10	392	759	3,970	1,930	10,300	3,600	3,170	2,460	776	418	369	528
11	376	731	3,510	1,760	7,990	3,090	2,800	2,340	769	423	356	428
12	368	697	2,530	1,660	5,750	2,800	2,600	2,100	762	423	360	432
13	359	664	2,100	1,550	5,530	2,530	2,530	1,930	748	418	356	492
14	347	724	2,360	1,550	4,520	2,340	2,400	1,820	735	409	348	497
15	347	633	7,520	1,450	3,700	2,280	2,280	1,710	702	404	348	409
16	343	574	10,800	1,400	3,420	2,460	2,040	1,610	677	404	344	373
17	363	552	9,240	1,350	3,790	2,280	1,930	1,560	652	396	344	365
18	372	568	6,400	1,260	3,420	2,160	1,820	1,510	628	396	339	502
19	397	530	4,740	1,180	3,170	2,040	1,710	1,510	628	382	339	428
20	432	510	4,630	1,130	2,800	1,930	1,660	1,460	611	386	348	373
21	392	499	3,990	1,080	2,600	1,820	1,610	1,360	588	471	339	352
22	368	690	3,340	1,050	2,400	1,760	1,510	1,360	571	428	331	339
23	388	585	2,800	1,010	2,340	1,760	1,710	1,360	555	400	327	339
24	546	541	2,460	969	2,280	1,930	2,040	1,320	539	396	327	335
25	437	510	2,160	935	3,840	1,880	1,880	1,230	528	386	327	331
26	499	499	1,980	986	4,960	2,620	1,820	1,150	517	577	335	339
27	552	515	1,760	1,600	4,200	3,510	1,760	1,080	512	683	432	615
28	639	484	1,930	1,400	6,190	3,340	2,160	1,030	502	544	404	646
29	615	474	2,220	1,300	7,020	3,420	2,220	980	492	481	356	476
30	536	609	2,530	1,290	-	4,630	2,500	980	481	486	344	414
31	489	-	2,660	1,240	-	4,630	-	1,170	-	452	339	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	14,095	783	336	455	0.964	1.11	27,960
November	17,645	952	428	588	1.25	1.39	35,000
December	95,852	10,800	664	3,092	6.55	7.55	190,100
Calendar year 1939	588,031	13,100	313	1,611	3.41	46.33	1,166,000
January	53,820	3,170	935	1,736	3.68	4.24	106,800
February	132,120	10,300	1,150	4,556	9.65	10.41	262,100
March	103,750	7,020	1,760	3,347	7.09	8.17	205,800
April	71,880	4,410	1,510	2,396	5.08	5.66	142,600
May	64,850	4,680	980	2,092	4.43	5.11	128,600
June	21,090	1,050	481	703	1.49	1.66	41,830
July	13,765	683	382	444	.941	1.08	27,300
August	11,292	432	327	364	.771	.89	22,400
September	12,204	646	331	407	.862	.96	24,210
Water year 1939-40	612,363	10,800	327	1,673	3.54	48.23	1,215,000

Peak discharge.- Dec. 15 (7 to 7:30 p.m.) 12,800 sec.-ft.; Dec. 16 (12:30 to 1 p.m.) 11,900 sec.-ft.; Feb. 6 (1 p.m.) 11,700 sec.-ft.

O-233 April 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

South Fork of Toutle River at Toutle, Wash.

Location.- Water-stage recorder, lat. 46°19', long. 122°42', in SW¼NW¼ sec. 28, T. 10 N., R. 1 E., half a mile southwest of Toutle, 1½ miles upstream from mouth and 3 miles downstream from Johnson Creek. Datum of gage is at mean sea level (from river-profile survey). Prior to Nov. 11, 1939, staff gage at same site but at datum 451.12 feet above mean sea level.

Drainage area.- 116 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during year, 5,820 second-feet Dec. 15 (elevation, 456.50 feet); minimum, 68 second-feet Aug. 18, 19 (elevation, 451.46 feet).

Remarks.- Records good except those for period of no gage-height record, which are poor, and those Oct. 10 to Mar. 5, which are fair. No diversion or regulation.

Rating table, water year 1939-40 (elevation, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 16 to Mar. 5)

451.5	74	452.5	378	454.5	2,450
451.7	111	453.0	685	455.0	3,220
451.9	158	453.5	1,140	455.5	4,050
452.2	252	454.0	1,750	456.0	4,920

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		h113	242	1,110	350	2,380	1,410	1,300	183	99	95	74
2		h122	360	1,050	346	2,380	1,120	1,020	180	99	93	76
3		h124	319	972	403	1,680	925	817	175	97	88	91
4		h111	282	1,090	668	1,470	817	888	161	95	86	81
6	a110	a109	256	1,100	1,120	1,290	709	1,720	156	95	84	79
6		h107	328	906	3,890	1,070	618	1,500	150	93	82	74
7		h148	307	774	2,820	1,440	808	1,110	161	93	81	74
8		h180	884	678	1,950	1,500	943	888	153	95	81	79
9		h198	1,080	604	2,500	1,260	1,160	741	143	95	79	82
10	h95	h161	1,920	578	3,380	1,050	1,010	626	143	91	79	129
11	h91	f172	1,490	514	2,300	906	869	538	140	93	74	89
12	h89	158	982	483	1,680	765	749	478	133	99	72	93
13	h86	186	774	f434	1,680	670	670	434	129	95	76	115
14	h84	164	973	f388	1,380	598	591	388	129	88	76	111
15	a82	f148	3,590	369	1,120	611	557	364	126	86	72	84
16	n81	143	3,880	346	1,060	678	495	332	124	88	70	77
17	h91	143	2,820	332	1,290	618	444	311	124	86	70	77
18	h93	156	1,820	319	1,120	571	434	290	120	84	68	133
19	h111	143	1,340	298	1,010	532	393	275	118	84	70	99
20	h105	136	1,420	282	860	489	369	260	118	88	72	82
21	h93	143	1,260	267	741	466	346	248	113	99	72	79
22	a91	195	1,040	256	655	450	324	234	111	93	72	76
23	h89	164	869	248	626	428	439	228	111	89	72	81
24	h164	153	709	242	591	439	501	217	107	88	72	81
25	h109	148	611	231	1,210	456	450	214	107	86	72	79
26	h158	148	544	260	1,540	966	408	205	107	140	74	81
27	h166	164	483	587	1,420	1,350	388	195	109	158	101	192
28	h186	148	564	478	2,210	1,270	564	189	109	111	93	158
29	a162	146	721	428	2,520	1,350	538	183	105	101	97	111
30	h138	220	842	408	-	1,700	733	180	103	109	76	97
31	h124	-	915	378	-	1,570	-	224	-	97	74	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,478	186	91	112	.966	1.12	6,900
November	4,551	220	107	152	1.31	1.46	9,030
December	33,625	3,880	242	1,085	9.35	10.78	66,690
Calendar year	-	-	-	-	-	-	-
January	16,410	1,110	231	529	4.56	5.26	32,550
February	42,440	3,890	346	1,463	12.61	13.61	84,180
March	32,403	2,380	428	1,045	9.01	10.39	64,270
April	19,782	1,410	324	659	5.68	6.34	39,240
May	16,597	1,720	180	535	4.61	5.32	32,920
June	3,948	183	103	132	1.14	1.27	7,830
July	3,014	158	84	97.2	.838	.97	5,980
August	2,443	101	68	78.8	.679	.78	4,850
September	2,834	192	74	94.5	.815	.91	5,620
Water year 1939-40	181,525	3,890	68	496	4.28	58.21	360,100

Peak discharge.- Dec. 15 (4:40 p.m.) 5,820 sec.-ft.; Dec. 16 (10:30 a.m.) 4,560 sec.-ft.; Feb. 6 (12 m.) 4,560 sec.-ft.

a No gage-height record; discharge interpolated or computed on basis of records for East Fork of Lewis River near Heisson.

f Computed from partly estimated gage height.

h Computed from twice-daily staff-gage readings.

9-255 April 1950

101604-O U. S. GOVERNMENT PRINTING OFFICE 19

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. Datum 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 1940. March 1916 to September 1917 (gage heights only), at site 3 miles upstream. August 1927 to December 1933, at site 1 mile upstream.

Extremes.- Maximum discharge during year, 3,390 second-feet Dec. 16 (gage height, 11.59 feet); minimum, 4.8 second-feet Sept. 7, 8.
1927-40: Maximum discharge, about 6,300 second-feet Nov. 24, 1927 (gage height, 6.52 feet, site and datum then in use); minimum, 3.7 second-feet Sept. 22, 23, 1938.

Remarks.- Records good except those for periods of no gage-height record, which are fair. No diversion or regulation above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.7	5.2	2.6	63	6.0	720
1.0	10.0	3.0	97	7.0	1,050
1.4	18.5	3.5	151	8.0	1,450
1.8	29	4.0	230	9.0	1,920
2.2	44	5.0	450	10.0	2,450

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a5	30	120	675	129	690	385	627	30	11	9.5	5.2
2	a7	31	174	795	116	633	255	366	31	11	8.6	5.1
3	a15	32	130	575	118	452	223	254	30	11	7.4	5.5
4	a60	29	114	792	376	405	181	343	29	10	6.8	5.3
5	a45	26	101	723	782	348	150	705	2e	10	6.5	5.5
6	a35	26	130	485	2,140	271	132	445	26	10	6.2	5.2
7	a25	27	199	348	1,090	485	198	300	29	9.8	6.3	5.0
8	a20	e0	828	259	795	472	198	219	27	9.8	6.2	5.1
9	a16	e1	726	209	1,160	422	354	168	24	9.5	5.9	7.1
10	a14	58	828	190	1,130	368	259	139	23	9.1	5.8	12
11	a13	75	600	161	750	308	205	119	21	8.7	5.5	9.5
12	a12	58	390	147	532	252	166	104	20	8.6	5.6	8.7
13	a11	56	275	151	696	207	141	92	20	9.1	5.9	9.1
14	a10	62	456	143	488	173	127	80	19	9.3	5.6	11
15	10	51	1,720	134	410	161	111	a72	18	8.9	5.5	8.6
16	10	47	2,130	122	562	185	98	65	1e	8.7	5.3	7.1
17	24	44	1,170	112	606	145	89	a60	17	8.6	5.3	7.1
18	24	49	648	103	508	130	83	57	16	8.4	5.2	10
19	24	44	460	94	428	119	76	54	16	8.0	5.2	11
20	29	40	615	85	326	111	73	52	15	9.3	5.2	8.6
21	22	45	485	79	258	101	67	49	15	10	5.2	7.1
22	18	92	357	73	221	93	61	47	14	e.7	5.2	6.0
23	26	65	267	70	252	88	134	45	14	8.2	5.2	5.6
24	51	54	202	66	269	88	116	43	14	e.0	5.2	5.6
25	41	50	164	64	572	80	99	41	13	7.9	5.2	5.6
26	84	51	138	166	639	151	94	39	12	14	6.2	6.2
27	72	104	126	578	490	332	87	37	12	17	8.2	8.7
28	61	73	228	317	542	380	143	35	12	14	7.4	11
29	48	66	420	267	657	581	128	34	12	12	6.2	9.1
30	40	129	359	190	-	649	394	33	11	10	5.6	7.7
31	35	-	558	151	-	555	-	32	-	9.8	5.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	907	84	5	29.3	0.916	1.05	1,800
November	1,675	129	26	55.8	1.74	1.95	3,320
December	15,118	2,130	101	488	15.2	17.57	29,990
Calendar year 1939	54,517	2,130	4	149	4.66	63.36	108,200
January	8,344	795	64	269	8.41	9.70	16,550
February	17,044	2,140	116	588	18.4	19.81	33,810
March	9,636	849	80	311	9.72	11.20	19,110
April	4,857	394	61	162	5.06	5.64	9,630
May	4,757	705	32	153	4.78	5.53	9,430
June	586	31	11	19.5	.609	.68	1,160
July	308.4	17	7.9	9.95	.311	.36	612
August	138.3	9.5	5.2	6.07	.190	.22	373
September	224.3	12	5.0	7.48	.234	.26	445
Water year 1939-40	63,644.0	2,140	5.0	174	5.44	73.97	126,200

Peak discharge.- Dec. 8 (1 p.m.) 1,330 sec.-ft.; Dec. 15 (2 p.m.) 2,890 sec.-ft.; Dec. 16 (8 a.m.) 3,390 sec.-ft.; Feb. 6 (7 a.m.) 3,260 sec.-ft.; Feb. 9 (7 p.m.) 1,990 sec.-ft.
a No gage-height record; discharge computed on basis of records for Wilson and Trask Rivers near Tillamook.

9-233 April 1936
UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

NEHALEM RIVER BASIN

Nehalem River near Foss, Oreg.

Location.- Water-stage recorder, lat. 45°42', long. 123°45', in NW¼ sec. 35, T. 3 N., R. 9 W., a quarter of a mile upstream from Cook Creek and 2.2 miles northeast of Foss.

Drainage area.- 667 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during year, 26,700 second-feet Dec. 16 (gage height, 15.69 feet); minimum, 85 second-feet Aug. 20, 21 (gage height, 1.38 feet).

Remarks.- Records good except those for periods of no gage-height record or staff-gage readings, which are fair. No known diversion or regulation above station.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 3 to Dec. 15

1.4	120	2.3	450
1.7	205	2.6	615
2.0	315	3.0	870

Note.- Same as following table above 3.0 feet.

Dec. 16 to Sept. 30

1.4	90	3.5	1,220	10.0	11,630
1.7	161	4.0	1,620	12.0	16,660
2.0	295	5.0	2,590	14.0	22,000
2.3	435	6.0	3,780	16.0	27,600
2.6	605	7.0	5,300		
3.0	870	8.0	7,150		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a90	h254	919	8,500	2,590	11,600	5,960	6,000	561	199	174	90
2	a90	h236	1,490	10,600	2,320	11,500	4,650	5,520	575	195	171	90
3	h120	h240	1,360	9,140	2,260	9,220	3,790	4,220	551	185	156	96
4	h226	a220	1,160	9,610	3,620	7,290	3,130	4,020	528	181	148	98
5	h445	a210	1,030	11,200	6,830	5,960	2,810	6,390	490	181	139	107
6	h373	h205	1,010	9,770	20,700	4,840	2,480	7,290	479	178	130	110
7	h343	h208	1,130	7,070	23,900	5,160	2,510	5,890	462	174	116	112
8	a270	h254	5,270	5,380	18,900	5,610	2,590	4,520	452	174	115	118
9	h219	h339	5,640	4,320	14,500	5,380	3,220	3,600	440	166	112	112
10	h199	h351	e,230	3,730	14,100	5,030	3,110	2,990	420	164	107	112
11	h169	351	6,850	3,210	12,700	4,530	2,820	2,560	390	161	101	121
12	h157	355	5,000	2,910	10,300	3,980	2,570	2,230	376	161	98	151
13	h151	339	3,700	2,700	10,300	3,480	2,330	1,960	356	161	96	161
14	h135	347	5,610	2,550	9,610	3,080	2,120	1,750	349	158	98	171
15	a130	331	18,700	2,410	8,040	2,850	1,940	1,590	331	155	98	174
16	h130	315	25,100	2,270	7,610	2,710	1,770	1,450	322	151	96	168
17	h145	307	22,200	2,110	9,520	2,440	1,620	1,320	313	148	93	161
18	a160	319	15,000	1,950	9,360	2,190	1,520	1,210	300	148	93	168
19	h181	311	9,470	1,830	7,330	1,990	1,410	1,120	295	145	90	151
20	h199	291	8,300	1,690	5,750	1,830	1,320	1,040	287	161	88	139
21	a180	299	7,540	1,570	4,670	1,700	1,230	989	271	158	88	136
22	a170	400	6,310	1,480	3,950	1,590	1,160	926	267	155	90	121
23	h184	405	5,070	1,400	3,660	1,490	1,410	856	259	151	90	118
24	h240	364	4,050	1,330	3,770	1,450	1,580	794	251	151	88	112
25	h226	347	3,320	1,260	5,690	1,380	1,550	754	240	148	88	107
26	h519	378	2,840	1,660	8,450	1,930	1,430	722	228	168	90	107
27	h405	816	2,510	4,600	e,540	3,790	1,360	683	225	174	93	124
28	h382	720	2,760	5,150	e,870	5,380	1,540	657	221	161	96	142
29	a340	682	3,570	4,360	10,400	6,200	1,600	618	217	181	101	161
30	h307	838	4,130	3,530	-	e,260	2,680	593	210	161	104	188
31	h266	-	5,910	2,980	-	7,460	-	593	-	174	93	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	6,953	445	90	224	0.336	0.39	13,790
November	11,034	838	205	368	.552	.62	21,890
December	195,199	25,100	919	6,297	9.44	10.88	387,200
Calendar year	-	-	-	-	-	-	-
January	132,290	11,200	1,280	4,267	6.40	7.38	262,400
February	258,660	23,900	2,260	8,919	13.4	14.42	513,000
March	141,320	11,600	1,360	4,559	6.84	7.88	280,300
April	69,210	5,960	1,160	2,307	3.46	3.86	137,300
May	74,855	7,290	593	2,415	3.62	4.17	148,500
June	10,688	581	210	356	.534	.60	21,200
July	5,170	199	145	167	.250	.29	10,250
August	3,346	174	88	108	.162	.19	6,640
September	3,926	188	90	131	.196	.22	7,790
Water year 1939-40	912,651	25,100	88	2,494	3.74	50.90	1,810,000

Peak discharge.- Dec. 10 (7 a.m.) 9,340 sec.-ft.; Dec. 16 (10.15 a.m.) 26,700 sec.-ft.; Mar. 1 (7 p.m.) 13,100 sec.-ft.

a No gage-height record; discharge computed on basis of records for Trask River and Wilson River near Tillamook.

h Discharge computed from twice-daily staff-gage readings.

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 6½ miles east of Tillamook. Datum of gage is 42.13 feet above mean sea level (general adjustment of 1929).

Drainage area.- 162 square miles.

Records available.- July 1931 to September 1940. December 1914 to November 1916 (incomplete), at site three-quarters of a mile downstream.

Extremes.- Maximum discharge during year, 17,000 second-feet Dec. 15 (gage height, 14.42 feet); minimum, 65 second-feet Sept. 24-26.
1914-16, 1931-40: Maximum discharge, 30,000 second-feet Dec. 21, 1933 (gage height, 19.28 feet, site and datum then in use, observed at peak), from rating curve extended above 15,000 second-feet; minimum discharge observed, 59 second-feet Sept. 22, 1938.

Remarks.- Records good except those for periods of no gage-height record, which are fair. No diversion or regulation above station.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 15

1.2	69	3.5	1,180	8.0	6,070
1.5	132	4.0	1,620	9.0	7,510
1.8	217	4.5	2,090	10.0	9,050
2.2	365	5.0	2,590	11.0	10,700
2.6	565	6.0	3,680	12.2	12,800
3.0	810	7.0	4,820		

Dec. 16 to Sept. 30

1.0	55	2.2	380
1.2	83	2.6	575
1.5	144	3.0	815
1.8	230	3.5	1,180

Note.- Same as preceding table above 3.5 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	345	1,150	3,570	841	4,240	1,980	2,940	262	123	100	68
2	69	325	1,800	3,210	763	4,470	1,550	1,880	262	123	98	68
3	71	301	1,570	2,840	770	3,060	1,300	1,440	240	121	92	70
4	a410	274	1,220	3,500	1,800	2,400	1,120	1,580	230	119	88	74
5	a450	257	1,020	3,930	3,540	1,970	964	2,640	227	119	86	72
6	a310	250	964	4,000	11,600	1,660	874	2,200	218	117	83	68
7	h243	250	915	2,200	7,900	2,490	1,010	1,670	221	117	83	70
8	a200	333	2,690	1,760	5,110	2,630	1,040	1,330	206	113	82	74
9	a170	353	3,180	1,460	4,810	2,290	1,790	1,100	206	108	80	72
10	a150	329	4,700	1,330	5,600	1,950	1,580	943	200	106	80	74
11	a140	349	3,210	1,150	3,900	1,700	1,290	828	194	104	80	72
12	a130	325	2,190	1,030	2,960	1,440	1,090	744	185	104	80	71
13	a125	329	1,740	957	3,690	1,260	950	666	194	106	80	77
14	a120	341	3,400	915	3,150	1,110	848	624	182	104	78	83
15	h118	321	12,700	848	2,520	1,080	763	575	173	102	77	78
16	a118	301	12,400	796	2,820	1,080	690	531	173	100	76	77
17	a160	301	8,060	732	3,550	971	636	490	170	100	74	82
18	a170	321	4,540	684	2,780	394	608	470	167	100	72	100
19	a210	293	3,080	636	2,230	815	564	438	160	98	72	88
20	285	282	3,240	608	1,840	744	526	425	157	100	72	77
21	240	309	2,630	570	1,570	690	490	398	152	100	72	72
22	205	510	2,290	542	1,350	642	470	380	152	97	72	71
23	224	460	1,830	515	1,360	608	624	364	147	95	71	68
24	250	410	1,500	495	1,430	602	536	344	144	92	71	67
25	217	388	1,240	490	3,560	556	496	332	142	92	71	65
26	743	507	1,080	666	4,200	1,340	466	312	142	132	71	67
27	784	1,150	985	2,600	3,270	2,640	466	300	137	128	82	98
28	656	936	1,550	1,830	3,230	3,020	702	293	135	106	83	117
29	538	771	2,290	1,400	3,590	2,960	636	279	130	115	76	92
30	450	1,050	2,310	1,120	-	3,580	1,720	276	128	108	71	82
31	378	-	3,060	950	-	2,690	-	272	-	100	70	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	8,403	784	69	271	1.67	1.93	16,670
November	12,671	1,150	250	422	2.60	2.91	25,130
December	94,734	12,700	915	3,056	18.9	21.75	187,900
Calendar year 1939	337,724	12,700	63	925	5.71	77.53	669,900
January	47,334	4,000	490	1,527	9.43	10.87	93,890
February	95,734	11,600	763	3,301	20.4	21.98	189,900
March	57,584	4,470	558	1,858	11.5	13.22	114,200
April	27,778	1,980	466	926	5.72	6.38	55,100
May	27,064	2,940	272	873	5.39	6.21	53,680
June	5,436	262	128	181	1.12	1.25	10,780
July	3,349	132	92	108	.667	.77	6,640
August	2,443	100	70	78.8	.486	.56	4,850
September	2,314	117	65	77.1	.476	.53	4,590
Water year 1939-40	384,844	12,700	65	1,051	6.49	88.36	763,300

Peak discharge.- Dec. 15 (4 p.m.) 17,000 sec.-ft.; Dec. 16 (11 a.m.) 14,600 sec.-ft.; Feb. 6 (9 a.m.) 13,500 sec.-ft.

a No gage-height record; discharge computed on basis of records for Trask River near Tillamook

h Computed from staff-gage reading.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-0 U S GOVERNMENT PRINTING OFFICE 1936

Trask River 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 1940.

Extremes.- Maximum discharge during year, 10,600 second-feet Dec. 15 (gage height, 8.67 feet); minimum, 69 second-feet Sept. 23-26.
1931-40: Maximum discharge, 20,000 second-feet Dec. 22, 1933 (gage height, 13.00 feet); minimum, 58 second-feet Sept. 26, 27, 1939.
Maximum stage known, about 17 feet, probably occurred during flood of November 1921 or Mar. 31, 1931 (discharge, about 30,000 second-feet).

Remarks.- Records good except those for periods of no gage-height record, which are fair. No diversion or regulation above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-4)

0.4	69	2.5	1,000	6.0	5,710
.7	130	3.0	1,460	7.0	7,480
1.0	210	3.5	2,010	8.0	9,340
1.5	400	4.0	2,640		
2.0	665	5.0	4,100		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	279	594	2,470	710	3,620	1,580	1,910	279	132	a105	73
2	71	272	769	2,330	647	4,060	1,270	1,400	275	130	a100	73
3	71	268	698	2,170	659	2,890	1,100	1,120	268	130	a96	75
4	393	236	611	2,910	1,450	2,330	972	1,300	254	126	a93	78
5	429	220	561	3,170	2,540	1,930	860	2,500	250	126	a91	77
6	261	213	566	2,390	8,470	1,620	788	2,110	243	123	a89	75
7	204	217	544	1,850	6,220	2,110	888	1,590	247	121	a88	73
8	168	217	1,680	1,490	4,630	2,260	847	1,250	233	119	h85	82
9	152	290	1,970	1,240	4,190	1,990	1,180	1,030	220	119	a86	75
10	140	257	3,630	1,150	4,600	1,720	1,030	888	213	117	a84	77
11	130	250	2,430	1,000	3,700	1,480	909	802	207	119	a84	75
12	121	233	1,690	923	2,860	1,250	821	710	201	117	a84	75
13	117	240	1,320	874	3,520	1,110	756	641	204	119	a84	80
14	110	254	2,100	821	2,880	979	678	594	198	119	a82	86
15	108	230	8,110	750	2,290	944	623	556	187	115	a80	78
16	108	220	8,580	698	2,610	909	583	522	184	a112	78	77
17	135	220	5,510	647	3,060	821	550	485	181	a108	77	80
18	144	223	3,530	605	2,520	755	528	455	176	a106	75	98
19	184	207	2,480	561	2,050	684	490	432	173	a104	75	86
20	213	204	2,710	534	1,690	641	465	414	168	a106	75	77
21	168	213	2,480	506	1,420	594	440	396	165	a106	75	73
22	152	302	2,020	485	1,240	566	422	378	162	a104	77	71
23	165	265	1,600	460	1,320	534	623	357	159	a102	77	69
24	204	247	1,280	440	1,420	522	556	345	154	a98	75	69
25	176	236	1,070	440	3,010	500	495	337	152	a96	75	69
26	534	301	937	678	3,440	1,160	465	325	147	a125	75	73
27	588	691	867	1,880	2,790	2,130	445	313	142	a120	78	133
28	495	495	1,110	1,310	2,910	2,460	691	306	140	a105	78	144
29	404	427	1,500	1,060	3,190	2,240	635	294	137	a110	77	96
30	349	534	1,510	895	-	2,520	1,270	290	135	a108	73	86
31	309	-	1,970	795	-	2,030	-	287	-	a105	73	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	6,874	588	71	222	1.46	1.68	13,630
November	8,461	691	204	282	1.86	2.07	16,780
December	66,327	8,580	544	2,140	14.1	16.23	131,600
Calendar year 1939	271,056	9,910	58	743	4.89	66.40	537,600
January	37,532	3,170	440	1,211	7.97	9.18	74,440
February	82,036	8,470	647	2,829	18.6	20.07	162,700
March	49,360	4,060	500	1,592	10.5	12.08	97,900
April	22,960	1,580	422	765	5.03	5.62	45,540
May	24,317	2,500	287	784	5.16	5.95	48,230
June	5,854	279	135	195	1.28	1.43	11,610
July	3,549	132	96	114	.750	.87	7,040
August	2,547	105	73	82.2	.541	.62	5,050
September	2,453	144	69	81.8	.538	.60	4,870
Water year 1939-40	312,270	8,580	69	853	5.61	76.40	619,400

Peak discharge.- Dec. 15 (5 p.m.) 10,600 sec.-ft.; Feb. 6 (8 a.m.) 10,100 sec.-ft.
a No gage-height record; discharge computed on basis of records for Wilson River near Tillamook.
h Computed from staff-gage reading.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101604-O U S GOVERNMENT PRINTING OFFICE 1936

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 1940.

Average discharge.- 12 years, 45.4 second-feet.

Extremes.- Maximum discharge during year, 798 second-feet Feb. 6 (gage height, 3.96 feet); minimum, 1.7 second-feet Oct. 1-4.
1928-40: 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 1939-40 (gage height, in feet, and discharge, in second-feet)

0.4	1.8	1.3	29	3.0	310
.6	4.6	1.6	51	3.5	545
.8	8.7	2.0	92	4.0	820
1.0	14.4	2.5	176		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.7	7.4	11	117	51	198	95	66	13	5.2	4.0	2.2
2	1.7	6.9	14	122	45	196	77	58	13	5.0	4.0	2.0
3	1.7	6.5	15	112	46	152	65	56	12	5.0	3.8	2.0
4	2.6	6.1	14	156	91	122	58	69	12	5.2	3.8	2.0
5	4.3	5.7	13	176	145	105	53	120	11	5.0	3.6	2.2
6	5.2	5.6	12	132	616	87	48	106	11	4.8	3.5	2.2
7	5.0	5.4	12	101	410	92	54	86	11	4.8	3.2	2.2
8	4.8	5.4	22	78	245	101	53	67	11	4.6	3.0	2.2
9	4.4	5.6	50	69	191	90	56	56	11	4.4	2.8	2.2
10	4.3	5.4	137	64	196	79	51	47	10	4.3	2.8	2.3
11	4.0	5.2	96	56	170	69	47	41	9.5	4.3	2.8	2.3
12	3.8	5.0	61	50	137	62	42	37	9.2	4.1	2.6	2.4
13	3.5	5.0	45	46	194	56	40	33	8.7	4.1	2.6	2.4
14	3.3	5.2	49	43	176	50	37	30	8.7	4.1	2.5	2.4
15	3.2	5.0	258	39	141	48	35	28	8.3	4.1	2.4	2.4
16	3.2	4.8	512	36	170	46	32	26	8.0	4.0	2.4	2.6
17	3.3	4.8	273	34	228	42	30	24	7.8	3.8	2.4	2.9
18	3.5	4.8	156	32	172	38	29	22	7.4	3.8	2.4	3.0
19	4.3	4.8	108	29	128	36	28	21	7.2	3.8	2.3	2.9
20	5.0	4.6	95	27	102	34	26	20	6.9	4.0	2.3	2.8
21	5.0	4.6	81	26	86	32	25	19	6.7	4.0	2.3	2.8
22	4.8	4.8	68	25	73	30	23	19	6.5	4.0	2.3	2.8
23	4.8	5.0	58	24	71	29	25	18	6.3	3.8	2.2	2.6
24	4.8	5.0	49	23	77	29	27	16	6.1	3.8	2.2	2.4
25	4.8	4.8	43	23	111	29	24	16	5.9	3.6	2.2	2.4
26	6.9	5.6	38	33	148	64	23	15	5.7	3.8	2.2	2.3
27	10	8.3	36	98	146	122	22	14	5.6	4.0	2.2	2.5
28	11	9.5	49	93	170	137	25	14	5.4	4.0	2.2	2.6
29	10	9.5	65	80	210	135	28	13	5.4	4.1	2.2	2.8
30	9.2	10	72	67	-	139	40	13	5.2	4.1	2.2	2.9
31	8.3	-	90	58	-	114	-	13	-	4.1	2.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	152.4	11	1.7	4.92	0.410	0.47	302
November	176.3	10	4.6	5.88	.490	.55	350
December	2,602	512	11	83.9	6.99	8.06	5,160
Calendar year 1939	12,166.0	545	1.7	33.3	2.78	37.68	24,130
January	2,069	176	23	66.7	5.56	6.41	4,100
February	4,746	616	45	164	13.7	14.71	9,410
March	2,563	198	29	82.7	6.89	7.94	5,080
April	1,218	95	22	40.6	3.38	3.77	2,420
May	1,183	120	13	38.2	3.18	3.67	2,350
June	255.5	13	5.2	8.52	.710	.79	507
July	131.7	5.2	3.6	4.25	.354	.41	261
August	83.6	4.0	2.2	2.70	.225	.26	166
September	73.7	3.0	2.0	2.46	.205	.23	146
Water year 1939-40	15,254.2	616	1.7	41.7	3.48	47.27	30,250

Peak discharge.- Dec. 16 (10 a.m.) 616 sec.-ft.; Feb. 6 (10 a.m.) 798 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101604-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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., 1½ miles east of Siletz. Altitude of gage, about 105 feet above mean sea level (from river-profile map).

Drainage area.- 202 square miles.

Records available.- November 1905 to May 1912, January 1924 to September 1940.

Average discharge.- 20 years (1906-11, 1925-40), 1,652 second-feet.

Extremes.- Maximum discharge during year, 21,400 second-feet Feb. 6 (gage height, 19.51 feet); minimum, 62 second-feet Sept. 23-26.

1905-12, 1924-40: 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, about 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 above station. Flow regulated occasionally at low and medium stages by logging pond at Valsetz.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

2.2	61	4.0	635	7.0	2,650	16.0	15,000
2.5	111	4.5	890	8.0	3,580	18.0	18,500
2.8	183	5.0	1,180	10.0	5,980		
3.2	308	5.5	1,500	12.0	8,780		
3.6	460	6.0	1,850	14.0	11,800		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	436	835	4,650	1,050	6,150	2,940	3,240	326	138	109	67
2	72	408	1,040	4,390	950	6,460	2,340	2,230	322	136	103	65
3	72	412	940	3,720	1,010	4,540	1,910	1,740	312	133	98	67
4	496	369	815	4,890	2,560	3,440	1,590	1,970	294	131	94	69
5	634	332	740	5,280	4,690	2,770	1,410	4,000	280	129	92	74
6	290	318	750	4,020	17,600	2,270	1,270	3,290	273	129	87	68
7	232	301	690	3,060	11,500	2,570	1,350	2,470	270	124	85	65
8	186	336	2,520	2,430	8,640	3,120	1,370	1,910	257	122	84	68
9	167	332	3,870	2,170	7,340	2,740	2,090	1,580	247	120	82	77
10	152	287	7,440	1,970	6,920	2,390	1,810	1,330	241	116	82	74
11	138	280	5,170	1,760	5,500	2,080	1,570	1,170	235	113	82	71
12	131	260	3,290	1,640	4,070	1,800	1,370	1,040	223	111	80	68
13	126	273	2,390	1,500	5,430	1,690	1,230	928	223	115	78	68
14	120	322	2,960	1,360	4,480	1,410	1,100	846	214	111	77	85
15	116	280	11,900	1,260	3,540	1,410	1,010	785	203	109	75	74
16	116	260	16,400	1,160	4,130	1,420	918	730	197	105	74	68
17	232	263	10,100	1,070	6,080	1,260	852	675	194	103	74	74
18	276	287	5,720	989	4,720	1,160	815	612	189	103	72	94
19	270	267	3,650	912	3,660	1,070	750	581	186	102	71	84
20	384	254	3,420	840	2,900	978	700	545	180	102	72	72
21	294	254	2,930	785	2,280	901	650	509	175	102	72	68
22	251	343	2,470	740	1,950	835	612	488	173	100	71	65
23	241	301	2,080	705	1,730	800	770	460	170	96	69	64
24	287	287	1,740	725	1,640	800	715	420	165	94	69	62
25	244	273	1,480	852	3,260	775	630	400	162	92	68	62
26	759	376	1,310	1,280	4,070	3,330	590	384	155	129	67	65
27	1,190	950	1,200	2,570	3,690	5,820	572	369	152	205	68	241
28	1,130	735	1,850	2,030	5,030	5,680	835	358	152	145	77	194
29	825	622	2,630	1,610	6,220	5,340	735	347	147	143	71	113
30	645	765	2,920	1,340	-	5,080	1,990	347	140	150	68	90
31	509	-	3,300	1,170	-	3,820	-	347	-	122	67	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	10,652	1,190	69	344	1.70	1.96	21,130
November	11,183	950	254	373	1.85	2.06	22,180
December	108,550	16,400	690	3,502	17.3	19.99	215,300
Calendar year 1939	419,076	16,400	68	1,148	5.68	77.14	831,100
January	62,878	5,280	705	2,028	10.0	11.58	124,700
February	136,640	17,600	950	4,712	23.3	25.16	271,000
March	83,809	6,460	775	2,704	13.4	15.43	166,200
April	36,494	2,940	572	1,216	6.02	6.72	72,380
May	36,101	4,000	347	1,165	5.77	6.65	71,610
June	6,457	326	140	215	1.06	1.19	12,810
July	3,728	205	92	120	.594	.69	7,390
August	2,438	109	67	78.6	.389	.45	4,840
September	2,476	241	62	82.5	.408	.46	4,910
Water year 1939-40	501,406	17,600	62	1,370	6.78	92.34	994,400

Peak discharge.- Dec. 16 (10:30 a.m.) 18,500 sec.-ft.; Feb. 6 (8 a.m.) 21,400 sec.-ft.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
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Alsea River near Tidewater, Oreg.

Location.- Water-stage recorder, lat. 44°23', long. 123°50', in NW¼NW¼ sec. 6, T. 14 S., R. 9 W., three-quarters of a mile downstream from Grass Creek, 2.3 miles upstream from Scott Creek, and 3.8 miles southeast of Tidewater. Datum of gage is 48.16 feet above mean sea level (general adjustment of 1929).

Drainage area.- 334 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during year, 15,900 second-feet Feb. 6 (gage height, 15.93 feet); minimum, 62 second-feet Sept. 1 (gage height, 1.43 feet).

Remarks.- Records excellent except those for periods of no gage-height record, which are fair. No regulation; a few small diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.4	58	2.6	384	4.5	1,390	8.0	4,240
1.7	110	3.0	555	5.0	1,710	9.0	5,380
2.0	182	3.5	805	6.0	2,400	11.0	8,000
2.3	273	4.0	1,090	7.0	3,250	15.0	16,000

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a64	h144	177	2,750	1,280	5,940	2,940	1,160	392	156	114	64
2	a66	h132	225	2,860	1,160	6,040	2,460	942	376	151	108	66
3	a68	h125	228	2,590	1,230	4,690	2,160	838	368	151	104	67
4	a200	h119	199	4,090	2,570	3,720	1,900	1,190	345	146	100	70
5	a280	h110	182	5,530	3,740	3,000	1,680	3,070	334	144	94	72
6	a200	h106	216	3,390	13,300	2,530	1,520	2,610	315	144	92	76
7	a150	h102	225	2,660	10,800	2,500	1,480	1,900	312	144	90	72
8	a120	h110	1,210	2,250	7,120	2,730	1,400	1,500	304	142	90	68
9	a100	h110	1,910	2,130	5,120	2,490	1,570	1,280	287	139	90	73
10	a90	h106	5,840	2,360	4,620	2,280	1,420	1,120	284	134	88	80
11	a85	h102	2,840	2,120	4,460	2,060	1,290	1,010	270	130	88	85
12	a81	h98	1,710	1,910	3,790	1,830	1,190	952	263	128	87	80
13	a78	h98	1,190	1,680	5,090	1,670	1,090	854	263	130	87	75
14	h75	h102	1,100	1,520	4,640	1,520	1,010	810	253	128	85	86
15	a72	h98	4,820	1,380	3,930	1,480	948	761	247	121	83	94
16	a70	h98	11,800	1,260	4,040	1,430	893	715	240	119	82	87
17	a100	94	7,790	1,170	7,570	1,290	843	670	234	123	78	75
18	h159	94	4,440	1,070	5,280	1,200	810	635	231	123	73	94
19	h172	94	2,890	1,000	3,940	1,130	766	605	228	119	72	112
20	h169	94	2,800	926	3,150	1,070	730	625	222	117	70	94
21	h137	90	2,490	860	2,660	1,000	695	550	213	117	70	82
22	h112	100	2,060	810	2,300	946	670	524	207	117	70	73
23	h106	104	1,720	783	2,020	904	680	501	204	112	68	70
24	h128	102	1,450	810	1,880	876	650	475	196	110	68	68
25	h146	98	1,250	1,110	2,950	860	625	466	185	108	68	68
26	h204	121	1,100	2,050	4,350	3,990	600	449	182	123	68	72
27	h528	204	1,010	3,490	4,450	7,850	578	424	177	159	67	132
28	h510	179	1,160	2,600	7,270	6,650	630	408	172	156	70	253
29	a300	149	1,510	1,990	7,250	5,060	600	396	169	137	70	182
30	h193	159	1,780	1,650	-	4,650	805	396	161	134	68	125
31	h161	-	1,870	1,430	-	3,670	-	432	-	125	66	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	4,924	528	64	159	0.476	0.55	9,770
November	3,442	204	90	115	.344	.38	6,830
December	69,192	11,800	177	2,232	6.68	7.70	137,200
Calendar year	-	-	-	-	-	-	-
January	62,229	5,530	783	2,007	6.01	6.93	123,400
February	131,960	13,300	1,160	4,550	13.6	14.69	261,700
March	87,058	7,850	860	2,808	8.41	9.69	172,700
April	34,633	2,940	578	1,154	3.46	3.86	68,690
May	28,248	3,070	396	911	2.73	3.15	56,030
June	7,634	392	161	254	.760	.85	15,140
July	4,087	159	108	132	.395	.46	8,110
August	2,528	114	66	81.5	.244	.28	5,010
September	2,714	253	64	90.5	.271	.30	5,380
Water year 1939-40	438,649	13,300	64	1,198	3.59	48.84	870,000

Peak discharge.- Dec. 10(7 a.m.) 7,370 sec.-ft.; Feb. 6 (11 a.m.) 15,900 sec.-ft.; Feb. 28 (5 p. m.) 8,280 sec.-ft.

a No gage-height record; discharge computed on basis of records for Siletz River at Siletz.

h Computed from staff-gage readings.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 December 1940 (discontinued).
Extremes.- 1939-40: Maximum discharge observed during period, 5,880 second-feet Feb. 6 (gage height, 9.50 feet); minimum observed, 23 second-feet Oct. 1, 1939 (gage height, 1.09 feet).
1931-40: 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 discharge, 20 second-feet Sept. 28, 1939 (gage height, 1.04 feet).
Remarks.- Records fair. No diversion or regulation above station. Gage read once daily; occasionally twice.

Discharge, in second-feet, 1939-40

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	57	44	510	610	3,410	1,500	a400	184	72	42	27
2	24	46	49	655	510	3,770	1,260	343	178	68	41	26
3	26	46	50	820	496	3,140	1,070	350	175	68	40	24
4	26	44	50	1,360	2,230	2,150	945	645	160	67	39	26
5	68	41	46	1,750	2,270	1,720	825	1,140	154	65	38	26
6	71	39	50	1,400	5,260	1,360	748	1,100	148	62	36	27
7	62	38	52	946	4,780	1,260	720	764	143	62	35	26
8	57	39	138	759	3,500	1,470	698	590	137	62	33	a27
9	56	38	360	737	2,390	1,300	770	470	126	59	33	a30
10	44	38	1,910	808	2,270	1,140	698	410	126	59	32	a35
11	36	36	933	776	2,390	1,000	635	374	124	57	32	a37
12	36	35	635	660	1,990	873	600	343	119	57	32	a36
13	34	35	368	550	2,790	770	550	329	119	56	32	30
14	32	36	286	456	2,470	715	510	308	116	53	32	49
15	31	36	1,200	404	2,390	655	478	290	114	53	31	30
16	30	35	1,680	364	1,870	635	454	273	105	53	31	a29
17	30	35	1,260	336	4,040	560	430	248	103	52	29	a33
18	38	35	1,000	286	3,590	a510	406	245	98	52	29	62
19	38	35	650	279	2,430	490	390	234	98	49	29	a52
20	36	34	610	259	1,750	470	374	231	96	52	29	44
21	35	34	798	239	1,400	450	358	220	96	52	29	a38
22	34	36	640	221	1,200	430	340	207	94	52	28	34
23	32	36	510	215	1,000	410	329	204	94	50	27	34
24	37	35	364	230	921	398	322	191	92	48	27	a32
25	41	36	300	364	1,910	382	329	191	88	46	27	30
26	45	38	259	1,500	3,140	370	315	184	82	48	27	29
27	86	39	227	2,510	3,320	2,430	301	176	78	52	35	a60
28	112	38	265	1,830	4,780	3,500	315	172	78	62	36	a110
29	82	38	396	1,260	4,780	2,430	301	172	76	52	30	a80
30	72	41	483	921	-	2,310	322	166	75	52	29	a60
31	62	-	474	748	-	a1,800	-	184	-	49	27	-

a No gage-height record; discharge computed on basis of records for Alsea River near Tidewater and Siletz River near Siletz.

1940

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	a50	217	630	11	32	550	284	21	42	132	4,220
2	a45	191	530	12	31	506	252	22	47	140	2,150
3	39	154	390	13	30	406	224	23	44	132	1,300
4	41	126	378	14	30	322	210	24	298	204	1,170
5	44	157	366	15	30	252	191	25	315	350	1,640
6	39	273	374	16	29	210	194	26	217	406	1,950
7	36	390	398	17	30	178	184	27	132	350	2,960
8	35	660	406	18	29	160	280	28	90	332	1,990
9	35	698	366	19	29	137	326	29	84	1,230	1,500
10	34	715	315	20	a32	121	3,410	30	114	921	1,230
								31	166	-	1,040

a No gage-height record; discharge computed on basis of records for Alsea River near Tidewater and Siletz River near Siletz.

Monthly discharge, in second-feet, of Siuslaw River above Wildcat Creek, at Austa, Oreg., 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October 1939	1,455	112	23	46.9	0.176	0.20	2,890
November	1,150	57	34	38.3	.143	.16	2,280
December	16,107	1,910	44	520	1.95	2.24	31,950
Calendar year 1939	159,355	4,580	20	437	1.64	22.18	316,100
January 1940	24,152	2,510	215	779	2.92	3.36	47,900
February	72,497	5,280	496	2,500	9.36	10.10	143,800
March	42,308	3,770	370	1,365	5.11	5.89	83,920
April	17,293	1,500	301	576	2.16	2.41	34,300
May	11,156	1,140	166	360	1.35	1.55	22,130
June	3,476	184	75	116	.434	.48	6,890
July	1,731	72	46	55.8	.209	.24	3,430
August	996	42	27	32.1	.120	.14	1,980
September	1,183	110	24	39.4	.148	.16	2,350
Water year 1939-40	193,504	5,280	23	529	1.98	26.93	383,800
October 1940	2,249	315	29	72.5	.272	.31	4,460
November	10,620	1,230	121	354	1.33	1.48	21,060
December	30,858	4,220	184	995	3.73	4.30	61,210
Calendar year 1940	213,519	5,280	24	597	2.24	30.42	433,400

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. Datum 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 1940.

Extremes.- Maximum discharge during year, 1,650 second-feet Feb. 7 (gage height, 5.20 feet); minimum, 5.5 second-feet Oct. 1-4.
1931-40: 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, 5.5 feet Sept. 30, Oct. 1-4, 1939.

Remarks.- Records good except those below 10 second-feet and those for period of no gage-height record, which are fair. No diversion above gage; flow regulated only by natural storage in Triangle Lake.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.4	5.5	1.6	98	3.6	750
.7	15	2.0	177	4.2	1,050
1.0	32	2.5	312	4.6	1,290
1.3	57	3.0	485	5.1	1,590

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.5	24	18	279	231	1,070	517	112	59	22	17	9.0
2	5.5	23	20	300	205	970	428	100	58	21	16	9.0
3	5.5	21	21	306	208	845	372	100	55	21	16	8.5
4	7.5	19	21	389	273	705	331	136	52	20	15	8.5
5	11	17	21	517	392	583	291	250	49	20	15	8.5
6	16	17	22	517	900	489	259	378	46	20	14	8.5
7	18	16	23	434	1,580	445	250	315	44	19	13	9.0
8	18	16	33	369	1,320	442	245	268	43	19	13	9.5
9	17	15	72	337	a1,100	428	245	212	42	18	12	10
10	14	14	260	359	a950	386	239	179	41	18	11	10
11	14	14	414	365	a850	343	222	157	40	18	11	11
12	13	13	337	331	a800	303	208	140	38	17	11	11
13	12	13	233	285	a900	273	191	128	37	17	11	12
14	11	14	184	245	a800	245	177	119	36	17	10	13
15	11	13	277	212	a750	231	164	110	35	17	10	14
16	10	13	642	191	a680	220	155	103	34	17	10	14
17	11	13	865	173	a1,100	205	147	98	33	17	10	14
18	11	13	715	159	a1,000	188	138	92	31	17	9.5	15
19	13	13	517	147	710	175	130	86	28	16	9.5	14
20	14	13	396	136	578	162	124	82	29	16	9.0	13
21	15	13	321	126	481	155	117	77	29	16	9.0	13
22	15	13	270	119	414	149	112	75	27	16	9.5	12
23	15	14	225	113	359	140	108	70	27	15	9.5	12
24	15	14	193	115	337	136	106	68	26	15	9.5	11
25	15	14	166	144	406	134	103	64	26	15	9.5	11
26	17	15	147	250	624	243	98	62	24	15	9.0	11
27	20	15	130	453	800	578	95	59	24	16	9.0	15
28	26	16	140	513	955	785	95	57	23	17	9.0	18
29	30	17	173	431	1,130	775	94	55	23	17	9.0	22
30	29	17	218	337	-	682	98	54	23	17	9.0	22
31	27	-	247	273	-	606	-	57	-	17	9.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	462.0	.30	5.5	14.9	0.298	0.34	916
November	462	24	13	15.4	.308	.34	916
December	7,321	865	18	236	4.72	5.45	14,520
Calendar year 1939	48,377.5	1,110	5.5	133	2.66	36.00	95,960
January	8,925	517	113	288	5.76	6.64	17,700
February	20,833	1,580	205	718	14.4	15.50	41,320
March	13,091	1,070	134	422	8.44	9.74	25,970
April	5,859	517	94	195	3.90	4.36	11,620
May	3,863	378	54	125	2.50	2.87	7,660
June	1,082	59	23	36.1	.722	.80	2,150
July	543	22	15	17.5	.350	.40	1,080
August	344.0	17	9.0	11.1	.222	.26	682
September	368.5	22	8.5	12.3	.246	.27	731
Water year 1939-40	63,153.5	1,580	5.5	173	3.46	46.97	125,300

a No gage-height record; discharge computed on basis of records for Siuslaw River above Wildcat Creek, at Austa, and Alsea River near Tidewater.

South Umpqua River at Tiller, Oreg.

Location.- Water-stage recorder, lat. 42°56', long. 122°57', in NE¼ sec. 33, T. 30 S., R. 2 W., 0.3 mile upstream from Elk Creek, 0.4 mile downstream from Salt Creek, and 0.4 mile east of Tiller. Datum of gage is 991.8 feet above mean sea level (river-profile survey, general adjustment of 1929). Prior to Nov. 27, staff gage at same site and datum.

Drainage area.- 454 square miles.

Records available.- November 1910 to November 1911, October 1939 to September 1940.

Extremes.- Maximum discharge during year, 8,570 second-feet Feb. 28 (gage height, 10.55 feet), from rating curve extended above 5,400 second-feet; minimum, 24 second-feet Sept. 1, 2 (gage height, 0.73 foot).

1910-11, 1939-40: Maximum discharge observed, 11,400 second-feet Nov. 28, 1910 (gage height, 12.95 feet, site and datum then in use); minimum observed, 20 second-feet Sept. 3, 4, 1911.

Remarks.- Records good except those above 5,000 second-feet and those for period Oct. 1, 2, which are fair. Small diversions above station for irrigation. No regulation.

Cooperation.- Water-stage recorder inspected by employee of U. S. Forest Service.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 28				Feb. 29 to Sept. 30			
0.7	22	3.5	870	0.7	22	3.5	1,000
1.0	53	4.0	1,085	1.0	53	4.0	1,330
1.3	107	5.0	1,670	1.3	107	5.0	2,150
1.6	191	6.0	2,520	1.6	191	6.0	3,110
2.0	325	7.0	3,570	2.0	325	7.0	4,130
2.5	500	8.0	4,800	2.5	515	8.0	5,330
3.0	680	9.1	6,320	3.0	735	9.1	6,870

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a32	64	46	743	482	4,110	2,990	604	249	66	40	24
2	a40	59	46	662	448	4,430	2,280	568	246	64	38	24
3	45	56	48	691	486	3,440	2,770	555	201	59	37	28
4	41	56	45	784	1,070	2,590	1,630	614	185	58	36	33
5	117	53	43	762	2,160	2,150	1,390	712	169	56	34	37
6	143	53	41	666	4,800	1,720	1,180	645	163	54	33	33
7	86	52	43	583	4,410	1,580	1,130	578	154	53	32	30
8	64	52	59	554	2,830	3,190	1,290	527	148	53	32	29
9	54	53	666	1,270	2,150	2,470	1,350	495	140	52	30	30
10	50	53	1,870	1,630	3,980	1,940	1,260	485	131	50	30	30
11	45	a51	954	1,230	3,350	1,620	1,110	467	126	50	29	32
12	44	49	556	902	2,110	1,340	1,010	439	117	49	29	30
13	41	49	392	710	2,410	1,170	956	415	109	48	29	32
14	40	48	364	597	2,780	1,040	901	388	107	46	29	44
15	38	46	547	514	2,380	984	825	367	105	45	29	49
16	39	46	784	451	1,880	1,650	730	346	103	44	29	56
17	38	a46	1,320	402	3,140	1,660	663	325	101	43	29	54
18	39	45	773	367	2,370	1,390	618	311	94	43	29	92
19	40	44	547	339	1,600	1,180	591	294	94	41	28	128
20	40	45	525	311	1,240	1,070	555	280	99	46	28	70
21	39	45	640	283	1,050	1,000	523	263	92	54	27	49
22	39	45	511	263	977	967	503	249	88	52	27	43
23	38	44	423	253	898	901	495	243	84	48	28	38
24	56	44	342	256	878	934	471	233	82	43	28	36
25	68	44	287	297	1,350	934	487	225	79	40	28	35
26	59	43	253	1,200	2,500	2,920	463	213	73	40	28	37
27	500	40	230	1,280	3,910	5,830	423	207	72	45	28	367
28	322	40	311	870	6,300	4,170	451	197	70	58	27	1,070
29	119	40	601	695	6,180	3,200	531	194	68	49	26	328
30	94	41	866	601	-	2,930	555	188	68	44	25	182
31	72	-	894	532	-	3,340	-	194	-	41	25	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	2,482	500	32	80.1	0.176	0.20	4,920
November	1,446	64	40	48.2	.106	.12	2,870
December	15,029	1,870	41	485	1.07	1.23	29,810
Calendar year	-	-	-	-	-	-	-
January	20,698	1,630	253	668	1.47	1.70	41,050
February	70,119	6,300	448	2,418	5.33	5.74	139,100
March	67,850	5,830	901	2,189	4.82	5.56	134,600
April	30,131	2,990	423	1,004	2.21	2.47	59,760
May	11,817	712	188	381	.839	.97	23,440
June	3,617	249	68	121	.267	.30	7,170
July	1,534	66	40	49.5	.109	.13	3,040
August	927	40	25	29.9	.066	.08	1,840
September	3,068	1,070	24	102	.225	.25	6,090
Water year 1939-40	228,718	6,300	24	625	1.38	18.75	453,700

Peak discharge.- Feb. 6 (9 a.m.) 5,820 sec.-ft.; Feb. 28 (2 p.m.) 8,570 sec.-ft.; Mar. 26 (10 p.m.) 7,470 sec.-ft.

a No gage-height record; discharge interpolated or computed on basis of records for Cow Creek near Azalea.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Altitude of gage, 95 feet (from river-profile map).

Drainage area.- 3,680 square miles.

Records available.- October 1905 to September 1940 (prior to November 1908, incomplete).

Average discharge.- 35 years, 7,056 second-feet.

Extremes.- Maximum discharge observed during year, 83,500 second-feet Feb. 29 (gage height, 24.50 feet); minimum observed, 770 second-feet Aug. 31 to Sept. 4 (gage height, 1.00 foot).

1905-40: 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 flow probably only slightly affected. Slight diurnal fluctuation caused 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 1939-40 (gage height, in feet, and discharge, in second-feet)

1.0	770	4.0	4,340	11.0	23,300	21.0	66,600
1.5	1,220	5.0	6,130	13.0	31,500	23.0	76,100
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 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	818	1,240	886	6,330	5,280	g42,300	19,600	3,960	2,030	1,120	922	770
2	818	1,150	913	7,060	4,670	35,100	16,700	4,420	2,250	1,100	904	770
3	818	1,080	922	8,060	4,260	30,700	13,600	4,180	2,340	1,080	886	770
4	868	1,020	913	8,790	4,840	22,800	11,800	4,260	2,170	1,070	868	770
5	931	976	904	12,700	g9,820	18,300	10,100	4,920	1,950	1,050	850	794
6	985	976	904	11,200	g19,600	14,500	8,920	5,640	1,840	1,030	842	810
7	1,380	976	904	8,420	g42,300	12,100	8,060	5,100	1,780	1,010	834	818
8	1,220	958	994	6,950	g35,100	13,300	8,300	4,500	1,740	1,000	818	818
9	1,190	949	1,130	6,840	g24,200	17,700	9,690	4,100	1,700	994	818	802
10	1,090	940	g5,370	13,600	g20,000	14,500	9,690	3,810	1,650	994	834	802
11	1,050	940	g26,800	13,900	g28,800	12,100	8,790	3,670	1,610	976	818	818
12	985	940	11,500	10,900	22,400	10,400	7,720	3,530	1,570	976	818	850
13	940	940	6,130	8,180	g26,500	8,660	6,950	3,310	1,530	967	818	886
14	913	940	4,420	6,330	41,800	7,490	6,430	3,190	1,500	958	802	859
15	904	940	3,810	5,370	30,700	6,950	6,030	3,030	1,480	940	802	859
16	895	940	5,460	4,760	23,100	6,740	5,640	2,900	1,450	940	802	904
17	895	922	8,660	4,180	35,900	8,540	5,190	2,750	1,420	931	802	913
18	886	922	12,100	3,670	44,900	8,540	4,760	2,630	1,400	922	802	976
19	904	922	7,940	3,350	g27,200	7,380	4,500	2,530	1,370	922	802	1,010
20	904	922	5,640	3,180	19,000	6,740	4,260	2,440	1,340	922	802	1,120
21	904	904	9,040	2,960	14,800	6,230	4,030	2,350	1,340	931	802	1,080
22	886	922	7,490	2,700	11,500	5,840	3,880	2,260	1,320	994	786	1,030
23	886	922	5,640	2,540	9,960	5,550	3,670	2,190	1,300	1,010	786	976
24	913	904	4,500	2,460	8,660	5,280	3,600	2,140	1,300	976	786	931
25	949	904	3,740	2,630	8,300	5,460	3,670	2,100	1,280	976	786	877
26	1,040	904	3,160	3,670	13,600	5,740	3,600	2,050	1,250	958	786	859
27	1,090	904	2,810	g14,200	g25,300	g21,400	3,460	2,000	1,210	940	786	886
28	g2,540	886	2,580	15,800	g48,800	33,900	3,330	1,960	1,170	922	786	1,100
29	2,670	866	2,570	10,400	g73,200	25,300	3,330	1,920	1,160	931	766	3,810
30	1,870	886	4,030	7,600	-	21,000	3,810	1,900	1,140	967	786	2,920
31	1,420	-	5,100	6,130	-	19,300	-	1,980	-	922	770	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	34,562	2,670	818	1,115	0.303	0.35	68,550
November	28,615	1,240	886	954	.259	.29	56,760
December	156,960	26,800	886	5,063	1.38	1.59	311,300
Calendar year 1939	1,895,300	52,800	818	5,193	1.41	19.16	3,759,000
January	224,860	15,800	2,460	7,254	1.97	2.27	446,000
February	684,490	73,200	4,260	23,600	6.41	6.92	1,358,000
March	459,840	42,300	5,280	14,830	4.03	4.65	912,100
April	213,110	19,600	3,330	7,104	1.93	2.15	422,700
May	97,720	5,640	1,900	3,152	.857	.99	193,800
June	46,590	2,340	1,140	1,553	.422	.47	92,410
July	30,429	1,120	922	982	.267	.31	60,360
August	25,290	922	770	816	.222	.26	50,160
September	31,588	3,810	770	1,053	.286	.32	62,650
Water year 1939-40	2,034,054	73,200	770	5,558	1.51	20.57	4,035,000

g Computed from graph based on gage readings.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940 (incomplete prior to 1932).

Extremes.- Maximum discharge during year, 2,880 second-feet Feb. 28 (gage height, 8.20 feet, observed at peak), from rating curve extended above 1,200 second-feet; minimum discharge observed, 6.3 second-feet Aug. 19-21.
1926-40: Maximum discharge observed, 4,000 second-feet (estimated) Jan. 2, 1933 (gage height, 7.8 feet); minimum observed, 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. Small diversions above station for irrigation.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Dec. 8, Dec. 12 to Jan. 25)

Oct. 1 to Jan. 25				Jan. 26 to Sept. 30					
1.7	4.5	3.0	207	1.7	5.3	2.7	144	4.5	750
1.8	9.0	3.3	290	1.8	10	3.0	224	5.0	990
2.0	24	3.6	380	2.0	24	3.3	310	6.0	1,490
2.2	47	4.0	520	2.2	47	3.6	400	7.0	2,070
2.4	75	4.5	720	2.4	79	4.0	550	8.0	2,740
2.7	133								

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.1	9.0	10	72	87	710	470	59	47	14	10	7.3
2	9.6	9.6	11	82	79	622	328	65	40	14	9.3	7.8
3	10	9.6	11	87	213	442	287	60	34	13	8.8	8.8
4	12	9.0	10	194	710	358	246	85	33	13	8.3	10
5	21	9.0	10	165	376	304	224	79	31	13	8.3	9.3
6	20	9.6	10	102	1,090	252	197	72	28	13	7.8	9.3
7	16	9.6	11	77	574	241	205	64	26	13	7.3	8.3
8	12	10	36	70	400	310	184	59	25	12	7.3	8.3
9	9.6	10	92	265	316	269	154	56	25	12	7.3	8.8
10	9.0	10	1,040	273	352	235	147	54	24	12	6.8	8.8
11	9.0	9.6	262	178	304	213	134	50	22	12	7.8	8.3
12	8.6	9.6	70	127	255	192	120	48	22	11	7.3	8.8
13	8.1	9.6	55	98	702	170	109	47	22	11	7.3	12
14	8.1	9.6	59	77	435	152	107	45	21	11	7.3	7.3
15	8.6	9.0	60	68	328	139	105	43	21	12	7.8	8.3
16	9.0	9.6	68	62	287	170	9e	42	19	13	7.3	18
17	11	9.0	127	55	880	165	92	42	17	12	6.8	18
18	12	9.0	70	48	449	152	87	40	17	11	6.8	18
19	12	9.0	68	50	328	132	81	37	18	12	6.3	16
20	11	9.0	48	45	235	120	76	36	18	13	6.3	13
21	11	9.6	46	42	213	111	72	35	17	14	6.3	13
22	11	10	41	40	192	105	70	35	17	13	6.8	11
23	12	10	35	37	170	98	67	34	16	12	6.8	10
24	20	9.6	32	39	165	109	67	33	15	11	6.8	10
25	17	11	28	51	298	98	65	32	15	11	7.3	13
26	15	11	25	990	590	1,340	67	32	15	11	7.3	18
27	40	11	26	334	1,540	1,190	64	31	15	14	7.3	26
28	17	11	27	192	2,670	630	62	31	15	13	6.8	70
29	13	11	28	132	1,390	550	60	32	15	12	6.8	24
30	11	10	48	113	-	550	65	34	15	11	6.8	17
31	9.0	-	64	98	-	510	-	37	-	10	7.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	400.7	40	8.1	12.9	0.170	0.20	795
November	292.6	11	9.0	9.75	.128	.14	580
December	2,528	1,040	10	81.5	1.07	1.24	5,010
Calendar year 1939	23,256.2	1,040	5.0	63.7	.838	11.41	46,120
January	4,263	990	37	138	1.82	2.09	8,460
February	15,628	2,670	79	539	7.09	7.65	31,000
March	10,639	1,340	98	343	4.51	5.21	21,100
April	4,110	470	60	137	1.80	2.01	8,150
May	1,449	85	31	46.7	.614	.71	2,870
June	665	47	15	22.2	.292	.33	1,320
July	379	14	10	12.2	.161	.19	752
August	228.5	10	6.3	7.37	.097	.11	453
September	426.4	70	7.3	14.2	.187	.21	846
Water year 1939-40	41,009.2	2,670	6.3	112	1.47	20.09	81,340

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 Lake Creek and 30 miles southwest of Crescent. Altitude of gage, 4,090 feet (from river-profile map).

Drainage area.- 175 square miles.

Records available.- October 1927 to September 1940.

Average discharge.- 13 years, 362 second-feet.

Extremes.- Maximum discharge during year, 490 second-feet Apr. 9 (gage height, 1.30 feet); minimum, 262 second-feet Sept. 25 (gage height, 0.76 foot).
1927-40: 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. Flow slightly regulated by Diamond Lake.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.7	240	1.2	450
.8	277	1.4	545
1.0	358		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	293	304	300	360	336	368	451	410	365	324	300	289
2	296	304	300	360	316	372	437	410	385	324	296	289
3	296	304	300	360	320	368	441	410	381	320	296	289
4	300	304	300	360	320	364	437	430	385	320	296	289
5	312	304	300	356	332	364	432	425	381	320	296	285
6	308	304	300	344	352	360	432	420	381	320	296	285
7	304	304	300	352	344	372	461	415	372	320	296	285
8	300	300	304	356	336	385	475	410	368	320	293	285
9	304	300	328	356	336	372	485	410	368	320	293	285
10	300	300	328	356	352	372	475	419	368	320	293	285
11	304	300	300	348	344	368	450	428	368	320	293	285
12	304	300	300	348	336	364	440	425	385	316	293	289
13	304	300	328	340	340	372	440	420	381	316	293	285
14	304	300	332	332	340	364	435	420	360	316	289	285
15	304	300	336	340	340	364	430	405	356	312	289	285
16	300	300	348	340	336	376	415	400	352	308	289	289
17	300	300	352	336	340	368	430	410	352	308	289	289
18	300	300	340	336	336	364	440	410	348	308	285	296
19	300	300	340	336	332	372	420	405	344	304	285	289
20	300	300	352	336	332	368	420	405	340	308	285	289
21	300	300	348	332	332	364	420	400	340	308	285	289
22	300	300	340	332	332	364	420	400	344	304	285	285
23	304	300	340	332	328	360	420	400	344	304	285	285
24	308	300	340	328	328	364	425	397	340	304	289	281
25	308	300	336	332	336	372	430	397	340	304	289	273
26	316	300	340	344	348	401	425	397	336	304	289	281
27	332	300	340	344	360	419	420	393	328	308	289	300
28	320	300	356	340	385	419	430	389	328	304	289	308
29	316	300	364	340	381	437	420	385	324	300	289	289
30	312	300	364	340	-	456	430	385	324	300	289	289
31	308	-	364	340	-	461	-	381	-	300	289	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	9,461	332	293	305	1.74	2.01	18,770
November	9,028	304	300	301	1.72	1.92	17,910
December	10,220	364	300	330	1.89	2.17	20,270
Calendar year 1939	131,167	533	289	359	2.05	27.88	260,200
January	10,656	360	328	344	1.97	2.26	21,140
February	9,850	385	316	340	1.94	2.09	19,540
March	11,794	461	360	380	2.17	2.51	23,390
April	13,086	485	415	436	2.49	2.78	25,960
May	12,611	430	381	407	2.33	2.68	25,010
June	10,708	385	324	357	2.04	2.28	21,240
July	9,664	324	300	312	1.78	2.05	19,170
August	9,012	300	285	291	1.66	1.92	17,880
September	8,623	308	273	287	1.64	1.83	17,100
Water year 1939-40	124,713	485	273	341	1.95	26.50	247,400

Note.- No gage-height record Apr. 11 to May 8, May 12-23; discharge computed on basis of recorded range of stage and records for station at Toketee Falls.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 Clearwater River, half a mile upstream from Toketee Falls, and 30 miles east of Hoaglin. Datum 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 1940.

Average discharge.- 15 years (1925-40), 854 second-feet.

Extremes.- Maximum discharge during year, 1,580 second-feet Mar. 26, 30 (gage height, 2.30 feet); minimum, 540 second-feet Sept. 25 (gage height, 0.76 foot).
1908-9, 1914-17, 1924-40: 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. No diversion above station; regulation at Diamond Lake has little effect.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.7	510	1.2	775	2.0	1,340
.8	560	1.4	900	2.3	1,580
1.0	665	1.7	1,110		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	610	610	580	805	720	1,370	1,480	1,000	823	660	610	575
2	610	605	580	799	704	1,350	1,400	977	793	654	610	585
3	605	600	580	793	709	1,270	1,350	984	781	654	610	590
4	616	600	575	787	736	1,210	1,300	1,030	775	654	605	585
5	682	600	575	758	835	1,170	1,240	1,000	770	648	605	585
6	638	600	575	726	1,120	1,120	1,190	991	758	648	600	580
7	621	600	575	731	1,070	1,170	1,240	977	753	643	595	575
8	605	605	632	742	984	1,390	1,310	963	748	643	595	570
9	605	600	748	781	977	1,280	1,340	963	742	638	590	585
10	600	600	787	775	1,280	1,200	1,290	984	736	638	590	580
11	600	595	660	753	1,140	1,140	1,260	991	736	638	590	575
12	600	595	616	736	1,040	1,080	1,220	977	758	638	590	585
13	600	595	638	709	1,080	1,050	1,210	970	748	632	590	585
14	600	595	654	687	1,040	1,010	1,210	963	726	632	590	590
15	600	590	704	698	977	1,000	1,200	942	720	632	590	585
16	595	590	781	687	949	1,160	1,140	907	714	632	590	585
17	600	590	835	682	956	1,110	1,110	900	709	632	585	585
18	600	590	726	676	935	1,080	1,120	900	704	626	585	638
19	595	590	704	676	874	1,050	1,080	894	704	632	580	595
20	595	590	726	670	848	1,040	1,050	880	698	654	585	580
21	595	585	704	665	829	1,030	1,030	868	692	643	580	575
22	595	585	682	660	817	1,040	1,030	868	692	632	580	570
23	605	585	665	665	799	1,030	1,020	868	692	621	580	565
24	621	585	660	676	799	1,060	1,020	861	687	621	580	560
25	610	585	654	692	874	1,080	1,020	848	687	621	580	555
26	654	580	654	781	1,050	1,320	984	829	682	626	580	580
27	.742	575	654	793	1,220	1,530	977	823	665	638	575	692
28	665	575	748	764	1,460	1,500	1,020	811	665	626	575	670
29	632	575	829	742	1,480	1,530	1,000	805	665	621	575	590
30	621	590	829	736	-	1,550	1,040	799	660	616	575	580
31	610	-	811	731	-	1,560	-	793	-	610	575	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	19,127	742	595	617	1.83	2.11	37,940
November	17,760	610	575	592	1.76	1.96	35,230
December	21,141	835	575	682	2.02	2.33	41,930
Calendar year 1939	301,511	1,660	575	826	2.45	33.26	598,000
January	22,576	805	660	728	2.16	2.49	44,780
February	28,302	1,480	704	976	2.90	3.12	56,140
March	37,480	1,560	1,000	1,209	3.59	4.14	74,340
April	34,881	1,480	977	1,163	3.45	3.85	69,190
May	28,366	1,030	793	915	2.72	3.13	56,260
June	21,683	823	660	723	2.15	2.39	43,010
July	19,703	660	610	636	1.89	2.17	39,080
August	18,240	610	575	588	1.74	2.01	36,180
September	17,650	692	555	588	1.74	1.95	35,010
Water year 1939-40	286,909	1,560	555	784	2.33	31.65	569,100

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 Rock Creek and 5 miles northeast of Glide. Altitude of gage, 770 feet (from river-profile map).

Drainage area.- 886 square miles.

Records available.- June 1924 to September 1940.

Average discharge.- 16 years, 2,244 second-feet.

Extremes.- Maximum discharge during year, 13,100 second-feet Mar. 26 (gage height, 9.78 feet); minimum, 635 second-feet Sept. 25 (gage height, 2.15 feet).
1924-40: 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. No diversion above station; regulation at Diamond Lake has little effect.

Rating table, water year, 1939-40 (gage height, in feet, and discharge, in second-feet)

2.1	615	3.6	1,620	6.0	4,530
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	9.0	11,100
3.2	1,300	5.5	3,750		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	686	740	682	2,380	1,620	7,460	5,350	2,410	1,360	823	725	643
2	715	730	682	2,260	1,520	8,280	4,550	2,140	1,330	817	720	643
3	705	725	678	2,380	1,520	6,630	3,960	2,060	1,220	805	710	668
4	700	725	668	2,580	1,880	5,130	3,620	2,190	1,160	800	705	673
5	930	710	660	2,580	2,940	4,420	3,270	2,570	1,130	794	700	673
6	1,040	705	660	2,220	7,740	3,750	2,930	2,360	1,110	788	696	664
7	865	700	660	1,910	8,170	3,530	2,890	2,160	1,080	783	691	655
8	783	700	855	1,800	6,040	6,500	3,810	1,980	1,060	778	686	655
9	740	705	1,910	3,260	5,080	5,200	4,150	1,890	1,050	778	686	655
10	725	700	4,370	3,240	8,280	4,180	3,860	1,880	1,040	772	682	691
11	710	691	2,780	2,720	7,720	3,600	3,390	1,870	1,020	766	678	673
12	700	691	1,640	2,250	5,240	3,100	3,070	1,820	1,020	761	678	660
13	696	686	1,280	1,870	6,590	2,780	2,940	1,750	1,020	761	673	691
14	691	686	1,390	1,640	6,840	2,580	2,820	1,680	1,000	756	673	715
15	686	682	2,390	1,520	5,170	2,460	2,660	1,630	972	750	673	710
16	682	678	3,760	1,420	4,400	3,190	2,420	1,560	958	750	668	700
17	682	673	6,340	1,340	5,620	3,350	2,270	1,520	951	745	668	696
18	686	673	3,050	1,280	5,150	2,960	2,190	1,500	937	740	668	783
19	686	673	2,050	1,240	3,900	2,710	2,110	1,470	930	740	664	835
20	686	668	2,360	1,190	3,160	2,590	2,010	1,440	930	794	655	720
21	682	668	2,870	1,130	2,760	2,500	1,930	1,410	910	847	655	682
22	678	668	2,090	1,100	2,540	2,470	1,880	1,380	898	788	655	668
23	678	668	1,670	1,090	2,380	2,400	1,860	1,360	898	761	651	660
24	750	668	1,440	1,160	2,260	2,460	1,830	1,340	891	745	651	651
25	772	668	1,250	1,430	3,270	2,520	1,820	1,310	878	740	651	647
26	772	664	1,180	2,570	6,670	5,390	1,770	1,280	872	740	651	660
27	1,740	660	1,110	3,980	7,900	9,940	1,690	1,250	853	788	647	1,000
28	1,440	655	1,340	2,900	9,400	8,540	1,790	1,220	847	788	647	2,100
29	965	655	2,350	2,270	9,730	6,840	2,020	1,200	835	756	647	1,090
30	829	668	2,460	1,940	-	6,060	2,130	1,200	829	740	647	835
31	772	-	2,360	1,760	-	5,660	-	1,200	-	730	643	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	24,872	1,740	678	802	0.905	1.04	49,330
November	20,583	740	655	686	.774	.86	40,830
December	58,988	4,370	660	1,903	2.15	2.48	117,000
Calendar year 1939	721,242	11,800	655	1,976	2.23	30.26	1,431,000
January	62,410	3,980	1,090	2,013	2.27	2.62	123,800
February	145,490	9,730	1,520	5,017	5.66	6.11	288,600
March	139,180	9,940	2,400	4,490	5.07	5.84	276,100
April	82,990	5,350	1,690	2,766	3.12	3.48	164,600
May	52,030	2,570	1,200	1,678	1.89	2.18	103,200
June	29,989	1,360	829	1,000	1.13	1.26	59,480
July	23,924	847	730	772	.871	1.00	47,450
August	20,844	725	643	672	.758	.87	41,340
September	22,796	2,100	643	760	.858	.96	45,220
Water year 1939-40	684,096	9,940	643	1,869	2.11	28.70	1,357,000

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Altitude of gage, 5,180 feet (from river-profile map).

Drainage area.- 57 square miles.

Records available.- May 1922 to September 1925 (incomplete), October 1926 to September 1940.

Average discharge.- 13 years (1926-29, 1930-40), 47.1 second-feet.

Extremes.- Maximum discharge during year, 137 second-feet (regulated) Apr. 15 (gage height, 1.82 feet); minimum, 0.7 second-foot (regulated) Sept. 24; minimum daily discharge, 13 second-feet Sept. 24.

1922-25, 1926-40: Maximum discharge observed, 146 second-feet June 1, 1925 (gage height, 2.13 feet, site and datum then in use); no flow (regulated) Aug. 25-27, 1931.

Remarks.- Records good except those for periods of backwater from aquatic vegetation, Oct. 1 to Dec. 22, Sept. 1-30, which are fair. Flow regulated by gates and fish racks at lake outlet and, at times, by collection of moss on racks. No diversion above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	28	26	74	54	74	93	37	45	23	25	26
2	16	28	27	74	43	75	86	38	49	24	25	26
3	16	28	27	74	44	72	89	40	49	26	25	26
4	16	29	27	75	46	72	86	60	53	26	24	25
5	17	29	24	75	49	71	85	66	51	25	24	25
6	17	29	24	74	51	70	96	69	50	24	24	24
7	15	29	34	72	52	70	108	66	49	24	23	24
8	17	29	24	72	52	71	108	61	48	23	23	24
9	17	30	32	74	52	70	109	61	48	23	22	25
10	17	30	18	74	56	70	109	61	48	24	22	25
11	17	29	18	74	58	69	85	61	58	24	22	25
12	17	29	37	74	58	72	84	60	71	24	22	25
13	17	30	77	72	63	74	79	58	62	23	22	27
14	17	30	70	71	64	68	81	63	46	23	24	27
15	18	29	71	71	63	66	68	49	45	24	24	27
16	17	28	72	70	63	68	44	43	44	23	24	25
17	17	28	72	69	65	66	62	51	43	23	24	25
18	17	28	69	68	64	68	57	49	42	24	23	27
19	17	28	72	68	63	76	38	50	41	23	24	27
20	17	28	81	66	62	64	40	50	41	24	25	27
21	17	28	76	65	61	61	42	49	44	24	24	26
22	22	28	74	64	60	58	41	50	49	24	25	24
23	27	27	72	64	58	54	48	50	45	24	27	22
24	27	27	71	64	60	55	55	49	44	25	27	13
25	27	27	70	66	61	58	56	49	44	25	26	22
26	29	27	69	69	63	64	53	57	36	25	26	22
27	30	27	68	70	65	72	57	53	29	26	25	27
28	30	27	70	69	70	81	60	50	26	25	25	28
29	30	26	72	68	74	89	63	51	24	26	26	27
30	28	26	74	66	-	96	56	45	24	24	25	27
31	28	-	74	65	-	100	-	41	-	26	25	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	630	30	15	20.3	0.356	0.41	1,250
November	846	30	26	28.2	.495	.55	1,680
December	1,692	81	18	54.6	.958	1.10	3,360
Calendar year 1939	15,320	82	12	42.0	.737	10.00	30,400
January	2,171	75	64	70.0	1.23	1.42	4,310
February	1,694	74	43	58.4	1.02	1.11	3,360
March	2,194	100	54	70.8	1.24	1.43	4,350
April	2,138	109	38	71.3	1.25	1.39	4,240
May	1,637	69	37	52.8	.926	1.07	3,250
June	1,348	71	24	44.9	.788	.88	2,670
July	751	26	23	24.2	.425	.49	1,490
August	752	27	22	24.3	.426	.49	1,490
September	750	28	13	25.0	.439	.49	1,490
Water year 1939-40	16,603	109	13	45.4	.796	10.83	32,940

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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 Trap Creek and 40 miles east of Glide. Altitude of gage, 3,760 feet (from river-profile map).

Drainage area.- 40 square miles.

Records available.- October 1927 to September 1940.

Average discharge.- 12 years (1928-40), 142 second-feet.

Extremes.- Maximum discharge during year, 214 second-feet Mar. 26 (gage height, 1.37 feet); minimum, 115 second-feet Sept. 15, 16, 20.
1927-40: Maximum discharge, 380 second-feet June 9, 1933 (gage height, 2.02 feet, datum then in use), 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 excellent. No diversion or regulation above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.7	105	1.1	166
.9	133	1.3	201

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	126	122	121	136	127	168	173	158	158	128	121	118
2	126	122	121	136	127	164	169	158	151	126	121	120
3	126	122	120	133	130	161	168	156	147	127	121	120
4	127	122	120	133	130	161	166	158	144	126	121	120
5	132	122	120	130	135	158	163	154	143	126	121	118
6	127	122	120	126	158	156	161	152	143	126	121	118
7	126	122	120	126	147	164	168	151	141	126	120	118
8	126	124	126	127	141	171	169	151	139	126	120	118
9	126	122	143	128	141	164	176	154	141	126	120	120
10	124	122	141	127	147	163	169	159	141	126	120	118
11	124	122	127	124	141	159	169	163	143	124	120	118
12	124	124	124	124	139	156	171	161	143	124	120	118
13	124	124	122	122	141	154	173	159	141	124	120	120
14	124	124	124	122	138	152	174	159	141	124	120	118
15	124	122	130	124	136	154	171	158	139	124	120	115
16	122	122	138	122	136	159	168	156	138	124	121	115
17	122	122	139	122	136	154	166	154	136	124	121	120
18	124	122	128	121	133	152	166	156	136	122	121	122
19	122	122	127	121	132	151	166	156	135	124	121	117
20	122	122	127	121	132	151	164	156	135	126	120	115
21	122	121	126	121	132	152	163	156	133	124	120	117
22	122	121	124	121	130	152	163	156	133	122	120	117
23	122	121	124	121	130	154	161	159	132	122	120	117
24	124	121	122	122	132	159	161	156	132	122	120	117
25	122	120	122	122	138	159	159	152	132	122	120	117
26	128	120	122	133	146	190	158	149	130	124	120	120
27	135	120	122	128	156	188	154	147	130	124	118	130
28	127	120	127	127	183	178	161	147	130	122	118	126
29	126	120	132	127	175	181	158	147	130	122	118	120
30	124	121	136	127	-	183	159	147	130	122	118	120
31	122	-	135	127	-	180	-	147	-	121	118	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	3,872	135	122	125	3.12	3.60	7,680
November	3,653	124	120	122	3.05	3.40	7,250
December	3,930	143	120	127	3.18	3.65	7,800
Calendar year 1939	53,595	226	120	147	3.68	49.87	106,300
January	3,901	136	121	126	3.15	3.53	7,740
February	4,067	183	127	140	3.50	3.78	8,070
March	5,048	190	151	163	4.08	4.69	10,010
April	4,967	176	154	166	4.15	4.62	9,850
May	4,792	163	147	155	3.88	4.46	9,500
June	4,147	158	130	138	3.45	3.86	8,230
July	3,852	128	121	124	3.10	3.58	7,640
August	3,720	121	118	120	3.00	3.46	7,380
September	3,567	130	115	119	2.98	3.32	7,080
Water year 1939-40	49,516	190	115	135	3.38	46.05	98,230

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-O U.S. GOVERNMENT PRINTING OFFICE 1936

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. Altitude of gage, 200 feet (from river-profile map).

Drainage area.- 169 square miles.

Records available.- October 1928 to September 1940. September 1916 to September 1926, at site 1½ miles (revised) upstream.

Average discharge.- 21 years (1916-26, 1929-40), 700 second-feet.

Extremes.- Maximum discharge during year, 12,100 second-feet Dec. 10 (gage height, 12.76 feet), from rating curve extended above 4,200 second-feet on basis of subsequent rating; minimum, 13 second-feet Aug. 30, Sept. 1 (minimum gage height, 1.09 feet Oct. 1). 1916-26, 1928-40: Maximum discharge, 25,300 second-feet Oct. 31, 1924 (gage height, 17.5 feet, site and datum then in use), from rating curve extended above 12,000 second-feet; minimum, 12 second-feet Sept. 22-25, 27-30, 1939.

Remarks.- Records good. No regulation above station; small diversions for irrigation.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 10						Dec. 11 to Sept. 30					
1.1	13	3.0	432	7.0	3,780	1.4	10	3.0	435	6.0	3,020
1.3	24	3.5	687	9.0	6,420	1.7	37	3.5	765	7.0	4,200
1.6	55	4.0	1,020	11.0	9,370	2.0	76	4.0	1,140	9.0	6,800
2.0	116	5.0	1,760			2.5	196	5.0	2,000	11.0	9,700
2.5	247	6.0	2,650								

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	44	27	3,160	618	3,980	1,600	393	155	51	28	15
2	21	41	54	2,740	521	3,840	1,270	387	141	48	28	16
3	20	40	59	2,470	695	2,560	1,160	399	128	47	27	18
4	19	37	44	4,330	1,690	1,860	1,060	1,320	121	46	27	22
5	95	34	37	3,380	1,790	1,400	930	1,750	114	45	26	21
6	80	32	36	2,240	5,440	1,130	802	1,350	110	45	26	19
7	75	30	39	1,650	5,010	1,130	968	975	106	44	25	18
8	50	32	868	1,420	3,100	1,670	1,140	744	102	44	24	20
9	38	33	1,870	2,360	2,120	1,380	1,240	606	99	42	23	20
10	31	31	8,350	2,520	1,870	1,180	1,070	508	95	41	22	19
11	27	h28	3,020	1,940	1,730	1,010	908	441	90	40	22	18
12	24	a28	1,520	1,490	1,470	892	758	381	84	39	22	17
13	23	28	1,030	1,160	4,790	772	646	338	81	38	22	17
14	22	32	1,060	938	4,100	681	580	313	78	38	22	18
15	21	38	2,050	772	2,910	646	521	285	76	37	21	22
16	20	33	4,380	639	3,360	908	465	263	76	38	21	23
17	19	31	3,970	547	6,740	908	417	247	73	38	21	21
18	19	28	2,150	471	3,720	802	370	226	72	37	21	54
19	19	28	1,460	405	2,480	695	343	207	70	36	20	57
20	19	26	1,650	348	1,860	606	322	196	68	36	19	44
21	18	24	1,420	308	1,480	540	299	186	67	36	19	35
22	18	23	1,090	281	1,250	477	276	176	64	35	19	29
23	19	24	855	259	1,060	429	268	166	62	34	19	25
24	32	24	646	268	1,050	429	259	160	60	32	19	22
25	38	23	521	534	2,030	387	259	155	58	32	19	21
26	36	25	429	3,370	3,140	2,580	255	146	57	32	18	22
27	116	26	354	3,030	5,260	3,820	226	143	56	36	18	139
28	129	25	1,240	1,810	9,010	3,050	226	138	54	36	17	281
29	84	24	2,010	1,240	5,930	2,810	223	133	53	35	16	155
30	64	24	1,970	952	-	2,590	327	135	52	32	16	97
31	51	-	3,120	751	-	2,030	-	160	-	30	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,271	129	14	41.0	0.243	0.28	2,520
November	896	44	23	29.9	.177	.20	1,780
December	47,319	8,350	27	1,526	9.03	10.41	93,860
Calendar year 1939	186,663	8,350	12	511	3.02	41.08	370,200
January	47,783	4,330	259	1,541	9.12	10.52	94,780
February	86,224	9,010	521	2,973	17.6	18.97	171,000
March	47,192	3,980	387	1,522	9.01	10.39	93,600
April	19,188	1,600	223	640	3.79	4.22	38,060
May	13,027	1,750	133	420	2.49	2.87	25,840
June	2,522	155	52	84.1	.498	.55	5,000
July	1,200	51	30	38.7	.229	.26	2,380
August	663	28	16	21.4	.127	.15	1,320
September	1,305	281	15	43.5	.257	.29	2,590
Water year 1939-40	268,590	9,010	14	734	4.34	59.11	532,700

Peak discharge.- Dec. 10 (9 a.m.) 12,100 sec.-ft.; Feb. 17 (1 a.m.) 9,070 sec.-ft.; Feb. 28 (12 m.) 11,300 sec.-ft.

a No gage-height record; discharge computed on basis of records for Middle and North Forks of Coquille River near Myrtle Point.

h Computed from staff-gage reading.

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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 3½ miles southeast of Myrtle Point. Datum 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 1940.

Average discharge.- 10 years, 729 second-feet.

Extremes.- Maximum discharge during year, 13,400 second-feet Feb. 28 (gage height, 18.55 feet); minimum, 6 second-feet Oct. 1 (gage height, 1.64 feet).

1930-40: 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. Flow completely regulated during low-water periods and to some extent at other times by logging ponds above station. No diversion above station.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 28

1.6	5.0	4.0	202	10.0	2,800
1.8	10	5.0	400	11.0	3,600
2.1	19	6.0	665	13.0	5,520
2.5	36	7.0	1,060	15.0	7,960
3.0	73	8.0	1,540	16.0	9,360
3.5	127	9.0	2,110		

Feb. 29 to Sept. 30

1.6	7.5	2.5	38
1.8	12	3.0	73
2.1	21		

Note.- Same as preceding table above 3.0 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6	91	24	1,280	457	3,820	1,220	328	160	36	20	8
2	31	55	27	1,180	357	3,920	1,020	332	144	34	19	8
3	35	38	32	1,390	376	2,800	890	334	120	33	18	9
4	15	34	30	2,400	868	2,710	760	518	111	32	17	10
5	46	31	27	2,350	1,020	1,540	707	878	103	32	17	15
6	75	29	27	1,620	2,940	1,240	606	898	96	31	16	15
7	48	28	45	1,180	4,180	1,170	588	682	93	30	15	13
8	33	28	173	918	3,180	1,950	634	535	89	30	15	13
9	55	29	651	1,080	2,110	1,720	724	453	85	30	14	14
10	48	31	6,520	1,440	2,040	1,400	672	396	80	29	14	15
11	18	31	3,340	1,230	2,800	1,200	600	355	75	29	13	13
12	15	30	1,450	1,110	2,100	938	530	317	72	28	13	12
13	14	70	790	938	3,890	866	472	289	68	27	12	12
14	13	43	635	738	5,080	724	440	267	66	27	12	12
15	13	26	491	619	4,410	648	404	250	63	25	12	13
16	12	25	639	549	3,160	710	374	232	61	25	12	14
17	13	24	1,480	460	9,220	693	346	214	59	26	11	19
18	14	24	1,140	415	5,280	627	323	200	57	26	11	49
19	15	23	870	346	3,060	570	307	185	56	25	10	98
20	14	23	934	372	2,030	510	291	174	56	24	10	46
21	14	23	954	264	1,510	400	269	164	54	25	10	31
22	14	23	794	233	1,200	489	258	156	51	26	10	25
23	14	23	634	354	946	400	252	147	50	25	10	21
24	19	23	503	205	802	396	243	139	48	23	10	19
25	36	23	420	344	1,140	361	246	134	46	21	10	17
26	36	23	357	1,070	1,700	581	289	126	44	20	10	17
27	397	23	285	1,530	3,780	1,770	250	120	42	26	10	44
28	210	23	254	1,080	9,250	2,260	248	116	40	37	9	404
29	109	23	407	682	6,590	1,720	289	114	39	29	9	202
30	75	23	458	669	-	1,500	315	114	38	25	9	113
31	58	-	589	517	-	1,410	-	154	-	22	9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,515	397	6	48.9	0.160	0.18	3,000
November	943	91	23	31.4	.103	.11	1,870
December	24,980	6,520	24	806	2.64	3.05	49,550
Calendar year 1939	209,454.1	7,700	5.9	574	1.88	25.51	415,400
January	28,563	2,400	205	921	3.02	3.48	56,650
February	85,476	9,250	357	2,947	9.66	10.42	169,500
March	41,043	3,920	361	1,324	4.34	5.00	81,410
April	14,567	1,220	243	486	1.59	1.78	28,890
May	9,321	898	114	301	.987	1.14	18,490
June	2,166	160	38	72.2	.237	.26	4,300
July	858	37	20	27.7	.091	.10	1,700
August	387	20	9	12.5	.041	.05	768
September	1,301	404	8	43.4	.142	.16	2,580
Water year 1939-40	211,120	9,250	6	577	1.89	25.73	418,700

Peak discharge.- Dec. 10 (1 p.m.) 9,330 sec.-ft.; Feb. 13 (5 p.m.) 6,310 sec.-ft.; Feb. 17 (9 a.m.) 11,100 sec.-ft.; Feb. 28 (3 p.m.) 13,400 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is 10.94 feet above mean sea level (general adjustment of 1929).

Drainage area.- 276 square miles.

Records available.- October 1928 to September 1940. Prior to October 1930 at site 3½ miles downstream.

Average discharge.- 11 years (1929-40), 877 second-feet.

Extremes.- Maximum discharge during year, 7,010 second-feet Feb. 17 (gage height, 29.74 feet); minimum, 17 second-feet Sept. 9 (gage height, 1.58 feet).
1928-40: 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. Inlet pipe covered with silt at times. No diversion above station. Flow slightly regulated by logging ponds above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.4	11	3.5	153	8.0	837	19.0	3,410
1.7	22	4.0	208	10.0	1,220	21.0	4,000
2.0	37	5.0	340	12.0	1,630	23.0	4,630
2.5	68	6.0	495	14.0	2,070	26.0	5,650
3.0	106	7.0	659	16.0	2,570	29.0	6,730

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	110	47	1,630	561	5,350	1,480	508	227	72	34	19
2	19	94	51	1,570	519	4,990	1,290	485	198	70	33	20
3	21	88	61	1,810	533	4,350	1,140	567	178	62	32	19
4	26	80	71	2,500	993	3,250	1,010	659	166	70	38	20
5	109	72	66	3,360	1,100	2,440	918	1,280	160	56	38	20
6	315	67	69	2,620	2,660	1,920	819	1,490	152	51	34	18
7	149	62	91	1,800	4,930	1,670	806	1,210	147	51	32	18
8	104	60	150	1,390	4,490	2,450	922	823	141	53	30	18
9	69	61	813	1,430	3,360	2,250	1,020	693	135	55	30	18
10	53	60	e3,810	1,410	3,030	1,830	1,000	603	131	54	30	21
11	46	57	5,310	1,310	3,860	1,520	877	540	127	53	30	24
12	44	53	2,830	1,200	3,120	1,280	774	484	122	53	30	22
13	42	53	1,190	1,030	3,450	1,140	695	444	118	53	31	22
14	38	56	969	909	5,210	1,180	637	415	114	51	30	22
15	36	60	909	805	5,330	1,030	591	391	110	51	29	23
16	35	60	1,030	702	4,440	1,050	551	361	105	54	28	26
17	32	56	1,630	632	6,250	949	517	337	102	53	28	28
18	32	54	1,680	588	6,440	799	490	316	98	51	27	39
19	32	51	1,160	575	4,760	729	463	292	97	50	26	64
20	32	50	1,070	540	3,280	674	439	252	96	50	25	67
21	34	48	1,560	498	2,290	622	410	287	93	54	25	53
22	33	48	1,300	453	1,740	606	385	245	91	53	24	42
23	32	48	1,060	415	1,420	611	379	232	89	49	24	36
24	64	48	833	452	1,280	640	372	230	85	45	23	28
25	57	48	747	463	1,490	615	370	221	84	44	23	26
26	68	47	591	909	2,410	723	349	209	80	45	23	23
27	661	45	500	1,500	3,690	e2,000	326	200	77	47	22	43
28	720	44	628	1,090	5,740	3,310	358	194	76	76	22	307
29	295	42	871	806	6,600	2,600	447	186	75	60	19	284
30	186	45	1,120	697	-	2,030	465	187	74	61	20	132
31	137	-	1,200	627	-	1,700	-	232	-	38	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	3,539	720	18	114	0.413	0.48	7,020
November	1,767	110	42	58.9	.213	.24	3,500
December	33,417	5,310	47	1,078	3.91	4.50	66,280
Calendar year 1939	258,711	7,060	15	709	2.57	34.88	513,200
January	35,721	3,360	415	1,152	4.17	4.81	70,850
February	94,976	6,600	519	3,275	11.9	12.80	188,400
March	56,307	5,350	605	1,816	6.58	7.59	111,700
April	20,300	1,480	326	677	2.45	2.74	40,260
May	14,573	1,490	186	470	1.70	1.96	28,910
June	3,548	227	74	118	.428	.48	7,040
July	1,685	76	38	54.4	.197	.23	3,340
August	858	38	18	27.7	.100	.12	1,700
September	1,502	307	18	50.1	.182	.20	2,980
Water year 1939-40	268,193	6,600	18	733	2.66	36.15	532,000

Peak discharge.- Dec. 11 (2 p.m.) 6,100 sec.-ft.; Feb. 17 (8 to 9 p.m.) 7,010 sec.-ft.
e Intake action faulty; discharge computed from partly estimated gage heights.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
101604-0 U S GOVERNMENT PRINTING OFFICE 1936

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. Altitude of gage, about 3,465 feet (from river-profile map).

Drainage area.- 118 square miles.

Records available.- January 1930 to September 1940.

Average discharge.- 10 years, 459 second-feet.

Extremes.- Maximum discharge during year, 1,590 second-feet Mar. 26 (gage height, 4.06 feet); minimum, 238 second-feet Aug. 29 to Sept. 2 (gage height, 1.09 feet).
1930-40: 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 ice effect and no gage-height record, which are fair. No diversion or regulation above station.

Cooperation.- Water-stage recorder inspected by employee of The California Oregon Power Co.

Rating table, water year 1939-40 (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 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	285	270	a265	602	436	890	895	642	440	288	260	240
2	275	265	a260	584	426	840	804	646	398	282	260	245
3	265	265	a255	534	470	750	754	615	374	280	258	258
4	275	262	a255	570	490	710	718	660	365	280	255	252
5	368	262	a255	494	618	696	669	606	356	278	255	250
6	296	262	a255	436	1,110	651	638	579	350	278	252	248
7	280	260	a255	408	880	646	736	566	347	275	250	245
8	272	265	a280	408	710	905	813	566	341	275	250	245
9	268	262	a500	450	642	750	890	588	338	272	250	258
10	268	260	a700	432	945	678	808	633	335	272	250	255
11	265	260	a450	415	759	620	786	633	332	272	250	245
12	265	260	a360	387	656	570	808	610	326	272	248	245
13	262	260	a300	356	615	542	865	584	323	270	248	255
14	262	260	a320	350	b562	526	870	570	320	270	245	260
15	262	258	a350	345	b510	530	786	550	317	270	245	250
16	260	258	a500	340	b490	669	718	534	314	270	245	258
17	262	258	a700	335	b486	610	687	522	311	268	245	250
18	265	258	418	329	443	579	696	510	308	268	245	302
19	260	258	371	326	422	579	687	502	308	270	245	262
20	260	258	384	323	415	597	674	482	305	296	245	250
21	262	258	353	317	408	638	651	470	302	293	245	245
22	260	258	326	314	401	687	646	462	299	275	245	242
23	262	258	314	317	390	696	646	458	296	270	245	242
24	285	258	302	338	415	764	620	446	293	268	242	245
25	270	258	299	377	570	782	602	429	293	265	242	245
26	296	258	296	570	682	1,170	574	412	290	272	242	255
27	426	255	293	558	925	1,230	554	404	288	280	242	422
28	326	255	458	470	1,210	1,030	624	394	288	270	240	415
29	288	255	692	446	1,100	1,060	606	390	285	265	240	285
30	278	a260	772	443	-	1,080	674	387	288	262	240	265
31	272	-	628	440	-	1,010	-	384	-	262	240	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	8,700	426	260	281	2.38	2.74	17,260
November	7,794	270	255	260	2.20	2.46	15,460
December	12,166	772	255	392	3.32	3.83	24,130
Calendar year 1939	157,697	1,130	255	432	3.66	49.71	312,800
January	13,014	602	314	420	3.56	4.10	25,810
February	18,186	1,210	390	627	5.31	5.73	36,070
March	23,485	1,230	526	758	6.42	7.40	46,580
April	21,499	895	554	717	6.08	6.78	42,640
May	16,234	660	384	524	4.44	5.12	32,200
June	9,730	440	285	324	2.75	3.07	19,300
July	8,488	296	262	274	2.32	2.68	16,840
August	7,664	260	240	247	2.09	2.42	15,200
September	7,934	422	240	264	2.24	2.50	15,740
Water year 1939-40	154,894	1,230	240	423	3.58	48.83	307,200

Peak discharge.- Feb. 6 (12:30 p.m.) 1,350 sec.-ft.; Feb. 28 (2 p.m.) 1,420 sec.-ft.; Mar. 26 (7 to 8 p.m.) 1,590 sec.-ft.

a No gage-height record; discharge computed on basis of range of stage, weather records, and records for station above Prospect.

b Stage-discharge relation affected by ice.

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., 1⅛ miles upstream from intake of diversion of The California Oregon Power Co., 2 miles northwest of Prospect, and 3 miles upstream from Mill Creek. Altitude of gage, about 2,620 feet (from river-profile map).

Drainage area.- 332 square miles.

Records available.- July 1907 to February 1912 (incomplete), October 1923 to September 1940.

Average discharge.- 18 years (1910-11, 1923-40), 699 second-feet.

Extremes.- Maximum discharge during year, 3,400 second-feet Feb. 28 (gage height, 4.37 feet); minimum, 295 second-feet Aug. 30 to Sept. 1 (gage height, 1.35 feet).
1907-12, 1923-40: Maximum discharge, 9,300 second-feet (estimated) Nov. 22, 1909 (gage height, about 7.0 feet, former datum); minimum discharge observed, 200 second-feet Nov. 20, 1931 (gage height, 1.07 feet).

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

Cooperation.- Water-stage recorder graph furnished by The California Oregon Power Co.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.3	275	1.8	520	3.0	1,550
1.4	315	2.2	795	3.5	2,150
1.5	360	2.6	1,140	4.0	2,850

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	365	342	328	926	680	1,980	1,730	943	612	380	328	295
2	360	333	324	909	652	1,860	1,520	926	568	370	328	299
3	342	333	320	851	694	1,580	1,370	909	532	365	320	324
4	342	333	320	934	835	1,430	1,280	978	514	360	320	320
5	482	333	320	851	1,130	1,360	1,170	960	498	356	315	315
6	410	328	320	731	2,380	1,240	1,100	900	492	356	315	307
7	375	328	320	666	1,950	1,200	1,170	859	482	351	311	307
8	356	333	356	645	1,470	1,720	1,360	835	476	351	311	303
9	351	333	739	859	1,270	1,440	1,460	851	465	346	311	311
10	346	328	1,090	909	1,840	1,260	1,360	900	460	346	311	324
11	342	328	619	835	1,560	1,140	1,290	918	454	342	311	307
12	338	328	465	723	1,290	1,020	1,290	892	448	342	307	303
13	338	328	426	600	1,180	952	1,360	843	438	342	307	315
14	333	324	438	550	1,060	892	1,380	811	432	342	307	324
15	333	324	520	550	952	884	1,260	779	426	338	303	315
16	333	320	771	520	884	1,130	1,130	755	421	338	307	320
17	333	315	1,110	526	875	1,110	1,070	731	416	338	303	315
18	333	315	673	509	811	1,020	1,050	723	410	333	303	405
19	328	315	556	498	747	978	1,030	701	405	338	303	356
20	328	315	562	487	715	987	996	687	405	365	299	315
21	328	315	532	465	694	1,050	952	666	400	385	299	311
22	328	320	476	460	680	1,120	943	652	390	351	299	311
23	333	315	448	465	652	1,120	943	652	390	342	303	307
24	365	315	421	482	680	1,200	900	638	385	338	303	303
25	351	315	395	562	1,080	1,270	884	612	380	333	303	303
26	370	315	416	960	1,400	1,920	843	586	375	338	303	315
27	586	315	405	1,060	2,150	2,570	811	568	375	356	299	538
28	470	315	574	843	2,850	2,080	875	556	375	346	299	645
29	385	315	943	755	2,660	2,010	892	550	375	342	299	390
30	360	324	1,150	723	-	2,120	943	544	380	333	295	346
31	351	-	1,000	701	-	1,980	-	538	-	333	295	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	11,295	586	328	364	1.10	1.27	22,400
November	9,700	342	315	323	.973	1.09	19,240
December	17,337	1,150	320	559	1.68	1.94	34,390
Calendar year 1939	240,011	2,250	315	658	1.98	26.89	476,100
January	21,555	1,060	460	695	2.09	2.41	42,750
February	35,821	2,850	652	1,235	3.72	4.01	71,050
March	43,623	2,570	884	1,407	4.24	4.89	86,520
April	34,362	1,730	811	1,145	3.45	3.85	68,160
May	23,463	978	538	757	2.28	2.63	46,540
June	13,179	612	375	439	1.32	1.48	26,140
July	10,796	385	333	348	1.05	1.21	21,410
August	9,517	328	295	307	.925	1.07	18,880
September	10,149	645	295	338	1.02	1.14	20,130
Water year 1939-40	240,797	2,850	295	658	1.98	26.99	477,600

Peak discharge.- Feb. 6 (4 p.m.) 2,980 sec.-ft.; Feb. 10 (2 p.m.) 2,160 sec.-ft.; Feb. 28 (4 p.m.) 3,400 sec.-ft.; Mar. 26 (11 p.m.) 3,060 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

101604-O U S GOVERNMENT PRINTING OFFICE 1936

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. Altitude of gage, about 1,708 feet (from river-profile map).

Drainage area.- 643 square miles.

Records available.- April 1929 to September 1940.

Average discharge.- 11 years, 1,522 second-feet.

Extremes.- Maximum discharge during year, 5,660 second-feet Feb. 28 (gage height, 4.73 feet); minimum, 560 second-feet (regulated) Aug. 28-30, Sept. 4 (gage height, 0.08 foot); minimum daily, 770 second-feet Sept. 25.
1929-40: 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 doubtful or no gage-height record, which are fair. Minor diversions above station for irrigation. Considerable diurnal fluctuation caused by power plant 4 miles above station.

Cooperation.- Water-stage recorder graph furnished by The California Oregon Power Co.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.4	740	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 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	902	874	842	1,750	1,350	3,750	3,320	2,000	1,360	979	860	782
2	916	e67	824	1,700	1,330	3,650	2,870	1,950	1,350	965	848	776
3	874	f848	836	1,630	1,350	3,170	f2,820	1,920	1,300	951	860	818
4	867	ae70	818	1,710	1,610	2,850	f2,640	2,000	1,240	951	848	800
5	1,040	a850	842	1,620	1,960	2,670	f2,440	1,940	1,230	944	84e	812
6	1,050	a840	818	1,480	3,790	2,450	2,270	1,850	1,200	930	830	800
7	944	a840	830	1,370	3,500	2,430	f2,280	1,780	1,190	965	830	800
8	916	a890	e95	1,440	2,720	3,390	f2,640	1,760	1,170	951	836	812
9	888	a880	1,570	1,740	2,340	a3,000	f2,840	1,780	1,130	916	830	812
10	881	f860	2,020	1,990	3,140	a2,700	f2,580	1,860	1,170	909	830	e18
11	867	824	1,380	1,770	2,840	d2,360	2,520	1,890	1,130	909	830	788
12	867	824	1,090	1,550	2,450	d2,160	2,500	1,840	1,110	902	830	788
13	874	800	1,080	1,400	2,360	d2,040	2,570	1,780	1,100	895	824	f812
14	842	800	1,040	1,280	2,230	d1,920	2,620	1,730	1,090	895	824	824
15	848	800	1,100	1,230	2,020	d1,870	2,470	1,690	1,070	895	818	818
16	836	782	1,360	1,200	1,910	2,150	2,260	1,650	1,070	895	812	800
17	848	f800	1,880	a1,170	1,980	2,100	2,120	1,620	1,050	895	806	830
18	854	824	1,360	a1,140	1,840	1,970	2,120	1,610	1,040	895	812	944
19	854	818	1,170	1,120	1,760	1,890	2,130	1,600	1,040	881	806	895
20	860	830	1,140	1,080	1,630	1,880	2,050	1,560	1,040	916	805	818
21	848	824	1,130	1,080	1,580	1,940	1,950	1,520	1,040	944	800	806
22	848	824	1,070	1,040	1,540	2,030	1,960	1,480	1,030	909	794	806
23	848	836	1,040	1,040	1,500	2,030	1,980	1,460	1,010	888	788	788
24	916	830	1,010	1,060	1,510	2,120	1,900	1,440	1,020	881	788	788
25	888	818	944	1,180	2,050	2,260	1,870	1,400	1,000	838	794	770
26	916	824	986	1,640	2,410	3,010	1,790	1,360	986	881	788	806
27	1,240	818	951	1,840	3,590	4,500	1,730	1,360	979	902	782	1,100
28	1,060	824	1,100	1,570	4,690	3,690	1,790	1,310	965	888	782	1,370
29	930	824	1,380	1,440	4,660	3,520	1,920	1,320	1,000	874	782	958
30	902	830	2,070	1,420	-	3,780	1,970	1,290	1,040	860	776	860
31	888	-	1,930	1,380	-	3,710	-	1,290	-	867	782	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	28,112	1,240	836	907	1.41	1.63	55,760
November	24,973	890	782	832	1.29	1.44	49,530
December	36,506	2,070	818	1,178	1.83	2.11	72,410
Calendar year 1939	533,898	4,200	782	1,463	2.28	30.88	1,059,000
January	44,060	1,990	1,040	1,421	2.21	2.55	87,390
February	67,640	4,690	1,330	2,332	3.63	3.91	134,200
March	83,010	4,500	1,870	2,678	4.16	4.80	164,600
April	68,920	3,320	1,730	2,297	3.57	3.99	136,700
May	51,040	2,000	1,290	1,646	2.56	2.95	101,200
June	33,150	1,360	965	1,105	1.72	1.92	65,750
July	28,221	979	860	910	1.42	1.63	55,980
August	25,244	860	776	814	1.27	1.46	50,070
September	25,399	1,370	770	847	1.32	1.47	50,380
Water year 1939-40	516,275	4,690	770	1,411	2.19	29.86	1,024,000

a No gage-height record; discharge computed on basis of records for stations above Prospect and at Dodge Bridge, near Eagle Point.
d Doubtful gage-height record.
f Computed from gage height based on partial record.

9-233 April 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

Rogue River at Dodge Bridge, near Eagle Point, Oreg.

Location.- Water-stage recorder, lat. 42°32', long. 122°50', in SE¼ sec. 17, T. 35 S., R. 1 W., at Dodge Bridge, 0.6 mile downstream from mouth of Reese Creek and 4½ miles northwest of Eagle Point. Datum of gage is 1,273.66 feet above mean sea level (general adjustment of 1929).

Records available.- October 1938 to September 1940.

Extremes.- Maximum discharge during year, 13,300 second-feet Mar. 26 (gage height, 6.31 feet); minimum, 611 second-feet (regulated) Aug. 6, 14, 29, Sept. 9 (gage height, 0.99 foot); minimum daily, 830 second-feet Sept. 1.
1938-40: Maximum discharge, that of Mar. 26, 1940; minimum, that of Aug. 6, 14, 29, Sept. 9, 1940; minimum daily, that of Sept. 1, 1940.

Remarks.- Records excellent. Many small diversions above station for irrigation; most of the flow of Big Butte Creek is diverted near Butte Falls. Diurnal fluctuation caused by power plant about 30 miles above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.2	830	2.6	2,920	4.5	7,290
1.5	1,200	3.0	3,660	5.0	8,760
1.9	1,770	3.5	4,730	5.5	10,400
2.2	2,240	4.0	5,950		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,060	1,060	1,020	2,600	1,890	6,690	5,850	2,420	1,550	1,030	926	830
2	1,100	1,050	998	2,450	1,820	7,290	4,840	2,340	1,590	1,030	926	866
3	1,050	1,030	998	2,370	1,950	5,700	4,390	2,340	1,490	1,030	926	890
4	1,030	1,050	974	2,810	3,910	4,780	4,300	2,500	1,440	1,030	914	926
5	1,260	1,020	974	2,620	4,240	4,240	3,820	2,540	1,410	986	878	890
6	1,350	1,020	962	2,260	8,330	3,760	3,430	2,340	1,380	1,010	914	878
7	1,230	998	974	2,030	6,950	3,530	3,470	2,240	1,370	998	902	866
8	1,110	1,050	1,080	2,050	4,960	4,800	3,700	2,160	1,350	998	926	890
9	1,100	1,050	2,160	3,680	4,050	4,200	3,740	2,140	1,300	998	914	866
10	1,070	1,020	4,070	4,730	4,830	3,780	3,530	2,160	1,300	986	902	878
11	1,050	1,030	2,690	3,320	4,780	3,470	3,320	2,190	1,270	974	902	866
12	1,030	1,030	1,740	2,590	3,940	3,150	3,230	2,140	1,240	986	890	878
13	1,050	1,010	1,450	2,190	5,580	2,920	3,230	2,100	1,240	974	890	878
14	1,010	1,020	1,400	1,900	4,960	2,780	3,240	2,000	1,210	986	902	926
15	1,010	1,020	1,510	1,780	4,180	2,620	3,120	1,940	1,200	962	878	950
16	1,050	1,020	1,980	1,680	3,680	3,240	2,920	1,890	1,190	950	878	878
17	1,020	1,020	3,380	1,620	5,500	3,150	2,710	1,840	1,160	938	890	926
18	1,020	1,020	2,220	1,580	4,110	2,880	2,690	1,800	1,150	938	878	1,060
19	1,030	998	1,780	1,550	3,380	2,710	2,660	1,770	1,140	938	866	1,100
20	1,020	998	1,720	1,490	2,960	2,640	2,540	1,740	1,140	974	878	998
21	1,010	998	1,700	1,450	2,740	2,620	2,450	1,700	1,140	1,020	866	962
22	1,020	986	1,520	1,410	2,600	2,670	2,420	1,680	1,120	962	866	962
23	1,010	1,020	1,450	1,410	2,550	2,690	2,370	1,710	1,080	962	866	938
24	1,120	986	1,400	1,410	2,550	2,740	2,300	1,610	1,080	938	866	938
25	1,080	1,010	1,270	1,780	3,700	2,920	2,340	1,560	1,070	926	890	914
26	1,100	998	1,240	3,500	4,240	7,070	2,220	1,520	1,060	938	866	986
27	1,520	986	1,260	3,390	6,780	9,960	2,130	1,540	1,060	974	866	1,350
28	1,440	950	1,310	2,550	10,200	6,880	2,160	1,490	1,050	962	866	1,890
29	1,190	950	1,840	2,210	9,360	6,050	2,370	1,490	1,050	938	866	1,340
30	1,080	974	2,940	2,050	-	6,550	2,320	1,490	1,070	938	854	1,100
31	1,080	-	2,940	1,970	-	7,040	-	1,480	-	926	866	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	34,300	1,520	1,010	1,106	68,030
November	30,372	1,060	950	1,012	60,240
December	52,950	4,070	962	1,765	105,000
Calendar year 1939	727,330	7,250	950	1,993	1,443,000
January	70,430	4,730	1,410	2,272	139,700
February	130,720	10,200	1,820	4,508	259,300
March	135,520	9,960	2,620	4,372	268,800
April	93,810	5,850	2,130	3,127	186,100
May	59,860	2,540	1,480	1,931	118,700
June	36,900	1,590	1,050	1,230	73,190
July	30,200	1,030	926	974	59,900
August	27,518	926	854	888	54,580
September	29,620	1,890	830	987	58,750
Water year 1939-40	732,200	10,200	830	2,001	1,452,000

Peak discharge.- Feb. 6 (8 p.m.) 10,000 sec.-ft.; Feb. 28 (1 p.m.) 12,400 sec.-ft.; Mar. 26 (9 p.m.) 13,300 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage, 1,121.78 feet above mean sea level (general adjustment of 1929).

Drainage area.- 2,020 square miles.

Records available.- August 1905 to September 1940.

Average discharge.- 35 years, 2,726 second-feet.

Extremes.- Maximum discharge during year, 24,200 second-feet Feb. 28 (gage height, 10.2 feet); minimum, 646 second-feet (regulated) Aug. 3, 4 (gage height, 0.16 foot); minimum daily, 812 second-feet Aug. 31.

1905-40: Maximum discharge, 91,500 second-feet Feb. 21, 1927 (gage height, 24.8 feet, from floodmark), from rating curve extended above 36,000 second-feet; minimum discharge not determined; minimum daily, 616 second-feet Sept. 6, 1931.

Remarks.- Records good. Many diversions above station for irrigation. Diurnal fluctuation caused by power plant just above station.

Cooperation.- Water-stage recorder graph furnished by The California Oregon Power Co.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.4	805	1.5	1,810	3.0	3,880	6.0	10,410
.7	1,040	2.0	2,420	4.0	5,720	7.0	13,260
1.0	1,300	2.5	3,100	5.0	7,920	8.0	16,470

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,020	1,120	1,060	3,130	2,060	9,130	8,860	2,690	1,610	1,040	880	835
2	1,130	1,140	1,060	2,860	1,980	11,200	6,830	2,550	1,810	1,060	872	820
3	1,100	1,080	1,050	2,820	2,060	8,020	6,040	2,620	1,670	1,020	865	835
4	1,070	1,080	1,040	3,830	4,610	6,610	6,160	2,710	1,570	1,030	888	920
5	1,230	1,080	1,040	3,370	5,070	5,820	5,300	2,900	1,520	984	850	912
6	1,440	1,060	1,040	2,780	9,500	5,130	4,620	2,650	1,470	1,000	850	880
7	1,280	1,070	1,060	2,450	9,200	4,640	4,530	2,480	1,430	992	858	865
8	1,170	1,080	1,130	2,410	6,200	7,250	4,770	2,370	1,350	976	865	888
9	1,140	1,100	2,290	4,920	4,960	5,870	4,710	2,290	1,340	1,000	850	872
10	1,100	1,080	6,250	5,680	5,700	5,240	4,480	2,300	1,340	960	835	880
11	1,090	1,060	4,620	4,000	6,160	4,730	4,140	2,320	1,270	960	850	872
12	1,060	1,070	2,370	3,820	4,900	4,190	3,950	2,240	1,230	960	850	858
13	1,070	1,070	1,840	2,510	7,520	3,820	3,880	2,200	1,240	928	835	865
14	1,060	1,080	1,700	2,150	7,010	3,560	3,560	2,100	1,200	952	835	928
15	1,050	1,070	1,690	1,980	5,720	3,310	3,750	2,050	1,190	960	835	1,010
16	1,060	1,060	2,060	1,880	4,810	4,480	3,460	1,990	1,160	944	828	944
17	1,040	1,060	4,360	1,780	8,000	4,170	3,240	1,920	1,140	936	842	984
18	1,050	1,060	2,900	1,710	6,040	3,660	3,100	1,880	1,140	936	835	1,070
19	1,060	1,050	2,100	1,720	4,570	3,370	3,070	1,840	1,110	920	828	1,260
20	1,050	1,060	1,930	1,640	3,850	3,220	2,930	1,820	1,120	928	835	1,040
21	1,040	1,060	1,910	1,590	3,500	3,140	2,820	1,780	1,110	1,020	835	1,010
22	1,040	1,060	1,710	1,550	3,320	3,180	2,740	1,730	1,100	952	835	1,010
23	1,050	1,050	1,590	1,530	3,430	3,130	2,670	1,710	1,100	936	835	952
24	1,140	1,050	1,540	1,550	3,200	3,190	2,580	1,680	1,080	920	835	968
25	1,150	1,050	1,390	1,890	4,830	3,450	2,640	1,640	1,060	920	850	976
26	1,120	1,060	1,310	3,890	5,260	7,460	2,540	1,610	1,050	904	828	968
27	1,540	1,060	1,340	4,220	8,230	15,000	2,380	1,590	1,040	944	835	1,310
28	1,610	1,030	1,360	2,970	15,200	9,060	2,340	1,570	1,050	944	820	2,120
29	1,280	1,040	1,800	2,510	14,800	7,740	2,650	1,550	1,030	936	835	1,550
30	1,150	1,040	3,970	2,290	-	8,640	2,540	1,550	1,070	904	828	1,200
31	1,150	-	3,980	2,150	-	11,100	-	1,540	-	888	812	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	35,540	1,610	1,020	1,146	70,490
November	32,030	1,140	1,030	1,068	63,530
December	64,490	6,250	1,040	2,080	127,900
Calendar year 1939	814,922	11,200	904	2,233	1,616,000
January	83,580	5,680	1,530	2,696	165,800
February	171,690	15,200	1,980	5,920	340,500
March	182,510	15,000	3,130	5,887	362,000
April	117,580	8,860	2,340	3,919	233,200
May	63,870	2,900	1,540	2,060	126,700
June	37,600	1,810	1,030	1,253	74,580
July	29,744	1,050	888	959	59,000
August	26,134	888	812	843	51,840
September	30,602	2,120	820	1,020	60,700
Water year 1939-40	875,370	15,200	812	2,392	1,736,000

Peak discharge.- Dec. 10 (7 p.m.) 10,600 sec.-ft.; Feb. 6 (11:30 p.m.) 13,000 sec.-ft.; Feb. 28 (6 p.m.) 24,200 sec.-ft.; Mar. 26 (12 p.m.) 21,600 sec.-ft.; Mar. 31 (11 a.m.) 12,400 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is 888.28 feet above mean sea level (general adjustment of 1929).

Records available.- January 1939 to September 1940.

Extremes.- Maximum discharge during year, 29,700 second-feet Feb. 28 (gage height, 13.4 feet); minimum, 500 second-feet (regulated) Aug. 8 (gage height, 0.30 foot); minimum daily, 637 second-feet Aug. 8.
1939-40: Maximum discharge, that of Feb. 28, 1940; minimum, that of Aug. 8, 1940; minimum daily, that of Aug. 8, 1940.

Remarks.- Records excellent. 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.

Cooperation.- Water-stage recorder inspected by employees of Grants Pass Water Department.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.5	630	1.8	1,900	3.5	4,170	7.0	11,290
.7	770	2.2	2,380	4.0	5,000	8.0	13,750
1.0	1,030	2.6	2,900	5.0	6,090	9.0	16,400
1.4	1,440	3.0	3,440	6.0	8,980	11.0	22,100

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	868	1,180	1,150	3,580	2,380	11,900	10,200	2,650	1,520	913	770	904
2	994	1,200	1,150	3,270	2,270	13,400	7,800	2,500	1,770	913	763	859
3	1,080	1,150	1,140	3,290	2,510	9,700	6,750	2,580	1,630	913	756	967
4	1,220	1,150	1,130	4,300	5,860	7,550	6,810	2,650	1,560	895	749	922
5	1,310	1,150	1,120	4,060	6,570	6,750	5,790	2,960	1,460	886	f735	850
6	1,600	1,130	1,130	f3,430	11,900	5,860	5,040	2,740	1,400	868	f735	842
7	1,570	1,140	1,150	a2,900	12,600	5,340	4,860	2,480	1,330	850	728	859
8	1,340	1,140	1,230	f2,780	7,780	7,390	5,050	2,370	1,250	842	637	826
9	1,150	1,150	2,280	5,370	6,000	6,590	4,920	2,270	1,240	834	721	810
10	1,180	1,130	6,790	6,890	6,130	5,770	4,780	2,220	f1,170	826	728	794
11	1,140	1,120	5,750	5,130	7,110	5,140	4,360	2,210	1,150	826	693	802
12	1,070	1,130	2,820	3,750	5,560	4,580	4,100	2,140	1,070	818	700	794
13	1,150	1,140	2,150	3,060	9,360	4,120	3,990	1,980	1,060	802	721	802
14	1,090	1,130	1,950	2,610	9,570	3,880	3,990	2,010	1,040	786	714	834
15	1,130	1,130	1,880	2,370	7,330	3,610	3,880	1,940	1,030	786	735	886
16	1,080	1,160	2,130	2,210	6,110	4,380	3,660	1,900	1,020	786	756	859
17	1,100	1,100	4,330	2,090	11,200	4,460	3,440	1,830	994	778	770	886
18	1,110	1,110	3,440	2,020	8,500	3,900	3,290	1,770	994	778	802	940
19	1,120	1,130	2,500	1,970	6,050	3,610	3,190	1,700	967	770	834	1,210
20	1,110	1,120	2,210	1,910	4,970	3,430	2,660	1,740	958	778	866	1,050
21	1,100	1,120	2,150	1,820	4,390	3,340	2,960	1,640	949	786	913	940
22	1,110	1,120	1,980	1,760	4,080	3,330	2,860	1,580	940	842	1,020	904
23	1,110	1,120	1,820	1,730	4,160	3,290	2,760	1,560	958	802	1,000	859
24	1,190	1,120	1,740	1,740	3,930	3,310	2,650	1,550	931	786	931	859
25	1,240	1,110	1,630	2,060	5,860	3,540	2,670	1,510	931	786	976	859
26	1,210	1,110	1,520	4,140	6,610	7,620	2,560	1,470	931	788	976	859
27	1,450	1,120	1,520	5,230	10,600	19,000	3,380	1,440	931	778	949	1,050
28	1,780	1,110	1,530	3,650	19,000	11,400	2,280	1,430	922	794	1,030	1,970
29	1,420	1,110	1,850	3,000	19,600	9,270	2,550	1,430	913	786	895	1,790
30	1,260	1,130	3,660	2,690	-	9,950	2,510	1,440	922	778	922	1,510
31	1,210	-	4,470	2,510	-	12,600	-	1,440	-	770	886	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	37,472	1,780	868	1,209	74,320
November	33,960	1,200	1,100	1,132	67,360
December	71,200	6,790	1,120	2,297	141,200
Calendar year 1939	841,242	15,000	810	2,305	1,669,000
January	97,320	6,890	1,730	3,139	193,000
February	217,990	19,600	2,270	7,517	432,400
March	208,310	19,000	3,290	6,720	413,200
April	124,740	10,200	2,280	4,158	247,400
May	61,150	2,980	1,430	1,973	121,300
June	33,941	1,770	913	1,131	67,320
July	25,342	913	770	817	50,270
August	25,411	1,030	637	820	50,400
September	29,096	1,970	794	970	57,710
Water year 1939-40	965,932	19,600	637	2,639	1,916,000

Peak discharge.- Feb. 6 (8 p.m.) 16,400 sec.-ft.; Feb. 28 (9 p.m.) 29,700 sec.-ft.; Mar. 27 (2 a.m.) 24,500 sec.-ft.

a No gage-height record; discharge computed on basis of records for station at Raygold, near Central Point.

f Computed from daily gage height based on partial record.

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. Datum of gage is at mean sea level (irrigation district datum). Drainage area, 17 square miles. Records available, December 1915 to September 1940. Maximum contents observed during year, 5,990 acre-feet June 11 (elevation, 4,822.08 feet); minimum observed, 126 acre-feet Sept. 4-6 (elevation, 4,801.28 feet). Maximum contents observed during period 1915-40, 7,975 acre-feet June 20, 1938 (elevation, 4,827.09 feet); no usable contents at times.

Reservoir is formed by rock-faced earth dam, completed in fall of 1915; storage began in November 1915. Capacity, 7,527 acre-feet between elevations 4,799 feet (bottom of outlet tunnel) and 4,826 feet (spillway channel, incomplete). Water is diverted during summer from Fourmile Lake in Klamath River Basin through Cascade canal into Fish Lake. Water is used to irrigate lands near Medford. Gage read once daily by employee of Medford Irrigation District.

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. Datum of gage is at mean sea level (surveys of Talent Irrigation District). Records available, December 1924 to September 1940. Maximum contents observed during year, 8,603 acre-feet Feb. 28 (elevation, 2,174.6 feet); minimum, 184 acre-feet Aug. 22. Maximum contents during period 1924-40, 8,748 acre-feet Feb. 20, 1927 (elevation, 2,175.2 feet, observed at peak); no usable contents at times.

Reservoir is formed by concrete arch dam, completed in 1924 by Talent Irrigation District; storage began in December 1924. Capacity, 8,342 acre-feet between elevation 2,070 feet (16-inch sluice pipe) and 2,173.5 feet (crest of spillway). Dead storage negligible. Water is used for irrigation of lands near Talent. Gage read one to six times weekly by employee of Talent Irrigation District.

Monthly elevation and contents, water year October 1939 to September 1940

Date	Fish Lake Reservoir			Emigrant Gap Reservoir		
	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,805.70	858	-	-	a479	-
Oct. 31	-	a2,109	+1,251	-	a436	-43
Nov. 30	4,812.95	2,862	+753	2,104.2	506	+70
Dec. 31	4,815.14	3,555	+693	-	a2,060	+1,554
Calendar year 1939	-	-	-1,969	-	-	+630
Jan. 31	4,816.19	3,902	+347	-	a5,569	+3,509
Feb. 29	4,817.59	4,376	+474	2,173.4	8,318	+2,749
Mar. 31	4,819.17	4,928	+552	2,174.4	8,555	+237
Apr. 30	4,820.58	5,432	+504	-	a8,248	-307
May 31	4,820.62	5,446	+14	2,167.4	6,990	-1,258
June 30	4,818.05	4,536	-910	-	a4,750	-2,240
July 31	4,807.31	1,410	-3,126	2,124.9	1,527	-3,223
Aug. 31	4,801.60	156	-1,254	-	a191	-1,336
Sept.30	4,805.20	742	+586	-	a340	+149
Water year 1939-40	-	-	-116	-	-	-139

† Hour of gage reading not known.
a Interpolated.

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 1940.

Extremes.- Maximum discharge during year, 378 second-feet Mar. 26 (gage height, 2.91 feet); minimum, 38 second-feet Sept. 10-13.
1931-40: Maximum discharge, 1,140 second-feet Dec. 3, 1938 (gage height, 4.52 feet); minimum, 27 second-feet Oct. 1-21, 1931.

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

Cooperation.- Water-stage recorder graph furnished by The California Oregon Power Co.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.9	34	1.9	157
1.1	49	2.2	215
1.3	69	2.5	275
1.6	109	2.8	350

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	46	42	145	71	215	243	175	91	61	47	39
2	50	45	42	137	69	213	223	170	89	59	47	40
3	48	45	42	130	69	199	209	161	85	58	47	41
4	47	45	41	122	73	189	201	155	81	57	46	42
5	65	45	41	104	97	183	189	150	80	55	46	42
6	56	45	41	93	168	171	175	138	79	55	44	41
7	52	45	41	86	159	185	179	132	79	55	43	40
8	48	45	49	85	132	292	195	129	77	54	43	39
9	47	45	104	91	127	233	209	130	75	54	43	39
10	47	45	90	100	189	205	205	137	74	54	43	39
11	46	44	66	98	170	185	189	143	71	54	43	38
12	45	43	56	89	148	170	189	142	70	53	43	38
13	45	43	54	80	140	162	199	134	69	53	42	40
14	45	43	54	76	132	154	207	127	68	53	42	41
15	45	43	67	75	126	152	191	124	67	52	42	40
16	45	43	86	71	121	164	173	118	67	52	43	40
17	44	43	116	69	116	161	164	114	66	51	43	40
18	44	42	84	67	110	150	162	109	65	52	43	56
19	44	42	71	66	104	147	164	104	65	52	42	47
20	44	42	73	65	100	143	159	102	65	54	41	43
21	44	41	69	64	100	145	154	97	64	54	41	42
22	44	41	62	61	98	148	150	94	62	51	41	40
23	43	42	61	61	97	150	148	91	62	50	40	40
24	46	42	57	64	102	161	143	91	60	49	40	39
25	46	42	54	66	124	177	143	90	60	49	40	40
26	48	42	55	77	143	245	137	88	58	49	40	41
27	71	42	54	77	191	315	130	85	58	52	39	96
28	56	42	64	73	263	247	150	84	58	50	39	84
29	50	42	88	71	251	245	170	86	58	49	40	53
30	47	42	193	71	-	267	177	82	64	47	39	47
31	47	-	181	73	-	267	-	82	-	47	39	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	1,499	71	43	48.4	0.931	1.07	2,970
November	1,297	46	41	43.2	.831	.93	2,570
December	2,198	193	41	70.9	1.36	1.57	4,360
Calendar year 1939	38,540	417	41	106	2.04	27.56	76,450
January	2,607	145	61	84.1	1.62	1.86	5,170
February	3,790	263	69	131	2.52	2.71	7,520
March	6,040	315	143	195	3.75	4.32	11,980
April	5,327	243	130	178	3.42	3.81	10,570
May	3,664	175	82	118	2.27	2.62	7,270
June	2,087	91	58	69.6	1.34	1.49	4,140
July	1,635	61	47	52.7	1.01	1.17	3,240
August	1,311	47	39	42.3	.813	.94	2,600
September	1,347	96	38	44.9	.863	.96	2,670
Water year 1939-40	32,802	315	38	89.6	1.72	23.45	65,060

Peak discharge.- Mar. 8 (4 a.m.) 338 sec.-ft.; Mar. 26 (7 p.m.) 378 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolo[illegible] al Survey

101604-O U S GOVERNMENT PRINTING OFFICE 1936

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 1940.

Extremes.- Maximum daily discharge during year, 167 second-feet, probably on Mar. 26 (gage height, 1.84 feet, from floodmark noted May 28); minimum, 17 second-feet during part of August and September.
1931-40: 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 fair for days when gage was read, poor for other periods. 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.

Cooperation.- Gage readings furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	21	18	50	29	80	78	47	32	22	h18	17
2	19	h21	18	35	28	80	76	h45	31	21	18	17
3	19	21	18	h28	28	78	h74	44	30	21	18	17
4	18	21	18	27	30	77	72	43	29	h21	18	18
5	h28	20	18	26	40	77	70	42	29	21	18	h18
6	26	20	18	25	50	h77	68	41	h29	21	18	17
7	24	20	h18	25	h49	80	69	40	29	20	18	17
8	23	h20	25	25	47	85	72	39	28	20	h18	17
9	22	h20	40	30	45	80	72	h38	27	20	18	17
10	21	20	32	h35	60	76	68	39	26	20	18	17
11	21	20	26	32	56	74	h62	40	25	h20	18	17
12	h21	19	23	31	52	72	62	40	25	20	18	h17
13	21	19	h22	30	50	h70	64	39	h25	20	18	17
14	21	19	22	29	h49	68	66	37	25	20	h18	17
15	21	19	30	28	48	68	62	36	25	19	h17	17
16	21	h19	35	27	47	70	59	h36	25	19	17	17
17	20	19	45	h27	46	66	56	35	24	19	17	18
18	20	19	35	27	45	60	h54	34	24	h19	17	20
19	h20	19	24	26	44	56	54	33	24	19	17	h18
20	20	19	h24	26	43	h55	52	33	h24	19	17	17
21	20	19	24	26	h43	55	50	32	24	19	17	17
22	20	19	23	25	43	56	49	32	23	19	h17	17
23	19	h19	23	25	43	58	48	h32	22	19	17	17
24	20	19	22	h25	45	64	47	32	22	19	17	17
25	20	19	22	27	50	70	h47	32	22	h19	17	17
26	h21	19	23	32	60	90	45	31	22	19	17	h17
27	32	18	h22	32	70	h69	42	31	h22	20	17	35
28	26	18	25	30	h83	68	45	h31	22	19	17	30
29	23	18	35	29	80	72	47	30	22	18	h17	22
30	22	h18	65	29	-	78	48	h30	23	18	17	20
31	21	-	60	h29	-	80	-	30	-	18	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	669	32	18	21.6	0.831	0.96	1,330
November	581	21	18	19.4	.746	.83	1,150
December	853	65	18	27.5	1.06	1.22	1,690
Calendar year 1939	13,048	108	18	35.7	1.37	18.66	25,870
January	898	50	25	29.0	1.12	1.28	1,780
February	1,403	83	28	48.4	1.86	2.01	2,780
March	2,209	90	55	71.3	2.74	3.16	4,380
April	1,778	78	42	59.3	2.28	2.54	3,530
May	1,124	47	30	36.3	1.40	1.61	2,230
June	760	32	22	25.3	.973	1.09	1,510
July	608	22	18	19.6	.754	.87	1,210
August	541	18	17	17.5	.673	.77	1,070
September	556	35	17	18.5	.712	.80	1,100
Water year 1939-40	11,980	90	17	32.7	1.26	17.14	23,760

b Gage read on this day.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is about 3,357 feet above mean sea level (surveys of The California Oregon Power Co.).

Records available.- April 1932 to September 1940.

Extremes.- Maximum discharge during year, 175 second-feet Feb. 6 (gage height, 3.42 feet); no flow Mar. 6 to Apr. 6.
1932-40: Maximum discharge, 175 second-feet May 31, June 17, 1933, Feb. 6, 1940; no flow at times.

Remarks.- Records good except those for period Dec. 13-16, which are fair. This canal, completed in March 1932, diverts water from South Fork of Rogue River 200 feet below mouth of Imnaha Creek for use at power plant 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.

Cooperation.- Water-stage recorder graph furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	61	56	143	99	150	0	150	115	76	61	50
2	68	60	56	143	98	149	0	149	110	75	60	52
3	65	60	56	141	100	149	0	148	105	74	59	56
4	65	59	55	140	98	148	0	148	103	73	58	56
5	85	59	54	128	132	148	0	147	101	72	58	53
6	73	59	55	115	157	111	2	146	98	71	58	52
7	67	40	55	108	150	0	1	149	97	70	58	51
8	64	59	68	107	148	0	1	151	95	70	58	50
9	63	59	120	116	148	0	1	149	93	70	57	51
10	62	58	115	130	152	0	2	149	92	70	56	50
11	62	58	85	130	150	0	1	150	e9	69	56	49
12	61	58	74	115	149	0	1	148	e8	68	56	49
13	60	58	a70	106	148	0	1	148	e7	67	55	53
14	60	58	a68	101	148	0	1	148	e6	67	54	55
15	59	58	a80	a97	149	0	66	148	85	67	54	52
16	59	57	a100	a94	151	0	146	146	83	67	53	51
17	59	56	128	a90	150	0	147	141	e2	66	53	51
18	59	56	102	87	148	0	149	139	82	66	53	70
19	59	56	90	87	146	0	148	134	82	67	53	58
20	60	56	92	e4	140	0	148	131	82	68	53	52
21	61	56	86	82	138	0	148	127	80	67	53	50
22	61	56	80	81	135	0	148	122	79	65	53	49
23	62	56	78	81	131	0	148	121	7e	67	53	48
24	67	56	72	85	135	0	148	111	7e	64	53	49
25	62	56	70	89	155	0	148	115	77	64	53	49
26	68	56	70	106	155	0	147	112	76	64	53	52
27	85	56	70	103	158	0	146	110	75	67	53	82
28	74	56	80	97	129	0	149	109	75	64	52	97
29	66	56	106	96	153	0	151	111	75	63	51	62
30	63	56	143	99	-	0	150	107	82	61	50	55
31	62	-	147	99	-	0	-	104	-	61	50	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,011	e5	59	64.9	3,990
November	1,705	61	40	56.e	3,380
December	2,581	147	54	83.3	5,120
Calendar year 1939	36,362	170	2	99.6	72,140
January	3,280	143	81	106	6,510
February	4,050	158	98	140	8,030
March	855	150	0	27.6	1,700
April	2,298	151	0	76.6	4,560
May	4,168	151	104	134	8,270
June	2,630	115	75	87.7	5,220
July	2,100	76	61	67.7	4,170
August	1,697	61	50	54.7	3,370
September	1,654	97	48	55.1	3,280
Water year 1939-40	29,029	158	0	79.3	57,600

a No gage-height record; discharge computed on basis of records for Middle Fork of Rogue River and South Fork of Rogue River above Imnaha Creek, both near Prospect, and Red Blanket, and main power canals.

400450

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 4½ miles southeast of Prospect. Prior to Sept. 30, 1939 at datum 1.00 foot higher.

Drainage area.- 57 square miles.

Records available.- May 1925 to September 1940 (include flow of Middle Fork power canal).

Average discharge.- 15 years, 168 second-feet.

Extremes.- Maximum combined discharge of river and canal during year, 415 second-feet Mar. 26 (river gage height, 2.60 feet); minimum combined daily discharge, 97 second-feet Aug. 28.
1925-40: Maximum discharge, 1,300 second-feet Mar. 19, 1932 (gage height, 4.55 feet present datum); minimum, 72 second-feet Aug. 24 to Sept. 5, 1931.

Remarks.- Records good. 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.

Cooperation.- Water-stage recorder graph furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	110	107	227	137	312	261	229	160	116	106	98
2	116	110	106	220	136	309	247	233	151	115	106	100
3	113	109	106	202	138	285	240	221	145	114	106	104
4	114	109	105	196	144	271	232	221	145	113	105	106
5	149	109	105	175	198	253	222	205	140	113	104	101
6	122	109	105	158	263	239	216	194	138	112	103	100
7	117	108	105	148	240	240	230	190	138	111	102	100
8	113	111	121	149	222	295	249	197	136	111	102	99
9	112	109	231	172	220	264	259	205	134	111	102	101
10	111	108	198	196	265	250	241	224	132	110	102	100
11	109	108	140	167	226	233	234	230	131	110	102	99
12	109	106	124	151	224	221	237	226	131	110	102	99
13	108	108	122	142	224	209	249	218	130	110	101	102
14	108	105	122	139	216	200	258	217	130	110	101	102
15	108	106	141	136	204	200	240	211	128	109	101	101
16	108	106	163	134	197	202	223	204	128	109	101	102
17	108	106	190	130	197	186	216	199	125	109	101	101
18	108	106	144	128	188	181	223	197	124	109	101	117
19	108	106	135	127	177	178	225	195	124	109	100	104
20	108	106	138	126	168	184	219	196	123	112	100	101
21	108	105	130	123	164	190	215	189	122	112	99	99
22	107	105	124	121	159	196	216	180	122	109	99	99
23	108	106	122	121	155	197	215	179	120	108	99	99
24	113	105	119	125	161	209	207	174	118	108	99	99
25	110	105	117	130	180	221	200	166	117	107	99	98
26	123	106	117	143	218	307	191	158	117	108	99	109
27	160	106	117	138	282	299	182	153	116	112	99	142
28	122	105	133	136	335	258	221	151	115	108	97	137
29	115	105	170	135	332	262	216	162	115	107	98	109
30	113	106	250	138	-	277	235	153	117	107	98	105
31	111	-	239	138	-	272	-	149	-	107	98	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	3,564	160	107	115	2.02	2.33	7,070
November	3,209	111	105	107	1.88	2.09	6,360
December	4,346	250	105	140	2.46	2.84	8,620
Calendar year 1939	61,459	399	105	168	2.95	40.13	121,900
January	4,671	227	121	151	2.65	3.05	9,260
February	5,970	335	136	206	3.61	3.90	11,840
March	7,400	312	178	239	4.19	4.83	14,680
April	6,819	261	182	227	3.98	4.45	13,530
May	6,026	233	149	194	3.40	3.93	11,950
June	3,872	160	115	129	2.26	2.53	7,680
July	3,416	116	107	110	1.93	2.23	6,780
August	3,132	106	97	101	1.77	2.04	6,210
September	3,133	142	98	104	1.82	2.04	6,210
Water year 1939-40	55,558	335	97	152	2.67	36.26	110,200

Peak discharge.- Dec. 9 (6 p.m.) 309 sec.-ft.; Feb. 6 (10 to 11 a.m.) 304 sec.-ft.; Feb. 10 (8 a.m.) 300 sec.-ft.; Feb. 28 (11:30 a.m.) 356 sec.-ft.; Mar. 7 (11 p.m.) 339 sec.-ft.; Mar. 26 (6 p.m.) 415 sec.-ft.

9-233 April 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geolog. Survey

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. Datum of gage is about 2,632 feet above mean sea level (surveys of The California Oregon Power Co.).

Records available.- November 1931 to September 1940.

Extremes.- Maximum discharge during year, 156 second-feet Mar. 17 (gage height, 3.08 feet); minimum, 0.5 second-foot Mar. 14-17.
1931-40: 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.

Cooperation.- Water-stage recorder graph furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	123	109	106	135	135	136	145	145	153	115	105	96
2	115	109	105	135	134	136	145	145	148	114	105	98
3	112	109	105	134	136	136	145	145	143	113	105	101
4	113	108	104	132	138	136	145	145	141	112	104	103
5	134	108	104	131	140	135	145	145	138	112	103	99
6	121	108	104	130	135	135	145	145	136	110	102	98
7	116	108	104	134	124	46	145	145	136	110	101	98
8	112	110	118	140	124	.9	145	145	134	109	101	97
9	111	109	136	143	78	.8	144	141	132	109	101	99
10	110	103	130	144	2	.8	144	132	131	108	101	98
11	108	103	131	144	62	.6	144	133	130	108	101	97
12	108	106	122	143	144	.6	144	133	129	108	101	97
13	108	107	120	139	144	.6	144	133	128	108	100	100
14	108	104	120	137	144	.5	145	133	128	108	100	100
16	108	104	129	134	144	.5	145	132	126	108	100	99
16	108	105	133	132	144	.5	144	132	126	108	100	100
17	108	105	120	129	144	63	144	131	123	108	100	99
18	107	105	121	127	144	155	144	131	122	108	100	109
19	107	105	130	126	144	148	145	130	122	108	99	102
20	107	105	131	125	144	144	145	131	121	110	99	100
21	107	104	127	122	144	144	145	136	120	110	98	98
22	106	104	122	120	144	144	145	144	120	108	98	98
23	107	105	120	120	144	144	145	150	118	107	98	98
24	111	104	117	124	144	144	145	154	116	107	98	98
25	109	104	116	129	145	144	145	154	116	106	98	97
26	115	105	116	138	146	144	145	153	116	107	98	107
27	131	106	116	136	144	145	145	150	115	110	98	120
28	120	104	126	134	136	145	145	148	114	107	96	114
29	113	104	133	133	136	144	145	153	114	106	96	108
30	112	105	135	136	-	144	145	150	116	106	96	104
31	110	-	135	136	-	144	-	147	-	106	96	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,485	134	106	112	6,910
November	3,174	110	103	106	6,300
December	3,736	136	104	121	7,410
Calendar year 1939	42,330	157	1	116	83,960
January	4,122	144	120	133	8,180
February	3,787	146	2	131	7,510
March	2,961.8	155	0.5	95.5	5,870
April	4,342	145	144	145	8,610
May	4,391	154	130	142	8,710
June	3,812	153	114	127	7,560
July	3,374	115	106	109	6,690
August	3,098	105	96	99.9	6,140
September	3,032	120	96	101	6,010
Water year 1939-40	43,314.8	155	0.5	118	85,900

9-232 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

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 1940. Prior to October 1928, in NE¼ sec. 34, T. 32 S., R. 3 E.

Average discharge.- 15 years, 99.9 second-feet.

Extremes.- Maximum daily discharge during year, 210 second-feet (estimated) Mar. 26, 27; minimum daily, 44 second-feet during part of August and September.
1925-40: 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 fair for days when gage was read, poor for other periods. One irrigation diversion above station. Gage read only once weekly; discharge for intervening days computed on basis of records for South and Middle Forks of Rogue River near Prospect.

Cooperation.- Gage readings furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	60	h55	135	81	h185	190	130	95	62	49	44
2	59	59	55	130	h81	180	175	125	92	60	h49	44
3	58	h59	55	120	82	170	160	h120	88	58	49	44
4	57	59	55	105	86	160	145	118	85	57	49	44
5	82	59	55	h92	110	150	h138	118	82	h56	49	44
6	h66	58	55	86	170	140	130	116	82	56	48	h44
7	63	58	55	84	155	140	135	114	h81	56	47	44
8	62	58	h56	84	135	h164	145	112	80	55	47	44
9	61	h57	140	95	h124	150	160	112	79	55	h47	44
10	60	h58	105	110	170	140	155	h121	78	54	47	44
11	59	58	85	100	150	130	150	130	77	54	47	44
12	59	59	70	h94	135	120	h150	126	76	h54	47	44
13	h59	60	65	90	125	115	155	122	75	54	47	h44
14	59	59	65	85	120	110	160	118	h74	54	h47	44
15	59	58	h79	83	115	h110	150	116	72	54	47	44
16	59	57	95	80	h111	120	140	114	70	53	h47	44
17	59	h57	125	78	105	115	135	h111	68	53	47	44
18	58	57	95	76	100	113	132	109	66	53	47	55
19	58	57	75	h73	96	111	h132	108	64	h53	46	50
20	h58	56	80	72	92	110	128	106	63	54	46	h45
21	58	56	75	71	92	112	124	105	h62	54	45	44
22	58	56	h70	70	90	h113	120	104	62	53	45	44
23	56	55	66	70	h89	115	116	103	61	52	h45	44
24	60	h55	62	74	94	125	112	h103	60	51	44	44
25	59	55	58	h80	105	140	110	100	60	51	44	44
26	70	55	60	h97	120	210	h108	97	59	h51	44	48
27	h89	55	58	90	150	210	104	94	58	52	44	h93
28	70	55	75	85	200	200	110	92	h58	51	44	88
29	65	55	h118	82	195	h199	120	96	58	50	44	64
30	63	55	170	82	-	205	130	h92	65	50	h44	56
31	61	-	160	82	-	200	-	h89	-	50	44	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,923	89	56	62.0	1.55	1.79	3,810
November	1,715	80	55	57.2	1.43	1.59	3,400
December	2,492	170	55	80.4	2.01	2.32	4,940
Calendar year 1939	33,971	240	54	93.1	2.33	31.60	67,380
January	2,755	135	70	88.9	2.22	2.56	5,460
February	3,478	200	81	120	3.00	3.23	6,900
March	4,562	210	110	147	3.68	4.24	9,050
April	4,119	190	104	137	3.42	3.83	8,170
May	3,421	130	89	110	2.75	3.18	6,790
June	2,150	95	58	71.7	1.79	2.00	4,260
July	1,670	62	50	53.9	1.35	1.55	3,310
August	1,436	49	44	46.3	1.16	1.34	2,850
September	1,467	93	44	48.9	1.22	1.36	2,910
Water year 1939-40	31,188	210	44	85.2	2.13	28.99	61,850

h Gage read on this day.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolog. .l Survey

187604-0 U.S. GOVERNMENT PRINTING OFFICE 1936

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 and diversion dam and 2 miles east of Prospect. Datum of gage is 2,612 feet above mean sea level (surveys of The California Oregon Power Co.).

Records available.- November 1931 to September 1940.

Extremes.- Maximum discharge during year, 101 second-feet Dec. 29 (gage height, 3.22 feet); minimum, 8 second-feet Mar. 9-14.
1931-40: 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.

Cooperation.- Water-stage recorder graph furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	58	56	92	82	90	53	53	93	61	52	44
2	62	58	55	91	80	90	53	53	91	60	52	46
3	60	58	54	89	82	89	54	53	86	60	51	48
4	62	57	54	89	83	89	53	54	86	59	51	49
5	82	57	53	89	94	89	52	54	84	59	50	46
6	70	56	53	88	95	89	52	54	83	59	50	46
7	63	56	53	86	89	89	52	53	82	58	50	46
8	61	58	65	86	86	41	52	54	80	58	49	47
9	61	56	91	93	44	8	52	54	77	57	48	48
10	60	56	89	94	11	8	52	54	76	57	48	48
11	59	56	85	92	11	8	52	54	75	56	48	47
12	59	56	72	91	57	8	52	54	74	56	48	47
13	58	56	69	88	91	8	52	54	73	56	48	47
14	58	56	70	83	88	57	52	54	73	56	48	46
15	58	56	79	81	88	95	52	54	70	56	49	48
16	53	55	92	78	88	98	52	53	68	56	50	46
17	57	54	93	76	88	96	52	53	67	56	50	46
18	58	54	88	75	88	96	52	53	67	55	49	58
19	58	54	79	74	88	96	52	78	67	56	48	48
20	57	54	80	72	88	96	52	92	66	61	48	46
21	56	55	75	71	87	96	52	92	65	58	46	46
22	58	56	71	70	87	96	52	92	65	56	46	46
23	57	56	70	70	87	96	52	94	64	55	46	45
24	64	55	67	72	87	94	52	96	62	54	46	45
25	59	54	65	80	88	91	52	94	62	54	46	44
26	66	54	64	90	88	81	52	92	62	54	46	49
27	64	54	63	91	90	54	52	92	62	56	46	78
28	67	54	62	86	91	52	53	92	61	54	46	77
29	62	54	98	83	91	53	53	94	61	54	45	59
30	61	56	96	83	-	54	53	91	62	54	45	56
31	59	-	92	83	-	54	-	89	-	53	44	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,919	84	56	61.9	3,810
November	1,669	58	54	55.6	3,310
December	2,273	98	53	73.3	4,510
Calendar year 1939	24,858	98	3	68.1	49,310
January	2,586	94	70	83.4	5,130
February	2,317	95	11	79.9	4,600
March	2,161	98	8	69.7	4,290
April	1,568	54	52	52.3	3,110
May	2,153	96	53	69.5	4,270
June	2,164	93	61	72.1	4,290
July	1,754	61	53	56.6	3,480
August	1,489	52	44	48.0	2,950
September	1,490	78	44	49.7	2,960
Water year 1939-40	23,543	98	8	64.3	46,710

9-232 February 1935 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

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. Datum of gage is 2,599.0 feet above mean sea level (general adjustment of 1929).

Records available.- November 1931 to September 1940.

Extremes.- Maximum discharge during year, 403 second-feet Dec. 30 (gage height, 4.18 feet); no flow for 43 hours Mar. 12-14.
1931-40: Maximum discharge, 423 second-feet June 22, 1936; no flow at times.

Remarks.- Records good. 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.

Cooperation.- Water-stage recorder graph furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	260	228	235	310	333	205	208	363	394	268	225	194
2	246	225	235	308	328	204	207	363	383	265	223	197
3	238	226	235	304	333	201	207	363	366	262	222	204
4	241	224	235	300	349	200	207	364	358	259	219	209
5	300	222	234	288	365	200	205	363	351	258	216	201
6	249	224	237	325	319	180	207	361	346	254	215	200
7	251	204	238	351	298	105	205	363	341	253	214	202
8	241	228	273	355	294	48	205	364	332	252	212	201
9	236	225	352	378	190	11	205	358	327	248	211	205
10	237	217	368	391	40	11	208	349	322	247	209	202
11	233	217	331	367	76	9	205	351	319	246	208	200
12	230	221	295	371	181	3	204	351	312	246	208	198
13	230	221	282	352	217	0	204	353	311	242	208	205
14	228	218	282	339	213	55	204	353	308	242	208	209
15	226	218	316	328	213	99	265	351	301	241	208	202
16	225	218	355	318	215	103	356	349	295	241	208	205
17	225	218	370	308	216	161	353	346	292	241	205	205
18	225	220	341	304	213	271	359	341	287	240	204	250
19	225	220	328	300	237	264	359	364	288	241	202	218
20	224	218	330	295	344	259	359	378	285	248	202	207
21	224	220	316	289	371	259	359	380	284	246	201	201
22	222	222	298	284	359	259	359	387	280	238	201	197
23	222	222	290	286	355	259	359	388	276	235	201	196
24	237	222	280	296	349	256	359	387	274	234	200	196
25	228	224	272	318	295	253	359	390	271	232	198	196
26	248	225	274	357	296	244	359	387	270	234	198	207
27	302	226	274	349	258	211	358	382	268	244	197	293
28	262	226	318	335	193	208	359	378	266	234	197	303
29	239	228	367	330	207	208	361	388	268	229	194	235
30	233	230	346	335	-	208	361	378	276	229	196	218
31	230	-	310	338	-	208	-	370	-	228	196	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	7,419	302	222	239	14,720
November	6,657	230	204	222	13,200
December	9,217	370	234	297	18,280
Calendar year 1939	102,393	396	2	281	203,100
January	10,129	391	284	327	20,090
February	7,657	371	40	264	15,190
March	5,162	271	0	167	10,240
April	8,525	361	204	284	16,910
May	11,363	390	341	367	22,540
June	9,251	394	266	308	18,350
July	7,577	268	228	244	15,030
August	6,406	225	194	207	12,710
September	6,356	303	194	212	12,610
Water year 1939-40	95,719	394	0	262	189,900

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1940. August 1922 to March 1925, at site at Butte Falls.

Average discharge.- 24 years (1910-11, 1917-40), 156 second-feet.

Extremes.- Maximum discharge during year, 460 second-feet Mar. 2 (gage height, 1.56 feet); minimum, 58 second-feet Sept. 8, 9, 12 (gage height, 0.47 foot).
1910-11, 1915, 1917-40: 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 fair. Diversions above station for irrigation and, since 1927, for Medford municipal supply.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.5	63	0.8	132	1.2	271
.6	82	1.0	194	1.4	370

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	72	74	124	96	334	408	127	94	67	65	63
2	76	72	74	121	96	425	360	127	94	67	63	65
3	74	72	72	116	100	370	339	127	89	67	63	63
4	76	72	72	135	121	323	334	132	87	67	63	63
5	87	72	71	a110	129	290	285	129	84	67	63	63
6	84	72	71	a92	191	263	258	124	82	67	63	61
7	80	72	72	a88	222	254	254	121	80	67	65	61
8	78	72	82	a85	198	349	242	116	80	67	65	60
9	76	72	144	147	175	313	237	113	80	65	65	61
10	74	72	162	144	242	294	218	116	78	63	63	60
11	74	72	129	132	242	263	204	108	78	63	65	60
12	74	74	103	127	212	237	194	105	76	63	65	60
13	72	74	100	118	218	222	184	105	74	65	63	61
14	72	74	100	110	215	208	181	103	74	65	63	63
15	74	72	108	108	204	198	178	100	74	65	63	65
16	74	72	127	105	191	229	168	100	72	65	63	65
17	74	72	165	108	222	201	159	98	71	65	65	65
18	74	74	127	108	208	188	156	94	71	65	65	74
19	74	74	113	108	191	181	150	89	72	65	65	71
20	74	74	113	105	178	172	144	87	74	67	63	69
21	74	74	108	100	172	168	138	87	71	65	63	67
22	74	74	100	98	172	162	135	87	72	65	63	65
25	74	76	98	98	181	156	132	87	71	67	63	63
24	80	74	91	98	172	156	129	87	71	67	63	65
25	78	74	91	98	194	156	138	84	69	65	63	65
26	84	74	87	113	204	242	132	82	69	65	61	71
27	100	72	87	108	246	370	124	78	67	67	61	94
28	87	72	89	103	328	309	129	78	65	67	60	96
29	78	72	89	100	354	299	135	80	65	63	61	78
30	76	72	150	100	-	354	132	80	67	63	63	71
31	74	-	144	98	-	431	-	80	-	63	63	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,392	100	72	77.2	4,740
November	2,186	76	72	72.9	4,340
December	3,213	165	71	104	6,370
Calendar year 1939	49,729	599	63	136	98,630
January	3,405	147	85	110	6,750
February	5,674	354	96	196	11,250
March	8,117	431	156	262	16,100
April	5,977	408	124	199	11,860
May	3,131	132	78	101	6,210
June	2,271	94	65	75.7	4,500
July	2,029	67	63	65.5	4,020
August	1,962	65	60	63.3	3,890
September	2,008	96	60	66.9	3,980
Water year 1939-40	42,365	431	60	116	84,010

a No gage-height record; discharge computed on basis of records for South Fork of Little Butte Creek near Lake Creek.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 1½ miles southeast of town of Lake Creek.

Records available.- April 1921 to September 1940. November 1910 to April 1913, at site in sec. 11, T. 37 S., R. 2 E., 5 miles above Lake Creek.

Average discharge.- 20 years (1911-12, 1921-40), 92.1 second-feet.

Extremes.- Maximum discharge during year, 1,240 second-feet Feb. 28 (gage height, 4.53 feet); minimum, 4.8 second-feet Aug. 14 (gage height, 1.37 feet).
1910-13, 1921-40: 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 except those below 20 second-feet and those for period Mar. 8-25, which are fair. Diversions above station for irrigation.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Dec. 9 and Feb. 28 to Mar. 15)

Oct. 1 to Feb. 27

1.4	25	2.0	140		
1.6	47	2.2	202		
1.8	64	2.4	276		

Feb. 28 to Sept. 30

1.6	23	2.4	193	3.5	715
1.8	53	2.6	260	3.8	910
2.0	91	2.9	355		
2.2	137	3.2	540		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	16	15	116	52	540	556	83	40	13	11	10
2	18	15	15	152	48	556	445	83	43	13	11	11
3	17	15	14	155	59	415	372	85	34	12	12	13
4	16	15	15	212	102	362	332	91	31	12	12	14
5	20	14	15	146	107	328	288	87	29	12	9.5	13
6	20	14	15	102	230	296	250	75	29	12	8.8	12
7	18	14	15	92	226	300	246	71	27	12	9.5	12
8	16	14	18	92	202	643	232	66	27	12	9.5	12
9	16	15	94	146	180	470	228	64	23	12	7.4	12
10	16	14	180	110	284	420	203	57	20	12	8.8	10
11	15	14	116	97	253	362	187	53	20	11	8.8	10
12	14	14	75	82	199	320	178	51	19	11	8.1	10
13	14	14	66	58	189	292	169	48	19	12	6.0	12
14	14	14	64	53	202	272	169	43	15	11	5.6	14
15	14	14	60	52	206	253	169	42	16	11	6.7	15
16	14	14	107	48	176	312	153	40	18	11	6.7	15
17	14	14	199	46	268	268	140	39	16	11	6.7	17
18	14	14	92	44	230	242	132	36	16	10	7.4	43
19	14	14	66	46	176	228	125	34	15	10	8.1	33
20	14	14	66	43	143	215	120	33	15	12	8.1	21
21	14	14	58	39	131	206	113	30	15	12	9.5	18
22	14	14	43	38	134	199	109	29	16	11	8.1	17
23	14	14	43	37	131	196	104	27	16	10	8.8	17
24	18	14	34	37	125	203	106	29	15	11	9.5	17
25	18	14	29	38	173	219	118	29	13	9.5	10	17
26	18	15	31	116	249	372	100	29	12	9.5	10	21
27	39	14	31	92	467	573	95	29	13	11	10	50
28	24	14	33	69	812	425	102	30	14	11	10	71
29	18	14	44	59	697	372	100	34	15	11	10	37
30	18	14	199	56	-	512	89	30	15	11	9.5	26
31	16	-	149	56	-	679	-	29	-	10	9.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	525	39	14	16.9	1,040
November	427	16	14	14.2	847
December	2,001	199	14	64.5	3,970
Calendar year 1939	28,299	404	12	77.5	56,120
January	2,529	212	37	81.6	5,020
February	6,451	812	48	222	12,800
March	11,050	679	196	356	21,920
April	5,730	556	89	191	11,370
May	1,506	91	27	48.6	2,990
June	616	43	12	20.5	1,220
July	349.0	13	9.5	11.3	692
August	276.6	12	5.6	8.92	549
September	600	71	10	20.0	1,190
Water year 1939-40	32,060.6	812	5.6	87.6	63,610

Peak discharge.- Dec. 10 (11:30 a.m.) 367 sec.-ft.; Dec. 17 (1 a.m.) 293 sec.-ft.; Feb. 28 (11:30 a.m.) 1,240 sec.-ft.; Mar. 8 (7 p.m.) 890 sec.-ft.; Mar. 26 (10 p.m.) 741 sec.-ft.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 town of Lake Creek.

Drainage area.- 18 square miles.

Records available.- October 1914 to September 1940.

Mean annual discharge.- 25 years (1915-40), 32.0 second-feet.

Extremes.- Maximum discharge during year, 133 second-feet July 23, 24 (gage height, 1.62 feet); minimum, 0.7 second-foot Sept. 22-25 (gage height, 0.01 foot).
1914-40: Maximum discharge, 158 second-feet July 10, 1930; no flow at times.

Remarks.- Records good. Flow regulated by 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 diversion from creek above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.0	0.6	0.6	11.4	1.2	63
.2	2.0	.e	22	1.4	94
.4	4.9	1.0	38	1.6	129

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	3.5	S.8	13	14	17	21	22	37	108	106	33
2	14	3.8	8.8	13	14	17	21	22	27	106	99	33
3	1.3	4.0	8.8	13	14	17	21	22	23	109	94	32
4	1.2	4.2	8.8	13	14	17	22	23	23	108	94	33
S	1.3	4.5	8.8	13	15	17	21	22	28	106	94	32
6	1.3	4.5	S.8	13	15	17	21	22	34	108	94	21
7	1.4	4.7	8.8	13	15	18	21	22	34	102	96	26
8	1.6	5.2	10	13	15	18	21	22	34	99	92	36
9	1.8	5.2	10	14	15	18	21	22	34	97	S8	23
10	a1.8	5.5	10	14	16	18	22	22	40	99	S6	24
11	a1.7	5.5	10	14	16	18	22	22	68	108	S1	24
12	a1.7	h5.7	10	14	16	18	22	32	h68	109	74	27
13	a1.6	h5.7	10	14	16	18	22	40	h68	111	70	27
14	a1.6	h6.0	9.9	14	16	19	22	41	h94	124	69	39
15	a1.5	h6.0	10	13	16	19	22	37	h94	127	66	35
16	1.5	6.3	11	13	16	19	22	34	h94	131	63	34
17	1.5	6.3	11	13	16	19	22	33	h94	131	60	18
18	1.6	6.3	11	13	16	19	22	35	106	129	57	11
19	1.8	6.3	11	13	16	19	22	49	108	131	53	1.4
20	1.9	6.9	11	13	16	19	22	47	108	131	49	1.0
21	2.0	6.9	11	14	16	19	23	48	101	129	47	.S
22	2.2	7.1	h11	14	16	19	23	52	101	131	46	.7
2S	2.3	7.1	a11	14	16	19	23	56	102	133	42	.7
24	h2.7	7.1	a11	14	16	19	22	56	102	131	40	.7
25	h2.7	7.7	a11	14	16	19	23	55	106	h133	39	.7
26	h2.7	7.7	a11	14	16	20	23	55	113	h131	37	.8
27	h3.5	8.1	h11	14	16	20	22	55	111	h133	35	1.4
28	h3.1	8.1	12	14	17	20	23	55	111	h127	34	1.0
29	h3.1	8.1	12	14	17	20	23	46	113	h124	34	1.0
30	h3.1	8.4	13	14	-	21	22	42	115	111	34	.9
31	3.3	-	13	14	-	21	-	42	-	109	34	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	103.8	31	1.2	3.35	206
November	182.4	S.4	3.5	6.0e	362
December	323.5	13	8.8	10.4	642
Calendar year 1939	15,635.1	146	1.2	42.8	31,000
January	420	14	13	13.5	S33
February	453	17	14	15.6	899
March	578	21	17	18.6	1,150
April	659	23	21	22.0	1,310
May	1,153	56	22	37.2	2,290
June	2,291	115	23	76.4	4,540
July	3,668	133	97	118	7,280
August	2,007	106	34	64.7	3,980
September	519.1	39	0.7	17.3	1,030
Water year 1939-40	12,357.8	133	0.7	33.8	24,520

a No gage-height record; discharge interpolated.
h Computed from staff-gage reading.

9-252 February 1936 UNITED STATES DEPARTMENT OF THE INTERIOR Geological Survey

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 town of Lake Creek. Datum of gage is 2,125.01 feet above mean sea level (general adjustment of 1929).

Records available.- September 1911 to March 1913 (incomplete), May 1922 to September 1928 (incomplete), and October 1931 to September 1940, in reports of Geological Survey; September 1911 to March 1913, May 1922 to September 1936, in reports of State engineer.

Average discharge.- 14 years (1911-12, 1922-23, 1928-40), 65.1 second-feet.

Extremes.- Maximum discharge during year, 151 second-feet July 26 (gage height, 2.25 feet); minimum, 17 second-feet Oct. 13, 14.

1911-13, 1922-28, 1931-40: 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 Fish Lake Reservoir. Small diversions above station for irrigation; some water diverted into Fish Lake from Fourmile Lake, in Klamath River Basin, since September 1923.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 9		Feb. 10 to Sept. 30			
1.6	27	1.5	20	2.0	86
1.7	39	1.6	26	2.2	136
1.8	54	1.8	50		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	22	28	45	37	76	84	49	72	136	122	47
2	45	22	29	45	37	95	74	50	52	128	117	49
3	22	22	29	44	39	74	74	49	50	131	109	49
4	20	23	29	45	40	68	72	52	46	131	107	46
5	25	23	29	42	42	63	66	49	52	128	104	46
6	22	23	29	39	51	60	64	47	58	125	102	38
7	20	23	29	39	51	70	63	47	58	125	104	36
8	19	24	40	39	51	100	63	47	56	120	100	49
9	19	24	48	50	48	80	63	46	56	117	98	38
10	18	24	62	44	63	72	61	46	56	117	95	38
11	18	24	44	42	56	68	58	45	93	125	93	38
12	18	24	37	40	52	63	56	52	95	125	88	40
13	18	24	38	38	50	61	55	64	107	125	88	42
14	18	25	37	38	53	58	55	63	120	142	86	52
15	18	25	37	38	53	56	55	66	120	145	84	47
16	18	25	50	38	50	64	53	58	120	148	80	46
17	18	25	58	38	61	58	53	58	120	148	78	38
18	18	25	39	38	60	56	52	58	133	145	76	46
19	18	25	38	38	53	55	52	76	131	148	72	20
20	19	25	38	37	49	53	50	74	131	148	70	19
21	19	25	37	37	47	53	50	74	122	145	66	19
22	19	25	35	37	53	52	50	80	122	148	63	18
23	20	25	35	37	52	50	50	84	125	148	60	18
24	24	26	34	37	52	52	52	86	125	148	56	18
25	21	26	33	38	55	52	50	82	125	145	52	18
26	27	26	33	42	55	63	49	80	139	148	50	20
27	34	27	35	39	61	66	49	80	139	148	49	32
28	22	27	37	38	76	61	53	82	136	145	47	29
29	22	28	38	38	76	60	50	76	139	139	47	19
30	22	28	72	38	-	82	50	66	139	133	47	19
31	22	-	51	37	-	95	-	66	-	128	47	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	701	58	18	22.6	1,390
November	740	28	22	24.7	1,470
December	1,208	72	28	39.0	2,400
Calendar year 1939	26,899	168	18	73.7	53,380
January	1,235	50	37	39.8	2,450
February	1,523	76	37	52.5	3,020
March	2,036	100	50	65.7	4,040
April	1,726	84	49	57.5	3,420
May	1,952	86	45	63.0	3,870
June	3,037	139	46	101	6,020
July	4,232	148	117	137	8,390
August	2,457	122	47	79.3	4,870
September	1,034	52	18	34.5	2,050
Water year 1939-40	21,881	148	18	59.8	43,390

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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 Hanley north and south canals and Eagle Point canal are partly estimated.

Records for these canals, published as a group, are available from April 1929 to September 1940; records of some of the canals published separately prior to 1929.

Diversions, in acre-feet, water year October 1939 to September 1940

Month	Hanley south canal	Hanley north canal	Rogue River Valley canal below junction of intakes	Eagle Point canal
October	-	-	†510	‡419
March	-	-	329	-
April	293	277	2,610	533
May	522	506	4,510	1,040
June	448	460	5,540	1,100
July	431	492	7,480	1,160
August	431	584	3,780	992
September	254	383	1,550	869

†Oct. 1-16; no record after Oct. 16.
‡Oct. 1-24; no record after Oct. 24.
Note.- Probably some flow in canals during periods of no 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 1940 (some years incomplete).

Extremes.- Maximum discharge during period, 88 second-feet June 15 (gage height, 1.58 feet); no flow at times.
1920-40: Maximum discharge, 5,260 second-feet Feb. 20, 1927, by computation of flow over dam; no flow at times.

Remarks.- Records fair. Flow regulated since December 1924 by Emigrant Gap Reservoir. Diversions above station for irrigation; principal canals are Ashland lateral and East lateral. Water diverted by Keene Creek canal from Klamath River Basin into Emigrant Creek above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	1.5	2.2	38	31	
2							-	.8	2.0	37	31	
3							-	.9	1.9	37	31	
4							-	2.5	1.8	36	31	
5							-	6.6	1.9	36	29	
6							-	6.6	1.9	36	29	
7							-	5.4	1.8	36	29	
8							-	3.9	1.8	36	29	
9							-	2.6	1.9	38	29	
10							-	1.9	2.8	39	a29	
11							-	1.2	26	40	a30	
12							34	.9	42	42	a30	
13							35	.8	43	42	a31	
14							34	.7	43	42	31	
15							32	1.1	45	42	30	
16							30	5.4	43	42	28	
17							a28	7.7	42	41	27	
18							a26	7.3	42	41	24	
19							15	7.3	42	42	23	
20							13	9.4	41	41	23	
21							9.4	18	39	36	21	
22							5.4	19	38	36	16	
23							3.9	18	39	36	.5	
24							3.2	18	40	34	a.4	
25							6.2	16	40	34	a.3	
26							6.2	15	40	34	a.2	
27							4.3	14	40	34	a.1	
28							3.5	14	40	34	.1	
29							2.8	8.9	40	34	a.1	
30							1.9	2.4	39	31	0	
31							-	2.2	-	31	0	

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April 12-30	293.8	35	1.9	15.5	583
May	220.0	19	.7	7.10	436
June	824.0	45	1.8	27.5	1,630
July	1,158	42	31	37.4	2,300
August	615.7	31	0	19.8	1,220
September	0	0	0	0	0
The period	-	-	-	-	6,170

a No gage-height record; discharge interpolated or extrapolated.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is 1,343.89 feet above mean sea level (general adjustment of 1929).

Records available.- March 1915 to September 1940 (incomplete prior to April 1927).

Average discharge.- 19 years (1920-26, 1927-40), 71.5 second-feet.

Extremes.- Maximum discharge during year, 5,610 second-feet Feb. 28 (gage height, 6.85 feet); minimum, 4.5 second-feet Sept. 1, 9-11.
1915-40: 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 except those for periods of no gage-height record, which are fair. Diversions above station for irrigation. Flow partly regulated since December 1924 by Emigrant Gap Reservoir.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Jan. 27 to Feb. 5, Sept. 12-30)

Oct. 1 to Dec. 9				Dec. 10 to Sept. 30							
0.5	12	1.2	61	0.2	7.4	1.0	61	2.2	354	4.0	1,750
.6	16	1.4	92	.4	16	1.3	103	2.5	520	4.5	2,270
.8	25			.6	27	1.6	163	3.0	900	5.0	2,870
1.0	39			.8	42	1.9	243	3.5	1,300	6.0	4,280

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.5	a14	14	a140	58	916	772	93	33	9.4	11	5.4
2	11	13	a14	a160	56	988	527	90	47	9.0	11	5.1
3	12	13	14	a170	92	650	450	103	41	8.6	11	6.0
4	12	14	14	a300	177	527	377	125	34	9.0	11	6.2
5	a15	14	14	170	163	468	308	125	30	12	11	6.2
6	a14	14	14	141	628	416	282	116	28	11	11	5.7
7	a14	14	14	114	481	395	275	107	26	9.9	8.2	5.4
8	a13	15	19	105	305	576	262	103	20	12	8.2	5.1
9	a13	15	139	228	243	391	237	81	16	11	9.4	4.5
10	a13	15	714	156	269	308	209	a66	15	11	8.6	4.5
11	a13	15	234	125	341	275	190	a53	13	9.0	8.2	4.5
12	a13	15	108	116	305	220	175	a46	12	8.2	8.2	6.5
13	13	15	83	92	462	200	170	a40	12	9.9	10	6.8
14	13	15	66	77	400	182	168	a34	12	9.4	8.2	6.2
15	13	14	61	69	341	143	163	30	14	9.9	6.8	7.8
16	12	14	83	a58	301	187	156	26	13	11	8.2	8.6
17	13	14	198	a53	688	156	148	23	14	8.2	9.0	9.9
18	14	14	108	a50	474	137	135	20	14	12	7.8	20
19	14	15	80	54	391	127	137	17	16	13	7.1	33
20	14	14	66	51	363	117	127	18	17	13	6.0	29
21	15	14	57	47	346	112	123	17	16	15	5.4	25
22	14	14	50	a45	341	112	117	18	17	14	5.7	18
23	14	14	46	a43	333	121	103	18	15	13	6.0	15
24	13	14	42	a43	333	137	100	19	15	12	6.0	20
25	13	14	36	a45	411	159	112	22	15	12	5.1	24
26	13	14	35	a200	468	592	101	22	13	13	5.1	25
27	a25	14	36	117	1,060	972	90	18	12	13	5.1	42
28	a20	14	36	89	3,550	527	98	16	12	14	5.1	47
29	a15	15	a43	73	1,660	450	105	20	11	14	5.4	39
30	a15	14	a250	67	-	764	100	21	10	11	5.4	36
31	a14	-	a200	62	-	1,200	-	22	-	10	5.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	429.5	25	9.5	13.9	852
November	427	15	13	14.2	847
December	2,888	714	14	93.2	5,730
Calendar year 1939	18,120.3	714	6.5	49.6	35,930
January	3,260	300	43	105	6,470
February	15,040	3,550	56	519	29,830
March	12,525	1,200	112	404	24,840
April	6,317	772	90	211	12,530
May	1,529	125	16	49.3	3,030
June	563	47	10	18.8	1,120
July	347.5	15	8.2	11.2	689
August	239.6	11	5.1	7.73	475
September	477.4	47	4.5	15.9	947
Water year 1939-40	44,043.0	3,550	4.5	120	87,360

Peak discharge.- Dec. 10 (3 p.m.) 1,230 sec.-ft.; Feb. 28 (11 to 12 a.m.) 5,610 sec.-ft.
a No gage-height record; discharge computed on basis of records for South Fork of Big Butte Creek near Butte Falls and South Fork of Little Butte Creek near Lake Creek.

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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. 2 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 1940; records for some canals published separately prior to 1929.

Diversions, in acre-feet, water year October 1939 to September 1940

Month	Ashland lateral	East lateral	Talent lateral	Phoenix canal	Bear Creek canal
October	0	0	0	†137	0
November	0	0	0	---	0
December	0	0	0	---	0
January	0	0	0	---	0
February	0	0	0	---	0
March	0	0	0	---	0
April	45	1,080	254	174	0
May	493	1,900	2,160	1,400	732
June	865	2,560	2,250	1,370	974
July	902	3,160	2,250	723	710
August	778	1,150	1,210	520	329
September	2	0	0.8	523	314
Water year 1939-40	3,085	9,850	8,124.8	---	3,059

†Run-off for Oct. 1-5; no record Oct. 6 to Mar. 31, probably little flow.

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 mouth of French Gulch, 1½ miles downstream from mouth of Squaw Creek, and 3 miles northeast of Copper store. Datum of gage is 1,759.66 feet above mean sea level (general adjustment of 1929).

Records available.- December 1938 to September 1940.

Extremes.- Maximum discharge during year, 7,410 second-feet Feb. 28 (gage height, 11.84 feet); minimum, 25 second-feet Oct. 1, Nov. 16-18.
1938-40: Maximum discharge, that of Feb. 28, 1940; minimum, 20 second-feet Sept. 23-25, 1939.

Remarks.- Records good. 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 use 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 tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 26						Feb. 27 to Sept. 30					
0.9	36	2.0	215	3.6	890	0.9	25	2.5	328	5.0	1,695
1.1	57	2.4	340	4.0	1,140	1.2	52	3.0	500	6.0	2,430
1.4	95	2.8	490	4.5	1,480	1.6	110	3.5	725	7.0	3,210
1.7	146	3.2	675	5.7	2,350	2.0	191	4.0	1,020	10.0	5,730

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	30	33	1,020	450	2,560	1,730	612	347	92	45	31
2	34	29	34	1,020	426	2,270	1,510	645	322	87	45	32
3	28	29	34	944	672	1,860	1,360	568	276	84	43	38
4	26	29	33	1,310	835	1,590	1,220	655	256	82	41	40
5	42	30	32	818	944	1,420	1,100	568	240	80	42	38
6	46	31	32	594	2,530	1,270	1,000	560	228	75	42	37
7	39	31	32	486	1,650	1,230	1,170	564	218	71	43	37
8	34	30	96	499	1,190	1,400	1,150	548	208	70	43	36
9	30	28	1,010	956	956	1,200	1,180	580	201	65	41	33
10	28	29	1,100	874	1,020	1,070	1,080	612	193	67	41	32
11	27	29	386	700	868	949	1,030	584	180	64	41	32
12	27	28	215	571	769	863	1,080	564	169	63	38	36
13	27	28	167	470	944	780	1,140	544	158	62	38	48
14	27	28	161	406	932	730	1,110	524	150	63	38	42
15	27	29	208	358	791	710	949	508	148	60	38	48
16	27	27	532	322	747	925	835	500	144	60	35	49
17	27	25	784	292	968	813	791	482	136	63	33	50
18	27	26	382	270	902	752	791	459	132	63	34	72
19	27	27	276	252	764	725	774	449	130	63	33	72
20	27	27	240	232	670	720	736	434	128	64	31	53
21	27	27	200	218	612	730	710	410	123	63	32	49
22	27	28	174	205	580	769	705	393	115	59	32	46
23	27	28	159	198	584	764	675	390	108	57	33	43
24	41	29	138	202	742	955	635	376	105	54	32	41
25	38	31	124	246	1,490	981	598	344	102	50	32	40
26	36	34	118	846	2,300	3,590	560	319	98	49	34	39
27	47	34	112	791	3,890	3,130	536	306	96	49	35	89
28	41	31	146	589	5,860	2,130	540	312	92	50	34	95
29	36	31	340	535	3,750	2,530	528	322	93	50	32	65
30	34	31	796	512	-	2,500	607	285	98	48	31	54
31	32	-	920	490	-	2,040	-	276	-	48	31	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	993	47	26	32.0	1,970
November	874	34	25	29.1	1,730
December	9,014	1,100	32	291	17,880
Calendar year 1939	71,234	1,240	20	195	141,300
January	17,226	1,310	198	556	34,170
February	38,836	5,860	426	1,339	77,030
March	43,946	3,590	710	1,418	87,170
April	27,830	1,730	528	928	55,200
May	14,693	655	276	474	29,140
June	4,994	347	92	166	9,910
July	1,975	92	48	63.7	3,920
August	1,143	45	31	36.9	2,270
September	1,417	95	31	47.2	2,810
Water year 1939-40	162,941	5,860	25	445	323,200

Peak discharge.- Dec. 9 (7:30 p.m.) 2,110 sec.-ft.; Feb. 6 (9 a.m.) 3,460 sec.-ft.; Feb. 28 (8:30 a.m.) 7,410 sec.-ft.; Mar. 26 (2 p.m.) 6,040 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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, 1½ miles upstream from Little Applegate River and 4½ miles south of Ruch. Datum of gage is 1,475.09 feet above mean sea level (general adjustment of 1929, levels by Corps of Engineers, U. S. Army).

Records available.- June 1911 to September 1914, September 1925 to September 1940.

Average discharge.- 17 years (1911-14, 1925-26, 1927-40), 329 second-feet.

Extremes.- Maximum discharge during year, 9,640 second-feet Feb. 28 (gage height, 9.15 feet); minimum, 17 second-feet Oct. 1 (gage height, 0.15 foot).
1911-14, 1925-40: Maximum discharge, 20,000 second-feet 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 fair. Diversions above station for irrigation.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 27

0.4	43	1.3	264	2.5	900
.6	73	1.6	352	3.0	1,310
.8	114	1.9	527	4.0	2,340
1.0	168	2.2	700		

Note.- Same as succeeding table above 5.0 ft.

Feb. 28 to Sept. 30

0.4	40	1.9	595	5.0	3,550
.6	73	2.2	775	6.0	4,950
.8	118	2.5	985	7.0	6,270
1.0	175	3.0	1,390	8.0	7,800
1.3	288	3.5	1,860	9.0	9,400
1.6	435	4.0	2,380		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	31	30	978	451	2,660	1,840	619	335	90	40	26
2	28	30	32	1,030	418	2,360	1,550	649	326	84	40	27
3	27	31	32	914	623	1,890	1,380	578	275	81	40	28
4	25	31	32	1,440	579	1,610	1,240	661	254	81	39	33
5	29	32	31	865	935	1,390	1,120	584	238	81	42	34
6	51	35	31	611	2,810	1,200	1,040	568	238	77	39	36
7	44	33	31	491	1,960	1,140	1,170	584	219	69	39	33
8	39	35	73	470	1,310	1,330	1,160	568	201	66	39	34
9	35	32	1,080	1,040	1,010	1,150	1,160	584	186	62	38	35
10	33	33	1,210	921	1,030	1,020	1,080	619	178	62	39	34
11	33	33	404	730	893	922	1,040	590	166	66	36	36
12	29	31	230	588	767	838	1,070	573	160	64	32	35
13	26	31	177	480	994	763	1,120	556	151	64	30	48
14	26	29	162	414	1,040	727	1,100	534	140	64	32	43
15	26	26	201	373	844	703	964	524	140	62	32	44
16	27	26	456	335	774	887	859	507	137	59	33	48
17	28	24	774	304	1,160	796	810	496	126	57	33	48
18	28	23	373	289	1,060	739	603	475	118	57	33	64
19	28	23	275	271	851	715	789	460	118	55	33	90
20	28	23	240	254	730	715	751	450	121	57	30	55
21	28	24	204	237	658	715	721	425	111	57	30	49
22	28	25	177	224	611	745	721	405	111	57	29	46
23	29	25	162	220	566	739	691	400	104	54	28	43
24	38	26	140	220	623	894	661	395	99	52	27	42
25	39	26	127	250	1,250	1,780	619	360	96	52	27	42
26	37	29	122	781	2,030	4,080	584	335	92	49	26	40
27	46	31	117	830	4,260	3,330	562	321	90	50	26	64
28	47	29	140	599	7,120	2,300	562	297	88	49	26	96
29	39	29	293	538	4,330	2,540	546	330	86	49	27	69
30	35	30	730	511	-	2,620	613	284	88	46	26	57
31	33	-	949	485	-	2,160	-	275	-	42	24	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,010	51	21	32.6	2,000
November	866	35	23	28.9	1,720
December	9,035	1,210	30	291	17,920
Calendar year 1939	70,985	1,260	15	194	140,800
January	17,693	1,440	220	571	35,090
February	41,987	7,120	418	1,448	83,280
March	45,458	4,080	703	1,466	90,160
April	28,326	1,840	546	944	56,180
May	15,006	661	275	484	29,760
June	4,794	335	86	160	9,510
July	1,915	90	42	61.8	3,800
August	1,015	42	24	32.7	2,010
September	1,379	96	26	46.0	2,740
Water year 1939-40	168,484	7,120	21	460	334,200

Peak discharge.- Dec. 9 (8 p.m.) 2,510 sec.-ft.; Dec. 10 (11 a.m.) 2,130 sec.-ft.; Feb. 6 (10:30 a.m.) 4,070 sec.-ft.; Feb. 28 (12:30 p.m.) 9,640 sec.-ft.; Mar. 26 (4:30 p.m.) 6,500 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geolo gal Survey

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. Datum of gage is 1,285.33 feet above mean sea level (general adjustment of 1929).

Records available.- October 1938 to September 1940.

Extremes.- Maximum discharge during year, 10,600 second-feet Feb. 28 (gage height, 9.67 feet), from rating curve extended above 4,300 second-feet; minimum, 14 second-feet Aug. 28, 29.
1938-40: Maximum discharge, that of Feb. 28, 1940; minimum, 8 second-feet Sept. 7, 12, 13, 1939.

Remarks.- Records good. 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 tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 28

0.7	14	2.8	600	5.8	3,710
1.0	36	3.2	870	6.5	4,900
1.3	72	3.6	1,180	7.4	6,240
1.6	123	4.0	1,550	8.3	7,900
2.0	220	4.6	2,180		
2.4	374	5.2	2,900		

Feb. 29 to Sept. 30

0.5	11	3.0	740
.7	21	3.6	1,180
1.0	44	4.2	1,750
1.5	115	4.8	2,410
2.0	239	5.7	3,570
2.5	440	6.6	4,900

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	41	39	1,150	528	3,080	2,240	720	401	73	37	16
2	19	39	41	1,240	492	2,910	1,950	782	416	67	33	16
3	23	39	42	1,110	727	2,400	1,760	694	356	66	36	16
4	21	40	42	1,710	1,080	2,070	1,590	782	328	67	35	21
5	22	41	39	1,100	1,110	1,800	1,450	708	304	69	34	23
6	44	41	41	772	3,040	1,610	1,330	675	290	65	32	27
7	52	41	41	606	2,360	1,510	1,440	682	272	62	30	29
8	48	41	59	558	1,620	1,740	1,440	649	246	62	26	32
9	46	40	976	1,120	1,270	1,520	1,440	668	230	60	23	33
10	43	39	1,740	1,090	1,260	1,370	1,370	740	212	59	23	33
11	41	40	662	891	1,120	1,210	1,300	708	189	55	25	35
12	39	41	324	717	972	1,080	1,300	675	169	52	24	36
13	33	39	239	570	1,220	999	1,340	649	157	48	23	46
14	33	38	214	492	1,330	936	1,340	610	150	50	23	51
15	32	37	236	425	1,100	901	1,190	592	144	52	21	51
16	32	38	408	384	1,000	1,090	1,070	592	137	53	17	60
17	35	37	1,060	342	1,530	922	999	574	125	53	18	60
18	36	37	504	320	1,420	929	978	550	113	52	18	77
19	33	37	346	300	1,130	901	964	534	107	49	18	109
20	32	37	300	274	964	894	922	522	106	52	18	77
21	32	36	256	263	877	887	887	484	100	55	16	67
22	32	33	223	249	814	929	880	446	100	60	17	62
23	32	32	206	236	751	922	852	425	96	55	16	54
24	42	32	182	230	772	1,070	803	416	85	51	16	58
25	46	33	162	259	1,400	1,150	761	391	77	53	17	59
26	43	36	151	804	2,250	3,470	701	373	74	50	15	56
27	53	38	140	980	4,380	4,020	662	347	74	48	16	76
28	58	38	144	724	7,760	2,910	662	331	73	49	14	135
29	48	36	301	626	4,920	2,950	649	365	73	43	15	102
30	45	37	804	600	-	2,980	694	328	74	40	16	83
31	43	-	988	564	-	2,580	-	320	-	40	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,154	58	16	37.2	2,290
November	1,134	41	32	37.8	2,250
December	10,910	1,740	39	352	21,640
Calendar year 1939	79,558	1,740	9	218	157,800
January	20,706	1,710	230	668	41,070
February	49,207	7,760	492	1,697	97,600
March	53,740	4,020	887	1,734	106,600
April	34,964	2,240	649	1,165	69,350
May	17,332	782	320	599	34,380
June	5,278	416	73	176	10,470
July	1,710	73	40	55.2	3,390
August	688	37	14	22.2	1,360
September	1,600	135	16	53.3	3,170
Water year 1939-40	198,423	7,760	14	542	393,600

Peak discharge.- Feb. 6 (12 m.) 4,140 sec.-ft.; Feb. 28 (12 m.) 10,600 sec.-ft.; Mar. 26 (6 p.m.) 6,550 sec.-ft.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Datum of gage is 949.54 feet above mean sea level (general adjustment of 1929; levels by Corps of Engineers, U. S. Army).

Records available.- October 1938 to September 1940.

Extremes.- Maximum discharge observed during year, 13,300 second-feet Feb. 28 (gage height, 12.16 feet); minimum observed, 3.7 second-feet Oct. 1.
1938-40: Maximum discharge observed, that of Feb. 28, 1940; minimum discharge, 3.0 second-feet Sept. 12-15, 18-25, 1939.

Remarks.- Records good. Many diversions above station for irrigation and mining. Two ditches divert about 17 second-feet around station on left bank.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

0.5	3.0	1.8	66	3.6	700	7.0	4,200
.7	5.5	2.1	110	4.0	945	8.0	5,650
.9	9.2	2.4	176	4.5	1,330	9.0	7,300
1.2	20	2.8	306	5.0	1,820	10.0	9,100
1.5	39	3.2	480	6.0	2,920	11.0	11,000

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.7	60	56	1,440	736	5,300	3,040	748	470	60	17	4.5
2	4.0	57	57	1,560	682	5,360	2,500	820	470	58	15	4.6
3	4.1	54	55	1,490	790	3,920	2,350	748	430	56	14	4.5
4	4.2	53	58	2,500	1,770	3,200	2,060	868	403	56	13	4.6
5	4.5	54	61	1,840	1,690	2,720	1,880	784	385	41	14	4.7
6	4.7	55	62	1,220	3,640	2,260	1,760	760	369	38	12	4.6
7	13	56	62	952	4,270	2,010	1,860	748	337	36	12	5.2
8	31	57	73	832	2,690	2,350	1,760	724	337	36	12	6.1
9	32	55	426	1,970	2,020	2,100	1,700	688	276	33	10	6.3
10	33	56	3,220	2,050	1,910	1,900	1,620	700	249	31	10	6.6
11	33	54	1,360	1,550	1,830	1,700	1,530	700	223	25	5.5	7.1
12	32	56	688	1,170	1,500	1,550	1,520	688	201	22	5.2	7.9
13	32	59	495	919	2,610	1,390	1,550	700	166	21	5.2	14
14	26	59	416	820	2,800	1,280	1,560	618	151	21	5.5	21
15	30	57	403	712	2,080	1,190	1,390	580	138	22	5.2	39
16	31	54	455	634	1,890	1,380	1,250	596	133	21	5.0	47
17	38	56	1,640	580	4,030	1,310	1,140	563	125	22	5.2	57
18	39	55	826	520	2,940	1,180	1,110	541	121	12	5.2	71
19	44	54	607	475	2,150	1,130	1,080	530	78	14	5.0	110
20	41	55	563	445	1,740	1,090	1,020	520	81	16	5.0	96
21	42	54	470	426	1,480	1,070	997	480	71	20	4.7	81
22	42	55	403	403	1,380	1,090	958	460	73	19	4.7	73
23	42	54	373	381	1,310	1,100	919	430	77	19	4.5	64
24	45	51	341	373	1,240	1,140	868	421	78	20	4.3	57
25	47	52	299	398	2,120	1,320	820	403	68	18	4.2	58
26	51	51	273	862	2,660	2,520	808	390	66	19	4.5	60
27	49	54	252	1,500	g5,500	6,450	754	373	66	20	5.2	63
28	66	55	249	1,040	g9,860	4,340	736	353	68	18	5.0	107
29	73	55	349	893	g9,580	3,960	736	377	64	18	4.5	114
30	66	55	844	814	-	4,310	712	369	60	17	4.5	103
31	62	-	1,150	766	-	3,700	-	377	-	16	4.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,065.2	73	3.7	34.4	2,110
November	1,652	60	51	55.1	3,280
December	16,586	3,220	55	535	32,900
Calendar year 1939	115,148.7	3,310	3.0	315	228,400
January	31,535	2,500	373	1,017	62,550
February	78,898	9,860	682	2,721	156,500
March	75,320	6,450	1,070	2,430	149,400
April	41,988	3,040	712	1,400	83,280
May	18,057	868	353	582	35,820
June	5,834	470	60	194	11,570
July	845	60	12	27.3	1,680
August	231.4	17	4.2	7.46	459
September	1,301.7	114	4.5	43.4	2,580
Water year 1939-40	273,313.3	9,860	3.7	747	542,100

g Computed from graph based on gage readings.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

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. Altitude of gage, about 1,218 feet (from river-profile map).

Drainage area.- 367 square miles.

Records available.- March 1926 to September 1940.

Average discharge.- 14 years, 1,038 second-feet.

Extremes.- Maximum discharge during year, 19,900 second-feet Feb. 28 (gage height, 16.81 feet), from rating table extended above 5,600 second-feet; minimum daily discharge, 15 second-feet Aug. 31.
1926-40: Maximum discharge, 50,000 second-feet Feb. 20, 1927 (gage height, 19.6 feet, site and datum then in use), from rating curve extended above 26,000 second-feet; minimum, 13 second-feet Sept. 10-15, 1934.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Diversions above station for irrigation.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 9				Dec. 10 to Sept. 30					
0.4	31	2.0	415	-0.1	27	1.2	305	6.0	3,410
.6	54	2.5	620	0	39	1.6	440	8.0	5,550
.8	81	3.0	860	.2	69	2.0	605	10.0	8,100
1.0	115	3.5	1,150	.4	104	2.5	835	13.0	12,800
1.5	235			.6	145	3.0	1,100	16.0	18,300
				.9	218	4.0	1,750		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	36	52	4,990	1,340	7,300	3,130	740	278	63	a36	a16
2	23	38	52	4,440	1,220	7,850	2,530	718	305	61	a36	h17
3	26	41	52	3,710	1,860	4,990	2,290	695	266	59	a36	a18
4	23	42	52	5,790	4,440	3,710	2,050	1,580	252	58	a37	a20
5	28	44	52	4,220	4,110	3,040	1,820	1,720	240	56	h38	a20
6	28	43	50	2,860	8,020	2,530	1,610	1,250	232	h53	a36	a22
7	31	43	52	2,290	6,810	2,290	1,750	1,010	221	a51	a36	a24
8	31	44	92	3,220	4,220	2,690	1,780	885	215	a48	a36	a23
9	30	44	1,990	6,880	3,040	2,370	1,780	785	200	a47	a35	a22
10	29	44	7,550	5,790	3,310	2,130	1,640	740	190	a47	a36	a23
11	28	46	2,950	3,610	3,130	1,890	1,470	695	182	h53	a30	a23
12	27	46	1,680	2,610	2,610	1,680	1,370	628	178	a55	h27	h23
13	27	46	1,250	2,010	7,460	1,500	1,310	582	175	a56	a20	a40
14	26	46	1,500	1,680	6,030	1,370	1,220	539	a170	h56	a21	a37
15	26	46	1,820	1,440	4,110	1,280	1,130	494	a165	a55	a21	a36
16	26	46	3,100	1,280	4,000	1,540	1,010	444	a155	a53	a22	a41
17	26	47	4,690	1,160	8,240	1,400	935	401	a140	a51	a22	h56
18	26	47	2,370	1,070	4,990	1,310	885	367	a125	a49	a22	a80
19	27	50	1,680	985	3,610	1,220	860	344	a110	a45	a22	a120
20	28	53	2,290	910	2,860	1,160	810	327	a105	a47	h21	a75
21	28	50	1,930	860	2,450	1,130	762	302	97	a47	a20	a66
22	27	54	1,470	810	2,210	1,100	740	296	95	a47	a19	a60
23	27	58	1,220	785	2,210	1,070	718	284	90	a44	a18	56
24	33	59	985	785	2,770	1,100	695	266	83	a40	a18	55
25	34	a60	860	985	4,990	1,100	672	263	74	a40	a18	55
26	34	59	785	4,690	6,270	4,720	650	255	69	a38	h17	53
27	35	58	718	4,440	10,100	8,250	628	246	69	a39	a17	71
28	35	58	2,420	2,610	15,800	5,320	605	246	63	a38	a17	139
29	35	50	4,880	2,010	10,800	6,830	582	243	63	h38	a18	110
30	35	52	5,320	1,720	-	5,790	695	249	63	a37	a17	95
31	36	-	5,790	1,500	-	4,220	-	246	-	a36	a15	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	897	36	22	28.9	1,780
November	1,450	60	36	48.3	2,880
December	59,702	7,550	50	1,926	118,400
Calendar year 1939	239,544	9,160	19	656	475,100
January	82,140	6,880	785	2,650	162,900
February	143,010	15,800	1,220	4,931	283,700
March	93,980	8,250	1,070	3,028	186,200
April	38,127	3,130	582	1,271	75,620
May	17,840	1,720	243	575	35,390
June	4,870	305	63	156	9,260
July	1,507	63	36	48.6	2,990
August	784	38	15	25.3	1,560
September	1,496	139	16	49.9	2,970
Water year 1939-40	445,503	15,800	15	1,217	883,600

Peak discharge.- Dec. 10 (12:30 p.m.) 11,680 sec.-ft.; Jan. 9 (8 p.m.) 7,960 sec.-ft.; Jan. 26 (10:30 p.m.) 6,630 sec.-ft.; Feb. 6 (11:30 a.m.) 10,080 sec.-ft.; Feb. 28 (1 a.m.) 19,900 sec.-ft.

a No gage-height record; discharge computed on basis of weather records and records for Applegate River near Ruch.

h Discharge computed from staff-gage reading.

U.S. GOVERNMENT PRINTING OFFICE 1936—O 163001

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 Freewater, 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 not served by diversion from the river. A survey made in 1933 listed 57 springs or spring groups in the area, arranged in "inner," "intermediate," and "outer" zones concentric about the apex of the alluvial fan.1/

A noteworthy feature of the springs in 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.

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, discharge measurements of each of the principal springs and measurements of ground-water levels in representative wells have been made periodically since 1932. Results of previous discharge measurements have been published in Water-Supply Papers 834, 864, and 884.

Discharge measurements, in second-feet, of springs in Walla Walla River Basin, Ore.-Wash., during water year October 1939 to September 1940*

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	Date	Discharge
Oct. 13	0.24	Mar. 13	1.85	May 25	1.15	Aug. 9	0.28
Nov. 14	.31	23	1.98	June 12	1.04	27	.15
Dec. 14	.16	Apr. 10	2.75	25	.75	Sept.12	.24
Jan. 12	1.02	26	1.93	July 12	.44		
Feb. 10	2.18	May 10	1.40	27	.50		

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

Oct. 13	5.57	Mar. 13	13.4	May 25	11.6	Aug. 9	2.90
Nov. 14	2.42	23	12.4	June 12	7.86	27	2.62
Dec. 14	1.88	Apr. 10	11.2	26	4.99	Sept.12	3.36
Jan. 14	10.1	25	9.55	July 12	2.91		
Feb. 10	15.8	May 10	10.8	27	2.48		

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. 13	2.81	Mar. 13	4.71	May 25	2.91	Aug. 9	1.09
Nov. 14	1.41	23	4.37	June 12	2.22	27	.95
Dec. 14	.88	Apr. 10	4.32	26	1.24	Sept.12	1.50
Jan. 12	2.77	25	3.70	July 12	1.36		
Feb. 10	3.49	May 10	2.98	27	1.12		

Engle Spring, Oreg., NW¼SE¼ sec. 23, T. 6 N., R. 35 E., at diversion dam

Oct. 13	3.64	Mar. 13	3.67	June 12	3.09	Aug. 27	2.27
Nov. 14	2.65	Apr. 10	3.51	26	3.06	Sept.12	2.92
Dec. 14	2.03	25	3.19	July 12	2.43		
Jan. 12	3.89	May 10	3.30	27	2.55		
Feb. 10	4.16	25	3.30	Aug. 10	2.66		

Downing Spring, Oreg., SE¼SW¼ sec. 23, T. 6 N., R. 35 E., at weir, 200 feet below spring orifice

Oct. 13	1.66	Mar. 13	1.24	May 25	2.85	Aug. 10	1.04
Nov. 14	0	23	1.66	June 12	2.37	27	.65
Dec. 14	0	Apr. 10	1.37	26	1.66	Sept.12	1.11
Jan. 12	2.46	25	1.42	July 12	.90		
Feb. 10	3.57	May 10	2.09	27	.59		

*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, in second-feet, of springs in Walla Walla River Basin, Ore.-Wash., during water year October 1939 to September 1940--Continued

Springs of the inner zone--Continued

Haun Spring, Oreg., NW¼SE¼ sec. 23, T. 6 N., R. 35 E., at Haun farm, 50 feet above highway crossing

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Oct. 13	1.73	Mar. 13	1.75	May 25	2.22	Aug. 10	1.05
Nov. 14	.80	23	1.56	June 12	1.74	27	.92
Dec. 14	.45	Apr. 10	1.63	26	1.42	Sept.12	1.23
Jan. 12	1.74	25	1.72	July 12	.85		
Feb. 10	2.65	May 10	1.94	27	.93		

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 above Walla Walla Valley Railway

Oct. 13	5.35	Mar. 12	3.94	May 25	4.69	Aug. 9	2.01
Nov. 14	3.03	21	3.25	June 11	4.58	27	2.40
Dec. 14	3.05	Apr. 10	3.12	26	4.08	Sept.10	2.36
Jan. 11	4.80	25	2.58	July 12	2.79		
Feb. 10	5.30	May 11	3.68	26	2.29		

Lewis Spring, Oreg., NW¼NW¼ sec. 23, T. 6 N., R. 35 E., below road crossing

Oct. 13	2.16	Mar. 13	2.08	May 25	2.26	Aug. 9	1.61
Nov. 14	1.70	23	2.06	June 12	1.75	27	1.44
Dec. 14	1.22	Apr. 10	2.15	26	2.04	Sept.12	2.15
Jan. 12	2.34	25	1.90	July 12	1.63		
Feb. 10	2.68	May 11	1.95	27	1.44		

Unnamed spring, Wash., NW¼NE¼ sec. 16, T. 6 N., R. 35 E., at a small diversion structure

Oct. 13	3.67	Mar. 12	3.12	May 25	3.05	Aug. 9	1.55
Nov. 14	3.82	21	3.43	June 11	3.12	27	1.63
Dec. 14	1.61	Apr. 9	3.02	26	2.61	Sept.10	1.65
Jan. 11	4.65	25	3.47	July 12	2.56		
Feb. 10	5.06	May 11	2.21	26	1.45		

East Mud Creek (west prong), Oreg., SW¼SW¼ sec. 22, T. 6 N., R. 35 E., at weir

Oct. 12	3.00	Mar. 12	2.51	May 24	2.76	Aug. 10	1.64
Nov. 11	2.21	21	2.50	June 11	2.64	27	1.40
Dec. 12	1.69	Apr. 9	2.26	25	2.17	Sept.10	1.15
Jan. 10	2.88	27	2.16	July 12	1.71		
Feb. 9	2.81	May 10	2.64	26	1.46		

East Mud Creek (east prong), Oreg., SE¼SW¼ sec. 22, T. 6 N., R. 35 E., in diversion ditch, 150 feet below diversion dam

Oct. 12	1.60	Mar. 12	1.50	May 24	1.27	Aug. 10	.92
Nov. 11	1.16	21	1.17	June 11	1.59	27	.99
Dec. 12	.73	Apr. 9	.93	25	1.08	Sept.10	.83
Jan. 10	1.48	27	.75	July 12	1.10		
Feb. 9	1.70	May 10	1.23	26	.89		

East Mud Creek (branch of), Oreg., SW¼SW¼ sec. 16, T. 6 N., R. 35 E., near Lockwood dwelling

Oct. 12	1.96	Mar. 12	4.87	May 24	3.15	Aug. 10	.96
Nov. 14	3.30	21	4.02	June 11	2.97	27	.69
Dec. 13	3.00	Apr. 9	4.35	25	2.40	Sept.10	.59
Jan. 11	5.28	27	4.44	July 12	1.75		
Feb. 9	5.28	May 10	3.57	26	1.14		

South Mud Creek, Oreg., SE¼NW¼ sec. 28, T. 6 N., R. 35 E., at Von der Ahe farm

Oct. 12	2.10	Mar. 12	2.12	May 24	3.73	Aug. 10	1.22
Nov. 11	3.86	21	1.92	June 11	3.19	27	.99
Dec. 12	2.97	Apr. 9	2.13	25	2.21	Sept.10	1.03
Jan. 10	1.74	27	2.55	July 12	1.49		
Feb. 9	1.49	May 10	2.72	26	1.25		

Johnson Creek, Oreg., SE¼NW¼ sec. 29, T. 6 N., R. 35 E., at two weirs

Oct. 12	2.13	Mar. 12	3.25	May 24	3.32	Aug. 26	2.19
Nov. 11	2.51	21	2.81	June 11	3.10	Sept.10	2.38
Dec. 12	2.39	Apr. 9	3.33	25	2.05		
Jan. 10	3.23	27	4.09	July 12	2.44		
Feb. 9	2.53	May 10	4.05	26	2.70		

Dugger Creek, Oreg., NW¼NW¼ sec. 32, T. 6 N., R. 35 E., at two weirs

Oct. 12	6.49	Mar. 12	7.27	May 24	10.0	Aug. 8	5.30
Nov. 11	11.5	21	6.33	June 11	8.62	27	5.20
Dec. 12	9.81	Apr. 9	7.77	25	7.97	Sept.10	5.41
Jan. 10	9.54	26	9.45	July 12	6.10		
Feb. 9	6.81	May 10	9.03	26	5.53		

Discharge measurements, in second-feet, of springs in Walla Walla River Basin, Ore.-Wash., during water year October 1939 to September 1940--Continued

Springs of the intermediate and outer zones--Continued

Schwartz Spring Branch (south prong), Oreg., SW¼SE¼ sec. 23, T. 6 N., R. 34 E., at weirs

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Oct. 12	2.41	Mar. 12	8.50	May 24	5.88	Aug. 9	1.89
Nov. 11	2.86	21	7.44	June 11	4.73	27	1.65
Dec. 13	4.27	Apr. 9	8.02	25	3.83	Sept.10	2.11
Jan. 11	7.43	26	7.67	July 11	2.07		
Feb. 9	8.47	May 10	8.07	26	3.00		

Schwartz Spring Branch (north prong), Oreg., NE¼SW¼ sec. 23, T. 6 N., R. 34 E., in ditch diverting from spring

Oct. 12	4.81	Mar. 12	4.20	May 24	4.10	Aug. 9	3.42
Nov. 11	4.99	21	2.97	June 11	4.50	27	3.05
Dec. 13	5.00	Apr. 9	2.94	25	3.83	Sept.10	2.73
Jan. 11	6.75	26	5.21	July 11	3.80		
Feb. 9	5.73	May 10	3.61	26	2.72		

South Mud Creek, Oreg., SW¼SE¼ sec. 13, T. 6 N., R. 34 E., at Krumbaugh farm

Oct. 12	4.32	Mar. 12	4.99	May 24	5.12	Aug. 9	3.15
Nov. 11	4.84	21	5.90	June 11	6.23	27	3.75
Dec. 13	5.51	Apr. 9	5.43	25	4.68	Sept.10	3.59
Jan. 11	5.64	26	5.44	July 12	4.80		
Feb. 9	5.43	May 10	5.03	26	4.57		

In addition to the records of stream flow obtained at gaging stations in Pacific slope basins in Oregon and lower Columbia River Basin and reported in the preceding pages, measurements of flow were made at other points, as shown in the following table:

Miscellaneous discharge measurements in Pacific slope basins in Oregon and lower Columbia River Basin during water year October 1939 to September 1940

Walla Walla River Basin, Oreg.-Wash.

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
Jan. 31	Mill Creek.....	Walla Walla River	Diversion works above Yellowhawk Creek, 2½ miles downstream from Kibler, Wash.	82.3
Feb. 5	Tributary of Blue Creek from left	Blue Creek, ½ mile upstream from mouth.	Mouth, in sec. 26, T. 7 N., R. 37 E., near Walla Walla, Wash.	.7
24	....do.....	....do.....	....do.....	2.7
27	....do.....	....do.....	....do.....	10.6
29	....do.....	....do.....	....do.....	8.7
Mar. 15	....do.....	....do.....	....do.....	1.2
Apr. 8	....do.....	....do.....	....do.....	3.4
24	....do.....	....do.....	....do.....	1.6
July 3	South Fork of Walla Walla River.	Walla Walla River	NE¼ sec. 9, T. 4 N., R. 37 E., Oreg., below power diversion.	4.5
10	Crockett Branch..	Braided channel of Walla Walla River	SE¼NE¼ sec. 35, T. 6 N., R. 35 E., Oreg., above East Crockett divide.	17.2
10	West Crockett Branch.	....do.....	SE¼NE¼ sec. 35, T. 6 N., R. 35 E., Oreg., below weir.	9.2

Umatilla River Basin, Oreg.

Nov. 30	Umatilla River...	Columbia River...	SE¼ sec. 13, T. 3 N.. R. 36 E., near Gibbon.	35.9
30	....do.....	....do.....	SE¼ sec. 30, T. 3 N., R. 36 E., below Meacham Creek, near Gibbon.	36.1
30	....do.....	....do.....	SE¼NW¼ sec. 12, T. 2 N., R. 30 E., below former Furnish Reservoir.	39.0

Willow Creek Basin, Oreg.

Mar. 14	Willow Creek.....	Columbia River...	Above Balm Fork, 1 mile southeast of Heppner.	16.8
14	....do.....	....do.....	Former gaging station near Morgan.....	25.7
14	Rhea Creek.....	Willow Creek.....	Mouth, 3 miles east of Ione.....	25.5

Deschutes River Basin, Oreg.

Aug. 19	Deschutes River..	Columbia River...	SW¼ sec. 6, T. 17 S., R. 12 E., at bridge near Tumalo.	17.3
Sept.12	....do.....	....do.....	Sec. 31, T. 16 S., R. 12 E., above bridge at Tumalo.	21.6
Aug. 19	....do.....	....do.....	SW¼ sec. 29, T. 16 S., R. 12 E., near Tumalo.	11.6
Sept.12	....do.....	....do.....	SW¼ sec. 20, T. 16 S., R. 12 E., below Chamberlain Ranch, near Tumalo.	14.6
Aug. 19	....do.....	....do.....	NE¼ sec. 36, T. 14 S., R. 12 E., at Tetherow Bridge, near Redmond.	11.5
Sept.12	....do.....	....do.....	....do.....	20.2
Aug. 19	....do.....	....do.....	SE¼ sec. 9, T. 14 S., R. 12 E., at lower bridge near Terrebonne.	9.9
Sept.12	....do.....	....do.....	....do.....	23.4
Sept.13	Rock Springs.....	Inflow to Crane Prairie Reservoir.	SW¼SW¼ sec. 7, T. 21 S., R. 8 E., near Lapine.	20.4
May 8	Leakage from Crane Prairie Reservoir.	Crane Prairie Reservoir.	SE¼ sec. 15, T. 21 S., R. 8 E., upstream from reef separating reservoir from sink in lava.	47.3
June 1	....do.....	....do.....	....do.....	20.3

Wind River Basin, Wash.

Dec. 10	Little Wind River	Wind River.....	Mouth, near Carson, Wash.....	14.7
May 18	....do.....	....do.....	....do.....	15.5
July 24	....do.....	....do.....	....do.....	3.3

Sandy River Basin, Oreg.

July 25	Sandy River canal	Sandy River.....	Intake, near Marmot.....	320

Willamette River Basin, Oreg.

Aug. 7	Leakage through tunnel from Waldo Lake.	Black Creek.....	Outlet of unused tunnel from Klovdahl Bay.	3.2
Sept. 6	McKenzie River...	Willamette River.	SE¼ sec. 30, T. 17 S., R. 1 W., below intake of Springfield canal, a mile below Hendricks Bridge.	565
Oct. 24	Calapooya River..	....do.....	Mouth, below power canal, at Albany....	153
July 2	....do.....	....do.....	....do.....	254
Aug. 1	....do.....	....do.....	....do.....	160
Aug. 14	....do.....	....do.....	....do.....	105
July 13	North Santiam River.	Santiam River....	Highway bridge below diversions at Stayton.	88.2
Aug. 16	....do.....	....do.....	....do.....	71.1

Miscellaneous discharge measurements in Pacific slope basins in Oregon and lower Columbia River Basin during water year October 1939 to September 1940--Continued

Willamette River Basin, Oreg.--Continued

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
July 20	Mill Creek.....	Willamette River.	SE¼SE¼ sec. 32, T. 8 S., R. 1 W., above confluence with Salem Canal, 2 miles west of Sublimity.	0.2
29	....do.....	....do.....	....do.....	0
Aug. 10	....do.....	....do.....	....do.....	0
20	....do.....	....do.....	....do.....	0
30	....do.....	....do.....	....do.....	0
July 27	Porter Spring....	Head of Porter Creek.	NE¼SW¼ sec. 31, T. 8 S., R. 1 W., a mile southeast of Aumsville.	..
27	Porter Creek.....	Mill Creek.....	NE¼ sec. 36, T. 8 S., R. 2 W., at bridge half a mile south of Aumsville	.6
27	....do.....	....do.....	....do.....	.5
13	....do.....	....do.....	NE¼ sec. 35, T. 8 S., R. 2 W., at bridge a mile west of Aumsville.	.8
27	....do.....	....do.....	....do.....	.8
27	....do.....	....do.....	....do.....	.7
Sept. 28	Beaver Creek.....	....do.....	SE¼SW¼ sec. 24, T. 8 S., R. 2 W., at bridge a mile northwest of Aumsville.	1.0
30	Battle Creek.....	....do.....	Mouth, at Turner.....	2.2
July 23	Mill Creek.....	Pudding River....	Mouth, at Aurora.....	5.9
Sept. 27	....do.....	....do.....	....do.....	15.0

Nehalem River Basin, Oreg.

Aug. 26	Rock Creek.....	Nehalem River....	NW¼NE¼ sec. 7, T. 4 N., R. 5 W., a mile southwest of Keasey.	10.4
26	....do.....	....do.....	....do.....	10.7

Rogue River Basin, Oreg.

Dec. 1	Ditch Creek.....	Pleasant Creek...	SW¼ sec. 33, T. 34 S., R. 4 W., 12 miles northeast of Grants Pass.	0.5
Nov. 28	Elliott Creek....	Applegate River..	Mouth, Oregon-California State line....	9.0
28	Carberry Creek...	....do.....	Mouth, 15 miles southwest of Ruch.....	12.6
Apr. 9	Jack Creek.....	Jump-off-Joe Creek.	Mouth, 9 miles north of Grants Pass....	14.2
10	Grayback Creek...	Sucker Creek.....	Mouth, 4 miles east of Holland.....	99.5