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

Water-Supply Paper 832

SURFACE WATER SUPPLY *of the* UNITED STATES

1937

PART 12

PACIFIC SLOPE BASINS IN WASHINGTON AND UPPER COLUMBIA RIVER BASIN

NATHAN C. GROVER, Chief Hydraulic Engineer
W. A. LAMB, T. R. NEWELL, AND G. L. PARKER
District Engineers

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ILLUSTRATION

SURFACE WATER SUPPLY OF PACIFIC SLOPE BASINS IN WASHINGTON AND UPPER COLUMBIA RIVER BASIN, 1937

SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of flow made on streams in the United States during the water year ending September 30, 1937. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of stream flow have been made at about 7,200 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July 1937, 3,380 gaging stations were being maintained by the Geological Survey and the cooperating organizations. Many miscellaneous discharge measurements were made at other points.

In the execution of the work many State and private organizations have cooperated, either by furnishing data or by assisting in collecting data. Acknowledgments for cooperation of the first kind are made in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 8.

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 a rate of flow of 1 cubic foot per second, or the rate of discharge of water flowing in a channel when the cross-sectional area is 1 square foot and the average velocity is 1 foot per second.

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

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

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

"Second-foot-day" is the volume of water represented by a flow of 1 second-foot for 24 hours.

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

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

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either

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

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

The data presented for each gaging station in the area covered by this report usually comprise a description of the station, a table showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off. Skeleton rating tables are published except for those stations whose daily discharge for the greater part of the year was determined by shifting-control method or by use of slope 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. Information under "Extremes" gives the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation, and also the minimum discharge if useful; and the minimum gage height except when it is of no importance. Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder or a nonrecording gage read at the time of the crest. Likewise the minimum represents the lowest discharge unless otherwise qualified.

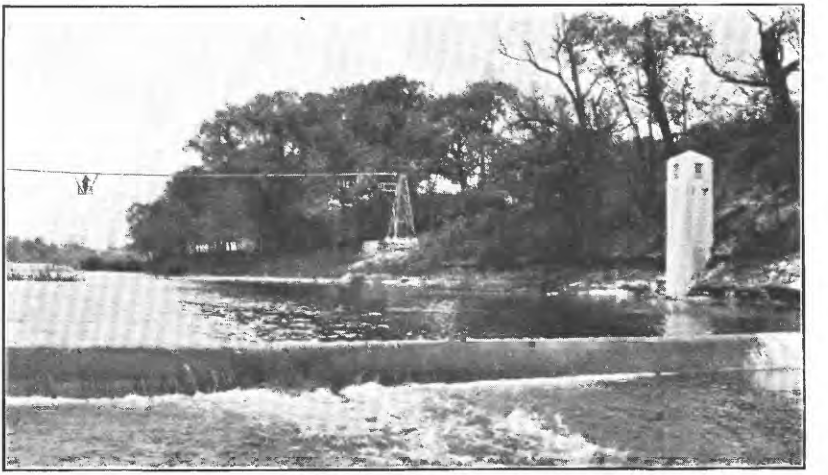
The table of daily discharge gives, for stations equipped with nonrecording gages, the discharge in second-feet corresponding to once-daily or the mean of twice-daily readings of the gage. For stations equipped with water-stage recorders the table gives the discharge corresponding to the mean daily gage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

In the table of monthly discharge the column headed "Second-foot-days" gives the sum for each month of the discharge given in the table of daily discharge. The column headed "Maximum" gives the maximum daily discharge and not the discharge when the water surface was at crest height. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" is the average flow in cubic feet per second during the month.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

The station description gives a statement under "Remarks" in regard to the general accuracy of the records. "Excellent" indicates that, in general, the daily records are



A. ARTIFICIAL CONTROL, RECORDER HOUSE, AND MEASURING CABLE ON OLENTANGY RIVER, DELAWARE, OHIO.

B. RECORDER HOUSE AND MEASURING CABLE ON KAWEAH RIVER, THREE RIVERS, CALIF.

TYPICAL RIVER-MEASUREMENT STATIONS.

in error not more than 5 percent; "good", not more than 10 percent; "fair", not more than 15 percent; and "poor", over 15 percent.

The monthly means for any station may represent with high accuracy the quantity of water flowing past the gage, but the figures showing discharge per square mile and depth in inches may be subject to gross errors caused by the inclusion of large noncontributing districts in the measured drainage area, by lack of information concerning water diverted for irrigation or other use, or by inability to interpret the effect of artificial regulation of the flow of the river above the station. "Second-feet per square mile" and "run-off in inches" are therefore not computed if such errors appear probable. The computations are also omitted for stations on streams draining areas in which the annual rainfall is less than 20 inches.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and the discharge recorded does not show the water supply available for further development, as prior appropriations below the 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 increased data and 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 indicated below.

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

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

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

Augusta, Maine, Statehouse.
Boston, Mass., 945 Post Office Building.
Hartford, Conn., 203 Federal Building.
Albany, N. Y., 526 Federal Building.
Trenton, N. J., 228 Federal Building.

Harrisburg, Pa., 490 Education Building.
Charlottesville, Va., University of Virginia.
South Charleston, W. Va., Naval Ordnance Plant.
Asheville, N. C., 220 Post Office Building.
Columbia, S. C., 119 United States Courthouse.
Atlanta, Ga., Georgia School of Technology.
Ocala, Fla., Post Office Building.
Montgomery, Ala., Post Office Building.
Chattanooga, Tenn., 442 Post Office Building.
Louisville, Ky., Federal Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Indianapolis, Ind., 319 Federal Building.
Urbana, Ill., 14 Post Office Annex.
Madison, Wis., 337N State Capitol.
St. Paul, Minn., 808 New Post Office Building.
Iowa City, Iowa, 402 Hydraulic Laboratory, University of Iowa.
St. Louis, Mo., 906 Customhouse, 1114 Market Street.
Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines and Metallurgy.
Topeka, Kans., 305 Federal Building.
Fort Smith, Ark., Post Office Building.
Austin, Tex., State Highway Building.
Santa Fe, N. Mex., 3 United States Courthouse.
Tucson, Ariz., 210 Post Office Building.
Denver, Colo., 230 Customhouse.
Salt Lake City, Utah, 303 Federal Building.
Idaho Falls, Idaho, 228 Federal Building.
Boise, Idaho, 429 Federal Building.
Helena, Mont., 412 Federal Building.
Tacoma, Wash., 406 Federal Building.
Portland, Oreg., 606 Post Office Building.
San Francisco, Calif., 208 Federal Office Building.
Los Angeles, Calif., 512 Eighth and Figueroa Building.
Honolulu, Hawaii, 225 Federal 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, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte Rivers, and western United States.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27.....	Measurements, ratings, and gage heights, eastern United States, eastern Mississippi River, and Missouri River.	1898.
W 28.....	Measurements, ratings, and gage heights, Arkansas River and western United States.	1898.
20th A, pt. 4	Monthly discharge (also for many earlier years)....	1898.
W 35 to 39...	Descriptions, measurements, gage heights, and ratings.	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52...	Descriptions, measurements, gage heights, and ratings.	1900.
22d A, pt. 4.	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.	1901.
W 75.....	Monthly discharge.....	1901.

Note.- The reports which contain records after 1901 are given in the table on page 5.

Numbers of water-supply papers containing results of stream measurements, 1899-1937
(For basins included see p. 3)

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1899 a...	35	b 35, 36	36	36	36	c 36, 37	37	37	d 37, 38	38, e 39	38, f 39	38	38	38
1900 g...	47, h 48	48	48, i 49	49	49	49, j 50	50	50	50	51	51	51	51	51
1901.....	65, 75	65, 75	65, 75	65, 75	k 65, 66, 75	66, 75	k 65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902.....	82	b 82, 83	83	m 82, 83	k 83, 85	84	k 83, 84	84	85	85	85	85	85	85
1903.....	97	b 97, 98	98	97	k 98, 99, n 100	99	k 98, 99	99	100	100	100	100	100	100
1904.....	o 124, p 125, q 126	q 126, 127	128	129	k 128, 130	130, r 131	k 128, 131	132	133	133, s 134	134	135	135	135
1905.....	o 165, p 166, q 167	q 167, 168	169	170	171	172	k 169, 173	174	175, t 177	176, s 177	177	178	178	u 177, 178
1906.....	o 201, p 202, q 203	q 203, 204	205	206	207	208	k 205, 209	210	211, t 213	212, s 213	213	214	214	214
1907-8...	241	242	243	244	245	246	247	248	249	250, s 251	251	252	252	252
1909.....	261	262	263	264	265	266	267	268	269	270, s 271	271	272	272	272
1910.....	281	282	283	284	285	286	287	288	289	290	291	292	292	292
1911.....	301	302	303	304	305	306	307	308	309	310	311	312	312	312
1912.....	321	322	323	324	325	326	327	328	329	330	331	332-A	332-B	332-C
1913.....	351	352	353	354	355	356	357	358	359	360	361	362-A	362-B	362-C
1914.....	381	382	383	384	385	386	387	388	389	390	391	392	393	394
1915.....	401	402	403	404	405	406	407	408	409	410	411	412	413	414
1916.....	431	432	433	434	435	436	437	438	439	440	441	442	443	444
1917.....	451	452	453	454	455	456	457	458	459	460	461	462	463	464
1918.....	471	472	473	474	475	476	477	478	479	480	481	482	483	484
1919-20..	501	502	503	504	505	506	507	508	509	510	511	512	513	514
1921.....	521	522	523	524	525	526	527	528	529	530	531	532	533	534
1922.....	541	542	543	544	545	546	547	548	549	550	551	552	553	554
1923.....	561	562	563	564	565	566	567	568	569	570	571	572	573	574
1924.....	581	582	583	584	585	586	587	588	589	590	591	592	593	594
1925.....	601	602	603	604	605	606	607	608	609	610	611	612	613	614
1926.....	621	622	623	624	625	626	627	628	629	630	631	632	633	634
1927.....	641	642	643	644	645	646	647	648	649	650	651	652	653	654
1928.....	661	662	663	664	665	666	667	668	669	670	671	672	673	674
1929.....	681	682	683	684	685	686	687	688	689	690	691	692	693	694
1930.....	696	697	698	699	700	701	702	703	704	705	706	707	708	709
1931.....	711	712	713	714	715	716	717	718	719	720	721	722	723	724
1932.....	726	727	728	729	730	731	732	733	734	735	736	737	738	739
1933.....	741	742	743	744	745	746	747	748	749	750	751	752	753	754
1934.....	756	757	758	759	760	761	762	763	764	765	766	767	768	769
1935.....	781	782	783	784	785	786	787	788	789	790	791	792	793	794
1936.....	801	802	803	804	805	806	807	808	809	810	811	812	813	814
1937.....	821	822	823	824	825	826	827	828	829	830	831	832	833	834

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 Grean and Gunnison Rivers and Colorado River above Gunnison River.
e Mojave River only.
f Kings and Kern Rivers and south Pacific slope basins.
g Rating tables and index to Water-Supply Papers 47-52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52. Monthly discharge for 1900 in 22d Annual Report, part 4.
h Wissahickon and Schuylkill Rivers to James River.
i Scioto River.
j Loup, Platte, and Elkhorn Rivers and tributaries below Platte River.
k Tributaries of Mississippi River from east.
m Lake Ontario and tributaries to St. Lawrence River proper.
n Hudson Bay only.
o New England rivers only.
p Hudson River to Delaware River, inclusive.
q Susquehanna River to Yadkin River, inclusive.
r Platte and Kansas Rivers.
s The Great Basin in California, except Truckee and Carson River Basins.
t Below junction with Gila River.
u Rogue, Umpqua, and Siletz Rivers only.

The foregoing table gives, by years and drainage basins, the numbers of the papers on surface water supply published from 1899 to 1937. 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 from 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 383, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

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

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

Reports containing compilation of discharge by States and drainage basins

Water-Supply Paper	Year ending	State or drainage basin and title
		STATE
107	1903	Alabama, Water powers of, with an appendix on stream measurements in Mississippi.
298	1912	California, Water resources of, part 1, Stream measurements in Sacramento River Basin.
299	1912	California, Water resources of, part 2, Stream measurements in San Joaquin River Basin.
300	1912	California, Water resources of, part 3, Stream measurements in the Great Basin and Pacific coast river basins.
447	1918	California, Surface water supply of the southern Pacific slope of.
597e	1927	California, Surface water supply of Sacramento River Basin.
636d	1927	California, Surface water supply of San Joaquin River Basin.
636e	1927	California, Surface water supply of Pacific slope basins in.
637a	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.
424	1916	Vermont, Surface waters of.
492	1919	Washington, Summary of hydrometric data in.
469	1921	Wyoming, Surface waters of, and their utilization.
		DRAINAGE BASIN
395	1914	Colorado River (Colo., Utah, etc.) and its utilization, 1916.
617	1927	Colorado River, upper (Colo., Utah), and its utilization, 1929.
517	1920	Great Salt Lake Basin, Water powers of, 1924.
618	1926	Green River (Wyo., Utah) and its utilization, 1930.
196	1906	Kennebec River Basin (Maine), Water resources of, 1907.
		Milk River. (See St. Mary and Milk Rivers.)
536	1920	New-Kanawha River Basin (W. Va., Va., N. C.), Surface water supply of, 1925.
279	1909	Penobscot River Basin (Maine), Water resources of, 1912.
192	1906	Potomac River Basin (W. Va., Va., Md., etc.), 1907.
358	1913	Rio Grande Basin (N. Mex., Tex., etc.), Water resources of, 1888-1913.
491	1917	St. Mary and Milk Rivers (Mont. and Canada), Water supply of, 1920.
109	1904	Susquehanna River Basin (Pa., Md.), Hydrography of, 1905.

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

State reports containing compilation of records of discharge

State	Year ending	Report	Issued by
Alabama....	1915	Bull. 17, Water powers of Alabama.....	Geological Survey of Alabama.
Arkansas...	1928	Stream gaging report 1.....	Arkansas Geological Survey.
Georgia....	1920	Bull. 38, Water powers of Georgia.....	Geological Survey of Georgia.
Illinois...	1937	Stream flow data of Illinois.....	Division of Waterways.
Do.....	1911	Water resources of Illinois.....	Rivers and Lakes Commission.
Indiana....	1927	Pub. 72, Surface water supply of Indiana.	Department of Conservation.
Do.....	[a]1930	Pub. 112, Surface water supply of Indiana.	Do.
Iowa.....	[b]1932	Stream-flow records of Iowa.....	Iowa State Planning Board.
Kansas.....	[c]1919	Surface waters of Kansas.....	Kansas Water Commission.
Do.....	[d]1924	.....do.....	Do.
Do.....	1928	.....do.....	Do.
Kentucky...	1920	Surface waters of Kentucky.....	Kentucky Geological Survey.
Minnesota..	1912	Water resources investigation of Minnesota.	State Drainage Commission.
Missouri...	1926	Reports of Bureau of Geology and Mines, Vol. 20, 2d series, Water Resources of Missouri.	Missouri Bureau of Geology and Mines.
Nebraska...	1914	1st hydrographic report.....	Bureau of Water Power, Irrigation and Drainage.
Do.....	[e]1928	2d hydrographic report.....	Do.
New Jersey.	1928	Bull. 33, Surface water supply of New Jersey.	Department of Conservation and Development.
Do.....	[f]1934	Special Report 5, Surface water supply of New Jersey.	State Water Policy Commission.
New Mexico.	1925	Surface water supply of New Mexico....	Office of the State Engineer.
North Carolina.	1923	Bull. 34, Discharge records of North Carolina streams.	Department of Conservation and Development.
Oregon.....	1914	Bull. 4, Water resources of the State of Oregon.	Office of the State Engineer.
Do.....	[g]1924	Bull. 7, Water resources of the State of Oregon.	Do.
Do.....	[h]1930	Bull. 8, Water resources of the State of Oregon.	Do.
Do.....	[i]1936	Bull. 9, Water resources of the State of Oregon.	Do.
Pennsylvania	1911	Report of Water Supply Commission of Pennsylvania.	Water Supply Commission of Pennsylvania.
Do.....	[j]1932	Stream-flow records of Pennsylvania..	Department of Forests and Waters.
Tennessee..	1924	Bull. 34, Water resources of Tennessee.	Department of Education.
Do.....	[k]1930	Bull. 40, Surface waters of Tennessee	Do.
Utah.....	1905	5th Biennial Report, State Engineer..	Office of the State Engineer.
Virginia...	1927	Bull. 31, Water resources of Virginia	Conservation and Development Commission.
Washington.	1933	Bull. 5, Monthly and yearly summaries of hydrometric data.	Department of Conservation and Development.
Wisconsin..	1914	1st report of Railroad Commission of Wisconsin to Legislature on water powers.	Railroad Commission of Wisconsin.
Do.....	[l]1923	2d report of Railroad Commission of Wisconsin to Legislature on water powers.	Do.

a Includes records for the years 1927-30.
b Includes records for the years 1895-1919.
c Includes records for the years 1919-24.
d Includes records for the years 1924-28.
e Includes records for the years 1914-28.
f Includes records for the years 1928-34.
g Includes records for the years 1914-24.
h Includes records for the years 1924-30.
i Includes records for the years 1930-36.
j Includes records for the years 1928-32.
k Includes average weekly discharge for the years 1920-30.
l Includes records for the years 1914-23.

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

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

Records of daily discharge of Reservation Drain at Alfalfa, Wash., for 1923-37 were collected by the Office of Indian Affairs and have not been published. Records for some earlier years were published in water-supply papers of the Geological Survey.

Unpublished records of daily discharge for 1937 and earlier years have been collected by the United States Bureau of Reclamation for numerous canals in Washington in connection with irrigation projects.

COOPERATION

The work was done under cooperative agreements with the several States as follows: In Idaho, with the Department of Reclamation, R. W. Faris, commissioner. In Montana, with the office of the State engineer, J. S. James. In Washington, with the Department of Conservation and Development, J. B. Fink, director, and C. J. Bartholet, supervisor of hydraulics, Division of Water Resources; with the cities of Aberdeen, Everett, Seattle, and Tacoma; with King and Pierce Counties, through the Intercounty River Improvement Commission; with Skagit and Whatcom Counties; and with Wenatchee Reclamation District.

Acknowledgment of financial assistance in collecting records published herein is due also to the United States Department of State, Bureau of Reclamation and Office of Indian Affairs, United States Department of Interior, Forest Service and Weather Bureau, United States Department of Agriculture.

Full cooperation exists between this organization and the Dominion Water and Power Bureau, Department of Mines and Resources, Canada. On waters adjacent to the international boundary certain stations are maintained jointly by the United States and Canada under the terms of the Boundary Waters Treaty of 1909, and others are maintained under a subsequent agreement between the two Governments. The records from all these stations are obtained in such a manner as to be equally acceptable and available in either country. These stations are herein designated "international gaging stations."

Assistance in collecting the records was also rendered by the following municipalities, corporations, and individuals: In Idaho by the city of Sandpoint and the Washington Water Power Co.; in Montana, by the Rocky Mountain Power Co. and the Glacier Silver Lead Co.; in Washington by the Chelan Copper Mining Co., Chelan Electric Co., Crown Zellerbach Corporation, Grays Harbor Railway & Light Co., Hugh L. Cooper Co., R. G. Hall, West Coast Power Co., the Puget Sound Power & Light Co., the Washington Water Power Co., and the Western Washington Electric Light & Power Co.

DIVISION OF WORK

The data for the stations in the several States were collected and prepared for publication under the supervision of district engineers as follows: In Idaho (except for Clark Fork at Priest River) and for Clark Fork near Heron, Mont., Flathead River at Flathead, British Columbia, Kootenai River at Newgate, British Columbia, and Kootenai River, near Rexford, Mont., T. R. Newell; in Montana, except for the stations noted above, W. A. Lamb; in Washington and for Clark Fork at Priest River, Idaho, G. L. Parker.

Basins between Columbia River and Puget Sound

NASELLE RIVER BASIN

Naselle River near Naselle, Wash.

Location.- Staff gage, lat. 46°22', long. 123°44', in SW¼ sec. 1, T. 10 N., R. 9 W., 1½ miles above Salmon Creek and 3½ miles east of Naselle.

Drainage area.- 66 square miles.

Records available.- May 1929 to September 1937.

Extremes.- Maximum discharge observed during year, 3,420 second-feet Feb. 22 (gage height, 8.52 feet); minimum daily discharge, 34 second-feet Nov. 12-15, 16, Nov. 26 to Dec. 1; minimum gage height, 1.87 feet Nov. 15, 16, 29, 30, Dec. 1.

1929-37: Maximum discharge observed, 10,400 second-feet Jan. 22, 1935 (gage height, 15.9 feet, from floodmarks), from rating curve extended above 3,000 second-feet; minimum, 22 second-feet Oct. 6, 7, 1929; minimum gage height, 1.72 feet Aug. 29, 1935.

Remarks.- Records good. Gage read twice daily. No diversion or regulation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	36	34	306	290	910	505	290	110	196	54	111
2	38	36	38	290	290	1,470	465	258	104	184	54	85
3	43	36	40	274	290	1,110	485	242	100	167	51	77
4	80	38	52	323	446	910	505	212	100	162	47	73
5	59	40	66	306	670	960	670	198	96	145	47	102
6	47	39	357	274	585	810	715	192	88	140	47	102
7	45	37	585	258	505	625	670	198	86	132	47	85
8	44	36	392	227	446	545	585	340	84	120	51	77
9	42	36	428	212	392	670	505	428	82	113	54	73
10	38	35	274	212	374	585	585	760	86	100	89	67
11	38	35	212	192	2,510	505	625	960	80	97	102	62
12	38	34	392	178	1,650	465	1,170	585	80	93	65	58
13	43	34	910	212	1,010	410	2,790	485	80	93	54	58
14	64	34	670	242	760	392	2,650	428	78	93	54	54
15	56	34	505	760	760	340	2,190	357	76	89	51	54
16	47	45	585	505	1,650	323	1,470	323	80	87	46	54
17	45	56	1,010	505	2,790	290	1,060	290	135	77	40	54
18	43	45	1,530	505	2,010	290	760	258	465	73	40	52
19	40	43	1,590	446	1,060	258	625	242	505	73	39	52
20	40	40	1,010	392	1,170	258	810	227	585	73	39	51
21	38	38	1,010	357	1,950	258	960	198	545	69	37	51
22	38	37	1,650	323	3,070	242	910	192	505	69	102	51
23	37	36	1,950	357	2,010	227	760	170	670	65	226	51
24	37	35	1,290	357	1,290	227	670	165	670	62	128	46
25	37	35	960	392	960	227	585	152	505	58	102	44
26	37	34	810	428	760	212	485	145	410	56	77	42
27	36	34	625	392	670	198	446	140	340	54	65	40
28	36	34	505	374	585	192	410	126	290	54	58	40
29	36	34	465	323	-	176	357	140	258	54	54	46
30	36	34	410	323	-	357	323	121	226	54	145	428
31	36	-	357	290	-	715	-	121	-	54	154	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,332	80	36	43.0	0.652	0.75	2,640
November	1,120	56	34	37.3	.565	.63	2,220
December	20,712	1,950	34	668	10.1	11.64	41,080
Calendar year 1936	132,480	5,580	34	362	5.48	74.65	262,800
January	10,535	760	178	340	5.15	5.94	20,900
February	30,953	3,070	290	1,105	16.7	17.39	61,390
March	15,157	1,470	176	489	7.41	8.54	30,060
April	25,746	2,790	323	858	13.0	14.50	51,070
May	8,943	960	121	288	4.36	5.03	17,740
June	7,519	670	76	251	3.80	4.24	14,910
July	2,956	196	54	95.4	1.45	1.67	5,860
August	2,219	226	37	71.6	1.08	1.24	4,400
September	2,240	428	40	74.7	1.13	1.26	4,440
Water year 1936-37	129,432	3,070	34	355	5.38	72.83	256,700

North River near Raymond, Wash.

Location.- Water-stage recorder, lat. 46°49', long. 123°51', in sec. 6, T. 15 N., R. 9 W., 1¼ miles above Salmon Creek and 10 miles northwest of Raymond.

Records available.- August 1927 to September 1937.

Average discharge.- 10 years, 997 second-feet.

Extremes.- Maximum discharge during water year 1934-35, 24,000 second-feet sometime during Jan. 21-24 (gage height, 12.5 feet, from floodmarks), from rating curve extended above 6,300 second-feet; minimum, 40 second-feet (revised), Sept. 10, 11 (gage height, 1.30 feet).

Maximum discharge during water year 1935-36, 7,890 second-feet Feb. 28 (gage height, 7.43 feet); minimum, 58 second-feet (revised), Oct. 9, 10, 11, Sept. 29, 30 (gage height, 1.44 feet).

Maximum discharge during water year 1936-37, 6,600 second-feet Apr. 15 (gage height, 6.92 feet); minimum, 56 second-feet Oct. 28, Nov. 1, 15, 16 (gage height, 1.43 feet).

1927-37: Maximum discharge, about 35,000 second-feet Dec. 10, 1933 (gage height, 15.8 feet, from floodmarks), from rating curve extended above 6,300 second-feet; minimum daily discharge, 28 second-feet (regulated) Aug. 17, 1928, Sept. 25, 1930.

Remarks.- Records excellent except those for Oct. 1-8, Nov. 29 to Dec. 17, 1934, Jan. 20-26, 1935, (computed on basis of records for Chehalis River at Grand Mound), and those above 10,000 second-feet, which are fair. Splash dam 800 feet above gage no longer operated. Results of many discharge measurements furnished by Western Washington Electric Light & Power Co.

Records for water years 1934-35 and 1935-36 supersede those published in Water-Supply Papers 792 and 812.

Rating tables, 1934-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1, 1934, to Jan. 23, 1935		Jan. 24, 1935, to Sept. 30, 1937	
1.2	26	1.2	29
1.5	65	1.5	66
2.0	164	2.0	168
2.5	312	2.5	320
3.0	620	3.0	600
3.5	1,060	3.5	970
4.0	1,600	4.0	1,480
5.0	2,870	5.0	2,800
6.0	4,600	6.0	4,600
7.0	6,850		
8.0	9,600		
10.0	15,730		
12.0	22,200		

Note.- Above 5.9 feet same as preceding table.

Discharge, in second-feet, 1934-37

1934-35

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		1,120	2,600	2,870	1,130	906	1,130	375	184	200	68	55
2		1,690	2,350	2,940	988	810	997	352	173	181	68	53
3		2,870	2,050	2,800	898	782	882	340	171	150	69	51
4	100	3,400	1,800	2,730	803	834	810	320	160	138	69	48
5		5,260	1,600	2,800	747	842	761	313	156	138	65	47
6		7,360	1,400	4,400	698	842	691	296	148	132	63	45
7	110	7,100	1,200	5,220	656	818	656	288	143	138	62	42
8	350	4,540	1,100	3,750	614	810	614	278	146	138	58	41
9	321	2,530	950	2,520	579	761	572	272	171	141	58	41
10	267	1,840	820	2,020	551	705	544	262	219	134	56	41
11	198	1,490	780	1,900	663	771	494	255	211	120	55	41
12	159	1,240	1,000	1,900	850	3,200	470	249	186	110	53	41
13	138	1,090	1,050	1,720	1,360	5,890	446	237	173	102	51	131
14	125	1,130	990	1,540	1,840	5,660	422	234	166	96	51	328
15	114	1,220	950	1,370	1,410	3,440	410	231	158	95	50	519
16	106	1,250	900	1,290	1,140	2,510	416	240	150	89	50	393
17	102	1,120	1,100	1,220	1,150	2,100	416	360	143	87	56	282
18	106	1,010	1,490	1,040	1,150	1,900	390	434	138	86	66	222
19	122	925	2,330	970	988	1,600	375	328	134	82	63	160
20	270	961	3,660	900	954	1,600	395	275	132	80	77	132
21	631	1,080	5,010	10,000	1,200	1,540	590	249	132	76	68	114
22	835	1,340	5,220	17,000	3,020	1,420	834	237	125	74	60	102
23	1,910	1,960	4,900	22,000	3,530	1,340	858	225	116	74	55	95
24	3,680	2,260	4,700	10,000	2,650	2,140	761	216	114	71	52	86
25	6,360	2,260	4,210	7,000	1,900	3,810	635	205	110	69	51	80
26	6,600	2,260	4,300	4,500	1,460	3,810	551	200	110	69	50	77
27	4,260	2,460	4,400	3,110	1,200	2,720	500	194	110	69	47	74
28	2,150	2,460	3,240	2,440	1,030	2,100	452	189	125	68	46	72
29	1,490	2,300	2,870	1,900	-	1,780	422	186	146	68	53	69
30	1,140	2,100	2,940	1,600	-	1,480	405	186	171	66	55	68
31	1,030	-	2,870	1,290	-	1,290	-	181	-	66	52	-

Discharge, in second-feet, of North River near Raymond, Wash., 1934-37--Continued

1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	143	285	3,270	600	3,780	1,060	272	296	262	116	157
2	63	125	268	4,500	565	2,650	922	275	288	252	112	205
3	63	114	252	4,800	530	2,040	834	336	299	259	108	194
4	63	106	240	5,550	512	1,660	768	402	336	380	106	132
5	60	100	225	5,890	500	1,360	691	768	332	422	104	104
6	62	100	288	4,620	518	1,160	642	796	302	395	102	93
7	63	98	612	2,650	614	1,010	607	628	407	320	100	84
8	62	154	987	2,300	670	1,190	600	488	1,090	285	98	80
9	59	205	858	2,510	565	1,840	565	422	1,290	262	96	77
10	59	228	782	2,720	537	1,660	530	375	906	272	95	72
11	58	281	867	3,920	530	1,420	518	340	747	272	89	69
12	83	494	1,150	7,020	506	1,540	500	313	635	278	87	69
13	114	537	1,210	7,620	482	2,040	464	299	544	262	86	92
14	212	406	914	6,710	470	2,650	428	348	488	243	84	106
15	200	435	754	3,820	428	3,190	400	509	482	225	82	127
16	200	530	663	2,880	400	2,880	380	593	586	211	82	118
17	168	614	586	2,370	380	2,100	365	614	726	200	82	95
18	143	607	512	2,040	365	1,600	352	482	740	186	79	84
19	132	458	458	1,840	356	1,300	352	452	670	176	77	79
20	127	360	405	1,900	344	1,110	340	476	572	171	76	74
21	122	313	370	1,970	348	970	324	458	500	166	72	71
22	116	288	348	1,780	1,330	866	313	440	446	160	71	71
23	110	551	336	1,480	3,030	789	302	416	395	153	72	68
24	102	656	382	1,290	1,970	726	299	375	356	148	77	66
25	96	586	618	1,110	1,390	663	299	344	332	143	86	65
26	91	476	870	979	2,480	785	332	320	313	138	86	62
27	87	416	1,290	882	6,990	1,910	320	302	310	136	79	59
28	164	365	1,780	834	7,890	2,650	313	285	328	134	72	59
29	189	332	1,600	775	6,500	2,040	299	292	316	127	69	58
30	231	310	1,540	698	-	1,540	285	313	285	122	66	58
31	178	-	2,300	649	-	1,240	-	313	-	118	84	-

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	58	63	663	607	1,320	1,020	810	240	385	108	342
2	59	58	63	586	663	1,600	842	754	231	344	106	198
3	63	62	63	524	726	1,840	834	691	219	313	104	150
4	106	63	66	565	980	1,600	922	635	211	292	102	129
5	98	63	81	656	2,420	1,470	1,240	586	200	275	96	134
6	120	71	212	586	3,530	1,320	1,470	544	194	255	96	150
7	95	69	416	488	2,550	1,150	1,420	518	189	243	95	184
8	79	69	526	446	1,780	1,010	1,170	621	186	231	96	141
9	71	66	656	452	1,360	1,030	1,020	882	191	222	102	118
10	66	60	564	428	1,160	1,150	1,090	1,060	208	214	130	106
11	63	59	318	405	2,820	997	1,280	1,350	231	202	158	100
12	62	59	262	400	3,720	922	1,500	1,140	219	194	146	96
13	68	59	1,090	422	2,950	866	3,150	898	197	191	134	91
14	93	58	2,230	469	2,040	826	5,330	782	184	189	112	87
15	93	58	1,600	820	1,720	782	6,360	691	178	186	104	86
16	108	58	1,020	1,320	2,080	740	5,560	614	202	184	96	86
17	96	71	1,280	1,040	4,610	691	3,420	579	271	176	87	86
18	80	76	2,140	1,150	6,360	656	2,300	524	748	168	82	82
19	72	86	2,800	1,160	5,210	621	1,720	476	834	160	79	82
20	68	79	2,590	954	2,880	586	1,920	434	1,040	153	77	80
21	66	74	1,780	826	3,140	565	2,950	405	1,280	148	79	74
22	63	71	2,420	747	5,440	586	3,030	385	1,060	143	104	74
23	63	69	4,270	698	5,660	544	2,370	356	1,060	138	122	71
24	60	66	4,400	670	4,260	524	1,900	344	1,340	134	184	71
25	59	63	2,780	712	2,650	512	1,540	328	1,090	129	158	69
26	58	63	1,900	810	1,970	464	1,320	313	834	125	125	68
27	58	63	1,470	866	1,600	452	1,320	299	670	122	106	68
28	58	63	1,160	803	1,350	428	1,130	285	558	120	95	68
29	58	63	954	740	-	410	988	275	482	116	87	68
30	58	63	850	663	-	472	882	265	422	114	142	372
31	58	-	754	621	-	825	-	252	-	112	240	-

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Discharge, in second-feet, of North River near Raymond, Wash., 1934-37--Continued

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1934	33,176	6,600	-	1,070	65,800
November	69,626	7,360	925	2,321	138,100
December	74,780	5,220	780	2,412	148,300
Calendar year 1934	399,308	10,500	54	1,094	792,000
January 1935	126,740	22,000	900	4,088	251,400
February	35,159	3,530	551	1,256	69,740
March	60,211	5,890	705	1,942	119,400
April	17,899	1,130	375	597	35,500
May	8,207	434	181	265	16,280
June	4,521	219	110	151	8,970
July	3,209	200	66	104	6,360
August	1,797	77	46	58.0	3,560
September	3,550	519	41	118	7,040
Water year 1934-35	438,875	22,000	41	1,202	870,400
October 1935	3,542	231	58	114	7,030
November	10,388	656	98	346	20,600
December	23,750	2,300	225	766	47,110
Calendar year 1935	298,973	22,000	41	819	593,000
January 1936	91,377	7,620	649	2,948	181,200
February	41,800	7,890	344	1,441	82,910
March	52,359	3,780	663	1,689	103,900
April	14,404	1,060	285	480	28,570
May	13,046	796	272	421	25,880
June	15,317	1,290	285	511	30,380
July	6,878	422	118	222	13,640
August	2,695	116	66	86.9	5,350
September	2,748	205	58	91.6	5,450
Water year 1935-36	278,304	7,890	58	760	552,000
October 1936	2,276	120	58	73.5	4,520
November	1,960	86	58	65.3	3,890
December	40,778	4,400	63	1,315	80,880
Calendar year 1936	285,640	7,890	58	780	566,600
January 1937	21,690	1,320	400	700	43,020
February	76,236	6,360	607	2,723	151,200
March	26,959	1,840	410	870	53,470
April	60,998	6,360	834	2,033	121,000
May	18,096	1,350	252	584	35,890
June	14,969	1,340	178	499	29,690
July	5,978	385	112	193	11,860
August	3,552	240	77	115	7,050
September	3,531	372	68	118	7,000
Water year 1936-37	277,025	6,360	58	759	549,500

Chehalis River near Grand Mound, Wash.

Location.- Water-stage recorder, lat. 46°47', long. 123°02', in NE¼ sec. 22, T. 15 N., R. 3 W., at Meadow, 1½ miles southwest of Grand Mound. Zero of gage is 123.27 feet above mean sea level (general adjustment of 1929).

Drainage area.- 928 square miles.

Records available.- October 1928 to September 1937.

Extremes.- Maximum discharge during year, 24,300 second-feet Apr. 15 (gage height, 14.33 feet); minimum, 189 second-feet Oct. 11, Nov. 29 (gage height, 2.52 feet).
1928-37: Maximum discharge observed, 45,000 second-feet Dec. 21, 1933 (gage height, 17.9 feet, present datum); minimum discharge, 126 second-feet Aug. 29, 1935 (gage height, 2.36 feet).

Remarks.- Records good. Cities of Centralia and Chehalis divert about 15 second-feet from Newaukum River, a tributary, for municipal use. No noticeable regulation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	211	207	204	2,390	1,720	4,890	4,730	2,500	727	1,300	338	550
2	214	214	207	2,060	1,930	7,720	3,980	2,290	700	1,140	328	450
3	211	211	211	1,800	2,390	9,610	3,530	2,160	684	1,070	301	378
4	214	214	235	1,790	4,310	8,140	3,460	2,090	652	961	297	338
5	260	231	301	2,530	9,230	7,060	4,130	1,830	628	907	283	418
6	297	226	424	2,080	8,500	7,240	4,280	1,700	606	817	274	916
7	239	256	1,980	1,630	6,550	6,040	4,130	1,580	644	763	288	636
8	218	214	1,880	1,410	4,890	4,890	3,680	1,640	578	727	269	480
9	214	196	2,770	1,560	3,980	4,730	3,380	1,700	606	668	306	414
10	218	218	1,810	1,500	3,230	5,370	4,130	1,760	709	636	355	360
11	193	207	1,160	1,290	4,380	4,730	5,050	3,190	790	613	366	344
12	200	218	943	1,190	9,800	4,430	5,050	2,920	763	585	360	328
13	204	211	1,350	1,290	8,500	4,430	11,100	2,290	684	578	322	317
14	211	211	3,950	1,310	6,550	4,130	16,800	2,020	644	585	297	301
15	247	211	2,990	2,190	5,050	3,830	22,700	1,760	668	564	288	297
16	274	211	2,090	3,760	7,160	3,680	20,800	1,580	799	536	283	283
17	256	226	2,040	3,090	11,200	3,460	14,500	1,470	1,040	522	274	283
18	231	260	5,020	3,530	16,500	3,160	9,570	1,380	1,470	487	265	283
19	222	269	8,100	3,530	14,000	2,880	6,860	1,260	2,430	487	252	288
20	222	247	6,790	2,670	9,420	2,810	5,340	1,200	3,060	480	243	306
21	214	243	4,250	2,250	10,600	2,670	6,350	1,120	3,950	450	252	283
22	218	226	5,390	1,990	13,200	2,600	6,520	1,070	4,400	438	256	278
23	211	222	14,200	1,800	15,600	2,600	5,840	1,030	4,580	438	322	274
24	211	222	13,400	1,920	12,700	2,950	5,020	979	7,740	420	438	269
25	207	231	9,420	1,920	9,610	2,810	4,250	979	5,680	396	414	274
26	214	207	6,890	2,600	7,780	2,670	4,100	970	3,800	384	378	265
27	226	204	5,530	2,880	6,210	2,460	4,400	925	2,780	378	333	274
28	204	226	4,280	2,740	5,050	2,320	3,800	907	2,090	360	344	269
29	222	200	3,380	2,390	-	2,180	3,280	835	1,700	356	256	269
30	231	200	3,090	2,060	-	2,120	2,850	772	1,470	344	283	288
31	222	-	2,810	1,800	-	3,170	-	763	-	344	409	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	6,936	297	193	224	0.241	0.28	13,760
November	6,639	269	196	221	.238	.27	13,170
December	117,095	14,200	204	3,777	4.07	4.69	232,300
Calendar year 1936	974,350	32,600	193	2,662	2.87	39.04	1,933,000
January	66,950	3,760	1,190	2,160	2.33	2.69	132,800
February	220,040	16,500	1,720	7,859	8.47	8.82	436,400
March	131,780	9,610	2,120	4,251	4.58	5.28	261,400
April	203,610	22,700	2,850	6,787	7.31	8.16	403,900
May	48,670	3,190	763	1,570	1.69	1.95	96,540
June	57,072	7,740	578	1,902	2.05	2.29	113,200
July	18,734	1,300	344	604	.651	.75	37,160
August	9,674	438	243	312	.336	.39	19,190
September	10,713	916	265	357	.385	.43	21,250
Water year 1936-37	897,913	22,700	193	2,460	2.65	36.00	1,781,000

Satsop River near Satsop, Wash.

Location.- Staff gage, lat. 47°00', long. 123°30', in sec. 36, T. 18 N., R. 7 W., 1 mile west of Satsop.

Drainage area.- 315 square miles.

Records available.- March 1929 to September 1937.

Extremes.- Maximum discharge observed during year, 13,300 second-feet Apr. 14 (gage height, 9.70 feet); minimum, 206 second-feet Sept. 28.
1929-37: Maximum discharge, 52,500 second-feet Jan. 22, 1935 (gage height, 18.0 feet, from floodmarks), from rating curve extended above 17,000 second-feet; minimum, 203 second-feet Sept. 21, 22, 1930.

Remarks.- Records good except those for periods of rapidly changing discharge, which are poor. Discharge for Dec. 9, 10 and Apr. 10 interpolated. Gage read once daily. No diversion or regulation.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

2.2	190	5.0	3,050
2.5	325	6.0	4,850
3.0	665	7.0	6,950
3.5	1,120	8.0	9,240
4.0	1,690	9.0	11,600
4.5	2,340	10.0	14,000

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	262	239	230	1,820	920	3,900	2,760	1,690	745	1,020	349	418
2	262	230	226	1,570	970	7,400	2,340	1,690	745	970	343	367
3	257	230	222	1,460	970	5,870	2,480	1,820	745	920	331	337
4	665	262	222	1,690	1,450	4,460	2,900	1,690	705	830	325	315
5	450	305	248	1,820	3,050	5,660	3,720	1,570	665	788	315	325
6	355	398	385	1,570	2,480	5,050	3,720	1,400	628	745	310	305
7	325	315	1,950	1,450	2,080	3,900	2,900	1,340	628	745	310	295
8	305	275	1,450	1,340	1,820	3,210	2,340	2,080	628	665	325	285
9	285	266	1,240	1,340	1,570	3,720	2,480	3,210	590	665	337	270
10	275	257	1,040	1,230	1,450	3,210	3,190	3,370	665	665	373	257
11	270	252	830	1,120	4,080	3,050	3,900	3,900	628	628	450	252
12	255	248	970	1,120	3,050	2,900	3,900	2,760	590	590	373	252
13	285	248	6,510	1,180	2,480	3,050	9,010	2,340	555	590	337	248
14	325	244	5,050	1,070	2,080	2,900	13,300	2,210	555	590	325	239
15	450	239	3,370	1,820	3,050	2,480	9,930	1,950	555	555	325	230
16	398	248	2,620	1,450	4,460	2,340	6,510	1,820	745	555	325	230
17	361	310	7,400	1,340	7,400	2,210	4,650	1,690	970	520	315	239
18	349	337	7,170	1,340	5,250	2,080	3,720	1,570	3,720	520	305	230
19	325	295	6,290	1,230	3,540	1,950	3,050	1,400	2,210	485	285	230
20	315	295	3,900	1,120	3,050	1,950	4,650	1,340	2,480	485	266	226
21	305	285	4,460	1,070	6,080	1,950	5,870	1,230	2,900	450	266	218
22	295	266	9,010	1,020	10,200	1,950	4,270	1,180	2,340	437	373	214
23	285	266	9,930	1,020	7,860	1,820	3,370	1,120	3,900	424	450	214
24	275	257	6,080	970	5,450	1,820	2,900	1,070	3,050	411	437	214
25	270	257	4,080	1,120	4,650	1,820	2,620	1,020	2,340	404	450	214
26	266	248	4,080	1,180	3,900	1,690	2,480	970	1,820	398	424	214
27	262	248	3,540	1,120	3,370	1,570	2,340	970	1,570	385	373	210
28	257	244	2,760	1,070	2,900	1,450	2,080	920	1,400	379	337	206
29	252	239	2,900	1,020	-	1,450	1,950	875	1,290	373	305	214
30	248	230	2,620	970	-	1,570	1,820	830	1,120	361	485	520
31	248	-	2,080	920	-	3,900	-	788	-	355	485	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	9,767	665	248	315	1.00	1.15	19,370
November	8,033	398	230	268	.851	.95	15,930
December	102,863	9,930	222	3,318	10.5	12.11	204,000
Calendar year 1936	621,444	16,600	222	1,698	5.39	73.31	1,233,000
January	39,550	1,820	920	1,276	4.05	4.67	78,450
February	99,610	10,200	920	3,558	11.3	11.77	197,600
March	92,280	7,400	1,450	2,977	9.45	10.90	183,000
April	121,150	13,300	1,820	4,038	12.8	14.28	240,300
May	51,813	3,900	788	1,671	5.30	6.11	102,800
June	41,472	3,900	555	1,382	4.39	4.90	82,260
July	17,908	1,020	355	578	1.83	2.11	35,520
August	11,009	485	266	355	1.13	1.30	21,840
September	7,988	520	206	266	.844	.94	15,840
Water year 1936-37	603,443	13,300	206	1,653	5.25	71.19	1,197,000

Wynoochee River at Oxbow, near Aberdeen, Wash.

Location.- Water-stage recorder, lat. 47°19'30", long. 123°38'20", in sec. 12, T. 21 N., R. 8 W., 1 mile below Oxbow and 24 miles northeast of Aberdeen. Discharge measurements made 1¼ miles upstream.

Drainage area.- About 65 square miles, above measuring section (uncertain because of inadequate maps).

Records available.- May 1925 to September 1937.

Average discharge.- 12 years, 770 second-feet.

Extremes.- Maximum discharge during year, 6,830 second-feet Dec. 22 (gage height, 20.55 feet); minimum, 96 second-feet Nov. 30, Dec. 1 (gage height, 2.24 feet).
1925-37: Maximum discharge, about 18,000 second-feet Jan. 22, 1935 (gage height, 30.3 feet, from floodmarks), from rating curve extended above 5,300 second-feet; minimum, 76 second-feet Sept. 23, 1930 (gage height, 2.09 feet).

Remarks.- Records excellent. No diversion or regulation.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

2.2	93	9.0	1,650
3.0	171	10.0	1,990
4.0	305	11.0	2,370
5.0	520	12.0	2,810
6.0	770	14.0	3,960
7.0	1,048	16.0	5,350
8.0	1,340	18.0	6,750

Discharge, in second-feet, water year October 1935 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	119	108	101	568	210	1,120	1,190	744	718	556	176	182
2	118	106	99	520	210	2,020	964	770	852	508	171	171
3	145	105	101	473	204	1,590	908	1,050	824	473	171	160
4	236	107	100	618	276	1,340	1,110	992	693	462	171	149
5	176	139	109	556	364	2,250	1,460	797	668	428	166	149
6	154	139	1,150	473	305	2,020	1,280	718	668	406	166	144
7	144	119	1,390	439	279	1,430	1,080	718	693	385	160	139
8	139	112	797	406	256	1,220	964	1,840	668	374	160	134
9	134	107	668	396	242	1,560	1,050	3,400	618	364	160	129
10	129	105	496	374	242	1,370	1,850	2,450	668	344	195	129
11	129	105	417	344	296	1,220	1,560	1,880	568	334	216	129
12	129	102	651	344	334	1,280	1,610	1,400	520	324	176	124
13	154	102	3,300	344	305	1,370	3,900	1,370	508	305	166	124
14	204	99	1,590	334	279	1,280	4,760	1,490	484	296	160	119
15	188	97	1,050	334	374	1,110	3,460	1,160	496	287	154	118
16	166	107	824	305	618	992	2,130	1,050	712	271	149	117
17	154	166	2,120	296	797	964	1,620	1,050	908	264	144	117
18	144	144	4,100	287	693	880	1,340	936	2,440	256	139	115
19	139	129	2,450	271	532	824	1,160	852	1,460	249	139	114
20	134	124	1,560	264	484	797	1,620	770	1,520	242	134	112
21	129	117	2,160	256	1,720	824	1,680	744	1,750	236	144	111
22	129	112	5,980	249	2,130	797	1,310	744	1,310	222	220	107
23	124	110	3,060	242	1,820	744	1,110	693	1,590	216	222	106
24	124	107	1,920	236	1,310	718	992	718	1,370	216	198	106
25	119	106	1,460	256	1,140	668	880	718	1,050	210	204	105
26	117	104	1,340	236	992	668	852	668	908	204	216	104
27	114	102	1,140	229	852	618	824	643	824	198	188	104
28	113	100	936	222	770	593	744	630	770	193	171	103
29	111	98	824	210	-	580	693	580	693	188	160	106
30	110	96	718	210	-	943	718	556	618	188	199	609
31	112	-	643	204	-	1,560	-	580	-	182	204	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,337	236	110	140	8,600
November	3,374	166	96	112	6,690
December	43,244	5,980	99	1,395	85,770
Calendar year 1936	241,938	5,980	96	661	479,600
January	10,496	618	204	339	20,820
February	18,034	2,130	204	644	35,770
March	35,350	2,260	580	1,140	70,120
April	44,819	4,760	693	1,494	88,900
May	32,711	3,400	556	1,055	64,880
June	27,669	2,440	484	919	54,680
July	9,381	556	182	303	18,610
August	5,399	222	134	174	10,710
September	4,236	609	103	141	8,400
Water year 1936-37	238,950	5,980	96	655	474,000

Quinault River at Quinault Lake, Wash.

Location.- Water-stage recorder, lat. 47°27'30", long. 123°53'30", in sec. 25, T. 23 N., R. 10 W., at outlet of Quinault Lake, 4 miles southwest of Quinault.

Drainage area.- 264 square miles.

Records available.- October 1911 to December 1922, July to November 1924, September 1925 to November 1932, May 1933 to September 1937. October 1911 to September 1933 (monthly discharge), in State Water-Supply Bulletin 5.

Average discharge.- 26 years, 2,710 second-feet.

Extremes.- Maximum discharge during year, 16,100 second-feet Dec. 22 (gage height, 10.79 feet); minimum, 360 second-feet Nov. 16 (gage height, 2.09 feet).
1911-22, 1924-32, 1933-37: Maximum discharge, 37,000 second-feet Dec. 12, 1921 (gage height, 16.3 feet, former datum); minimum, 285 second-feet Sept. 20, 1924 (gage height, 0.74 foot, former datum).

Remarks.- Records excellent except those for Jan. 2-19, May 2, which were computed on basis of records for South Fork of Skokomish River near Union, and are fair. No diversions. Slight regulation caused by natural storage in lake.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 22				Dec. 23 to Sept. 30			
2.0	320	5.0	3,210	2.2	470	3.5	1,400
2.5	565	6.0	4,800	2.5	630	4.0	1,910
3.0	910	7.0	6,730	3.0	960		
3.5	1,370	8.0	8,880				
4.0	1,910	9.0	11,250	Note.- Above 3.9 feet same as preceding table.			
4.5	2,500	10.0	13,820				
		11.0	16,650				

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	470	392	370	1,960	726	2,310	2,310	2,080	2,980	3,740	1,080	992
2	460	383	370	1,800	738	3,360	2,310	2,250	3,660	3,510	1,020	946
3	480	378	374	1,650	732	3,980	2,250	2,500	4,300	3,140	1,010	890
4	583	374	370	1,600	778	3,740	2,250	3,060	4,140	3,060	960	841
5	619	401	388	1,800	968	4,300	2,630	3,060	3,820	2,910	946	827
6	595	420	1,010	1,800	1,050	5,340	2,910	2,840	3,820	2,700	946	799
7	571	415	3,360	1,600	1,010	4,630	2,700	2,700	3,980	2,500	932	757
8	548	406	3,140	1,500	953	3,900	2,440	3,480	4,060	2,500	904	726
9	521	396	2,700	1,350	904	3,820	2,310	7,220	3,980	2,440	883	702
10	505	388	2,250	1,300	890	3,900	3,060	8,660	4,140	2,370	904	678
11	500	383	1,960	1,300	1,060	3,580	3,510	7,570	3,900	2,310	1,030	654
12	500	388	1,910	1,250	1,170	3,360	3,440	6,110	3,510	2,250	1,030	636
13	516	383	4,820	1,200	1,160	3,440	6,110	5,160	3,280	2,190	1,000	624
14	601	374	5,530	1,150	1,100	3,510	9,400	5,530	3,140	2,080	968	618
15	670	370	4,460	1,100	1,130	3,280	10,800	5,160	3,060	2,020	918	606
16	664	370	3,580	1,100	1,400	2,910	8,000	4,460	3,210	1,960	869	600
17	638	425	4,060	1,050	2,020	2,700	5,910	4,140	3,980	1,910	813	588
18	613	475	7,150	1,000	2,250	2,440	4,460	3,820	5,760	1,910	856	576
19	583	495	10,300	976	2,080	2,250	3,740	3,580	6,940	1,860	750	565
20	554	495	7,780	932	1,860	2,130	3,820	3,280	6,520	1,750	726	555
21	526	485	7,360	890	2,870	2,020	4,460	3,060	7,150	1,700	732	540
22	505	470	13,500	869	4,800	1,960	3,980	3,060	6,730	1,600	841	530
23	490	450	13,300	834	5,160	1,860	3,510	2,980	6,940	1,550	976	515
24	480	440	8,880	820	4,300	1,800	3,060	2,980	7,360	1,500	992	505
25	465	420	6,310	848	3,580	1,750	2,700	3,060	6,310	1,500	976	500
26	455	406	4,800	869	3,140	1,650	2,500	3,060	5,340	1,450	992	490
27	445	396	3,980	848	2,700	1,600	2,370	3,060	4,800	1,400	953	485
28	430	388	3,280	813	2,370	1,500	2,250	2,980	4,460	1,300	897	480
29	420	378	2,770	785	-	1,450	2,130	2,840	4,460	1,260	841	480
30	410	370	2,440	750	-	1,600	2,080	2,700	4,140	1,210	869	650
31	406	-	2,190	732	-	2,080	-	2,630	-	1,150	1,000	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	16,223	670	406	523	1.98	2.28	32,180
November	12,314	495	370	410	1.55	1.73	24,420
December	134,692	13,500	370	4,345	16.5	19.02	267,200
Calendar year 1936	858,788	13,500	370	2,346	8.89	120.93	1,703,000
January	36,475	1,960	732	1,177	4.46	5.14	72,350
February	82,899	5,160	726	1,889	7.16	7.46	104,900
March	88,160	5,340	1,450	2,844	10.8	12.45	174,800
April	113,400	10,800	2,080	3,780	14.3	15.95	224,900
May	119,070	8,660	2,080	3,841	14.6	16.72	236,200
June	139,870	7,360	2,980	4,662	17.7	19.75	277,400
July	64,730	3,740	1,150	2,088	7.91	9.12	128,400
August	28,613	1,080	726	923	3.50	4.04	56,750
September	19,355	992	480	645	2.44	2.72	38,390
Water year 1936-37	825,791	13,500	370	2,262	8.57	116.38	1,638,000

Queets River near Clearwater, Wash.

Location.- Water-stage recorder, lat. 47°32', long. 124°19', in SW¼ sec. 36, T. 24 N., R. 13 W., on Quinault Indian Reservation, 4 miles southwest of Clearwater. Zero of gage is 14.5 feet above mean sea level (Geological Survey river profile).

Drainage area.- 454 square miles.

Records available.- September 1930 to September 1937.

Extremes.- Maximum discharge during year, 37,900 second-feet Dec. 22 (gage height, 17.80 feet); minimum, 478 second-feet Sept. 25, 29 (gage height, 4.47 feet).
1930-37: Maximum discharge, about 100,000 second-feet Jan. 22, 1935 (gage height, 27.0 feet, present datum, from floodmarks), from rating curve extended above 31,000 second-feet; minimum, 420 second-feet Aug. 23, 24, 1931; minimum gage height, 3.58 feet, present datum, Oct. 11, 1932.

Remarks.- Records excellent for Oct. 1 to June 15 and good for June 16 to Sept. 30 except those for Apr. 1 to May 18, June 30 to July 8, which were computed on basis of four gage readings and records for Hoh River near Spruce and Quinault River at Quinault Lake and are fair. No diversion or regulation.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used June 19 to Sept.30)

4.5	490	10.0	8,850
5.0	770	12.0	15,030
5.5	1,110	14.0	22,500
6.0	1,550	16.0	30,400
7.0	2,750	18.0	38,700
8.0	4,340		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	596	555	575	2,540	1,190	5,450	4,300	3,900	2,610	2,750	734	1,070
2	580	530	626	2,350	1,700	9,560	3,900	4,400	3,100	2,600	710	925
3	773	520	620	2,160	1,650	7,860	3,600	5,000	3,080	2,400	716	860
4	2,300	525	626	3,230	3,310	6,220	4,400	3,720	2,480	2,200	728	800
5	1,170	1,460	680	2,720	5,110	11,400	7,000	3,400	2,420	2,100	734	800
6	890	1,340	10,000	2,220	3,400	9,420	5,600	3,000	2,480	1,950	722	770
7	800	830	9,880	1,980	2,680	6,450	4,700	3,500	2,610	1,800	740	710
8	740	698	6,140	1,870	2,160	5,350	4,000	7,000	2,610	1,700	692	686
9	704	644	5,110	1,820	1,870	8,050	5,200	15,000	2,480	1,600	710	668
10	680	614	3,400	1,700	2,140	6,220	8,400	12,500	2,800	1,500	882	638
11	680	692	2,890	1,600	7,240	5,140	6,000	10,600	2,420	1,500	1,720	620
12	800	900	5,880	1,500	4,640	4,930	5,600	9,000	2,100	1,450	995	620
13	1,390	692	20,000	1,650	3,330	5,040	11,000	9,800	2,040	1,400	860	608
14	2,620	650	9,940	1,650	2,680	4,930	20,000	6,680	1,920	1,320	860	606
15	1,920	620	6,680	2,650	4,770	4,150	14,300	5,500	2,100	1,230	752	614
16	1,320	632	5,240	1,980	6,910	3,640	11,800	4,500	2,480	1,320	692	614
17	1,150	1,260	12,700	1,870	14,900	3,400	10,000	4,200	3,780	1,320	662	585
18	995	1,040	20,800	1,920	7,690	3,180	8,400	3,700	10,600	1,270	668	580
19	925	960	14,200	1,600	4,790	3,030	7,000	3,400	7,110	1,150	656	570
20	860	995	9,070	1,400	5,010	2,820	11,600	3,030	6,910	1,110	626	555
21	770	860	14,600	1,360	22,400	2,610	9,400	2,890	8,930	1,070	668	525
22	740	758	27,500	1,320	16,400	2,420	7,800	2,960	6,680	995	1,740	515
23	722	710	15,200	1,360	12,600	2,280	6,600	2,680	7,560	995	1,720	495
24	698	674	9,820	1,360	8,100	2,220	5,700	2,680	8,390	1,030	1,070	486
25	680	644	7,140	1,670	6,680	2,040	5,000	2,750	5,350	1,030	1,070	478
26	644	614	6,220	1,700	5,780	1,920	4,800	2,540	4,150	960	1,500	495
27	626	596	4,930	1,400	4,830	1,820	4,700	2,480	3,640	925	1,070	505
28	608	575	4,060	1,320	4,150	1,760	4,200	2,420	3,330	890	890	486
29	590	565	3,560	1,230	-	1,700	3,900	2,280	3,180	860	800	486
30	580	555	3,330	1,150	-	2,860	3,880	2,100	3,000	800	1,100	3,820
31	575	-	2,890	1,110	-	5,910	-	2,220	-	764	1,630	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	29,126	2,620	575	940	2.07	2.39	57,770
November	22,608	1,460	520	754	1.66	1.85	44,840
December	244,307	27,500	575	7,881	17.4	20.06	484,600
Calendar year 1936	1,340,214	27,500	520	3,662	8.07	109.84	2,658,000
January	55,390	3,230	1,110	1,787	3.94	4.54	109,900
February	168,110	22,400	1,190	6,004	13.2	13.75	333,400
March	143,780	11,400	1,700	4,638	10.2	11.76	285,200
April	212,780	20,000	3,600	7,093	15.6	17.40	422,000
May	149,830	15,000	2,100	4,833	10.6	12.22	297,200
June	122,340	10,600	1,920	4,078	8.98	10.02	242,700
July	43,989	2,750	764	1,419	3.13	3.61	87,250
August	29,117	1,740	626	939	2.07	2.39	57,750
September	22,192	3,820	478	740	1.63	1.82	44,020
Water year 1936-37	1,243,569	27,500	478	3,407	7.50	101.81	2,467,000

Hoh River near Spruce, Wash.

Location.- Water-stage recorder, lat. 47°48', long. 124°06', in sec. 34, T. 27 N., R. 11 W., 2¼ miles below Spruce and 5 miles below South Fork.

Drainage area.- 193 square miles.

Records available.- August 1926 to September 1937.

Average discharge.- 11 years, 1,981 second-feet.

Extremes.- Maximum discharge during year, about 15,000 second-feet Dec. 22 (gage height, 12.23 feet), from rating curve extended above 8,000 second-feet; minimum, 333 second-feet Nov. 10 (gage height, 0.71 foot).
1926-37: Maximum discharge, about 40,000 second-feet Nov. 5, 1934 (gage height, 21.2 feet, from high-water mark in gage structure), from rating curve extended above 8,000 second-feet (gage observer noted water higher on this day than at any other time during his 43 years of residence on the stream); minimum discharge, 247 second-feet Nov. 14, 15, 1929; minimum gage height, that of Nov. 10, 1936.

Remarks.- Records good except those above 3,000 second-feet, which are fair. No diversion or artificial regulation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	685	379	355	1,290	550	1,720	1,360	1,330	2,170	2,500	925	1,030
2	623	355	344	1,200	566	2,400	1,210	1,450	2,650	2,330	900	1,000
3	686	344	355	1,110	550	2,170	1,180	2,100	2,650	2,090	925	975
4	1,160	355	344	1,290	662	2,100	1,330	2,030	2,240	2,330	1,030	925
5	800	442	404	1,110	745	3,320	1,750	1,680	2,170	1,930	1,060	900
6	752	405	4,440	990	669	3,120	1,610	1,510	2,320	1,790	1,090	850
7	825	367	3,220	940	634	2,400	1,390	1,640	2,480	1,790	1,120	828
8	790	355	2,160	890	616	2,100	1,270	3,240	2,560	1,930	1,060	875
9	800	344	1,790	868	582	2,740	1,400	5,050	2,480	1,860	1,030	850
10	875	333	1,370	825	633	2,320	2,100	4,020	2,650	1,790	1,240	785
11	825	355	1,250	805	940	2,100	1,890	3,220	2,320	1,860	1,760	875
12	800	392	1,920	725	868	2,100	1,810	2,650	2,100	1,930	1,480	925
13	1,140	379	5,500	745	785	2,240	5,040	2,830	2,100	1,860	1,400	900
14	1,700	379	3,490	745	725	2,170	6,970	3,220	2,030	1,760	1,120	950
15	1,100	392	2,490	785	1,020	1,890	5,140	2,560	2,240	1,680	875	1,060
16	958	433	2,000	725	1,410	1,720	3,500	2,320	2,340	1,860	805	925
17	902	1,140	3,510	706	2,600	1,540	2,740	2,170	2,560	1,930	875	875
18	825	775	7,490	687	1,840	1,420	2,320	2,100	4,260	1,930	950	875
19	685	902	5,480	651	1,380	1,300	2,100	2,030	3,740	1,760	900	828
20	584	718	3,710	616	1,300	1,210	2,910	1,820	3,780	1,580	875	785
21	529	584	7,320	616	4,240	1,120	2,740	1,820	4,910	1,440	962	680
22	565	512	11,200	616	3,550	1,070	2,400	1,890	3,900	1,400	1,790	631
23	603	463	5,800	616	3,020	1,020	2,170	1,750	4,260	1,480	1,270	600
24	584	448	3,970	599	2,320	952	1,960	1,820	4,090	1,620	1,030	585
25	529	448	2,990	634	2,100	908	1,750	1,960	3,080	1,580	1,180	585
26	495	433	2,610	599	1,890	885	1,680	1,820	2,680	1,440	1,270	647
27	463	419	2,180	582	1,680	865	1,610	1,820	2,680	1,400	925	713
28	433	392	1,880	566	1,510	845	1,480	1,820	2,880	1,440	805	647
29	419	367	1,700	550	-	825	1,360	1,640	2,980	1,300	748	600
30	405	355	1,560	534	-	1,020	1,360	1,510	2,500	1,150	1,110	1,660
31	392	-	1,410	534	-	1,450	-	1,680	-	975	1,220	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	22,932	1,700	392	740	3.83	4.42	45,480
November	13,965	1,140	333	466	2.41	2.69	27,700
December	94,242	11,200	344	3,040	15.8	18.22	186,900
Calendar year 1936	684,222	11,200	333	1,869	9.68	131.94	1,357,000
January	24,149	1,290	534	779	4.04	4.66	47,900
February	39,385	4,240	550	1,407	7.29	7.59	78,120
March	53,040	3,320	825	1,711	8.87	10.23	105,200
April	67,530	6,970	1,180	2,251	11.7	13.05	133,900
May	68,500	5,050	1,330	2,210	11.5	13.26	135,900
June	85,800	4,910	2,030	2,860	14.8	16.51	170,200
July	53,715	2,500	975	1,733	8.98	10.35	106,500
August	33,730	1,790	748	1,088	5.64	6.50	66,900
September	25,364	1,660	585	845	4.38	4.89	50,310
Water year 1936-37	582,352	11,200	333	1,595	8.26	112.37	1,155,000

Soleduck River near Fairholm, Wash.

Location.- Water-stage recorder, lat. 48°02'30", long. 123°57'30", in lot 4, sec. 35, T. 30 N., R. 10 W., 300 feet below South Fork and 7 miles southwest of Fairholm.

Drainage area.- 79 square miles.

Records available.- October 1917 to September 1921, October 1933 to September 1937.

Extremes.- Maximum discharge during year, 10,300 second-feet Dec. 22 (gage height, 9.26 feet); minimum not determined, possibly less than 60 second-feet sometime during Nov. 2-4.

1917-21, 1933-37: Maximum discharge, 24,300 second-feet Dec. 21, 1933 (gage height, 14.9 feet), from rating curve extended above 5,000 second-feet; minimum, 58 second-feet Sept. 29, Oct. 2, 3, 1918 (gage height, 0.48 foot, former datum).

Remarks.- Records excellent except those for period of missing gage heights, Oct. 26 to Nov. 12 (computed on basis of records for Queets River near Clearwater), and for periods of ice effect, Jan. 7, 8, 11, 12, 20-23, Jan. 30 to Feb. 3, Feb. 6-9 (computed on basis of gage heights and weather records), which are poor. No diversion or regulation.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.0	53	4.0	1,260
1.5	111	5.0	2,200
2.0	228	6.0	3,580
2.5	391	7.0	5,330
3.0	600	8.0	7,350
3.5	900		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	65	70	362	120	461	498	421	905	630	184	125
2	79	60	71	345	120	625	429	543	1,110	577	177	115
3	81	60	70	335	120	635	399	900	980	545	169	110
4	100	60	69	366	127	682	457	872	794	545	167	106
5	87	150	80	305	140	1,200	520	650	794	486	164	105
6	81	100	1,940	270	140	1,190	524	559	851	445	167	104
7	76	90	1,030	220	140	851	429	592	900	445	160	99
8	73	75	563	240	130	704	402	1,200	935	453	160	98
9	71	75	421	258	130	900	457	1,840	858	425	155	95
10	70	75	318	240	129	806	610	1,460	865	414	152	93
11	70	90	321	220	162	716	563	1,260	746	414	177	91
12	71	100	991	220	152	728	682	1,040	662	410	157	88
13	92	81	2,400	225	131	844	2,190	1,220	645	395	155	87
14	206	75	1,150	222	124	824	3,970	1,300	615	369	164	86
15	158	70	725	220	208	710	2,030	970	680	355	142	84
16	111	75	578	208	267	610	1,300	858	712	362	129	83
17	99	135	1,250	206	403	559	970	800	746	362	124	82
18	91	106	3,460	195	331	507	788	746	1,110	348	120	81
19	87	93	1,740	179	261	457	692	728	952	318	116	79
20	84	95	1,160	150	257	414	1,060	635	1,110	302	113	78
21	83	90	2,820	160	1,310	387	970	640	1,420	283	115	77
22	81	83	5,590	160	1,180	362	800	680	1,140	274	206	76
23	81	79	1,840	160	972	348	692	615	1,320	261	195	73
24	79	76	1,180	160	674	331	605	605	1,220	255	146	73
25	77	73	886	162	568	315	554	734	935	252	137	73
26	75	72	734	152	524	302	545	686	837	234	177	75
27	75	71	605	146	469	292	515	656	830	222	146	76
28	75	70	537	140	418	289	469	635	824	217	125	72
29	75	69	445	129	-	286	429	568	788	211	115	72
30	75	68	437	120	-	356	421	550	674	203	125	296
31	70	-	395	120	-	512	-	643	-	195	157	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,715	206	70	87.6	1.11	1.28	5,390
November	2,481	150	60	82.7	1.05	1.17	4,920
December	33,876	5,590	69	1,093	13.8	15.91	67,190
Calendar year 1936	187,577	5,590	60	513	6.49	88.32	372,000
January	6,595	366	120	213	2.70	3.11	13,080
February	9,707	1,310	120	347	4.39	4.57	19,250
March	18,203	1,200	286	587	7.43	8.57	36,110
April	24,970	3,970	399	832	10.5	11.71	49,530
May	25,606	1,840	421	826	10.5	12.11	50,790
June	26,958	1,420	615	899	11.4	12.72	53,470
July	11,207	630	195	362	4.58	5.28	22,230
August	4,696	206	113	151	1.91	2.20	9,310
September	2,852	296	72	95.1	1.20	1.34	5,660
Water year 1936-37	169,866	5,590	60	465	5.89	79.97	336,900

Elwha River at McDonald Bridge, near Port Angeles, Wash.

Location.- Water-stage recorder, lat. 48°03'20", long. 123°34'55", in NE¼NW¼ sec. 33, T. 30 N., R. 7 W., at McDonald Bridge, 8 miles southwest of Port Angeles. Zero of gage is 200.00 feet above mean sea level (general adjustment of 1929).
Drainage area.- 262 square miles.
Records available.- October 1897 to December 1901, October 1918 to September 1937.
Average discharge.- 23 years, 1,469 second-feet.
Extremes.- Maximum discharge observed during year, 8,870 second-feet Dec. 22 (gage height, 16.10 feet), from rating curve extended above 4,000 second-feet; minimum, regulated, 39 second-feet Nov. 29, 30 (gage height, 6.77 feet); minimum daily discharge, regulated, 40 second-feet Nov. 15.
1897-1901, 1918-37: Maximum discharge, 26,700 second-feet Dec. 21, 1933 (gage height, 10.5 feet, former site and datum, from floodmarks); minimum daily discharge, regulated, 11 second-feet Sept. 18, 25, 1932.
Remarks.- Records excellent except those below 300 second-feet, which are fair, and those for Sept. 9-14, which were computed on basis of plant superintendent's report of flow at Glines Canyon and are poor. Flow regulated for power development by operation of Glines Canyon Reservoir (capacity at elevation 610 feet, 38,650 acre-feet). Flow that is diverted through power house is returned to river above gage. Reservoir gage heights furnished by Crown-Zellerbach Corporation.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 14				Apr. 14 to Sept. 30			
6.7	33	10.0	1,340	7.0	60	10.0	1,460
7.0	60	11.0	2,050	7.5	160	11.0	2,280
7.5	160	12.0	3,030	8.0	335	12.0	3,360
8.0	335	13.0	4,200	8.5	570	13.0	4,600
8.5	550	14.0	5,550	9.0	850		
9.0	795						

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	616	*123	282	839	438	607	795	1,160	2,660	2,660	*1,090	714
2	642	42	280	844	478	820	820	*782	3,590	2,800	1,060	688
3	491	172	288	534	546	1,010	658	1,120	3,860	2,330	1,020	779
4	*198	314	288	630	544	1,040	*600	1,940	3,150	*2,190	1,050	751
5	464	286	160	836	609	1,110	768	1,890	3,050	2,410	955	*384
6	667	300	*154	717	578	1,490	808	1,630	*2,960	1,990	688	101
7	553	382	864	694	*244	*1,270	796	1,640	3,290	1,600	842	505
8	454	*142	858	614	498	1,100	834	2,190	3,710	2,110	*826	718
9	485	43	737	546	582	1,340	780	*2,660	3,620	2,050	830	608
10	472	250	716	*352	607	1,370	780	2,820	3,610	1,980	870	955
11	*299	292	611	626	548	1,280	*639	2,330	3,360	*1,930	872	565
12	352	372	642	801	423	1,310	1,030	2,020	2,840	1,940	812	*450
13	409	234	*680	846	455	1,380	1,160	2,330	*2,580	1,980	869	525
14	474	45	604	842	*335	*1,260	3,520	3,250	2,550	1,720	876	511
15	509	*40	673	776	545	1,350	3,510	3,010	2,460	1,640	*786	585
16	590	158	657	792	636	1,250	1,980	*1,670	2,670	1,740	820	584
17	488	370	716	*434	619	1,190	2,140	1,960	3,060	1,860	951	548
18	*234	390	1,940	574	634	1,180	*1,300	2,060	3,230	*1,790	883	560
19	216	360	2,170	682	610	1,100	1,520	2,080	3,700	1,580	868	*580
20	466	250	*1,490	660	487	1,030	1,700	2,020	*3,280	1,570	660	589
21	443	160	2,580	634	*350	*866	1,570	2,010	3,670	1,550	663	618
22	621	*44	5,480	588	558	958	1,430	1,980	3,630	1,520	*476	576
23	414	321	2,980	610	631	965	1,410	*2,090	3,220	1,510	543	496
24	336	324	2,290	*346	674	946	1,350	1,990	3,210	1,460	548	453
25	*153	313	1,530	518	595	805	*955	2,450	2,830	*1,070	609	452
26	184	293	1,050	672	600	786	1,440	2,450	2,720	1,510	560	*256
27	600	232	*964	572	630	790	1,540	2,440	*2,750	1,470	593	333
28	152	118	812	642	*621	*501	1,140	2,420	3,090	1,480	434	533
29	44	*41	884	582	-	706	1,100	2,080	3,210	1,190	*533	270
30	162	146	986	533	-	785	1,100	*1,900	3,090	1,070	588	401
31	206	-	1,000	*435	-	772	-	2,020	-	962	758	-

Month	Observed				Gain or loss in storage in Glines Canyon Reservoir (acre-feet)	Adjusted for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October	667	44	400	24,580	-2,220	22,360	364	1.39	1.60
November	390	40	219	13,050	+3,420	16,470	277	1.06	1.18
December	5,480	154	1,141	70,150	+5,140	75,290	1,224	4.67	5.38
Calendar year 1936	5,480	40	1,205	875,000	-920	874,100	1,204	4.60	62.51
January	846	346	638	39,220	-6,200	33,020	537	2.05	2.36
February	674	244	538	29,900	+5,690	35,590	641	2.45	2.55
March	1,490	501	1,044	64,200	-1,580	62,620	1,018	3.89	4.48
April	3,520	600	1,306	77,700	+590	78,290	1,316	5.02	5.60
May	3,250	782	2,077	127,700	+2,210	129,900	2,113	8.06	9.29
June	3,860	2,460	3,155	187,700	-260	187,400	3,149	12.0	13.39
July	2,660	962	1,757	108,000	-1,530	106,500	1,732	6.61	7.62
August	1,090	434	773	47,510	+1,230	48,740	793	3.03	3.49
September	955	101	536	31,910	-2,800	29,110	489	1.87	2.09
Water year 1936-37	5,480	40	1,135	821,600	+3,690	825,300	1,140	4.35	59.03

*Sunday.

Dungeness River near Sequim, Wash.

Location.- Water-stage recorder, lat. 48°00'40", long. 123°07'50", in SW¼SE¼ sec. 12, T. 29 N., R. 4 W., three-quarters of a mile above Canyon Creek and 4½ miles southwest of Sequim.

Drainage area.- 156 square miles (revised).

Records available.- June to September 1937. July 1897 to July 1898, at site about 2 miles downstream; June 1923 to September 1930, at site half a mile downstream.

Extremes.- Maximum discharge during June to September 1937, 1,200 second-feet June 21 (computed on basis of records for Dosewallips River near Brinnon); minimum, 105 second-feet Sept. 24, 25 (gage height. 2.66 feet).
1897-98, 1923-30, 1937: Maximum discharge recorded, 5,140 second-feet Feb. 12, 1924; minimum, 77 second-feet Sept. 10, 1928.

Remarks.- Records good except those for periods of missing gage heights, June 1-18, 20, 21, July 4, 18, 25, and of backwater effect from logs, July 29-31, Aug. 3-14, which were computed on basis of records for Dosewallips River near Brinnon and are poor. Staff gage read to hundredths once or twice daily June 19 to Aug. 12. No diversion or regulation.

Rating table, June to September 1937 except period of backwater effect (gage height, in feet, and discharge, in second-feet)

2.6	95
3.0	179
3.5	375
4.0	615
4.5	890
5.0	1,210

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										860	269	174
2										830	257	166
3									900	720	260	163
4										750	270	161
5										748	290	171
6										640	300	163
7										610	280	156
8									950	665	260	153
9										665	240	151
10										615	260	144
11										640	310	142
12										615	280	144
13										600	270	140
14									750	565	230	138
15										510	224	144
16										560	204	142
17										580	204	135
18									850	570	217	135
19										560	214	133
20									920	480	204	129
21									1,050	470	198	123
22									1,200	456	217	116
23									1,010	434	207	110
24									830	434	188	107
25									720	430	182	107
26									692	416	185	114
27									748	406	171	114
28									802	380	161	112
29									950	360	153	109
30									1,040	330	174	152
31									890	300	201	-

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	26,402	1,200	692	880	5.64	6.29	52,370
July	17,199	860	300	555	3.56	4.10	34,110
August	7,080	310	153	228	1.46	1.68	14,040
September	4,148	174	107	138	.885	.99	8,230
The period							108,800

DOSEWALLIPS RIVER BASIN

Dosewallips River near Brinnon, Wash.

Location.- Water-stage recorder, lat. 47°43', long. 123°00', in SW¼ sec. 24, T. 26 N., R. 3 W., half a mile above Corrigenda ranger station and 5⅛ miles northwest of Brinnon.

Drainage area.- 94 square miles (revised).

Records available.- October 1930 to September 1937.

Extremes.- Maximum discharge during year, 1,980 second-feet Dec. 22 (gage height, 4.96 feet); minimum, 65 second-feet Dec. 4 (gage height, 1.71 feet).
1930-37: Maximum discharge, about 10,900 second-feet Nov. 5, 1934 (gage height, 9.57 feet), from rating curve extended above 4,500 second-feet; minimum, that of Dec. 4, 1936.

Remarks.- Records excellent. No diversion or regulation.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

1.7	64
2.0	112
2.3	177
2.7	315
3.0	450
3.5	705
4.0	1,050
4.5	1,500
5.0	2,030

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	116	77	70	148	88	207	262	323	1,180	1,130	319	195
2	114	74	68	142	88	280	244	482	1,600	1,030	315	195
3	116	74	67	137	83	272	233	922	1,550	970	319	189
4	135	75	67	142	89	288	240	1,050	1,260	1,030	328	183
5	116	77	68	131	91	472	254	772	1,180	978	340	189
6	114	78	199	116	88	510	251	661	1,260	804	349	177
7	120	75	192	114	83	393	237	650	1,400	817	323	174
8	118	74	120	118	81	328	233	735	1,450	886	307	174
9	116	74	103	122	81	465	262	986	1,400	837	288	170
10	120	72	92	116	83	470	319	907	1,600	804	307	162
11	118	74	89	110	88	440	303	753	1,220	798	357	172
12	114	75	102	110	86	500	364	705	1,050	778	319	172
13	127	74	266	108	84	515	865	950	1,050	741	311	167
14	144	74	157	107	83	510	1,100	1,090	1,040	693	265	174
15	118	75	123	105	91	445	995	900	1,180	650	233	183
16	112	78	112	103	98	393	705	830	1,260	678	224	167
17	112	116	158	101	132	353	565	747	1,180	711	233	154
18	112	96	381	99	116	315	490	747	1,300	688	247	157
19	105	105	420	92	110	292	431	765	1,310	625	237	152
20	98	101	292	84	110	292	426	711	1,400	570	227	152
21	92	88	546	91	118	296	412	747	1,600	540	227	146
22	98	81	1,440	96	137	292	366	798	1,360	525	269	137
23	96	80	785	96	146	269	340	772	1,220	520	227	131
24	94	77	470	92	157	258	315	851	1,050	540	214	127
25	92	77	344	92	172	247	307	986	986	525	224	123
26	86	75	353	91	174	244	332	963	1,040	495	217	125
27	84	74	276	91	172	240	357	928	1,180	470	192	129
28	81	72	247	89	167	233	344	893	1,360	455	180	125
29	80	71	210	86	-	233	323	784	1,360	436	174	120
30	80	70	189	84	-	244	307	753	1,130	393	214	338
31	78	-	170	84	-	258	-	875	-	357	220	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,306	144	78	107	1.14	1.31	6,560
November	2,383	116	70	79.4	.845	.94	4,730
December	8,176	1,440	67	264	2.81	3.24	16,220
Calendar year 1936	135,459	1,910	67	370	3.94	*53.58	268,700
January	3,297	148	84	106	1.13	1.30	6,540
February	3,096	174	81	111	1.18	1.23	6,140
March	10,554	515	207	340	3.62	4.17	20,930
April	12,182	1,100	233	406	4.32	4.82	24,160
May	25,036	1,090	323	808	8.60	9.92	49,660
June	38,156	1,600	986	1,272	13.5	15.06	75,680
July	21,464	1,130	357	692	7.36	8.48	42,570
August	8,206	357	174	265	2.82	3.25	16,280
September	4,959	338	120	165	1.76	1.96	9,840
Water year 1936-37	140,815	1,600	67	386	4.11	55.68	279,300

*Computed on basis of revised drainage area.

North Fork of Skokomish River below Staircase Rapids, near Hoodsport, Wash.

Location.- Staff gage, lat. 47°31', long. 123°20', in NW¼ sec. 4, T. 23 N., R. 5 W., 2 miles above Dry Creek and 11½ miles northwest of Hoodsport.

Drainage area.- 60 square miles.

Records available.- July 1924 to September 1937.

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

Extremes.- Maximum discharge during year, 4,840 second-feet Dec. 22 (gage height, 6.85 feet); minimum, 32 second-feet Dec. 1 (gage height, 1.32 feet).
1924-37: Maximum discharge, about 23,300 second-feet Nov. 5, 1934 (gage height, 14.4 feet, from floodmarks), from rating curve extended above 3,200 second-feet; minimum, 16 second-feet Sept. 23, 1930 (gage height, 1.12 feet).

Remarks.- Records good. Discharge for Oct. 25-31, Nov. 14, Dec. 3, 14, 15, Mar. 7, 8, 11, 22, 24, 29, 30 and Apr. 16 interpolated; that for Dec. 19, 20, Apr. 5-7, 12, 13, 19-21 computed on basis of records for South Fork of Skokomish River near Union and Dosewallips River near Brinnon. Gage read once daily. No diversion or regulation.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 22				Dec. 23 to Sept. 30			
1.3	30	4.0	1,200	1.5	49	4.0	1,150
1.5	51	4.5	1,640	2.0	124	4.5	1,600
2.0	138	5.0	2,110	2.5	259	5.0	2,100
2.5	283	5.5	2,630	3.0	472	5.5	2,650
3.0	500	6.0	3,300	3.5	780		
3.5	810	7.0	5,150				

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	37	33	211	84	334	472	399	955	780	196	100
2	51	37	34	196	85	675	376	447	1,230	745	182	96
3	49	37	34	182	80	525	314	1,030	1,230	640	182	91
4	49	38	33	226	74	422	376	1,030	990	675	182	86
5	49	40	35	182	103	885	420	815	920	610	182	91
6	47	44	38	155	85	850	450	640	990	552	169	88
7	68	41	384	155	76	815	430	675	1,070	552	167	80
8	59	39	174	150	72	780	422	1,150	1,070	552	159	80
9	51	37	147	145	68	745	472	2,420	955	552	155	78
10	49	36	111	141	69	640	580	1,600	1,150	525	150	76
11	49	37	111	132	74	658	498	1,230	850	525	169	73
12	47	37	121	128	79	675	600	955	780	498	155	73
13	46	37	1,040	124	74	745	1,500	1,150	780	472	145	72
14	44	36	760	120	73	675	2,530	1,320	745	447	132	69
15	43	36	481	120	76	580	1,600	1,030	850	422	124	70
16	43	39	202	109	78	525	1,160	920	955	422	120	68
17	42	81	528	109	69	447	710	885	1,030	422	118	65
18	42	54	920	105	84	399	610	850	2,000	422	120	64
19	41	48	1,250	98	74	276	500	815	1,320	376	116	63
20	40	46	500	91	72	355	540	815	1,600	334	114	60
21	40	42	1,820	95	182	355	540	780	1,700	334	111	59
22	39	40	4,740	91	314	334	525	780	1,230	314	167	58
23	38	38	1,900	91	334	314	498	780	1,410	314	130	56
24	38	37	675	85	259	296	399	780	1,230	314	114	53
25	39	36	640	95	259	277	422	885	990	295	113	53
26	38	35	472	88	242	277	447	815	955	277	111	54
27	38	34	376	88	226	259	498	780	955	277	103	52
28	38	34	334	84	211	259	447	780	955	259	96	50
29	37	34	295	80	-	338	399	710	990	242	91	49
30	37	33	277	79	-	418	376	640	850	226	116	850
31	37	-	242	80	-	498	-	710	-	211	118	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,378	68	37	44.5	0.742	0.86	2,730
November	1,200	81	33	40.0	.667	.74	2,380
December	18,707	4,740	33	603	10.0	11.53	37,100
Calendar year 1936	145,298	4,740	33	397	6.62	89.94	288,200
January	3,835	226	79	124	2.07	2.39	7,610
February	3,576	334	68	128	2.13	2.22	7,090
March	15,731	885	259	507	8.45	9.74	31,200
April	19,111	2,530	314	637	10.6	11.83	37,910
May	28,616	2,420	399	923	15.4	17.75	56,760
June	32,735	2,000	745	1,091	18.2	20.31	64,930
July	13,586	780	211	438	7.30	8.42	26,950
August	4,307	196	91	139	2.32	2.68	8,540
September	2,877	850	49	95.9	1.60	1.78	5,710
Water year 1936-37	145,659	4,740	33	399	6.65	90.25	288,900

South Fork of Skokomish River near Union, Wash.

Location.- Water-stage recorder, lat. 47°20'30", long. 123°16'30", in NE¼ sec. 2, T. 21 N., R. 5 W., 5 miles above Vance Creek and 8 miles west of Union.

Drainage area.- 81 square miles.

Records available.- August 1931 to September 1937.

Extremes.- Maximum discharge during year, 10,000 second-feet Dec. 22 (gage height, 9.46 feet), from rating curve extended above 3,500 second-feet; minimum, 71 second-feet Nov. 15, 16, 29, 30, Dec. 1-3 (gage height, 4.50 feet).
1931-37: Maximum discharge, 17,000 second-feet Jan. 22, 1935 (gage height, 11.0 feet), from rating curve extended above 4,000 second-feet; minimum, 71 second-feet Oct. 11, 1932 and at times during November and December 1936.

Remarks.- Records good except those for Sept. 15-30 (computed on basis of records for North Fork of Skokomish River below Staircase Rapids, near Hoodsport, and Wynoochee River at Oxbow, near Aberdeen), and those above 5,000 second-feet, all of which are poor. No diversion or regulation.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 21				Dec. 22 to Sept. 30			
4.4	54	6.0	1,080	4.5	90	6.5	1,880
4.6	91	6.5	1,780	4.7	173	7.0	2,650
5.0	222	7.0	2,670	5.0	317	8.0	4,660
5.5	580	8.0	5,220	5.5	710	9.0	8,150
				6.0	1,200		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	91	73	71	475	173	1,030	1,110	702	634	532	182	143
2	91	73	73	421	160	2,030	900	791	764	491	178	134
3	91	73	73	391	152	1,620	800	1,090	764	451	173	130
4	100	73	73	459	187	1,300	881	1,090	659	436	169	126
5	98	79	73	451	242	1,850	1,170	890	625	406	169	126
6	93	85	383	391	210	1,930	1,100	773	625	383	164	126
7	91	81	788	357	187	1,380	910	764	642	363	164	118
8	89	77	378	330	173	1,120	818	1,490	625	363	160	118
9	87	77	322	324	164	1,260	867	2,650	582	350	160	118
10	87	75	234	302	169	1,240	1,400	2,180	616	337	164	118
11	87	75	194	286	214	1,130	1,300	1,850	524	330	173	118
12	85	73	256	276	228	1,200	1,420	1,370	483	317	164	118
13	89	73	2,290	266	224	1,320	4,120	1,280	459	312	156	114
14	98	73	1,240	261	210	1,220	4,490	1,360	444	302	152	114
15	93	71	760	261	244	1,070	3,420	1,110	444	292	147	110
16	87	75	572	242	350	960	2,260	1,000	552	281	143	110
17	87	93	1,500	233	475	900	1,630	960	728	276	139	110
18	85	93	2,880	224	421	836	1,320	881	1,780	266	134	110
19	83	87	2,240	214	330	782	1,140	836	1,420	257	130	110
20	81	83	1,260	201	302	764	1,420	764	1,490	247	130	110
21	81	79	1,790	196	728	800	1,640	719	1,410	238	130	100
22	79	77	6,120	187	1,410	800	1,220	719	1,110	233	164	100
23	79	75	3,030	187	1,360	764	1,040	684	1,420	224	169	100
24	79	75	1,920	182	1,040	702	910	684	1,300	219	160	100
25	77	75	1,360	191	920	668	827	710	990	214	156	100
26	77	73	1,140	187	863	659	818	676	845	214	156	100
27	77	73	930	182	773	642	818	634	755	210	147	100
28	77	73	791	173	684	616	764	608	702	201	139	100
29	75	71	702	169	-	600	702	574	650	196	134	100
30	75	71	625	160	-	811	684	524	591	191	156	600
31	75	-	540	160	-	1,280	-	540	-	187	160	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,644	100	75	85.3	1.05	1.21	5,240
November	2,304	93	71	76.8	.948	1.06	4,570
December	34,608	6,120	71	1,116	13.8	15.91	68,640
Calendar year 1936	205,826	6,120	71	562	6.94	94.52	408,300
January	8,339	475	160	269	3.32	3.83	16,540
February	12,593	1,410	152	450	5.56	5.79	24,980
March	33,284	2,030	600	1,074	13.3	15.33	66,020
April	41,399	4,490	684	1,397	17.2	19.19	83,110
May	30,903	2,650	524	997	12.3	14.18	61,300
June	24,633	1,780	444	821	10.1	11.27	48,860
July	9,319	532	187	301	3.72	4.29	18,480
August	4,822	182	130	156	1.93	2.22	9,560
September	3,881	600	100	129	1.59	1.77	7,700
Water year 1936-37	209,229	6,120	71	573	7.07	96.05	415,000

Nisqually River near Alder, Wash.

Location.- Water-stage recorder, lat. 46°46'05", long. 122°16'05" (revised), in SW¼ sec. 23, T. 15 N., R. 4 E., 2⅛ miles southeast of Alder.

Drainage area.- 252 square miles (revised).

Records available.- August 1931 to September 1937.

Extremes.- Maximum discharge during year, 8,100 second-feet Apr. 14 (gage height, 7.65 feet); minimum, 145 second-feet Dec. 2 (gage height, 1.32 feet).
1931-37: Maximum discharge, 25,000 second-feet Dec. 22, 1933 (gage height, 13.2 feet), from rating curve extended above 10,000 second-feet; minimum, 142 second-feet Nov. 3, 1935 (gage height, 1.31 feet).

Remarks.- Records excellent except those for period of ice effect, Jan. 7 to Feb. 2, which were computed on basis of gage heights and weather records and are poor. No diversion or regulation. Gage-height record collected in cooperation with city of Tacoma.

Rating tables, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 14

1.3	140	4.0	1,790
1.5	191	4.5	2,340
2.0	374	5.0	3,010
2.5	650	6.0	4,700
3.0	980	7.0	6,660
3.5	1,340		

Apr. 15 to Sept. 30

1.5	210	3.0	900
2.0	370	3.5	1,320
2.5	590	4.0	1,790

Note.- Same as preceding table above 3.9 feet.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	421	200	169	722	220	1,430	1,790	1,230	1,640	1,840	481	468
2	415	177	156	656	280	2,280	1,510	1,520	2,280	1,540	445	441
3	373	174	152	605	308	2,110	1,300	2,470	2,460	1,460	495	468
4	488	191	154	650	410	2,000	1,340	2,860	2,110	1,460	580	505
5	412	188	182	624	426	2,460	1,380	2,340	2,000	1,320	615	972
6	416	180	786	471	365	2,590	1,260	1,940	2,060	1,100	615	724
7	441	169	1,250	430	335	2,110	1,160	1,840	2,110	1,100	605	600
8	374	163	945	380	323	1,840	1,120	1,740	2,160	1,140	545	605
9	494	161	845	400	300	1,790	1,220	1,690	2,060	1,180	515	590
10	474	156	624	360	296	1,740	1,420	1,940	2,110	1,100	670	570
11	439	156	516	320	597	1,640	1,420	2,220	1,790	1,100	893	590
12	360	156	467	280	845	1,790	1,490	2,110	1,640	1,050	774	590
13	315	158	896	240	644	2,110	3,670	2,280	1,590	1,000	670	585
14	458	169	1,050	280	545	1,940	5,830	2,460	1,590	916	515	590
15	349	174	945	300	522	1,790	5,850	2,280	1,840	851	425	610
16	308	183	793	320	910	1,690	3,830	2,110	1,920	908	450	555
17	344	255	1,050	300	1,140	1,560	2,860	1,890	1,890	1,000	545	472
18	348	216	1,750	280	945	1,420	2,280	1,890	2,460	1,320	590	476
19	310	206	2,400	240	728	1,260	2,000	1,790	2,940	1,060	590	454
20	300	222	1,740	150	612	1,160	1,940	1,590	3,240	858	560	486
21	286	216	1,700	180	939	1,080	2.280	1,540	3,740	809	550	445
22	274	200	3,890	210	1,840	1,060	2,110	1,690	3,490	760	550	385
23	296	191	5,080	220	1,640	1,020	1,890	1,590	3,080	774	630	320
24	320	206	2,880	220	1,460	945	1,690	1,590	2,860	795	510	306
25	301	210	2,020	220	1,420	878	1,590	1,840	2,400	844	454	350
26	295	213	1,600	220	1,300	878	1,590	1,840	2,110	858	450	402
27	282	213	1,340	220	1,190	845	1,590	1,740	2,000	830	425	417
28	273	203	1,120	210	1,120	819	1,500	1,790	2,060	788	384	399
29	278	188	980	200	-	786	1,360	1,540	2,160	724	398	339
30	246	177	910	190	-	910	1,230	1,320	1,940	646	490	350
31	239	-	806	180	-	1,420	-	1,360	-	535	535	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	10,929	494	239	353	1.40	1.61	21,680
November	5,671	255	156	189	.750	.84	11,250
December	39,196	5,080	152	1,264	5.02	5.79	77,740
Calendar year 1936	421,681	5,330	152	1,152	4.57	62.68	836,400
January	10,278	722	150	332	1.32	1.52	20,390
February	21,660	1,840	220	774	3.07	3.20	42,960
March	47,371	2,590	786	1,528	6.06	6.99	93,960
April	61,500	5,850	1,120	2,050	8.13	9.07	122,000
May	58,030	2,860	1,230	1,872	7.43	8.57	115,100
June	67,730	3,740	1,590	2,258	8.96	10.00	134,300
July	31,666	1,840	535	1,021	4.05	4.67	62,810
August	16,954	893	384	547	2.17	2.50	33,630
September	15,064	972	306	502	1.99	2.22	29,880
Water year 1936-37	386,049	5,850	150	1,05e	4.20	56.98	765,700

Little Nisqually River near Alder, Wash.

Location.- Water-stage recorder, lat. 46°47'20", long. 122°18'45", in NW¼ sec. 16, T. 15 N., R. 4 E., 1,500 feet above mouth, 3,000 feet above diversion dam of Tacoma municipal power plant on Nisqually River, and 1½ miles southwest of Alder.

Drainage area.- 27.2 square miles (revised).

Records available.- August 1920 to September 1937.

Average discharge.- 17 years, 123 second-feet.

Extremes.- Maximum discharge during year, 1,830 second-feet Apr. 14 (gage height, 5.75 feet); minimum, 4.1 second-feet Dec. 1 (gage height, 0.57 foot).
1920-37: Maximum discharge, 2,430 second-feet Dec. 20, 21, 1933 (gage height, 6.8 feet); minimum, 0.9 second-foot July 17, 1926; minimum gage height, 0.55 foot Sept. 1, 2, 1934.

Remarks.- Records excellent except those for period of ice effect, Jan. 7 to Feb. 6, which were computed on basis of gage heights and weather records and are poor. No diversion or regulation. Gage-height record collected in cooperation with city of Tacoma.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

0.5	2.0	3.0	525
1.0	37	3.5	725
1.5	105	4.0	940
2.0	209	4.5	1,170
2.5	337	5.0	1,420

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	6.6	4.1	60	10	262	398	109	78	79	17	19
2	7.6	5.6	4.6	54	10	585	271	142	102	68	17	17
3	8.2	5.6	4.6	50	10	485	216	239	105	63	17	16
4	11	6.1	5.1	56	25	405	230	242	86	58	16	15
5	10	6.6	6.6	49	30	625	242	185	79	53	16	56
6	8.8	6.1	66	46	35	595	216	142	78	49	15	37
7	9.4	5.6	119	35	36	273	187	136	76	47	15	29
8	8.8	5.6	122	25	37	286	172	144	76	44	15	25
9	8.2	5.6	96	30	37	297	194	150	98	40	17	22
10	8.2	5.6	59	30	37	292	227	222	98	38	18	20
11	7.6	5.6	46	25	101	276	220	314	78	37	16	19
12	7.1	5.6	41	20	130	305	360	249	69	37	16	17
13	7.6	5.6	164	25	84	343	1,140	234	63	35	16	16
14	10	5.6	165	25	65	303	1,350	216	68	34	16	16
15	9.4	5.6	126	25	67	266	942	194	78	32	14	14
16	8.2	6.1	105	25	146	254	513	172	90	30	14	13
17	8.2	13	226	20	200	227	328	148	136	29	12	13
18	8.2	7.6	460	20	130	196	251	118	429	29	11	13
19	7.6	6.1	447	15	88	169	207	98	401	27	11	12
20	8.2	6.1	228	5	73	148	209	98	585	26	11	12
21	7.6	5.6	247	10	193	132	254	98	585	25	11	13
22	8.2	5.1	880	15	485	126	227	96	383	24	16	12
23	8.2	5.1	848	15	369	120	196	91	343	23	31	11
24	8.2	5.6	381	15	294	107	169	90	343	24	23	11
25	7.1	5.1	230	20	274	100	159	102	254	22	18	11
26	6.6	5.1	169	20	237	98	161	98	187	21	16	11
27	6.6	4.6	130	15	205	98	159	88	146	20	15	11
28	6.1	4.6	103	15	176	93	146	82	120	19	14	11
29	5.6	4.6	86	15	-	90	128	78	102	19	14	10
30	5.6	4.6	76	10	-	145	113	69	90	19	16	55
31	6.6	-	68	10	-	333	-	68	-	19	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	246.3	11	5.6	7.95	0.292	0.34	489
November	175.9	13	4.6	5.86	.215	.24	349
December	5,713.0	880	4.1	184	6.76	7.79	11,330
Calendar year 1936	43,041.2	1,140	4.1	118	4.34	*58.75	85,360
January	600	60	5	25.8	.949	1.09	1,590
February	3,584	485	10	128	4.71	4.90	7,110
March	8,034	625	90	259	9.52	10.98	15,940
April	9,585	1,350	113	320	11.8	13.17	19,010
May	4,512	314	68	146	5.37	6.19	8,950
June	5,426	585	63	181	6.65	7.42	10,760
July	1,090	79	19	35.2	1.29	1.49	2,160
August	495	31	11	16.0	.588	.68	982
September	557	56	10	18.6	.684	.76	1,100
Water year 1936-37	40,218.2	1,350	4.1	110	4.04	55.05	79,770

*Computed on basis of revised drainage area.

Puyallup River near Orting, Wash.

Location.- Water-stage recorder, lat. 47°02'30", long. 122°12'20", in SW¼ sec. 17, T. 18 N., R. 5 E., 4 miles south of Orting.

Drainage area.- 170 square miles (revised).

Records available.- September 1931 to September 1937.

Extremes.- Maximum discharge during year, 4,860 second-feet Apr. 14 (gage height, 7.37 feet); minimum, regulated, 54 second-feet Oct. 5 (gage height, 3.50 feet); minimum daily discharge, 77 second-feet Oct. 5.
1931-37: Maximum discharge occurred Dec. 9 or 10, 1933; minimum, that of Oct. 5, 1936; minimum daily discharge, that of Oct. 5, 1936.

Remarks.- Records fair. Discharge Feb. 15-17 computed on basis of records for Nisqually River near Alder and Carbon River near Fairfax. Water that is diverted for Electron plant of Puget Sound Power & Light Co. is returned to river above gage. Slight regulation due to pondage in connection with operation of Electron power plant.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	225	123	118	327	184	749	679	620	866	1,330	353	395
2	216	115	118	294	188	956	537	794	1,200	1,060	311	367
3	161	115	98	270	197	947	508	1,240	1,380	1,000	388	409
4	250	135	94	288	216	912	514	1,330	1,190	1,070	510	462
5	77	132	132	275	245	1,160	495	1,010	1,130	941	608	1,730
6	110	123	448	211	225	1,160	465	848	1,140	788	608	950
7	239	118	476	143	220	920	435	812	1,250	806	566	707
8	96	115	730	132	220	812	417	776	1,280	678	542	644
9	406	108	653	167	206	826	508	749	1,230	887	550	626
10	392	108	477	163	206	791	595	785	1,390	896	707	582
11	344	108	412	155	277	742	588	821	1,090	678	932	626
12	272	110	380	167	378	763	537	776	990	860	788	680
13	307	110	774	167	300	833	1,480	950	950	815	608	644
14	378	106	829	167	277	812	3,060	950	1,050	761	402	680
15	206	103	708	248	260	749	2,720	920	1,280	734	353	770
16	165	108	536	236	480	686	1,850	866	1,340	806	409	653
17	234	184	515	220	700	630	1,370	794	1,250	923	550	526
18	216	158	895	225	588	560	1,120	803	1,450	1,070	582	534
19	144	129	1,530	193	495	508	970	776	1,550	869	502	518
20	175	150	1,020	193	429	465	1,030	684	1,810	725	494	542
21	197	158	928	115	906	435	1,190	684	2,580	689	494	409
22	177	147	2,180	138	1,560	465	1,120	740	2,240	716	574	318
23	193	138	3,400	188	1,140	459	990	692	2,010	725	566	236
24	216	126	2,010	197	956	453	866	749	1,610	806	388	215
25	188	150	1,450	197	840	435	848	911	1,290	824	360	260
26	177	147	1,070	211	784	423	848	875	1,200	752	367	402
27	173	144	818	197	721	393	821	830	1,240	752	290	416
28	158	138	631	197	672	370	749	830	1,380	743	176	339
29	161	129	515	193	-	348	692	700	1,570	671	260	242
30	144	126	459	169	-	393	644	620	1,440	574	374	248
31	135	-	380	129	-	595	-	652	-	409	486	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	6,530	406	77	211	1.24	1.43	12,950
November	3,841	184	103	128	.753	.84	7,620
December	24,764	3,400	94	799	4.70	5.42	49,120
Calendar year 1936	242,298	3,600	77	662	3.89	*52.99	480,600
January	6,172	327	115	199	1.17	1.35	12,240
February	13,670	1,560	184	495	2.91	3.03	27,510
March	20,750	1,160	348	669	3.94	4.54	41,160
April	28,776	3,060	417	959	5.64	6.29	57,080
May	25,587	1,330	620	825	4.85	5.59	50,750
June	41,376	2,580	866	1,379	8.11	9.05	82,070
July	25,758	1,330	409	831	4.89	5.64	51,090
August	15,098	932	176	487	2.86	3.30	29,950
September	16,130	1,730	215	538	3.16	3.53	31,990
Water year 1936-37	228,652	3,400	77	626	3.68	50.01	453,500

*Computed on basis of revised drainage area.

Puyallup River at Puyallup, Wash.

Location.- Water-stage recorder, lat. 47°12'20", long. 122°19'30", in NE¼ sec. 20, T. 20 N., R. 4 E., 1 mile northwest of Puyallup. Zero of gage is at mean sea level (general adjustment of 1929).

Drainage area.- 948 square miles (revised).

Records available.- May 1914 to September 1937.

Average discharge.- 23 years, 3,281 second-feet.

Extremes.- Maximum discharge during year, 17,800 second-feet Apr. 15 (gage height, 18.12 feet); minimum, 580 second-feet Nov. 15 (gage height, 7.69 feet).
1914-37: Maximum discharge, about 57,000 second-feet Dec. 10, 1933 (gage height, 31.0 feet, present datum); minimum, probably less than 350 second-feet (regulated) Nov. 24, 28, Dec. 1, 3-5, 1929.

Remarks.- Records good. Discharge for Sept. 25-30 interpolated. All diverted water returned to river above gage. Large part of flow of White River diverted into Lake Tapps above station. Records of storage regulation in Lake Tapps furnished by Puget Sound Power & Light Co. Some pondage on upper Puyallup River and other tributaries.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,640	*1,080	755	2,160	1,100	3,250	2,710	2,600	3,440	6,250	*1,860	1,880
2	1,740	905	735	2,350	1,140	4,000	2,490	*2,890	5,160	4,960	2,160	1,810
3	1,510	788	775	*2,080	1,180	4,080	2,330	5,110	6,600	4,280	1,960	1,880
4	*1,740	785	775	2,320	1,380	3,830	*2,080	6,600	6,030	*4,010	2,120	1,680
5	1,770	854	700	2,060	1,540	4,280	2,540	5,340	5,460	4,000	2,330	*2,590
6	1,520	806	*2,050	1,900	1,270	5,000	2,600	4,130	*4,750	3,520	2,420	2,440
7	1,530	745	3,760	1,540	*1,100	*3,740	2,600	4,460	5,670	3,610	2,440	2,100
8	1,480	*990	2,940	1,550	1,220	3,410	2,540	4,690	6,190	3,630	*2,480	2,130
9	1,530	920	2,660	1,390	1,280	3,420	2,450	*4,350	6,070	3,670	2,670	2,090
10	1,450	750	2,170	*1,170	1,270	3,330	2,540	4,960	6,690	3,570	2,820	1,850
11	*1,490	676	1,890	1,290	1,420	3,310	*2,440	5,170	5,710	*2,950	2,380	1,720
12	1,390	710	1,680	1,350	1,940	3,270	2,730	3,980	5,100	3,410	2,710	*1,570
13	1,350	680	*2,730	1,420	1,640	3,320	5,400	3,870	*4,460	3,360	2,510	1,740
14	1,750	660	4,010	1,370	*1,590	*3,360	9,310	4,500	4,800	3,260	2,040	1,880
15	1,780	*660	3,740	1,460	1,640	3,430	14,700	4,020	5,980	3,070	*1,460	1,860
16	1,480	834	2,980	1,320	2,210	3,240	8,870	*3,440	5,900	3,020	2,050	1,810
17	1,400	881	2,560	*1,110	2,470	3,600	5,580	3,700	5,860	3,140	2,370	1,660
18	*1,190	941	3,400	1,270	2,460	2,800	*4,090	3,810	5,980	*3,230	2,230	1,550
19	1,650	901	6,830	1,230	2,010	2,580	4,110	3,600	7,320	3,530	2,090	*1,500
20	1,360	844	*4,360	1,140	1,770	2,350	4,010	3,130	*7,250	2,960	2,010	1,700
21	1,150	775	3,960	1,160	*2,670	*1,870	5,450	2,830	10,300	2,760	1,690	1,580
22	1,070	*688	5,700	1,190	7,240	2,470	5,080	3,080	11,400	2,720	*1,740	1,410
23	1,080	730	10,700	1,050	6,200	2,430	4,130	*3,320	9,950	2,590	2,120	1,310
24	1,030	760	5,660	*990	4,600	2,250	3,270	4,770	8,690	2,740	1,950	1,220
25	*1,190	755	3,510	1,190	4,060	2,180	*2,990	5,760	6,870	*2,860	1,790	1,200
26	1,120	640	3,140	1,310	3,620	2,100	3,310	5,940	5,480	3,150	1,780	*1,180
27	974	750	*2,500	1,270	3,120	1,940	3,470	5,650	*4,910	3,020	1,710	1,150
28	986	795	2,770	1,190	*2,710	*1,730	3,400	4,640	5,430	2,820	1,490	1,130
29	947	*688	2,710	1,150	-	1,950	3,120	3,670	6,280	2,890	*1,400	1,110
30	954	770	2,610	1,010	-	2,000	2,960	*2,720	5,920	2,890	1,910	1,090
31	850	-	2,590	907	-	2,360	-	2,370	-	2,280	2,080	-

Month	Observed				Gain or loss in storage in Lake Tapps (acre-feet)	Adjusted for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October	1,780	850	1,358	83,510	-9,920	73,590	1,197	1.26	1.45
November	1,080	640	792	47,130	+1,650	48,780	820	.865	.97
December	10,700	700	3,140	193,100	+15,430	208,500	3,391	3.58	4.13
Calendar year 1936	12,900	640	3,365	2,443,000	+2,620	2,446,000	3,369	3.55	†3.38
January	2,350	907	1,416	87,070	-4,960	82,110	1,335	1.41	1.63
February	7,240	1,100	2,352	130,600	+2,890	133,500	2,404	2.54	2.64
March	5,000	1,730	2,996	184,200	+8,820	193,000	3,139	3.31	3.82
April	14,700	2,080	4,103	244,200	+8,120	252,300	4,240	4.47	4.99
May	6,600	2,370	4,165	256,100	-2,480	253,600	4,124	4.35	5.02
June	11,400	3,440	6,322	376,200	+5,510	381,700	6,415	6.77	7.55
July	6,250	2,280	3,360	206,600	-3,160	203,400	3,308	3.49	4.02
August	2,820	1,400	2,089	128,500	-15,290	113,200	1,841	1.94	2.24
September	2,590	1,090	1,661	98,820	-1,380	97,440	1,638	1.73	1.93
Water year 1936-37	14,700	640	2,812	2,036,000	+5,230	2,041,000	2,819	2.97	40.39

†Computed on basis of revised drainage area.
*Sunday.

Carbon River near Fairfax, Wash.

Location.- Water-stage recorder, lat. 47°01'30", long. 122°02'00", in SW¼ sec. 22, T. 18 N., R. 6 E., 1¼ miles northwest of Fairfax.

Drainage area.- 81 square miles (revised).

Records available.- March 1929 to September 1937. November 1910 to July 1912, at station 1¼ miles upstream.

Extremes.- Maximum discharge during year, 1,810 second-feet Apr. 14 (gage height, 3.98 feet); minimum, 67 second-feet Nov. 14 (gage height, 1.04 feet).
1910-12, 1929-37: Maximum discharge, about 8,030 second-feet Dec. 9, 1933 (gage height, 10.2 feet), from rating curve extended above 500 second-feet; minimum, 40 second-feet (estimated) Jan. 20, 1930 (stage-discharge relation affected by ice).

Remarks.- Records good except those above 1,000 second-feet, which are poor. Some water diverted for use by lumber industry but returned to river above gage.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-21)

Oct. 22 to June 20		June 21 to Sept. 30	
1.0	64	1.4	79
1.5	144	1.7	149
2.0	300	2.0	250
2.5	550	2.5	490
3.0	910	3.0	850
3.5	1,330	3.5	1,270
4.0	1,810	4.0	1,760

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	145	77	75	169	81	324	358	354	781	930	227	254
2	137	73	72	159	82	446	312	496	1,040	770	209	231
3	130	71	72	149	81	452	285	958	1,110	728	242	235
4	272	70	71	159	87	462	285	1,010	918	728	286	254
5	294	72	87	140	82	648	270	718	902	651	350	788
6	189	73	664	102	80	655	255	578	942	560	370	609
7	170	72	571	97	78	508	242	571	1,020	560	360	400
8	165	71	405	99	78	415	235	532	1,010	609	330	360
9	161	70	324	108	76	405	273	508	990	630	326	335
10	163	70	248	110	82	385	304	544	1,010	609	395	298
11	161	69	235	110	149	372	296	557	823	595	511	310
12	161	69	225	110	124	405	332	557	767	567	478	314
13	131	68	468	104	108	484	660	732	767	532	395	278
14	198	68	514	100	99	479	1,150	830	838	525	302	298
15	223	69	430	116	120	425	1,200	704	862	472	227	306
16	167	69	336	129	126	376	809	648	823	518	223	282
17	149	115	316	122	144	340	634	592	767	595	258	250
18	137	106	625	116	120	304	532	620	1,010	686	314	239
19	130	102	1,150	112	110	273	479	599	1,010	595	302	235
20	112	100	704	108	122	252	550	502	1,150	484	278	216
21	102	97	564	102	383	235	662	514	1,460	436	266	186
22	94	95	797	97	718	235	544	599	1,270	430	286	155
23	88	90	1,070	95	550	219	462	532	1,090	425	340	131
24	87	88	697	90	435	209	415	585	906	460	278	123
25	85	85	496	95	380	203	425	753	826	504	246	126
26	84	84	395	92	344	203	462	704	842	472	235	136
27	84	81	332	87	308	197	468	662	874	436	192	167
28	82	80	281	85	285	189	420	669	930	448	173	164
29	81	78	245	82	-	183	380	550	1,010	405	167	136
30	80	76	219	81	-	206	349	474	970	335	202	136
31	78	-	194	81	-	308	-	* 538	-	274	270	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	4,340	294	78	140	1.73	1.99	8,610
November	2,408	115	68	80.3	.991	1.11	4,780
December	12,882	1,150	71	416	5.14	5.93	25,550
Calendar year 1936	146,664	2,110	68	401	4.95	66.69	290,900
January	3,406	169	81	110	1.36	1.57	6,760
February	5,432	718	76	194	2.40	2.50	10,770
March	10,797	655	183	348	4.30	4.96	21,420
April	14,048	1,200	235	468	5.78	6.45	27,860
May	19,190	1,010	354	619	7.64	8.81	38,060
June	28,718	1,460	767	957	11.8	13.17	56,960
July	16,969	930	274	547	6.75	7.78	33,660
August	9,038	511	167	292	3.60	4.15	17,930
September	7,952	788	123	265	3.27	3.65	15,770
Water year 1936-37	135,180	1,460	68	370	4.57	62.07	268,100

White River at Greenwater, Wash.

Location.- Water-stage recorder, lat. 47°08'50", long. 121°38'50", in SE¼ sec. 10, T. 19 N., R. 9 E., three-quarters of a mile southeast of Greenwater and above mouth of Greenwater River.

Drainage area.- 216 square miles.

Records available.- March 1929 to September 1937. September 1911 to May 1912 (fragmentary), at site 2 miles upstream, published as White River near Enumclaw, Wash.

Extremes.- Maximum discharge during year, 4,210 second-feet June 21 (gage height, 5.08 feet); minimum, occurred sometime during period of ice effect.
1911-12, 1929-37: Maximum discharge, 12,100 second-feet Dec. 21, 1933 (gage height, 9.38 feet); minimum, 120 second-feet Nov. 2, 1935 (gage height, 1.69 feet).

Remarks.- Records good except those for period of ice effect, Jan. 8 to Feb. 5, which were computed on basis of one discharge measurement, gage heights, and weather records and are poor. No diversion or regulation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	366	209	174	224	150	359	672	714	1,510	2,320	630	511
2	374	182	185	216	150	482	623	968	2,080	1,850	630	518
3	368	193	189	216	160	521	574	1,570	2,520	1,670	672	532
4	461	209	193	234	160	528	567	1,860	2,300	1,700	721	546
5	356	209	225	212	170	609	547	1,490	2,080	1,460	749	672
6	344	201	461	156	171	728	521	1,250	2,000	1,320	721	567
7	386	185	362	147	171	672	508	1,200	2,150	1,320	693	539
8	398	182	290	140	165	588	508	1,110	2,300	1,370	658	567
9	398	182	261	150	162	554	567	1,080	2,150	1,380	686	560
10	428	182	230	160	159	560	623	1,160	2,150	1,340	812	532
11	392	178	225	150	200	560	602	1,120	1,860	1,330	858	567
12	350	178	213	140	212	609	616	1,080	1,760	1,260	835	588
13	332	182	410	150	177	777	1,060	1,310	1,780	1,230	749	546
14	489	185	410	150	171	756	1,660	1,520	1,780	1,160	623	581
15	356	205	350	160	165	686	1,820	1,460	2,000	1,090	553	630
16	332	230	300	160	174	665	1,310	1,440	2,000	1,130	574	574
17	338	248	332	150	174	644	1,060	1,340	1,860	1,220	644	525
18	320	217	622	150	171	595	936	1,420	1,860	1,380	700	518
19	300	197	797	140	168	547	848	1,450	2,000	1,220	686	511
20	266	201	573	140	171	514	920	1,340	2,450	1,040	658	469
21	248	185	531	150	406	482	1,030	1,340	3,800	1,010	644	410
22	243	178	618	150	679	456	904	1,450	3,500	987	644	357
23	252	174	819	160	574	424	812	1,350	2,700	969	616	325
24	256	171	616	160	502	400	749	1,370	2,050	1,040	511	315
25	252	171	488	170	469	382	756	1,660	1,770	1,140	504	325
26	243	168	418	160	418	394	812	1,690	1,820	1,090	518	368
27	238	164	370	160	376	394	798	1,670	2,010	1,060	483	379
28	234	160	326	150	354	394	756	1,670	2,340	1,030	476	346
29	234	157	300	140	-	400	714	1,480	2,610	920	469	325
30	234	154	280	140	-	430	679	1,270	2,420	784	497	346
31	230	-	256	140	-	547	-	1,270	-	672	525	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	10,038	489	230	324	1.50	1.73	19,910
November	5,637	248	154	188	.870	.97	11,180
December	12,024	819	174	388	1.80	2.08	23,850
Calendar year 1936	264,276	2,400	154	722	3.34	45.53	524,100
January	5,025	234	140	162	.750	.86	9,970
February	7,179	679	150	256	1.19	1.24	14,240
March	16,657	777	359	537	2.49	2.87	33,040
April	24,572	1,820	508	819	3.79	4.23	48,740
May	42,092	1,860	714	1,358	6.29	7.25	83,490
June	65,610	3,800	1,510	2,187	10.1	11.27	130,100
July	32,492	2,320	672	1,242	5.75	6.63	76,350
August	19,739	658	469	637	2.95	3.40	39,150
September	14,549	672	315	485	2.25	2.51	28,860
Water year 1936-37	261,614	3,800	140	717	3.32	45.04	518,900

Greenwater River at Greenwater, Wash.

Location.- Water-stage recorder, lat. 47°09'15", long. 121°38'00", in NW¼NW¼ sec. 11, T. 19 N., R. 9 E., 1 mile above mouth and 1 mile east of Greenwater.

Drainage area.- 74 square miles(revised).

Records available.- September 1911 to August 1912 (fragmentary), May 1929 to September 1937.

Extremes.- Maximum discharge during year, 748 second-feet May 4 (gage height, 4.34 feet); minimum daily discharge, 24 second-feet Nov. 27 to Dec. 4.
1911-12, 1929-37: Maximum discharge, 4,140 second-feet Dec. 9, 1933 (gage height, 9.24 feet, former site and datum); minimum, 23 second-feet Oct. 7, 1934 (gage height, 2.06 feet).

Remarks.- Records excellent except those for period of missing gage heights, Nov. 11-22, July 31 to Aug. 2, and Aug. 5 to Sept. 1 (computed on basis of records for Clear Fork of Cowlitz River near Packwood), and those for periods of ice effect, Jan. 7-14, 19-22, and Jan. 30 to Feb. 5 (computed on basis of one discharge measurement, gage heights, and weather records), which are poor. No diversions or regulation.

Rating tables, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 25				Dec. 26 to Sept. 30			
1.9	20	3.0	169	3.0	168	4.0	555
2.2	38	3.5	355	3.5	317	4.5	830
2.5	72						

Note.- Same as preceding table below 2.8 feet.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	34	24	68	35	130	227	210	435	313	85	60
2	35	32	24	62	35	161	202	278	538	280	80	56
3	36	32	24	61	35	190	182	558	670	260	80	55
4	53	32	24	61	35	200	175	714	720	247	79	55
5	43	37	38	58	35	241	168	594	676	230	80	102
6	38	35	121	52	36	277	161	480	638	215	75	80
7	37	32	89	45	36	238	153	435	621	202	75	68
8	36	31	74	40	36	202	148	401	626	190	70	62
9	35	31	74	40	35	190	164	388	610	182	70	59
10	34	30	58	45	35	185	178	406	616	173	75	56
11	34	30	56	40	39	185	178	401	582	166	80	54
12	33	30	52	40	42	224	173	388	528	159	80	52
13	34	30	93	40	39	287	238	464	469	155	75	50
14	41	30	116	45	38	260	403	528	439	153	70	50
15	35	30	105	47	37	227	654	522	449	144	70	49
16	42	30	82	47	37	213	485	500	444	138	65	48
17	38	40	77	46	39	200	357	474	495	132	65	48
18	37	35	113	45	39	185	302	495	485	128	60	50
19	35	30	242	45	38	166	270	485	495	122	60	47
20	34	30	175	45	40	153	277	459	469	118	60	47
21	34	30	145	45	139	142	392	439	480	115	60	46
22	33	25	195	45	202	136	337	464	490	113	60	45
23	33	25	303	42	192	126	280	454	485	109	80	45
24	33	25	232	40	175	120	247	454	449	105	80	44
25	32	25	175	39	173	113	241	522	406	102	60	43
26	32	25	142	39	150	111	260	555	375	100	60	43
27	32	24	122	38	134	111	267	555	349	98	60	43
28	72	24	105	37	120	111	247	544	333	94	60	42
29	32	24	93	37	-	113	227	506	325	93	55	42
30	32	24	84	35	-	124	210	454	317	91	60	42
31	32	-	77	35	-	183	-	420	-	90	65	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	1,122	55	32	36.2	0.489	0.56	2,230
November	892	40	24	29.7	.401	.45	1,770
December	3,334	303	24	108	1.46	1.68	6,610
Calendar year 1936	68,846	812	24	188	2.54	34.19	136,600
January	1,404	68	35	45.3	.612	.71	2,780
February	2,026	202	35	72.4	.978	1.02	4,020
March	5,504	287	111	178	2.41	2.78	10,920
April	7,803	654	148	260	3.51	3.92	15,480
May	14,544	714	210	469	6.34	7.31	28,850
June	15,014	720	317	500	6.76	7.54	29,780
July	4,817	313	90	155	2.09	2.41	9,550
August	2,134	85	55	68.8	.930	1.07	4,230
September	1,583	102	42	52.8	.714	.80	3,140
Water year 1936-37	60,177	720	24	165	2.23	30.25	119,400

Green River near Palmer, Wash.

Location.- Water-stage recorder, lat. 47°17'40", long. 121°49'20", in SW¼NW¼ sec. 20, T. 21 N., R. 8 E., 1½ miles above intake of Tacoma water-supply system and 4 miles southeast of Palmer.

Drainage area.- 231 square miles.

Records available.- October 1931 to September 1937.

Extremes.- Maximum discharge during year, 5,580 second-feet Apr. 14 (gage height, 11.40 feet); minimum, 110 second-feet Nov. 15, 16 (gage height, 4.55 feet).
1931-37: Maximum discharge, 33,600 second-feet Dec. 9, 1933 (gage height, 19.4 feet); minimum, 81 second-feet Sept. 4, 5, 1934; minimum gage height, 4.00 feet Sept. 4, 1933.

Remarks.- Records excellent except those for periods of ice effect, Jan. 7-13, 20, 31, Feb. 1, which were computed on basis of gage heights, weather records, and records for station near Auburn and are fair. No diversion or regulation.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

4.5	95	6.0	845	8.5	2,390
4.7	162	6.5	1,120	9.0	2,760
4.9	260	7.0	1,420	9.5	3,260
5.2	410	7.5	1,720	10.0	3,860
5.5	570	8.0	2,040	10.5	4,460

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	128	124	121	660	250	1,450	1,970	1,360	1,420	955	265	205
2	128	124	124	614	260	2,040	1,660	2,090	1,840	845	260	191
3	128	124	124	581	265	2,390	1,420	2,950	2,040	762	255	176
4	262	135	124	625	270	2,320	1,390	2,950	1,720	702	245	161
5	245	158	420	554	260	2,530	1,420	2,390	1,540	652	235	335
6	191	143	2,140	466	250	2,600	1,360	1,970	1,480	603	235	280
7	162	135	1,720	420	245	2,180	1,270	1,840	1,510	559	240	235
8	151	132	1,450	400	245	1,840	1,210	1,720	1,510	537	235	220
9	139	124	1,540	430	235	1,660	1,270	1,660	1,390	510	245	205
10	132	124	1,040	400	235	1,510	1,360	1,780	1,420	488	250	196
11	128	121	845	380	320	1,510	1,300	1,900	1,240	466	270	181
12	128	121	762	370	415	1,780	1,330	1,840	1,090	450	245	176
13	143	118	2,170	380	345	2,040	1,900	2,040	1,040	445	235	172
14	240	115	2,460	385	315	1,780	3,780	2,180	1,060	455	230	162
15	280	112	1,980	420	305	1,600	4,460	2,040	1,180	425	220	162
16	225	118	1,420	375	340	1,480	3,680	1,900	1,300	400	210	162
17	191	172	1,330	365	380	1,390	2,320	1,720	1,330	380	196	158
18	181	147	2,470	355	370	1,240	1,970	1,720	1,750	375	191	154
19	172	132	3,770	325	335	1,120	1,840	1,660	2,110	365	181	154
20	162	135	2,440	310	335	1,010	2,600	1,540	1,970	350	181	154
21	158	128	1,970	320	1,990	928	2,920	1,450	2,040	340	176	154
22	151	124	2,680	335	3,980	900	2,250	1,540	1,900	330	196	151
23	143	121	3,220	335	2,750	845	1,900	1,450	1,900	320	275	151
24	135	118	2,390	330	2,250	790	1,660	1,420	1,780	310	250	147
25	132	115	1,840	335	2,040	762	1,660	1,660	1,600	305	215	143
26	128	118	1,510	325	1,600	790	1,720	1,660	1,390	295	205	143
27	128	115	1,240	315	1,390	790	1,600	1,600	1,240	290	196	139
28	128	115	1,060	305	1,270	790	1,480	1,510	1,120	290	186	135
29	124	112	928	290	-	790	1,330	1,420	1,060	280	176	135
30	121	112	845	270	-	1,010	1,240	1,240	982	275	191	151
31	124	-	762	250	-	1,840	-	1,210	-	270	215	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	4,988	280	121	161	0.697	0.80	9,890
November	3,792	172	112	126	.545	.61	7,520
December	46,895	3,770	121	1,513	6.55	7.55	93,010
Calendar year 1936	369,892	5,170	112	1,011	4.38	59.54	733,700
January	12,245	680	250	395	1.71	1.97	24,290
February	23,245	3,980	235	830	3.59	3.74	46,110
March	45,705	2,600	762	1,474	6.38	7.36	90,650
April	57,270	4,460	1,210	1,909	8.26	9.22	113,600
May	55,410	2,950	1,210	1,787	7.74	8.92	109,900
June	44,952	2,110	982	1,498	6.48	7.23	89,160
July	14,029	955	270	453	1.96	2.26	27,830
August	6,905	275	176	223	.965	1.11	13,700
September	5,308	335	135	177	.766	.85	10,530
Water year 1936-37	320,744	4,460	112	879	3.81	51.62	636,200

Green River near Auburn, Wash.

Location.- Water-stage recorder, lat. 47°18'15", long. 122°02'10", in lot 3, sec. 17, T. 21 N., R. 5 E., 1½ miles east of Auburn and 2 miles below Big Soos Creek. Zero of gage is mean sea level (general adjustment of 1929).
Drainage area.- 386 square miles.
Records available.- August 1936 to September 1937.
Extremes.- Maximum discharge during period, 6,820 second-feet Apr. 15 (elevation, 61.37 feet); minimum discharge, 170 second-feet Nov. 28, 29, 30, Dec. 1; minimum elevation, 55.03 feet Sept. 28, 29, 30, 1937.
Remarks.- Records good for August to March except those for periods of missing gage heights, Aug. 1-3, 9, 16, 23, Sept. 6, 13, 20, 28-30, Oct. 1-7, 9-11, 1936, which were computed on basis of records for station near Palmer and are poor. Records excellent for April to September. Staff gage read to hundredths twice daily prior to installation of water-stage recorder on Oct. 19. City of Tacoma diverts about 85 second-feet for municipal use. No regulation.

Discharge, in second-feet, Aug. 1 to Sept. 30, 1936

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	640	577	11	549	418	21	500	232
2	630	703	12	598	430	22	507	223
3	610	612	13	640	430	23	540	255
4	598	556	14	591	424	24	570	242
5	584	514	15	640	394	25	577	232
6	577	510	16	610	418	26	542	214
7	577	500	17	570	346	27	535	214
8	570	500	18	612	270	28	500	210
9	570	472	19	570	251	29	500	210
10	563	458	20	528	240	30	486	210
						31	493	-

Note.- Mean discharge Aug. 1-31, 567 second-feet (run-off 34,860 acre-feet); Sept. 1-30, 376 second-feet (run-off 22,340 acre-feet).

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	210	192	172	960	428	1,830	2,520	1,590	1,410	1,140	356	264
2	210	192	180	880	470	2,450	2,200	1,740	1,740	1,040	342	252
3	210	188	188	838	470	3,000	1,890	2,730	2,190	964	330	245
4	350	195	192	852	548	2,790	1,790	3,540	1,890	900	316	240
5	330	208	201	852	649	3,020	1,940	2,970	1,640	852	304	330
6	285	211	1,540	747	594	3,490	1,840	2,420	1,590	796	297	394
7	240	201	2,030	684	542	2,920	1,690	2,190	1,590	740	304	323
8	220	192	1,460	649	522	2,370	1,590	2,090	1,590	700	297	284
9	215	188	1,680	684	483	2,120	1,640	1,890	1,500	668	297	364
10	210	185	1,240	628	470	2,000	1,740	2,090	1,540	636	304	245
11	200	182	952	621	628	1,910	1,740	2,260	1,410	612	310	240
12	204	180	850	600	852	2,020	1,740	2,190	1,280	588	310	232
13	208	177	1,900	614	768	2,360	2,580	2,240	1,140	573	290	222
14	214	177	3,040	614	726	2,310	4,090	2,420	1,140	604	284	218
15	310	177	2,540	712	712	2,090	6,000	2,420	1,320	573	278	209
16	295	180	1,730	649	944	1,950	4,320	2,240	1,360	531	271	204
17	260	208	1,410	614	1,010	1,810	3,300	1,940	1,500	503	264	204
18	228	219	1,980	600	1,040	1,670	2,750	1,890	1,740	489	258	209
19	223	204	4,540	561	896	1,530	2,480	1,890	2,420	482	245	204
20	242	198	3,100	502	817	1,400	2,700	1,790	2,260	461	245	204
21	275	192	2,330	502	1,690	1,320	4,020	1,640	2,480	440	240	204
22	237	182	2,800	535	5,010	1,360	3,300	1,640	2,360	434	264	200
23	204	180	4,420	522	4,240	1,370	2,700	1,640	2,310	420	330	197
24	201	177	3,220	516	3,100	1,250	2,310	1,540	2,200	401	342	197
25	198	175	2,440	516	2,770	1,200	2,240	1,690	1,940	394	297	197
26	198	172	1,930	568	2,330	1,160	2,190	1,840	1,690	388	271	194
27	195	172	1,640	535	2,030	1,160	2,240	1,740	1,500	375	252	191
28	195	172	1,370	509	1,780	1,120	2,090	1,640	1,360	375	245	185
29	192	170	1,240	483	-	1,130	1,840	1,590	1,280	375	240	182
30	192	170	1,120	452	-	1,170	1,690	1,460	1,180	368	245	191
31	192	-	1,040	428	-	1,910	-	1,360	-	362	264	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	7,143	350	192	230	0.596	0.69	14,170
November	5,616	219	170	187	.484	.54	11,140
December	54,475	4,540	172	1,757	4.55	5.25	108,000
Calendar year							
January	19,427	960	428	627	1.62	1.87	38,530
February	36,519	5,010	428	1,304	3.38	3.52	72,430
March	59,190	3,490	1,120	1,909	4.95	5.71	117,400
April	75,160	6,000	1,590	2,505	6.49	7.24	149,100
May	62,310	3,540	1,360	2,010	5.21	6.01	123,600
June	50,550	2,480	1,140	1,685	4.37	4.88	100,300
July	18,184	1,140	362	587	1.52	1.75	36,070
August	8,892	356	240	287	.744	.86	17,640
September	6,925	394	182	231	.598	.67	13,740
Water year 1936-37	404,391	6,000	170	1,108	2.87	38.99	802,100

Cedar River at Cedar Falls, Wash.

Location.- Water-stage recorder, lat. 47°25'10", long. 121°47'20", in sec. 4, T. 22 N., R. 8 E., three-quarters of a mile below Seattle municipal power plant at Cedar Falls.

Drainage area.- 86 square miles (revised).

Records available.- April 1914 to September 1937.

Average discharge.- 23 years, 304 second-feet.

Extremes.- Maximum discharge during year, 1,600 second-feet June 20 (gage height, 7.64 feet); minimum, 29 second-feet, regulated, Nov. 16 (gage height, 4.89 feet).
1914-37: Maximum discharge, 6,290 second-feet Dec. 19, 1917; maximum gage height, 11.5 feet Dec. 22, 1933; no flow (regulated) Nov. 25, 1917, Aug. 18, 1923.

Remarks.- Records excellent. All diverted water returned to river above gage. Flow partly regulated in Cedar Lake Reservoir for operation of power plant. Gage-height record collected in cooperation with city of Seattle, which furnished some discharge measurements.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

4.8	20
5.0	42
5.5	125
6.0	300
6.5	560
7.0	950
7.5	1,450

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	*55	31	78	182	478	196	257	382	453	*109	162
2	58	58	31	102	170	452	200	*293	385	411	107	158
3	58	55	31	*86	216	438	146	270	472	275	105	160
4	*60	55	31	247	168	530	*92	260	524	*153	105	113
5	58	55	40	330	191	574	236	238	542	140	103	*103
6	56	55	*64	348	154	606	216	264	*560	242	120	92
7	56	55	80	314	*60	*384	210	258	566	206	101	94
8	56	*55	88	314	230	512	192	273	584	158	*188	114
9	56	58	172	285	220	532	141	*296	688	138	98	102
10	55	56	113	*183	211	530	100	266	691	138	101	84
11	*56	56	52	278	194	466	*216	228	636	*132	107	91
12	58	56	132	292	190	394	182	257	550	132	106	*82
13	61	56	*276	256	212	383	180	278	*415	130	103	94
14	60	55	224	198	*112	*318	218	270	546	128	100	140
15	60	*54	207	250	170	413	298	378	560	123	*100	104
16	58	40	190	148	196	350	254	*307	567	117	100	116
17	58	32	212	*128	201	396	176	369	609	113	96	89
18	*58	31	252	234	184	328	*290	404	659	*115	100	76
19	58	32	377	246	166	228	248	383	788	117	99	*70
20	60	32	*385	236	194	138	348	349	*900	117	99	100
21	58	32	378	252	*229	*520	260	380	1,010	119	118	98
22	55	*32	346	213	280	212	258	386	1,030	117	*96	88
23	56	32	268	136	303	232	243	*260	982	115	98	82
24	56	31	184	*77	374	242	176	342	927	117	92	88
25	*55	30	84	195	296	202	*104	438	798	*121	92	74
26	55	30	112	194	337	178	242	444	736	115	91	*70
27	56	30	*87	172	428	102	244	409	*579	113	89	67
28	58	30	130	182	*419	*76	257	472	654	119	91	74
29	56	*31	118	143	-	142	249	406	570	113	*87	74
30	58	31	118	112	-	168	252	*420	470	111	110	75
31	56	-	125	*120	-	198	-	298	-	150	110	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	1,779	61	55	57.4			3,530
November	1,310	58	30	43.7			2,600
December	4,938	385	31	159			9,790
Calendar year 1936	95,911	1,400	30	262	3.05	41.52	190,200
January	6,349	348	77	205			12,590
February	6,277	428	60	224			12,450
March	10,772	606	76	347			21,370
April	6,424	348	92	214			12,740
May	10,153	472	228	328			20,140
June	19,360	1,030	365	645			38,400
July	4,828	453	111	156			9,580
August	3,221	188	87	104			6,390
September	2,934	162	67	97.8			5,820
Water year 1936-37	78,345	1,030	30	215	2.50	33.94	155,400

Note.- Monthly discharge in second-feet per square mile and run-off in inches not computed, owing to regulation. Yearly figures closely represent natural flow.
*Sunday.

Cedar River near Landsberg, Wash.

Location.- Water-stage recorder, lat. 47°23'35", long. 121°56'50", in sec. 17, T. 22 N., R. 7 E., 1¾ miles above Landsberg, intake of Seattle water-supply system.
Drainage area.- 138 square miles (revised).
Records available.- April 1914 to September 1937, July 1895 to September 1898 (at site 2 miles downstream), and March 1901 to April 1912 (at site of water-supply intake) in water-supply papers of Geological Survey; August 1895 to April 1912 and May 1914 to September 1933 (monthly discharge) in State Water-Supply Bulletin 5; records equivalent.
Average discharge.- 39 years (1895-1911, 1914-37), 704 second-feet.
Extremes.- Maximum discharge during year, 1,800 second-feet June 20 (gage height, 3.34 feet); minimum, 197 second-feet Nov. 30, Dec. 1, 2 (gage height, 0.83 foot).
1895-98, 1901-12, 1914-37: Maximum discharge observed, 13,600 second-feet Nov. 19, 1911 (gage height, 9.7 feet, former site and datum); minimum, 83 second-feet Sept. 19, 1898.
Remarks.- Records excellent. All water diverted, except that from Rock Creek, returned to river above station. (Rock Creek, which enters naturally just above gage, has been diverted to a point below municipal water-supply intake to lessen danger of pollution of that supply.) Flow of river reduced by diversion of Rock Creek, whose flow was computed on basis of two discharge measurements, 99 observations of stage, and difference in flow of river between stations near Landsberg and at Cedar Falls. Flow of river partly regulated by storage and release of water at Cedar Lake Reservoir. Gage-height record collected in cooperation with city of Seattle.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	289	247	200	380	428	982	658	719	758	820	420	430
2	285	247	200	391	437	1,080	620	772	758	790	415	450
3	285	244	203	372	482	1,020	542	730	830	671	415	442
4	293	247	200	516	440	1,080	528	765	892	546	406	406
5	285	247	228	606	479	1,150	620	726	892	510	410	446
6	282	244	397	590	424	1,230	642	725	925	582	424	402
7	278	240	446	571	353	962	612	716	925	579	410	392
8	274	240	406	566	462	1,030	598	714	925	490	492	390
9	274	240	512	564	488	1,020	550	770	1,030	485	402	401
10	271	244	439	466	469	1,010	517	733	1,040	480	402	370
11	271	237	321	517	512	957	631	730	988	470	415	370
12	271	237	325	552	522	878	596	698	920	465	406	367
13	278	234	803	543	500	854	782	736	800	465	406	368
14	289	231	748	466	430	828	953	740	878	475	392	412
15	293	231	637	511	448	866	1,010	820	928	460	392	376
16	278	228	571	420	515	815	864	766	950	456	392	334
17	274	228	565	387	550	818	744	786	994	451	384	375
18	271	215	672	468	517	792	806	826	1,090	446	388	347
19	268	215	838	486	499	686	762	802	1,220	446	384	340
20	268	215	774	494	520	504	902	768	1,330	442	388	356
21	264	209	765	476	750	942	900	784	1,430	442	392	370
22	260	209	871	455	1,140	632	834	792	1,430	438	410	356
23	260	206	899	401	974	632	785	682	1,390	433	420	348
24	257	203	671	354	992	694	708	724	1,340	433	397	349
25	257	203	500	442	880	586	630	816	1,210	433	388	338
26	257	203	480	456	854	556	716	854	1,140	424	388	325
27	254	200	442	446	934	498	744	822	1,000	424	379	317
28	254	200	450	464	930	451	746	852	1,020	428	374	321
29	250	200	451	410	-	493	722	815	970	420	379	330
30	250	197	427	366	-	548	720	822	872	415	402	348
31	250	-	420	392	-	630	-	686	-	456	402	-

Month	Observed				Diverted by Rock Creek (acre-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	293	250	271	16,640	196	16,840	274		
November	247	197	225	13,370	165	13,540	228		
December	899	200	512	31,460	2,650	34,110	555		
Calendar year 1936	1,600	197	615	446,500	18,500	465,000	641	4.64	63.16
January	606	354	469	28,860	708	29,570	481		
February	1,140	353	605	33,580	2,840	36,420	656		
March	1,230	451	814	50,030	3,450	53,480	870		
April	1,010	517	715	42,530	3,950	46,480	781		
May	854	682	764	46,990	1,410	48,400	787		
June	1,430	758	1,029	61,240	1,960	63,200	1,062		
July	820	415	493	30,300	375	30,680	499		
August	492	374	402	24,740	268	25,010	407		
September	450	317	374	22,270	345	22,620	380		
Water year 1936-37	1,430	197	555	402,000	18,320	420,400	581	4.21	57.15

Note.- Monthly discharge in second-feet per square mile and run-off in inches not computed, owing to regulation. Yearly figures closely represent natural flow.

South Fork of Skykomish River near Index, Wash.

Location.- Water-stage recorder, lat. 47°43'20", long. 121°32'40", in NE¼ sec. 29 T. 27 N., R. 10 E., 600 feet above Sunset Falls, 2 miles above North Fork, and 2 miles southeast of Index.

Drainage area.- 355 square miles.

Records available.- October 1902 to September 1905, April 1911 to September 1937.

Average discharge.- 29 years, 2,364 second-feet.

Extremes.- Maximum discharge during year, 14,400 second-feet Dec. 18 (gage height, 12.85 feet); minimum, 316 second-feet Dec. 1 (gage height, 1.78 feet).
1902-05, 1911-37: Maximum discharge observed, about 57,000 second-feet Dec. 18, 1917 (gage height, 22.6 feet, at former site); minimum, 214 second-feet Oct. 15-21, 23, 1925.

Remarks.- Records excellent except those for periods of ice effect, Jan. 7-13, 19-25, Jan. 29 to Feb. 10, which were computed on basis of one discharge measurement, gage heights, and weather records and are poor. No diversion or regulation.

Rating tables, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 18

1.7	288	3.5	1,200	7.0	4,450
2.0	397	4.0	1,600	8.0	5,840
2.5	595	5.0	2,430	9.0	7,400
3.0	840	6.0	3,380	11.0	10,700

Dec. 19 to Sept. 30

1.8	323	3.5	1,230	7.0	4,540
2.0	400	4.0	1,630	8.0	5,860
2.5	635	5.0	2,460		
3.0	900	6.0	3,420		

Note.- Same as preceding table above 8.5 feet.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	405	370	327	990	380	1,370	2,310	1,970	6,070	4,930	812	545
2	401	359	337	918	400	2,020	1,930	3,360	8,440	3,990	768	522
3	397	355	345	872	410	2,430	1,690	6,730	8,620	3,560	735	508
4	671	359	341	918	400	2,280	1,650	7,530	6,540	3,490	730	504
5	578	386	399	845	420	2,830	1,670	4,970	6,150	3,030	730	706
6	483	408	4,750	746	400	3,470	1,610	3,880	6,320	2,590	720	690
7	451	382	5,980	640	400	2,660	1,530	3,730	6,970	2,550	720	585
8	435	363	3,310	540	380	2,170	1,510	3,740	7,000	2,580	690	545
9	424	352	2,440	550	380	2,010	1,610	3,710	6,390	2,510	670	522
10	424	345	1,670	570	370	1,930	1,890	4,260	6,820	2,370	675	490
11	424	341	1,410	580	481	1,910	1,850	3,890	5,360	2,250	1,100	486
12	412	345	1,280	600	570	2,270	1,760	3,550	4,970	2,170	884	481
13	412	345	5,370	610	499	2,830	3,120	4,400	5,090	2,060	774	463
14	735	341	4,080	630	463	2,540	5,660	6,340	5,570	1,960	746	454
15	1,120	341	2,690	635	472	2,230	5,980	5,270	5,860	1,820	655	463
16	676	345	1,920	610	615	2,050	4,030	4,550	6,000	1,790	610	440
17	575	464	2,360	605	650	1,930	3,090	4,200	5,930	1,800	590	414
18	531	459	9,070	585	645	1,780	2,590	4,670	7,170	1,810	600	396
19	491	408	7,660	530	595	1,590	2,320	4,490	7,950	1,650	595	400
20	463	408	4,700	480	560	1,440	2,790	3,700	7,930	1,490	575	396
21	439	393	4,250	440	1,690	1,300	3,210	3,750	7,820	1,370	555	380
22	424	378	8,070	450	3,350	1,240	2,500	4,700	6,710	1,290	565	368
23	416	367	6,550	460	2,520	1,140	2,300	3,950	6,870	1,200	774	356
24	408	355	3,950	470	2,030	1,060	2,080	4,280	5,890	1,170	872	338
25	401	345	2,880	480	1,830	1,030	2,160	5,310	4,920	1,160	752	330
26	389	334	2,300	512	1,570	1,080	2,590	4,800	4,740	1,090	665	334
27	382	330	1,930	490	1,370	1,160	2,480	4,830	4,970	1,010	600	342
28	374	327	1,660	472	1,260	1,120	2,210	4,800	5,470	984	545	338
29	374	323	1,450	430	-	1,110	1,970	4,090	5,780	930	517	334
30	367	320	1,260	400	-	1,320	1,820	3,530	4,950	884	517	338
31	370	-	1,120	390	-	2,300	-	4,150	-	900	560	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	14,852	1,120	367	479	1.35	1.56	29,460
November	10,948	464	320	365	1.03	1.15	21,720
December	95,859	9,070	327	3,092	8.71	10.04	190,100
Calendar year 1936	825,106	10,400	320	2,254	6.35	86.37	1,637,000
January	18,448	990	390	595	1.68	1.94	36,590
February	25,110	3,350	370	897	2.53	2.64	49,800
March	57,600	3,470	1,030	1,858	5.23	6.03	114,200
April	73,910	6,980	1,510	2,464	6.94	7.74	146,600
May	137,130	7,530	1,970	4,424	12.5	14.41	272,000
June	189,270	8,620	4,740	6,309	17.8	19.86	375,400
July	62,388	4,930	864	2,013	5.67	6.54	123,700
August	21,301	1,100	517	687	1.94	2.24	42,250
September	13,468	706	330	449	1.26	1.41	26,710
Water year 1936-37	720,284	9,070	320	1,973	5.56	75.56	1,429,000

Skykomish River near Gold Bar, Wash.

Location.- Water-stage recorder, lat. 47°50'15", long. 121°40'00", in SW¼ sec. 9, T. 27 N., R. 9 E., 2 miles southeast of Gold Bar. Zero of gage is 210.01 feet above mean sea level (subject to correction for general adjustment of 1929).

Drainage area.- 535 square miles.

Records available.- September 1928 to September 1937.

Extremes.- Maximum discharge during year, 25,300 second-feet Dec. 18 (gage height, 12.19 feet); minimum, 413 second-feet Dec. 1 (gage height, 2.73 feet), or may have been less sometime during Jan. 20-25 or Jan. 31 to Feb. 2.
1928-37: Maximum discharge, 79,000 second-feet Dec. 21, 1933 (gage height, 21.3 feet); minimum, 392 second-feet Oct. 2, 3, 1929.

Remarks.- Records excellent except those for periods of ice effect, Jan. 7-13, 20-25, Jan. 31 to Feb. 2 (computed on basis of gage heights and weather records), and those for periods of faulty gage heights, June 6-10, Aug. 31, Sept. 1, 5-7 (computed on basis of records for South Fork of Skykomish River near Index), which are poor. No diversion or regulation.

Rating tables, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 18						Dec. 19 to Sept. 30					
2.7	395	4.5	2,010	8.0	8,900	2.9	520	4.5	2,210	8.0	9,100
3.0	590	5.0	2,680	9.0	12,000	3.2	740	5.0	2,920	9.0	12,200
3.5	990	6.0	4,350	10.0	15,650	3.5	1,030	6.0	4,570	10.0	15,710
4.0	1,450	7.0	6,400			4.0	1,590	7.0	6,510		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	618	534	425	1,690	620	2,290	3,570	3,130	9,180	7,450	1,390	900
2	604	507	462	1,540	640	3,340	2,980	5,380	12,800	6,100	1,290	840
3	597	494	462	1,460	653	3,960	2,640	11,100	12,800	5,560	1,240	812
4	1,110	500	449	1,540	646	3,730	2,580	11,600	9,760	5,480	1,230	794
5	1,110	555	542	1,440	684	4,790	2,660	7,340	9,280	4,770	1,230	1,150
6	868	611	7,740	1,230	653	5,670	2,560	5,780	9,600	4,120	1,210	1,100
7	772	555	10,400	1,030	646	4,300	2,420	5,670	10,500	4,090	1,180	950
8	716	514	5,240	880	632	3,520	2,400	5,730	10,300	4,180	1,130	880
9	676	494	3,700	900	618	3,250	2,550	5,670	9,700	4,120	1,070	830
10	646	488	2,510	910	611	3,070	2,950	6,420	10,400	3,890	1,120	776
11	639	481	2,140	930	828	3,020	2,900	5,920	8,040	3,690	1,870	749
12	625	481	1,990	950	1,000	3,630	2,780	5,420	7,400	3,570	1,540	749
13	618	488	7,790	970	840	4,530	5,270	6,510	7,550	3,360	1,330	724
14	1,420	481	6,190	1,000	776	4,070	9,200	9,730	8,400	3,180	1,250	716
15	2,000	494	4,060	1,000	794	3,570	9,510	7,880	8,660	2,920	1,080	716
16	1,300	494	2,960	930	1,140	3,230	6,250	6,810	9,320	2,900	990	700
17	1,050	739	3,400	920	1,250	3,000	4,860	6,290	9,220	2,940	940	668
18	918	772	13,900	890	1,180	2,770	4,090	6,970	11,900	2,940	950	646
19	836	660	12,400	803	1,060	2,490	3,680	6,740	12,300	2,640	940	639
20	764	646	7,310	720	970	2,280	4,370	5,560	12,600	2,400	950	632
21	716	611	6,530	660	2,740	2,090	5,010	5,610	12,000	2,220	890	618
22	668	576	13,000	680	5,230	2,020	4,020	6,880	10,300	2,090	930	604
23	639	541	10,200	690	4,210	1,870	3,820	5,900	10,900	2,020	1,400	590
24	618	520	6,020	710	3,410	1,770	3,440	6,250	8,860	1,980	1,430	548
25	604	500	4,500	720	3,100	1,700	3,500	8,040	7,480	1,950	1,220	534
26	590	488	3,580	749	2,660	1,750	4,110	7,140	7,230	1,870	1,050	534
27	569	468	2,980	716	2,330	1,840	3,990	7,210	7,600	1,760	940	548
28	548	455	2,550	700	2,140	1,820	3,570	7,190	8,400	1,700	870	541
29	541	443	2,260	676	-	1,810	3,170	6,180	8,920	1,590	821	534
30	541	437	2,030	646	-	2,050	2,900	5,400	7,400	1,520	821	541
31	541	-	1,850	630	-	3,450	-	6,250	-	1,540	900	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	24,462	2,000	541	789	1.47	1.70	48,520
November	16,027	772	437	534	.998	1.11	31,790
December	149,470	13,900	425	4,822	9.01	10.39	296,500
Calendar year 1936	1,296,164	16,900	425	3,541	6.62	90.08	2,571,000
January	29,310	1,690	630	945	1.77	2.04	58,140
February	42,061	5,230	611	1,502	2.81	2.93	83,430
March	92,670	5,670	1,700	2,999	5.59	6.44	183,800
April	117,750	9,510	2,400	3,925	7.34	8.19	233,600
May	207,700	11,600	3,130	6,700	12.5	14.41	412,000
June	288,800	12,800	7,230	9,627	18.0	20.08	572,800
July	100,540	7,450	1,520	3,243	6.06	6.99	199,400
August	35,202	1,870	621	1,136	2.12	2.44	69,820
September	21,563	1,150	534	719	1.34	1.50	42,770
Water year 1936-37	1,125,555	13,900	425	3,084	5.76	78.22	2,233,000

North Fork of Skykomish River at Index, Wash.

Location.- Wire-weight gage, lat. 47°49'20", long. 121°32'50", in SE¼ sec. 17, T. 27 N., R. 10 E., on highway bridge at Index, 1⅝ miles above mouth.

Drainage area.- 149 square miles.

Records available.- August 1910 to September 1922, February 1929 to September 1937.

Average discharge.- 20 years, 1,212 second-feet.

Extremes.- Maximum discharge observed during year, 4,670 second-feet June 2 (gage height, 5.30 feet), may have been greater sometime during Dec. 18-19; minimum observed, 84 second-feet Dec. 1.

1910-22, 1929-37: Maximum discharge observed, about 21,000 second-feet Feb. 26, 1932 (gage height, 10.5 feet), or may have reached 26,500 second-feet Dec. 21, 1933 (from unofficial reports of comparative stages); minimum, 78 second-feet Sept. 25, 1930.

Remarks.- Records fair except those for periods of ice effect, Jan. 6-14, 16-24, 26, 28, Jan. 30 to Feb. 10, which were computed on basis of one discharge measurement, gage heights, weather records, and records for stations on Skykomish River near Gold Bar and South Fork of Skykomish River near Index and are poor. Gage read once daily Oct. 1 to Mar. 31 and June 16 to Sept. 30, twice daily Apr. 1 to June 15. No diversion or regulation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	170	140	84	464	140	600	950	1,000	*3,000	2,120	376	261
2	155	120	111	428	140	963	842	*2,200	*4,200	1,860	350	230
3	148	120	94	410	150	1,180	734	4,250	3,670	1,690	342	222
4	*410	120	92	491	140	1,120	770	3,850	2,930	1,730	359	215
5	300	148	117	402	160	1,470	782	2,220	2,930	1,510	350	400
6	236	162	2,820	330	140	1,920	758	1,820	3,010	1,220	350	402
7	209	140	1,650	280	140	1,400	710	1,860	3,460	1,280	342	309
8	185	125	1,680	240	140	1,040	710	1,940	3,250	1,290	309	269
9	185	120	1,240	240	140	963	758	1,940	3,250	1,250	293	253
10	178	116	*800	240	130	902	902	2,120	3,290	1,250	301	230
11	162	112	700	240	285	854	842	1,940	2,530	1,170	666	215
12	162	120	582	240	261	1,050	818	1,790	2,390	1,160	446	222
13	162	112	*2,200	250	222	1,520	1,900	*2,300	*2,400	1,070	384	208
14	918	125	1,800	250	178	1,280	3,350	*3,300	*2,800	963	350	200
15	848	116	1,220	245	170	1,070	2,800	2,420	2,700	890	301	200
16	489	116	846	240	301	938	1,900	2,200	2,780	902	269	200
17	380	*260	898	230	309	866	1,420	2,080	2,910	926	253	185
18	320	193	3,110	220	309	782	1,180	2,360	3,500	938	253	170
19	272	148	3,720	200	269	677	1,080	2,190	3,910	818	245	170
20	245	159	2,490	190	230	611	1,340	1,790	4,570	734	245	178
21	227	143	2,240	180	464	560	1,400	1,850	3,960	677	238	164
22	200	134	4,530	190	1,330	510	1,180	*2,200	3,310	644	238	164
23	200	118	3,170	190	1,210	464	1,210	1,910	3,580	611	359	170
24	185	106	1,820	200	902	437	1,050	*2,100	*3,000	611	384	152
25	170	101	1,380	200	878	410	1,130	2,610	2,390	590	334	146
26	170	99	1,080	200	710	446	1,380	2,300	2,300	560	293	146
27	155	94	938	185	600	473	1,290	2,320	2,270	530	261	146
28	155	92	758	180	550	455	1,110	2,300	2,420	491	245	140
29	140	87	655	170	-	455	938	1,910	2,800	446	215	140
30	140	86	590	160	-	520	854	1,700	2,120	428	215	146
31	140	-	530	140	-	950	-	2,000	-	437	230	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	8,016	918	140	259	1.74	2.01	15,900
November	3,832	260	86	128	.859	.96	7,600
December	44,145	4,530	84	1,424	9.56	11.02	87,560
Calendar year 1936	393,265	4,750	84	1,074	7.21	98.19	780,100
January	7,825	491	140	252	1.69	1.95	15,520
February	10,598	1,330	130	378	2.54	2.64	21,020
March	26,886	1,920	410	867	5.82	6.71	53,330
April	36,088	3,350	710	1,203	8.07	9.00	71,580
May	68,770	4,250	1,000	2,218	14.9	17.18	136,400
June	91,630	4,570	2,120	3,054	20.5	22.87	181,700
July	30,796	2,120	428	993	6.66	7.68	61,080
August	9,796	666	215	316	2.12	2.44	19,430
September	6,253	402	140	208	1.40	1.56	12,400
Water year 1936-37	344,635	4,570	84	944	6.34	86.02	683,500

*Computed on basis of one gage reading daily and records for Skykomish River at Gold Bar and South Fork of Skykomish River near Index.

Troublesome Creek near Index, Wash.

Location.- Water-stage recorder, lat. 47°54'00", long. 121°23'50", in NE¼ sec. 21, T. 28 N., R. 11 E. (unsurveyed), a quarter of a mile above mouth and 9 miles northeast of Index.

Drainage area.- 10.4 square miles at measuring section, 1¼ miles above gage.

Records available.- July 1929 to September 1937.

Extremes.- Maximum discharge during year, 740 second-feet Dec. 18 (gage height, 3.45 feet); minimum, 10 second-feet Nov. 17, 18, 19.
1929-37: Maximum discharge, 2,300 second-feet Dec. 21, 1933 (gage height, 7.0 feet), from rating curve extended above 750 second-feet; maximum gage height, 7.54 feet Feb. 26, 1932; minimum discharge, that of Nov. 17, 18, 19, 1936.

Remarks.- Records fair. They represent discharge at measuring section, 1¼ miles above gage. No diversion or regulation.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

0.1	9
.5	18
1.0	51
1.5	113
2.0	228
2.5	378
3.0	560
3.5	760

Discharge, in second-feet, water year October1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	14	11	40	12	122	223	80	249	249	61	30
2	22	14	11	33	12	367	223	178	354	213	54	32
3	22	13	11	28	12	468	167	378	350	196	52	32
4	25	13	11	36	12	400	170	369	276	189	54	33
5	30	13	12	28	11	486	244	257	257	162	57	46
6	29	13	416	23	11	504	265	196	268	131	59	55
7	27	12	408	20	11	367	233	181	302	127	58	50
8	26	12	231	19	11	251	193	172	308	141	54	46
9	24	12	140	18	11	238	150	167	288	153	50	43
10	23	12	99	17	11	244	160	186	299	153	54	42
11	22	12	32	16	28	223	129	174	254	153	82	39
12	22	11	74	16	36	262	151	148	231	150	85	40
13	23	11	253	15	18	400	360	195	231	145	76	40
14	76	11	217	15	16	308	518	274	249	136	66	42
15	107	11	301	15	15	218	542	233	251	120	55	45
16	86	11	268	14	33	160	439	206	288	124	47	44
17	66	10	326	14	30	122	305	191	314	133	43	40
18	53	10	670	14	26	102	210	206	393	145	45	37
19	44	10	600	14	18	83	150	198	400	131	46	34
20	39	11	450	14	17	73	264	153	410	118	45	33
21	35	11	403	14	181	71	418	145	407	107	42	32
22	30	11	586	14	486	68	371	181	350	99	44	29
23	27	12	580	14	486	62	368	155	389	96	52	27
24	25	11	412	13	385	53	317	189	364	98	53	24
25	21	12	254	13	364	51	262	231	302	103	49	21
26	19	12	153	14	302	57	213	216	241	103	45	19
27	18	12	96	13	206	56	155	213	231	100	42	18
28	17	11	73	13	125	51	113	203	265	92	40	18
29	16	11	62	13	-	51	98	174	311	87	38	18
30	15	11	53	13	-	94	78	141	268	83	32	18
31	15	-	46	12	-	256	-	169	-	73	31	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,026	107	15	33.1	3.18	3.67	2,040
November	350	14	10	11.7	1.12	1.25	694
December	7,309	670	11	236	22.7	26.17	14,500
Calendar year 1936	39,606	670	10	108	10.4	141.66	78,560
January	555	40	12	17.9	1.72	1.98	1,100
February	2,886	486	11	103	9.90	10.31	5,720
March	6,258	504	51	202	19.4	22.37	12,410
April	7,489	542	78	250	24.0	26.78	14,850
May	6,189	389	80	200	19.2	22.14	12,280
June	9,100	410	231	303	29.1	32.47	18,050
July	4,107	249	73	132	12.7	14.64	8,150
August	1,606	85	31	51.9	4.99	5.75	3,190
September	1,027	56	18	34.2	3.29	3.67	2,040
Water year 1936-37	47,904	670	10	131	12.6	171.20	95,020

Sultan River near Startup, Wash.

Location.- Water-stage recorder, lat. 47°58'30", long. 121°46'30", in NE¼ sec. 28 T. 29 N., R. 8 E., 1½ miles above intake of Everett water-supply system and 7½ miles north of Startup.

Drainage area.- 75 square miles.

Records available.- May 1934 to September 1937.

Extremes.- Maximum discharge during year, 10,700 second-feet Dec. 6 (gage height, 13.40 feet), from rating curve extended above 3,000 second-feet; minimum, probably less than 90 second-feet sometime during Jan. 20-25.
1934-37: Maximum discharge, 15,600 second-feet Oct. 24, 1934 (gage height, 16.05 feet), from rating curve extended above 3,000 second-feet; minimum, 66 second-feet Sept. 7, 1934 (gage height, 3.52 feet).

Remarks.- Records excellent except those for periods of ice effect, Jan. 8-10, 20-25, which were computed on basis of gage heights and weather records and are fair. No diversion or regulation.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

3.5	78	6.0	755	9.0	3,400
4.0	133	6.5	1,020	10.0	4,800
4.5	222	7.0	1,360	11.0	6,360
5.0	356	7.5	1,760		
5.5	535	8.0	2,230		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	120	109	96	262	97	525	980	678	1,340	830	183	165
2	115	106	115	238	97	1,200	730	1,640	1,720	682	172	146
3	120	104	115	222	92	1,140	682	2,600	1,480	638	160	136
4	389	106	113	258	101	1,100	773	2,080	1,120	660	160	132
5	249	142	220	224	104	2,030	830	1,260	1,120	535	160	276
6	179	149	5,730	185	106	1,940	730	990	1,180	466	158	278
7	153	128	3,900	167	102	1,070	595	1,080	1,260	469	161	207
8	141	116	1,820	160	99	850	595	1,220	1,220	516	152	176
9	132	110	1,100	150	97	860	755	1,300	1,180	516	146	158
10	124	106	678	140	96	790	905	1,480	1,360	481	211	146
11	116	104	646	139	176	755	780	1,360	1,020	444	547	137
12	114	101	755	136	222	1,120	698	1,150	932	422	312	130
13	140	100	4,190	132	155	1,330	2,280	1,380	960	405	236	128
14	1,580	99	2,040	130	136	1,060	3,550	2,040	1,020	385	209	120
15	723	99	1,080	152	148	890	2,450	1,450	1,050	353	174	116
16	415	101	805	147	278	750	1,520	1,220	1,510	372	153	115
17	309	186	1,410	141	289	656	1,020	1,180	1,670	398	146	113
18	252	157	4,550	136	226	587	830	1,220	3,350	398	141	108
19	218	155	3,090	107	179	492	783	1,080	2,240	332	136	107
20	195	185	1,830	90	166	433	1,940	855	2,670	294	132	106
21	177	153	2,020	90	990	395	1,350	855	2,280	275	128	104
22	165	136	4,350	95	1,900	375	932	1,050	1,850	255	182	115
23	155	126	2,160	100	1,310	353	990	855	2,620	252	336	108
24	147	119	1,210	100	855	329	880	1,020	2,290	255	309	104
25	140	112	905	100	760	320	932	1,220	1,480	258	258	98
26	133	107	692	110	595	350	1,050	1,020	1,220	245	205	96
27	128	104	551	114	508	362	932	960	1,150	229	177	96
28	123	99	451	112	433	341	780	905	1,180	214	160	93
29	118	97	388	107	-	332	660	780	1,180	195	147	96
30	114	94	341	94	-	748	595	682	880	191	146	169
31	114	-	297	92	-	1,500	-	878	-	201	149	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	7,298	1,580	114	235	3.13	3.61	14,480
November	3,610	186	94	120	1.60	1.78	7,160
December	47,648	5,730	96	1,537	20.5	23.63	94,510
Calendar year 1936	269,748	5,730	80	737	9.83	133.76	535,000
January	4,430	262	90	143	1.91	2.20	8,790
February	10,317	1,900	92	368	4.91	5.11	20,460
March	24,983	2,030	320	806	10.7	12.34	49,550
April	32,527	3,550	595	1,084	14.5	16.18	64,520
May	37,488	2,600	678	1,209	16.1	18.56	74,360
June	45,532	3,350	880	1,518	20.2	22.54	90,310
July	12,166	830	191	392	5.23	6.03	24,130
August	6,046	547	128	195	2.60	3.00	11,990
September	4,079	278	93	136	1.81	2.02	8,090
Water year 1936-37	236,124	5,730	90	647	8.63	117.00	468,400

Snoqualmie River near Tolt, Wash.

Location.- Water-stage recorder, lat. 47°39'55", long. 121°55'30", in sec. 9, T. 25 N., R. 7 E., 100 feet below highway bridge, 1 mile northwest of Tolt. Zero of gage is 42.96 feet above mean sea level (general adjustment of 1929).

Drainage area.- 605 square miles.

Records available.- February 1929 to September 1937.

Extremes.- Maximum discharge during year, 17,200 second-feet Apr. 15 (gage height, 9.60 feet); minimum, 371 second-feet Sept. 28, 29 (gage height, 2.69 feet).
1929-37: Maximum discharge, about 51,000 second-feet Feb. 26, 1932; maximum gage height recorded, 16.97 feet Nov. 13, 1932; minimum discharge, 354 second-feet Sept. 9, 13, 1935; minimum gage height, 0.34 foot Sept. 11, 1930.

Remarks.- Records good for October to April, excellent for May to September. Shifting-control method used Feb. 16 to May 16. Low-water flow diverted for power-plant purposes at Snoqualmie Falls but returned to river above gage. Some regulation of flow caused by operation of power plants.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	690	615	588	2,140	854	4,060	4,930	3,530	5,760	4,960	1,080	969
2	680	624	606	1,960	888	5,940	4,060	4,660	7,670	4,200	1,070	902
3	680	597	615	1,740	900	6,590	3,740	8,330	8,250	3,680	988	821
4	1,070	597	633	1,960	916	5,820	3,750	9,410	6,600	3,580	952	786
5	1,660	700	750	2,030	1,140	6,460	3,960	6,580	5,990	3,280	946	1,110
6	1,200	793	6,350	1,620	1,060	7,840	3,860	5,270	6,110	2,980	936	1,640
7	930	720	13,600	1,450	982	6,070	3,650	5,040	6,350	2,780	940	1,360
8	837	660	7,810	1,340	966	4,750	3,450	5,150	6,600	2,780	886	1,100
9	771	624	6,160	1,440	900	4,530	3,560	5,050	5,990	2,680	943	980
10	750	615	4,350	1,250	916	4,420	4,190	5,850	6,350	2,560	893	902
11	730	606	3,590	1,170	1,370	4,100	3,880	5,860	5,520	2,400	1,300	832
12	680	597	3,170	1,150	2,440	4,540	3,660	5,290	5,180	2,300	1,580	789
13	680	588	9,000	1,270	2,060	5,350	7,360	5,860	5,180	2,200	1,220	789
14	990	579	10,200	1,250	1,860	4,880	10,500	7,660	5,180	2,260	1,090	756
15	1,950	546	7,450	1,490	1,760	4,330	14,700	7,120	6,350	2,170	1,010	746
16	1,620	597	5,160	1,350	2,580	4,000	9,230	5,870	6,320	2,000	910	700
17	1,080	750	4,800	1,260	3,510	3,580	6,940	5,410	7,960	1,960	872	694
18	990	990	9,320	1,220	3,920	3,380	5,800	5,640	8,470	1,960	813	689
19	930	848	13,300	1,150	2,980	3,080	5,220	5,520	11,000	1,850	789	671
20	815	815	8,260	976	2,370	2,880	6,510	4,740	10,000	1,650	768	655
21	782	771	6,970	930	4,740	2,590	7,920	4,520	10,000	1,530	750	656
22	730	730	7,570	1,070	12,600	2,700	5,930	5,520	8,540	1,290	752	650
23	670	690	12,600	1,050	11,100	2,700	5,110	5,180	8,540	1,390	1,310	634
24	660	651	7,680	1,020	7,540	2,470	4,670	4,850	8,250	1,280	2,210	616
25	651	651	5,780	1,030	6,310	2,320	4,450	5,990	6,350	1,270	1,620	571
26	660	633	4,690	1,100	5,190	2,290	4,790	5,870	5,640	1,270	1,320	572
27	624	624	3,910	1,030	4,620	2,330	4,790	5,640	5,410	1,220	1,150	546
28	642	615	3,380	968	4,060	2,260	4,360	5,410	5,410	1,190	995	535
29	615	579	2,970	928	-	2,200	3,940	5,180	5,760	1,130	874	544
30	615	606	2,680	852	-	2,470	3,520	4,520	4,960	1,110	926	608
31	615	-	2,390	821	-	4,690	-	4,520	-	1,190	950	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	26,997	1,950	615	871	1.44	1.66	53,550
November	20,011	990	546	667	1.10	1.23	39,690
December	176,332	13,600	588	5,688	9.40	10.84	349,700
Calendar year 1936	1,273,840	14,300	546	3,480	5.75	78.34	2,527,000
January	40,015	2,140	821	1,291	2.13	2.46	79,370
February	90,532	12,600	854	3,233	5.34	5.56	179,600
March	125,620	7,840	2,200	4,052	6.70	7.72	249,200
April	162,430	14,700	3,450	5,414	8.95	9.99	322,200
May	175,040	9,410	3,530	5,646	9.33	10.76	347,200
June	205,690	11,000	4,960	6,856	11.3	12.61	408,000
July	68,100	4,960	1,110	2,197	3.63	4.18	135,100
August	32,843	2,210	750	1,059	1.75	2.02	65,140
September	23,823	1,640	535	794	1.31	1.46	47,250
Water year 1936-37	1,147,433	14,700	535	3,144	5.20	70.49	2,276,000

North Fork of Snoqualmie River near Snoqualmie Falls, Wash.

Location.- Water-stage recorder, lat. 47°37'10", long. 121°42'35", in SW¼ sec. 30, T. 25 N., R. 9 E., 1 mile above Calligan Creek and 8 miles northeast of Snoqualmie Falls.

Drainage area.- 65 square miles.

Records available.- August 1929 to September 1937.

Extremes.- Maximum discharge during year, 4,010 second-feet Dec. 6 (gage height, 10.74 feet); minimum, 54 second-feet Sept. 29, 30 (gage height, 2.36 feet).
1929-37: Maximum discharge, about 8,020 second-feet Feb. 26, 1932 (gage height, 17.5 feet), from rating curve extended above 1,500 second-feet; minimum, 30 second-feet Sept. 17-19, 1929 (gage height, 1.91 feet).

Remarks.- Records good except those for period of ice effect, Jan. 9 to Feb. 5 (computed on basis of gage heights, weather records, and records for station near North Bend), and those above 2,500 second-feet, which are poor. No diversion or regulation.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Feb. 23 to Apr. 13)

2.3	49	4.5	477
2.5	67	5.0	650
2.7	86	6.0	1,080
3.0	125	7.0	1,600
3.5	211	8.0	2,200
4.0	329	9.0	2,800

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	88	71	74	213	100	351	566	442	1,130	635	122	126
2	84	68	72	197	100	709	411	957	1,410	484	111	114
3	88	65	72	186	100	714	356	1,620	1,220	461	104	103
4	290	71	72	203	100	650	376	1,400	918	467	101	98
5	226	99	150	184	100	1,020	387	810	922	378	97	217
6	159	117	2,390	154	101	1,120	356	650	968	329	93	234
7	134	91	2,200	134	99	652	340	714	1,040	334	96	184
8	119	80	1,020	140	96	490	437	746	999	345	93	151
9	107	75	732	140	94	500	420	766	904	332	88	134
10	98	72	490	130	91	490	507	963	1,000	311	95	121
11	92	70	445	120	107	464	433	860	706	289	348	110
12	87	70	419	120	153	622	429	750	945	272	211	103
13	92	70	2,160	120	136	742	1,400	1,020	819	267	161	96
14	205	71	1,410	120	117	598	2,200	1,500	674	279	146	90
15	317	72	832	120	113	510	1,630	1,030	1,060	255	128	85
16	197	72	556	120	173	448	954	846	1,210	239	112	81
17	154	147	584	120	207	402	702	790	1,230	228	101	77
18	134	126	2,400	110	222	359	594	891	1,940	234	92	75
19	121	108	1,660	95	182	313	576	766	1,760	207	87	73
20	110	114	1,080	80	164	281	1,010	573	1,730	186	83	72
21	102	107	1,180	90	696	260	949	643	1,450	171	78	71
22	96	94	2,150	100	1,710	255	612	909	1,180	161	87	68
23	90	88	1,420	100	1,040	232	534	662	1,400	153	347	65
24	86	84	806	100	646	215	480	782	1,200	145	316	63
25	83	82	594	100	542	203	570	1,010	860	140	269	62
26	79	79	471	95	436	213	666	864	786	132	201	59
27	77	77	393	95	378	224	594	828	774	130	161	58
28	74	75	334	90	326	213	490	794	824	126	138	57
29	72	74	301	90	-	209	417	702	832	122	124	56
30	71	72	272	95	-	307	378	570	621	117	122	65
31	72	-	239	95	-	751	-	736	-	126	137	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	3,804	317	71	123	1.89	2.18	7,550
November	2,561	147	65	85.4	1.31	1.46	5,080
December	26,978	2,400	72	870	13.4	15.45	53,510
Calendar year 1936	180,080	2,560	54	492	7.57	103.04	357,200
January	3,856	213	80	124	1.91	2.20	7,650
February	8,329	1,710	91	297	4.57	4.76	16,520
March	14,517	1,120	203	468	7.20	8.30	28,790
April	19,774	2,200	340	659	10.1	11.27	39,220
May	26,594	1,620	442	858	13.2	15.22	52,750
June	32,712	1,940	621	1,090	16.8	18.74	64,880
July	8,055	635	117	260	4.00	4.61	15,980
August	4,449	348	78	144	2.22	2.56	8,820
September	2,968	254	56	98.9	1.52	1.70	5,890
Water year 1936-37	154,597	2,400	56	424	6.52	88.45	306,600

North Fork of Snoqualmie River near North Bend, Wash.

Location.- Water-stage recorder, lat. 47°32'20", long. 121°44'20", in NE¼ sec. 26, T. 24 N., R. 8 E., 2 miles above mouth and 3½ miles northeast of North Bend.

Drainage area.- 105 square miles.

Records available.- July 1907 to September 1926, February 1929 to September 1937.

Average discharge.- 27 years, 696 second-feet.

Extremes.- Maximum discharge during year, 4,760 second-feet Dec. 6 (gage height, 6.71 feet); minimum, 99 second-feet Dec. 1, 4.

1907-26, 1929-37: Maximum discharge recorded, about 11,500 second-feet Oct. 24 or 25, 1934 (gage height, 11.4 feet, from apparent range of stage), from rating curve extended above 2,500 second-feet; water above gage Nov. 18, 19, 23, 24, 29, 30, 1909, on which days stage and discharge may have exceeded those of 1934. Minimum discharge, 54 second-feet Aug. 31, Sept. 1, 1930, Sept. 1, 1934.

Remarks.- Records fair. Discharge for Oct. 19-22 interpolated. No diversion or regulation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	114	103	380	155	621	899	691	1,700	895	182	204
2	123	111	102	348	150	1,050	691	1,240	1,990	698	168	186
3	125	106	102	325	144	1,100	614	2,140	1,820	641	161	172
4	328	114	100	344	150	1,040	642	2,030	1,410	648	154	163
5	279	142	188	319	150	1,440	663	1,350	1,400	548	148	324
6	211	166	2,520	281	142	1,700	614	1,070	1,440	480	144	362
7	180	142	2,880	267	140	1,150	594	1,120	1,540	475	146	293
8	160	130	1,560	270	136	928	588	1,160	1,470	480	142	247
9	147	121	1,170	270	132	910	684	1,180	1,320	460	138	223
10	132	116	788	250	132	892	820	1,470	1,430	441	144	204
11	125	113	691	228	159	838	733	1,370	1,080	410	391	186
12	121	111	635	228	216	1,010	745	1,200	1,300	388	283	174
13	121	111	2,500	238	194	1,190	1,900	1,500	1,160	384	226	165
14	234	110	1,980	234	173	1,020	2,670	2,030	1,250	401	210	157
15	372	110	1,330	238	173	910	2,320	1,590	1,620	371	189	148
16	250	110	937	225	241	804	1,520	1,320	1,790	350	168	144
17	208	176	910	225	299	726	1,190	1,290	1,800	334	154	138
18	188	166	2,690	216	307	670	1,020	1,390	2,450	334	146	134
19	178	149	2,240	194	257	600	973	1,250	2,300	300	138	132
20	167	160	1,620	183	228	552	1,420	982	2,200	273	132	132
21	157	142	1,660	183	733	504	1,520	1,040	2,060	253	132	128
22	146	130	2,650	178	2,000	480	1,080	1,410	1,700	241	148	124
23	136	125	2,100	181	1,490	455	937	1,110	1,900	229	500	119
24	132	120	1,320	178	1,090	425	829	1,210	1,710	218	491	115
25	129	116	1,010	178	928	405	901	1,540	1,270	210	414	111
26	127	113	820	173	780	405	1,050	1,420	1,160	201	322	108
27	121	110	677	168	684	415	973	1,330	1,100	191	266	106
28	118	108	582	162	607	400	820	1,260	1,130	186	235	102
29	114	103	510	155	-	390	719	1,140	1,140	179	210	102
30	113	100	460	140	-	482	656	958	886	177	204	125
31	114	-	420	152	-	1,040	-	1,130	-	186	218	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	5,185	372	113	167	1.59	1.83	10,280
November	3,742	176	100	125	1.19	1.33	7,420
December	37,255	2,880	100	1,202	11.4	13.14	73,890
Calendar year 1936	255,039	3,020	86	697	6.64	90.34	505,900
January	7,109	380	140	229	2.18	2.51	14,100
February	11,990	2,000	132	428	4.08	4.25	23,780
March	24,552	1,700	390	792	7.54	8.69	48,700
April	30,785	2,670	588	1,026	9.77	10.90	61,060
May	40,901	2,140	691	1,319	12.6	14.53	81,130
June	46,536	2,450	886	1,551	14.8	16.51	92,280
July	11,582	895	177	374	3.56	4.10	22,970
August	6,704	500	132	216	2.06	2.38	13,300
September	5,028	362	102	168	1.60	1.78	9,970
Water year 1936-37	231,359	2,680	100	634	6.04	81.95	458,900

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South Fork of Snoqualmie River at North Bend, Wash.

Location.- Water-stage recorder, lat. 47°29'20", long. 121°47'10", in SE¼ sec. 9, T. 23 N., R. 8 E., half a mile south of North Bend and 3½ miles above mouth.

Drainage area.- 84 square miles.

Records available.- July 1907 to September 1926, February 1929 to September 1937.

Average discharge.- 27 years, 538 second-feet.

Extremes.- Maximum discharge during year, 2,810 second-feet Dec. 19 (gage height, 6.43 feet); minimum discharge, 87 second-feet Nov. 15, 16; minimum gage height, 1.24 feet Sept. 29, 30.

1907-26, 1929-37: Maximum discharge recorded, 7,620 second-feet Oct. 25, 1934 (gage height, 11.2 feet), from rating curve extended above 2,000 second-feet; water above gage Nov. 3, 4, 19, 23, 29, 1909, on which days stage and discharge may have exceeded those of 1934. Minimum discharge, 63 second-feet Oct. 22, 1925 (gage height, 1.14 feet).

Remarks.- Records excellent except those for Apr. 24 to May 19, which were computed from doubtful gage-height record and are fair. No diversion or regulation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101	98	92	312	164	512	700	499	1,100	875	261	187
2	100	96	94	287	165	700	597	664	1,420	725	250	173
3	101	92	113	272	161	750	525	1,300	1,420	650	244	166
4	139	96	94	309	166	750	530	1,540	1,150	640	239	161
5	167	105	117	278	168	875	538	1,100	1,080	578	233	245
6	131	105	940	243	161	950	512	900	1,100	530	230	266
7	119	103	1,460	224	157	775	474	850	1,150	513	230	222
8	111	98	745	227	155	675	458	850	1,150	505	225	192
9	107	94	590	227	150	626	483	850	1,050	490	222	180
10	101	92	427	214	148	584	530	950	1,080	467	222	170
11	100	90	356	209	200	574	512	950	900	444	244	161
12	98	88	322	206	246	675	512	900	825	433	241	154
13	101	88	988	222	211	825	904	1,050	850	423	228	150
14	138	88	1,020	216	192	725	1,490	1,220	900	423	222	143
15	229	87	720	252	192	626	1,580	1,100	975	401	210	139
16	172	90	532	224	243	574	1,120	1,000	1,100	387	200	137
17	144	123	532	222	293	543	925	900	1,180	377	194	137
18	131	135	1,350	214	275	499	800	1,000	1,330	367	190	132
19	121	119	1,900	204	238	454	750	950	1,820	354	185	130
20	115	113	1,080	182	219	415	900	850	1,530	337	182	130
21	111	105	900	199	631	392	1,050	850	1,590	328	180	128
22	109	101	1,340	199	1,330	388	825	1,020	1,320	318	187	126
23	107	100	1,460	192	1,020	363	725	900	1,380	308	247	122
24	105	98	975	189	850	346	700	900	1,230	302	269	122
25	103	96	775	196	725	336	650	1,120	1,050	296	225	120
26	101	94	626	194	602	336	626	1,020	950	287	202	118
27	100	94	534	184	521	342	650	1,020	925	281	190	114
28	98	92	462	180	474	332	588	1,020	925	278	182	114
29	96	90	415	173	-	332	525	925	925	272	175	114
30	96	90	378	161	-	385	499	825	825	264	175	126
31	96	-	342	152	-	688	-	875	-	266	192	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,648	229	96	118	1.40	1.61	7,240
November	2,960	135	87	98.7	1.18	1.32	5,870
December	21,679	1,900	92	699	8.32	9.59	43,000
Calendar year 1936	188,791	2,000	87	516	6.14	83.59	374,500
January	6,763	312	152	218	2.60	3.00	13,410
February	10,058	1,330	148	359	4.27	4.45	19,950
March	17,347	950	332	560	6.67	7.69	34,410
April	21,678	1,580	458	723	8.61	9.61	43,000
May	29,898	1,540	499	964	11.5	13.26	59,300
June	34,230	1,820	825	1,141	13.6	15.17	67,890
July	13,119	875	264	423	5.04	5.81	26,020
August	6,576	269	175	215	2.56	2.95	13,240
September	4,579	266	114	153	1.82	2.03	9,080
Water year 1936-37	172,635	1,900	87	473	5.63	76.49	342,400

South Fork of Stillaguamish River near Granite Falls, Wash.

Location.- Water-stage recorder, lat. 48°06'10", long. 121°56'40", in SW¼NW¼ sec. 8, T. 30 N., R. 7 E., 2 miles northeast of Granite Falls.

Drainage area.- 119 square miles.

Records available.- July 1928 to September 1937.

Extremes.- Maximum discharge during year, 14,400 second-feet Dec. 6 (gage height, 13.60 feet); minimum, 92 second-feet Sept. 26, 27 (gage height, 3.22 feet).
1928-37: Maximum discharge, about 28,700 second-feet Feb. 28, 1932 (gage height, 19.7 feet, from graph based on gage readings), from rating curve extended above 6,000 second-feet; minimum, 66 second-feet Sept. 4, 1930 (gage height, 3.05 feet).

Remarks.- Records excellent except those for periods of ice effect, Jan. 7-18, 20-29, Jan. 31 to Feb. 3 (computed on basis of gage heights and weather records), and those above 6,000 second-feet, which are poor. No diversion or regulation.

Rating tables, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 5		Dec. 6 to Sept. 30			
3.0	55	3.2	88	7.0	2,950
3.5	160	3.5	160	8.0	4,450
4.0	325	4.0	340	9.0	6,080
4.5	545	4.5	580	10.0	7,800
5.0	860	5.0	915	11.0	9,600
5.5	1,240	6.0	1,760		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	149	126	119	389	150	775	1,440	832	1,620	1,010	234	169
2	141	119	186	358	160	1,910	1,060	1,510	2,020	855	213	157
3	144	114	201	336	160	1,720	1,010	2,620	1,820	780	190	152
4	474	109	180	410	163	1,490	1,130	2,400	1,400	802	187	146
5	350	153	301	371	184	2,460	1,310	1,520	1,360	659	190	289
6	243	228	8,110	271	166	2,570	1,150	1,150	1,440	564	190	311
7	198	166	5,370	260	155	1,580	908	1,190	1,540	470	210	230
8	177	146	2,120	260	144	1,150	825	1,660	1,490	608	193	190
9	163	133	1,430	260	138	1,230	1,000	1,760	1,400	613	175	169
10	155	123	878	250	136	1,190	1,400	2,020	1,720	586	216	155
11	146	119	795	240	248	1,110	1,190	1,860	1,310	544	805	144
12	141	114	1,110	240	449	1,270	1,060	1,440	1,160	538	395	136
13	149	114	5,910	240	315	1,490	3,480	1,620	1,110	513	302	131
14	1,010	109	2,930	230	241	1,440	4,890	2,580	1,190	483	278	126
15	798	109	1,500	230	246	1,230	3,630	1,720	1,310	440	216	123
16	448	109	1,110	220	555	1,050	2,280	1,440	1,750	454	181	121
17	337	328	2,060	220	558	930	1,540	1,360	2,220	483	160	121
18	278	304	5,200	210	453	862	1,190	1,400	4,450	498	152	116
19	243	230	4,230	206	332	716	1,060	1,310	2,630	430	149	114
20	220	310	2,320	210	296	630	3,040	1,070	3,470	371	141	109
21	198	240	2,460	210	1,690	575	2,260	1,050	3,090	344	136	107
22	186	204	6,710	200	2,880	570	1,360	1,400	2,310	319	335	109
23	174	180	3,150	200	2,080	564	1,360	1,190	3,360	315	825	107
24	166	163	1,620	200	1,270	518	1,230	1,230	3,530	315	514	101
25	157	152	1,310	200	1,050	493	1,270	1,580	1,870	323	398	96
26	146	141	998	200	862	533	1,310	1,310	1,490	311	302	92
27	138	138	780	200	744	559	1,190	1,230	1,360	286	248	94
28	133	131	641	190	659	513	1,010	1,190	1,360	271	206	101
29	133	123	564	180	-	493	848	1,040	1,400	252	172	103
30	131	119	498	172	-	1,180	751	900	1,070	234	178	310
31	128	-	444	160	-	2,420	-	1,100	-	237	181	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	7,654	1,010	128	247	2.08	2.40	15,180
November	4,854	328	109	162	1.36	1.52	9,630
December	65,235	8,110	119	2,104	17.7	20.41	129,400
Calendar year 1936	358,176	8,110	109	979	8.23	111.90	710,500
January	7,523	410	160	243	2.04	2.35	14,920
February	16,484	2,880	136	589	4.95	5.16	32,700
March	35,221	2,570	493	1,136	9.55	11.01	69,860
April	47,182	4,890	751	1,573	13.2	14.73	93,580
May	45,682	2,620	832	1,474	12.4	14.30	90,610
June	57,240	4,450	1,070	1,908	16.0	17.85	113,500
July	14,908	1,010	234	481	4.04	4.66	29,570
August	8,272	825	136	267	2.24	2.58	16,410
September	4,429	311	92	148	1.24	1.38	8,780
Water year 1936-37	314,684	8,110	92	862	7.24	98.35	624,100

South Fork of Stillaguamish River above Jim Creek, near Arlington, Wash.

Location.- Water-stage recorder, lat. 48°09'55", long. 122°03'55", in SW¼ sec. 17, T. 31 N., R. 6 E., 1½ miles above Jim Creek and 3 miles southeast of Arlington. Zero of gage is 80 feet above mean sea level (general adjustment of 1929).

Drainage area.- 199 square miles.

Records available.- October 1936 to September 1937.

Extremes.- Maximum discharge observed during year, 13,600 second-feet Dec. 22 (gage height, 19.31 feet); minimum, 142 second-feet Nov. 16 (gage height, 10.79 feet).

Remarks.- Records excellent except those for the period Oct. 1 to Dec. 31, which are good, and those for period of missing gage heights, Oct. 1-29 (computed on basis of records for stations near Granite Falls and near Arlington), and periods of ice effect, Jan. 7-10, 13-19, 21, 23-27, Feb. 4-12 (computed on basis of one discharge measurement, gage heights, and weather records), which are poor. Staff gage read once or twice daily Oct. 30 to Dec. 30. Discharge interpolated Nov. 15, 28-29 and Dec. 25. No diversions or regulation.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

10.5	70	12.5	1,110	16.0	6,550
11.0	220	13.0	1,610	17.0	8,650
11.5	445	14.0	2,830	18.0	10,750
12.0	720	15.0	4,580	19.5	14,050

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	210	160	148	678	220	1,370	2,600	1,370	2,280	1,430	327	276
2	205	152	212	622	224	3,150	1,790	2,340	2,860	1,210	318	260
3	200	145	292	605	232	2,920	1,710	3,990	2,570	1,100	276	236
4	560	145	244	674	270	2,500	1,840	3,600	2,000	1,150	268	224
5	460	200	309	649	320	3,720	2,180	2,300	1,930	956	268	418
6	320	420	8,520	561	300	3,980	1,950	1,780	2,050	818	272	490
7	280	236	7,470	540	280	2,440	1,800	1,850	2,180	818	304	240
8	260	200	2,420	520	260	1,870	1,450	2,440	2,080	868	288	304
9	220	170	2,890	500	250	2,040	1,730	2,690	1,950	868	248	276
10	220	156	2,350	480	240	2,050	2,400	2,980	2,430	832	272	252
11	210	152	1,680	465	360	1,800	2,050	2,610	1,990	769	1,110	232
12	200	152	1,230	445	780	2,120	1,760	2,130	1,710	748	606	216
13	200	148	12,500	420	627	2,440	5,000	2,430	1,580	714	445	208
14	1,150	145	5,370	400	485	2,360	6,510	3,650	1,730	666	445	200
15	1,000	144	2,560	380	440	2,110	5,250	2,420	1,900	622	332	192
16	540	142	1,780	360	903	1,740	3,610	2,100	2,550	638	276	192
17	420	309	3,280	330	940	1,530	2,590	2,000	3,190	672	240	192
18	340	465	6,630	310	832	1,450	2,070	2,100	6,270	684	224	192
19	320	292	5,730	290	627	1,200	1,790	1,950	3,700	606	216	188
20	280	435	3,630	264	556	1,060	4,720	1,560	4,710	517	208	192
21	260	355	3,420	260	2,730	948	4,120	1,540	4,790	480	196	188
22	250	280	10,600	256	5,210	948	2,350	2,040	3,420	445	427	188
23	240	244	4,880	250	3,940	940	2,230	1,710	4,600	430	1,450	184
24	220	200	3,490	250	2,310	876	2,060	1,810	5,170	430	894	176
25	210	192	2,500	250	1,940	825	2,200	2,310	2,790	430	654	170
26	200	183	1,520	250	1,620	892	2,180	1,880	2,190	420	495	162
27	180	173	1,330	250	1,430	964	1,950	1,740	1,980	385	410	170
28	180	164	1,100	244	1,280	876	2,010	1,690	1,960	360	380	180
29	180	154	948	232	-	825	1,460	1,570	1,950	336	288	184
30	162	145	839	224	-	1,670	1,290	1,350	1,530	318	284	319
31	166	-	741	220	-	4,260	-	1,580	-	322	304	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	9,845	1,150	162	318	1.60	1.84	19,520
November	6,458	465	142	215	1.08	1.20	12,810
December	100,610	12,500	145	3,246	16.3	18.79	199,600
Calendar year							
January	12,169	678	220	393	1.97	2.27	24,140
February	29,616	5,210	220	1,058	5.32	5.54	58,740
March	57,874	4,260	825	1,867	9.38	10.81	114,800
April	76,440	6,510	1,290	2,548	12.8	14.28	151,600
May	67,490	3,990	1,350	2,177	10.9	12.57	133,900
June	82,070	6,270	1,530	2,736	13.7	15.29	162,800
July	21,041	1,430	318	679	3.41	3.93	41,730
August	12,725	1,450	196	410	2.06	2.38	25,240
September	6,901	490	162	230	1.16	1.29	13,690
Water year 1936-37	483,237	12,500	142	1,324	6.65	90.19	958,600

North Fork of Stillaguamish River near Arlington, Wash.

Location.- Water-stage recorder, lat. 48°15'45", long. 122°02'45", in SE¼NW¼ sec. 16, T. 32 N., R. 6 E., 6 miles above mouth and 6 miles northeast of Arlington.

Drainage area.- 269 square miles (revised).

Records available.- July 1928 to September 1937.

Extremes.- Maximum discharge during year, 12,000 second-feet Dec. 13 (gage height, 9.33 feet); minimum, 157 second-feet Nov. 5 (gage height, 1.65 feet, from recorded range of stage).

1926-37: Maximum discharge, 27,700 second-feet Feb. 26, 1932 (gage height, 12.7 feet); minimum, 156 second-feet Sept. 1, 1931; minimum gage height, 1.33 feet Sept. 7, 1934.

Remarks.- Records excellent except those for periods of ice effect, Jan. 9-11, 13-19, Jan. 22 to Feb. 2, which were computed on basis of gage heights and weather records and are poor. No diversion or regulation.

Rating tables, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Dec. 7-21)

Oct. 1 to Dec. 21				Dec. 22 to Sept. 30			
1.5	120	5.0	2,000	1.5	175	5.0	2,090
2.0	257	6.0	3,040	2.0	315	6.0	3,150
2.5	422	7.0	4,630	2.5	470	7.0	4,830
3.0	607	8.0	7,000	3.0	655	8.0	7,250
3.5	830	9.0	10,400	3.5	880	9.0	10,700
4.0	1,140			4.0	1,220		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	236	176	167	805	340	1,740	3,180	1,500	2,340	1,500	405	399
2	230	167	239	758	350	3,840	2,190	2,200	2,810	1,300	393	354
3	236	160	282	735	354	3,220	1,990	3,420	2,590	1,140	372	333
4	491	160	248	830	378	2,810	2,040	3,500	2,090	1,140	363	318
5	412	198	364	735	522	3,720	2,190	2,640	2,040	1,000	366	390
6	307	314	5,680	595	452	3,780	2,090	2,040	2,190	880	369	435
7	266	279	6,100	575	414	2,760	1,760	1,990	2,290	830	399	375
8	245	242	2,920	558	393	2,290	1,580	2,390	2,290	830	375	342
9	227	215	2,190	540	372	2,340	1,760	2,810	2,140	830	348	327
10	215	204	1,340	530	360	2,440	2,490	3,090	2,490	805	357	315
11	236	192	1,340	520	492	2,190	2,540	2,700	2,190	758	807	306
12	230	190	1,570	505	805	2,390	2,190	2,440	1,860	758	522	300
13	212	187	9,050	490	655	2,640	4,270	2,540	1,680	715	452	288
14	968	184	4,620	470	522	2,640	5,280	3,260	1,760	695	505	279
15	965	178	2,860	450	505	2,440	5,370	2,590	1,900	655	414	279
16	549	173	2,100	440	940	2,140	3,880	2,290	2,080	655	372	273
17	436	309	3,020	420	940	1,900	2,980	2,240	3,030	655	345	267
18	387	387	7,010	410	855	1,720	2,490	2,190	5,860	655	330	264
19	343	298	5,080	390	695	1,460	2,240	2,090	4,460	615	318	261
20	310	360	3,540	372	635	1,300	4,100	1,720	4,570	558	312	258
21	285	304	3,280	360	2,460	1,140	4,000	1,630	5,740	540	306	249
22	266	260	8,400	360	4,230	1,180	2,760	1,990	3,860	505	462	246
23	248	239	5,550	360	3,420	1,180	2,590	1,720	4,140	505	1,820	246
24	239	221	3,240	360	2,590	1,070	2,440	1,860	4,120	488	852	240
25	227	207	2,640	350	2,290	1,000	2,640	2,290	2,920	505	635	237
26	218	195	2,140	350	1,900	1,040	2,490	1,940	2,440	488	540	234
27	210	187	1,760	350	1,680	1,070	2,240	1,810	2,190	460	466	279
28	204	176	1,460	350	1,540	1,040	1,940	1,760	2,090	446	408	255
29	195	173	1,260	350	-	970	1,720	1,720	1,990	429	375	255
30	190	167	1,070	340	-	1,600	1,500	1,500	1,630	417	375	470
31	181	-	940	340	-	4,090	-	1,680	-	405	399	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	9,964	968	181	321	1.19	1.37	19,760
November	6,702	387	160	223	.829	.92	13,290
December	91,460	9,050	167	2,950	11.0	12.68	181,400
Calendar year 1936	564,723	9,050	160	1,543	5.74	*78.19	1,120,000
January	14,998	830	340	484	1.80	2.08	29,750
February	31,089	4,230	340	1,110	4.13	4.30	61,660
March	65,140	4,090	970	2,101	7.81	9.00	129,200
April	80,930	5,370	1,500	2,698	10.0	11.16	160,500
May	69,540	3,500	1,500	2,243	8.34	9.62	137,900
June	83,780	5,860	1,630	2,793	10.4	11.60	166,200
July	22,162	1,500	405	715	2.66	3.07	43,960
August	14,562	1,620	306	470	1.75	2.02	28,880
September	9,074	470	234	302	1.12	1.25	18,000
Water year 1936-37	499,401	9,050	160	1,368	5.09	69.07	990,500

*Computed on basis of revised drainage area.

Skagit River near Hope, British Columbia

(International gaging station)

Location.- Water-stage recorder, lat. 49°03', long. 121°05', just below Galena Creek, 4 miles above the international boundary, and 40 miles southeast of Hope.

Drainage area.- 370 square miles.

Records available.- October 1934 to September 1937 in water-supply papers of Geological Survey; March 1915 to September 1922 in bulletins of Dominion Water and Power Bureau (Canada).

Extremes.- Maximum discharge during year, 6,570 second-feet June 3 (gage height, 8.84 feet); minimum probably occurred during a period of missing gage-heights in February. 1915-22, 1934-37: Maximum discharge, 7,560 second-feet June 17, 1916; minimum, not determined, probably occurred during February 1937.

Remarks.- Records good except those for periods of missing gage heights, which are poor. No diversion or regulation. This station is maintained with the cooperation of the city of Seattle and is one of the international gaging stations maintained by Canada under agreement with the United States.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to June 2				June 3 to Sept. 30			
2.0	64	5.0	1,620	2.5	183	5.0	1,510
2.5	175	6.0	2,520	3.0	353	6.0	2,460
3.0	338	7.0	3,710	3.5	568	7.0	3,710
3.5	573	8.0	5,230	4.0	818	8.0	5,230
4.0	860	8.8	6,510	4.5	1,135	9.0	6,830
4.5	1,220						

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	146	116	97	*200	*99	*99	*402	*1,380	3,700	2,760	*555	287
2	143	110	97	*190	99	99	*412	*1,980	5,280	2,430	523	276
3	141	112	97	*185	*96	*114	422	*2,580	6,290	2,130	500	273
4	149	112	99	*180	*93	*129	*430	3,180	5,070	2,020	487	262
5	146	110	99	175	*90	*144	*438	*2,730	4,470	1,870	474	298
6	141	110	125	*168	*87	*159	446	*2,280	4,530	1,680	465	312
7	138	110	278	*160	*85	*174	*454	1,830	5,050	1,560	452	287
8	138	110	205	*152	*83	*189	*462	*1,790	5,500	1,530	435	266
9	136	110	*200	*144	81	205	470	*1,760	5,230	1,530	427	259
10	136	110	*195	*136	*83	*236	*516	*1,730	5,010	*1,440	422	252
11	133	110	*191	*128	*85	*267	*563	1,700	5,250	*1,360	474	242
12	133	112	*187	120	*87	*298	*610	*1,600	4,670	1,280	448	239
13	136	110	*183	*117	*90	*329	656	*1,700	4,140	*1,230	439	232
14	193	110	*179	*114	*93	*360	*800	2,370	4,080	*1,180	452	255
15	227	110	175	*111	*96	*391	*1,100	*2,400	4,040	*1,130	410	235
16	190	110	*231	*108	99	422	1,030	*2,300	4,000	1,080	381	232
17	175	128	*288	*105	*99	*402	*965	2,200	4,580	1,070	365	245
18	166	138	*345	*102	*99	*382	*900	2,330	3,890	1,040	357	291
19	158	133	*402	99	*99	*362	*836	2,550	3,810	992	349	259
20	149	141	*459	*99	*99	*342	771	2,510	3,630	927	338	235
21	143	136	*516	*99	*99	*322	*743	2,240	3,740	869	327	223
22	141	130	573	*99	*99	302	*714	2,490	3,820	824	334	213
23	136	125	*650	*99	99	*312	685	2,520	3,490	770	365	204
24	133	120	*550	*99	*99	*322	*729	2,670	3,000	760	346	195
25	130	114	*450	*99	*99	*332	*773	3,300	2,710	745	327	192
26	130	112	*400	99	*99	*342	*817	3,780	2,620	730	320	195
27	125	107	*350	*99	*99	*352	860	3,740	2,770	705	312	195
28	123	105	*300	*99	*99	*362	*840	3,540	3,070	*675	298	186
29	120	101	256	*99	-	*372	*820	3,070	3,240	*645	291	183
30	120	99	*220	*99	-	*382	800	2,740	3,000	*615	284	189
31	118	-	*210	*99	-	*392	-	2,810	-	*585	280	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	4,493	227	118	145	0.39	0.45	8,910
November	3,461	141	99	115	.31	.35	6,860
December	8,587	650	97	277	.75	.86	17,000
Calendar year 1936	274,954	4,850	97	751	2.03	27.66	545,000
January	3,882	200	99	125	.34	.39	7,700
February	2,634	99	81	94	.25	.26	5,220
March	8,895	422	99	287	.78	.90	17,600
April	20,463	1,100	402	682	1.84	2.05	40,600
May	75,580	3,780	1,380	2,440	6.59	7.60	150,000
June	123,680	6,290	2,620	4,120	11.14	12.43	245,000
July	38,162	2,760	585	1,230	3.32	3.83	75,700
August	12,237	555	280	395	1.07	1.23	24,300
September	7,192	312	183	240	.65	.73	14,300
Water year 1936-37	309,266	6,290	81	847	2.29	31.08	613,000

*Missing gage-heights; discharge computed on basis of records for station near Newhalem.

Skagit River near Newhalem, Wash.

Location.- Water-stage recorder, lat. 48°45', long. 121°02', in sec. 30, T. 38 N., R. 14 E., 1⅛ miles above Ruby Creek and 11 miles northeast of Newhalem.

Drainage area.- 765 square miles, of which 390 square miles is in Canada.

Records available.- March 1930 to September 1937.

Extremes.- Maximum discharge during year, 12,700 second-feet June 3 (gage height, 11.39 feet); minimum, 230 second-feet Feb. 21 (gage height, 3.27 feet).
1930-37: Maximum discharge, 25,700 second-feet Feb. 27, 1932 (gage height, 15.9 feet), from rating curve extended above 13,000 second-feet; minimum, that of Feb. 21, 1937.

Remarks.- Records excellent except those for periods of ice effect, Jan. 6-8, 11, 12, 19-21, Jan. 29 to Feb. 5, which were computed on basis of gage heights and weather records, and are fair. No diversion or regulation. Gage-height record collected in cooperation with city of Seattle, which furnished results of many discharge measurements.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

3.5	325	6.0	2,420	8.5	6,270
4.0	595	6.5	3,100	9.0	7,270
4.5	940	7.0	3,800	10.0	9,470
5.0	1,380	7.5	4,550	11.0	11,800
5.5	1,850	8.0	5,350	12.0	14,300

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	643	442	375	736	380	420	1,400	2,190	7,720	7,330	1,680	1,090
2	637	420	375	703	400	442	1,410	2,890	10,600	6,430	1,620	1,100
3	613	420	370	691	400	474	1,390	4,780	12,300	5,630	1,600	1,090
4	679	415	365	679	400	513	1,400	7,050	10,800	5,540	1,630	1,080
5	637	420	365	649	410	679	1,410	6,210	9,420	5,080	1,690	1,340
6	601	405	474	620	385	884	1,390	5,060	9,380	4,500	1,660	1,280
7	619	400	673	600	375	892	1,350	4,580	10,100	4,220	1,600	1,170
8	649	390	649	570	370	892	1,350	4,380	10,900	4,300	1,520	1,110
9	631	385	577	565	370	892	1,410	4,340	10,800	4,260	1,460	1,100
10	637	380	530	547	370	916	1,490	4,440	10,500	4,080	1,510	1,020
11	655	375	513	540	375	956	1,540	4,160	10,300	4,080	1,850	988
12	619	375	524	530	375	1,060	1,570	3,890	9,540	4,040	1,790	1,020
13	643	375	697	530	365	1,210	1,850	4,070	8,650	4,020	1,780	1,010
14	940	370	722	518	360	1,330	2,520	5,450	8,600	3,730	1,730	1,160
15	972	370	661	513	370	1,400	3,340	5,630	8,600	3,410	1,420	1,110
16	808	375	619	502	375	1,410	3,000	5,370	8,470	3,460	1,280	1,070
17	764	486	643	496	385	1,410	2,650	4,980	9,260	3,550	1,250	1,070
18	743	480	891	480	345	1,400	2,420	5,090	8,560	3,550	1,320	1,110
19	703	469	1,090	470	340	1,350	2,250	5,470	8,760	3,370	1,310	1,090
20	649	553	1,080	460	390	1,290	2,190	5,160	8,540	3,000	1,300	1,020
21	601	496	1,120	450	400	1,230	2,160	4,950	9,420	2,810	1,280	924
22	577	474	2,080	447	405	1,180	2,030	5,470	9,560	2,590	1,500	830
23	559	452	2,320	436	395	1,130	1,920	5,560	8,490	2,500	1,550	764
24	553	436	1,850	430	395	1,070	1,850	5,770	7,050	2,540	1,310	715
25	530	425	1,560	436	400	1,040	1,950	7,030	6,230	2,600	1,290	685
26	513	415	1,360	430	410	1,050	2,110	8,160	6,050	2,520	1,240	697
27	496	405	1,220	425	405	1,080	2,280	8,140	6,690	2,400	1,150	743
28	486	395	1,080	420	400	1,140	2,320	7,480	7,570	2,380	1,060	679
29	480	385	988	400	-	1,190	2,240	6,510	8,510	2,240	1,000	667
30	469	380	908	390	-	1,230	2,150	5,680	7,810	2,040	1,000	673
31	458	-	830	380	-	1,240	-	5,790	-	1,820	996	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	19,564	972	458	631	0.825	0.95	38,800
November	12,568	553	370	419	.548	.61	24,930
December	27,509	2,320	365	887	1.16	1.34	54,560
Calendar year 1936	762,311	11,800	365	2,083	2.72	37.06	1,512,000
January	16,043	736	380	518	.677	.78	31,820
February	10,750	410	340	384	.502	.52	21,320
March	32,400	1,410	420	1,045	1.37	1.58	64,260
April	58,340	3,340	1,350	1,945	2.54	2.83	115,700
May	165,730	8,160	2,190	5,346	6.99	8.06	328,700
June	269,180	12,300	6,050	8,973	11.7	13.05	533,900
July	114,020	7,330	1,820	3,678	4.81	5.54	226,200
August	44,376	1,850	996	1,431	1.87	2.16	88,020
September	29,405	1,540	667	980	1.28	1.43	58,320
Water year 1936-37	799,885	12,300	340	2,191	2.86	38.85	1,587,000

Skagit River at Newhalem, Wash.

Location.- Water-stage recorder, lat. 48°40', long. 121°15', in SE¼ sec. 21, T. 37 N., R. 12 E., at power plant of city of Seattle at Newhalem, a quarter of a mile above Newhalem Creek. Zero of gage is 400 feet above mean sea level (subject to correction for general adjustment of 1929).
Drainage area.- 1,160 square miles, of which 390 square miles is in Canada.
Records available.- December 1908 to May 1914 and October 1920 to September 1937 in reports of Geological Survey; October 1908 to September 1933 (monthly discharge only) in State Water-Supply Bulletin 5.
Average discharge.- 29 years, 4,403 second-feet.
Extremes.- Maximum discharge during year, 22,500 second-feet June 3 (gage height, 89.32 feet); minimum, 74 second-feet Nov. 10 (gage height, 78.39 feet, regulated); minimum daily discharge 458 second-feet Nov. 15.
1908-14, 1920-37: Maximum discharge, 60,000 second-feet Dec. 12, 1921 (gage height, 94.2 feet); minimum, that of Nov. 10, 1936; minimum daily discharge, 136 second-feet Aug. 24, 1930.
Remarks.- Records excellent. Water that is diverted 3 miles above station returns to river at Seattle power plant just above station. Entire low-water flow of river may be carried through plant. Flow partly regulated by storage and release of water at tunnel intake and above Diablo Dam. Capacity of Diablo Reservoir, 91,300 acre-feet at elevation 1,205 feet. Gage-height record collected in cooperation with city of Seattle, which furnished results of several discharge measurements.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

79.5	400	81.0	1,330	82.5	2,930	84.0	5,200	87.0	12,890
80.0	640	81.5	1,790	83.0	3,620	85.0	7,150	88.0	16,700
80.5	945	82.0	2,330	83.5	4,400	86.0	9,820	89.0	21,000

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,440	*480	771	1,100	1,290	986	1,570	3,370	12,400	12,200	*3,040	2,030
2	1,060	764	762	1,160	1,250	1,040	1,310	*4,530	18,300	10,700	2,390	2,030
3	1,160	776	801	*1,060	1,250	1,070	1,260	8,380	20,000	9,490	3,500	2,040
4	*1,250	789	786	1,170	1,290	1,020	*2,220	11,600	16,700	*9,690	2,900	1,970
5	1,370	793	720	1,130	1,250	1,130	2,070	9,500	14,300	9,000	3,150	*2,500
6	1,330	762	*920	1,080	1,140	941	2,060	7,590	*14,400	7,330	3,020	2,390
7	1,340	624	1,260	1,130	*1,110	*858	1,910	6,910	16,200	5,910	3,460	2,400
8	1,280	*536	1,090	1,120	1,220	991	2,040	6,130	17,500	7,100	*2,460	2,250
9	1,290	1,000	1,010	1,070	986	1,010	2,030	*6,760	16,700	7,520	2,390	2,260
10	1,130	1,000	971	*984	790	1,040	2,180	6,470	16,600	7,310	2,920	2,220
11	*1,400	818	874	1,130	832	994	*2,200	6,170	15,400	*6,970	4,440	2,050
12	1,500	693	804	1,150	836	1,170	2,680	5,730	14,000	7,520	4,180	*1,740
13	1,520	678	*928	1,190	680	1,090	2,810	5,660	*13,200	7,460	3,510	2,270
14	2,180	656	1,250	1,250	*684	*920	4,090	8,840	13,500	6,290	3,640	2,200
15	2,190	*458	1,180	1,200	818	1,110	5,150	8,990	13,500	6,770	*1,790	2,250
16	1,530	632	1,140	1,200	784	1,120	4,300	*8,260	13,700	5,930	2,170	2,350
17	1,840	693	1,180	*1,050	858	1,070	4,060	7,860	15,300	6,340	2,250	2,240
18	*993	635	1,630	1,180	768	1,110	*3,690	7,620	13,000	*6,630	2,610	2,140
19	1,580	732	1,270	1,200	778	1,200	3,070	8,540	14,200	6,600	2,890	*2,120
20	1,520	736	*954	1,220	693	1,200	3,280	8,150	*13,200	5,840	2,520	2,360
21	1,090	775	1,240	1,230	*779	*522	3,370	7,760	15,400	4,900	2,550	2,250
22	947	*694	1,880	1,210	810	1,250	3,310	8,920	16,100	4,280	*3,190	2,220
23	852	774	2,110	1,210	850	1,450	2,690	*8,760	13,600	4,680	3,000	2,190
24	858	762	3,240	*1,100	830	1,650	2,730	9,220	11,200	4,960	2,380	2,200
25	*803	752	2,380	1,260	899	1,570	*2,960	11,000	9,700	*5,130	2,290	2,040
26	891	718	1,690	1,260	932	2,180	3,200	12,800	9,630	5,610	2,200	*1,710
27	905	748	*1,750	1,250	876	1,250	3,450	12,600	*11,300	4,710	2,150	1,650
28	916	738	1,400	1,230	*684	*1,060	3,620	11,400	13,000	4,480	1,930	1,500
29	926	*694	1,430	1,230	-	1,270	3,280	9,820	14,800	4,500	*1,600	1,300
30	920	770	1,320	1,210	-	1,270	3,090	*7,100	13,200	3,160	2,110	1,430
31	857	-	1,240	*1,060	-	1,350	-	8,380	-	3,010	2,120	-

Month	Observed: Discharge in second-feet: Maximum	Minimum	Mean	Observed: Run-off in acre-feet	Gain or loss in storage in Diablo Reservoir (acre-feet)	Adjusted for storage: Run-off in acre-feet	Discharge in second-feet: Mean	Per square mile	Run-off in inches
October	2,190	803	1,254	77,090	-2,550	74,540	1,212	1.04	1.20
November	1,000	458	723	43,000	-3,730	39,270	660	.569	.63
December	3,240	720	1,290	79,300	+16,410	95,710	1,557	1.34	1.54
Calendar year 1936	20,600	458	3,563	2,586,000	+53,100	2,640,000	3,636	3.13	42.56
January	1,260	984	1,162	71,450	-27,200	44,250	720	.621	.72
February	1,290	680	927	51,500	-19,670	31,830	573	.494	.51
March	2,180	522	1,157	71,150	+35,650	106,800	1,737	1.50	1.73
April	5,150	1,260	2,856	169,900	+5,990	175,900	2,956	2.55	2.84
May	12,800	3,370	8,220	505,400	+3,920	509,300	8,283	7.14	8.23
June	20,000	9,630	14,330	853,000	-4,050	849,000	14,270	12.3	13.72
July	12,200	3,010	6,517	400,700	+4,180	404,900	6,585	5.68	6.56
August	4,440	1,600	2,734	168,100	-1,040	167,100	2,718	2.34	2.70
September	2,500	1,300	2,077	123,600	-10,770	112,800	1,896	1.63	1.82
Water year 1936-37	20,000	458	3,611	2,614,000	-2,860	2,611,000	3,607	3.11	42.19

*Sunday.

Skagit River near Concrete, Wash.

Location.- Water-stage recorder, lat. 48°32', long. 121°46', in sec. 16, T. 35 N., R. 8 E., at dalles, 2 miles below Baker River and 2½ miles southwest of Concrete. Zero of gage is 142.7 feet (revised) above mean sea level (general adjustment of 1929).
Drainage area.- 2,700 square miles, of which 390 square miles is in Canada.
Records available.- September 1924 to September 1937.
Average discharge.- 13 years, 14,410 second-feet.
Extremes.- Maximum discharge during year, 68,300 second-feet June 19 (gage height, 16.28 feet); minimum, 2,430 second-feet Nov. 15 (gage height, minus 0.09 foot).
1924-37: Maximum discharge, 147,000 second-feet Feb. 27, 1932 (gage height, 27.3 feet); minimum, probably less than 2,160 second-feet during Oct. 1-24, 1925, when recorder was not operating and gates in Baker River dam were closed for first time.
High-water marks at stage 56.6 feet indicate a flood of 500,000 second-feet about 1815. Records of other floods prior to establishment of station are given in Water-Supply Paper 612.
Remarks.- Records excellent except those for periods of ice effect, Jan. 18-23, Jan. 28 to Feb. 3, which were computed on basis of gage heights, weather records, and records for stations at Newhalem, Sauk River near Sauk, and Baker River at Concrete, and are poor. All diversions returned to river above gage. At low stages flow partly regulated by storage at power plants on Baker and upper Skagit Rivers. Capacity of Lake Shannon Reservoir, on Baker River, 156,200 acre-feet at elevation 435 feet. Capacity of Diablo Reservoir, on upper Skagit River, 91,300 acre-feet at elevation, 1,205 feet.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.0	2,550	1.0	3,850	3.0	7,550	6.0	15,200	10.0	32,200	14.0	54,000
.5	3,140	2.0	5,550	4.0	9,900	8.0	22,900	12.0	42,800	17.0	73,000

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,790	*3,340	3,060	6,910	3,200	5,280	9,140	10,700	31,800	37,000	*10,200	7,140
2	4,840	2,770	2,820	6,670	3,500	6,720	8,320	*12,500	45,500	31,300	6,980	7,140
3	4,550	2,760	2,990	*6,540	3,600	7,300	7,750	24,900	52,800	27,400	10,100	7,160
4	4,860	2,780	2,950	6,580	3,620	6,900	*7,340	35,300	42,800	*28,600	9,950	7,140
5	4,920	2,880	2,720	6,340	3,630	9,080	8,850	29,100	37,800	26,200	9,430	*8,020
6	4,440	2,720	*5,840	5,920	3,420	11,900	8,590	23,300	38,200	22,100	9,240	8,160
7	4,580	2,680	15,100	5,850	*3,120	*9,540	8,460	21,300	42,100	20,300	9,080	7,590
8	4,580	*3,080	8,540	5,740	3,400	8,340	8,180	20,700	45,200	21,700	*11,300	6,880
9	4,430	2,700	7,100	5,640	3,470	8,170	8,380	*20,900	43,400	23,500	12,200	7,060
10	4,440	2,870	5,640	*5,580	3,200	8,250	9,000	22,500	45,000	22,400	11,400	6,840
11	*4,490	2,820	4,940	5,260	3,180	7,780	*8,200	21,000	42,700	*22,300	12,500	6,350
12	4,760	2,710	4,860	4,900	3,200	8,300	9,500	19,700	37,200	22,400	12,600	*5,860
13	4,520	2,680	*11,000	4,940	3,080	9,480	12,400	19,000	*34,600	22,200	11,100	6,550
14	6,860	2,610	11,300	4,820	*2,860	*9,420	16,600	27,600	35,700	20,500	11,400	6,650
15	9,290	*2,770	8,840	4,790	3,100	9,300	22,200	28,200	36,600	18,300	*8,430	7,060
16	6,680	2,660	7,120	4,280	3,580	8,660	17,500	*24,700	37,500	19,600	7,370	7,060
17	5,300	2,980	7,970	*3,670	3,840	8,700	14,500	25,600	43,100	19,300	7,060	6,640
18	*5,190	3,260	12,600	3,500	4,000	8,200	*12,500	23,100	43,800	*20,800	8,000	6,500
19	5,380	2,980	18,200	3,400	3,560	7,950	11,900	24,400	59,400	19,600	8,610	*6,790
20	5,270	3,340	*13,200	3,200	3,420	7,490	12,400	22,200	*62,600	17,500	8,540	6,860
21	4,330	3,200	12,300	3,200	*4,120	*6,220	13,900	20,800	56,000	15,100	8,280	6,360
22	3,700	*3,050	21,100	3,200	5,880	6,530	12,200	24,300	50,100	14,200	*9,060	5,900
23	3,620	2,980	21,500	3,250	5,920	6,920	11,600	*22,900	44,900	13,800	10,700	5,520
24	3,320	2,880	16,000	*3,310	5,780	6,760	11,100	24,300	38,900	14,100	8,890	5,500
25	*3,760	2,800	12,300	4,160	5,720	6,600	*11,000	29,600	31,300	*15,500	8,080	5,260
26	3,700	2,720	10,700	4,030	5,680	7,120	12,100	30,900	29,000	15,400	7,920	*4,770
27	3,100	2,740	*9,020	3,830	5,660	6,400	12,500	31,500	*32,900	14,300	7,620	5,610
28	3,120	2,970	8,600	3,600	*5,000	*5,680	12,100	29,400	38,600	13,200	7,180	5,320
29	3,130	*2,730	7,970	3,400	-	6,200	11,400	25,800	45,200	13,000	*7,060	4,740
30	3,160	2,810	7,610	3,100	-	6,280	10,800	*21,700	39,800	11,500	6,940	4,750
31	2,910	-	7,300	*3,000	-	7,870	-	22,000	-	10,500	7,360	-

Month	Observed				Gain or loss in storage in Diablo and Lake Shannon Reservoirs (acre-feet)	Adjusted for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October	9,290	2,910	4,614	283,700	-7,950	275,800	4,485	1.66	1.91
November	3,340	2,610	2,876	171,100	-5,220	165,900	2,788	1.03	1.15
December	21,500	2,720	9,393	577,600	+65,270	642,900	10,460	3.87	4.46
Calendar year 1936	52,400	2,610	13,210	9,589,000	+74,250	9,665,000	13,310	4.93	67.14
January	6,910	3,000	4,604	283,100	-73,370	209,700	3,410	1.26	1.45
February	5,920	2,860	3,991	221,600	-26,440	195,200	3,515	1.30	1.35
March	11,900	5,280	7,721	474,700	+71,800	546,500	8,888	3.29	3.79
April	22,200	7,340	11,350	675,200	+52,300	727,500	12,230	4.53	5.05
May	35,300	10,700	23,800	1,464,000	+15,650	1,480,000	24,070	8.91	10.27
June	62,600	29,000	42,150	2,507,000	+13,610	2,521,000	42,370	15.7	17.52
July	37,000	10,500	19,790	1,217,000	+3,640	1,221,000	19,860	7.36	8.48
August	12,600	6,940	9,245	568,400	-25,050	543,400	8,838	3.27	3.77
September	8,160	4,740	6,440	383,200	-30,100	353,100	5,934	2.20	2.46
Water year 1936-37	62,600	2,610	12,190	8,827,000	+54,140	8,882,000	12,270	4.54	61.66

*Sunday.

Ruby Creek near Newhalem, Wash.

Location.- Water-stage recorder, lat. 48°44', long. 121°02', in sec. 31, T. 38 N., R. 14 E., 1 mile above mouth and 10½ miles northeast of Newhalem.

Drainage area.- 210 square miles.

Records available.- June 1919 to March 1920, April 1930 to September 1937.

Extremes.- Maximum discharge during year, 4,480 second-feet June 2 (gage height, 13.51 feet); minimum, 40 second-feet Feb. 22 (gage height, 5.87 feet).
1919-20, 1930-37: Maximum discharge, 6,730 second-feet Feb. 27, 1932 (gage height, 14.15 feet); minimum, that of Feb. 22, 1937.

Remarks.- Records excellent except those for periods of ice effect, Jan. 2 to Feb. 20, Feb. 24-28, Mar. 4-7 which were computed on basis of one discharge measurement, gage heights, and weather records, and are poor. No diversion or regulation. Gage-height record collected in cooperation with city of Seattle, which furnished results of many discharge measurements.

Rating tables, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to May 25				May 26 to Sept. 30			
6.2	61	8.5	477	6.5	110	9.0	650
6.6	98	9.0	622	7.0	180	10.0	1,050
7.0	145	10.0	1,000	7.5	270	11.0	1,670
7.5	239	11.0	1,550	8.0	380	12.0	2,580
8.0	354	12.0	2,580	8.5	505	13.0	3,800

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	77	67	89	70	82	268	492	2,730	2,240	361	220
2	109	68	72	90	70	91	252	935	3,570	1,960	354	215
3	106	82	70	90	70	101	228	1,760	3,620	1,760	354	213
4	119	82	69	90	70	130	226	2,020	2,940	1,810	370	211
5	110	82	69	85	70	170	216	1,430	2,790	1,620	378	366
6	104	81	118	85	70	200	206	1,170	2,970	1,320	356	282
7	108	74	118	85	70	180	198	1,140	3,220	1,280	338	240
8	111	76	96	85	70	170	208	1,070	3,220	1,350	320	226
9	109	77	84	85	70	168	246	1,040	3,080	1,320	300	217
10	112	74	74	85	70	179	276	1,020	3,100	1,220	309	199
11	113	77	78	85	70	200	268	928	2,940	1,190	368	198
12	107	76	82	85	70	246	274	896	2,580	1,220	363	201
13	111	75	110	85	70	304	340	1,140	2,590	1,190	347	194
14	174	75	111	80	65	285	464	1,560	2,790	1,010	307	208
15	164	76	93	80	65	265	522	1,470	2,690	891	260	211
16	130	77	88	80	65	252	437	1,410	2,990	933	240	204
17	122	90	95	80	65	243	395	1,290	3,080	992	246	201
18	119	85	154	80	60	224	378	1,430	2,490	987	270	199
19	114	81	156	80	60	202	368	1,540	2,420	883	264	191
20	107	89	137	80	60	188	368	1,430	2,460	748	262	180
21	101	82	144	80	58	172	344	1,480	2,910	673	254	162
22	98	78	345	80	54	163	318	1,760	2,860	631	272	149
23	96	75	298	80	58	155	299	1,660	2,420	619	266	136
24	95	74	196	80	60	148	288	1,910	2,010	625	226	130
25	93	73	153	80	65	148	328	2,390	1,870	670	218	126
26	90	71	133	75	70	158	417	2,780	1,990	619	213	131
27	89	71	121	75	70	172	437	2,600	2,310	589	201	135
28	88	70	111	75	75	190	414	2,330	2,660	563	190	126
29	87	67	102	75	-	202	390	1,930	2,780	500	180	154
30	86	61	97	75	-	208	395	1,730	2,380	442	183	150
31	85	-	92	70	-	246	-	1,940	-	378	191	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	3,369	174	85	109	0.519	0.60	6,680
November	2,296	90	61	76.5	.364	.41	4,550
December	3,733	345	67	120	.571	.66	7,400
Calendar year 1936	197,045	3,850	61	538	2.56	34.96	390,800
January	2,529	90	70	81.6	.389	.45	5,020
February	1,860	75	54	66.4	.316	.33	3,690
March	5,842	304	82	188	.895	1.03	11,590
April	9,768	522	198	326	1.55	1.73	19,370
May	47,681	2,780	492	1,538	7.32	8.44	94,570
June	82,460	3,620	1,870	2,749	13.1	14.62	163,600
July	32,213	2,240	378	1,039	4.95	5.71	63,890
August	8,761	378	180	283	1.35	1.56	17,380
September	5,775	366	126	192	.914	1.02	11,450
Water year 1936-37	206,287	3,620	54	565	2.69	36.56	409,200

Thunder Creek near Newhalem, Wash.

Location.- Water-stage recorder, lat. 48°40', long. 121°04', in SE¼ sec. 23, T. 37 N., R. 13 E., unsurveyed, half a mile above backwater from Diablo Reservoir and 8 miles east of Newhalem.

Drainage area.- 98 square miles.

Records available.- October 1930 to September 1937.

Extremes.- Maximum discharge during year, 2,650 second-feet June 21, 29 (gage height, 7.34 feet); minimum probably occurred during period of ice effect, Jan. 30 to Feb. 3. 1930-37: Maximum discharge, 8,780 second-feet Feb. 26, 1932 (gage height, 11.3 feet), from rating curve extended above 2,000 second-feet; minimum occurred during period of ice effect.

Remarks.- Records excellent except those for periods of ice effect Jan. 7-9, 20-22, and Jan. 30 to Feb. 3, which were computed on basis of gage heights, weather records, and records for Ruby Creek near Newhalem and are poor. No diversion or regulation. Gage-height record collected in cooperation with city of Seattle, which furnished results of many discharge measurements.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet

1.5	49	4.5	810
1.7	66	5.0	1,050
2.0	100	5.5	1,300
2.5	185	6.0	1,620
3.0	295	7.0	2,350
3.5	425	8.0	3,300
4.0	600		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	440	108	84	111	65	67	210	293	1,320	1,960	600	661
2	408	100	82	108	65	72	198	478	1,890	1,610	647	741
3	389	104	78	106	65	74	187	1,010	1,950	1,470	819	764
4	662	103	77	108	65	80	185	1,200	1,420	1,660	990	771
5	354	100	77	101	66	111	179	886	1,330	1,410	1,040	1,040
6	400	96	184	94	65	147	175	742	1,490	1,170	905	770
7	520	92	202	95	64	140	169	676	1,800	1,200	915	734
8	524	91	127	90	63	132	173	628	1,830	1,370	752	787
9	483	90	107	90	63	135	187	612	1,720	1,380	740	708
10	559	87	96	90	63	142	204	604	1,840	1,350	978	645
11	510	88	96	90	64	147	196	528	1,610	1,410	1,530	757
12	414	91	97	94	63	160	198	485	1,340	1,600	1,340	829
13	569	91	179	90	62	185	257	631	1,370	1,560	1,200	769
14	861	94	151	87	62	198	326	930	1,480	1,280	772	919
15	475	97	120	87	62	193	373	806	1,440	1,250	556	981
16	417	104	110	83	63	185	324	729	1,700	1,510	567	822
17	459	206	110	84	64	179	295	660	1,670	1,720	761	864
18	461	149	190	79	62	171	274	708	1,430	1,750	930	853
19	349	271	252	77	62	161	263	752	1,310	1,490	837	778
20	265	248	219	75	62	154	268	684	1,550	1,260	878	664
21	221	149	221	75	64	147	263	696	2,370	1,160	843	470
22	208	125	428	75	66	144	250	855	2,060	1,120	1,050	344
23	224	110	402	75	66	138	239	796	1,540	1,210	832	274
24	221	104	295	74	67	135	230	896	1,180	1,370	613	248
25	196	100	241	74	67	135	257	1,130	1,070	1,620	676	290
26	179	97	206	73	67	140	284	1,220	1,160	1,440	612	434
27	171	97	181	72	66	145	297	1,170	1,530	1,350	482	424
28	160	95	163	70	66	151	288	1,040	2,050	1,300	431	324
29	152	90	149	70	-	154	274	850	2,490	1,120	432	277
30	140	84	138	65	-	161	270	742	2,060	868	455	254
31	125	-	127	60	-	193	-	873	-	664	506	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	11,516	861	125	371	3.79	4.37	22,840
November	3,461	271	84	115	1.17	1.30	6,860
December	5,189	428	77	167	1.70	1.96	10,290
Calendar year 1936	221,600	3,200	50	605	6.17	84.19	439,500
January	2,622	111	60	84.6	.863	.99	5,200
February	1,799	67	62	64.2	.655	.68	3,570
March	4,476	198	67	144	1.47	1.70	8,880
April	7,293	373	169	243	2.48	2.77	14,470
May	24,310	1,220	293	784	8.00	9.22	48,220
June	49,000	2,490	1,070	1,633	16.7	18.63	97,190
July	42,632	1,960	664	1,375	14.0	16.14	84,560
August	24,689	1,530	431	796	8.12	9.36	48,970
September	19,196	1,040	248	640	6.53	7.29	38,070
Water year 1936-37	196,183	2,490	60	537	5.48	74.41	389,100

Stetattle Creek near Newhalem, Wash.

Location.- Water-stage recorder, lat. 48°43'40", long. 121°09'30", in NE¼ sec. 6, T. 37 N., R. 13 E., three-quarters of a mile above mouth and 5½ miles northeast of Newhalem. Gage moved to left bank and datum changed Aug. 27, 1937.

Drainage area.- 21.4 square miles.

Records available.- September 1933 to September 1937. December 1913 to March 1914, December 1914 to April 1915, at site half a mile downstream; records equivalent.

Extremes.- Maximum discharge during year, 1,370 second-feet June 18 (gage height, 5.50 feet), former datum; minimum, 9 second-feet Nov. 9, 10, 11.
1913-15, 1933-37: Maximum discharge, 4,520 second-feet Nov. 5, 1934 (gage height, 10.4 feet, former site and datum), from rating curve extended above 400 second-feet; minimum, that of Nov. 9, 10, 11, 1936.

Remarks.- Records fair. Discharge for Aug. 23, 24 interpolated. No diversion or regulation. Gage-height record collected in cooperation with city of Seattle, which furnished results of several discharge measurements.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	15	11	49	16	41	131	145	590	373	69	57
2	34	12	12	46	17	64	117	322	718	298	69	58
3	36	11	15	44	17	74	105	582	446	286	80	59
4	64	11	14	43	17	90	107	489	350	290	92	59
5	44	11	14	40	20	172	109	298	360	240	96	97
6	39	11	129	36	20	176	104	233	435	212	86	70
7	38	10	130	35	18	130	97	240	487	224	83	60
8	38	10	68	33	17	111	98	245	461	261	71	57
9	38	9	53	32	16	110	114	257	403	242	67	55
10	38	9	44	31	16	116	127	257	396	245	153	47
11	37	9	46	29	18	117	127	228	363	247	196	47
12	35	10	47	28	24	139	131	201	334	268	119	49
13	57	12	132	26	16	159	237	321	337	245	125	51
14	146	15	96	26	15	151	331	543	350	199	99	55
15	80	15	65	26	34	139	280	331	325	194	69	57
16	57	17	51	25	42	126	193	276	404	226	59	52
17	49	82	70	26	33	119	150	252	362	235	63	48
18	46	37	254	25	33	109	132	307	667	230	66	48
19	41	54	247	22	29	95	123	268	564	190	63	45
20	35	45	195	22	26	84	132	214	540	163	63	41
21	31	33	209	22	35	74	127	230	660	149	61	36
22	25	28	442	21	47	68	117	351	451	141	73	31
23	24	25	330	19	44	65	114	279	396	147	80	28
24	24	22	208	18	41	63	112	355	313	158	88	25
25	22	20	152	18	41	64	134	396	281	163	96	25
26	22	19	120	17	42	68	157	370	318	150	72	31
27	22	18	96	17	39	75	153	334	400	143	64	31
28	20	17	80	17	38	79	137	284	489	136	54	27
29	20	15	69	17	-	82	123	216	482	116	48	26
30	19	12	63	16	-	88	117	239	425	100	49	38
31	17	-	55	17	-	119	-	356	-	78	49	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,234	146	17	39.8	1.86	2.14	2,450
November	614	82	9	20.5	.958	1.07	1,220
December	3,517	442	11	113	5.28	6.09	6,980
Calendar year 1936	50,670	652	9	138	6.45	88.05	100,500
January	843	49	16	27.2	1.27	1.46	1,670
February	771	47	15	27.5	1.29	1.34	1,530
March	3,167	176	41	102	4.77	5.50	6,280
April	4,236	331	97	141	6.59	7.35	8,400
May	9,449	582	145	305	14.3	16.49	18,740
June	13,107	718	281	437	20.4	22.76	26,000
July	6,349	373	78	205	9.58	11.04	12,590
August	2,501	196	48	80.7	3.77	4.35	4,960
September	1,410	97	23	47.0	2.20	2.46	2,800
Water year 1936-37	47,198	718	9	129	6.03	82.05	93,620

Cascade River at Marblemount, Wash.

Location.- Water-stage recorder, lat. 48°31'45", long. 121°23'30", in SW¼ sec. 9, T. 35 N., R. 11 E., 2 miles east of Marblemount.

Drainage area.- 180 square miles.

Records available.- September 1928 to September 1937.

Extremes.- Maximum discharge during water year 1935-36, 5,760 second-feet June 2 (gage height, 7.07 feet); minimum, 185 second-feet Feb. 20, 21 (gage height, 1.42 feet). Maximum discharge during water year 1936-37, 4,760 second-feet June 3 (gage height, 6.59 feet); minimum, 157 second-feet Feb. 8 (gage height, 1.11 feet).

1928-37: Maximum discharge, 12,900 second-feet Feb. 26, 1932 (gage height, 9.88 feet); minimum, 149 second-feet Nov. 15, 1929, or may have been less during January or February 1929, when stage-discharge relation was affected by ice; minimum gage height, that of Feb. 8, 1937.

Remarks.- Records excellent except those for period of missing gage heights, Mar. 7-16, 19-21 and Aug. 2-12, 1937, which were computed on basis of records for Sauk River above Whitechuck River, near Darrington, and Thunder Creek near Newhalem, and are poor. No diversion or regulation.

Records for 1935-36 as here given supersede those published in Water-Supply Paper 812.

Rating tables, water years 1935-36, 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1, 1935, to June 2, 1936		June 3, 1936, to Sept. 30, 1937	
1.4	181	1.0	140
1.6	220	1.5	230
1.9	298	2.0	370
2.2	400	2.5	560
2.5	525	3.0	775
3.0	755	3.5	1,030
3.5	1,030	4.0	1,360
4.0	1,360	5.0	2,290
5.0	2,290	6.0	3,680
6.0	3,680	7.0	5,560
7.0	5,550		
7.5	6,640		

Discharge, in second-feet, 1935-37

1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	436	236	284	469	266	396	261	1,930	3,080	1,410	800	1,350
2	416	227	275	638	256	432	253	2,290	3,850	1,560	825	757
3	408	222	269	615	248	592	248	2,350	3,740	1,740	900	680
4	404	220	269	705	248	552	243	2,600	2,550	1,990	925	752
5	386	220	275	730	253	496	236	2,470	2,290	1,770	900	708
6	372	220	301	592	246	472	236	1,880	2,540	1,400	850	540
7	393	251	304	530	225	440	253	1,520	3,140	1,320	752	516
8	351	264	298	489	225	555	261	1,360	3,000	1,320	708	580
9	314	254	379	456	225	735	264	1,360	2,530	1,260	708	484
10	301	236	379	444	218	615	380	1,520	2,410	1,260	708	405
11	320	243	393	476	216	570	632	2,080	2,930	1,320	730	354
12	327	238	351	556	210	730	1,120	2,290	2,790	1,120	730	328
13	304	232	320	566	204	660	1,290	2,860	2,480	1,060	752	315
14	327	248	301	512	200	615	1,290	3,940	2,660	1,090	708	344
15	295	292	286	512	200	615	1,380	3,360	2,720	1,000	685	325
16	710	292	278	460	200	548	2,220	3,000	2,630	1,030	662	312
17	962	266	266	424	196	516	3,000	2,060	3,030	1,090	640	284
18	660	256	256	382	192	464	3,290	1,930	2,080	1,090	620	306
19	494	261	248	368	187	428	2,530	2,720	1,740	1,120	600	322
20	412	259	251	362	187	428	2,180	2,150	1,790	1,240	662	334
21	362	256	251	351	189	432	2,290	1,840	2,110	1,240	685	374
22	362	251	246	372	255	408	2,600	1,930	2,570	1,180	620	974
23	324	266	271	400	202	390	2,240	1,880	2,680	1,060	660	520
24	334	281	404	396	190	372	2,030	2,080	2,490	950	600	500
25	317	286	400	368	189	358	1,880	2,620	2,200	825	520	430
26	289	286	348	351	202	358	1,700	3,530	2,090	800	540	377
27	446	289	298	372	225	354	1,560	4,110	1,920	825	564	395
28	340	275	269	320	227	317	1,520	3,850	1,700	850	620	430
29	292	266	304	301	365	292	1,660	3,280	1,440	875	620	409
30	266	281	344	289	-	281	1,790	3,680	1,400	850	540	370
31	246	-	393	284	-	269	-	4,200	-	850	628	-

Discharge, in second-feet, of Cascade River at Marblemount, Wash., 1935-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	363	201	173	318	175	260	433	708	2,710	2,880	662	520
2	344	191	173	303	175	325	444	1,200	3,680	2,290	600	540
3	325	189	169	289	173	360	430	2,480	3,420	2,160	660	540
4	514	189	166	286	166	416	394	2,800	2,510	2,250	730	540
5	367	189	171	273	166	620	433	1,790	2,430	1,880	800	921
6	334	185	424	242	163	800	452	1,360	2,770	1,610	780	662
7	370	182	617	242	160	720	452	1,320	3,210	1,700	750	580
8	370	178	384	237	158	650	456	1,290	3,210	1,880	720	560
9	374	176	309	239	158	600	488	1,260	2,930	1,850	700	560
10	412	173	270	232	160	540	540	1,320	3,280	1,740	840	508
11	384	175	260	226	171	500	520	1,180	2,790	1,790	1,000	540
12	334	175	266	222	171	600	540	1,090	2,290	1,790	930	560
13	368	176	694	220	166	700	871	1,330	2,290	1,740	925	540
14	915	178	600	215	166	670	1,160	2,030	2,530	1,610	780	640
15	710	178	452	217	168	640	1,290	1,610	2,470	1,560	600	640
16	480	176	363	211	178	610	1,000	1,440	2,940	1,700	560	560
17	426	268	377	209	203	580	875	1,290	2,780	1,790	600	540
18	394	237	685	205	197	560	775	1,440	2,660	1,740	685	540
19	354	236	850	195	185	520	730	1,480	2,530	1,520	662	508
20	312	312	730	189	184	490	775	1,260	3,000	1,330	640	484
21	281	232	752	189	220	450	775	1,290	3,850	1,260	620	422
22	263	213	1,390	189	253	416	708	1,610	3,280	1,150	852	363
23	263	203	1,270	187	251	464	662	1,400	2,720	1,150	925	312
24	260	197	875	185	253	480	640	1,690	2,180	1,220	662	318
26	248	193	708	187	263	440	708	2,080	1,880	1,320	662	284
26	242	189	600	187	263	405	800	1,840	2,050	1,240	580	374
27	235	185	512	184	256	408	800	1,790	2,530	1,120	516	413
28	228	184	452	180	251	448	752	1,700	3,260	1,060	472	337
29	224	176	412	178	-	492	685	1,360	3,600	950	436	315
30	213	173	380	178	-	520	640	1,220	2,660	850	464	315
31	211	-	350	175	-	488	-	1,610	-	708	484	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October 1935	12,170	962	246	393	2.18	2.51	24,140
November	7,654	292	220	255	1.42	1.58	15,180
December	9,511	404	246	307	1.71	1.97	18,860
Calendar year 1935	333,501	8,550	220	914	5.08	68.90	661,500
January 1936	14,090	730	284	455	2.53	2.92	27,950
February	6,416	365	187	221	1.23	1.33	12,730
March	14,712	755	269	475	2.64	3.04	29,180
April	41,029	3,280	236	1,368	7.60	8.48	81,380
May	78,670	4,200	1,360	2,538	14.1	16.26	156,000
June	74,760	3,850	1,400	2,492	13.8	15.40	148,300
July	36,495	1,990	800	1,177	6.54	7.54	72,390
August	21,362	925	520	689	3.83	4.42	42,370
September	14,715	1,350	284	490	2.72	3.04	29,190
Water year 1935-36	331,584	4,200	187	906	5.03	68.49	657,700
October 1936	11,118	915	211	359	1.99	2.29	22,050
November	5,909	312	173	197	1.09	1.22	11,720
December	15,834	1,390	166	511	2.84	3.27	31,410
Calendar year 1936	335,110	4,200	166	916	5.09	69.21	664,700
January 1937	6,789	318	175	219	1.22	1.41	13,470
February	5,453	263	158	195	1.08	1.12	10,820
March	16,172	800	260	522	2.90	3.34	32,080
April	20,228	1,290	394	674	3.74	4.17	40,120
May	47,268	2,800	708	1,525	8.47	9.76	93,750
June	84,440	3,650	1,880	2,815	15.6	17.40	167,500
July	48,838	2,880	708	1,575	8.75	10.09	96,870
August	21,297	1,000	436	687	3.82	4.40	42,240
September	14,936	921	284	498	2.77	3.09	29,630
Water year 1936-37	298,282	3,850	158	817	4.54	61.56	591,700

Sauk River above Whitechuck River, near Darrington, Wash.

Location.- Water-stage recorder, lat. 48°10'00", long. 121°27'45", in NW¼ sec. 24, T. 31 N., R. 10 E., half a mile above Whitechuck River and 9½ miles southeast of Darrington.

Drainage area.- 152 square miles.

Records available.- August to November 1910 (fragmentary gage heights), October 1917 to September 1922, August 1928 to September 1937.

Average discharge.- 14 years (1917-22, 1928-37), 1,127 second-feet.

Extremes.- Maximum discharge during year, 4,310 second-feet June 3 (gage height, 6.19 feet); minimum, 115 second-feet Nov. 15, 16, 30, Dec. 1.
1917-22, 1928-37: Maximum discharge, 23,000 second-feet Dec. 12, 1921 (gage height, 14.65 feet), from rating curve extended above 3,000 second-feet; minimum, that of Nov. 15, 16, 30, Dec. 1, 1936.

Remarks.- Records fair except those for period of missing gage heights, Jan. 6 to Feb. 8, which were computed on basis of records for station near Sauk and are poor. No diversion or regulation.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-15)

2.1	85	4.0	1,230
2.5	195	4.5	1,760
3.0	465	5.0	2,400
3.5	815	6.0	3,970

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	204	134	119	405	140	423	726	823	2,470	2,540	530	296
2	200	128	131	369	140	600	642	1,370	3,640	2,130	484	296
3	191	123	123	351	150	579	572	2,760	3,640	2,000	498	290
4	300	123	121	375	150	691	579	3,080	2,840	2,000	524	290
5	275	128	134	334	150	1,110	621	2,130	2,620	1,700	530	496
6	226	128	1,360	320	150	1,290	593	1,650	2,840	1,480	504	453
7	208	123	1,940	320	140	983	537	1,540	3,160	1,540	478	375
8	204	123	1,050	300	140	800	517	1,600	3,240	1,650	447	340
9	195	121	755	280	128	748	537	1,600	3,000	1,650	429	328
10	200	119	558	270	128	712	614	1,700	3,160	1,600	459	296
11	195	117	517	270	187	691	614	1,600	2,690	1,540	663	285
12	187	117	508	260	187	778	600	1,430	2,330	1,540	558	285
13	195	117	1,690	240	155	951	1,440	1,650	2,330	1,430	524	270
14	820	117	1,330	240	143	911	2,020	2,400	2,620	1,310	465	275
15	727	115	919	230	162	831	2,060	2,130	2,690	1,210	393	290
16	441	119	691	230	250	748	1,540	1,880	2,920	1,280	351	275
17	357	213	911	220	275	698	1,180	1,700	2,920	1,330	345	255
18	306	208	2,250	210	260	642	1,010	1,820	3,320	1,380	363	245
19	275	183	2,440	210	236	579	903	1,880	3,400	1,170	351	240
20	240	195	1,600	200	208	530	1,030	1,600	3,800	1,050	334	236
21	218	171	1,540	200	514	491	1,110	1,600	3,800	975	323	222
22	200	159	3,140	200	670	472	935	1,880	3,240	919	393	218
23	187	149	2,320	190	614	441	903	1,650	3,240	895	517	200
24	183	137	1,430	190	572	417	815	1,760	2,840	903	447	183
25	175	131	1,140	180	530	399	847	2,200	2,330	935	405	167
26	167	125	895	180	465	411	967	2,130	2,200	871	417	171
27	159	123	740	170	411	429	967	2,130	2,470	792	328	200
28	152	121	635	160	369	411	903	2,060	2,920	755	301	175
29	149	119	628	160	-	405	823	1,760	3,240	691	285	179
30	143	117	498	150	-	478	762	1,600	2,620	656	285	195
31	143	-	453	140	-	698	-	1,760	-	607	290	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	7,822	820	143	252	1.66	1.91	15,510
November	4,103	213	115	137	.901	1.01	8,140
December	32,566	3,140	119	1,051	6.91	7.97	64,590
Calendar year 1936	347,947	3,970	115	951	6.26	85.07	690,200
January	7,554	405	140	244	1.61	1.86	14,980
February	7,624	670	128	272	1.79	1.86	15,120
March	20,347	1,290	399	656	4.32	4.98	40,360
April	27,367	2,060	517	912	6.00	6.69	54,280
May	56,873	3,080	823	1,835	12.1	13.95	112,800
June	88,530	3,800	2,200	2,951	19.4	21.64	175,600
July	40,529	2,540	607	1,307	8.60	9.92	80,390
August	13,221	663	285	426	2.80	3.23	26,220
September	8,026	496	167	268	1.76	1.96	15,920
Water year 1936-37	314,562	3,800	115	862	5.67	76.98	623,900

Sauk River near Sauk, Wash.

Location.- Water-stage recorder, lat. 48°25'15", long. 121°33'45", in NW¼ sec. 19, T. 34 N., R. 10 E., 5 miles above mouth and 5 miles southeast of Sauk. Zero of gage is about 267 feet above mean sea level (general adjustment of 1929), determined by plane-table survey.

Drainage area.- 714 square miles.

Records available.- July 1928 to September 1937. August 1910 to August 1912, various gages between a point 1 mile below and a point 5 miles above present site. All early discharge measurements made at point 5 miles above present site.

Extremes.- Maximum discharge during year, 15,900 second-feet June 3 (gage height, 8.15 feet); minimum discharge recorded, 592 second-feet Nov. 16; discharge may have been lower sometime during period of missing gage-height record, Nov. 21-30.

1910-12, 1928-37: Maximum discharge, 68,500 second-feet Feb. 26, 1932 (gage height, 15.83 feet); minimum, 572 second-feet Dec. 5, 1929; discharge may have been less sometime during period Jan. 10-27, 1930, when stage-discharge relation was affected by ice.

Remarks.- Records excellent except those for periods of ice effect, Jan. 6-9, 11-13, 15-17, 19-23, Jan. 29 to Feb. 3, which were computed on basis of gage heights, weather records, and records for Skagit River at Newhalem and are poor. Discharge interpolated Nov. 21-30 and computed on basis of records for station above Whitechuck River Sept. 4-8. No diversions or regulation.

Rating tables, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to June 3

2.4	520	4.0	2,550	6.0	7,660
2.7	800	4.5	3,530	7.0	11,050
3.0	1,120	5.0	4,690	8.0	15,200
3.5	1,750	5.5	6,090		

June 4 to Sept. 30

2.9	890	3.5	1,650
3.2	1,250	4.0	2,510

Note.- Same as preceding table above 4.4 feet.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,160	750	626	1,810	820	1,900	3,100	3,140	8,690	11,000	2,490	1,560
2	1,130	682	691	1,680	830	2,740	2,630	4,590	12,600	9,400	2,300	1,640
3	1,090	691	710	1,630	840	2,950	2,350	9,100	14,200	8,600	2,450	1,600
4	1,420	700	720	1,700	860	2,950	2,340	10,900	10,600	8,990	2,690	1,700
5	1,300	730	770	1,610	890	4,580	2,550	7,690	9,620	7,880	2,790	2,500
6	1,110	740	4,640	1,550	850	5,730	2,460	6,000	10,400	6,590	2,690	2,200
7	1,180	700	7,110	1,500	830	4,150	2,280	5,620	11,800	6,680	2,550	1,900
8	1,200	682	5,300	1,450	820	3,450	2,200	5,730	12,200	7,340	2,380	1,800
9	1,170	682	2,480	1,350	790	3,320	2,280	5,730	11,600	7,530	2,230	1,700
10	1,200	675	1,830	1,310	790	3,240	2,610	6,210	12,400	7,050	2,340	1,540
11	1,230	682	1,680	1,300	953	3,120	2,610	5,670	10,900	6,800	3,420	1,560
12	1,100	691	1,680	1,250	1,040	3,380	2,550	5,110	9,400	6,800	3,090	1,680
13	1,090	682	6,540	1,200	933	3,930	5,300	5,760	9,230	6,400	2,830	1,590
14	2,270	682	5,110	1,190	870	5,900	7,650	6,430	10,300	6,000	2,420	1,710
15	2,630	675	3,440	1,150	890	5,620	8,460	7,210	10,700	5,500	1,890	1,810
16	1,620	655	2,530	1,150	1,240	3,280	6,090	6,370	11,200	5,790	1,730	1,670
17	1,420	664	3,210	1,100	1,350	3,060	4,720	5,730	12,100	6,150	1,890	1,490
18	1,320	646	7,590	1,090	1,320	2,850	4,250	6,120	12,100	6,240	2,180	1,460
19	1,230	664	8,880	1,100	1,190	2,610	3,600	6,400	12,400	5,560	2,110	1,470
20	1,100	655	5,880	1,050	1,140	2,390	4,150	5,470	13,500	4,790	2,000	1,460
21	999	653	5,500	1,050	1,890	2,220	5,060	5,330	15,000	4,440	1,940	1,300
22	955	650	11,500	1,050	2,930	2,140	3,930	6,590	13,300	4,180	2,190	1,150
23	944	648	9,440	1,000	2,700	2,070	3,660	5,790	12,600	4,130	2,510	1,000
24	944	645	5,790	1,010	2,370	1,950	3,420	6,210	11,500	4,180	2,040	923
25	911	643	4,340	999	2,280	1,880	3,490	8,010	9,300	4,640	1,890	923
26	870	640	3,510	988	2,120	1,880	3,880	7,560	8,800	4,320	1,830	1,100
27	850	638	3,010	944	1,950	1,950	3,840	7,630	9,820	3,950	1,680	1,380
28	840	655	2,630	911	1,830	1,880	3,550	7,400	11,600	3,710	1,490	1,100
29	820	633	2,350	870	-	1,850	3,240	6,370	13,600	3,470	1,430	1,010
30	790	650	2,150	840	-	2,010	3,040	5,500	11,200	3,150	1,490	989
31	780	-	1,980	800	-	3,010	-	6,180	-	2,730	1,520	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	36,673	2,630	780	1,183	1.66	1.91	72,740
November	20,139	750	630	671	.940	1.05	39,950
December	121,619	11,500	628	3,923	5.49	6.33	241,200
Calendar year 1936	1,432,701	15,200	628	3,914	5.48	74.71	2,842,000
January	37,632	1,810	800	1,214	1.70	1.96	74,640
February	37,296	2,930	790	1,332	1.87	1.95	73,980
March	89,990	5,730	1,850	2,903	4.07	4.69	178,500
April	111,290	8,460	2,200	3,710	5.20	5.80	220,700
May	199,550	10,900	3,140	6,437	9.02	10.40	395,800
June	342,860	15,000	8,800	11,430	16.0	17.85	680,100
July	185,990	11,000	2,730	5,935	8.31	9.58	364,900
August	68,480	3,420	1,450	2,209	3.09	3.56	135,800
September	44,935	2,500	923	1,498	2.10	2.34	89,130
Water year 1936-37	1,294,454	15,000	628	3,546	4.97	67.42	2,567,000

Nooksack River near Glacier, Wash.

Location.- Water-stage recorder, lat. 48°54'30", long. 121°59'30", in NE¼ sec. 2, T. 39 N., R. 6 E., 600 feet below mouth of Canyon Creek and 2½ miles northwest of Glacier.

Drainage area.- 195 square miles.

Records available.- February 1934 to September 1937. September 1910 to September 1911 (fragmentary), at practically same site.

Extremes.- Maximum discharge during year, 6,150 second-feet June 21 (gage height, 6.0 feet); minimum, 112 second-feet Sept. 24 (gage height, 1.13 feet).
1910-11, 1934-37: Maximum discharge recorded, 8,810 second-feet Nov. 5, 1934 (gage height, 7.42 feet); minimum, that of Sept. 24, 1937.

Remarks.- Records fair except those for period of ice effect, Jan. 7 to Feb. 4, which were computed on basis of gage heights, weather records, and records for South Fork of Nooksack River near Wickersham and are poor. Water diverted for Excelsior power plant of Puget Sound Power & Light Co. returned to river above gage. Regulation due to operation of plant produces only slight effect at gage.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	487	240	240	471	200	375	683	773	2,690	2,840	618	622
2	455	234	240	463	210	569	629	1,180	3,410	2,360	637	589
3	458	240	222	455	210	603	578	2,040	3,070	2,210	780	592
4	674	240	216	455	220	647	603	2,450	2,450	2,440	865	532
5	447	240	216	415	216	980	620	1,730	2,520	2,140	936	597
6	447	234	1,790	319	210	1,150	594	1,500	2,750	1,780	918	497
7	519	228	1,560	270	204	890	560	1,430	3,070	1,780	794	476
8	511	222	910	270	192	764	560	1,550	3,240	1,990	709	499
9	503	222	701	260	192	773	586	1,790	2,990	1,920	675	493
10	560	222	544	260	186	800	665	1,670	3,240	1,850	1,020	415
11	535	272	535	260	204	773	656	1,500	3,070	1,920	1,480	471
12	463	260	574	250	204	800	656	1,380	2,600	1,920	1,190	517
13	815	240	1,310	250	186	930	1,180	1,610	2,520	1,850	1,430	497
14	1,390	240	1,000	250	186	940	1,810	2,240	2,680	1,650	918	671
15	871	246	810	240	204	880	1,700	1,910	2,680	1,650	577	670
16	728	288	692	230	228	791	1,250	1,790	2,750	1,850	548	524
17	674	651	764	220	246	737	1,020	1,670	2,830	1,990	666	619
18	612	375	1,340	220	228	692	1,000	1,670	3,240	1,850	732	597
19	511	535	1,310	220	216	638	840	1,670	3,240	1,650	684	502
20	451	471	1,140	220	216	594	990	1,500	3,760	1,420	664	399
21	375	423	1,540	220	381	560	1,020	1,550	5,410	1,330	640	269
22	361	391	2,880	220	447	535	880	1,790	4,430	1,210	1,360	185
23	368	361	1,810	210	439	519	840	1,550	3,660	1,320	971	145
24	354	333	1,310	210	423	495	800	1,790	2,840	1,450	636	122
25	319	305	1,030	210	407	487	980	2,170	2,280	1,530	716	164
26	298	279	880	210	391	495	980	1,980	2,360	1,430	611	314
27	286	272	791	200	368	495	960	1,910	2,760	1,330	460	254
28	292	260	701	200	354	487	880	1,910	3,400	1,290	382	167
29	279	246	620	200	-	479	810	1,670	3,660	1,110	335	140
30	272	240	569	200	-	503	755	1,610	3,000	918	443	486
31	266	-	511	200	-	638	-	1,910	-	695	495	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	15,561	1,390	266	502	2.57	2.96	30,860
November	9,010	651	222	300	1.54	1.72	17,870
December	28,756	2,880	216	928	4.76	5.49	57,040
Calendar year 1936	362,617	3,620	140	991	5.08	69.09	719,200
January	8,278	471	200	267	1.37	1.58	16,420
February	7,368	447	186	263	1.35	1.41	14,610
March	21,019	1,150	375	678	3.48	4.01	41,690
April	26,085	1,810	560	870	4.46	4.98	51,740
May	52,893	2,450	773	1,706	8.75	10.09	104,900
June	92,600	5,410	2,280	3,087	15.8	17.63	183,700
July	52,673	2,840	695	1,699	8.71	10.04	104,500
August	23,910	1,480	335	771	3.95	4.55	47,420
September	13,025	671	122	434	2.23	2.49	25,830
Water year 1936-37	351,178	5,410	122	962	4.93	66.95	696,600

Nooksack River at Deming, Wash.

Location.- Water-stage recorder, lat. 48°48'35", long. 112°12'15", in lot 12, sec. 6, T. 38 N., R. 5 E., 800 feet below the South Fork and 1 mile southeast of Deming.

Drainage area.- 580 square miles.

Records available.- July 1935 to September 1937. September to December 1910 (gage heights only), at site 1 1/8 miles downstream. December 1910 to March 1911 (gage heights only), at Mugents' bridge, 4 miles below Deming.

Extremes.- Maximum discharge during year, 20,100 second-feet Dec. 22 (gage height, 10.81 feet); minimum, 560 second-feet Nov. 9, 10 (gage height, 3.70 feet), or may have been less sometime during period of ice effect.
1935-37: Maximum discharge, that of Dec. 22, 1936; minimum, that of Nov. 9, 10, 1936.

Remarks.- Records excellent except those for period of ice effect, Jan. 6-29, which were computed on basis of gage heights, weather records, and records for station on South Fork of Nooksack River near Wickersham and are poor. No diversions. Limited regulation at power plant at Excelsior has slight if any effect at this station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,070	605	575	1,680	691	2,380	3,360	2,380	6,350	5,660	1,570	1,560
2	990	585	565	1,600	733	4,940	2,660	3,690	8,280	5,000	1,500	1,450
3	950	580	575	1,550	727	4,620	2,470	6,630	7,650	4,620	1,630	1,450
4	1,590	585	580	1,600	721	4,380	2,660	7,350	5,930	4,740	1,760	1,380
5	1,100	621	595	1,400	759	5,930	2,950	5,260	5,930	4,380	1,840	1,490
6	1,000	616	6,360	1,180	721	6,630	2,560	4,040	6,490	3,810	1,840	1,350
7	1,100	585	9,830	1,100	703	4,620	2,290	3,800	7,060	3,590	1,720	1,280
8	1,090	570	4,260	1,070	680	3,690	2,200	4,500	7,350	3,920	1,590	1,290
9	1,040	565	3,170	1,040	674	3,690	2,290	5,130	6,770	3,810	1,540	1,300
10	1,100	560	2,450	1,020	680	3,920	2,760	5,130	7,350	3,590	1,760	1,200
11	1,090	600	2,370	990	815	3,580	2,850	4,620	7,060	3,590	2,880	1,220
12	920	616	2,500	980	930	3,690	2,760	4,150	5,930	3,590	2,370	1,270
13	1,150	595	8,820	950	808	4,260	4,740	4,500	5,390	3,380	2,530	1,240
14	2,910	580	5,800	920	766	4,260	7,260	6,920	5,930	3,070	2,370	1,430
15	2,460	575	3,920	880	808	3,800	7,850	5,260	6,070	2,980	1,590	1,490
16	1,660	585	3,170	850	1,260	3,160	5,130	4,870	6,070	3,270	1,420	1,330
17	1,490	1,240	4,060	820	1,640	2,850	3,920	5,390	7,960	3,480	1,520	1,390
18	1,330	864	8,050	800	1,420	2,560	3,260	4,870	9,260	3,480	1,580	1,410
19	1,160	920	7,610	780	1,110	2,290	2,950	4,620	9,950	3,070	1,540	1,280
20	990	1,160	5,880	760	1,030	2,040	4,230	3,690	11,800	2,700	1,530	1,180
21	882	822	7,120	740	3,140	1,840	4,870	3,580	18,600	2,530	1,490	1,030
22	822	730	14,400	730	4,500	1,760	3,690	4,380	12,900	2,370	2,350	916
23	814	684	10,000	720	4,040	1,720	3,260	3,800	9,950	2,450	2,290	818
24	782	654	6,210	710	3,160	1,630	3,050	4,350	8,600	2,620	1,700	768
25	738	643	4,740	700	2,850	1,560	3,580	5,520	6,770	2,700	1,660	782
26	717	626	3,920	690	2,470	1,720	3,580	4,740	6,210	2,620	1,540	975
27	684	616	3,360	680	2,200	1,860	3,360	4,500	6,350	2,450	1,340	1,190
28	665	605	2,850	680	2,080	1,760	3,050	4,380	6,920	2,370	1,230	916
29	660	590	2,470	680	-	1,660	2,660	3,920	7,350	2,210	1,130	834
30	643	575	2,200	680	-	1,890	2,470	3,580	6,210	1,980	1,230	1,560
31	626	-	1,940	685	-	3,360	-	4,380	-	1,680	1,290	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	34,223	2,910	626	1,104	1.90	2.19	67,860
November	20,152	1,240	560	672	1.16	1.29	39,970
December	140,370	14,400	575	4,528	7.81	9.00	278,400
Calendar year 1936	1,133,585	14,400	560	3,097	5.34	72.64	2,249,000
January	29,665	1,680	680	957	1.65	1.90	58,840
February	42,116	4,500	674	1,504	2.59	2.70	83,540
March	98,050	6,630	1,560	3,163	5.45	6.28	194,500
April	104,720	7,850	2,200	3,491	6.02	6.72	207,700
May	143,930	7,350	2,380	4,643	8.01	9.24	285,500
June	234,440	18,600	5,390	7,815	13.5	15.06	465,000
July	101,710	5,660	1,680	3,281	5.66	6.52	201,700
August	53,330	2,880	1,130	1,720	2.97	3.42	105,800
September	36,779	1,560	768	1,226	2.11	2.35	72,950
Water year 1936-37	1,039,485	18,600	560	2,848	4.91	66.67	2,062,000

South Fork of Nooksack River near Wickersham, Wash.

Location.- Water-stage recorder, lat. 48°39'50", long. 122°07'50", in lot 2, sec. 26, T. 37 N., R. 5 E., three-quarters of a mile above Skookum Creek and 4 miles east of Wickersham.

Drainage area.- 103 square miles.

Records available.- May 1934 to September 1937.

Extremes.- Maximum discharge during water year 1934-35, 11,200 second-feet Nov. 5 (gage height, 9.95 feet); minimum, 102 second-feet Sept. 12 (gage height, 2.27 feet).

Maximum discharge during water year 1935-36, 3,770 second-feet May 4 (gage height, 6.51 feet); minimum, occurred during period of ice effect, Feb. 3-21; minimum of 100 second-feet Aug. 31, as published in Water-Supply Paper 812, probably too high.

Maximum discharge during water year 1936-37, 8,470 second-feet Dec. 6 (gage height, 8.88 feet); minimum, 85 second-feet Sept. 25, 26 (gage height, 2.26 feet).

1934-37: Maximum discharge, that of Nov. 5, 1934; minimum, that of Sept. 25, 26, 1937.

Remarks.- Records excellent except those for periods of missing gage heights, Jan. 18-23, Mar. 29-31, Apr. 2-6, 1935 (computed on basis of records for Nooksack River near Glacier and Middle Fork of Nooksack River near Deming), which are fair, and those for periods of ice effect, Feb. 3-21, 1936, Jan. 6 to Feb. 12, 1937 (computed on basis of gage heights and weather records), which are poor. No diversion or regulation. Records for water years 1934-35 and 1935-36 as previously published have been revised in this report.

Rating tables, water years, 1934-35, 1935-36, 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1, 1934, to Sept. 13, 1935		Sept. 14, 1935, to Sept. 30, 1937	
2.2	93	2.2	74
2.5	136	2.5	146
3.0	300	3.0	330
3.5	555	3.5	570
4.0	940	4.0	915
4.5	1,390	4.5	1,350
5.0	1,870	5.0	1,800
5.5	2,470	5.5	2,360
6.0	3,080	6.0	3,030
7.0	4,570	7.0	4,570
8.0	6,500	8.0	6,500
9.0	8,700	9.0	8,700

Discharge, in second-feet, 1934-37

1934-35

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	126	2,910	1,010	770	2,230	440	292	634	922	931	199	117
2	122	2,200	778	1,220	2,530	415	282	588	922	702	185	114
3	120	1,990	1,080	1,440	2,110	425	272	669	706	537	174	113
4	117	1,710	886	1,440	1,620	381	262	834	986	478	171	112
5	117	6,360	722	1,340	1,340	358	252	994	1,390	468	157	109
6	116	3,200	714	1,300	1,140	340	242	949	1,520	440	151	107
7	114	1,620	770	868	940	327	232	842	1,480	468	144	106
8	123	1,500	686	676	778	304	232	904	1,260	468	142	107
9	130	1,020	786	549	669	280	240	949	1,340	456	140	105
10	122	794	683	478	600	272	256	746	1,390	405	140	105
11	119	706	1,980	468	730	395	327	614	1,070	403	134	103
12	130	641	1,730	410	662	1,070	505	560	1,020	513	133	105
13	122	794	1,570	363	655	1,990	630	837	1,010	591	138	633
14	117	1,130	1,390	358	568	1,520	473	1,070	1,010	594	138	2,390
15	117	985	1,060	332	507	1,010	543	1,190	931	542	136	1,000
16	116	690	850	318	473	746	588	940	669	440	133	1,000
17	113	543	967	309	832	641	490	1,340	868	390	139	480
18	112	588	1,390	300	770	562	420	1,120	834	372	220	339
19	173	490	1,390	295	627	531	432	976	818	340	144	278
20	1,080	451	2,070	290	706	478	778	1,180	676	314	131	239
21	915	627	3,050	500	770	425	746	1,480	780	318	126	213
22	1,440	1,290	1,770	2,000	1,620	390	627	1,340	763	322	123	196
23	1,410	1,960	1,340	3,500	1,110	368	662	994	568	318	122	188
24	1,890	1,760	1,160	8,240	786	395	574	770	490	284	120	172
25	2,400	1,910	976	8,550	627	376	568	634	475	226	117	162
26	1,020	1,440	1,080	5,260	549	350	669	1,040	586	206	116	152
27	730	1,140	794	2,830	501	327	627	1,120	730	188	117	143
28	655	913	662	2,290	468	354	607	1,210	727	360	119	137
29	555	922	594	1,990	-	350	683	1,210	706	252	119	132
30	513	1,190	537	1,870	-	330	746	994	676	206	122	126
31	762	-	595	1,760	-	310	-	886	-	192	120	-

Discharge, in second-feet, of South Fork of Nooksack River near Wickersham, Wash., 1934-37 -- Cont.

1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	123	246	429	1,700	290	1,470	274	1,400	1,030	480	175	1,170
2	117	235	388	1,940	274	1,170	266	1,580	1,720	470	168	440
3	115	228	348	1,260	250	1,530	254	1,620	1,530	520	168	246
4	112	210	322	2,230	270	1,050	243	2,440	1,170	657	165	199
5	112	202	302	1,690	290	798	239	2,960	1,050	604	162	172
6	112	196	452	1,000	210	672	235	2,030	1,100	480	156	159
7	110	192	743	843	150	606	320	1,350	1,390	434	152	146
8	110	462	630	835	95	1,450	398	1,100	2,010	402	146	137
9	107	604	569	775	120	1,510	366	1,110	1,350	375	143	134
10	103	362	971	718	160	883	800	1,300	1,260	399	137	129
11	113	348	805	1,120	210	777	2,300	1,480	1,900	798	137	129
12	410	563	949	1,580	250	1,260	1,710	1,530	1,350	480	134	206
13	412	492	636	1,590	220	1,040	1,580	1,760	1,120	402	132	268
14	438	393	520	1,010	210	883	1,300	2,120	1,100	370	132	292
15	395	534	460	1,260	180	812	1,220	2,120	1,040	339	126	235
16	325	955	429	939	170	711	1,800	2,240	1,270	322	126	199
17	1,660	788	424	704	150	630	1,960	1,400	1,930	310	123	172
18	1,760	526	384	576	160	548	1,960	1,350	1,400	306	120	159
19	744	424	352	548	170	515	1,530	2,020	1,020	286	117	146
20	542	366	322	654	180	537	1,440	1,440	931	278	115	134
21	490	326	314	624	200	520	1,580	1,580	915	270	112	137
22	402	334	306	600	833	465	1,900	1,900	923	258	112	393
23	344	453	290	618	433	429	1,530	1,530	836	243	123	234
24	306	532	525	576	314	406	1,400	1,530	739	228	132	182
25	282	679	1,080	485	262	375	1,440	1,620	654	217	117	156
26	254	1,000	1,750	438	691	402	1,300	1,760	600	210	115	140
27	251	725	1,050	420	1,100	380	1,260	1,800	624	202	110	129
28	843	542	812	393	820	348	1,220	1,760	984	199	105	123
29	450	475	630	357	2,200	318	1,350	1,350	594	192	105	117
30	339	470	812	334	-	298	1,400	1,220	520	188	103	112
31	282	-	1,090	314	-	286	-	1,260	-	185	134	-

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	115	95	93	370	140	654	939	606	1,660	820	182	206
2	110	93	91	366	145	1,530	684	1,190	1,890	718	172	159
3	115	93	93	306	145	1,130	660	1,900	1,560	654	165	143
4	258	95	93	326	145	1,120	775	1,800	1,300	648	159	129
5	178	120	110	278	150	1,480	768	1,220	1,300	554	159	156
6	143	120	3,590	235	145	1,300	648	931	1,440	505	168	152
7	126	105	2,510	220	140	907	576	1,010	1,480	480	168	137
8	117	98	1,050	215	135	739	554	1,260	1,480	510	152	126
9	115	95	672	210	135	835	648	1,350	1,350	480	149	120
10	110	93	470	200	135	859	883	1,350	1,660	456	165	117
11	103	107	460	200	165	782	971	1,300	1,400	452	417	115
12	103	115	639	195	185	899	899	1,140	1,130	438	232	110
13	152	107	2,560	190	188	1,080	1,580	1,260	1,090	411	238	105
14	683	100	1,220	185	165	1,080	2,380	2,050	1,170	380	304	103
15	460	98	768	175	175	931	2,000	1,350	1,300	357	196	103
16	262	98	588	170	294	753	1,260	1,350	1,460	366	175	103
17	206	427	1,000	165	314	672	987	1,620	2,020	370	156	103
18	175	220	2,380	160	254	624	828	1,350	2,940	366	146	100
19	156	172	1,920	155	213	532	725	1,220	2,280	326	143	98
20	146	202	1,440	150	210	475	1,180	923	3,430	290	140	95
21	134	156	2,280	150	642	434	1,110	947	4,870	274	134	91
22	129	137	4,530	145	939	434	835	1,140	2,420	250	218	89
23	123	123	2,140	145	843	420	739	987	2,300	250	334	89
24	120	115	1,260	140	690	393	718	1,220	2,060	250	250	89
25	117	112	947	140	606	388	915	1,400	1,480	250	199	87
26	112	105	739	140	510	438	867	1,110	1,260	239	178	124
27	110	103	612	135	452	475	768	1,050	1,220	224	162	200
28	107	98	515	135	429	460	684	1,050	1,220	213	156	123
29	103	95	460	135	-	429	606	923	1,120	206	143	117
30	103	93	420	135	-	596	554	907	899	188	149	251
31	100	-	370	135	-	1,140	-	1,220	-	178	168	-

Discharge, in second-feet, of South Fork of Nooksack River near Wickersham, Wash., 1934-37 -- Cont.

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October 1934	15,696	2,400	112	506	4.91	5.66	31,130
November	43,474	6,360	451	1,449	14.1	15.73	86,230
December	35,270	3,050	537	1,138	11.0	12.68	69,960
Calendar year							
January 1935	52,314	8,550	290	1,688	16.4	18.91	103,800
February	26,918	2,530	468	961	9.33	9.72	53,390
March	16,460	1,990	272	531	5.16	5.95	32,650
April	14,257	778	232	475	4.61	5.14	28,280
May	29,814	1,480	560	962	9.34	10.77	59,140
June	27,323	1,520	475	911	8.84	9.86	54,190
July	12,726	931	188	411	3.99	4.60	25,240
August	4,370	220	116	141	1.37	1.58	8,670
September	9,283	2,390	103	309	3.00	3.35	18,410
Water year 1934-35	287,905	8,550	103	789	7.66	103.95	571,100
October 1935	12,163	1,760	103	392	3.81	4.39	24,120
November	13,862	1,001	192	462	4.49	5.01	27,490
December	19,094	1,750	290	616	5.98	6.89	37,870
Calendar year 1935	238,584	8,550	103	654	6.35	86.17	473,200
January 1936	28,131	2,230	314	907	8.81	10.16	55,800
February	10,862	2,200	95	375	3.64	3.93	21,540
March	23,079	1,530	286	744	7.22	8.32	45,780
April	34,575	2,300	235	1,152	11.2	12.50	68,580
May	51,660	2,960	1,100	1,666	16.2	18.68	102,500
June	34,060	2,010	520	1,135	11.0	12.27	67,560
July	11,104	798	185	358	3.48	4.01	22,020
August	4,102	175	103	132	1.28	1.48	8,140
September	6,595	1,170	112	220	2.14	2.39	13,080
Water year 1935-36	249,287	2,960	95	681	6.31	90.03	494,500
October 1936	5,091	683	100	164	1.59	1.83	10,100
November	3,790	427	93	126	1.22	1.36	7,520
December	36,020	4,530	91	1,162	11.3	13.03	71,440
Calendar year 1936	249,069	4,530	91	681	6.61	89.96	494,100
January 1937	6,006	370	135	194	1.88	2.17	11,910
February	8,689	939	135	310	3.01	3.13	17,230
March	23,989	1,530	388	774	7.51	8.66	47,580
April	27,741	2,380	554	925	8.98	10.02	55,020
May	38,134	2,050	606	1,230	11.9	13.72	75,640
June	52,189	4,870	899	1,740	16.9	18.86	103,500
July	12,103	820	178	390	3.79	4.37	24,010
August	5,877	417	134	190	1.84	2.12	11,660
September	3,740	251	87	125	1.21	1.35	7,420
Water year 1936-37	223,369	4,870	87	612	5.94	80.62	443,000

Note.- Records for the water years 1934-35 and 1935-36 supersede those published in Water-Supply Papers 792 and 812.

COLUMBIA RIVER MAIN STEM

Columbia River at Trail, British Columbia

(International gaging station)

Location.- Cable gage, lat. 49°06', long. 117°42', on highway bridge at Trail, 12 miles above international boundary and mouth of Clark Fork. Zero of gage is 1,313.08 feet above sea level (from levels by Geodetic Survey of Canada in 1930).
Drainage area.- 34,000 square miles.
Records available.- April 1913 to September 1937.
Average discharge.- 24 years, 70,940 second-feet.
Extremes.- Maximum discharge observed during year, 183,000 second-feet June 24, 25 (gage height, 29.9 feet); minimum, 8,940 second-feet Feb. 3 (gage height, 6.27 feet).
1913-37: Maximum discharge observed, 312,000 second-feet June 14, 15, 1913 (gage height, 41.6 feet); minimum observed, that of Feb. 3, 1937.
Remarks.- Records good. Small amount of water diverted above station for irrigation. Slight fluctuation at low water caused by operation of power plant on Kootenai River. Natural storage in numerous lakes affects flow. This is one of the international gaging stations maintained by Canada under agreement with the United States. Gage read once daily.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

6.0	8,200	18.0	71,700
7.0	11,000	20.0	87,100
8.0	14,200	22.0	105,000
9.0	18,000	24.0	123,000
10.0	22,600	26.0	142,000
12.0	33,000	29.0	173,000
14.0	44,400	32.0	204,000
16.0	57,300		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38,500	23,600	15,600	12,300	9,020	11,000	12,300	25,500	128,000	173,000	114,000	63,700
2	37,900	23,100	15,500	12,200	8,970	11,000	12,300	26,800	133,000	175,000	112,000	62,200
3	37,200	22,800	15,500	12,100	8,940	11,000	12,000	30,300	139,000	176,000	109,000	60,400
4	36,600	22,400	15,400	12,000	8,970	11,000	12,200	33,200	143,000	176,000	105,000	58,600
5	35,900	21,900	15,300	11,900	9,020	11,000	12,500	36,200	147,000	175,000	101,000	57,400
6	35,300	21,500	15,200	11,800	9,140	11,000	12,800	40,000	151,000	172,000	98,600	57,900
7	34,600	21,100	15,100	11,700	9,080	11,100	12,900	42,600	154,000	170,000	95,800	57,200
8	34,000	20,700	14,900	11,500	9,020	11,000	12,900	45,700	156,000	166,000	93,800	56,600
9	33,400	20,200	14,600	11,100	8,970	11,000	13,100	48,600	158,000	162,000	91,800	56,500
10	32,800	19,600	14,200	10,700	9,020	11,100	13,200	51,800	161,000	157,000	89,600	55,700
11	32,200	19,000	13,900	10,400	9,020	11,200	13,500	54,100	162,000	153,000	88,100	55,500
12	31,700	18,500	13,600	10,200	9,080	11,300	13,800	56,800	162,000	149,000	86,400	55,400
13	31,200	18,200	13,200	9,990	9,020	11,300	14,600	58,000	162,000	147,000	84,400	55,100
14	31,100	18,000	13,000	9,910	9,020	11,400	15,000	60,900	162,000	144,000	84,200	55,000
15	31,000	17,800	12,800	9,960	9,110	11,400	15,500	64,000	160,000	142,000	84,300	55,500
16	30,900	17,500	12,700	10,100	9,240	11,500	15,800	66,400	162,000	140,000	84,600	55,300
17	30,800	17,100	12,600	9,960	9,440	11,600	16,100	69,300	164,000	138,000	84,200	55,100
18	30,600	16,700	12,600	9,850	9,600	11,800	16,700	72,100	168,000	136,000	83,200	55,200
19	30,600	16,300	12,600	9,710	9,800	11,900	17,200	75,100	173,000	134,000	81,900	55,700
20	30,600	16,200	12,600	9,630	9,710	11,900	1e,300	77,200	175,000	132,000	79,000	56,600
21	29,800	16,300	12,600	9,520	9,770	12,000	19,300	79,300	176,000	131,000	77,500	56,200
22	29,900	16,600	12,600	9,440	9,910	11,800	20,000	82,000	177,000	130,000	75,700	54,300
23	28,800	16,400	12,600	9,380	10,400	11,800	20,100	84,100	180,000	128,000	74,800	53,700
24	28,200	16,200	12,600	9,440	10,800	11,600	20,600	86,600	183,000	126,000	74,000	53,400
25	27,700	16,000	12,700	9,300	11,400	11,600	21,100	91,000	183,000	124,000	73,200	52,300
26	27,200	16,000	12,600	9,240	11,500	11,500	21,600	95,300	181,000	121,000	72,800	51,400
27	26,900	16,000	12,600	9,300	11,400	11,600	22,500	102,000	178,000	120,000	72,000	50,200
28	26,300	15,900	12,600	9,360	11,100	11,700	22,600	109,000	174,000	118,000	70,900	48,300
29	25,700	15,800	12,600	9,440	-	11,700	24,400	115,000	171,000	117,000	69,000	46,900
30	25,300	15,700	12,600	9,240	-	11,600	25,000	119,000	170,000	117,000	67,700	44,500
31	24,400	-	12,500	9,080	-	11,700	-	124,000	-	116,000	66,000	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	967,100	38,500	24,400	31,200	0.92	1.06	1,920,000
November	553,100	23,600	15,700	18,400	.54	.60	1,100,000
December	419,500	15,600	12,500	13,500	.40	.46	832,000
Calendar year 1936	23,434,400	271,000	10,200	64,000	1.88	25.64	46,500,000
January	319,750	12,300	9,080	10,300	.30	.35	634,000
February	269,470	11,500	8,940	9,620	.28	.29	534,000
March	354,100	12,000	11,000	11,400	.34	.39	702,000
April	499,900	25,000	12,000	16,700	.49	.55	992,000
May	2,121,900	124,000	25,500	68,400	2.01	2.32	4,210,000
June	4,893,000	183,000	128,000	163,000	4.79	5.34	9,710,000
July	4,465,000	176,000	116,000	144,000	4.24	4.89	8,860,000
August	2,644,500	114,000	66,000	85,300	2.51	2.89	5,250,000
September	1,651,800	63,700	44,500	55,100	1.62	1.81	3,280,000
Water year 1936-37	19,159,120	183,000	8,940	52,500	1.54	20.95	38,000,000

Columbia River at Kettle Falls, Wash.

Location.- Water-stage recorder, lat. 48°37'20", long. 118°07'00", in northwest corner lot 1, sec. 14, T. 36 N., R. 37 E., 3½ miles above mouth of Colville River at Kettle Falls. Zero of gage is at mean sea level (subject to correction for general adjustment of 1929).

Drainage area.- 64,500 square miles.

Records available.- April 1913 to September 1937.

Average discharge.- 24 years, 99,500 second-feet.

Extremes.- Maximum discharge during year, 258,000 second-feet June 24 (elevation 1,189.28 feet); minimum daily discharge, 13,000 second-feet Jan. 31, during period of ice effect.

1913-37: Maximum discharge, 468,000 second-feet June 14, 15, 1913 (gage height, 34.2 feet, from floodmarks, referred to U. S. Weather Bureau gage at Marcus); minimum (estimated because of ice effect), 13,000 second-feet Jan. 18-21, 1930, Jan. 31, 1937.

Maximum discharge during flood of 1894, 700,000 second-feet, based on information from several sources.

Remarks.- Records excellent except those for period of ice effect, Jan. 6 to Mar. 10, which were computed on basis of one discharge measurement, gage heights, weather records, and records for Columbia River at Trail, B. C., and Grand Coulee and for Spokane River below Little Falls and are poor. Discharge May 28 to June 2 computed on basis of partial gage-height record. Discharge Sept. 2-4 interpolated. Numerous diversions above gage for irrigation, but quantity diverted is very small in proportion to flow past gage. Slight fluctuation at extreme low water caused by operation of power plant on Kootenai River. Some regulation due to natural storage in numerous lakes above gage.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

1,164.5	13,000	1,169.0	32,800	1,174.0	66,900	1,182.0	148,400
1,165.0	14,900	1,170.0	38,800	1,175.0	75,100	1,185.0	188,900
1,166.0	18,800	1,171.0	45,300	1,176.0	83,600	1,188.0	235,000
1,167.0	22,900	1,172.0	52,000	1,178.0	102,800	1,190.0	271,000
1,168.0	27,500	1,173.0	59,250	1,180.0	124,800		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46,800	31,100	22,100	19,400	13,500	17,700	21,200	49,500	194,000	234,000	139,000	78,100
2	46,100	30,500	22,000	18,800	13,900	17,600	21,700	52,600	200,000	235,000	137,000	76,000
3	45,400	30,000	21,700	16,800	14,100	17,400	21,900	58,000	211,000	235,000	134,000	74,000
4	44,600	29,400	21,600	15,700	14,200	17,200	22,100	65,200	219,000	233,000	129,000	71,900
5	44,100	29,000	21,600	15,900	14,300	17,000	22,400	72,300	220,000	230,000	125,000	69,800
6	43,200	28,600	21,600	16,500	14,400	17,300	22,700	75,100	222,000	226,000	122,000	69,300
7	42,600	28,300	21,800	17,000	14,400	17,600	22,900	76,800	225,000	222,000	119,000	68,600
8	42,000	27,800	21,600	16,700	14,200	17,900	23,400	80,900	227,000	216,000	117,000	67,800
9	41,500	27,300	21,600	16,300	14,000	18,200	23,500	84,300	230,000	210,000	114,000	67,500
10	40,800	26,500	21,600	16,000	14,100	18,500	24,200	89,300	231,000	204,000	112,000	67,400
11	40,000	26,000	21,400	15,700	14,200	18,800	25,100	92,300	232,000	198,000	109,000	66,700
12	39,400	25,700	21,100	15,600	14,300	19,300	25,400	95,700	232,000	194,000	107,000	66,300
13	39,000	25,400	20,300	15,400	14,400	19,800	26,100	99,700	230,000	190,000	105,000	66,300
14	38,300	25,200	19,800	15,200	14,500	19,900	28,100	105,000	228,000	188,000	104,000	65,900
15	38,300	25,100	19,600	15,000	14,600	19,900	30,400	111,000	227,000	184,000	103,000	65,900
16	38,300	24,700	19,600	15,600	15,000	19,700	31,900	116,000	227,000	181,000	103,000	65,700
17	38,500	24,600	19,700	16,400	15,500	19,500	32,500	120,000	230,000	178,000	103,000	65,500
18	38,500	24,300	19,600	16,000	16,000	19,500	33,500	124,000	234,000	174,000	101,000	64,900
19	38,500	24,000	19,400	15,500	16,000	19,700	34,400	128,000	240,000	171,000	99,100	65,700
20	38,300	23,900	19,200	15,000	16,000	19,600	36,000	133,000	244,000	168,000	95,900	66,100
21	38,300	23,900	19,200	14,700	16,400	19,600	37,400	137,000	246,000	166,000	94,100	66,000
22	38,100	23,800	19,400	14,600	16,800	19,800	38,100	141,000	247,000	164,000	92,200	63,500
23	37,200	23,700	19,800	14,600	17,200	20,100	38,700	145,000	252,000	161,000	90,900	62,800
24	35,300	23,600	20,000	14,600	17,600	19,900	39,400	148,000	256,000	159,000	89,200	62,400
25	34,800	23,400	20,300	14,600	18,000	19,800	40,100	155,000	255,000	155,000	88,600	61,400
26	34,400	23,200	20,500	14,600	18,000	20,000	41,700	163,000	252,000	152,000	87,900	60,300
27	34,000	23,200	20,500	14,600	18,000	20,100	43,000	171,000	247,000	149,000	86,500	58,700
28	33,600	23,100	20,500	14,600	17,900	20,200	45,200	178,000	241,000	147,000	85,000	57,600
29	32,800	23,000	20,500	14,600	-	20,300	47,000	182,000	236,000	145,000	83,600	55,600
30	32,000	22,700	20,200	13,500	-	20,400	48,000	186,000	234,000	143,000	81,800	53,500
31	31,600	-	19,700	13,000	-	20,800	-	190,000	-	142,000	79,800	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,206,300	46,800	31,600	38,910	0.603	0.70	2,393,000
November	771,000	31,100	22,700	25,700	.398	.44	1,529,000
December	637,500	22,100	19,200	20,560	.319	.37	1,264,000
Calendar year 1936	32,493,300	374,000	14,800	88,780	1.38	18.75	64,450,000
January	482,500	19,400	13,000	15,560	.241	.28	957,000
February	431,500	18,000	13,500	15,410	.239	.25	855,900
March	593,100	20,800	17,000	19,130	.297	.34	1,176,000
April	948,000	48,000	21,200	31,600	.490	.55	1,880,000
May	3,624,700	190,000	49,500	116,900	1.81	2.09	7,189,000
June	6,969,000	256,000	194,000	232,300	3.60	4.02	13,820,000
July	5,754,000	235,000	142,000	185,600	2.88	3.32	11,410,000
August	3,237,600	139,000	79,800	104,400	1.62	1.87	6,422,000
September	1,971,200	78,100	53,500	65,710	1.02	1.14	3,910,000
Water year 1936-37	26,626,400	256,000	13,000	72,950	1.13	15.37	52,810,000

Columbia River at Grand Coulee, Wash.

Location.- Water-stage recorder, lat. 47°58'00", long. 118°58'45", opposite lot 4, sec. 36 T. 29 N., R. 30 E., in pier 3 of highway bridge at Grand Coulee, 2,500 feet below Grand Coulee Dam. Zero of gage is at mean sea level (subject to correction for general adjustment of 1929).
Drainage area.-74,100 square miles.
Records available.- June to December 1923 and June 1928 to September 1937 (complete), April 1913 to June 1923 and January 1924 to May 1928 (monthly discharge only).
Average discharge.- 24 years, 108,000 second-feet.
Extremes.- Maximum discharge during year, 271,000 second-feet June 25 (elevation, 965.71 feet); minimum may have been less than 15,300 second-feet sometime during period of ice effect.

1913-37: Maximum discharge, 492,000 second-feet June 15, 1913 (computed on basis of records of peak discharge at other gaging stations); minimum may have been less than 15,300 second-feet (estimated) in January or February 1937, when stage-discharge relation was affected by ice.

Maximum discharge during flood of June 1894, 725,000 second-feet (estimated).
Remarks.- Records excellent except those for period of ice effect, Jan. 1 to Mar. 8, which were computed on basis of weather records and records for station at Kettle Falls and Spokane River below Little Falls and are poor. Discharge July 25, 26 computed on basis of one staff-gage reading and recorded range of stage. Diversions for irrigation above station are small in proportion to flow past gage. Some diurnal fluctuation caused by operation of power plants on Spokane River. Some regulation due to natural storage in numerous lakes above gage.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

932.7	18,630	936.0	31,150	940.0	51,200	946.0	88,200	954.0	153,000	964.0	250,000
933.0	19,560	937.0	35,700	941.0	56,700	948.0	104,000	956.0	171,000	967.0	287,000
934.0	22,960	938.0	40,700	942.0	62,200	950.0	120,000	958.0	189,000		
935.0	26,900	939.0	45,700	944.0	74,500	952.0	136,000	961.0	218,000		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50,200	34,200	25,300	21,700	15,300	20,800	26,300	67,100	211,000	243,000	146,000	81,600
2	49,300	32,500	25,300	21,200	16,200	20,800	26,700	68,800	216,000	242,000	143,000	79,300
3	48,800	32,800	25,100	20,000	16,300	21,600	27,200	71,600	224,000	244,000	141,000	76,800
4	47,500	32,400	24,900	18,500	16,800	21,500	26,900	77,200	232,000	242,000	138,000	74,600
5	45,900	31,800	24,400	18,500	17,200	21,400	26,500	85,400	236,000	240,000	133,000	72,600
6	46,400	31,600	24,100	19,500	17,100	22,100	32,100	93,600	236,000	237,000	130,000	70,500
7	45,800	31,200	23,700	20,100	17,000	22,600	33,000	100,000	237,000	232,000	126,000	69,700
8	45,000	30,600	24,200	20,000	16,300	22,900	32,500	103,000	241,000	228,000	123,000	70,300
9	44,600	29,400	24,000	19,500	16,700	23,200	31,000	106,000	239,000	223,000	120,000	69,800
10	44,000	30,000	23,700	19,000	16,800	23,700	32,800	110,000	243,000	216,000	118,000	69,500
11	43,000	29,500	23,800	18,300	16,900	23,800	34,100	115,000	242,000	210,000	115,000	68,900
12	41,600	28,500	23,600	18,600	16,700	23,900	35,800	118,000	243,000	204,000	113,000	67,600
13	42,000	28,500	23,100	18,800	16,400	24,300	36,600	121,000	243,000	200,000	110,000	66,700
14	41,600	28,200	22,200	17,700	17,000	24,600	36,600	125,000	240,000	196,000	108,000	67,400
15	41,000	27,700	22,500	17,300	16,900	24,200	41,200	130,000	238,000	193,000	107,000	67,200
16	40,800	26,700	22,500	17,200	17,900	24,700	46,900	135,000	236,000	190,000	106,000	67,200
17	41,000	27,400	22,500	17,600	18,200	24,700	49,200	140,000	237,000	187,000	107,000	67,000
18	41,000	27,100	22,300	17,300	18,900	24,400	50,500	144,000	243,000	183,000	107,000	66,700
19	40,200	27,000	22,400	17,700	18,700	24,300	52,100	147,000	246,000	178,000	105,000	66,000
20	41,300	26,700	21,800	17,300	18,700	24,200	51,900	153,000	251,000	176,000	103,000	66,400
21	41,200	26,600	21,200	17,200	19,000	24,300	54,100	158,000	255,000	174,000	99,100	66,700
22	41,000	26,200	21,700	17,200	20,000	24,500	54,200	161,000	256,000	172,000	96,400	66,700
23	40,600	25,500	22,300	17,100	21,000	24,800	56,800	166,000	261,000	170,000	93,400	64,700
24	39,800	26,200	22,400	17,000	21,500	25,500	58,000	169,000	267,000	167,000	93,300	64,400
25	38,100	26,300	22,300	16,900	22,000	25,300	59,100	171,000	270,000	163,000	91,400	64,100
26	37,000	26,600	21,800	17,300	21,900	25,000	59,100	178,000	264,000	160,000	90,200	62,900
27	37,200	25,600	22,800	17,900	21,300	25,200	59,700	185,000	260,000	156,000	89,700	61,300
28	37,200	26,300	22,900	17,800	21,000	25,100	61,600	192,000	254,000	154,000	88,200	60,400
29	36,600	26,100	23,500	17,800	-	24,800	63,400	200,000	248,000	152,000	86,700	59,600
30	36,000	25,300	23,600	16,700	-	25,200	65,800	204,000	244,000	149,000	84,200	57,800
31	35,400	-	23,300	16,000	-	25,600	-	207,000	-	147,000	83,700	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,301,100	50,200	35,400	41,970	0.566	0.65	2,581,000
November	854,500	34,200	25,300	28,480	.384	.43	1,695,000
December	719,200	25,300	21,200	23,200	.313	.36	1,427,000
Calendar year 1936	35,270,700	385,000	19,500	96,370	1.30	17.66	69,960,000
January	564,900	21,700	16,000	18,220	.246	.28	1,120,000
February	509,700	22,000	15,300	18,200	.246	.26	1,011,000
March	739,000	25,600	20,800	23,840	.322	.37	1,466,000
April	1,321,700	65,800	26,300	44,060	.595	.66	2,622,000
May	4,201,700	207,000	67,100	135,500	1.83	2.11	8,334,000
June	7,313,000	270,000	211,000	243,800	3.29	3.67	14,510,000
July	6,028,000	244,000	147,000	194,500	2.62	3.02	11,960,000
August	3,395,300	146,000	83,700	109,500	1.48	1.71	6,734,000
September	2,034,400	81,600	57,800	67,810	.915	1.02	4,035,000
Water year 1936-37	28,982,500	270,000	15,300	79,400	1.07	14.54	57,500,000

Columbia River at Trinidad, Wash.

Location.- Water-stage recorder, lat. 47°13'30", long. 120°00'50", in SE¼ sec. 13, T. 20 N., R. 22 E., half a mile southwest of Trinidad and 12 miles below Rock Island Dam. Zero of gage is 500 feet above mean sea level (subject to correction for general adjustment of 1929).

Drainage area.- 89,700 square miles.

Records available.- October 1930 to September 1937, January to December 1910 (gage heights only) and May 1913 to December 1916, at Wenatchee, January 1917, at Beverly, January 1917 to September 1930, at Vernita.

Average discharge.- 24 years, 118,500 second-feet.

Extremes.- Maximum discharge during year, 290,000 second-feet June 22, 25 (gage height, 42.75 feet); minimum, 5,800 second-feet Mar. 14 (gage height, 12.05 feet, caused by regulation).

1913-37: Maximum discharge, 528,000 second-feet June 15, 16, 1913 (gage height, 45.7 feet, on original U. S. Weather Bureau gage at Wenatchee); minimum, 4,120 second-feet, regulated, Feb. 10, 1932 (gage height, 11.40 feet).

Maximum discharge known, about 740,000 second-feet June 7, 1894.

Remarks.- Records excellent except those for period of ice effect, Jan. 4 to Mar. 11, which were computed on basis of two discharge measurements, gage heights, weather records, and records for station at Grand Coulee and are fair. Considerable water diverted for irrigation above gage but quantity small in proportion to flow past gage. Some diurnal fluctuation at low stages as result of operation of Rock Island power plant. Artificial regulation at Coeur d'Alene and Chelan Lakes. Flow affected by natural storage in numerous lakes above gage.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

16.0	19,900	22.0	51,600	32.0	137,000
17.0	24,100	23.0	58,100	34.0	159,000
18.0	28,600	24.0	65,000	37.0	197,000
19.0	33,600	26.0	79,800	40.0	242,000
20.0	39,200	28.0	97,000	44.0	314,000
21.0	45,300	30.0	116,000		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53,900	38,600	28,900	25,500	20,000	23,300	29,100	70,700	224,000	270,000	147,000	86,500
2	53,600	37,200	28,800	24,300	20,000	23,700	29,600	72,400	234,000	265,000	145,000	84,600
3	52,900	36,300	28,600	24,000	20,000	24,000	29,600	75,800	247,000	260,000	143,000	82,500
4	52,400	36,200	28,000	23,000	20,100	24,800	30,200	82,700	257,000	256,000	140,000	80,100
5	51,300	36,100	28,300	22,000	20,300	24,800	30,100	90,400	263,000	257,000	138,000	81,700
6	49,900	35,600	27,700	22,000	20,500	24,700	30,700	98,400	264,000	252,000	133,000	75,400
7	49,900	35,200	27,200	22,400	20,400	25,300	33,800	105,000	264,000	243,000	130,000	69,800
8	49,400	34,800	27,700	22,700	20,200	25,400	36,700	110,000	268,000	238,000	126,000	73,600
9	48,800	34,100	27,400	22,300	20,000	25,700	36,000	112,000	270,000	234,000	123,000	74,300
10	48,100	33,200	27,800	22,000	20,000	25,800	35,200	115,000	271,000	229,000	120,000	73,700
11	47,500	33,300	27,100	21,800	20,100	26,000	35,500	118,000	274,000	220,000	118,000	73,400
12	46,500	33,200	27,700	21,600	20,200	26,100	37,300	122,000	270,000	215,000	116,000	73,400
13	45,400	32,200	27,200	21,400	20,200	27,900	39,600	125,000	270,000	209,000	113,000	71,400
14	45,500	32,100	27,100	21,300	20,300	24,900	41,800	128,000	268,000	204,000	111,000	70,600
15	45,400	33,100	26,000	21,000	20,300	26,300	42,300	135,000	267,000	199,000	109,000	71,200
16	44,700	29,800	26,000	21,700	20,400	26,800	46,200	141,000	264,000	195,000	108,000	70,900
17	44,600	30,600	25,900	22,300	20,500	27,100	51,200	148,000	269,000	192,000	107,000	70,800
18	44,700	30,600	25,600	21,800	20,600	27,100	53,400	152,000	270,000	189,000	107,000	73,500
19	44,600	30,800	26,200	21,600	20,600	27,200	55,000	155,000	271,000	186,000	107,000	73,000
20	43,900	30,800	27,700	21,000	20,700	27,100	57,000	160,000	273,000	180,000	106,000	63,400
21	44,400	30,200	24,500	20,900	20,600	27,600	56,800	165,000	280,000	176,000	104,000	69,800
22	44,900	28,800	25,300	20,800	20,600	26,900	58,800	170,000	287,000	173,000	101,000	69,900
23	45,000	29,800	25,400	20,800	21,900	27,300	58,600	173,000	287,000	171,000	98,500	70,000
24	44,700	29,400	26,000	20,800	22,800	27,400	60,800	179,000	288,000	169,000	96,400	68,200
25	43,700	29,300	26,300	20,800	23,200	28,200	61,800	183,000	289,000	167,000	95,800	67,800
26	41,800	29,700	26,400	20,800	23,400	28,500	63,100	189,000	287,000	162,000	94,000	67,500
27	40,500	29,700	25,700	20,700	23,700	28,200	63,700	199,000	282,000	158,000	93,200	66,400
28	40,300	29,400	25,600	20,700	23,700	28,300	64,400	207,000	280,000	156,000	95,700	65,000
29	40,300	29,200	26,900	20,700	-	27,900	66,400	213,000	277,000	154,000	87,700	64,300
30	39,900	29,300	26,500	20,300	-	28,500	68,400	218,000	277,000	151,000	89,000	63,200
31	39,200	-	26,500	20,000	-	28,600	-	221,000	-	149,000	87,200	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,427,700	53,900	39,200	46,050	0.513	0.59	2,832,000
November	968,600	38,600	28,800	32,290	.360	.40	1,921,000
December	832,000	28,900	24,600	26,840	.299	.34	1,650,000
Calendar year 1936	37,118,600	411,000	22,000	101,400	1.13	15.39	73,620,000
January	673,000	25,500	20,000	21,710	.242	.28	1,335,000
February	585,300	23,700	20,000	20,900	.233	.24	1,161,000
March	821,400	28,600	23,300	26,500	.295	.34	1,629,000
April	1,403,100	68,400	29,100	46,770	.521	.58	2,783,000
May	4,433,400	221,000	70,700	143,000	1.59	1.83	8,794,000
June	8,092,000	289,000	224,000	269,700	3.01	3.36	16,050,000
July	6,279,000	270,000	149,000	202,500	2.26	2.61	12,450,000
August	3,489,500	147,000	87,200	112,600	1.26	1.45	6,921,000
September	2,165,900	86,500	63,200	72,200	.805	.90	4,296,000
Water year 1936-37	31,170,900	289,000	20,000	85,400	.952	12.92	61,820,000

Kootenai River at Newgate, British Columbia

(International gaging station)

Location.- Two staff gages, one on main river and one on slough, lat. 49°01', long. 115°10', at highway bridges, 0.7 mile northwest of Newgate, British Columbia, and 0.9 mile north of the international boundary.

Drainage area.- 7,660 square miles.

Records available.- October 1930 to September 1937.

Extremes.- Maximum discharge observed during year, 37,800 second-feet June 3; minimum, 1,160 second-feet Jan. 2-8.
1931-37: Maximum discharge observed, 83,500 second-feet June 18, 1933; minimum, 994 second-feet Feb. 7, 1936.

Remarks.- Records good except those for period of ice effect, Dec. 27 to Mar. 25, which were computed on basis of three discharge measurements, gage heights, weather records, and records for stations at Wardner and Rexford and are fair. Gages read once daily. Records give total flow of main channel and slough. This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,050	2,340	1,630	1,300	1,790	1,630	2,040	6,510	23,100	24,900	8,970	4,940
2	3,100	2,300	1,610	1,160	1,790	1,550	2,080	8,020	28,400	23,300	9,040	4,840
3	3,240	2,240	1,700	1,160	1,790	1,570	2,140	9,910	37,800	20,900	8,700	4,860
4	3,260	2,250	1,800	1,160	1,790	1,610	2,060	12,800	36,200	19,600	8,540	4,740
5	3,310	2,260	1,700	1,160	1,790	1,700	2,080	17,100	26,900	18,500	8,540	4,480
6	2,710	2,010	1,540	1,160	1,780	1,720	2,120	17,600	23,600	17,700	8,770	4,660
7	2,910	2,040	1,340	1,160	1,780	1,700	2,060	15,200	24,000	15,700	8,380	4,860
8	3,240	2,100	1,440	1,160	1,780	1,700	2,160	13,800	24,900	14,200	8,150	4,980
9	3,140	2,170	1,530	1,200	1,780	1,700	2,230	12,800	25,300	13,800	7,940	4,920
10	3,000	2,160	1,640	1,310	1,780	1,700	2,340	12,400	23,400	13,400	7,680	4,880
11	2,840	2,150	1,700	1,400	1,770	1,720	2,380	12,200	21,200	13,000	7,360	4,780
12	2,870	2,230	1,900	1,500	1,770	1,750	2,420	12,000	19,900	13,300	7,200	4,720
13	2,970	2,330	1,980	1,600	1,770	1,760	2,570	11,600	21,300	14,400	7,140	4,680
14	2,910	2,250	2,010	1,700	1,770	1,780	2,770	13,600	29,100	15,300	7,140	4,580
15	2,940	2,160	2,170	1,710	1,770	1,760	3,170	16,400	33,000	16,400	7,140	4,520
16	3,000	2,180	2,200	1,730	1,710	1,760	3,550	16,900	33,200	16,000	6,610	4,400
17	3,040	2,180	2,050	1,820	1,650	1,780	3,310	17,100	34,900	13,400	6,280	4,400
18	2,990	2,130	2,110	1,820	1,630	1,760	3,310	17,300	35,000	13,400	5,970	4,400
19	2,880	2,330	2,250	1,840	1,640	1,790	3,290	19,000	31,500	12,900	6,000	4,380
20	2,810	2,250	2,000	1,820	1,660	1,800	3,340	20,600	27,400	12,400	6,040	4,380
21	2,770	2,220	2,150	1,770	1,560	1,800	3,620	20,100	25,800	12,000	5,900	4,400
22	2,750	2,200	2,300	1,780	1,560	1,810	3,440	19,000	26,900	11,200	5,800	4,280
23	2,720	2,180	2,740	1,820	1,520	1,850	3,290	19,400	29,200	10,600	6,040	4,380
24	2,720	1,940	2,720	1,840	1,600	1,860	3,140	20,300	26,000	9,980	6,160	4,440
25	2,700	1,800	2,350	1,880	1,620	1,800	3,020	22,600	21,900	9,790	6,280	4,180
26	2,670	1,740	2,200	1,800	1,650	1,770	3,080	29,200	19,700	9,600	6,140	4,020
27	2,670	1,720	2,000	1,800	1,610	1,790	3,550	37,100	16,400	9,400	5,590	4,000
28	2,500	1,700	1,720	1,800	1,620	1,840	4,320	36,500	19,600	9,280	5,490	3,960
29	2,580	1,670	1,640	1,800	-	1,890	5,560	31,800	21,300	9,030	5,360	3,800
30	2,560	1,660	1,580	1,800	-	1,920	5,850	25,600	24,100	8,700	5,240	3,800
31	2,460	-	1,500	1,800	-	2,000	-	22,000	-	8,700	5,110	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	89,310	3,310	2,460	2,880	0.38	0.44	177,000
November	62,890	2,340	1,660	2,100	.27	.30	125,000
December	59,200	2,740	1,340	1,910	.25	.29	117,000
Calendar year 1936	2,705,724	49,100	994	7,390	.96	13.14	5,370,000
January	48,760	1,880	1,160	1,570	.20	.23	96,700
February	47,730	1,790	1,520	1,700	.22	.23	94,700
March	54,610	2,000	1,550	1,760	.23	.26	108,000
April	90,290	5,850	2,040	3,010	.39	.44	179,000
May	556,440	37,100	6,510	18,300	2.39	2.76	1,120,000
June	791,000	37,800	16,400	26,400	3.45	3.85	1,570,000
July	430,780	24,900	8,700	13,900	1.81	2.09	854,000
August	214,700	9,040	5,110	6,930	.90	1.04	426,000
September	134,660	4,980	3,800	4,490	.59	.66	267,000
Water year 1936-37	2,590,370	37,800	1,160	7,100	.93	12.59	5,130,000

Kootenai River near Rexford, Mont.

(International gaging station)

Location.- Wire-weight gage, lat. 48°52', long. 115°14', in sec. 21, T. 36 N., R. 28 W., at highway bridge, 300 feet below Sullivan Creek and 1.1 miles southwest of Rexford.

Drainage area.- 8,420 square miles.

Records available.- March 1929 to September 1937.

Extremes.- Maximum discharge observed during year, 37,200 second-feet June 4 (gage height, 10.52 feet); minimum, 1,120 second-feet Dec. 7 (gage height, 0.12 foot).
1929-37: Maximum discharge, 87,300 second-feet June 18, 1933 (gage height, 15.70 feet); minimum, 1,100 second-feet Feb. 7, 1936; minimum gage height, that of Dec. 7, 1936.

Remarks.- Records good except those for period of ice effect, Jan. 3 to Mar. 8, which were computed on basis of gage heights, two discharge measurements, observer's notes, weather records, and records for stations at Newgate, Libby, and Leonia and are fair. Discharge for May 11 computed on basis of records for other stations on Kootenai River. Gage read twice daily. No diversion or regulation. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,230	2,590	1,650	1,320	1,800		2,170	6,330	22,700	24,800	8,940	5,080
2	3,310	2,400	1,540	1,200	1,800		2,220	7,380	26,000	24,300	9,220	4,960
3	3,170	2,310	1,830			1,800	2,280	9,220	32,900	22,700	9,220	4,860
4	3,170	2,340	1,960				2,270	11,900	37,200	20,100	8,940	4,790
5	3,140	2,330	1,820		1,900		2,270	15,400	31,600	18,700	8,670	5,080
6	3,020	2,220	1,490	1,200		1,850	2,190	17,400	26,000	18,300	8,940	4,880
7	2,970	2,000	1,140				2,150	16,200	24,300	17,000	8,670	5,160
8	3,080	2,030	1,350				2,150	14,300	25,400	15,400	8,400	5,180
9	2,970	1,960	1,460	1,300		1,830	2,220	12,900	26,000	13,900	8,140	5,080
10	2,940	1,940	1,680	1,400	1,800	1,850	2,360	12,600	24,300	13,900	7,880	4,980
11	3,000	2,240	1,930	1,500		1,930	2,600	12,500	22,700	13,600	7,630	4,880
12	2,970	2,280	2,060	1,600		1,960	2,340	11,900	20,600	13,200	7,380	4,700
13	2,880	2,290	2,180	1,700	1,900	1,870	2,590	11,600	21,100	13,600	7,380	4,700
14	2,910	2,360	2,340			1,850	2,860	12,600	25,400	15,000	7,260	4,600
15	2,970	2,370	2,350			1,900	3,390	15,400	31,600	16,200	7,260	4,600
16	3,070	2,250	2,230		2,000	1,850	3,890	17,000	32,900	16,200	7,020	4,600
17	3,040	2,360	2,210			1,900	3,550	17,000	32,900	15,400	6,670	4,600
18	3,010	2,310	2,180	1,800	1,900	1,900	3,390	17,000	34,300	13,900	6,330	4,510
19	2,860	2,290	2,250		1,800	1,900	3,390	18,300	32,300	13,200	6,110	4,600
20	2,860	2,340	2,390		1,800	1,930	3,550	20,100	27,700	12,900	6,220	4,700
21	2,800	2,330	2,310			1,850	3,640	19,600	26,500	12,600	6,110	4,510
22	2,850	2,290	2,340			1,850	3,890	18,700	26,000	11,900	5,900	4,420
23	2,800	2,210	2,620			1,850	3,640	19,600	28,400	11,000	5,900	4,420
24	2,810	2,010	2,810			1,840	3,390	20,100	28,400	10,700	6,110	4,510
25	2,750	1,900	2,510	1,900	1,750	1,870	3,230	21,100	24,300	10,100	6,330	4,330
26	2,750	1,920	2,390			1,870	3,100	26,000	21,100	9,790	6,330	4,150
27	2,710	1,910	2,120			1,900	3,470	32,900	19,200	9,790	5,900	4,150
28	2,700	1,800	1,830			1,940	4,700	36,500	19,200	9,500	5,680	3,980
29	2,640	1,720	1,600			1,980	5,480	32,900	20,600	9,220	5,580	3,980
30	2,830	1,720	1,620	1,800	-	2,050	6,000	28,400	23,200	9,220	5,480	3,980
31	2,670	-	1,520		-	2,100	-	23,700	-	8,940	5,280	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	90,660	3,310	2,630	2,925	0.347	0.40	179,800
November	65,020	2,590	1,720	2,167	.257	.29	129,000
December	61,710	2,810	1,140	1,991	.236	.27	122,400
Calendar year 1936	2,854,640	48,400	1,100	7,800	.926	12.61	5,662,000
January	50,220	-	-	1,620	.192	.22	99,610
February	51,500	-	-	1,839	.218	.23	102,100
March	58,370	2,100	-	1,883	.224	.26	115,800
April	94,370	6,000	2,150	3,146	.374	.42	187,200
May	556,530	36,500	6,330	17,950	2.13	2.46	1,104,000
June	794,800	37,200	19,200	26,490	3.15	3.51	1,576,000
July	445,060	24,800	8,940	14,360	1.71	1.97	882,800
August	220,880	9,220	5,280	7,125	.846	.98	438,100
September	139,030	5,060	3,980	4,634	.550	.61	275,800
Water year 1936-37	2,628,150	37,200	1,140	7,200	.855	11.62	5,213,000

Kootenai River at Libby, Mont.

Location.- Water-stage recorder, lat. 48°24', long. 115°33', in NW¼ sec. 3, T. 30 N., R. 31 W., 1,200 feet below highway bridge at Libby.

Drainage area.- 10,240 square miles (revised).

Records available.- October 1910 to September 1937.

Average discharge.- 27 years, 11,570 second-feet.

Extremes.- Maximum discharge during year, 41,000 second-feet May 28 (gage height, 10.76 feet); minimum daily discharge, 1,230 second-feet Jan. 5, 6.
1910-37: Maximum discharge, 130,000 second-feet June 21, 1916 (gage height, 19.17 feet); minimum, 895 second-feet (discharge measurement) Jan. 11, 1930 (ice present).

Remarks.- Records good except those for periods of ice effect, Dec. 15-17, Dec. 29 to Mar. 14, Mar. 23, 24, which were computed on basis of three discharge measurements, gage heights, and weather records, and are fair. Discharge for Nov. 3-19, Dec. 23 to Jan. 23, Mar. 1-13, Mar. 23 to May 7 computed on basis of once-daily gage readings and rating curve for wire-weight gage at highway bridge, 1,200 feet above recorder. No diversions above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,420	2,860	1,960	1,500	1,980		2,720	8,380	25,900	25,900	9,340	5,410
2	3,420	2,860	1,860	1,300	2,040		2,900	9,980	27,300	26,800	9,660	5,280
3	3,420	2,720	2,270	1,300	2,140	2,200	2,900	12,100	33,300	25,400	9,660	5,150
4	3,420	2,550	2,330	1,300	2,080		*2,900	16,500	38,800	23,200	9,660	5,020
5	3,300	2,550	2,100	1,230	2,160		2,900	20,000	37,100	21,000	9,020	4,890
6	3,420	*2,460	1,420	1,230	2,220		2,900	20,000	32,800	20,200	9,020	5,020
7	3,300	2,380	1,400	1,260	2,080		2,900	22,100	27,300	18,500	9,020	5,020
8	3,300	*2,300	1,400	1,300	2,040	2,300	*2,900	19,800	27,300	17,700	9,020	5,410
9	3,300	2,210	1,400	1,360	1,940		2,900	18,500	28,300	16,100	8,700	5,280
10	3,190	2,210	1,400	1,490	2,100		3,080	17,700	27,800	14,900	8,400	5,150
11	3,190	2,050	1,400	1,620	2,160		*3,170	17,700	26,400	14,600	8,100	5,020
12	3,190	2,210	1,520	1,760	2,200		3,260	16,900	24,500	14,200	7,800	4,890
13	3,080	2,210	1,940	1,900	2,330	2,400	3,440	16,100	23,200	14,600	7,500	4,890
14	3,190	2,720	2,860		2,420		*4,280	17,300	25,000	15,300	7,500	4,890
15	3,190	*2,640	2,860		2,420	2,490	5,130	19,800	31,800	16,500	7,500	4,760
16	3,190	2,550	2,660		2,380	2,510	6,270	21,800	34,900	17,300	7,500	4,760
17	3,190	*2,550	2,640		2,330	2,570	5,970	21,800	34,900	16,900	7,200	4,760
18	3,300	2,550	2,640	2,000	2,310	2,490	*5,550	21,800	36,600	16,100	6,640	4,630
19	3,190	2,550	2,640		2,180	2,490	5,130	22,700	36,600	14,600	6,360	4,760
20	3,080	2,660	2,660		2,100	2,490	5,680	24,500	33,300	13,800	6,220	4,630
21	3,080	2,640	2,770		2,040	2,490	5,970	25,000	30,800	13,400	6,360	4,760
22	3,080	2,640	2,790		2,000	2,620	*5,680	24,000	29,200	12,700	6,220	4,630
23	3,080	2,550	3,440		2,080	2,550	5,400	24,000	29,800	12,000	6,080	4,500
24	3,080	2,490	3,440	2,060	2,120	2,550	5,130	24,500	31,200	11,300	6,080	4,630
25	3,080	2,000	*3,260	2,100	2,120	2,580	*4,880	25,400	29,200	11,000	6,220	4,630
26	2,970	2,000	3,080	2,120	2,080	2,550	4,640	28,300	25,000	10,300	6,500	4,500
27	2,970	2,000	*2,990	2,100	2,100	2,550	4,640	34,400	22,300	10,300	6,220	4,380
28	2,970	2,120	2,900	2,040	2,100	*2,460	6,270	40,400	21,400	9,980	5,800	4,380
29	2,970	2,020	2,550	1,940	-	2,380	6,920	38,800	21,800	9,980	5,670	4,260
30	2,970	2,020	2,210	1,880	-	2,550	8,000	34,400	23,600	9,660	5,670	4,260
31	2,970	-	1,760	1,900	-	2,720	-	28,800	-	9,340	5,540	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	98,500	3,420	2,970	3,177	0.310	0.36	195,400
November	72,270	2,860	2,000	2,409	.235	.26	143,300
December	72,550	3,440	1,400	2,340	.229	.26	143,900
Calendar year 1936	3,195,490	48,800	-	8,731	.853	11.61	6,338,000
January	54,690	-	1,230	1,764	.172	.20	108,500
February	60,250	2,420	1,940	2,152	.210	.22	119,500
March	75,110	2,720	-	2,423	.237	.27	149,000
April	134,410	8,000	2,720	4,480	.438	.49	226,600
May	693,460	40,400	8,380	22,370	2.18	2.51	1,375,000
June	877,400	38,800	21,400	29,250	2.86	3.19	1,740,000
July	483,560	26,800	9,340	15,600	1.52	1.75	959,100
August	230,180	9,660	5,540	7,425	.725	.84	456,600
September	144,550	5,410	4,260	4,818	.471	.53	286,700
Water year 1936-37	2,996,930	40,400	1,230	8,211	.802	10.88	5,944,000

*Interpolated.

Kootenai River at Leonia, Idaho

Location.- Water-stage recorder, lat. 48°37', long. 116°03', in SW¼ sec. 17, T. 33 N., R. 34 W., at Leonia, 450 feet east of Montana-Idaho State line and half a mile above mouth of Boulder Creek. Zero of gage is 1,700.00 feet above mean sea level, U. S. Coast and Geodetic Survey datum.

Drainage area.- 11,740 square miles.

Records available.- March 1928 to September 1937.

Extremes.- Maximum discharge during year, 47,900 second-feet May 28 (water-surface elevation, 1,812.40 feet); minimum discharge, 998 second-feet Dec. 9 (water-surface elevation, 1,798.47 feet).

1928-37: Maximum discharge, 95,500 second-feet June 18, 1933 (water-surface elevation, 1,818.11 feet); minimum, that of Dec. 9, 1936; minimum water-surface elevation, 1,797.56 feet Dec. 10, 1929.

Floods of June 1894 and 1916 reached elevations of 1,824.6 and 1,821.6 feet, respectively (information furnished by Great Northern Railway Co.).

Remarks.- Records excellent except those for Nov. 4-7 (computed on basis of weather records and records for other stations on Kootenai River), those for period of ice effect, Jan. 3 to Mar. 22 (computed on basis of two discharge measurements, available gage heights, weather records, and records for stations at Libby and Bonners Ferry), and those below 2,500 second feet, all of which are fair. No diversion or regulation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,890	3,190	2,300	1,600	2,200	2,500	3,250	12,200	31,100	26,900	9,870	5,920
2	3,840	3,060	2,360	1,330	2,200	2,500	3,340	14,500	32,000	27,600	10,000	5,730
3	3,840	2,950	3,140	1,330	2,300	2,500	3,500	18,900	37,500	26,600	10,100	5,620
4	3,820	2,900	2,870	1,330	2,300	2,500	3,500	23,400	43,300	24,400	9,980	5,570
5	3,820	2,850	2,600	1,300	2,300	2,500	3,550	27,900	42,100	22,000	9,670	5,620
6	3,770	2,800	2,040	1,300	2,300	2,600	3,480	28,800	35,000	20,700	9,390	5,710
7	3,740	2,750	1,350	1,300	2,300	2,600	3,460	27,500	30,900	20,100	9,480	5,600
8	3,690	2,560	1,070	1,290	2,200	2,600	3,440	25,200	30,400	18,500	9,310	5,810
9	3,720	2,540	1,240	1,400	2,200	2,600	3,500	23,300	31,000	16,700	9,030	5,840
10	3,690	2,770	1,410	1,600	2,300	2,600	3,690	22,700	30,800	15,700	8,840	5,680
11	3,550	2,610	1,440	1,800	2,350	2,600	3,940	22,300	30,200	15,300	8,600	5,600
12	3,530	2,750	2,120	2,000	2,400	2,600	4,170	21,300	27,600	14,900	8,350	5,490
13	3,460	2,830	2,450	2,100	2,500	2,600	4,410	20,900	26,600	14,800	8,140	5,360
14	3,570	2,850	2,890	2,150	2,600	2,600	5,720	22,800	28,100	15,400	7,920	5,330
15	3,600	2,890	3,080	2,150	2,600	2,700	9,600	25,700	33,500	16,600	7,810	5,270
16	3,570	2,870	3,100	2,150	2,600	2,700	10,400	27,600	37,700	17,300	7,840	5,250
17	3,530	2,830	3,060	2,150	2,600	2,700	9,360	27,500	38,000	17,100	7,700	5,190
18	3,570	2,850	2,910	2,150	2,550	2,800	8,250	27,800	39,000	16,100	7,330	5,190
19	3,550	2,850	3,060	2,150	2,500	2,800	7,920	29,100	40,800	15,000	6,980	5,140
20	3,410	2,830	2,970	2,150	2,400	2,860	7,890	30,400	37,400	14,100	6,760	5,110
21	3,410	2,830	3,080	2,150	2,350	2,800	9,090	30,500	34,300	13,600	6,810	5,140
22	3,390	2,850	3,280	2,150	2,350	2,700	9,090	29,900	32,300	13,200	6,700	5,080
23	3,390	2,790	4,520	2,200	2,350	2,710	8,400	29,800	32,500	12,500	6,620	5,000
24	3,370	2,650	4,490	2,300	2,350	2,650	7,630	30,600	33,800	11,900	6,680	4,980
25	3,340	2,480	4,120	2,350	2,350	2,770	7,110	31,600	31,900	11,400	6,760	5,030
26	3,300	2,430	3,650	2,400	2,400	2,770	7,230	35,000	27,800	11,000	6,980	5,000
27	3,190	2,410	3,230	2,400	2,400	2,850	8,760	40,600	24,800	10,700	6,870	4,840
28	3,280	2,670	3,060	2,300	2,400	2,890	10,700	46,900	23,400	10,500	6,490	4,760
29	3,250	2,500	3,000	2,200	-	2,890	11,600	45,600	23,500	10,400	6,270	4,710
30	3,210	2,290	2,460	2,200	-	2,970	11,600	39,800	24,900	10,100	6,190	4,650
31	3,190	-	1,870	2,200	-	3,080	-	34,100	-	9,840	6,080	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	109,480	3,890	3,190	3,532	0.301	0.35	217,000
November	82,430	3,190	2,290	2,748	.234	.26	163,500
December	84,220	4,520	1,070	2,717	.231	.27	167,000
Calendar year 1936	3,710,040	53,700	1,070	10,140	.864	11.77	7,358,000
January	59,580	2,400	1,290	1,922	.164	.19	118,200
February	66,650	2,600	2,200	2,380	.203	.21	132,200
March	83,540	3,080	2,500	2,695	.230	.27	165,700
April	197,580	11,600	3,250	6,586	.561	.63	391,900
May	874,200	46,900	12,200	28,200	2.40	2.77	1,734,000
June	972,400	43,300	23,400	32,410	2.76	3.08	1,929,000
July	501,140	27,800	9,840	16,170	1.38	1.59	994,000
August	245,550	10,100	6,080	7,921	.675	.78	487,000
September	159,220	5,920	4,650	5,307	.452	.50	315,800
Water year 1936-37	3,435,990	46,900	1,070	9,414	.802	10.90	6,816,000

Kootenai River at Boom Camp, near Bonners Ferry, Idaho

Location.- Water-stage recorder, lat. 48°42'05", long. 116°14'30", in NW¼ sec. 29, T. 62 N., R. 2 E., 600 feet east of Boom Camp, 3½ miles upstream from Bonners Ferry, and 4 miles downstream from Moyie River. Zero of gage is 1,700.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Records available.- October 1927 to September 1937 in reports of Geological Survey; April 1925 to September 1927, in reports of Dominion Water and Power Bureau (Canada).

Extremes.- Maximum water-surface elevation during year, 1,768.16 feet May 29; minimum, 1,755.53 feet Dec. 9.
1927-37: Maximum water-surface elevation recorded, 1,776.58 feet June 18, 1933; minimum, that of Dec. 9, 1936.

Remarks.- Records excellent. Elevations affected by backwater from Kootenay Lake from about May 24 to July 4.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57.16	56.79	56.09	56.25	57.94	57.07	56.96	60.34	65.14	63.76	59.55	58.09
2	57.13	56.72	56.27	55.99	57.85	57.07	57.04	60.93	65.19	63.99	59.60	58.01
3	57.12	56.67	56.44	55.80	57.75	57.03	57.10	61.98	66.21	63.79	59.63	57.95
4	57.12	56.64	56.34	55.89	57.69	56.96	57.10	63.11	67.25	63.31	59.59	57.92
5	57.13	56.61	56.45	56.08	57.62	56.91	57.14	64.05	67.35	62.76	59.49	57.98
6	57.07	56.59	56.54	56.23	57.56	56.88	57.11	64.17	66.15	62.42	59.40	58.00
7	57.09	56.56	55.94	56.13	57.50	56.82	57.08	63.96	65.16	62.28	59.43	57.95
8	57.04	56.39	55.61	56.33	57.50	56.81	57.07	63.52	64.87	61.96	59.38	58.04
9	57.04	56.33	55.66	56.54	57.46	56.75	57.13	63.11	64.94	61.53	59.29	58.06
10	57.04	56.55	55.90	56.31	57.43	56.69	57.27	62.98	64.93	61.24	59.22	58.00
11	56.99	56.44	56.00	56.50	57.44	56.66	57.44	62.91	64.87	61.11	59.14	57.95
12	56.99	56.53	56.26	56.78	57.42	56.69	57.55	62.69	64.32	61.03	59.05	57.90
13	56.94	56.57	56.35	56.88	57.38	56.78	57.70	62.62	64.01	61.03	58.96	57.86
14	57.00	56.58	56.66	57.06	57.43	56.78	58.39	63.01	64.31	61.12	58.88	57.83
15	57.03	56.60	56.90	57.17	57.34	56.64	59.63	63.62	65.27	61.40	58.84	57.81
16	56.99	56.64	56.90	57.27	57.41	56.70	59.87	64.02	66.21	61.59	58.85	57.79
17	56.99	56.60	56.87	57.37	57.38	56.69	59.57	64.02	66.44	61.55	58.81	57.77
18	57.00	56.60	56.76	57.41	57.37	56.67	59.23	64.11	66.61	61.34	58.66	57.75
19	57.00	56.61	56.83	57.58	57.32	56.72	59.13	64.39	67.13	61.05	58.52	57.74
20	56.92	56.59	56.79	57.69	57.25	56.67	59.13	64.67	66.75	60.82	58.43	57.74
21	56.92	56.60	56.81	57.86	57.24	56.68	59.46	64.70	66.12	60.68	58.44	57.72
22	56.91	56.60	56.94	57.98	57.25	56.61	59.46	64.62	65.58	60.56	58.41	57.71
23	56.91	56.57	57.62	58.00	57.26	56.59	59.25	64.57	65.44	60.37	58.39	57.65
24	56.89	56.49	57.62	58.01	57.25	56.60	59.00	64.73	65.68	60.18	58.41	57.65
25	56.89	56.40	57.41	58.08	57.24	56.64	58.81	65.00	65.42	60.02	58.44	57.67
26	56.86	56.35	57.15	58.01	57.23	56.60	58.86	65.63	64.51	59.89	58.53	57.67
27	56.79	56.30	56.94	57.93	57.17	56.64	59.37	66.69	63.68	59.82	58.50	57.60
28	56.84	56.50	56.90	57.86	57.09	56.69	59.98	67.86	63.24	59.75	58.34	57.55
29	56.83	56.32	56.76	57.87	-	56.70	60.16	67.97	63.15	59.69	58.24	57.55
30	56.81	56.16	56.38	57.90	-	56.76	60.17	67.97	63.38	59.61	58.21	57.52
31	56.80	-	56.27	57.94	-	56.84	-	65.91	-	59.54	58.16	-

Note.-Add 1,700.00 feet to obtain elevation above mean sea level.

Kootenai River at Bonners Ferry, Idaho

Location.- Wire gage, lat. 48°42'00", long. 116°18'45", in NE¼ sec. 27, T. 62 N., R. 1 E., on highway bridge at Bonners Ferry. Zero of gage is 1,743.005 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Drainage area.- 13,000 square miles.

Records available.- October 1927 to September 1937. May to October 1904, at point three-quarters of a mile downstream. Gage heights collected by U. S. Weather Bureau May 1904 to September 1927.

Extremes.- Maximum daily discharge during year, 52,300 second-feet May 28; maximum water-surface elevation, 1,764.69 feet May 29; minimum discharge, 1,340 second-feet Dec. 9; minimum water-surface elevation, 1,741.19 feet Dec. 9.
1927-37: Maximum discharge, 99,800 second-feet June 18, 1933; maximum water-surface elevation, 1,774.98 feet June 19, 1933; minimum mean daily discharge, 1,300 second-feet, Feb. 8, 1936; minimum water-surface elevation, 1,741.14 feet Dec. 5, 1929.
Maximum water-surface elevation known, 1,777.2 feet in June 1894.

Remarks.- Records of discharge excellent except those for period of ice effect, Jan. 1 to Mar. 21, which were computed on basis of six discharge measurements, gage heights, weather records, and records for station at Leonia and other stations on Kootenai River and are fair. Gage-height records good. Discharge for period of backwater from Kootenay Lake, May 25 to July 4, obtained by slope computations; that for remainder of year, from rating for station at Bonners Camp. Discharge measurements are made at station near Bonners Ferry. No artificial diversion or regulation above station.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43.58	42.78	41.72	42.20	43.72	42.57	42.26	47.96	60.96	58.77	49.24	45.63
2	43.48	42.69	41.69	42.59	43.75	42.50	42.44	48.88	60.86	59.10	49.19	45.48
3	43.49	42.62	41.71	42.72	43.66	42.46	42.48	50.78	62.30	58.88	49.14	45.39
4	43.46	42.62	42.02	43.15	43.42	42.46	42.50	53.10	63.71	58.18	49.00	45.32
5	43.50	42.55	41.98	43.24	43.20	42.42	42.54	55.41	64.14	57.21	48.78	45.34
6	43.42	42.50	42.02	43.82	43.73	42.46	42.56	56.26	62.74	56.54	48.60	45.38
7	43.42	42.42	41.92	43.96	43.54	42.47	42.51	56.16	61.43	56.15	48.55	45.32
8	43.35	42.16	41.41	44.19	43.44	42.68	42.48	55.48	60.84	55.56	48.44	45.38
9	43.34	42.00	41.21	44.30	43.51	42.61	42.56	54.78	60.86	54.79	48.22	45.42
10	43.33	42.20	41.43	44.47	43.47	42.42	42.73	54.43	60.88	54.12	48.02	45.33
11	43.26	42.16	41.54	44.51	43.40	42.38	42.98	54.46	60.88	53.78	47.85	45.28
12	43.22	42.21	41.51	44.60	43.33	42.44	43.10	54.14	60.18	53.47	47.73	45.22
13	43.18	42.38	41.84	44.69	43.22	42.49	43.30	53.94	59.52	53.26	47.52	45.15
14	43.22	42.34	42.29	44.64	43.18	42.42	44.34	54.62	59.78	53.21	47.36	45.10
15	43.26	42.28	42.62	44.68	43.16	42.31	45.78	55.93	60.82	53.48	47.28	45.10
16	43.22	42.26	42.57	44.78	43.14	42.36	47.02	56.90	62.30	53.66	47.22	45.06
17	43.22	42.40	42.49	44.78	43.04	42.27	46.41	57.12	62.82	53.58	47.16	45.03
18	43.18	42.37	42.40	44.75	42.96	42.30	45.94	57.33	63.10	53.20	47.02	44.98
19	43.16	42.39	42.39	44.68	43.00	42.31	45.71	57.92	63.84	52.72	46.80	44.98
20	43.07	42.41	42.38	44.72	42.95	42.26	45.70	58.56	63.64	52.26	46.56	44.99
21	43.05	42.39	42.32	44.80	42.88	42.24	46.12	58.80	62.94	51.86	46.44	44.93
22	43.00	42.36	42.51	44.78	42.72	42.11	46.42	58.82	62.12	51.58	46.37	44.97
23	43.00	42.33	43.39	44.76	42.68	42.10	46.16	58.81	61.80	51.28	46.25	44.96
24	42.96	42.22	43.46	44.76	42.62	42.06	45.76	59.08	62.08	50.88	46.26	44.94
25	42.95	41.90	43.26	44.81	42.66	42.04	45.48	59.63	61.87	50.57	46.24	44.94
26	42.90	41.65	42.90	44.77	42.64	42.08	45.46	60.75	60.74	50.34	46.28	44.94
27	42.87	41.40	42.70	44.70	42.64	42.07	46.06	62.28	59.44	50.08	46.21	44.92
28	42.88	41.57	42.42	44.40	42.60	42.10	47.12	64.13	58.58	49.84	46.14	44.86
29	42.83	41.70	42.22	44.09	-	42.10	47.61	64.56	58.20	49.67	45.98	44.82
30	42.82	41.74	42.48	43.88	-	42.14	47.70	63.56	58.16	49.51	45.86	44.78
31	42.80	-	42.26	43.69	-	42.20	-	62.10	-	49.32	45.79	-

Note.- Add 1,700 feet to obtain elevation above mean sea level.

Discharge, in second-feet, of Kootenai River at Bonners Ferry, Idaho, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,020	3,280	2,120	2,000	2,300	2,600	3,610	13,300	36,200	28,900	10,300	6,090
2	3,950	3,160	2,390	1,600	2,300	2,600	3,770	15,600	36,700	30,200	10,400	5,890
3	3,930	3,070	2,670	1,500	2,400	2,600	3,890	20,200	42,400	29,100	10,500	5,750
4	3,930	3,010	2,500	1,450	2,400	2,600	3,890	25,900	47,900	26,700	10,400	5,680
5	3,950	2,960	2,680	1,400	2,400	2,600	3,970	31,200	47,300	24,000	10,100	5,820
6	3,830	2,920	2,840	1,400	2,400	2,700	3,910	32,000	40,500	22,300	9,770	5,870
7	3,870	2,870	1,900	1,400	2,400	2,700	3,850	30,700	35,600	21,600	9,870	5,750
8	3,770	2,580	1,440	1,400	2,300	2,700	3,830	28,100	34,500	20,100	9,710	5,970
9	3,770	2,490	1,510	1,500	2,300	2,700	3,950	25,900	35,000	18,100	9,420	6,010
10	3,770	2,860	1,840	1,700	2,400	2,700	4,250	25,200	34,800	16,900	9,200	5,870
11	3,670	2,670	1,980	1,900	2,450	2,700	4,620	24,800	34,500	16,300	8,950	5,750
12	3,670	2,820	2,380	2,100	2,500	2,700	4,860	23,700	31,500	16,000	8,680	5,630
13	3,570	2,890	2,520	2,200	2,600	2,700	5,210	23,300	30,100	16,000	8,410	5,540
14	3,690	2,910	3,050	2,200	2,700	2,700	6,980	25,300	31,700	16,300	8,170	5,470
15	3,750	2,940	3,490	2,200	2,700	2,850	10,800	28,700	37,200	17,600	8,060	5,420
16	3,670	3,010	3,490	2,200	2,700	2,850	11,600	31,100	42,200	18,400	8,080	5,380
17	3,670	2,940	3,430	2,200	2,700	2,850	10,600	31,100	43,000	18,200	7,970	5,330
18	3,690	2,940	3,230	2,200	2,650	2,950	9,470	31,600	43,800	17,300	7,550	5,280
19	3,690	2,960	3,360	2,200	2,600	2,950	9,150	33,300	46,100	16,000	7,170	5,260
20	3,530	2,920	3,280	2,200	2,500	2,950	9,150	35,000	43,300	15,100	6,940	5,260
21	3,530	2,940	3,320	2,200	2,450	2,950	10,200	35,200	40,000	14,500	6,960	5,220
22	3,510	2,940	3,570	2,200	2,450	2,960	10,200	34,700	37,500	14,000	6,890	5,190
23	3,510	2,890	5,030	2,300	2,450	2,920	9,530	34,400	37,000	13,300	6,830	5,060
24	3,470	2,750	5,030	2,400	2,450	2,940	8,750	35,300	38,400	12,500	6,890	5,060
25	3,470	2,600	4,550	2,450	2,500	3,010	8,180	35,900	36,700	11,900	6,960	5,100
26	3,410	2,520	4,000	2,500	2,500	2,940	8,330	39,800	32,100	11,400	7,200	5,100
27	3,280	2,440	3,570	2,500	2,500	3,010	9,910	46,100	28,300	11,200	7,120	4,940
28	3,380	2,770	3,490	2,400	2,500	3,100	12,000	52,300	26,300	10,900	6,700	4,830
29	3,360	2,470	3,230	2,300	-	3,120	12,600	51,800	25,900	10,700	6,450	4,830
30	3,320	2,220	2,570	2,300	-	3,230	12,700	46,600	27,100	10,500	6,380	4,760
31	3,300	-	2,390	2,300	-	3,380	-	40,200	-	10,200	6,250	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	112,930	4,020	3,280	3,643	0.280	0.32	224,000
November	84,740	3,280	2,220	2,825	.217	.24	168,100
December	92,850	5,030	1,440	2,995	.230	.27	184,200
Calendar year 1936	3,999,520	55,700	1,300	10,930	.841	11.44	7,934,000
January	62,800	2,500	1,400	2,026	.156	.18	124,600
February	69,500	2,700	2,300	2,482	.191	.20	137,900
March	88,260	3,380	2,600	2,847	.219	.25	175,100
April	223,760	12,700	3,610	7,459	.574	.64	443,800
May	988,300	52,300	13,300	31,880	2.45	2.82	1,960,000
June	1,103,600	47,900	25,900	36,790	2.83	3.16	2,189,000
July	536,200	30,200	10,200	17,300	1.33	1.53	1,064,000
August	254,280	10,500	6,250	8,203	.631	.73	504,400
September	163,110	6,090	4,760	5,437	.418	.47	323,500
Water year 1936-37	3,780,330	52,300	1,400	10,360	.797	10.81	7,499,000

Kootenai River near Bonners Ferry, Idaho

Location.- Water-stage recorder, lat. 48°41'55", long. 116°20'40", in NW¼ sec. 28, T. 62 N., R. 1 E., 1.6 miles downstream from highway bridge at Bonners Ferry. Zero of gage is 1,700.00 feet above mean sea level, U. S. Coast and Geodetic Survey datum.

Drainage area.- 13,000 square miles.

Records available.- May 1928 to September 1937.

Extremes.- Maximum water-surface elevation during year, 1,764.07 feet May 29; minimum, 1,740.66 feet Dec. 9.
1928-37: Maximum water-surface elevation, 1,774.17 feet June 20, 1933; minimum, 1,740.31 feet Feb. 9, 1936.

Remarks.- Records excellent except those for May 7-12, 17-20, 23, 24, May 30 to June 3, which are good. Discharge for Nov. 27, 28 computed on basis of records for stations at Klockmann Ranch and near Copeland. Elevations affected by backwater from Kootenay Lake.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42.85	41.95	40.96	41.07	41.24	41.52	41.22	47.18	60.51	58.38	48.92	45.20
2	42.80	41.86	40.97	41.01	41.33	41.52	41.25	48.13	60.38	58.70	48.88	45.05
3	42.77	41.83	40.98	40.94	41.38	41.50	41.30	49.99	61.69	58.52	48.80	44.94
4	42.74	41.81	41.09	41.01	41.41	41.51	41.30	52.36	63.12	57.82	48.64	44.88
5	42.83	41.77	41.06	40.86	41.39	41.52	41.32	54.55	63.60	56.91	48.42	44.90
6	42.72	41.74	41.03	40.86	41.44	41.57	41.37	55.51	62.38	56.25	48.24	45.00
7	42.71	41.70	40.98	40.80	41.44	41.61	41.35	55.42	61.06	55.86	48.18	44.92
8	42.66	41.56	40.78	40.73	41.47	41.62	41.34	54.76	60.45	55.27	48.05	44.95
9	42.64	41.50	40.72	40.78	41.40	41.60	41.36	54.14	60.41	54.49	47.87	44.95
10	42.60	41.55	40.79	40.89	41.42	41.59	41.44	53.80	60.46	53.88	47.69	44.88
11	42.51	41.54	40.78	40.89	41.47	41.58	41.76	53.80	60.48	53.50	47.49	44.83
12	42.50	41.57	40.76	40.88	41.53	41.61	41.90	53.52	59.81	53.20	47.34	44.74
13	42.44	41.59	40.97	40.98	41.53	41.57	42.12	53.54	59.20	52.98	47.11	44.69
14	42.47	41.56	41.20	40.92	41.61	41.56	43.08	54.08	59.40	52.94	46.94	44.64
15	42.52	41.53	41.51	41.09	41.51	41.49	44.78	55.39	60.40	53.15	46.90	44.61
16	42.46	41.53	41.51	41.11	41.56	41.45	45.91	56.38	61.80	53.33	46.86	44.57
17	42.42	41.55	41.45	41.15	41.54	41.43	45.52	56.63	62.34	53.25	46.74	44.54
18	42.41	41.52	41.39	41.11	41.60	41.41	44.96	56.84	62.62	52.90	46.62	44.54
19	42.45	41.51	41.40	41.09	41.61	41.35	44.73	57.40	63.38	52.38	46.45	44.54
20	42.33	41.58	41.38	41.07	41.56	41.29	44.70	58.03	63.18	51.91	46.17	44.50
21	42.27	41.52	41.31	41.07	41.58	41.24	45.18	58.28	62.49	51.54	46.04	44.41
22	42.22	41.53	41.39	41.10	41.63	41.19	45.46	58.30	61.74	51.30	45.95	44.51
23	42.18	41.48	42.09	41.19	41.62	41.12	45.24	58.33	61.40	50.97	45.83	44.54
24	42.15	41.43	42.37	41.15	41.62	41.08	44.88	58.58	61.66	50.61	45.86	44.51
25	42.13	41.32	42.10	41.19	41.61	41.09	44.62	59.14	61.47	50.30	45.82	44.52
26	42.11	41.23	41.87	41.26	41.61	41.05	44.61	60.21	60.38	50.02	45.84	44.51
27	42.04	41.08	41.76	41.30	41.59	41.03	45.21	61.76	59.13	49.78	45.79	44.48
28	42.06	41.07	41.52	41.26	41.54	41.05	46.23	63.47	58.28	49.55	45.72	44.46
29	42.00	41.07	41.36	41.24	-	41.04	46.81	63.96	57.90	49.33	45.53	44.38
30	41.99	41.03	41.42	41.20	-	41.04	46.93	63.04	57.95	49.15	45.43	44.33
31	42.01	-	41.24	41.17	-	41.08	-	61.62	-	49.01	45.38	-

Note.- Add 1,700 feet to obtain elevation above mean sea level.

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Kootenai River at Klockmann ranch, near Bonners Ferry, Idaho

Location.- Water-stage recorder, lat. 48°47'40", long. 116°22'50", in SE¼ sec. 19, T. 63 N., R. 1 E., at Klockmann ranch, 800 feet south of viaduct on Kootenai Valley Branch of Great Northern Railway and 8 miles north of Bonners Ferry. Zero of gage is 1,700.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Records available.- May 1928 to September 1937.

Extremes.- Maximum water-surface elevation during year, 1,762.13 feet May 29; minimum, 1,740.42 feet Dec. 12.
1928-37: Maximum water-surface elevation, 1,771.24 feet June 20, 1933; minimum, 1,739.99 feet Jan. 2, 1931.

Remarks.- Records good, except those for Jan. 6-18, 20-29, Jan. 31 to Feb. 18, June 13, 14 which were computed on basis of elevations for stations near Bonners Ferry and Copeland, and are fair. Elevations affected by backwater from Kootenay Lake.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42.43	41.59	40.73	40.85	40.75	40.99	40.67	45.72	59.12	57.14	48.22	44.63
2	42.40	41.54	40.72	40.81	40.85	40.98	40.69	46.53	58.99	57.41	48.13	44.49
3	42.37	41.52	40.70	40.75	40.85	40.95	40.71	48.27	60.09	57.26	48.03	44.40
4	42.36	41.50	40.75	40.79	40.90	40.95	40.71	50.53	61.34	56.66	47.87	44.35
5	42.41	41.46	40.74	40.66	40.90	40.94	40.72	52.75	61.85	55.87	47.67	44.32
6	42.32	41.44	40.66	40.66	40.95	40.96	40.78	53.74	60.87	55.26	47.50	44.44
7	42.31	41.40	40.63	40.62	40.95	40.98	40.75	53.71	59.69	54.88	47.43	44.36
8	42.27	41.31	40.56	40.59	41.00	40.98	40.74	53.18	59.12	54.34	47.29	44.37
9	42.25	41.25	40.52	40.62	40.95	40.97	40.77	52.59	59.06	53.65	47.13	44.37
10	42.21	41.24	40.53	40.65	40.95	40.97	40.78	52.29	59.09	53.09	46.96	44.32
11	42.15	41.23	40.50	40.65	41.00	40.97	41.03	52.31	59.10	52.67	46.77	44.26
12	42.12	41.24	40.46	40.62	41.05	40.98	41.12	52.09	58.53	52.37	46.63	44.20
13	42.07	41.23	40.56	40.65	41.05	40.95	41.31	51.97	58.00	52.16	46.43	44.16
14	42.10	41.22	40.70	40.64	41.15	40.94	41.99	52.51	58.10	52.07	46.25	44.11
15	42.12	41.20	40.91	40.75	41.05	40.92	43.28	53.70	58.93	52.19	46.22	44.09
16	42.07	41.19	40.92	40.76	41.10	40.90	44.41	54.59	60.20	52.31	46.15	44.05
17	42.03	41.20	40.89	40.78	41.05	40.90	44.17	54.90	60.73	52.22	46.06	44.04
18	42.02	41.17	40.88	40.74	41.10	40.90	43.73	55.11	61.01	51.91	45.97	44.03
19	42.07	41.16	40.94	40.68	41.13	40.86	43.55	55.72	61.71	51.47	45.84	44.03
20	41.95	41.25	40.96	40.66	41.09	40.83	43.53	56.28	61.61	51.04	45.57	43.99
21	41.88	41.17	40.91	40.66	41.11	40.79	43.92	56.56	61.02	50.70	45.42	43.93
22	41.82	41.18	40.94	40.68	41.16	40.75	44.19	56.62	60.33	50.47	45.35	44.02
23	41.79	41.15	41.37	40.74	41.15	40.70	44.05	56.66	60.01	50.18	45.23	44.05
24	41.76	41.11	41.65	40.75	41.14	40.67	43.77	56.91	60.19	49.85	45.23	44.03
25	41.75	41.04	41.47	40.75	41.11	40.68	43.58	57.44	60.05	49.56	45.18	44.03
26	41.74	40.98	41.34	40.80	41.09	40.65	43.57	58.42	59.13	49.30	45.17	44.00
27	41.68	40.87	41.28	40.80	41.06	40.61	44.01	59.83	58.01	49.07	45.15	44.01
28	41.68	40.87	41.13	40.75	41.02	40.61	44.87	61.48	57.21	48.83	45.09	44.00
29	41.64	40.82	40.99	40.75	-	40.59	45.38	62.02	56.84	48.63	44.93	43.92
30	41.63	40.77	41.04	40.74	-	40.58	45.51	61.33	56.84	48.43	44.83	43.87
31	41.63	-	40.94	40.73	-	40.58	-	60.11	-	48.30	44.77	-

Note.- Add 1,700 feet to obtain elevation above mean sea level.

Kootenai River near Copeland, Idaho
(International gaging station)

Location.- Water-stage recorder, lat. 48°54'45", long. 116°25'00", in NW¼NW¼SW¼ sec. 12, T. 64 N., R. 1 W., at Andrews ranch, three-quarters of a mile below Mission Creek and 1½ miles northwest of Copeland. Zero of gage is 1,700.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Drainage area.- 13,400 square miles.

Records available.- October 1927 to May 1929 (gage heights only), May 1929 to September 1937. Gage-height records collected by Dominion Water and Power Bureau, Department of Mines and Resources, Canada, April 1925 to September 1927.

Extremes.- Maximum daily discharge during year, 52,300 second-feet May 29; maximum water-surface elevation, 1,759.38 feet June 5; minimum daily discharge, 1,410 second-feet Jan. 8 (during ice period); minimum water-surface elevation, 1,740.34 feet Dec. 12.

1929-37: Maximum daily discharge, 90,500 second-feet June 19, 1933; minimum, 1,350 second-feet Feb. 8, 1936.

1929-37: Maximum water-surface elevation, 1,767.98 feet June 20, 1933; minimum, 1,739.59 feet Jan. 25, 1930.

Remarks.- Records of discharge good except those for periods of ice effect, Nov. 1 to Dec. 22, Dec. 28 to Mar. 31, which were computed on basis of six discharge measurements and records for station at Bonners Ferry and are fair. Records of water-surface elevations excellent except those for Jan. 20-22, Mar. 12-14, which are fair. Elevations affected by backwater from Kootenay Lake. Discharge computed from a mean elevation-fall-discharge diagram on basis of fall between station at Klockmann ranch near Bonners Ferry and that at Port Hill and discharge measurements made at station near Copeland. This is one of the international gaging stations maintained by the United States under agreement with Canada. The records of discharge have not as yet been formally approved by the Dominion Water and Power Bureau, Department of Mines and Resources, Canada.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42.29	41.47	40.67	40.85	40.66	40.85	40.45	44.37	57.13	55.60	47.64	44.29
2	42.26	41.43	40.66	40.81	40.76	40.84	40.46	44.97	57.02	55.78	47.53	44.19
3	42.23	41.42	40.61	40.75	40.76	40.81	40.46	46.24	57.84	55.66	47.43	44.10
4	42.23	41.40	40.63	40.75	40.79	40.81	40.46	48.09	58.80	55.20	47.24	44.04
5	42.27	41.38	40.61	40.65	40.77	40.79	40.47	50.02	59.29	54.56	47.07	44.02
6	42.19	41.36	40.56	40.65	40.81	40.79	40.51	51.01	58.70	54.05	46.91	44.10
7	42.17	41.31	40.57	40.60	40.83	40.80	40.49	51.10	57.80	53.70	46.84	44.05
8	42.13	41.24	40.51	40.56	40.87	40.79	40.48	50.79	57.32	53.25	46.69	44.05
9	42.12	41.19	40.47	40.58	40.81	40.78	40.49	50.38	57.23	52.71	46.55	44.03
10	42.06	41.17	40.45	40.61	40.82	40.78	40.50	50.18	57.23	52.20	46.38	44.00
11	42.02	41.16	40.40	40.59	40.88	40.77	40.67	50.24	57.26	51.84	46.22	43.97
12	42.00	41.16	40.38	40.56	40.93	40.73	40.70	50.14	56.83	51.56	46.09	43.92
13	41.95	41.14	40.43	40.58	40.92	40.70	40.84	50.07	56.36	51.34	45.93	43.89
14	41.98	41.15	40.50	40.57	40.97	40.70	41.26	50.51	56.41	51.22	45.78	43.86
15	42.00	41.12	40.65	40.65	40.89	40.68	42.05	51.49	56.91	51.22	45.74	43.83
16	41.96	41.10	40.65	40.65	40.94	40.66	42.94	52.28	57.86	51.23	45.67	43.80
17	41.92	41.11	40.63	40.65	40.92	40.65	42.87	52.60	58.40	51.11	45.58	43.80
18	41.91	41.08	40.66	40.63	40.98	40.63	42.62	52.85	58.65	50.86	45.52	43.79
19	41.94	41.08	40.71	40.60	41.00	40.61	42.53	53.38	59.24	50.52	45.43	43.80
20	41.84	41.15	40.75	40.58	40.96	40.58	42.55	53.88	59.28	50.17	45.19	43.75
21	41.76	41.07	40.72	40.57	40.99	40.54	42.83	54.17	58.86	49.86	45.05	43.70
22	41.73	41.09	40.76	40.60	41.03	40.51	43.06	54.30	58.36	49.66	44.97	43.80
23	41.68	41.04	41.01	40.65	41.01	40.49	43.03	54.38	58.09	49.41	44.85	43.85
24	41.66	41.02	41.23	40.64	41.00	40.48	42.86	54.61	58.18	49.12	44.84	43.82
25	41.64	40.97	41.15	40.63	40.96	40.47	42.77	55.10	58.10	48.88	44.77	43.82
26	41.63	40.93	41.10	40.69	40.94	40.45	42.78	55.96	57.44	48.67	44.75	43.80
27	41.59	40.84	41.09	40.67	40.92	40.44	43.04	57.14	56.55	48.45	44.73	43.81
28	41.57	40.80	41.02	40.64	40.88	40.44	43.60	58.51	55.89	48.22	44.71	43.80
29	41.54	40.76	40.93	40.67	-	40.42	44.03	59.13	55.52	48.02	44.56	43.72
30	41.53	40.71	40.98	40.64	-	40.41	44.19	58.75	55.42	47.87	44.47	43.68
31	41.52	-	40.90	40.63	-	40.41	-	57.88	-	47.74	44.41	-

Note.- Add 1,700.00 feet to obtain elevations above mean sea level.

Discharge, in second-feet, of Kootenai River near Copeland, Idaho, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,030	3,350	2,160	2,090	2,290	2,660	3,940	13,500	38,300	29,600	10,200	6,240
2	3,990	3,230	2,440	1,690	2,300	2,660	4,000	15,300	37,600	31,000	10,400	5,900
3	3,980	3,140	2,710	1,590	2,400	2,660	4,090	19,400	41,800	30,700	10,600	5,810
4	3,920	3,080	2,540	1,540	2,440	2,660	4,090	24,900	47,200	28,400	10,600	5,800
5	4,050	3,040	2,720	1,480	2,440	2,640	4,100	30,700	48,600	25,600	10,200	5,830
6	3,850	3,000	2,880	1,460	2,440	2,740	4,160	33,100	43,400	23,600	10,000	6,150
7	3,940	2,940	1,990	1,460	2,440	2,770	4,150	32,400	38,000	22,800	9,970	5,900
8	3,920	2,650	1,530	1,410	2,370	2,780	4,050	30,200	36,000	21,500	9,890	5,950
9	3,880	2,560	1,540	1,520	2,370	2,780	4,200	27,900	36,000	19,100	9,600	6,110
10	3,900	2,900	1,870	1,720	2,410	2,790	4,210	26,600	36,300	17,800	9,500	5,940
11	3,730	2,710	2,020	1,930	2,460	2,810	4,840	26,500	36,400	16,900	9,080	5,750
12	3,720	2,860	2,420	2,120	2,520	2,820	5,090	25,400	34,000	16,300	8,940	5,640
13	3,650	2,930	2,440	2,220	2,620	2,820	5,490	24,700	32,100	16,100	8,610	5,570
14	3,760	2,960	2,970	2,220	2,800	2,820	7,210	26,200	32,800	16,400	8,160	5,500
15	3,780	2,990	3,420	2,220	2,740	2,960	10,400	29,800	37,000	17,700	8,280	5,500
16	3,700	3,060	3,550	2,250	2,740	2,970	12,700	32,300	42,600	18,800	8,290	5,390
17	3,700	2,990	3,490	2,240	2,740	2,980	11,700	32,900	44,000	19,000	8,130	5,340
18	3,690	2,990	3,290	2,240	2,690	3,090	10,500	33,000	44,800	18,000	7,910	5,330
19	3,860	3,010	3,440	2,240	2,660	3,080	9,880	34,600	47,400	16,700	7,640	5,330
20	3,670	2,970	3,400	2,240	2,560	3,080	9,690	35,900	46,100	15,500	7,110	5,260
21	3,640	2,990	3,450	2,240	2,480	3,080	10,500	36,500	43,200	14,900	7,070	5,180
22	3,520	2,990	3,510	2,210	2,480	3,090	11,000	36,100	39,800	14,400	7,110	5,180
23	3,550	2,990	4,950	2,320	2,500	3,050	10,400	35,800	38,500	13,600	6,910	5,040
24	3,540	2,850	5,450	2,420	2,500	3,040	9,510	36,400	39,700	12,800	7,010	5,030
25	3,590	2,700	4,870	2,470	2,560	3,130	8,890	37,700	39,200	12,200	7,130	5,090
26	3,590	2,610	4,250	2,520	2,560	3,060	8,780	40,500	35,100	11,700	7,240	5,020
27	3,410	2,510	4,000	2,560	2,580	3,140	9,990	45,200	30,600	11,500	7,230	5,020
28	3,460	2,840	3,700	2,460	2,580	3,230	12,100	51,400	28,000	11,000	6,950	5,020
29	3,400	2,540	3,360	2,360	-	3,260	13,100	52,300	27,200	10,900	6,660	5,000
30	3,400	2,290	2,710	2,360	-	3,460	13,200	48,300	27,900	10,400	6,540	4,830
31	3,490	-	2,520	2,340	-	3,570	-	42,700	-	10,300	6,510	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	115,310	4,050	3,400	3,720	0.278	0.32	228,700
November	86,670	3,350	2,290	2,889	.216	.24	171,900
December	95,590	5,450	1,530	3,084	.230	.27	189,600
Calendar year 1936	4,116,840	57,700	1,350	11,250	.840	11.44	8,166,200
January	64,140	2,560	1,410	2,069	.154	.18	127,200
February	70,670	2,800	2,290	2,524	.188	.20	140,200
March	91,680	3,570	2,640	2,957	.221	.25	181,800
April	235,960	13,200	3,940	7,865	.587	.65	468,000
May	1,018,200	52,300	13,500	32,850	2.45	2.82	2,020,000
June	1,149,600	48,600	27,200	38,320	2.86	3.19	2,280,000
July	555,200	31,000	10,300	17,910	1.34	1.54	1,101,000
August	259,470	10,600	6,510	8,370	.625	.72	514,700
September	164,650	6,240	4,830	5,488	.410	.46	326,600
Water year 1936-37	3,907,140	52,300	1,410	10,700	.799	10.84	7,749,700

Kootenai River at Lucas Creek, near Port Hill, Idaho

Location.- Staff gage, lat. 48°57'25", long. 116°28'55", in sec. 28, T. 65 N., R. 1 W., at mouth of Lucas Creek, 3 miles southeast of Port Hill. Zero of gage is 1,700.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Records available.- May 1928 to September 1930, May 1932 to July 1935, May to August 1937.

Extremes.- Maximum water-surface elevation observed during year, 1,758.15 feet June 19; minimum occurred during period of no record.
1928-30, 1932-35, 1937: Maximum water-surface elevation observed, 1,765.78 feet June 21, 1933; minimum occurred during period of no record.

Remarks.- Records reliable. None obtained for July 2, 1935, to May 20, 1937, Aug. 16 to Sept. 30, 1937. Elevation affected by backwater from Kootenay Lake.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	56.13	54.95	47.46	
2								-	56.09	55.08	47.34	
3								-	56.82	54.97	47.21	
4								-	57.58	54.56	47.02	
5								-	58.09	54.05	46.88	
6								-	57.61	53.58	46.70	
7								-	56.88	53.25	46.65	
8								-	56.47	52.84	46.48	
9								-	56.39	52.34	46.37	
10								-	56.38	51.89	46.21	
11								-	56.41	51.53	46.08	
12								-	56.04	51.28	45.95	
13								-	55.61	51.07	45.79	
14								-	55.66	50.90	45.63	
15								-	56.04	50.86	45.61	
16								-	56.82	50.82	-	
17								-	57.30	50.69	-	
18								-	57.51	50.49	-	
19								-	58.07	50.16	-	
20								-	58.11	49.84	-	
21								53.08	57.80	49.58	-	
22								53.23	57.39	49.40	-	
23								53.35	57.17	49.14	-	
24								53.57	57.24	48.88	-	
25								54.03	57.17	48.68	-	
26								54.83	56.56	48.48	-	
27								55.90	55.86	48.27	-	
28								57.07	55.29	48.04	-	
29								57.70	54.94	47.81	-	
30								57.42	54.83	47.66	-	
31								56.72	-	47.55	-	

Note.- Add 1,700 feet to obtain elevation above mean sea level.

Kootenai River at Port Hill, Idaho
(International gaging station)

Location.- Water-stage recorder, lat. 49°00'00", long. 116°30'10", in SW¼ sec. 8, T. 65 N., R. 1 W., 300 feet south of international boundary at Port Hill. Zero of gage is 1,700.00 feet above mean sea level, U. S. Coast and Geodetic Survey datum, and 1,699.80 feet above mean sea level, datum of Geodetic Survey of Canada (adjustment of 1928).

Drainage area.- 13,700 square miles.

Records available.- May to July, 1904, and October 1927 to April 1928 (gage heights only), April 1928 to September 1937. Gage-height records collected by Dominion Water and Power Bureau, Department of Mines and Resources, Canada, October 1924 to September 1927.

Extremes.- Maximum daily discharge during year, 54,300 second-feet May 29; maximum water-surface elevation, 1,757.05 feet June 20; minimum daily discharge, 1,430 second-feet Jan. 8; minimum water-surface elevation, 1,740.11 feet Mar. 31.

1928-37: Maximum daily discharge, 93,200 second-feet June 19, 1933; minimum daily discharge, 1,380 second-feet Feb. 8, 1936; maximum water-surface elevation, 1,763.92 feet June 20, 1933; minimum, 1,739.32 feet Jan. 28, 1930.

Maximum elevation known, 1,772.7 feet June 1894.

Remarks.- Records of discharge good except those for Nov. 1 to Dec. 22, Dec. 28 to Mar. 31, which are fair. Records of water-surface elevations excellent. Records of discharge include flow of Boundary Creek and represent entire flow passing international boundary. Elevations affected by backwater from Kootenay Lake. Daily discharge records obtained by adding tributary inflow to discharge for station near Copeland. Dike of the Reclamation Farm and the Forest Service roadway dike (south side of Boundary Creek) continued intact throughout the year.

This is one of the international gaging stations maintained by the United States under agreement with Canada. The records of discharge have not as yet been formally approved by the Dominion Water and Power Bureau, Department of Mines and Resources, Canada.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42.05	41.24	40.44	40.65	40.46	40.62	40.18	43.47	55.20	54.29	47.20	43.98
2	42.03	41.21	40.44	40.62	40.55	40.61	40.19	43.93	55.18	54.37	47.06	43.89
3	42.00	41.19	40.39	40.58	40.56	40.59	40.19	44.93	55.80	54.26	46.91	43.81
4	42.00	41.19	40.39	40.56	40.59	40.56	40.19	46.38	56.44	53.93	46.72	43.76
5	42.03	41.16	40.38	40.50	40.58	40.54	40.20	47.91	56.87	53.45	46.56	43.72
6	41.97	41.13	40.33	40.47	40.61	40.55	40.25	48.74	56.56	53.05	46.44	43.79
7	41.94	41.09	40.36	40.42	40.62	40.54	40.22	48.90	56.00	52.73	46.37	43.75
8	41.90	41.03	40.31	40.37	40.64	40.53	40.23	48.77	55.65	52.35	46.22	43.75
9	41.89	40.98	40.27	40.36	40.59	40.51	40.23	48.58	55.57	51.90	46.10	43.72
10	41.84	40.96	40.24	40.39	40.60	40.51	40.24	48.48	55.55	51.47	45.93	43.70
11	41.81	40.95	40.18	40.41	40.63	40.50	40.36	48.57	55.55	51.13	45.80	43.67
12	41.76	40.94	40.16	40.38	40.68	40.48	40.40	48.55	55.26	50.88	45.67	43.63
13	41.74	40.94	40.20	40.40	40.68	40.44	40.51	48.56	54.92	50.68	45.51	43.60
14	41.75	40.93	40.27	40.36	40.73	40.42	40.82	48.95	54.93	50.51	45.39	43.56
15	41.77	40.92	40.38	40.43	40.67	40.42	41.39	49.69	55.20	50.42	45.34	43.54
16	41.73	40.88	40.38	40.44	40.70	40.40	42.06	50.28	55.81	50.37	45.26	43.52
17	41.69	40.90	40.37	40.43	40.70	40.40	42.06	50.58	56.26	50.22	45.19	43.52
18	41.68	40.87	40.39	40.41	40.76	40.39	41.91	50.85	56.47	50.02	45.13	43.51
19	41.70	40.86	40.45	40.39	40.78	40.36	41.89	51.35	56.92	49.76	45.04	43.51
20	41.61	40.91	40.49	40.36	40.75	40.32	41.92	51.80	57.03	49.47	44.84	43.48
21	41.54	40.84	40.45	40.36	40.78	40.29	42.16	52.07	56.80	49.20	44.69	43.43
22	41.50	40.87	40.50	40.38	40.81	40.25	42.34	52.25	56.50	49.02	44.60	43.53
23	41.46	40.83	40.70	40.42	40.79	40.22	42.35	52.39	56.32	48.80	44.51	43.59
24	41.43	40.80	40.89	40.41	40.77	40.21	42.27	52.59	56.35	48.57	44.49	43.57
25	41.41	40.74	40.83	40.40	40.73	40.20	42.21	53.03	56.28	48.35	44.41	43.56
26	41.40	40.71	40.83	40.47	40.71	40.19	42.23	53.77	55.82	48.15	44.38	43.54
27	41.37	40.63	40.82	40.44	40.69	40.17	42.42	54.70	55.20	47.93	44.36	43.55
28	41.36	40.58	40.77	40.41	40.65	40.17	42.83	55.74	54.68	47.73	44.35	43.54
29	41.33	40.55	40.72	40.45	-	40.14	43.17	56.32	54.36	47.54	44.23	43.46
30	41.32	40.49	40.76	40.43	-	40.12	43.30	56.18	54.23	47.41	44.14	43.44
31	41.30	-	40.69	40.42	-	40.12	-	55.65	-	47.28	44.08	-

Note.- Add 1,700.00 feet to obtain elevations above mean sea level.

Discharge, in second-feet, of Kootenai River at Port Hill, Idaho, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,060	3,370	2,180	2,120	2,320	2,690	4,000	13,900	40,500	30,200	10,300	6,290
2	4,020	3,250	2,460	1,720	2,330	2,690	4,060	15,900	40,200	31,600	10,600	5,950
3	4,010	3,160	2,730	1,620	2,430	2,690	4,150	20,300	44,400	31,200	10,700	5,860
4	3,950	3,110	2,560	1,570	2,470	2,690	4,150	26,200	49,100	28,800	10,700	5,850
5	4,080	3,070	2,740	1,510	2,470	2,670	4,160	32,000	50,200	26,000	10,300	5,970
6	3,880	3,030	2,900	1,480	2,470	2,770	4,220	34,100	45,000	24,000	10,100	6,290
7	3,970	2,970	2,010	1,480	2,470	2,800	4,210	33,300	39,600	23,100	10,100	5,990
8	3,950	2,680	1,550	1,430	2,400	2,810	4,110	31,100	37,500	21,800	9,980	6,030
9	3,910	2,580	1,560	1,550	2,400	2,810	4,270	28,800	37,500	19,400	9,680	6,180
10	3,930	2,920	1,890	1,760	2,440	2,830	4,300	27,600	38,000	18,100	9,580	6,000
11	3,760	2,730	2,050	1,970	2,490	2,850	4,940	27,400	38,100	17,100	9,160	5,810
12	3,750	2,890	2,450	2,150	2,550	2,860	5,180	26,300	35,400	16,500	9,010	5,700
13	3,680	2,960	2,470	2,250	2,650	2,870	5,660	25,800	33,500	16,400	8,680	5,620
14	3,790	2,990	3,000	2,250	2,830	2,860	7,440	27,800	34,100	16,700	8,230	5,550
15	3,820	3,020	3,460	2,250	2,770	3,000	10,700	31,300	38,300	17,900	8,340	5,550
16	3,730	3,090	3,590	2,280	2,770	3,010	13,000	33,700	44,000	19,000	8,350	5,440
17	3,730	3,020	3,530	2,270	2,770	3,020	11,900	34,300	45,500	19,200	8,190	5,390
18	3,720	3,020	3,330	2,270	2,720	3,130	10,700	34,700	46,700	18,200	7,970	5,380
19	3,890	3,040	3,480	2,270	2,690	3,120	10,100	36,500	49,600	16,900	7,700	5,380
20	3,700	3,000	3,470	2,270	2,590	3,120	9,930	37,700	48,300	15,700	7,160	5,300
21	3,670	3,020	3,520	2,270	2,510	3,120	10,800	38,200	45,000	15,100	7,120	5,220
22	3,550	3,020	3,580	2,240	2,510	3,130	11,200	38,100	41,500	14,500	7,160	5,220
23	3,580	3,020	5,020	2,350	2,530	3,090	10,600	37,700	40,200	13,700	7,010	5,080
24	3,570	2,880	5,520	2,450	2,530	3,080	9,700	38,500	41,100	12,900	7,150	5,070
25	3,620	2,730	4,940	2,500	2,590	3,170	9,070	40,200	40,400	12,300	7,210	5,130
26	3,620	2,640	4,320	2,550	2,590	3,100	8,980	43,300	36,100	11,800	7,310	5,060
27	3,440	2,540	4,040	2,590	2,610	3,180	10,300	47,900	31,500	11,600	7,290	5,060
28	3,490	2,860	3,740	2,490	2,610	3,280	12,400	53,900	28,900	11,100	7,010	5,060
29	3,430	2,570	3,400	2,390	-	3,310	13,400	54,300	28,000	11,000	6,710	5,050
30	3,430	2,320	2,750	2,390	-	3,510	13,500	49,900	28,600	10,500	6,590	4,880
31	3,520	-	2,560	2,370	-	3,630	-	44,500	-	10,400	6,560	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	116,250	4,080	3,430	3,750	0.274	0.32	230,600
November	87,500	3,370	2,320	2,917	.213	.24	173,600
December	96,800	5,520	1,550	3,123	.228	.26	192,000
Calendar year 1936	4,228,680	59,800	1,380	11,550	.843	11.47	8,387,300
January	65,060	2,590	1,430	2,099	.153	.18	129,000
February	71,510	2,830	2,320	2,554	.186	.19	141,800
March	92,890	3,630	2,670	2,996	.219	.25	184,200
April	241,130	13,500	4,000	8,038	.587	.65	478,300
May	1,065,200	54,300	13,900	34,360	2.51	2.89	2,113,000
June	1,196,800	50,200	28,000	39,890	2.91	3.25	2,374,000
July	562,700	31,600	10,400	18,150	1.32	1.52	1,116,000
August	261,950	10,700	6,560	8,450	.617	.71	519,600
September	166,360	6,290	4,880	5,545	.405	.45	330,000
Water year 1936-37	4,024,150	54,300	1,430	11,030	.805	10.91	7,982,100

Granite Creek near Libby, Mont.

Location.- Staff gage, lat. 48°18', long. 115°35', in SE¼ sec. 5, T. 29 N., R. 31 W., at Glacier Silver Lead Mine, 7 miles southwest of Libby.
Records available.- January to September 1933, August 1936 to September 1937.
Extremes.- Maximum discharge observed during August 1936 to September, 1937, 415 second-feet May 26 (gage height, 2.86 feet); minimum daily discharge, 3 second-feet (estimated) Jan. 16-20.
1933, 1936-37: Maximum discharge observed, 1,360 second-feet June 10, Dec. 22, 1933; maximum gage height, 4.10 feet Dec. 22, 1933 (date published in Water-Supply Paper 752 in error); no flow Jan. 4, 1933 (creek blocked by snow slide).
Remarks.- Records fair except those for period of ice effect or missing gage heights, Dec. 28 to Mar. 26, which were computed on basis of one discharge measurement, available gage heights, and weather records and are poor.

Discharge, in second-feet, Aug. 21 to Sept. 30, 1936

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	9.1	11	-	8.3	21	9.1	6.3
2	-	9.5	12	-	7.5	22	9.1	6.3
3	-	9.9	13	-	6.9	23	9.1	6.3
4	-	10	14	-	6.9	24	9.1	6.0
5	-	11	15	-	6.6	25	9.1	5.7
6	-	10	16	-	6.3	26	9.1	5.7
7	-	9.9	17	-	6.3	27	9.1	5.1
8	-	9.1	18	-	6.0	28	9.1	5.1
9	-	9.1	19	-	6.0	29	9.1	4.5
10	-	8.3	20	-	6.3	30	9.1	4.5
						31	9.1	-

Note.- Mean discharge Aug. 21-31, 9.10 second-feet (run-off, 199 acre-feet); Sept. 1-30, 7.28 second-feet (run-off 433 acre-feet).

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.5	5.1	4.8				26	142	344	104	24	5.7
2	4.5	5.1	4.8				26	152	390	92	23	5.1
3	4.5	5.1	4.8	4.4			26	175	265	84	22	6.3
4	6.0	5.1	4.8				24	217	217	78	20	6.9
5	9.5	5.4	4.8				29	232	175	72	19	16
6	9.5	5.4	4.8				27	265	175	67	16	14
7	8.7	5.4	5.4				24	248	202	62	16	12
8	7.9	5.4	6.0	4.1			27	232	188	56	16	12
9	7.2	5.4	6.6				32	248	152	53	14	11
10	6.6	5.4	6.6				34	265	188	51	14	9.1
11	6.6	5.4	6.0				33	284	175	51	14	8.3
12	6.6	5.4	5.4				36	284	164	47	13	8.3
13	7.5	5.7	6.0	4.0		7.0	48	265	175	53	13	7.5
14	8.3	5.7	7.9				76	265	188	47	15	6.9
15	9.9	5.7	9.5				132	265	175	41	13	9.9
16	12	5.7	7.9				105	284	164	35	12	9.1
17	12	5.7	10				91	302	188	34	11	8.3
18	12	5.7	12	3.0			88	323	202	34	10	7.5
19	11	5.7	15				85	344	217	34	10	7.5
20	9.9	5.4	12				84	302	217	34	9.5	6.9
21	8.7	6.0	10				107	284	232	32	8.7	7.2
22	7.9	5.4	12				113	248	217	30	8.7	7.2
23	7.2	5.4	14	3.5			115	284	188	27	12	6.0
24	6.6	5.4	16				110	323	164	26	13	6.0
25	6.6	5.4	18				115	323	142	24	9.5	5.4
26	6.6	4.8	16				115	415	124	24	7.9	5.4
27	6.0	4.8	11			14	124	390	107	24	6.6	4.8
28	6.3	4.8	9.1			16	132	265	101	23	6.6	4.8
29	5.7	4.8	6.9	4.5		18	142	202	110	22	6.6	4.3
30	5.7	4.8	6.3			22	142	248	124	20	6.6	4.3
31	5.7	-	5.7			26	-	302	-	19	6.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	237.7	12	4.5	7.67	471
November	160.5	6.0	4.8	5.35	318
December	270.1	18	4.8	8.71	536
Calendar year					
January	112.0	-	-	3.94	242
February	126.0	-	-	4.50	250
March	278.0	26	-	8.97	551
April	2,268	142	24	75.6	4,500
May	8,378	415	142	270	16,620
June	5,670	390	101	189	11,250
July	1,400	104	19	45.2	2,780
August	396.7	24	6.0	12.8	787
September	233.7	16	4.3	7.79	464
Water year 1936-37	19,540.7	415	-	53.5	38,770

Boulder Creek near Leonia, Idaho

Location.- Water-stage recorder, lat. 48°36', long. 116°06', in NW¼ sec. 32, T. 61 N., R. 3 E., half a mile below McGinty Creek, 1 mile above buildings of the Idamount Lead-Zinc Mines Co., 3 miles above mouth, and 3 miles southwest of Leonia.

Drainage area.- 53 square miles.

Records available.- November 1928 to September 1937. April to November 1928, at site 1¼ miles downstream.

Extremes.- Maximum discharge during year, 920 second-feet May 4 (gage height, 3.40 feet); minimum discharge, 4 second-feet Nov. 28 (gage height, 0.41 foot).
1928-37: Maximum discharge, 1,540 second-feet Nov. 7, 1934 (gage height, 4.40 feet); minimum, 2 second-feet Aug. 25, Sept. 5, 1931.

Remarks.- Records good except those for periods of ice effect or missing gage heights, Nov. 28 to Dec. 10, Dec. 28 to Feb. 14, July 2-27, which were computed on basis of discharge measurement on Jan. 14, partial gage-height records, weather records, and records for stations on nearby streams and are fair.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8	e				9	35	269	412	106	30	11
2	e	6				9	34	408	460	100	31	10
3	8	9	6	7		9	32	602	417	90	23	9
4	8	8				9	32	722	313	80	19	9
5	15	8				9	32	602	265	75	17	26
6	12	8				10	30	440	253	70	16	23
7	10	6				12	29	417	241	65	15	16
8	9	7	7	5	8	12	33	440	225	60	15	14
9	8	8				12	40	426	205	55	15	12
10	8	8				14	53	495	233	50	15	11
11	8	8	9			18	53	404	229	48	15	10
12	8	8	9	e		18	50	404	185	45	14	10
13	8	8	9			20	106	505	179	50	13	10
14	15	8	11	9		19	171	695	171	55	12	9
15	16	8	12		9	18	381	607	162	50	11	9
16	12	8	10		9	18	225	550	171	45	12	9
17	10	9	9		8	19	160	540	182	40	11	9
18	10	9	14		8	19	145	612	249	38	11	9
19	9	9	27		8	18	152	651	325	35	11	9
20	9	9	20		8	16	152	555	372	32	11	9
21	9	8	16		9	15	182	515	273	30	10	9
22	9	8	71		9	15	136	596	253	28	10	9
23	8	6	132	9	9	15	115	565	309	26	19	9
24	8	6	60		9	15	106	596	273	24	25	9
25	8	6	38		9	15	110	668	211	23	16	9
26	8	5	28		9	16	150	706	182	22	13	9
27	8	5	21		9	19	225	824	157	21	12	9
28	8		15		9	24	241	540	140	21	11	9
29	8	5	10		-	27	188	422	128	22	11	11
30	8		8		-	28	188	376	115	18	11	12
31	8	-	7		-	30	-	390	-	17	11	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	289	16	8	9.3	0.175	0.20	573
November	219	9	5	7.3	.138	.15	434
December	601	132	6	19.4	.366	.42	1,190
Calendar year 1936	29,877	866	4	81.6	1.54	20.97	59,260
January	246	-	-	7.9	.149	.17	488
February	234	-	-	8.4	.158	.16	464
March	507	30	9	16.4	.309	.36	1,010
April	3,586	381	29	120	2.26	2.52	7,110
May	16,342	722	269	527	9.94	11.46	32,410
June	7,290	460	115	243	4.58	5.11	14,460
July	1,441	106	17	46.5	.877	1.01	2,860
August	466	31	10	15.0	.283	.33	924
September	329	26	9	11.0	.208	.23	653
Water year 1936-37	31,550	722	5	86.4	1.63	22.12	62,580

Moyie River at Eastport, Idaho

(International gaging station)

Location.- Water-stage recorder, lat. 49°00', long. 116°11', in SE¼ sec. 10, T. 65 N., R. 2 E., 1,000 feet downstream from international boundary at Eastport.

Drainage area.- 570 square miles.

Records available.- August 1929 to September 1937 in reports of Geological Survey; January to December 1915, March to December 1916, and discharge measurements during 1914 and 1917 in reports of the Dominion Water and Power Bureau of the Department of Mines and Resources, Canada.

Extremes.- Maximum discharge during year, 3,300 second-feet May 28 (gage height, 7.25 feet); minimum, 23 second-feet Nov. 7 (gage height, 3.20 feet).
1929-37: Maximum discharge, 6,240 second-feet Apr. 28, 1934; minimum, that of Nov. 7, 1936.

Remarks.- Records good except those for periods of ice effect, Nov. 1-15, 21, 23, 24, Nov. 27 to Dec. 16, Dec. 27 to Mar. 14, which were computed on basis of five discharge measurements, gage heights, weather records, and records for station at Eileen and are fair. No regulation or diversions above station. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

3.2	23	4.1	242	5.0	743	5.9	1,560	6.8	2,660
3.5	62	4.4	372	5.3	985	6.2	1,890	7.1	3,080
3.8	138	4.7	539	5.6	1,260	6.5	2,260	7.4	3,520

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	45		35			160	1,190	2,390	926	205	86
2	50	40					164	1,560	2,520	843	235	84
3	52					56	160	2,130	2,590	766	205	80
4	52						164	2,660	2,390	700	184	77
5	57	45					160	2,660	2,130	623	174	94
6	54		40	30			160	2,010	1,950	584	170	109
7	52				53	60	160	1,890	1,840	539	177	99
8	50						177	1,840	1,750	497	167	92
9	48	40		35			212	1,840	1,670	451	157	89
10	48			40		64	278	1,950	1,670	413	151	86
11	48		43			67	291	1,780	1,670	382	144	82
12	48		45				270	1,720	1,560	377	135	82
13	48	42	48			75	418	1,950	2,010	382	126	80
14	50		50				584	2,460	2,260	398	121	77
15	50		52		58	77	1,110	2,590	2,130	377	118	77
16	48	44	54			109	804	2,460	2,070	382	115	77
17	48	47	55	44		104	664	2,460	2,130	363	109	77
18	48	47	57			82	664	2,590	2,070	334	104	77
19	48	48	66			80	700	2,800	2,260	316	102	75
20	48	45	64			75	729	2,730	2,320	291	99	75
21	50	45	62		54	86	766	2,590	2,200	274	96	73
22	48	42	77			71	610	2,660	2,010	266	92	71
23	48	42	124			73	558	2,660	1,950	254	104	71
24	50	42	109			71	509	2,660	1,890	238	118	75
25	48	42	92			75	497	2,940	1,720	231	109	75
26	47	40	82		56	77	657	3,150	1,560	224	102	75
27	47	35	70	50		86	934	3,220	1,410	209	94	77
28	47	35	60			102	1,080	3,220	1,260	205	92	77
29	47	38	50		—	124	900	3,010	1,160	202	89	80
30	47	40	45		—	141	884	2,730	1,040	191	89	84
31	47	-	40		—	148	-	2,460	-	180	86	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,523	57	47	49.1	0.086	0.10	3,020
November	1,267	48	35	42.2	.074	.08	2,510
December	1,745	124	-	56.3	.099	.11	3,460
Calendar year 1936	162,493	3,440	35	444	.779	10.60	322,300
January	1,298	-	-	41.9	.074	.09	2,570
February	1,532	-	-	54.7	.096	.10	3,040
March	2,461	148	-	79.4	.139	.16	4,880
April	15,424	1,110	160	514	.902	1.01	30,590
May	74,570	3,220	1,190	2,405	4.22	4.86	147,900
June	57,610	2,590	1,040	1,920	3.37	3.76	114,300
July	12,418	926	180	401	.704	.81	24,630
August	4,069	235	86	131	.230	.27	8,070
September	2,433	109	71	81.1	.142	.16	4,830
Water year 1936-37	176,350	3,220	-	483	.847	11.51	349,800

Moyie River at Eileen, Idaho

Location.- Water-stage recorder, lat. 48°46', long. 116°10', in NE¼ sec. 35, T. 63 N., R. 2 E., an eighth of a mile downstream from Skin Creek, a quarter of a mile southeast of Eileen, and 4 miles above junction with Kootenai River.

Drainage area.- 755 square miles.

Records available.- October 1925 to September 1937.

Average discharge.- 12 years, 769 second-feet.

Extremes.- Maximum discharge during year, 3,850 second-feet May 5 (gage height, 3.62 feet); minimum, 40 second-feet Nov. 27 (gage height, -0.25 foot).
1925-37: Maximum discharge, 8,780 second-feet Apr. 29, 1934; maximum gage height, 4.8 feet May 17, June 10, 11, 1927, May 13, 17-19, 1928; minimum discharge, that of Nov. 27, 1936.

Remarks.- Records good except those for periods of ice effect or missing gage heights, Oct. 1-4, Nov. 3-15, Nov. 28 to Dec. 16, Dec. 29 to Mar. 8, which were computed on basis of four discharge measurements, available gage heights, weather records, records for station at Eastport and stations on nearby streams and are fair. No diversion or regulation above station.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 28				Mar. 9 to Sept. 30			
-0.1	53	2.3	1,410	0.2	100	1.2	422
+.3	106	2.8	2,140	.7	211	1.7	766
.8	237	3.3	3,040				
1.3	474	3.8	4,480	Note.- Same as preceding table above 1.8 feet.			
1.8	857						

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84	79		60			268	1,420	2,840	1,130	256	128
2	84	63					275	1,980	2,960	1,040	312	126
3	85					90	275	2,650	3,060	935	275	122
4	85						272	3,260	2,760	867	249	120
5	86	70	64	50			272	3,440	2,520	793	231	160
6	88				82	100	268	2,580	2,320	733	221	160
7	86						264	2,370	2,200	676	221	151
8	85						272	2,350	2,120	623	221	142
9	85	60	64	60		108	317	2,300	2,000	574	211	137
10	85		67	70		115	422	2,450	1,940	528	202	129
11	83		69	75		126	461	2,300	2,000	490	196	128
12	83	66	72	75	82	128	433	2,170	1,860	467	184	126
13	83		76			128	588	2,400	2,190	478	176	124
14	86	66	80			126	916	2,940	2,580	497	168	120
15	86	70	83		90	135	1,530	3,170	2,440	472	163	119
16	85	74	87			124	1,230	3,000	2,330	472	158	117
17	83	81	92	75		129	1,010	2,940	2,370	456	155	117
18	83	81	94			135	955	3,130	2,350	428	151	115
19	83	81	106			131	997	3,340	2,580	402	146	114
20	83	79	103			128	986	3,280	2,630	376	144	112
21	81	76	101		86	119	1,090	3,080	2,580	353	140	110
22	81	79	133			129	916	3,190	2,350	334	137	109
23	81	73	211			126	839	3,170	2,280	317	148	109
24	81	78	181			124	758	3,170	2,200	300	165	112
25	81	76	142			129	708	3,460	2,040	287	160	117
26	81	70	128	80	90	137	857	3,730	1,840	279	148	117
27	81	56	110			151	1,210	3,760	1,670	264	140	119
28	81		96			173	1,400	3,680	1,510	256	135	115
29	81	60	90		—	199	1,230	3,440	1,390	253	131	128
30	81		80		—	225	1,140	3,150	1,240	242	129	131
31	81	-	70		—	249	-	2,900	-	231	129	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,582	88	81	83.3	0.110	0.13	5,120
November	2,081	81	56	69.4	.092	.10	4,130
December	2,847	211	64	91.8	.122	.14	5,650
Calendar year 1936	210,876	4,610	56	576	.763	10.38	418,300
January	2,160	-	-	69.7	.092	.11	4,280
February	2,400	-	-	85.7	.114	.12	4,760
March	4,034	249	-	130	.172	.20	8,000
April	22,159	1,530	264	739	.979	1.09	44,000
May	90,200	3,760	1,420	2,910	3.85	4.44	178,900
June	67,150	3,060	1,240	2,238	2.96	3.30	133,200
July	15,553	1,130	231	502	.665	.77	30,800
August	5,602	312	129	181	.240	.28	11,100
September	3,734	160	109	124	.164	.18	7,410
Water year 1936-37	220,502	3,760	-	604	.800	10.86	437,400

Deep Creek at Moravia, Idaho

Location.- Staff gage, lat. 48°38', long. 116°24', in sec. 18, T. 61 N., R. 1 E., at concrete highway bridge 1 mile below Ruby Creek and 1 mile southwest of Moravia.

Drainage area.- 133 square miles.

Records available.- May 1928 to September 1937 (except winters prior to 1933).

Extremes.- Maximum discharge observed during year, 830 second-feet Apr. 15 (gage height, 3.40 feet); minimum discharge, 13 second-feet Dec. 3, Jan. 6-10, Aug. 20-22; minimum gage height, 0.32 foot Dec. 3, Aug. 20-22.
1928-37: Maximum discharge observed, 1,300 second-feet Dec. 22, 1933 (gage height, 4.20 feet); minimum discharge, 7 second-feet Aug. 15, 24, 25, 1931; minimum gage height, 0.24 foot Sept. 1, 1936.

Remarks.- Records good except those for periods of ice effect, Nov. 7-13, Dec. 4-19, Dec. 30 to Mar. 7, which were computed on basis of three discharge measurements, gage heights, observer's notes, and weather records and are poor. Staff gage read once daily. No diversions above station.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 14				Apr. 15 to Sept. 30			
0.2	8	1.7	195	0.3	12	1.8	238
.5	23	2.0	272	.6	32	2.1	325
.8	50	2.5	430	.9	65	2.5	460
1.1	85	3.0	630	1.2	109	3.0	650
1.4	132			1.5	168	3.5	880

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	17	18		20	25	172	391	310	113	30	15
2	18	17	18	24		25	172	478	325	99	38	15
3	18	17	15			26	151	530	294	86	32	15
4	16	17		24		28	151	730	252	81	29	18
5	16	18		22		30	151	730	238	78	27	120
6	17	19	14			33	142	570	238	73	23	40
7	17	18			22	36	132	460	213	65	23	29
8	17	16		13		42	142	442	202	65	21	24
9	17		15			46	151	425	190	63	21	23
10	17	15	16			48	162	425	213	55	21	21
11	17		17			50	195	425	190	51	20	19
12	17	16	18			54	195	425	190	50	18	19
13	17	17	19			54	505	425	202	60	17	18
14	17	18	20			56	505	425	190	58	16	18
15	17	18	21	18		52	830	391	190	49	15	16
16	18	19	22		27	54	610	391	179	49	15	16
17	18	21	23			63	495	374	213	44	14	16
18	18	21	25			61	425	374	226	42	14	16
19	18	19	40			57	425	374	325	38	14	16
20	18	19	54			54	408	374	460	36	13	16
21	18	19	63	16	23	54	512	358	265	36	13	15
22	18	18	115			57	408	358	213	34	13	14
23	18	18	132			54	391	358	190	30	21	15
24	18	18	102			53	391	358	190	29	18	15
25	18	18	85		25	63	425	391	179	29	18	15
26	18	17	50	20		25	66	374	391	160	29	16	16
27	18	17	63			25	68	495	374	147	27	16	18
28	18	17	61			25	71	495	358	143	24	15	18
29	18	17	54			-	75	478	325	135	26	15	29
30	18	17	40	20		-	124	358	280	120	27	15	30
31	18	-	30	20		-	142	-	265	-	29	15	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	542	18	16	17.5	0.132	0.15	1,080
November	528	21	15	17.6	.132	.15	1,050
December	1,206	132	-	38.9	.292	.34	2,390
Calendar year 1936	35,655	920	10	97.4	.732	9.99	70,730
January	571	-	-	18.4	.138	.16	1,130
February	667	-	-	23.8	.179	.19	1,320
March	1,721	142	25	55.5	.417	.48	3,410
April	10,446	830	132	348	2.62	2.92	20,720
May	12,975	730	265	419	3.15	3.63	25,740
June	6,582	460	120	219	1.65	1.84	13,060
July	1,575	113	24	50.8	.382	.44	3,120
August	596	38	13	19.2	.144	.17	1,180
September	675	120	14	22.5	.169	.19	1,340
Water year 1936-37	38,084	830	13	104	.782	10.66	75,540

Long Canyon Creek near Port Hill, Idaho

Location.- Water-stage recorder, lat. 48°57', long. 116°32', in NW¼ sec. 36, T. 65 N., R. 2 W., on U. S. Forest Service bridge at mouth of canyon and 4 miles southwest of Port Hill.

Drainage area.- 29 square miles.

Records available.- May 1928 to September 1937 (except winters prior to 1935).

Extremes.- Maximum discharge during year, 644 second-feet June 2 (gage height, 4.00 feet); minimum, 3 second-feet Nov. 1-3, November 28, Dec. 4-10, Jan. 6-8; minimum gage height recorded, 1.51 feet Nov. 1

1928-37: Maximum daily discharge, 950 second-feet (estimated) June 15, 1933; maximum gage height, 6.55 feet (caused by drift jam) June 15, 1933; minimum discharge, that of Nov. 1-3, 28, Dec. 4-10, 1936, Jan. 6-8, 1937; minimum gage height, 0.91 foot Nov. 8, 1930.

Remarks.- Records good except those for period of ice effect, or missing gage heights, Nov. 29 to Feb. 23, which were computed on basis of two discharge measurements, weather records, and records for Smith Creek and Boundary Creek near Port Hill, and are poor. No diversions above gage.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	4	4			4	8	39	284	114	22	9
2	4	3	4			4	8	53	385	102	25	9
3	4	3	4	5		4	8	76	426	93	20	8
4	4	4	*3			4	9	101	302	85	18	9
5	5	5				4	9	119	258	76	17	24
6	5	5				5	9	103	266	69	16	21
7	5	4	3	3		5	9	95	250	61	18	15
8	5	4				5	10	95	237	56	16	13
9	5	4		*4		5	11	91	229	52	15	11
10	5	4				6	15	97	311	48	15	10
11	5	4				6	16	91	311	46	15	10
12	5	5				7	15	90	254	43	14	10
13	5	5	4	5	4	7	25	106	266	48	13	9
14	5	5				6	33	151	262	45	13	9
15	6	5				6	46	168	254	40	13	9
16	5	4				5	39	162	262	39	12	9
17	5	5	7			5	32	165	250	37	11	8
18	5	5				5	32	197	275	35	11	8
19	5	5				5	29	222	358	33	11	8
20	5	5				5	28	218	358	30	10	8
21	4	4				5	30	207	311	29	10	8
22	5	5				5	26	245	284	27	10	8
23	5	4	10	4		5	23	237	258	25	18	8
24	5	4			4	5	21	270	222	24	22	8
25	5	4			4	5	21	332	190	23	14	8
26	5	4			4	5	24	374	181	22	12	8
27	5	4			4	5	33	385	168	21	11	8
28	5	3			4	6	38	358	159	21	10	8
29	5	4	7		-	6	33	298	146	24	10	8
30	5	4			-	7	32	241	133	20	10	8
31	5	-			-	8	-	241	-	19	9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	151	6	4	4.87	0.168	0.19	300
November	128	5	3	4.27	.147	.16	254
December	189	-	-	6.10	.210	.24	375
Calendar year	13,863	420	-	37.9	1.31	17.77	27,500
January	133	-	-	4.29	.148	.17	264
February	112	-	-	4.00	.138	.14	222
March	165	8	4	5.32	.183	.21	327
April	672	46	8	22.4	.772	.86	1,330
May	5,632	385	39	182	6.28	7.24	11,170
June	7,850	426	133	262	9.03	10.08	15,570
July	1,407	114	19	45.4	1.57	1.81	2,790
August	441	25	9	14.2	.490	.56	875
September	297	24	8	9.90	.341	.38	589
Water year 1936-37	17,177	426	-	47.1	1.62	22.04	34,070

*Discharge measurement.

Smith Creek near Port Hill, Idaho

Location.- Water-stage recorder, lat. 48°57'40", long. 116°33'20", in NE¼ sec. 28, T. 65 N., R. 2 W., at U. S. Forest Service bridge 1 mile south of Smith Creek ranger station and 4 miles southwest of Port Hill.

Drainage area.- 70 square miles.

Records available.- May 1928 to September 1937 (except winters prior to 1935).

Extremes.- Maximum discharge during year, 1,550 second-feet June 19 (gage height, 5.68 feet); minimum discharge, 4 second-feet Dec. 4-10; minimum gage height, 1.10 feet Oct. 21.

1928-37: Maximum discharge, 3,060 second-feet June 14, 1933 (gage height, 7.15 feet); minimum discharge, that of Dec. 4-10, 1936; minimum gage height, 0.80 foot Sept. 15-18, 1929, and Sept. 10, 1930.

Remarks.- Records good except those for periods of ice effect or missing gage heights, Nov. 2-6, Nov. 8 to Dec. 3, Dec. 5 to Jan. 8, Jan. 10 to Feb. 23, which were computed on basis of two discharge measurements, available gage heights, weather records, and records for stations on nearby streams and are poor. No diversions above gage.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 7

1.1	5
1.2	7
1.3	9.5
1.4	12.5

Feb. 24 to Sept. 30

1.1	5	2.1	58	4.0	520
1.3	10	2.3	81	4.5	775
1.5	16.5	2.5	106	5.0	1,060
1.7	26	3.0	197	5.5	1,400
1.9	39	3.5	328		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8	6				8	21	138	912	232	41	16
2	8	5	5			8	21	211	1,060	204	68	16
3	8	6		9		8	20	368	1,030	182	44	15
4	8	8	*4			8	21	535	731	162	36	15
5	9	9				9	21	570	615	147	31	56
6	9	9				10	21	401	605	133	30	64
7	9	8	4	5		12	21	346	635	118	35	38
8	8	7				12	22	348	610	109	31	30
9	8			*9		12	25	348	580	100	28	27
10	8	6				15	33	397	650	91	26	24
11	8					15	37	358	640	86	26	22
12	8		7		S	17	35	344	530	82	24	21
13	8	8		10		17	57	460	520	88	23	19
14	9					16	77	685	498	91	21	18
15	11					16	109	640	502	81	20	17
16	10					16	89	580	545	80	19	16
17	9		12			16	83	580	605	79	18	16
18	9	10				15	83	731	775	68	18	15
19	8					14	82	802	1,030	62	17	15
20	8			9		13	87	753	1,000	56	16	15
21	8					12	94	748	715	51	16	14
22	8					12	82	830	670	47	15	14
23	8	9	20			12	75	775	680	44	40	14
24	8				8	12	67	858	560	40	68	14
25	8				8	12	64	1,060	451	38	35	14
26	8				8	13	74	1,160	393	36	26	14
27	8			8	8	15	116	1,120	351	33	22	15
28	8	7			8	17	110	1,030	319	32	20	15
29	8		12		-	18	115	775	290	43	19	16
30	8				-	20	110	645	262	35	18	18
31	8	-			-	20	-	710	-	33	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	259	11	8	8.35	0.119	0.14	514
November	238	-	-	7.93	.113	.13	472
December	331	-	-	10.7	.153	.18	657
Calendar year 1936	43,897	1,330	6	120	1.71	23.41	87,060
January	267	-	-	8.61	.123	.14	530
February	224	-	-	8.00	.114	.12	444
March	420	20	8	13.5	.193	.22	833
April	1,672	116	20	62.4	.891	.99	3,710
May	19,298	1,160	138	623	8.90	10.26	38,280
June	18,764	1,060	262	625	8.93	9.96	37,220
July	2,683	232	32	86.5	1.24	1.43	5,320
August	868	68	17	28.0	.400	.46	1,720
September	623	64	14	20.8	.297	.33	1,240
Water year 1936-37	45,847	1,160	-	126	1.80	24.36	90,940

*Result of discharge measurement.

Boundary Creek near Port Hill, Idaho

(International gaging station)

Location.- Water-stage recorder, lat. 48°59'50", long. 116°34'05", in SW¼ sec. 11, T. 65 N., R. 2 W., 140 feet below bridge at mouth of canyon, 0.2 mile south of international boundary, and 3 miles west of Port Hill.

Drainage area.- 97 square miles.

Records available.- May 1928 to September 1937.

Extremes.- Maximum discharge during year, 1,320 second-feet June 2 (gage height, 4.07 feet); minimum, 5 second-feet sometime during Nov. 10 to Dec. 3 (gage height. 0.27 foot, from recorded range of stage).
1928-37: Maximum discharge, 2,400 second-feet June 15, 1933 (gage height, 5.22 feet); minimum, that between Nov. 10 and Dec. 3, 1936.

Remarks.- Records good except those for periods of ice effect or missing gage heights, Nov. 3, 4, 6-30, Dec. 1-3, Dec. 5 to Jan. 10, Jan. 20 to Feb. 5, Feb. 7 to Mar. 7, Apr. 14-22, July 10-15, Aug. 8-11, Sept. 27-30, which were computed on basis of two discharge measurements, weather records, available gage heights, and records for stations on nearby streams and are poor. No diversions above gage. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	10					20	160	870	247	44	22
2	14	9	12				20	247	1,020	217	63	21
3	14	12		15	13		19	386	990	197	47	20
4	14	14	*12				20	536	750	176	41	20
5	16	*16				13	20	546	630	160	38	44
6	15	16			13		20	382	610	147	36	50
7	14	14	12	10			20	352	625	136	38	35
8	14	12				13	20	359	600	128	37	29
9	14			15		13	24	363	566	126	34	26
10	14	10		18		14	28	402	610	110	32	24
11	14			18		16	30	367	630	100	31	23
12	13		15	17		16	28	375	526	95	31	22
13	13	15		16		18	60	478	512	100	30	22
14	15			16		16	80	635	502	105	28	21
15	18			16		16	100	620	512	95	28	20
16	16		20	16		15	90	580	536	89	27	20
17	15			15		15	85	551	610	84	27	20
18	14	17		15	13	15	85	668	780	77	25	20
19	14			15		15	85	722	722	75	25	19
20	14					15	90	695	750	68	24	19
21	12					15	90	695	668	63	24	18
22	16			15		15	80	780	640	56	23	18
23	14	16	30			15	73	750	668	55	34	18
24	14					15	74	810	556	50	39	18
25	14					15	70	960	464	47	30	17
26	13					16	74	1,100	406	46	26	18
27	13					16	102	1,020	363	42	24	19
28	13	13		14		17	126	990	329	41	23	19
29	13		20		-	18	118	810	294	47	22	20
30	15				-	19	117	668	283	42	22	22
31	13	-			-	20	-	722	-	40	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	439	18	12	14.2	0.146	0.17	871
November	423	16	9	14.1	.145	.16	839
December	590	-	-	19.0	.196	.23	1,170
Calendar year 1936	47,169	1,370	9	129	1.33	18.07	93,570
January	456	-	-	14.7	.152	.18	904
February	364	-	-	13.0	.134	.14	722
March	469	20	13	15.1	.156	.18	930
April	1,868	126	19	62.3	.642	.72	3,710
May	18,729	1,100	160	604	6.23	7.18	37,150
June	18,022	1,020	283	601	6.20	6.92	35,750
July	3,063	247	40	98.8	1.02	1.18	6,080
August	975	63	22	31.5	.325	.37	1,930
September	684	50	17	22.8	.235	.26	1,360
Water year 1936-37	46,082	1,100	9	126	1.30	17.69	91,320

*Result of discharge measurement.

Clark Fork above Missoula, Mont.

Location.- Water-stage recorder, lat. 46°53', long. 113°55', in SE¼ sec. 18, T. 13 N., R. 18 W., 1½ miles below mouth of Blackfoot River and 4 miles east of Missoula.

Records available.- March 1929 to September 1937.

Extremes.- Maximum discharge, 7,790 second-feet May 5 (gage height, 5.80 feet); minimum, 228 second-feet Sept. 28 (gage height, 1.01 feet).
1929-37: Maximum discharge, 21,600 second-feet June 2, 1933 (gage height, 9.90 feet); minimum, 86 second-feet Jan. 8, 1930 (gage height, 0.52 foot, ice jammed above gage).

Remarks.- Records good except those for periods of ice effect, Dec. 6-13, Dec. 23 to Mar. 18, which were computed on basis of 3 discharge measurements, gage heights, observer's notes, and weather records and are fair. Observer's daily readings used Jan. 2 to Mar. 16. Slight regulation from operation of power plant near Bonner. Several diversions for irrigation above station.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting control method used June 10 to Aug. 13, Sept. 24-30)

Oct. 1 to May 5				May 6 to Sept. 30			
1.3	400	2.6	1,560	1.2	305	2.6	1,530
1.5	520	3.0	2,060	1.4	410	3.0	2,020
1.7	660	3.5	2,790	1.6	540	3.5	2,720
2.0	920	4.0	3,660	1.8	690	4.0	3,550
2.2	1,120			2.0	870	4.5	4,510
				2.2	1,070	5.0	5,660

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	911	1,170	1,010	749	708	740	1,200	1,930	3,640	1,890	940	618
2	1,200	1,050	1,100	848	676	724	1,300	1,930	3,460	1,830	1,010	626
3	1,250	920	970	776	884	758	1,420	2,260	3,370	1,770	1,050	596
4	1,000	1,110	990	920	980	848	1,380	2,710	3,550	1,710	1,110	561
5	1,010	1,170	1,000	660	1,000	902	1,350	3,490	3,460	1,650	1,070	596
6	1,050	1,120	548	632	1,000	960	1,380	3,370	3,200	1,590	1,030	596
7	1,060	1,100	660	400	902	1,030	1,350	3,640	3,030	1,460	1,000	626
8	1,050	1,030	893	400	920	970	1,340	3,820	2,950	1,420	910	618
9	1,030	1,030	930	455	866	1,080	1,380	3,920	2,870	1,410	920	650
10	1,050	1,020	1,060	455	830	1,020	1,490	4,020	2,870	1,300	960	526
11	1,020	1,030	1,050	468	758	1,080	1,620	4,110	3,030	1,220	930	716
12	1,040	1,140	875	468	724	1,220	1,680	4,020	3,200	1,190	816	1,090
13	1,040	1,320	911	474	660	1,190	1,620	3,820	3,370	1,190	960	388
14	793	1,260	1,070	481	676	1,280	1,680	3,920	3,550	1,210	828	440
15	1,260	848	1,040	590	604	857	2,000	4,110	3,550	1,430	816	422
16	980	1,170	1,120	576	920	1,080	2,000	4,210	3,640	1,460	798	526
17	866	1,190	1,120	632	785	1,190	1,930	4,110	3,730	1,360	825	540
18	812	1,140	1,110	646	839	1,210	1,740	4,210	3,920	1,340	674	554
19	1,060	1,120	1,130	576	776	1,170	1,620	4,410	3,730	1,250	789	519
20	1,070	1,150	1,100	604	830	1,150	1,620	4,830	3,460	1,180	666	561
21	1,100	1,160	1,090	590	1,040	1,070	1,740	4,620	3,550	1,150	708	610
22	1,100	1,120	1,120	548	980	1,100	1,740	4,210	3,550	1,110	674	682
23	1,110	1,120	1,100	548	902	1,060	1,740	4,210	3,550	1,090	674	735
24	1,150	1,030	1,120	618	1,120	1,070	1,680	4,310	3,370	1,050	674	1,190
25	1,120	1,050	1,120	548	902	1,090	1,560	4,310	3,030	970	642	1,240
26	1,210	950	1,040	604	812	1,000	1,500	4,510	3,470	970	634	618
27	1,150	1,000	1,040	692	884	1,030	1,740	4,830	2,300	930	589	340
28	1,150	920	1,040	708	830	1,020	1,800	4,830	1,830	950	610	603
29	1,110	812	821	632	-	1,060	1,930	4,830	2,150	930	603	920
30	1,030	767	632	724	-	1,070	1,930	4,510	1,960	940	634	890
31	1,100	-	893	758	-	1,120	-	4,020	-	920	575	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	32,882	1,260	793	1,061	65,220
November	32,017	1,320	767	1,067	63,500
December	30,703	1,130	548	990	60,900
Calendar year 1936	824,851	12,300	474	2,254	1,636,000
January	18,780	920	400	606	37,250
February	23,808	1,120	604	850	47,220
March	32,149	1,280	724	1,037	63,770
April	48,460	2,000	1,200	1,615	96,120
May	122,030	4,830	1,930	3,936	242,000
June	96,340	3,920	1,830	3,211	191,100
July	39,870	1,890	920	1,286	79,080
August	25,116	1,110	575	810	49,820
September	19,597	1,240	340	653	38,870
Water year 1936-37	521,752	4,830	340	1,429	1,035,000

Clark Fork below Missoula, Mont.

Location.- Water-stage recorder, lat. 46°53', long. 114°07', in SE¼ sec. 21, T. 13 N., R. 20 W., 2 miles below mouth of Bitterroot River and 6 miles west of Missoula.

Records available.- October 1929 to September 1937.

Extremes.- Maximum discharge during year, 11,700 second-feet May 27 (gage height, 5.09 feet); minimum, 620 second-feet Sept. 13 (gage height, 0.37 foot).
1929-37: Maximum discharge, 36,800 second-feet June 11, 1933 (gage height, 10.14 feet); minimum, 388 second-feet Jan. 18, 1933 (gage height, 0.58 foot, ice present).

Remarks.- Records good except those for Oct. 1-18, Dec. 17, 18, Jan. 5 to Mar. 16, May 2-11, which were computed on basis of observer's daily readings and are fair. Numerous diversions above station.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-18, Sept. 22-30)

0.3	550	2.5	3,930
.5	740	2.8	4,640
.7	960	3.1	5,390
1.0	1,340	3.5	6,520
1.3	1,750	4.0	8,060
1.6	2,220	4.5	9,640
1.9	2,740	5.0	11,310
2.2	3,300	5.5	13,220

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,570	1,780	1,500	1,080	938	1,310	1,780	3,000	8,060	3,710	1,310	828
2	2,110	1,690	1,640	1,090	1,060	1,530	1,880	3,110	7,600	3,500	1,390	850
3	1,670	1,570	1,680	927	1,060	1,580	2,060	3,820	8,060	3,200	1,400	883
4	1,670	1,670	1,640	1,070	1,110	1,670	1,980	5,000	8,680	3,000	1,480	806
5	1,640	1,840	1,650	938	1,160	1,690	2,010	6,670	8,060	2,920	1,430	839
6	1,720	1,780	1,350	872	1,180	1,690	1,950	7,440	7,130	2,740	1,390	872
7	1,800	1,810	1,240	720	872	1,720	1,920	7,280	6,820	2,480	1,370	850
8	1,740	1,760	1,580	700	1,110	1,780	1,870	7,440	6,520	2,390	1,260	850
9	1,740	1,690	1,800	720	1,250	1,810	1,920	8,060	6,520	2,220	1,240	861
10	1,760	1,710	1,840	720	1,110	1,870	2,060	8,370	6,670	2,140	1,310	784
11	1,700	1,690	1,720	660	1,180	1,960	2,140	8,370	7,130	1,930	1,310	773
12	1,700	1,780	1,600	680	1,310	2,060	2,300	7,750	7,440	1,920	1,260	1,490
13	1,680	1,900	1,530	720	1,370	2,030	2,220	7,440	7,440	1,840	1,250	660
14	1,300	2,220	1,600	762	1,390	1,930	2,300	7,750	7,600	1,810	1,160	670
15	2,140	1,510	1,720	916	1,310	1,840	2,740	8,680	7,750	2,010	1,140	680
16	1,650	1,860	1,690	1,030	1,370	1,810	2,830	8,680	8,060	2,060	1,130	690
17	1,360	1,920	1,840	1,060	1,290	1,840	2,830	8,680	8,370	2,040	1,110	710
18	1,310	1,860	1,840	1,010	1,260	1,900	2,740	9,000	8,680	1,960	1,010	762
19	1,640	1,870	1,870	1,010	1,310	1,900	2,560	9,640	7,750	1,870	1,020	700
20	1,640	1,860	1,800	872	1,180	1,870	2,480	10,600	7,750	1,750	984	740
21	1,640	1,880	1,750	660	1,160	1,780	2,560	9,960	9,320	1,640	949	817
22	1,650	1,860	1,760	680	1,370	1,710	2,650	9,000	9,320	1,570	927	916
23	1,640	1,810	1,750	916	1,440	1,690	2,740	9,000	9,000	1,530	916	984
24	1,650	1,780	1,780	1,030	1,500	1,670	2,650	9,960	8,060	1,480	927	1,250
25	1,650	1,710	1,760	1,010	1,440	1,650	2,480	9,960	6,670	1,420	916	1,710
26	1,720	1,670	1,740	1,180	1,440	1,580	2,300	10,600	5,940	1,390	872	1,200
27	1,710	1,640	1,670	1,060	1,420	1,600	2,560	11,300	4,880	1,350	828	700
28	1,720	1,570	1,440	806	1,390	1,610	2,740	11,300	4,160	1,380	828	850
29	1,750	1,420	1,310	720	-	1,600	3,110	11,000	4,160	1,420	828	1,210
30	1,680	1,370	1,080	700	-	1,670	3,000	9,960	3,820	1,370	861	1,330
31	1,690	-	1,220	680	-	1,690	-	8,680	-	1,290	817	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	52,040	2,140	1,300	1,679	103,200
November	52,480	2,220	1,370	1,749	104,100
December	50,390	1,870	1,080	1,625	99,950
Calendar year 1936	1,570,640	26,700	800	4,291	3,115,000
January	26,999	1,180	660	871	53,550
February	34,980	1,500	872	1,249	69,380
March	54,040	2,060	1,310	1,743	107,200
April	71,360	3,110	1,780	2,379	141,500
May	257,500	11,300	3,000	8,306	510,700
June	217,420	9,320	3,820	7,247	431,200
July	63,330	3,710	1,290	2,043	125,600
August	34,623	1,480	817	1,117	68,670
September	27,265	1,710	660	909	54,080
Water year 1936-37	942,427	11,300	660	2,582	1,869,000

Clark Fork at St. Regis, Mont.

Location.- Water-stage recorder, lat. 47°18', long. 115°05', in sec. 19, T. 18 N., R. 27 W., at St. Regis, half a mile below mouth of St. Regis River.

Drainage area.- 10,500 square miles.

Records available.- October 1910 to September 1923, February 1929 to September 1937.

Average discharge.- 21 years, 7,512 second-feet.

Extremes.- Maximum discharge during year, 17,100 second-feet May 28 (gage height, 10.06 feet); minimum, 1,140 second-feet Sept. 17; minimum gage height, 3.25 feet Jan. 4. 1910-23, 1929-37: Maximum discharge observed, 62,800 second-feet May 30, 31, 1913 (gage height, 19.1 feet); minimum, 1,050 second-feet Feb. 19-22, 1929; ice on control.

Remarks.- Records good except those for periods of ice effect, Dec. 2-6, Jan. 3 to Feb. 28, which were computed on basis of one discharge measurement, gage heights, and weather records and are fair. Numerous diversions above station.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting control method used Nov. 1 to Dec. 1, Dec. 7 to Jan. 2, May 1 to July 24)

Oct. 1 to May 28

3.2	1,200	6.0	5,000
3.4	1,350	7.0	7,360
3.6	1,510	8.0	10,100
4.0	1,880	9.0	13,150
4.5	2,470	10.0	16,380
5.0	3,200	11.0	20,100
5.5	4,020		

May 29 to Sept. 30

3.2	1,070
3.4	1,220
3.6	1,380
4.0	1,800
4.5	2,470

Note.- Above 4.5 feet same as preceding table.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,150	2,150	1,740	1,600	1,600	2,040	2,210	4,490	12,500	5,320	2,000	1,340
2	2,150	2,150	1,740	1,310	1,690	2,040	2,340	4,790	11,900	5,100	2,000	1,340
3	2,210	2,090	1,740	1,350	1,780	2,150	2,400	5,660	11,900	4,790	2,060	1,340
4	2,470	2,040	1,740	1,390	1,880	2,090	2,470	7,360	12,200	4,490	2,060	1,380
5	2,210	2,090	1,740	1,350	1,880	2,090	2,470	9,230	11,900	4,200	2,060	1,340
6	2,210	2,210	1,740	1,350	1,930	2,090	2,470	10,400	11,000	4,110	2,060	1,340
7	2,210	2,210	1,740	1,310	1,930	2,150	2,400	10,700	10,400	3,850	2,000	1,340
8	2,280	2,210	1,740	1,310	1,880	2,150	2,400	10,700	9,810	3,600	1,930	1,340
9	2,210	2,150	1,930	1,350	1,880	2,210	2,400	11,300	9,520	3,440	1,860	1,340
10	2,210	2,090	2,040	1,350	1,880	2,280	2,540	11,900	9,520	3,200	1,860	1,300
11	2,210	2,090	2,040	1,310	2,040	2,340	2,610	12,200	9,520	3,050	1,930	1,300
12	2,150	2,090	1,930	1,310	2,210	2,470	2,750	11,900	9,810	2,820	1,930	1,260
13	2,150	2,150	1,880	1,310	2,210	2,540	2,980	11,600	9,810	2,820	1,860	1,680
14	2,150	2,280	1,830	1,390	2,210	2,470	3,360	12,200	10,100	2,750	1,800	1,300
15	2,090	2,470	1,930	1,350	2,210	2,400	4,020	13,200	10,400	2,680	1,740	1,220
16	2,150	2,040	1,930	1,430	2,470	2,280	4,110	13,500	10,400	2,820	1,740	1,180
17	2,150	2,210	1,980	1,510	2,400	2,340	3,940	13,200	10,700	2,900	1,680	1,180
18	1,980	2,280	2,040	1,560	2,470	2,340	3,850	13,500	11,000	2,820	1,620	1,180
19	1,930	2,210	2,040	1,560	*2,440	2,340	3,680	14,100	11,000	2,750	1,620	1,220
20	2,040	2,210	2,090	1,470	2,400	2,280	3,600	15,000	10,400	2,610	1,520	1,180
21	2,090	2,210	2,040	1,510	*2,400	2,210	4,300	15,000	10,700	2,540	1,520	1,180
22	2,090	2,210	2,040	1,510	2,400	2,090	4,200	13,800	12,200	2,470	1,470	1,220
23	2,090	2,150	2,090	1,510	2,340	2,090	4,020	13,200	11,900	2,330	1,470	1,300
24	2,090	2,150	2,150	1,560	2,150	2,090	3,940	13,800	11,300	2,260	1,420	1,380
25	2,090	2,090	2,090	1,640	2,040	2,090	3,680	14,400	9,810	2,190	1,420	1,520
26	2,090	2,040	2,090	1,690	1,930	2,090	3,760	15,400	8,680	2,120	1,420	2,000
27	2,150	1,980	2,040	1,780	1,930	2,040	4,110	16,400	7,620	2,060	1,380	1,620
28	2,150	1,980	1,980	1,740	1,930	2,040	4,300	16,700	6,860	2,060	1,340	1,340
29	2,150	1,930	1,780	1,690	-	2,090	4,300	16,000	5,890	2,060	1,340	1,300
30	2,150	1,830	1,690	1,600	-	2,090	4,390	15,000	5,780	2,060	1,340	1,570
31	2,150	-	1,600	1,600	-	2,150	-	13,500	-	2,000	1,340	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	66,600	2,470	1,930	2,148	132,100
November	63,990	2,470	1,830	2,133	126,900
December	59,170	2,150	1,600	1,909	117,400
Calendar year 1936	2,089,650	33,000	1,080	5,709	4,145,000
January	45,700	1,780	1,310	1,474	90,640
February	58,510	2,470	1,600	2,090	116,100
March	68,160	2,540	2,040	2,199	135,200
April	100,000	4,390	2,210	3,333	198,300
May	380,130	16,700	4,490	12,260	754,000
June	304,830	12,500	5,780	10,150	604,000
July	94,270	5,320	2,000	3,041	187,000
August	52,790	2,060	1,340	1,703	104,700
September	40,530	2,000	1,180	1,351	80,390
Water year 1936-37	1,334,380	16,700	1,180	3,656	2,647,000

*Interpolated.

Clark Fork near Plains, Mont.

Location.- Water-stage recorder, lat. 47°26', long. 114°51', on lot 7, sec. 7, T. 19 N., R. 26 W., 3 miles above Plains and 7 miles below mouth of Flathead River.

Drainage area.- 19,900 square miles.

Records available.- October 1910 to September 1937.

Average discharge.- 27 years, 19,480 second-feet.

Extremes.- Maximum discharge during year, 50,000 second-feet May 30 (gage height, 11.05 feet).

1910-37: Maximum discharge, 126,000 second-feet May 28, 1928; minimum, 3,200 second-feet Feb. 8, 1936, ice present.

Remarks.- Records good except those for periods of ice effect, Dec. 7-19, Dec. 29 to Mar. 22 which were computed on basis of three discharge measurements, available gage heights, weather records, and records for other stations in Clark Fork Basin and are fair. Numerous diversions for irrigation above station. Flow somewhat regulated by natural storage in Flathead Lake.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting control method used June 14 to Sept. 30)

3.0	3,200	4.2	7,330	7.0	20,400
3.2	3,810	4.4	8,070	8.0	26,880
3.4	4,460	4.6	8,830	9.0	33,900
3.6	5,150	5.0	10,390	10.0	41,700
3.8	5,860	5.5	12,460	11.0	50,000
4.0	6,590	6.0	14,800		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,500	4,980	4,300			4,460	4,630	9,600	48,200	35,400	12,000	6,780
2	5,320	4,980	4,300			4,630	4,630	10,400	46,500	34,600	11,600	6,400
3	5,150	4,800	4,130			4,460	4,630	11,200	46,500	33,200	11,600	6,400
4	5,500	4,630	4,130			4,630	4,630	13,400	47,400	32,400	11,200	6,220
5	5,150	4,460	4,130			4,800	4,630	15,800	48,200	31,000	11,200	6,220
6	5,150	4,800	4,130	>3,300	>3,500	4,980	4,630	19,200	46,500	30,300	10,800	6,040
7	5,150	4,980	4,130			4,980	4,630	22,300	45,700	28,900	10,800	6,040
8	5,150	4,800	3,940			4,630	4,630	24,200	44,900	28,200	10,400	5,860
9	5,150	4,630	3,870			4,800	4,630	26,200	44,100	26,900	10,400	5,680
10	5,150	4,460	3,870		3,500	4,630	4,630	28,200	44,100	25,600	9,990	5,680
11	5,150	4,460	3,840		3,660	4,460	4,800	28,900	43,300	24,900	9,990	5,680
12	5,150	4,460	3,910		3,560	4,460	4,800	29,600	43,300	24,200	9,800	5,500
13	4,980	4,460	4,030		3,910	4,630	4,980	30,300	43,300	22,900	9,600	5,500
14	4,980	4,630	4,030		3,840	4,800	5,320	31,000	43,300	22,300	9,400	5,680
15	4,980	4,980	3,970		4,000	4,460	6,040	32,400	43,300	21,000	9,020	5,150
16	4,960	4,630	4,030	>3,250	4,460	4,460	6,590	33,900	44,100	20,400	9,020	5,150
17	4,980	4,460	4,070		4,460	4,460	6,400	35,400	44,900	20,400	8,830	4,980
18	4,800	4,630	4,070		4,300	4,630	6,590	36,200	44,900	19,800	8,640	4,800
19	4,800	4,630	4,070		4,130	4,630	6,590	37,700	45,700	18,600	8,450	4,800
20	4,800	4,630	4,100		4,030	4,800	6,590	39,300	44,900	18,100	8,260	4,630
21	4,980	4,630	4,130		4,070	4,800	6,960	41,700	45,700	17,500	8,260	4,630
22	4,980	4,630	4,130		4,130	4,630	7,520	41,700	46,500	16,400	8,070	4,630
23	4,800	4,630	4,130	>3,450	4,300	4,630	7,520	40,900	46,500	15,800	7,880	4,460
24	4,800	4,460	4,300		4,460	4,630	7,520	41,700	46,500	15,800	7,520	4,630
25	4,800	4,460	4,460		4,630	4,630	7,520	43,300	44,900	14,800	7,330	4,800
26	4,800	4,300	4,300	3,500	4,630	4,630	7,700	44,100	43,300	14,800	7,330	5,320
27	4,800	4,300	4,300	3,590	4,460	4,630	7,880	46,500	41,700	13,800	7,330	5,150
28	4,980	4,300	4,300	3,560	4,300	4,460	8,260	48,200	40,100	13,800	6,780	4,980
29	4,800	4,300	3,970	3,470	-	4,630	8,450	49,100	37,700	13,400	6,780	4,630
30	4,800	4,130	3,860	3,400	-	4,630	9,020	50,000	36,900	12,900	6,780	4,980
31	4,800	-	3,590	3,400	-	4,630	-	49,100	-	12,500	6,780	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	155,310	5,500	4,800	5,010	308,100
November	137,630	4,980	4,130	4,588	273,000
December	126,320	4,460	3,590	4,075	250,600
Calendar year 1936	5,861,290	80,800	3,200	16,010	11,630,000
January	103,670	3,590	-	3,344	205,600
February	110,330	4,630	-	3,940	218,800
March	143,720	4,980	4,460	4,636	285,100
April	183,350	9,020	4,630	6,112	363,700
May	1,011,500	50,000	9,600	32,630	2,006,000
June	1,332,900	48,200	36,900	44,430	2,644,000
July	680,600	35,400	12,500	21,950	1,350,000
August	281,840	12,000	6,780	9,092	559,000
September	161,400	6,780	4,460	5,380	320,100
Water year 1936-37	4,428,570	50,000	-	12,130	8,784,000

Clark Fork near Heron, Mont.

Location.- Water-stage recorder, lat. 48°04', long. 115°59', in sec. 28, T. 27 N., R. 34 W., 600 feet above Dead Horse Creek and 1½ miles northwest of Heron.

Drainage area.- 21,800 square miles.

Records available.- September 1928 to September 1937.

Extremes.- Maximum discharge during year, 54,900 second-feet May 29 (gage height, 27.63 feet); minimum, 1,810 second-feet, regulated, Jan. 1 (gage height, 8.09 feet), from rating curve extended below 4,000 second-feet.

1928-37: Maximum discharge, 137,000 second-feet June 17, 1933 (gage height, 46.62 feet, present datum); minimum, 620 second-feet, during period of extreme regulation, Dec. 23, 1935, (gage height, 7.59 feet), from rating curve extended below 4,000 second-feet.

Maximum stage known, 59.1 feet, present datum, June 1894.

Remarks.- Records good except those for period of ice effect, Jan. 3 to Feb. 28, which were computed on basis of one discharge measurement, partial gage heights, weather records, and records for stations near Plains, Mont., and at Priest River, Idaho and are poor. Operation of power plant at Thompson Falls causes diurnal fluctuation during low-water periods. Considerable water diverted for irrigation from tributaries upstream.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,710	5,240	4,640	2,970		4,640	5,240	12,700	53,000	38,300	13,400	7,070
2	5,710	5,240	4,790	3,460		4,790	5,390	13,900	52,200	37,200	13,200	7,250
3	5,710	5,390	4,340		3,800	4,940	5,550	16,500	51,600	35,800	12,700	6,890
4	5,870	5,390	5,240			4,790	5,550	20,700	51,800	35,100	12,300	7,070
5	5,710	5,090	5,240			4,490	5,710	23,600	51,800	33,800	12,300	7,250
6	5,710	4,940	5,240	3,400		4,940	5,870	25,000	51,400	32,400	12,100	6,030
7	5,710	4,940	4,640			4,940	5,870	26,600	50,300	31,400	11,900	6,370
8	5,710	5,550	4,940			5,090	5,710	28,800	49,200	29,800	11,600	6,540
9	5,550	4,790	3,960		3,900	5,240	5,710	30,400	48,000	28,600	11,400	6,370
10	5,550	4,940	4,340			5,390	6,030	33,100	47,700	27,800	11,200	6,370
11	5,550	4,940	3,250			5,240	5,710	34,500	47,300	26,900	11,000	6,370
12	5,550	4,790	3,960			5,550	6,710	34,500	46,600	25,600	10,800	6,030
13	5,550	4,940	4,250		4,200	5,550	6,370	35,600	46,200	25,000	10,600	6,030
14	5,550	4,940	4,640			5,870	7,250	36,900	45,800	24,100	10,400	6,870
15	5,550	4,940	4,490			5,550	8,750	39,000	45,800	23,200	10,200	6,030
16	5,240	5,390	4,420	3,500		5,710	9,950	40,400	46,200	22,400	9,550	5,550
17	5,240	5,090	4,640			5,090	10,400	41,100	46,600	21,800	9,550	5,550
18	5,550	4,790	4,640			5,090	9,350	41,800	46,900	21,200	9,550	5,550
19	5,390	5,090	4,790			5,240	8,750	43,600	48,000	20,700	9,350	5,550
20	5,390	5,090	4,790		4,500	5,240	9,350	45,100	48,000	19,300	8,950	5,550
21	5,240	5,090	4,640			5,240	10,400	46,200	47,700	18,300	8,560	5,550
22	5,240	5,090	4,940			5,090	11,200	47,300	48,000	18,300	8,560	5,390
23	5,390	5,090	5,240			4,940	11,200	46,900	48,600	17,500	8,370	5,390
24	5,390	5,090	5,090			4,790	10,600	46,600	48,400	17,200	8,180	5,240
25	5,240	4,940	4,940			4,940	10,600	48,000	47,300	16,800	7,800	5,390
26	5,240	4,790	5,550	3,700	4,700	5,090	10,600	50,300	45,800	16,200	7,800	5,550
27	5,240	4,790	5,390			5,390	11,400	51,800	44,300	15,600	7,990	5,870
28	5,240	4,790	5,090			4,640	12,500	53,700	42,500	15,300	7,800	5,870
29	5,240	4,640	5,710		-	4,790	12,700	54,900	41,100	15,000	7,430	5,240
30	5,240	4,420	5,240		-	5,090	12,500	54,600	39,700	14,600	7,250	5,240
31	5,240	-	3,600		-	5,390	-	54,100	-	13,400	7,250	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	169,440	5,870	5,240	5,466	336,100
November	150,240	5,390	4,420	5,008	298,000
December	146,680	5,710	3,250	4,732	290,900
Calendar year 1936	6,539,340	89,600	1,400	17,870	12,970,000
January	109,330	-	2,970	3,527	216,900
February	118,600	-	-	4,232	235,000
March	158,770	5,870	4,490	5,122	314,900
April	251,920	12,700	5,240	8,397	499,700
May	1,177,900	54,900	12,700	38,000	2,336,000
June	1,428,200	53,000	39,700	47,610	2,833,000
July	739,000	38,300	13,400	23,840	1,466,000
August	309,040	13,400	7,250	9,969	613,000
September	180,020	7,250	5,240	6,001	357,100
Water year 1936-37	4,939,040	54,900	2,970	13,530	9,797,000

Pend Oreille Lake at Hope, Idaho

Location.- Water-stage recorder, lat. 48°15', long. 116°18', in lot 2, sec. 35, T. 57 N., R. 1 E., at floating dock near Northern Pacific Railway station at Hope. Zero of gage is 2,000.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Drainage area.- 22,900 square miles.

Records available.- September 1921 to September 1937, March 1914 to September 1922, at Sandpoint.

Extremes.- Maximum water-surface elevation during year, 2,057.29 feet June 7; minimum, 2,046.55 feet Jan. 29.
, 1921-37: Maximum water-surface elevation, 2,068.78 feet June 21, 1933; minimum, 2,046.47 feet Feb. 17, 1936.
Maximum water-surface elevation known, 2,076.08 feet in June 1894.

Remarks.- Records excellent. Considerable water diverted from tributaries of Clark Fork for irrigation.

Gage height, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47.18	46.84	46.65	46.90	46.60	46.73	47.02	49.20	56.99	56.02	50.43	48.05
2	47.19	46.82	46.64	46.91	46.60	46.76	47.06	49.26	57.08	55.83	50.32	48.01
3	47.16	46.81	46.63	46.87	46.60	46.77	47.10	49.38	57.18	55.62	50.19	47.96
4	47.16	46.80	46.63	46.86	46.63	46.77	47.12	49.60	57.23	55.42	50.07	47.92
5	47.16	46.80	46.66	46.84	46.66	46.77	47.16	49.92	57.27	55.22	49.97	47.98
6	47.13	46.79	46.67	46.86	46.67	46.77	47.20	50.23	57.28	55.01	49.87	47.96
7	47.13	46.77	46.72	46.86	46.68	46.77	47.23	50.51	57.27	54.79	49.74	47.91
8	47.12	46.77	46.74	46.86	46.69	46.78	47.26	50.82	57.22	54.56	49.66	47.87
9	47.11	46.76	46.76	46.85	46.68	46.79	47.27	51.13	57.16	54.37	49.58	47.83
10	47.10	46.75	46.74	46.84	46.67	46.79	47.32	51.47	57.10	54.15	49.48	47.80
11	47.10	46.74	46.70	46.82	46.70	46.80	47.35	51.83	57.06	53.93	49.40	47.75
12	47.09	46.73	46.67	46.77	46.72	46.80	47.37	52.14	56.99	53.71	49.31	47.72
13	47.09	46.72	46.65	46.74	46.72	46.80	47.44	52.41	56.90	53.53	49.23	47.68
14	47.11	46.72	46.65	46.69	46.74	46.82	47.58	52.69	56.80	53.35	49.18	47.64
15	47.10	46.71	46.65	46.69	46.74	46.84	47.80	52.99	56.72	53.14	49.07	47.60
16	47.08	46.70	46.64	46.69	46.76	46.86	48.00	53.28	56.68	52.94	48.98	47.56
17	47.06	46.71	46.64	46.70	46.79	46.87	48.15	53.57	56.63	52.76	48.91	47.53
18	47.05	46.71	46.64	46.69	46.80	46.89	48.27	53.83	56.60	52.58	48.83	47.50
19	47.02	46.70	46.65	46.66	46.81	46.90	48.35	54.10	56.64	52.42	48.76	47.46
20	47.01	46.70	46.65	46.63	46.81	46.89	48.43	54.39	56.67	52.22	48.69	47.44
21	46.99	46.69	46.67	46.62	46.84	46.88	48.57	54.66	56.69	52.02	48.64	47.41
22	46.97	46.69	46.70	46.63	46.83	46.87	48.67	54.92	56.72	51.85	48.57	47.38
23	46.96	46.69	46.62	46.64	46.81	46.88	48.76	55.15	56.77	51.66	48.56	47.34
24	46.94	46.68	46.90	46.64	46.78	46.89	48.81	55.35	56.79	51.51	48.48	47.29
25	46.92	46.68	46.92	46.64	46.78	46.89	48.83	55.55	56.76	51.37	48.41	47.27
26	46.92	46.67	46.90	46.63	46.77	46.89	48.86	55.78	56.70	51.20	48.37	47.24
27	46.91	46.66	46.90	46.68	46.77	46.90	48.90	56.03	56.62	51.07	48.31	47.22
28	46.89	46.66	46.89	46.56	46.75	46.90	48.98	56.30	56.51	50.94	48.26	47.22
29	46.89	46.65	46.88	46.57	-	46.91	49.06	56.54	56.36	50.81	48.20	47.21
30	46.88	46.65	46.89	46.60	-	46.92	49.14	56.72	56.20	50.67	48.14	47.17
31	46.87	-	46.89	46.59	-	46.97	-	56.87	-	50.53	48.09	-

Clark Fork at Priest River, Idaho

Location.- Water-stage recorder, lat. 48°10'30", Long. 116°55'30", in lot 4, sec. 26, T. 56 N., R. 5 W., at Priest River. Zero of gage 2,000 feet above mean sea level. Discharge measurements made at highway bridge at Newport, Wash., 6 miles downstream.
Drainage area.- 24,200 square miles.
Records available.- June 1903 to April 1905 and October 1921 to September 1937. June 1903 to September 1921, at Newport, Wash., 6 miles downstream; records equivalent.
Average discharge.- 34 years, 25,570 second-feet (adjusted for storage in Pend Oreille Lake).
Extremes.- Maximum discharge during year, 59,100 second-feet June 7 (elevation, 2,053.69 feet); minimum, probably less than 3,000 second-feet sometime during period of ice effect, Dec. 30 to Mar. 9.
1903-37: Maximum discharge, 136,000 second-feet June 15, 1913, June 21, 1933; minimum, 2,200 second-feet Dec. 12, 1919.
Maximum stage known, 38.9 feet June 1894, from floodmarks, referred to Newport gage (estimated discharge, 217,000 second-feet).
Remarks.- Records excellent except those for period of ice effect, Dec. 30 to Mar. 9, which were computed on basis of one discharge measurement, gage heights, weather records, and records for station below Z Canyon and are poor. Discharge for Dec. 17, 18 interpolated. Numerous small diversions from upper tributaries for irrigation. Flow subject to natural regulation in several lakes and to slight regulation during log-driving seasons, owing to operations of flash dam on tributary of Priest River. Part of monthly-discharge table adjusted for natural storage in Pend Oreille Lake. Gage-height record collected in cooperation with U. S. Weather Bureau.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

43.0	2,600	44.5	6,200	47.0	16,800	50.0	33,560	53.0	54,250
43.5	3,600	45.0	7,950	48.0	21,780	51.0	40,250	54.0	61.250
44.0	4,750	46.0	12,100	49.0	27,460	52.0	47,250		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,100	6,820	5,390	3,900	4,000	5,500	7,610	16,700	56,700	50,200	20,200	10,100
2	6,960	6,260	5,360	4,000	4,100	5,600	7,680	17,100	57,200	48,900	19,900	10,000
3	6,850	6,260	5,440	4,500	4,200	5,700	7,870	17,400	57,800	48,000	19,400	9,880
4	6,750	6,390	5,530	4,300	4,300	5,750	7,910	17,700	58,100	46,700	18,900	9,880
5	6,880	6,260	5,650	4,600	4,350	5,700	8,110	18,900	58,300	45,300	18,300	9,920
6	6,780	6,460	5,800	4,100	4,400	5,600	8,340	20,400	58,200	44,300	17,900	9,960
7	6,780	6,200	5,980	3,700	4,500	5,800	8,300	22,100	58,500	43,000	17,400	9,670
8	6,780	6,140	6,110	4,000	4,500	5,950	8,460	22,900	58,200	41,600	17,000	9,630
9	6,920	6,230	6,140	4,200	4,200	6,100	8,460	24,400	57,600	40,200	16,800	9,390
10	7,060	6,260	6,080	4,300	4,500	6,260	8,740	25,300	57,600	38,800	16,300	9,180
11	6,990	6,300	6,010	4,100	4,800	6,490	8,860	27,300	57,300	37,700	16,000	9,020
12	6,990	6,330	5,980	4,300	4,900	6,960	9,140	28,800	56,600	36,600	15,800	8,740
13	7,130	6,170	5,800	4,700	5,050	7,130	9,020	29,900	56,400	35,200	15,000	8,660
14	7,100	6,110	5,830	4,700	5,150	6,780	10,100	30,900	55,500	34,400	14,700	8,460
15	7,100	5,950	5,920	4,700	5,200	6,650	10,800	32,900	54,700	33,400	14,500	8,420
16	6,850	5,920	5,770	4,700	5,250	6,750	11,500	34,600	54,200	32,400	14,300	8,180
17	6,720	5,860	5,760	4,600	5,300	6,880	12,200	36,000	53,900	31,500	13,900	7,990
18	6,680	5,890	5,750	4,500	5,300	6,880	12,600	37,300	54,000	30,500	13,500	7,870
19	6,590	5,860	5,740	4,300	5,200	6,920	12,600	38,800	54,200	29,400	13,300	7,840
20	6,550	5,980	5,800	3,000	5,000	7,130	13,100	40,500	54,500	28,700	13,100	7,570
21	6,720	5,980	5,860	4,000	5,300	7,310	13,500	42,400	54,700	27,400	12,800	7,380
22	6,620	5,800	5,860	4,300	5,400	7,200	14,200	43,700	54,600	26,900	12,300	7,200
23	6,650	5,830	6,390	4,400	5,500	6,920	14,500	45,400	54,700	25,900	12,300	7,060
24	6,590	5,890	6,750	4,500	5,600	7,100	15,000	46,800	55,000	25,100	12,200	7,020
25	6,620	5,830	6,680	4,600	5,600	7,100	15,300	47,700	54,900	24,500	11,800	6,960
26	6,520	5,830	6,780	4,700	5,550	6,990	15,400	49,100	54,700	23,700	11,500	6,920
27	6,520	5,830	7,100	4,800	5,500	7,130	15,100	50,500	54,200	23,100	11,200	6,920
28	6,460	5,770	6,880	4,900	5,450	7,130	15,600	51,900	53,600	22,400	11,000	7,160
29	6,460	5,560	6,460	4,000	-	7,200	16,000	53,700	53,500	21,900	10,800	7,020
30	6,360	5,500	6,000	3,300	-	7,240	16,400	55,100	51,400	21,100	10,700	7,270
31	6,390	-	5,000	3,700	-	7,420	-	55,900	-	20,700	10,400	-

Month	Observed				Gain or loss in storage in Pend Oreille Lake (acre-feet)	Adjusted for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October	7,130	6,360	6,757	415,500	-27,160	388,300	6,315	0.261	0.30
November	6,820	5,500	6,049	359,900	-18,040	341,900	5,746	.237	.26
December	7,100	5,000	5,987	368,100	+19,680	387,800	6,307	.261	.30
Calendar year 1936	65,800	3,530	20,570	14,930,000	+4,960	14,940,000	20,580	.850	11.57
January	4,900	3,000	4,271	262,600	-24,600	238,000	3,871	.160	.18
February	5,600	4,000	4,932	273,900	+13,120	287,000	5,168	.214	.22
March	7,420	5,500	6,622	407,100	+18,040	425,100	6,915	.286	.33
April	16,400	7,610	11,410	679,100	+182,400	861,500	14,480	.598	.67
May	55,900	16,700	34,900	2,146,000	+680,900	2,827,000	45,980	1.90	2.19
June	58,500	51,400	55,690	3,314,000	-60,470	3,254,000	54,690	2.26	2.52
July	50,200	20,700	33,530	2,062,000	-501,100	1,561,000	25,390	1.05	1.21
August	20,200	10,400	14,620	898,900	-208,200	690,700	11,230	.464	.53
September	10,100	6,920	8,376	498,400	-76,950	421,400	7,082	.293	.33
Water year 1936-37	58,500	3,000	16,140	11,690,000	-2,380	11,680,000	16,140	.667	9.04

Clark Fork below Z Canyon, near Metaline Falls, Wash.

(International gaging station)

Location.- Water-stage recorder, lat. 48°59', long. 117°21', in lot 2, sec. 11, T. 40 N., R. 43 E., three-quarters of a mile below Z Canyon and 10 miles below Metaline Falls.

Drainage area.- 25,200 square miles.

Records available.- October 1928 to September 1937. November 1908 to September 1910 and October 1912 to September 1928, at Metaline Falls.

Average discharge.- 25 years (1912-37), 26,180 second-feet (adjusted for storage in Pend Oreille Lake).

Extremes.- Maximum discharge during year, 60,200 second-feet June 8 (gage height, 28.30 feet); minimum daily discharge, 3,500 second-feet Jan. 20, when stage-discharge relation was affected by ice.

1912-37: Maximum discharge, 139,000 second-feet June 16, 1913 (gage height, 41.2 feet, Metaline Falls gage); minimum, 2,500 second-feet Dec. 12, 1919 (gage height, -2.4 feet, Metaline Falls gage).

Remarks.- Records excellent except those for period of ice effect, Dec. 30 to Mar. 6, which were computed on basis of one discharge measurement, gage heights, weather records, and records for stations on Columbia River at Kettle Falls and at Trail, B. C., and are poor. Numerous small diversions from upper tributaries for irrigation. No artificial regulation of any consequence. Flow regulated by natural storage in Pend Oreille Lake. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

10.0	5,720	14.0	14,950	20.0	34,900	30.0	65,200
11.0	7,600	15.0	18,100	22.0	40,900		
12.0	9,720	16.0	21,500	24.0	46,900		
13.0	12,180	18.0	28,520	26.0	53,100		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,450	6,420	5,850	5,000	4,300	5,900	8,090	16,600	57,000	53,200	21,800	10,700
2	7,430	6,710	5,790	4,500	4,400	6,000	8,270	17,100	58,000	52,100	21,000	10,400
3	7,300	6,610	5,620	4,800	4,450	6,050	8,370	17,800	55,200	50,700	20,500	10,200
4	7,220	6,400	5,700	4,650	4,550	6,100	8,540	18,400	59,200	49,700	19,900	10,100
5	7,110	6,400	5,830	4,500	4,650	6,200	8,730	19,100	59,400	48,500	19,300	10,300
6	7,090	6,380	5,830	4,700	4,750	6,300	8,760	19,300	59,700	47,000	18,700	10,200
7	7,110	6,440	5,970	4,900	4,800	6,420	8,930	20,800	59,800	45,800	18,100	10,300
8	7,070	6,440	5,970	4,300	4,800	6,610	9,000	22,900	59,900	44,700	17,800	10,100
9	7,050	6,350	6,180	4,300	4,500	6,820	9,110	23,900	59,900	43,500	17,200	9,770
10	7,050	6,290	6,210	4,500	4,800	6,820	9,410	25,400	59,400	42,200	16,900	9,500
11	7,030	6,210	6,140	4,400	5,000	7,030	9,550	26,500	59,200	41,000	16,600	9,340
12	6,990	6,160	6,060	4,700	5,100	7,240	9,620	28,200	58,800	40,000	16,200	9,300
13	6,880	6,180	6,010	5,000	5,200	7,600	10,200	29,900	58,300	39,000	16,000	9,090
14	6,940	6,190	5,990	5,000	5,350	7,810	10,800	31,300	57,900	37,900	15,400	8,840
15	6,970	6,230	5,920	5,000	5,450	7,410	11,500	32,600	57,200	36,800	14,800	8,760
16	6,990	6,250	6,010	5,000	5,500	7,160	12,000	34,200	56,500	35,800	14,700	8,670
17	7,030	6,250	6,160	4,900	5,450	7,010	12,500	36,000	56,100	34,900	14,500	8,520
18	6,990	6,230	5,970	4,800	5,450	7,090	12,900	37,100	55,800	33,900	14,200	8,330
19	6,920	6,210	5,880	4,600	5,400	7,220	13,300	38,400	55,800	33,000	13,700	8,170
20	6,860	6,190	5,760	3,500	5,400	7,200	13,600	39,600	56,100	31,600	13,500	8,150
21	6,860	6,270	5,990	4,200	5,500	7,280	13,900	40,900	56,200	30,800	13,300	7,980
22	6,880	6,350	6,270	4,600	5,600	7,450	13,900	42,600	56,500	29,700	13,000	7,770
23	6,820	6,230	6,380	4,700	5,700	7,560	14,300	43,900	56,800	28,900	12,800	7,580
24	6,710	6,160	6,540	4,800	5,800	7,330	14,700	45,200	56,500	28,000	12,400	7,430
25	6,630	6,160	6,990	4,900	6,000	7,330	15,000	46,900	56,800	27,200	12,300	7,390
26	6,650	6,180	7,030	5,000	5,900	7,430	15,400	48,400	56,800	26,500	12,100	7,280
27	6,610	6,160	7,010	5,100	5,800	7,410	15,800	49,600	56,500	25,500	11,800	7,220
28	6,610	6,160	7,200	5,200	5,850	7,490	15,800	51,100	55,900	24,900	11,400	7,140
29	6,570	6,140	7,220	4,200	-	7,620	15,900	52,400	55,200	24,200	11,200	7,140
30	6,540	5,990	6,900	3,600	-	7,700	16,200	54,000	54,400	23,300	11,100	7,090
31	6,480	-	6,500	4,100	-	7,880	-	55,800	-	22,400	10,900	-

Month	Observed				Gain or loss in storage in Pend Oreille Lake (acre-feet)	Adjusted for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October	7,450	6,480	6,930	426,100	-27,160	398,900	6,487	0.257	0.30
November	6,710	5,990	6,278	373,600	-18,040	355,600	5,976	.237	.26
December	7,220	5,620	6,222	382,600	+19,680	402,300	6,543	.260	.30
Calendar year 1936	87,200	3,800	21,240	15,420,000	+4,960	15,430,000	21,250	.843	11.48
January	5,200	3,500	4,627	284,500	-24,600	259,900	4,227	.168	.19
February	6,000	4,300	5,195	288,500	+13,120	301,600	5,431	.216	.22
March	7,880	5,900	7,047	433,300	+18,040	451,300	7,340	.291	.34
April	16,200	8,090	11,800	702,300	+182,400	884,700	14,870	.590	.66
May	55,800	16,600	34,380	2,114,000	+680,900	2,795,000	45,460	1.80	2.08
June	59,900	54,400	57,460	3,419,000	-60,470	3,359,000	56,450	2.24	2.50
July	53,200	22,400	36,540	2,247,000	-501,100	1,746,000	28,400	1.13	1.30
August	21,800	10,900	15,260	938,400	-208,200	730,200	11,880	.471	.54
September	10,700	7,090	8,759	521,200	-76,950	444,200	7,465	.296	.33
Water year 1936-37	59,900	3,500	16,760	12,130,000	-2,380	12,130,000	16,750	.665	9.02

East Fork of Rock Creek near Philipsburg, Mont.

Location.- Staff gage, lat. 46°08', long. 113°22', in sec. 5, T. 4 N., R. 14 W., 200 feet above Flint Creek Canal, 300 feet below Rock Creek dam, 3 miles above mouth of Meadow Creek, and 14 miles southwest of Philipsburg. Prior to Oct. 10 at site 600 feet upstream. Oct. 10 to Aug. 20 at site 400 feet downstream.

Records available.- June 1935 to September 1937.

Extremes.- Maximum discharge observed during year, 132 second-feet June 22 (gage height, 2.72 feet); minimum, 5.0 second-feet Feb. 20-26 and Mar. 1-3 (gage height, 0.54 foot). 1935-37: Maximum discharge observed, 289 second-feet June 15, 1935 (gage height, 3.06 feet); minimum, 3.4 second-feet Apr. 10, 1936 (gage height, 0.33 foot).

Remarks.- Records fair except those for period of ice effect, Jan. 1-31, which were computed on basis of gage heights and weather records and are poor. Flint Creek Canal began diverting water on June 27. Records for June 27 to Aug. 20, when gage was below diversion to Flint Creek Canal, include estimated flow in canal. Flow regulated by storage above Rock Creek Dam, which was completed about Oct. 15. Storage capacity of Rock Creek Reservoir is 16,000 acre-feet. Gage read once or twice daily.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	14	12		8.0	5.0	7.6	10	18			21
2	*15	14	12		7.6	5.0	8.0	*10	19			20
3	*15	14	12		7.6	5.0	8.0	10	45	28	26	20
4	*15	14	12		*7.6	5.7	*8.1	10	42			21
5	*15	14	*12		7.6	5.7	8.2	10	39			19
6	*14	14	12		6.0	5.7	8.2	10	*39			19
7	*14	14	11		*6.0	*5.7	8.2	10	39			19
8	*14	*11	*12	9	6.0	5.7	8.2	10	36	30	24	19
9	*14	7.6	12		6.0	6.4	9.0	*10	36			19
10	14	7.6	12		*6.0	5.8	9.0	11	32			18
11	*14	7.6	12		6.0	6.0	*9.0	11	36			18
12	15	8.0	12		*6.0	6.0	9.0	11	42			18
13	14	8.0	*12		6.0	6.0	9.2	11	39	17	23	18
14	14	9.0	11		*5.8	*5.9	10	11	34			18
15	14	10	11		5.7	5.8	9.2	12	39			18
16	14	12	*11		*5.7	5.8	10	12	54			18
17	14	14	11		5.7	7.0	9.5	13	76			18
18	*14	13	11		5.3	7.0	*9.6	14	60	26	21	18
19	14	13	11		5.3	7.0	9.8	18	42			*18
20	14	13	*10		5.0	7.2	9.8	24	69			18
21	14	13	10		*5.0	*7.2	10	25	80		19	18
22	14	*13	11		5.0	7.2	10	26	123		20	*18
23	14	13	11		*5.0	6.8	9.5	*26	86	24	20	18
24	14	*13	10	8	5.0	6.8	9.5	26	66		21	*18
25	*14	*13	*10		5.0	7.0	*10	26	57		23	18
26	14	13	10		5.0	7.4	11	39	42		23	18
27	14	12	*10		5.3	7.4	11	28			23	18
28	14	12	10		*5.2	*7.4	11	32	33		22	18
29	14	12	10		-	7.4	10	36		26	*22	18
30	13	12	9.5		-	7.6	10	29			22	18
31	13	-	9.5		-	7.6	-	22	-		21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	438	15	13	14.1	869
November	357.8	14	7.6	11.9	710
December	342.0	12	9.5	11.0	678
Calendar year 1936	8,797.8	188	3.4	24.0	17,450
January	263	-	-	8.48	522
February	165.4	8.0	5.0	5.91	328
March	199.2	7.6	5.0	6.43	395
April	279.6	11	7.6	9.32	555
May	553	39	10	17.8	1,100
June	1,422	123	18	47.4	2,820
July	781	-	-	25.2	1,550
August	706	-	19	22.8	1,400
September	555	21	18	18.5	1,100
Water year 1936-37	6,062.0	123	5.0	16.6	12,030

Nevada Creek near Finn, Mont.

Location.- Staff gage, lat. 46°48', long. 112°48', in NE¼ sec. 13, T. 12 N., R. 10 W., 6 miles west of Finn.

Records available.- May 1934 to September 1937.

Extremes.- Maximum discharge observed during year, 178 second-feet Apr. 13; maximum stage, 3.64 feet Apr. 10 (ice on control); minimum discharge, 4.6 second-feet Sept. 18-20 (gage height, 0.94 foot).
1934-37: Maximum discharge, 1,200 second-feet (estimated) Apr. 11, 1936 (gage height, 4.26 feet, from floodmark); minimum, that of Sept. 18-20, 1937.

Remarks.- Records good except those for periods of ice effect, Oct. 30 to Nov. 2, Nov. 13 to Apr. 15 which were computed on basis of two discharge measurements, gage heights, and weather records, and are poor. Gage read twice daily. Some diversions above gage.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.6	9.6					13	37	31	19	12	5.6
2	9.9	9.2					13	41	27	18	11	5.4
3	9.6	9.6					13	51	25	17	11	5.1
4	9.9	11					12	52	27	17	9.6	5.6
5	12	11					13	56	28	18	9.2	6.8
6	10	11				10	15	55	28	21	8.4	6.5
7	9.9	11					17	52	26	16	7.6	6.2
8	9.6	11					29	53	29	17	7.6	5.9
9	9.9	12					30	48	24	16	8.4	5.6
10	9.6	11					42	49	28	16	9.2	5.4
11	9.9	12					48	49	32	15	9.2	5.4
12	9.6	12					53	47	38	15	9.2	5.4
13	9.2	12					102	31	41	14	8.4	5.4
14	9.9	12					78	35	31	14	7.6	5.1
15	9.9	12					62	38	28	15	7.6	5.1
16	9.9	12				11	56	44	29	15	7.3	5.1
17	9.6	12					39	42	34	14	6.2	4.8
18	9.2	12					42	42	30	12	5.9	4.6
19	9.9	11					56	53	31	12	5.6	4.6
20	9.9	11					50	53	31	11	5.1	4.6
21	9.6	11					51	48	29	9.9	5.9	7.3
22	9.6	10					27	41	44	9.2	5.6	9.6
23	9.9	9.6					26	34	32	8.4	6.2	8.4
24	9.9	8.8					25	33	28	7.6	6.2	8.0
25	10	8.8					36	34	26	7.6	5.9	8.0
26	9.6	8.8				12	41	51	26	8.0	5.6	7.3
27	12	8.8					47	40	22	8.0	5.6	7.6
28	11	9.2					51	38	21	8.8	5.9	8.0
29	9.9	9.2					48	36	20	9.2	6.5	9.2
30	10	8.4					39	34	20	8.8	6.5	8.4
31	10	-					-	32	-	8.4	5.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	308.5	12	9.2	9.95	612
November	317.0	12	8.4	10.6	629
December	279.0	-	-	9.0	553
Calendar year 1936	9,849.7	340	8.4	26.9	19,540
January	294.5	-	-	9.5	584
February	280.0	-	-	10.0	555
March	342.0	-	-	11.0	678
April	1,174	102	12	39.1	2,330
May	1,349	56	31	43.5	2,680
June	866	44	20	28.9	1,720
July	405.9	21	7.6	13.1	805
August	231.9	12	5.1	7.48	460
September	190.0	9.6	4.6	6.33	377
Water year 1936-37	6,037.8	102	4.6	16.5	11,980

Bitterroot River near Darby, Mont.

Location.- Wire-weight gage, lat. 45°59', long. 114°09', in NE¼ sec. 36, T. 3 N., R. 21 W., at bridge on U. S. Highway 93, a quarter of a mile below mouth of Chaffin Creek and 4 miles southeast of Darby.

Records available.- April to September 1937.

Extremes.- Maximum discharge observed during April to September, 2,650 second-feet May 19 (gage height, 4.54 feet); minimum, 104 second-feet Sept. 19 (gage height, 1.18 feet).

Remarks.- Records good. Gage read twice daily. Diversions for irrigation above gage.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	487	1,570	547	244	120
2							-	680	1,670	680	230	118
3							-	910	1,880	611	202	118
4							169	1,370	1,770	579	190	126
5							172	1,880	1,570	517	183	145
6							177	1,770	1,470	579	177	145
7							174	1,670	1,370	487	169	142
8							169	1,770	1,370	458	160	138
9							169	1,880	1,470	430	155	138
10							190	1,880	1,570	404	155	120
11							216	1,880	1,570	378	158	120
12							209	1,670	1,470	378	155	120
13							237	1,770	1,370	430	145	116
14							287	1,990	1,370	404	140	114
15							404	2,100	1,470	404	135	114
16							404	2,100	1,470	354	130	114
17							354	2,210	1,570	331	124	112
18							331	2,320	1,370	309	122	110
19							354	2,650	1,370	309	124	106
20							354	2,430	1,770	287	122	112
21							404	2,210	1,670	268	120	145
22							404	2,210	1,670	268	120	160
23							354	2,540	1,470	263	122	138
24							354	2,320	1,180	248	118	138
25							331	2,430	952	230	118	140
26							354	2,650	870	248	118	140
27							517	2,430	792	268	118	138
28							611	2,650	792	268	118	138
29							547	2,430	753	244	116	138
30							458	1,990	753	237	118	140
31							-	1,670	-	234	120	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April 4-30	8,704	611	169	322	17,260
May	60,947	2,650	487	1,966	120,900
June	41,412	1,880	753	1,380	82,140
July	11,652	680	230	376	23,110
August	4,526	244	116	146	8,980
September	3,863	160	106	129	7,660
The period					260,000

East Fork of Bitterroot River at Conner, Mont.

Location.- Wire-weight gage, lat. 45°56', long. 114°08', in SE¼ sec. 7, T. 2 N., R. 20 W., at highway bridge at Conner, about half a mile above confluence with West Fork. September 1910 to September 1916, at site 2½ miles upstream.

Records available.- April to September 1937.

Extremes.- Maximum discharge observed during April to September, 700 second-feet May 26 (gage height, 3.74 feet); minimum, 1.4 second-feet Aug. 17 (gage height, 0.70 foot).

Remarks.- Records good except those below 30 second-feet, which are poor. Gage read twice daily.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	110	411	112	55	8.0
2							-	141	391	118	53	8.0
3							-	184	411	106	49	8.8
4							44	196	411	99	45	18
5							49	251	372	92	44	13
6							52	251	353	112	44	15
7							46	267	335	99	38	14
8							49	283	317	95	38	13
9							50	300	335	92	37	13
10							53	335	353	88	39	16
11							50	335	317	79	35	19
12							55	317	335	80	28	19
13							66	317	335	118	26	19
14							74	353	335	114	21	16
15							92	391	335	104	21	12
16							95	391	317	87	19	18
17							87	411	353	74	6.8	18
18							77	452	317	70	10	19
19							80	602	317	67	9.6	25
20							80	580	335	59	5.3	21
21							97	472	335	58	5.3	36
22							85	493	317	55	8.8	39
23							73	557	300	59	8.8	36
24							70	557	251	54	8.4	34
25							80	602	236	48	8.4	36
26							90	650	209	60	7.7	34
27							116	602	209	67	9.2	36
28							136	650	172	68	8.4	36
29							118	602	141	59	9.2	37
30							103	536	130	55	8.8	38
31							-	472	-	49	8.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April 4-30	2,067	136	44	76.6	4,100
May	12,660	650	110	408	25,110
June	9,285	411	130	310	18,420
July	2,497	118	48	80.5	4,950
August	715.5	55	5.3	23.1	1,420
September	674.8	39	8.0	22.5	1,340
The period					55,340

Flathead River at Flathead, British Columbia

(International gaging station)

Location.- Staff gage, lat. 49°00', long. 114°29', at highway bridge 0.2 mile north of international boundary, 0.2 mile northwest of Flathead, British Columbia, and 7 miles northwest of Trail Creek, Mont.

Drainage area.- 450 square miles.

Records available.- March 1929 to September 1937 (except during winter).

Extremes.- Maximum observed discharge during year, 5,260 second-feet May 27 (gage height, 5.10 feet); minimum computed discharge, 80 second-feet Apr. 1; minimum observed gage height, 0.76 foot Apr. 2, 3. Discharge may have been less sometime during winter, when no records were obtained.

1923-37: Maximum observed discharge, 10,600 second-feet June 17, 1933 (gage height, 6.90 feet); minimum observed, 65 second-feet Apr. 9, 1929 (gage height, 0.76 foot).

Remarks.- Records good except those for periods of ice effect, Nov. 2-10, Apr. 1, which are fair. Discharge for July 1 interpolated. No records Dec. 5 to Mar. 31. Gage read twice daily.

This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Ratin table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.7	70	1.9	595	3.1	1,740	4.3	3,600
1.0	135	2.2	830	3.4	2,140	4.6	4,190
1.3	240	2.5	1,090	3.7	2,580	4.9	4,825
1.6	390	2.8	1,400	4.0	3,070	5.2	5,490

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	153	130	115				80	1,440	2,760	1,130	396	236
2	153	130	118				82	1,990	3,100	1,010	450	232
3	150	130	125				82	2,490	3,890	991	438	220
4	153	130	132				84	3,380	2,790	957	414	216
5	153	135	-				86	3,600	2,400	897	390	208
6	147	135	-				88	2,970	2,380	822	390	200
7	144	135	-				90	2,720	2,360	797	366	193
8	144	135	-				94	2,460	2,310	764	354	186
9	141	140	-				102	2,140	2,150	732	342	182
10	141	140	-				106	2,170	1,910	678	342	179
11	135	141	-				115	2,180	1,840	640	330	172
12	135	135	-				130	2,010	1,740	655	315	172
13	141	135	-				147	2,420	3,330	797	305	168
14	141	130	-				186	3,090	3,220	764	300	168
15	138	125	-				300	3,560	2,720	732	290	165
16	135	120	-				295	3,380	2,600	686	272	168
17	135	115	-				300	3,050	2,460	632	268	165
18	135	110	-				378	3,580	2,140	602	264	165
19	132	112	-				402	3,970	2,110	580	264	165
20	132	115	-				426	4,130	2,080	550	256	165
21	130	115	-				396	3,090	2,110	513	252	165
22	130	115	-				348	3,140	1,960	492	248	165
23	130	112	-				310	3,190	1,860	478	256	172
24	130	112	-				290	3,140	1,730	464	272	172
25	135	115	-				280	3,870	1,620	450	264	179
26	135	115	-				325	4,500	1,470	450	264	179
27	130	115	-				535	5,240	1,370	432	256	179
28	130	112	-				822	4,590	1,290	414	248	182
29	130	112	-				1,040	3,560	1,250	396	248	186
30	128	118	-				1,060	2,930	1,250	390	240	186
31	128	-	-				-	2,460	-	378	240	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	4,274	153	128	138	0.31	0.36	8,480
November	3,719	141	110	124	.28	.31	7,370
December 1-4	490	132	115	122	.27	.04	971
Calendar year							
January	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-
April	8,979	1,060	80	299	.66	.74	17,800
May	96,440	5,240	1,440	3,110	6.91	7.97	191,000
June	66,200	3,890	1,250	2,210	4.91	5.48	131,000
July	20,273	1,130	378	654	1.45	1.67	40,200
August	9,534	450	240	308	.68	.78	18,900
September	5,490	236	165	183	.41	.46	10,900
Water year							

Flathead River near Columbia Falls, Mont.

Location.- Water-stage recorder, lat. 48°29', long. 114°05', in NW¼ sec. 7, T. 31 N., R. 19 W., at Potter's ranch, three-quarters of a mile above junction with Middle Fork and 10 miles northeast of Columbia Falls.

Drainage area.- 1,620 square miles.

Records available.- September 1910 to September 1917, April 1929 to September 1937.

Extremes.- Maximum discharge recorded during year, 13,900 second-feet May 28 (gage height, 8.74 feet).
1910-17, 1929-37: Maximum discharge, 29,500 second-feet June 20, 1916 (gage height, 9.8 feet, former site and datum); minimum, 340 second-feet Jan. 26-31, 1936 (ice present).

Remarks.- Records good except those for periods of ice effect, Dec. 11-20, Dec. 30 to Apr. 9, which were computed on basis of five discharge measurements, gage heights, weather records, and records for Flathead River at Columbia Falls and are poor.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 3 to July 9)

1.2	335	2.6	1,120	5.0	4,070
1.4	390	3.0	1,470	6.0	6,090
1.6	465	3.4	1,840	7.0	8,700
1.8	560	3.8	2,280	8.0	11,820
2.0	675	4.2	2,800	9.0	15,420
2.2	810	4.6	3,410		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	550	483					397	4,420	8,700	5,640	1,650	810
2	545	429					414	5,210	9,600	5,420	1,700	789
3	540	428	350		350	430	411	6,800	11,500	4,800	1,650	775
4	535	426					411	8,700	11,200	4,610	1,560	761
5	540	424					418	10,500	9,600	4,240	1,470	754
6	545	422					429	10,500	8,110	3,900	1,420	775
7	545	411					437	9,000	8,110	3,730	1,470	796
8	535	429	340		340	470	470	8,110	8,400	3,410	1,420	782
9	525	429					510	7,300	8,110	3,100	1,380	761
10	525	429					604	7,050	7,830	2,950	1,380	740
11	520	441	*360		*395	*485	627	7,300	7,300	2,800	1,290	720
12	515	445	*380		*395	510	645	6,560	6,800	2,730	1,250	714
13	515	441	*400		397	496	775	6,560	7,830	2,660	1,250	701
14	525	441	429		394	474	1,040	7,300	10,500	2,800	1,200	688
15	535	429	437		394	488	1,470	9,000	10,500	2,730	1,160	682
16	530	425	437		394	506	1,600	9,000	10,200	2,600	1,120	669
17	525	433	429		408	560	1,520	8,700	10,500	2,400	1,120	657
18	520	433	437		400	540	1,520	9,300	10,200	2,230	1,080	651
19	523	425	441		400	545	1,650	9,900	9,300	2,100	1,040	645
20	520	418	453		384	437	1,790	10,500	9,300	2,050	1,020	645
21	510	414	474		372	375	2,100	9,900	9,300	1,940	984	645
22	506	414	501		384	355	1,840	9,000	9,300	1,830	960	639
23	496	404	588		404	366	1,700	9,600	8,700	1,840	945	639
24	496		615		418	358	1,600	9,000	7,830	1,740	984	682
25	496		582		400	352	1,520	9,300	6,800	1,700	968	663
26	496	390	530		375	350	1,700	11,200	5,860	1,700	930	663
27	492		483		*400	348	2,400	13,200	5,420	1,650	900	663
28	492		425		*390	348	3,410	13,600	5,210	1,600	870	663
29	488		360		-	352	3,900	13,200	5,000	1,560	662	720
30	483		352		-	355	3,900	11,200	5,640	1,520	855	734
31	492	-	348		-	372	-	9,300	-	1,470	840	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off: Inches	Run-off: Acre-feet
October	16,062	550	483	518	0.320	0.37	31,860
November	12,603	483	-	420	.259	.29	25,000
December	12,911	615	-	416	.257	.30	25,610
Calendar year 1936	892,353	18,200	-	2,438	1.50	20.49	1,770,000
January	10,075	-	-	325	.201	.23	19,980
February	10,554	418	-	377	.233	.24	20,930
March	13,472	560	348	435	.269	.31	26,720
April	41,208	3,900	397	1,374	.848	.95	81,730
May	280,210	13,600	4,420	9,039	5.58	6.43	555,800
June	252,650	11,500	5,000	8,422	5.20	5.80	501,100
July	85,560	5,640	1,470	2,760	1.71	1.97	169,700
August	36,728	1,700	840	1,185	.731	.84	72,850
September	21,226	810	639	708	.437	.49	42,100
Water year 1936-37	793,259	13,600	-	2,173	1.34	18.22	1,573,000

*Estimated.

Flathead River at Columbia Falls, Mont.

Location.- Water-stage recorder, lat. 48°22', long. 114°11' (revised), in SW¼ sec. 17, T. 30 N., R. 20 W., about 200 feet below highway bridge at Columbia Falls. Zero of gage is 2,978.44 feet above mean sea level.

Drainage area.- 4,440 square miles.

Records available.- May 1922 to September 1923 (fragmentary), June 1928 to September 1937.

Extremes.- Maximum discharge during year, 46,000 second-feet May 28 (gage height, 11.99 feet); minimum, 814 second-feet Dec. 28 (gage height, 0.07 foot, ice present).
1922-23, 1928-37: Maximum discharge, 102,000 second-feet June 1, 1923 (gage height, 17.3 feet); minimum, 798 second-feet Dec. 8, 1929 (gage height, -0.08 foot).

Remarks.- Records good except those for periods of ice effect, Dec. 2-20, Dec. 26 to Mar. 22, which were computed on basis of four discharge measurements, gage heights, and weather records and are fair. Discharge based on observer's daily gage readings Dec. 6-13, Jan. 7-19, Mar. 13-24. No diversions.

Rating tables, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Aug. 25 to Sept. 30)

Oct. 1 to July 18						July 19 to Sept. 30			
0.0	835	3.0	4,890	8.0	21,850	0.0	850	3.0	4,860
.5	1,270	3.5	5,990	9.0	27,000	.5	1,230	3.5	5,990
1.0	1,820	4.0	7,250	10.0	32,730	1.0	1,720		
1.5	2,460	5.0	10,150	11.0	39,060	1.5	2,330	Note.- Above gage	
2.0	3,190	6.0	13,550	12.0	45,980	2.0	3,060	height 3.4 feet same	
2.5	3,980	7.0	17,450			2.5	3,900	as preceding table.	

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,480	1,370	1,020	990	880	926	1,440	15,000	29,300	17,400	4,270	2,070
2	1,480	1,340	1,020	990	880	942	1,560	17,900	31,000	16,200	4,460	2,010
3	1,470	1,180	1,020	966	865	966	1,530	23,800	37,700	15,000	4,360	1,950
4	1,470	1,110	990	958	888	998	1,460	29,800	33,900	13,600	4,080	1,950
5	1,480	1,290	998	950	895	1,010	1,480	36,400	28,100	12,800	3,900	1,950
6	1,520	1,350	974	950	895	990	1,480	35,200	25,400	12,100	3,720	2,010
7	1,530	1,300	950	926	865	966	1,510	30,400	25,900	11,100	3,720	2,010
8	1,490	1,300	974	*930	888	974	1,570	28,100	26,400	10,200	3,640	1,950
9	1,470	1,090	1,020	934	865	1,010	1,720	25,400	25,400	9,530	3,550	1,890
10	1,450	1,240	1,080	918	850	1,020	2,060	25,400	24,800	8,930	3,550	1,890
11	1,410	1,170	1,170	950	858	1,010	2,260	25,900	23,800	8,640	3,380	1,830
12	1,400	1,210	1,150	*919	880	1,020	2,390	23,300	22,800	8,350	3,300	1,830
13	1,390	1,230	1,120	888	895	982	2,670	22,800	27,600	8,070	3,220	1,780
14	1,400	1,300	1,130	910	895	1,030	3,660	25,400	33,900	8,070	3,140	1,780
15	1,490	1,290	1,140	950	902	1,080	5,760	30,400	33,300	7,790	3,060	1,780
16	1,480	1,240	1,110	*958	902	1,080	6,480	30,400	33,300	7,250	2,910	1,780
17	1,470	1,180	1,230	966	926	1,180	5,640	31,000	35,200	6,730	2,840	1,720
18	1,420	1,170	1,290	950	918	1,190	5,310	32,700	33,300	6,480	2,760	1,720
19	1,450	1,190	1,290	950	918	1,150	5,530	33,900	29,300	6,230	2,680	1,720
20	1,420	1,190	1,280	*888	926	1,170	6,110	35,800	29,300	5,990	*2,610	1,660
21	1,410	1,180	1,270	926	942	1,170	7,520	32,200	31,600	5,640	2,540	1,720
22	1,410	1,160	1,400	942	958	1,220	6,990	29,300	32,200	5,400	2,470	1,660
23	1,400	1,140	1,690	934	942	1,180	6,230	30,400	30,400	5,180	2,470	1,720
24	1,390	1,060	1,810	926	934	1,210	5,640	29,800	25,900	4,960	2,470	1,830
25	1,380	1,040	1,670	918	948	1,140	5,310	31,600	21,800	4,760	2,400	1,780
26	1,380	1,080	1,470	918	934	1,120	6,110	39,100	19,200	4,660	2,330	1,720
27	1,380	1,030	1,270	895	950	1,090	9,230	43,800	17,900	4,560	2,260	1,720
28	1,370	1,020	1,020	880	942	1,110	13,600	45,300	17,400	4,360	2,200	1,720
29	1,370	998	974	850	-	1,150	14,700	42,500	17,000	4,360	2,200	1,830
30	1,360	1,020	990	865	-	1,210	13,900	35,200	17,900	4,190	2,140	1,890
31	1,350	-	990	880	-	1,280	-	29,800	-	3,990	2,070	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	44,370	1,530	1,350	1,431	0.322	0.37	88,010
November	35,468	1,370	998	1,182	.266	.30	70,350
December	36,510	1,810	950	1,178	.265	.31	72,420
Calendar year 1936	2,947,818	67,800	899	8,054	1.81	24.70	5,847,000
January	28,775	990	850	928	.209	.24	57,070
February	25,341	958	850	905	.204	.21	50,260
March	33,574	1,280	926	1,083	.244	.28	66,590
April	150,850	14,700	1,440	5,028	1.13	1.26	299,200
May	948,000	45,300	15,000	30,580	6.89	7.94	1,880,000
June	821,000	37,700	17,000	27,370	6.16	6.87	1,628,000
July	252,510	17,400	3,990	8,145	1.83	2.11	500,800
August	94,700	4,460	2,070	3,055	.688	.79	187,800
September	54,870	2,070	1,660	1,829	.412	.46	108,800
Water year 1936-37	2,525,968	45,300	850	6,920	1.56	21.14	5,009,000

*Interpolated.

Flathead River near Kalispell, Mont.

Location.- Chain gage, lat. 48°13', long. 114°15', in NE¼ sec. 10, T. 28 N., R. 21 W., at highway bridge 3 miles east of Kalispell. Gage readings adjusted to mean sea level (Somers datum).

Records available.- May 1928 to September 1937.

Extremes.- Maximum water-surface elevation observed during year, 2,910.42 feet May 28; minimum, 2,900.96 feet Dec. 6.
1928-37: Maximum water-surface elevation, 2,913.95 feet May 27, 1928; minimum, 2,900.70 feet Feb. 4, 5, 1936.

Remarks.- Records fragmentary but reliable; used for study of profile between Kalispell and Flathead Lake.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.50	1.46	1.10	1.86	-	1.40	1.58	7.15	9.80	7.00	3.22	1.64
2	1.48	1.46	1.08	1.86	1.74	-	-	7.25	9.90	6.90	3.24	1.60
3	-	-	1.08	-	-	1.40	1.70	8.10	9.60	6.75	3.20	1.54
4	1.48	1.44	1.04	1.84	1.70	-	-	9.00	9.25	-	3.05	-
5	1.46	-	1.00	-	1.68	-	1.82	9.55	8.95	6.55	2.90	1.54
6	1.44	1.42	.96	1.84	-	1.44	-	9.70	8.50	6.30	-	-
7	-	1.40	1.00	-	1.64	-	1.90	9.20	8.45	6.15	2.88	1.54
8	1.44	1.40	1.02	-	1.60	1.44	-	8.85	8.40	6.10	2.86	-
9	1.42	1.38	1.06	1.82	-	-	-	8.55	8.33	5.90	-	1.52
10	1.40	1.38	1.06	-	1.58	-	1.96	-	8.30	5.70	2.60	1.48
11	-	1.36	-	1.80	-	1.46	-	8.65	8.45	5.45	-	1.44
12	1.40	1.36	1.10	-	1.56	-	2.00	8.35	8.57	5.10	2.46	-
13	1.40	-	-	1.80	-	1.48	2.22	8.30	-	4.60	2.42	1.40
14	1.46	1.36	1.12	-	1.56	-	2.84	8.60	9.45	4.65	2.38	1.36
15	1.48	-	1.16	1.80	-	1.48	3.40	9.05	-	-	2.32	1.32
16	-	1.34	1.20	1.78	1.54	1.50	3.60	-	9.50	-	2.26	1.28
17	1.52	1.34	1.28	-	-	-	4.05	-	9.48	4.20	2.18	-
18	1.54	1.32	1.36	1.78	1.54	1.52	3.85	9.30	9.30	-	-	-
19	1.54	1.30	1.44	-	1.52	-	-	9.35	-	3.94	2.10	1.28
20	-	-	1.56	1.78	-	1.50	4.10	9.45	8.85	3.80	2.04	-
21	-	1.26	1.60	1.78	-	-	4.60	9.45	-	3.70	-	1.28
22	-	1.20	1.68	-	1.52	-	4.30	9.30	9.22	-	-	1.28
23	1.52	1.20	1.80	-	-	1.48	-	-	-	3.55	1.92	-
24	1.51	1.18	1.94	-	1.50	-	4.10	9.00	9.00	3.43	1.88	-
25	1.50	1.14	-	1.76	1.46	1.48	-	-	8.70	3.30	1.84	-
26	1.50	1.12	2.20	-	-	-	4.00	9.40	8.30	3.32	-	-
27	-	1.10	2.28	-	1.44	1.50	4.80	10.16	8.15	-	1.78	-
28	1.49	1.10	-	1.76	1.40	-	-	10.42	7.10	3.10	1.74	-
29	1.48	-	2.18	-	-	1.52	6.80	10.32	6.80	3.04	1.70	-
30	-	1.10	2.08	1.76	-	-	6.70	-	6.74	3.00	-	-
31	1.47	-	2.02	1.74	-	1.52	-	10.15	-	-	1.68	-

Note.- Add 2,900.00 feet to obtain elevation above mean sea level, Somers datum.

Flathead River at Demersville, near Kalispell, Mont.

Location.- Wire gage, lat. 48°10', long. 114°16', in NE¼ sec. 23, T. 28 N., R. 21 W., at Demersville, 3 miles south of Kalispell. Zero of gage is at mean sea level, Somers datum.

Records available.- April 1909 to July 1912, April 1928 to September 1937.

Extremes.- Maximum water-surface elevation observed during water year 1935-36, 2,901.20 feet May 16; minimum, 2,881.86 feet Dec. 18-26.
Maximum water-surface elevation observed during water year 1936-37, 2,895.02 feet May 28; minimum, 2,882.20 feet Oct. 3.
1909-12, 1928-37: Maximum water-surface elevation observed, 2,904.94 feet June 17, 1933; minimum, that of Dec. 18-26, 1936.

Remarks.- Records used for profile studies of Flathead River above Flathead Lake. Records for 1936 fair and for 1937 good except those below stage at which gage pool became separated from river (2,882.5 feet in 1936 and 2,882.8 feet in 1937), which are poor. Gage read once or twice daily.

Elevation, in feet, water years 1935-36 and 1936-37

1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82.65	81.92	81.98	81.90	81.88	81.90	81.98	91.70	97.74	87.42	83.90	82.58
2	82.64	81.92	81.98	81.91	81.89	81.90	81.97	91.88	97.43	87.18	83.81	82.56
3	82.60	81.90	81.97	81.91	-	81.91	81.96	92.52	95.77	87.04	83.75	82.70
4	82.59	81.86	81.94	81.91	-	81.91	81.96	93.08	94.54	86.88	83.75	82.72
5	82.56	81.80	81.92	81.91	-	81.92	81.97	95.10	93.67	86.71	83.65	82.70
6	82.55	81.76	81.89	81.90	-	81.93	81.98	96.54	93.42	86.53	83.55	82.70
7	82.52	81.72	81.92	81.90	-	81.94	81.98	95.10	92.73	86.41	83.55	82.64
8	82.50	81.89	81.92	81.90	-	81.94	81.98	94.50	92.56	86.25	83.52	82.58
9	82.47	82.12	81.93	81.90	-	81.94	82.07	93.88	92.25	86.15	83.46	82.52
10	82.42	82.12	81.96	81.90	-	81.96	82.06	94.60	91.88	85.95	83.44	82.50
11	82.39	82.13	81.96	81.90	-	81.97	82.12	96.10	91.66	85.83	83.38	82.48
12	82.37	82.20	81.94	81.94	-	81.98	82.12	98.45	91.45	85.71	83.28	82.38
13	82.32	82.32	81.94	82.00	-	82.00	83.42	-	91.27	85.61	83.28	82.34
14	82.27	82.22	81.93	81.95	-	82.12	84.82	98.41	91.08	85.47	83.24	82.42
15	82.22	82.02	81.93	81.95	-	82.08	86.02	100.05	90.93	85.39	83.14	82.42
16	82.25	81.94	81.91	81.92	-	82.02	86.62	101.05	90.84	85.27	83.10	82.40
17	82.30	82.14	81.88	81.91	-	82.02	87.32	99.50	90.65	85.17	83.08	82.40
18	82.35	82.11	81.86	81.91	-	82.07	88.72	96.87	90.30	85.08	83.02	82.42
19	82.39	82.02	81.86	81.90	-	82.08	90.62	96.23	89.97	85.00	82.92	82.42
20	82.39	81.99	81.86	81.90	-	82.03	92.21	96.16	89.58	84.93	82.90	82.40
21	82.25	81.95	81.86	81.90	-	82.02	92.43	96.16	89.23	84.82	82.88	82.36
22	82.19	81.92	81.86	81.91	-	82.02	91.71	96.36	88.97	84.72	82.86	82.36
23	82.14	82.01	81.86	81.91	-	82.02	92.81	94.64	88.86	84.64	82.82	82.32
24	82.23	82.02	81.86	81.92	-	82.10	93.05	94.33	88.76	84.58	82.78	82.26
25	82.18	82.02	81.86	81.88	-	82.08	92.43	94.52	88.66	84.50	82.72	82.26
26	82.14	82.03	81.86	81.90	-	82.06	92.51	95.10	88.44	84.38	82.72	82.24
27	82.14	82.01	81.88	81.88	-	82.02	92.03	96.00	88.38	84.26	82.70	82.24
28	82.05	82.00	81.90	81.88	-	82.00	91.55	96.72	88.09	84.18	82.62	82.24
29	82.00	82.00	81.91	81.88	-	81.96	91.17	97.08	87.93	84.14	82.60	82.24
30	81.95	81.99	81.91	81.88	-	81.97	91.31	97.09	87.64	84.06	82.60	82.24
31	81.93	-	81.90	81.88	-	81.98	-	97.59	-	84.00	82.58	-

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82.22	82.36	82.29	82.34	82.36	82.39	82.35	87.36	92.99	90.15	84.73	82.89
2	82.22	82.32	82.27	82.32	82.39	82.37	82.38	88.36	93.35	89.92	84.67	82.86
3	82.20	82.32	82.25	82.32	82.41	82.37	82.40	89.62	93.91	89.75	84.63	82.82
4	82.22	82.32	82.25	82.30	82.41	82.35	82.42	91.22	94.15	89.58	84.53	82.74
5	82.54	82.30	82.24	82.30	82.39	82.35	82.42	92.11	93.20	89.12	84.45	82.72
6	82.52	82.30	82.24	82.29	82.40	82.36	82.42	93.06	93.25	89.02	84.37	82.68
7	82.42	82.28	82.22	82.27	82.38	82.34	82.44	93.79	92.43	88.98	84.31	82.66
8	82.38	82.28	82.24	82.27	82.40	82.34	82.44	93.04	92.47	88.86	84.27	82.52
9	82.32	82.28	82.27	82.29	82.38	82.36	82.46	92.04	92.38	88.76	84.23	82.60
10	82.32	82.28	82.27	82.30	82.36	82.37	82.48	91.29	92.02	88.48	84.17	82.60
11	82.34	82.30	82.29	82.32	82.37	82.37	82.50	91.26	91.97	88.10	84.11	82.58
12	82.32	82.31	82.29	82.34	82.35	82.39	82.52	91.21	92.22	87.76	84.07	82.56
13	82.30	82.29	82.31	82.34	82.35	82.39	82.54	91.25	93.12	87.38	84.05	82.54
14	82.40	82.29	82.32	82.36	82.33	82.39	82.58	91.29	93.67	87.22	83.97	82.54
15	82.40	82.27	82.30	82.37	82.34	82.40	82.65	91.35	93.50	86.86	83.91	82.50
16	82.38	82.28	82.32	82.39	82.36	82.38	82.74	91.44	93.62	86.76	83.87	82.46
17	82.38	82.28	82.34	82.39	82.36	82.38	82.84	91.78	93.96	86.58	83.69	82.44
18	82.38	82.30	82.34	82.39	82.36	82.36	82.91	92.46	93.83	86.30	83.67	82.40
19	82.40	82.30	82.37	82.42	82.38	82.35	82.94	92.85	93.52	86.22	83.61	82.36
20	82.36	82.28	82.37	82.40	82.39	82.33	82.96	93.37	93.46	86.06	83.51	82.32
21	82.34	82.29	82.39	82.40	82.41	82.33	82.98	93.11	93.35	85.98	83.45	82.28
22	82.28	82.31	82.39	82.38	82.39	82.33	83.00	92.56	93.42	85.82	83.41	82.27
23	82.30	82.31	82.42	82.38	82.39	82.31	83.05	92.56	93.31	85.71	83.37	82.26
24	82.32	82.31	82.42	82.41	82.37	82.32	83.09	92.78	92.60	85.62	83.35	82.28
25	82.38	82.29	82.40	82.41	82.38	82.32	83.13	93.39	91.96	85.48	83.23	82.46
26	82.40	82.30	82.40	82.39	82.40	82.34	83.18	93.63	91.29	85.34	83.15	82.48
27	82.40	82.32	82.38	82.39	82.40	82.34	83.50	94.34	91.00	85.15	83.15	82.52
28	82.38	82.32	82.39	82.38	82.38	82.35	84.60	95.00	90.46	85.07	83.07	82.54
29	82.38	82.30	82.37	82.38	-	82.37	85.60	94.78	90.40	84.97	83.03	82.58
30	82.36	82.29	82.35	82.38	-	82.37	86.40	94.12	90.32	84.87	82.97	82.62
31	82.38	-	82.35	82.36	-	82.37	-	93.26	-	84.79	82.91	-

Note. Add 2,800.00 feet to obtain elevation above mean sea level, Somers datum.

Flathead River at Damon ranch, near Kalispell, Mont.

Location.- Staff gage, lat. 48°09', long. 114°08', in NW¼ sec. 32, T. 28 N., R. 20 W., at Damon ranch, 7 miles southeast of Kalispell. Zero of gage is at mean sea level (Somers datum).
Records available.- April 1909 to July 1912, May 1928 to September 1937.
Extremes.- Maximum water-surface elevation observed during water year 1935-36, 2,896.71 feet (revised) May 16; minimum, 2,881.55 feet (revised) Feb. 10.
Maximum water-surface elevation observed during water year 1936-37, 2,892.55 feet May 29; minimum, 2,881.33 feet Jan. 27-31.
1909-12, 1928-37: Maximum water-surface elevation observed, 2,900.94 feet June 17, 1933; minimum, that of Jan. 27-31, 1937.
Remarks.- Records good except those for October 1936 to June 1937, which are poor. Records collected for profile study of Flathead River above Flathead Lake. Records for Nov. 12,1935 to Sept. 30, 1938, as here given supersede those published in Water-Supply Paper 812.

Elevation, in feet, water years 1935-36 and 1936-37

1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82.42	81.90	81.69	81.66	81.66	81.65	81.82	89.47	94.77	87.07	83.84	82.49
2	82.39	81.88	81.68	81.70	81.62	81.70	81.84	90.09	94.68	86.85	83.75	82.59
3	82.35	81.86	81.66	81.72	81.59	81.73	81.78	90.30	93.91	86.78	83.74	82.61
4	82.35	81.86	81.64	81.70	81.61	81.73	81.80	90.91	93.18	86.66	83.77	82.57
5	82.35	81.84	81.66	81.66	81.61	81.75	81.82	92.13	92.56	86.50	83.74	82.52
6	82.35	81.83	81.66	81.70	81.59	81.75	81.84	92.77	92.18	86.35	83.68	82.52
7	82.35	81.80	81.68	81.77	81.59	81.77	81.81	92.08	91.92	86.18	83.60	82.48
8	82.35	81.82	81.70	81.79	81.57	81.79	81.87	91.69	91.64	86.06	83.49	82.46
9	82.30	81.82	81.72	81.72	81.57	81.81	81.89	91.80	91.40	85.86	83.44	82.42
10	82.21	81.84	81.69	81.81	81.81	81.79	81.89	92.29	91.07	85.74	83.38	82.40
11	82.24	81.85	81.69	81.82	81.58	81.77	81.91	93.36	90.86	85.71	83.33	82.38
12	82.33	81.86	81.72	81.84	81.59	81.78	82.00	94.50	90.66	85.62	83.30	82.38
13	82.31	81.84	81.74	81.86	81.59	81.91	82.59	94.88	90.47	85.46	83.35	82.38
14	82.29	81.82	81.74	81.80	81.59	81.89	83.27	94.70	90.23	85.36	83.32	82.36
15	82.26	81.81	81.72	81.82	81.59	81.85	84.14	95.72	90.09	85.22	83.22	82.32
16	82.23	81.83	81.70	81.73	81.61	81.82	84.66	96.68	89.99	85.12	83.15	82.23
17	82.19	81.86	81.66	81.75	81.61	81.84	85.27	95.70	89.81	85.05	83.09	82.19
18	82.15	81.84	81.66	81.75	81.61	81.87	86.40	94.63	89.61	84.96	83.06	82.19
19	82.13	81.80	81.64	81.75	81.61	81.84	87.84	94.18	89.34	84.88	82.95	82.17
20	82.12	81.80	81.64	81.77	81.61	81.82	88.98	94.16	89.17	84.78	82.98	82.17
21	82.13	81.81	81.62	81.77	81.61	81.87	88.94	94.13	88.88	84.70	82.94	82.15
22	82.11	81.81	81.62	81.79	81.61	81.84	88.76	93.63	88.55	84.62	82.86	82.13
23	82.10	81.79	81.62	81.79	81.61	81.82	89.38	93.19	88.36	84.52	82.83	82.10
24	82.07	81.78	81.62	81.67	81.61	81.81	89.70	92.92	88.43	84.44	82.81	82.06
25	82.04	81.77	81.64	81.67	81.63	81.78	89.68	92.88	88.21	84.34	82.80	82.05
26	82.05	81.75	81.67	81.65	81.61	81.86	89.81	93.08	88.02	84.27	82.78	82.03
27	82.06	81.75	81.66	81.65	81.63	81.82	89.64	93.58	87.84	84.23	82.73	82.05
28	82.06	81.75	81.68	81.69	81.63	81.82	89.40	93.93	87.66	84.16	82.66	82.04
29	82.06	81.73	81.64	81.71	81.65	81.78	89.29	94.27	87.50	84.09	82.64	81.99
30	82.04	81.71	81.66	81.69	-	81.80	89.22	84.30	87.29	84.02	82.62	81.93
31	81.94	-	81.68	81.68	-	81.80	-	94.57	-	83.95	82.60	-

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81.93	81.63	81.50	81.44	81.35	81.39	81.55	85.02	91.20	89.38	84.67	82.82
2	81.93	81.63	81.48	81.42	81.35	81.39	81.56	85.30	91.32	89.10	84.63	82.81
3	81.93	81.66	81.46	81.42	81.37	81.39	81.58	86.18	91.73	88.80	84.55	82.80
4	81.93	81.69	81.44	81.42	81.37	81.39	81.60	87.28	91.94	88.63	84.45	82.79
5	81.97	81.64	81.42	81.41	81.37	81.41	81.59	88.37	91.37	88.31	84.30	82.79
6	81.95	81.63	81.42	81.40	81.37	81.41	81.56	88.85	90.95	88.13	84.25	82.77
7	81.92	81.62	81.40	81.40	81.39	81.41	81.58	88.45	90.83	87.89	84.16	82.71
8	81.87	81.61	81.38	81.42	81.39	81.41	81.56	88.34	90.84	87.67	84.11	82.68
9	81.90	81.57	81.46	81.40	81.39	81.41	81.58	88.30	90.75	87.50	84.13	82.65
10	81.92	81.55	81.53	81.40	81.41	81.41	81.60	88.29	90.58	87.30	84.08	82.62
11	81.87	81.53	81.55	81.40	81.40	81.41	81.62	88.58	90.52	87.05	84.02	82.60
12	81.85	81.55	81.52	81.40	81.40	81.41	81.67	88.47	90.33	86.85	83.93	82.58
13	81.87	81.57	81.49	81.40	81.40	81.41	81.75	88.41	90.84	86.76	83.88	82.54
14	81.88	81.59	81.47	81.40	81.40	81.41	81.85	88.68	91.34	86.64	83.84	82.51
15	81.86	81.57	81.44	81.40	81.40	81.41	82.10	89.64	91.42	86.43	83.78	82.48
16	81.82	81.57	81.43	81.40	81.40	81.41	82.41	89.68	91.38	86.35	83.71	82.43
17	81.84	81.55	81.57	81.40	81.40	81.43	82.37	90.08	91.60	86.23	83.65	82.39
18	81.80	81.55	81.55	81.40	81.40	81.43	82.32	90.23	91.65	86.10	83.59	82.39
19	81.78	81.57	81.52	81.40	81.40	81.45	82.40	90.51	91.24	85.94	83.51	82.37
20	81.76	81.57	81.49	81.40	81.40	81.45	82.54	90.68	91.24	85.82	83.43	82.37
21	81.69	81.54	81.57	81.39	81.40	81.46	82.75	90.40	91.35	85.70	83.39	82.34
22	81.75	81.52	81.65	81.39	81.40	81.46	82.92	90.29	91.42	85.55	83.34	82.31
23	81.75	81.52	81.67	81.37	81.40	81.47	82.90	90.38	91.39	85.46	83.28	82.28
24	81.73	81.52	81.62	81.37	81.40	81.47	82.89	90.43	91.04	85.32	83.25	82.26
25	81.71	81.50	81.55	81.37	81.40	81.47	82.85	90.52	90.26	85.21	83.21	82.24
26	81.69	81.50	81.53	81.35	81.40	81.47	82.95	91.24	90.15	85.16	83.14	82.23
27	81.67	81.48	81.50	81.33	81.40	81.48	83.27	91.90	89.87	85.03	83.15	82.21
28	81.67	81.48	81.47	81.33	81.40	81.48	83.95	92.31	89.66	84.99	83.06	82.16
29	81.67	81.48	81.49	81.33	-	81.50	84.56	92.46	89.48	84.87	83.05	82.18
30	81.66	81.48	81.49	81.33	-	81.51	84.79	91.91	89.41	84.75	82.98	82.17
31	81.66	-	81.47	81.33	-	81.53	-	91.38	-	84.67	82.86	-

Note.- Add 2,800 feet to obtain elevation above mean sea level, Somers datum.

Flathead River at Therriault Ferry, near Kalispell, Mont.

Location.- Staff gage, lat. 48°08', long. 114°09', in NW¼ sec. 4, T . 27 N., R. 20 W., at Therriault Ferry, 9 miles southeast of Kalispell, Mont. Zero of gage is at mean sea level (Somers datum).

Records available.- October 1934 to September 1937.

Extremes.- Maximum water-surface elevation observed during water year 1934-35, 2,893.54 feet June 2; minimum, 2,881.92 feet Oct. 17, 18.
Maximum water-surface elevation observed during water year 1935-36, 2,894.23 feet May 16; minimum, 2,881.49 feet Feb. 9-20.
Maximum water-surface elevation observed during water 1936-37, 2,891.02 feet May 29; minimum, 2,881.28 feet Jan. 21-23.
1934-37: Maximum water-surface elevation observed, 2,894.23 feet May 16, 1936; minimum, that of Jan. 21-23, 1937.

Remarks.- Records good. They were used for study of profile of Flathead River above Flathead Lake. Gage read twice daily.

Elevation, in feet, 1934-37

1934-35

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82.07	82.45	83.64	82.96	83.14	82.88	82.76	85.75	93.27	90.13	85.55	83.35
2	82.09	82.53	83.63	82.95	83.14	82.86	82.75	85.82	93.52	89.83	85.43	83.30
3	82.10	82.68	83.59	82.92	83.14	82.84	82.73	85.88	93.43	89.57	85.28	83.25
4	82.08	82.64	83.53	82.90	83.16	82.81	82.72	86.04	93.18	89.39	85.20	83.19
5	82.08	82.65	83.50	82.90	83.16	82.77	82.72	86.36	93.13	89.22	85.12	83.12
6	82.06	82.74	83.47	82.92	83.14	82.73	82.71	87.08	93.14	89.05	84.96	83.06
7	82.05	83.09	83.43	82.90	83.15	82.69	82.68	87.58	92.96	88.92	84.88	83.05
8	82.06	83.45	83.39	82.88	83.13	82.72	82.68	87.51	92.93	88.76	84.82	83.02
9	82.05	83.78	83.35	82.86	83.10	82.77	82.69	87.46	93.11	88.59	84.72	82.99
10	82.04	83.78	83.31	82.85	83.08	82.75	82.68	87.60	93.15	88.40	84.66	82.95
11	82.04	83.71	83.27	82.81	83.08	82.74	82.68	87.75	93.07	88.24	84.58	82.91
12	82.04	83.66	83.24	82.77	83.08	82.74	82.69	87.70	93.04	88.04	84.50	82.89
13	82.03	83.66	83.26	82.74	83.08	82.74	82.73	87.65	93.06	87.87	84.44	82.87
14	82.00	83.68	83.25	82.72	83.08	82.75	82.79	87.64	93.03	87.71	84.44	82.86
15	81.98	83.68	83.23	82.70	83.06	82.79	82.87	87.75	93.02	87.59	84.29	82.88
16	81.95	83.70	83.21	82.70	83.05	82.86	82.98	88.02	92.82	87.46	84.19	82.87
17	81.92	83.71	83.22	82.66	83.06	82.87	83.12	88.51	92.51	87.35	84.12	82.80
18	81.93	83.75	83.19	82.60	83.04	82.84	83.21	89.15	92.29	87.19	84.08	82.74
19	81.97	83.77	83.16	82.55	83.02	82.85	83.28	89.50	92.14	87.02	84.01	82.71
20	81.96	83.79	83.16	82.52	83.00	82.82	83.41	89.83	92.00	86.86	83.93	82.68
21	81.94	83.77	83.18	82.52	82.99	82.80	83.72	90.39	91.80	86.74	83.89	82.66
22	81.95	83.80	83.18	82.59	82.98	82.80	84.09	91.13	91.59	86.66	83.83	82.64
23	81.99	83.80	83.16	82.63	82.96	82.80	84.23	92.20	91.53	86.50	83.79	82.64
24	82.03	83.80	83.13	82.67	82.94	82.82	84.33	93.15	91.41	86.42	83.75	82.59
25	82.05	83.80	83.09	82.69	82.92	82.83	84.50	93.04	91.15	86.32	83.68	82.52
26	82.14	83.78	82.98	82.79	82.89	82.84	84.87	92.46	90.83	86.22	83.61	82.46
27	82.39	83.72	82.91	83.06	82.86	82.85	85.24	92.36	90.58	86.05	83.54	82.45
28	82.35	83.73	82.95	83.06	82.87	82.86	85.32	92.48	90.38	85.96	83.51	82.44
29	82.35	83.69	83.00	83.11	-	82.79	85.33	92.50	90.36	85.85	83.45	82.42
30	82.38	83.66	82.99	83.16	-	82.78	85.50	92.61	90.32	85.70	83.42	82.41
31	82.39	-	82.97	83.14	-	82.76	-	92.90	-	85.58	83.36	-

Elevation, in feet, of Flathead River at Therriault Ferry near Kalispell, Mont., 1934-37-Continued

1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82.41	81.85	81.77	81.65	81.60	81.55	81.71	88.49	93.23	86.86	83.79	82.48
2	82.38	81.84	81.75	81.65	81.58	81.57	81.71	88.80	93.23	86.69	83.67	82.45
3	82.35	81.83	81.73	81.69	81.56	81.59	81.74	89.11	92.89	86.61	83.64	82.46
4	82.33	81.82	81.72	81.65	81.54	81.61	81.77	89.47	92.44	86.43	83.64	82.43
5	82.33	81.81	81.70	81.65	81.53	81.61	81.74	90.28	92.02	86.29	83.58	82.43
6	82.30	81.81	81.69	81.67	81.52	81.63	81.75	90.84	91.66	86.11	83.52	82.42
7	82.28	81.83	81.69	81.71	81.51	81.63	81.77	90.61	91.42	86.01	83.49	82.38
8	82.24	81.85	81.71	81.69	81.51	81.63	81.79	90.46	91.20	85.88	83.41	82.35
9	82.22	81.73	81.71	81.66	81.49	81.68	81.77	90.53	90.89	85.80	83.36	82.34
10	82.19	81.80	81.71	81.69	81.49	81.67	81.79	90.84	90.66	85.62	83.35	82.33
11	82.20	81.83	81.71	81.74	81.49	81.68	81.80	91.51	90.42	85.54	83.28	82.30
12	82.24	81.81	81.73	81.77	81.49	81.72	81.90	92.20	90.20	85.43	83.23	82.27
13	82.24	81.82	81.71	81.76	81.49	81.75	82.22	92.64	90.02	85.32	83.20	82.26
14	82.17	81.83	81.69	81.75	81.49	81.76	82.72	92.69	89.80	85.18	83.16	82.24
15	82.19	81.81	81.67	81.76	81.49	81.75	83.29	93.41	89.62	85.10	83.09	82.20
16	82.17	81.81	81.67	81.73	81.49	81.75	83.71	94.17	89.51	85.01	83.06	82.16
17	82.15	81.81	81.65	81.71	81.49	81.77	84.19	93.91	89.29	84.90	83.02	82.13
18	82.13	81.81	81.63	81.71	81.49	81.77	84.96	93.35	89.13	84.84	82.95	82.12
19	82.11	81.79	81.61	81.71	81.49	81.78	85.99	93.11	88.92	84.76	82.88	82.10
20	82.09	81.79	81.61	81.71	81.49	81.76	86.91	93.07	88.68	84.65	82.87	82.09
21	82.07	81.77	81.59	81.72	81.51	81.80	87.11	93.03	88.46	84.58	82.86	82.09
22	82.07	81.79	81.59	81.73	81.53	81.74	87.08	92.55	88.22	84.50	82.80	82.06
23	82.08	81.79	81.59	81.73	81.53	81.74	87.62	92.39	88.11	84.43	82.76	82.02
24	82.06	81.79	81.59	81.73	81.53	81.72	88.03	92.16	87.97	84.38	82.72	81.99
25	82.01	81.80	81.59	81.69	81.53	81.71	88.13	92.03	87.86	84.30	82.68	81.97
26	82.03	81.80	81.59	81.69	81.53	81.72	88.35	92.09	87.70	84.17	82.64	81.95
27	82.02	81.78	81.61	81.69	81.53	81.74	88.37	92.31	87.52	84.09	82.60	81.95
28	82.05	81.77	81.61	81.66	81.53	81.78	88.32	92.55	87.37	84.02	82.56	81.93
29	81.98	81.78	81.63	81.65	81.55	81.81	88.28	92.78	87.23	83.97	82.53	81.90
30	81.94	81.79	81.63	81.64	-	81.78	88.32	92.83	87.05	83.92	82.52	81.87
31	81.88	-	81.68	81.61	-	81.72	-	93.03	-	83.86	82.51	-

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81.86	81.56	81.40	81.38	81.32	81.36	81.50	84.18	90.38	88.87	84.57	82.84
2	81.86	81.56	81.38	81.37	81.32	81.38	81.50	84.51	90.44	88.66	84.52	82.82
3	81.86	81.56	81.38	81.41	81.33	81.38	81.51	85.14	90.65	88.47	84.38	82.79
4	81.87	81.60	81.38	81.38	81.36	81.36	81.53	85.98	90.80	88.27	84.30	82.75
5	81.86	81.59	81.38	81.36	81.36	81.36	81.57	86.69	90.49	88.08	84.23	82.72
6	81.85	81.55	81.36	81.36	81.36	81.36	81.59	87.22	90.26	87.89	84.19	82.70
7	81.84	81.52	81.36	81.36	81.36	81.36	81.56	87.11	90.13	87.70	84.13	82.68
8	81.82	81.52	81.34	81.36	81.36	81.37	81.55	87.13	90.16	87.49	84.07	82.66
9	81.80	81.52	81.36	81.36	81.34	81.38	81.58	87.17	90.05	87.30	84.03	82.63
10	81.80	81.50	81.37	81.36	81.32	81.37	81.58	87.29	89.97	87.13	83.99	82.61
11	81.80	81.50	81.42	81.36	81.34	81.35	81.61	87.56	89.88	86.93	83.94	82.57
12	81.78	81.48	81.42	81.33	81.33	81.34	81.64	87.58	89.72	86.72	83.88	82.54
13	81.78	81.48	81.44	81.29	81.32	81.35	81.67	87.60	89.78	86.62	83.83	82.52
14	81.78	81.48	81.44	81.30	81.32	81.36	81.74	87.78	90.21	86.52	83.78	82.49
15	81.77	81.48	81.40	81.30	81.32	81.38	81.87	88.21	90.26	86.40	83.70	82.47
16	81.76	81.48	81.39	81.30	81.34	81.38	82.02	88.44	90.34	86.24	83.63	82.43
17	81.74	81.48	81.46	81.30	81.34	81.38	82.18	88.58	90.46	86.10	83.59	82.39
18	81.76	81.46	81.45	81.30	81.34	81.40	82.19	88.83	90.55	85.98	83.54	82.37
19	81.75	81.47	81.41	81.30	81.34	81.40	82.25	89.09	90.35	85.88	83.48	82.35
20	81.71	81.48	81.38	81.30	81.34	81.40	82.37	89.36	90.28	85.74	83.43	82.32
21	81.68	81.48	81.38	81.28	81.34	81.40	82.52	89.45	90.36	85.59	83.39	82.31
22	81.67	81.48	81.39	81.28	81.36	81.42	82.65	89.30	90.41	85.46	83.35	82.29
23	81.65	81.48	81.43	81.28	81.34	81.44	82.70	89.38	90.42	85.35	83.31	82.27
24	81.63	81.46	81.54	81.30	81.36	81.44	82.70	89.46	90.22	85.24	83.26	82.25
25	81.62	81.45	81.55	81.32	81.36	81.44	82.73	89.49	89.90	85.15	83.18	82.27
26	81.60	81.44	81.56	81.32	81.36	81.45	82.80	89.95	89.66	85.06	83.13	82.24
27	81.60	81.42	81.54	81.32	81.36	81.46	82.98	90.44	89.44	84.94	83.09	82.15
28	81.60	81.42	81.49	81.32	81.36	81.48	83.38	90.82	89.25	84.83	83.05	82.12
29	81.59	81.40	81.43	81.32	-	81.46	83.86	91.01	89.07	84.72	83.00	82.16
30	81.58	81.40	81.41	81.32	-	81.48	84.05	90.81	88.99	84.65	82.94	82.15
31	81.56	-	81.38	81.32	-	81.48	-	90.51	-	84.53	82.88	-

Note.- Add 2,800 feet to obtain elevation above mean sea level, Somers datum.

Flathead River near Holt, Mont.

Location.- Staff gage, lat. 48°06', long. 114°06', in NE¼ sec. 22, T. 27 N., R. 20 W., at Keller ranch near Holt, Mont. Zero of gage is at mean sea level (Somers datum).

Records available.- April 1909 to July 1912, June 1928 to September 1937.

Extremes.- Maximum water-surface elevation observed during year, 2,890.14 feet June 4; minimum, 2,681.32 feet Dec. 6-19, Jan. 11-27, and Feb. 9-16.
1909-12, 1928-37: Maximum water-surface elevation, 2,897.35 feet May 29, 30, 1928 (from floodmark); minimum, 2,881.24 feet Jan. 25-28, 1930.

Remarks.- Records good. They were used for study of profile of Flathead River above Flathead Lake.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81.90	81.56	81.36	81.36	81.34	81.36	81.44	83.70	89.90	88.60	84.48	82.87
2	81.88	81.56	81.36	81.36	81.34	81.36	81.44	83.96	89.86	88.46	84.42	82.83
3	81.88	81.54	81.36	81.36	81.34	81.36	81.44	84.44	89.90	88.28	84.34	82.79
4	81.86	81.54	81.34	81.36	81.34	81.36	81.44	85.10	90.14	88.06	84.28	82.77
5	81.86	81.52	81.34	81.36	81.34	81.36	81.46	85.70	90.00	87.90	84.22	82.73
6	81.84	81.52	81.32	81.34	81.34	81.36	81.48	86.56	89.86	87.72	84.12	82.69
7	81.84	81.50	81.32	81.34	81.34	81.36	81.50	86.22	89.74	87.52	84.06	82.67
8	81.82	81.50	81.32	81.34	81.34	81.36	81.52	86.44	89.68	87.30	84.02	82.65
9	81.82	81.48	81.32	81.34	81.32	81.36	81.52	86.54	89.62	87.14	83.96	82.61
10	81.80	81.48	81.32	81.34	81.32	81.38	81.54	86.70	89.50	86.98	83.92	82.59
11	81.78	81.46	81.32	81.32	81.32	81.38	81.56	86.92	89.40	86.82	83.87	82.57
12	81.76	81.46	81.32	81.32	81.32	81.38	81.62	86.94	89.34	86.66	83.83	82.53
13	81.76	81.44	81.32	81.32	81.32	81.38	81.68	87.02	89.40	86.52	83.79	82.51
14	81.74	81.44	81.32	81.32	81.32	81.38	81.76	87.18	89.54	86.40	83.75	82.47
15	81.74	81.42	81.32	81.32	81.32	81.38	81.84	87.46	89.62	86.30	83.69	82.45
16	81.72	81.42	81.32	81.32	81.32	81.38	81.92	87.68	89.66	86.16	83.63	82.43
17	81.72	81.44	81.32	81.32	81.34	81.38	81.96	87.84	89.80	86.02	83.57	82.39
18	81.70	81.44	81.32	81.32	81.34	81.38	82.00	88.06	89.92	85.92	83.51	82.37
19	81.70	81.42	81.32	81.32	81.34	81.40	82.10	88.28	89.82	85.84	83.45	82.33
20	81.68	81.44	81.34	81.32	81.34	81.40	82.20	88.50	89.82	85.66	83.41	82.29
21	81.68	81.44	81.34	81.32	81.34	81.40	82.28	88.72	89.82	85.54	83.37	82.25
22	81.66	81.44	81.36	81.32	81.34	81.40	82.36	88.68	89.78	85.42	83.31	82.21
23	81.66	81.44	81.36	81.32	81.34	81.40	82.46	88.78	89.74	85.32	83.27	82.21
24	81.64	81.42	81.36	81.32	81.36	81.40	82.54	88.84	89.68	85.18	83.21	82.21
25	81.64	81.42	81.38	81.32	81.36	81.42	82.60	88.88	89.56	85.06	83.17	82.19
26	81.62	81.40	81.38	81.32	81.36	81.42	82.66	89.02	89.30	84.96	83.11	82.17
27	81.62	81.40	81.38	81.32	81.36	81.42	82.78	89.66	89.10	84.84	83.07	82.15
28	81.60	81.38	81.38	81.34	81.36	81.42	83.00	89.98	89.00	84.78	83.03	82.13
29	81.60	81.38	81.38	81.34	-	81.42	83.20	90.10	88.84	84.70	82.99	82.13
30	81.58	81.38	81.36	81.34	-	81.42	83.46	90.08	88.74	84.64	82.95	82.13
31	81.58	-	81.36	81.34	-	81.42	-	89.98	-	84.56	82.91	-

Note.- Add 2,800 feet to obtain elevation above mean sea level, Somers datum.

Flathead Lake at Somers, Mont.

Location.- Water-stage recorder, lat. 48°04', long. 114°13', in NE¼ sec. 26, T. 27 N., R. 21 W., at steamboat dock at Somers. Gage readings adjusted to mean sea level (Somers datum).

Records available.- April 1922 to September 1937.

Extremes.- Maximum water-surface elevation during year, 2,889.65 feet June 11; minimum, 2,881.07 feet Dec. 5.
1922-37. Maximum water-surface elevation, 2,896.26 feet June 19, 1933; minimum, that of Dec. 5, 1937.

Remarks.- Records excellent except those for Jan. 21 to Feb. 2, Feb. 7 to Apr. 7, Apr. 17 to May 13, which are mean of observer's twice-daily readings, and are good.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81.79	81.55	81.39	81.37	81.31	81.29	81.45	83.29	89.50	88.41	84.44	82.80
2	81.78	81.58	81.38	81.37	81.29	81.31	81.45	83.44	89.48	88.26	84.39	82.79
3	81.78	81.56	81.36	81.38	81.28	81.33	81.47	83.65	89.46	88.10	84.29	82.76
4	81.80	81.56	81.36	81.36	81.24	81.30	81.47	83.98	89.55	87.96	84.22	82.68
5	81.79	81.52	81.29	81.35	81.25	81.32	81.46	84.43	89.56	87.80	84.18	82.71
6	81.77	81.52	81.33	81.34	81.25	81.32	81.46	84.85	89.51	87.62	84.11	82.66
7	81.75	81.51	81.33	81.32	81.32	81.33	81.49	85.19	89.42	87.46	84.04	82.61
8	81.75	81.50	81.37	81.33	81.29	81.32	81.50	85.56	89.36	87.28	83.99	82.60
9	81.74	81.49	81.36	81.31	81.25	81.33	81.52	85.84	89.28	87.13	83.95	82.58
10	81.73	81.48	81.35	81.32	81.29	81.32	81.53	86.05	89.20	86.96	83.90	82.54
11	81.73	81.47	81.38	81.31	81.32	81.32	81.54	86.25	89.15	86.76	83.88	82.51
12	81.73	81.47	81.35	81.31	81.31	81.33	81.57	86.45	89.05	86.58	83.81	82.49
13	81.72	81.47	81.38	81.28	81.31	81.28	81.60	86.62	89.02	86.45	83.76	82.47
14	81.72	81.47	81.36	81.26	81.28	81.31	81.62	86.76	89.00	86.36	83.72	82.43
15	81.70	81.47	81.33	81.28	81.28	81.30	81.69	86.87	89.09	86.25	83.67	82.39
16	81.69	81.46	81.35	81.31	81.28	81.33	81.73	87.09	89.15	86.21	83.57	82.38
17	81.68	81.47	81.40	81.32	81.29	81.33	81.85	87.25	89.25	85.97	83.50	82.37
18	81.67	81.46	81.39	81.29	81.29	81.33	81.92	87.42	89.35	85.84	83.49	82.34
19	81.65	81.46	81.36	81.27	81.27	81.36	82.01	87.61	89.36	85.75	83.43	82.32
20	81.61	81.45	81.36	81.28	81.29	81.35	82.08	87.84	89.35	85.61	83.37	82.29
21	81.59	81.45	81.38	81.26	81.31	81.35	82.18	88.05	89.33	85.47	83.33	82.28
22	81.60	81.45	81.42	81.23	81.32	81.35	82.27	88.21	89.34	85.37	83.28	82.27
23	81.60	81.44	81.38	81.25	81.31	81.36	82.39	88.23	89.39	85.26	83.25	82.20
24	81.61	81.44	81.45	81.27	81.30	81.37	82.44	88.37	89.38	85.14	83.24	82.18
25	81.61	81.43	81.47	81.27	81.29	81.40	82.49	88.41	89.30	85.03	83.16	82.17
26	81.59	81.42	81.45	81.29	81.30	81.40	82.54	88.53	89.16	84.97	83.11	82.15
27	81.58	81.42	81.41	81.28	81.30	81.39	82.62	88.71	89.00	84.85	83.08	82.12
28	81.58	81.40	81.42	81.27	81.31	81.40	82.71	89.01	88.84	84.73	83.02	82.09
29	81.58	81.40	81.42	81.29	-	81.41	82.94	89.26	88.73	84.69	82.98	82.11
30	81.58	81.39	81.40	81.29	-	81.42	83.11	89.45	88.56	84.58	82.93	82.09
31	81.53	-	81.37	81.30	-	81.43	-	89.50	-	84.46	82.82	-

Note.- Add 2,800.00 feet to obtain elevation above mean sea level, Somers datum.

Flathead Lake at Polson, Mont.

Location.- Staff gage and water-stage recorder, lat. 47°42', long. 114°09', in SW¼ sec. 4, T. 22 N., R. 20 W., at south end of lake at Polson. Gage readings adjusted to mean sea level (Somers datum).

Records available.- August 1908 to September 1926, June 1928 to September 1937.

Extremes.- Maximum water-surface elevation observed during year, 2,889.72 feet June 3; minimum, 2,881.12 feet Dec. 13.
1908-26, 1928-37: Maximum water-surface elevation, 2,896.26 feet June 19, 1933; minimum, that for Dec. 13, 1936.

Remarks.- Records good. With the exception of those for Nov. 19 to Jan. 4, May 8-14, which were computed from water-stage recorder graph, they are based on observer's twice-daily readings of staff gage.

Elevation, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81.86	81.59	81.23	81.32	81.26	81.28	81.29	83.18	89.39	88.28	84.26	82.84
2	81.79	81.49	81.22	81.30	81.27	81.29	81.31	83.39	89.35	88.15	84.19	82.73
3	81.74	81.49	81.26	81.28	81.28	81.30	81.33	83.61	89.52	88.01	84.17	82.67
4	81.67	81.47	81.25	81.30	81.27	81.29	81.33	83.96	89.42	87.84	84.11	82.72
5	81.73	81.45	81.40	81.27	81.26	81.30	81.32	84.29	89.44	87.67	84.04	82.63
6	81.73	81.46	81.28	81.27	81.25	81.29	81.33	84.80	89.41	87.53	83.97	82.59
7	81.71	81.46	81.26	81.23	81.24	81.29	81.37	85.29	89.54	87.38	83.95	82.55
8	81.72	81.45	81.25	81.21	81.25	81.29	81.39	85.48	89.26	87.16	83.91	82.56
9	81.71	81.43	81.28	81.22	81.26	81.31	81.41	85.76	89.19	87.01	83.87	82.51
10	81.72	81.41	81.27	81.21	81.24	81.32	81.44	86.07	89.10	86.84	83.78	82.47
11	81.71	81.39	81.25	81.20	81.26	81.30	81.45	86.27	89.00	86.75	83.73	82.45
12	81.69	81.37	81.26	81.21	81.27	81.32	81.47	86.45	88.94	86.60	83.69	82.41
13	81.65	81.37	81.21	81.22	81.26	81.33	81.49	86.58	88.97	86.44	83.63	82.39
14	81.69	81.38	81.25	81.19	81.25	81.30	81.51	86.67	88.93	86.24	83.56	82.40
15	81.74	81.37	81.28	81.20	81.24	81.29	81.56	86.74	88.95	86.12	83.51	82.35
16	81.67	81.37	81.28	81.22	81.25	81.27	81.63	87.00	89.04	86.01	83.55	82.31
17	81.69	81.36	81.23	81.24	81.23	81.27	81.75	87.16	89.10	85.90	83.47	82.29
18	81.65	81.38	81.21	81.26	81.24	81.25	81.84	87.32	89.09	85.76	83.37	82.25
19	81.66	81.36	81.26	81.25	81.24	81.25	81.89	87.48	89.16	85.62	83.31	82.26
20	81.77	81.38	81.29	81.26	81.23	81.26	81.95	87.70	89.19	85.50	83.29	82.21
21	81.71	81.35	81.26	81.25	81.24	81.29	82.03	87.92	89.17	85.40	83.24	82.17
22	81.69	81.36	81.19	81.24	81.26	81.29	82.11	88.07	89.21	85.28	83.23	82.10
23	81.67	81.36	81.30	81.26	81.28	81.30	82.21	88.17	89.23	85.20	83.08	82.11
24	81.67	81.34	81.33	81.23	81.27	81.29	82.33	88.24	89.21	85.09	83.03	82.09
25	81.68	81.33	81.36	81.24	81.28	81.30	82.41	88.29	89.16	84.95	83.05	82.07
26	81.67	81.32	81.41	81.26	81.27	81.31	82.47	88.34	89.06	84.83	83.07	82.07
27	81.69	81.31	81.49	81.25	81.27	81.31	82.48	88.56	88.89	84.76	82.99	82.07
28	81.65	81.31	81.43	81.26	81.26	81.27	82.60	88.87	88.74	84.69	82.92	82.06
29	81.60	81.29	81.37	81.25	-	81.28	82.80	89.15	88.55	84.58	82.90	82.00
30	81.55	81.28	81.35	81.26	-	81.27	83.00	89.40	88.42	84.46	82.88	82.03
31	81.66	-	81.37	81.25	-	81.28	-	89.41	-	84.38	82.93	-

Note.- Add 2,800 feet to obtain elevation above mean sea level, Somers datum.

Flathead River near Polson, Mont.

Location.- Water-stage recorder, lat. 47°39', long. 114°20', in sec. 19, T. 22 N., R. 21 W., at highway bridge at Norrisvale, 12 miles below Polson.

Drainage area.- 7,010 square miles.

Records available.- July 1907 to September 1937.

Average discharge.- 30 years, 11,550 second-feet.

Extremes.- Maximum discharge during year, 35,800 second-feet June 4, 5; maximum gage height, 10.83 feet June 4; minimum discharge, 1,340 second-feet Dec. 28 (gage height, 0.89 foot, ice present).
1907-37: Maximum discharge, 82,100 second-feet May 29,30, 1928 (gage height, 17.1 feet); minimum, that of Dec. 28, 1936.

Remarks.- Records good except those for period of missing gage heights or ice effect, Nov. 2 to Mar. 14, July 1, 2 which were computed on basis of available gage heights, weather records, and records of stage for Flathead Lake at Polson and are fair. Several small diversions from tributaries above Flathead Lake. Flow somewhat regulated by natural storage in Flathead Lake.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Aug. 18 to Sept. 30)

1.0	1,580	2.0	2,570	4.0	5,500	7.0	13,880
1.2	1,750	2.3	2,930	4.5	6,510	8.0	18,900
1.4	1,930	2.6	3,320	5.0	7,600	9.0	24,600
1.6	2,130	3.0	3,880	5.5	8,890	10.0	30,800
1.8	2,340	3.5	4,640	6.0	10,400	11.0	37,120

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,510	2,180	1,700	1,750	1,750	1,750	1,880	5,500	35,200	28,300	9,180	4,480
2	2,450	2,030	1,700	1,750	1,750	1,800	1,930	6,300	35,200	27,700	8,890	4,330
3	2,400	2,030	1,750	1,750	1,750	1,800	1,930	6,940	35,200	27,100	8,890	4,330
4	2,280	2,030	1,700	1,800	1,750	1,800	1,930	7,600	35,200	25,800	8,610	4,330
5	2,450	1,980	1,930	1,750	1,750	1,800	1,930	9,180	35,800	24,600	8,340	4,030
6	2,400	1,980	1,750	1,750	1,700	1,800	1,930	11,000	35,200	24,000	8,080	4,030
7	2,400	1,980	1,750	1,700	1,700	1,800	1,980	12,300	34,600	23,400	8,080	4,030
8	2,400	1,980	1,700	1,660	1,700	1,800	1,980	13,500	34,000	22,200	7,830	3,880
9	2,400	1,930	1,750	1,700	1,750	1,580	2,030	14,800	34,000	21,100	7,830	3,880
10	2,400	1,930	1,750	1,660	1,700	1,660	2,030	15,800	33,300	20,500	7,600	3,740
11	2,340	1,880	1,700	1,660	1,750	1,700	2,030	16,800	33,300	20,000	7,160	3,740
12	2,280	1,880	1,750	1,660	1,750	1,700	2,080	17,800	32,700	18,900	7,160	3,600
13	2,280	1,880	1,660	1,700	1,750	1,750	2,030	18,400	32,100	18,400	6,720	3,600
14	2,230	1,880	1,700	1,660	1,800	1,800	2,130	18,900	32,100	17,300	6,510	3,600
15	2,340	1,880	1,750	1,660	1,800	1,840	2,130	20,000	32,700	16,800	6,720	3,530
16	2,280	1,880	1,750	1,700	1,750	1,840	2,340	21,100	32,700	16,300	6,300	3,460
17	2,280	1,840	1,700	1,700	1,700	1,840	2,450	22,200	33,300	15,800	5,890	3,460
18	2,230	1,880	1,430	1,750	1,700	1,840	2,690	22,800	33,300	14,800	5,890	3,320
19	2,340	1,840	1,540	1,700	1,700	1,880	2,690	24,000	34,000	13,900	5,890	3,320
20	2,400	1,880	1,580	1,750	1,700	1,880	2,810	25,200	34,000	13,900	5,890	3,260
21	2,340	1,840	1,580	1,700	1,700	1,880	2,870	26,500	34,000	13,100	5,690	3,120
22	2,130	1,840	1,500	1,700	1,750	1,930	3,190	27,100	34,000	12,700	5,690	2,930
23	2,080	1,840	1,620	1,750	1,750	1,930	3,320	27,700	33,300	12,300	5,140	3,060
24	2,130	1,840	1,660	1,700	1,750	1,930	3,530	28,300	34,000	12,000	5,140	3,060
25	2,180	1,840	1,700	1,700	1,750	1,930	3,740	28,300	34,000	11,700	5,140	2,930
26	2,080	1,800	1,700	1,750	1,750	1,980	3,880	28,900	32,700	11,000	5,140	3,000
27	2,130	1,800	1,840	1,700	1,750	1,980	3,880	30,200	31,400	11,000	4,800	3,000
28	2,080	1,800	1,500	1,750	1,750	1,880	4,180	32,100	30,800	10,700	4,800	3,000
29	2,080	1,800	1,620	1,700	-	1,840	4,640	34,000	30,800	10,100	4,800	2,870
30	2,030	1,750	1,620	1,750	-	1,840	5,140	34,600	28,900	9,780	4,640	2,930
31	2,230	-	1,700	1,700	-	1,880	-	35,200	-	9,780	4,800	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	70,580	2,510	2,030	2,277	0.325	0.37	140,000
November	56,920	2,180	1,750	1,897	.271	.30	112,900
December	52,080	1,930	1,430	1,680	.240	.28	103,300
Calendar year 1936	3,472,170	50,200	1,430	9,487	1.35	18.42	6,887,000
January	53,110	1,800	1,660	1,713	.244	.28	105,300
February	48,650	1,800	1,700	1,738	.248	.26	96,500
March	56,660	1,980	1,580	1,828	.261	.30	112,400
April	81,300	5,140	1,880	2,710	.387	.43	161,300
May	643,020	35,200	5,500	20,740	2.96	3.41	1,275,000
June	1,001,800	35,800	28,900	33,390	4.76	5.31	1,987,000
July	534,960	28,300	9,780	17,260	2.46	2.84	1,061,000
August	203,240	9,180	4,640	6,556	.935	1.08	403,100
September	105,850	4,480	2,870	3,528	.503	.56	210,000
Water year 1936-37	2,908,170	35,800	1,430	7,968	1.14	15.42	5,768,000

South Fork of Flathead River near Columbia Falls, Mont.

Location.- Water-stage recorder, lat. 48°22', long. 114°03', in NE¼ sec. 17, T. 30 N., R. 19 W., 2 miles above mouth and 9 miles east of Columbia Falls.

Drainage area.- 1,640 square miles.

Records available.- September 1910 to September 1916, April 1923 to September 1937.

Average discharge.- 14 years (1924-37), 3,521 second-feet.

Extremes.- Maximum discharge during year, 17,000 second-feet May 28 (gage height, 11.19 feet); minimum discharge observed, 254 second-feet Jan. 20 (discharge measurement, ice present).

1910-16, 1923-37: Maximum discharge observed, about 46,200 second-feet June 19, 1916 (gage height, 16.6 feet, former site and datum); minimum, 206 second-feet Dec. 6, 1935 (ice on control).

Remarks.- Records good except those for periods of missing gage heights, Oct. 10-20, Oct. 25 to Nov. 18, Nov. 20 to Dec. 14, Dec. 16 to Apr. 6, May 7-25, June 2-5 which were computed on basis of five discharge measurements and records for Flathead River at Columbia Falls, and are fair. No diversion or storage above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	425							5,470	10,100	5,000	1,290	560
2	430							6,780		4,560	1,410	550
3	430							8,820	10,800	4,280	1,330	540
4	435						510	11,000		3,870	1,210	535
5	478	385	350		290	365		13,400		3,610	1,130	535
6	505							12,600	8,040	3,350	1,090	545
7	488						516		8,620	3,110	1,090	540
8	461						520		8,820	2,870	1,060	530
9	450						570		8,420	2,700	1,060	520
10				270			750		8,230	2,480	1,020	512
11							880	9,620	8,040	2,360	1,060	502
12	425				*294	*377	950		7,850	2,310	950	494
13			400				1,090		8,620	2,260	915	484
14							1,540		8,620	2,200	880	480
15		375	*400				2,680		9,440	2,140	848	471
16						410	2,810		10,300	2,040	815	466
17							2,310		11,700	1,920	789	462
18	435		435				2,040		10,800	1,820	756	453
19		*364					2,090		9,440	1,680	730	448
20				*254			2,310		9,230	1,640	711	444
21	430				310		3,050	12,200	10,100	1,590	680	444
22	425						2,870		10,500	1,500	668	448
23	425		550				2,580		10,300	1,460	680	458
24	425						2,260		8,420	1,410	674	507
25		330					2,140		6,950	1,370	652	512
26				260		435	2,580	15,500	6,110	1,330	630	502
27			440				3,950	16,100	5,630	1,290	614	512
28	410						5,790	16,400	5,470	1,290	592	516
29					-		5,950	15,200	5,310	1,290	586	565
30			325		-		5,310	11,900	5,150	1,250	575	575
31		-			-		-	10,300	-	1,210	570	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	13,402	505	-	432	0.263	0.30	26,580
November	10,844	-	-	361	.220	.25	21,510
December	12,720	-	-	410	.250	.29	25,230
Calendar year 1936	1,129,006	30,000	-	3,085	1.88	25.54	2,240,000
January	8,244	-	-	266	.162	.19	16,350
February	8,444	-	-	302	.184	.19	16,750
March	12,457	-	-	402	.245	.28	24,710
April	60,606	5,950	-	2,020	1.23	1.37	120,200
May	352,050	16,400	5,470	11,360	6.93	7.99	698,300
June	263,410	11,700	5,150	8,780	5.35	5.97	522,500
July	71,190	5,000	1,210	2,296	1.40	1.61	141,200
August	27,065	1,410	570	873	.532	.61	53,680
September	15,110	575	444	504	.307	.34	29,970
Water year 1936-37	855,542	16,400	-	2,344	1.43	19.39	1,697,000

*Discharge measurement.

Stillwater River near Whitefish, Mont.

Location.- Water-stage recorder, lat. 48°19', long. 114°23', in SW¼ sec. 34, T. 30 N., R. 22 W., 600 feet below highway bridge and 7 miles southwest of Whitefish.

Records available.- November 1930 to September 1937.

Extremes.- Maximum discharge during year, 1,240 second-feet Apr. 28 (gage height, 7.79 feet); minimum, 55 second-feet (estimated) Jan. 20-22 (ice present).
1930-37: Maximum discharge, 2,680 second-feet Apr. 28, 1934 (gage height, 14.47 feet); minimum, that of Jan. 20-22, 1937.

Remarks.- Records good except those for periods of ice effect, Nov. 2-18, Nov. 25 to Dec. 24, Dec. 28 to Apr. 6, which were computed on basis of four discharge measurements, gage heights, and weather records, and are fair. Discharge for Nov. 2-17, Dec. 17, Jan. 2 to Mar. 12, Mar. 30 to Apr. 7 computed from once-daily readings of gage. Some water stored during high-water periods and released for logging operations during summer. No diversions.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	73	62	70	60	74	83	583	985	464	162	91
2	72	70	63	67	65	77	88	637	945	447	162	90
3	72	68	64	64	66	78	88	709	905	430	168	88
4	72	72	62	66	71	74	90	785	865	406	162	87
5	71	70	60	61	69	82	90	885	845	390	156	87
6	71	56	60	61	69	82	86	985	825	366	156	86
7	70	64	58	61	69	84	83	1,060	805	351	156	86
8	70	64	60	62	69	87	91	1,140	785	328	156	86
9	70	65	62	62	69	84	94	1,180	747	292	156	86
10	70	64	62	67	67	74	104	1,240	728	271	151	85
11	70	64	62	66	69	81	108	1,220	709	271	151	84
12	69	64	62	64	82	71	110	1,220	691	271	146	84
13	70	64	65	57	78	73	113	1,220	673	271	146	82
14	70	66	68	56	76	72	124	1,180	709	278	138	81
15	70	68	67	57	73	70	151	1,180	709	285	131	79
16	70	68	66	57	77	71	180	1,180	709	278	128	79
17	72	68	66	65	78	74	218	1,180	709	264	126	79
18	71	72	67	62	77	76	251	1,160	709	244	122	79
19	71	75	70	64	72	74	244	1,140	691	238	118	77
20	72	76	72	55	70	72	258	1,120	691	232	115	77
21	73	77	74	55	72	74	285	1,120	691	225	112	75
22	72	75	79	55	78	78	328	1,100	673	218	110	75
23	72	75	91	58	84	82	336	1,080	655	212	106	76
24	73	70	109	57	87	82	336	1,060	637	199	104	76
25	73	69	122	67	85	83	328	1,040	619	192	103	77
26	73	70	129	64	84	84	328	1,000	601	186	101	77
27	74	68	106	60	80	83	351	985	566	186	98	77
28	74	66	98	57	78	80	406	985	532	180	97	78
29	74	64	92	56	-	79	498	985	515	174	95	81
30	74	63	88	56	-	79	566	1,020	498	168	94	87
31	73	-	74	57	-	83	-	1,020	-	162	92	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,220	74	69	71.6	4,400
November	2,058	77	63	68.6	4,080
December	2,340	129	58	75.5	4,640
Calendar year 1936	97,576	1,750	58	267	193,500
January	1,886	70	55	60.8	3,740
February	2,074	87	60	74.1	4,110
March	2,417	87	70	78.0	4,790
April	6,416	566	83	214	12,730
May	32,399	1,240	583	1,045	64,260
June	21,422	985	498	714	42,490
July	8,479	464	162	274	16,820
August	4,018	168	92	130	7,970
September	2,452	91	75	81.7	4,860
Water year 1936-37	88,181	1,240	55	242	174,900

Logan Creek at Tally Lake, near Whitefish, Mont.

Location.- Staff gage, lat. 48°27', long. 114°34', in NW¼ sec. 17, T. 31 N., R. 23 W., about 2½ miles north of Tally Lake and 10 miles west of Whitefish.

Records available.- April 1936 to September 1937. August 1931 to April 1933 and May to September 1934, at site about 2½ miles upstream; records equivalent.

Extremes.- Maximum discharge observed during year, 515 second-feet May 9 (gage height, 3.18 feet); minimum occurred during period of ice effect.
1931-33, 1934, 1936-37: Maximum stage, 7.22 feet May 28, 29, 1933 (discharge not determined); minimum discharge, 0.8 second-foot Sept. 6, 1931.

Remarks.- Records fair except those for period of ice effect, Dec. 25 to Mar. 6 which were computed on basis of one discharge measurement, gage heights, and weather records, and are poor. Gage read twice daily. Natural storage in Tally Lake.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.4	13	13				15	160	200	98	24	5.5
2	9.4	13	13				16	170	194	94	24	5.5
3	9.4	13	13		8.5		16	194	179	84	24	5.5
4	9.8	13	13			10	17	249	170	78	24	5.5
5	10	13	13	7.5			17	303	162	74	23	5.2
6	10	13	13				18	385	152	67	23	5.2
7	9.8	13	13			16	18	430	149	64	23	5.2
8	10	13	13			15	18	515	144	58	22	5.2
9	10	13	13			16	18	515	139	54	21	5.0
10	11	13	13		9.5	16	19	515	134	51	21	5.0
11	11	13	13			16	20	485	130	48	20	5.0
12	11	12	13			16	20	485	125	46	19	4.8
13	11	12	13			15	23	485	130	50	18	4.8
14	12	12	14			14	25	485	137	51	16	4.8
15	12	12	15	6.0		14	29	408	149	51	15	4.5
16	12	12	16			14	31	430	165	50	13	4.5
17	12	12	16			14	34	430	176	48	11	4.5
18	12	12	16		13	14	36	342	176	48	9.0	4.5
19	13	13	16			14	38	364	170	46	8.6	4.5
20	13	13	16			14	43	364	165	45	8.2	4.5
21	12	13	16			14	51	342	165	42	7.8	4.5
22	12	13	17			14	58	322	160	38	7.8	4.8
23	12	13	18			15	60	303	154	36	7.0	5.0
24	12	14	22			15	64	284	144	34	7.0	5.0
25	13	14	23		8.5	15	67	266	137	32	6.8	5.0
26	13	14	22	8.5		15	74	266	130	30	6.5	5.0
27	13	14	20			15	82	249	125	29	6.5	5.2
28	13	14	18			14	98	249	116	27	6.2	5.5
29	13	13	17		-	14	125	232	111	26	6.0	5.5
30	13	13	17		-	14	149	232	102	25	5.8	5.5
31	13	-	16		-	15	-	216	-	25	5.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	356.8	13	9.4	11.5	708
November	388	14	12	12.9	770
December	484	23	13	15.6	960
Calendar year					
January	228.5	-	-	7.37	453
February	270.5	-	-	9.66	537
March	428	16	-	13.8	849
April	1,299	149	15	43.3	2,580
May	10,675	515	160	344	21,170
June	4,490	200	102	150	8,910
July	1,549	98	25	50.0	3,070
August	440.0	24	5.8	14.2	873
September	150.2	5.5	4.5	5.01	298
Water year 1936-37	20,759.0	515	-	56.9	41,180

Whitefish Creek near Kalispell, Mont.

Location.- Water-stage recorder, lat. 48°19', long. 114°16', in SW¼ sec. 34, T. 30 N., R. 21 W., 8 miles north of Kalispell.

Records available.- November to December 1906, July 1928 to September 1937.

Extremes.- Maximum discharge during year, 661 second-feet June 8 (gage height, 2.84 feet); minimum, 12 second-feet Nov. 22 (gage height, 0.97 foot).
1906, 1928-37: Maximum discharge, 1,260 second-feet June 3, 1932 (gage height, 4.26 feet); minimum, 4.5 second-feet Oct. 18, 1934 (gage height, 0.83 foot).

Remarks.- Records good except those for periods of ice effect, Nov. 5-8, Nov. 27 to Dec. 19, Dec. 28 to Mar. 23, which were computed on basis of three discharge measurements, gage heights, temperature records, and observer's notes, and are fair. Discharge for Nov. 29 to Dec. 17, Dec. 24 to Apr. 6 computed from once-daily readings of gage. Some regulation at Whitefish Lake. No diversions.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.9	6	2.1	332
1.1	28	2.3	414
1.3	67	2.5	500
1.5	120	2.7	590
1.7	183	3.0	733
1.9	255		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	24	15				103	194	590	385	111	81
2	45	25	16				103	135	581	372	111	79
3	47	24	14				103	144	487	360	111	77
4	47	24	19				*97	187	514	344	106	74
5	47	23	20				91	208	527	332	106	74
6	47	18	15	35	30	70	91	197	527	320	103	74
7	45	18	18				91	215	554	309	103	74
8	45	23	15				91	336	661	301	100	72
9	43	24	20				91	348	637	289	103	72
10	43	24	19				40	360	614	278	103	72
11	43	23	18				23	380	590	270	100	77
12	43	22	22				27	380	586	263	97	79
13	43	20	22			110	94	385	581	251	97	79
14	43	19	25				103	385	572	248	97	77
15	45	18	33	25	40		108	393	554	241	97	77
16	43	16	42				111	397	536	241	94	74
17	43	16	47				111	401	527	230	103	69
18	45	16	43			230	108	414	518	223	106	74
19	45	15	47				114	422	504	208	106	77
20	45	15	52				117	439	500	197	103	74
21	45	14	42			282	138	456	500	190	97	74
22	42	13	40			282	142	465	491	180	94	45
23	42	20	42			278	141	469	487	170	91	31
24	42	42	49			285	138	474	469	163	91	31
25	38	16	49		45	132	135	474	456	157	91	31
26	38	18	49	20		97	138	*491	439	153	89	31
27	38	19	49			97	160	518	422	144	89	28
28	86	19	43			97	190	558	406	123	89	25
29	100	18	45		-	91	194	590	389	117	89	28
30	42	18	42		-	103	190	614	389	111	86	31
31	25	-	35		-	97	-	590	-	108	84	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,432	100	25	46.2	2,840
November	604	42	13	20.1	1,200
December	1,007	52	14	32.5	2,000
Calendar year 1936	59,768	856	13	163	118,600
January	820	-	-	26.5	1,630
February	1,060	-	-	37.9	2,100
March	4,241	285	-	137	8,410
April	3,382	194	23	113	6,710
May	12,019	614	135	388	23,840
June	15,608	661	389	520	30,960
July	7,278	385	108	235	14,440
August	3,047	111	84	98.3	6,040
September	1,861	81	25	62.0	3,690
Water year 1936-37	52,359	661	13	143	103,900

*Interpolated.

Ashley Creek near Kalispell, Mont.

Location.- Wire-weight gage, lat. 48°11', long. 114°24', in SE¼ sec. 16, T. 28 N., R. 22 W., 4 miles west of Kalispell.

Records available.- April 1931 to March 1933, April 1934 to September 1937.

Extremes.- Maximum discharge observed during year, 60 second-feet Apr. 5 (gage height, 7.31 feet); no flow Sept. 5-30.
1931-37: Maximum discharge observed, 285 second-feet Apr. 26, 1934 (gage height, 9.30 feet); no flow at times.

Remarks.- Records poor. Discharge for period of ice effect, Dec. 1 to Feb. 10, computed on basis of two discharge measurements, gage heights, and weather records. Gage read twice daily. Some diversions; natural storage in Smith Lake.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	0.1				1.2	27	24	46	37	24	2.0
2	2.2	1.1				1.0	35	20	46	37	26	1.2
3	2.6	.8				1.4	40	22	37	32	21	.8
4	2.9	1.0				1.7	49	28	40	37	19	.1
5	3.0	1.5				1.7	56	28	40	36	17	0
6	2.8	1.6			1.0	2.0	56	28	40	32	15	0
7	2.8	1.6				1.9	53	26	36	32	13	0
8	2.7	1.4	2.0			1.7	40	35	40	33	9.2	0
9	3.0	1.4				1.6	46	31	36	33	11	0
10	3.0	1.6				1.6	46	34	37	32	10	0
11	3.0	1.6			1.0	1.6	40	35	40	29	9.8	0
12	3.6	1.6			.5	1.6	32	32	43	30	9.8	0
13	4.0	1.6			.8	2.1	37	32	43	31	7.6	0
14	3.9	1.6			.7	3.1	30	36	43	33	7.0	0
15	3.8	1.6			1.2	2.1	37	32	43	34	6.4	0
16	3.3	1.6			1.0	2.0	33	32	49	34	6.0	0
17	3.1	1.6			.6	2.7	32	30	46	34	5.0	0
18	2.8	1.6			.5	2.9	31	33	49	35	4.6	0
19	2.3	1.6			.8	2.4	30	37	49	35	4.3	0
20	1.5	1.7			1.4	2.5	28	36	46	34	4.1	0
21	.5	2.3			1.0	2.8	31	35	46	34	3.7	0
22	2.3	2.1			1.0	3.2	28	43	46	33	3.5	0
23	2.6	2.0			1.2	3.8	30	37	49	32	3.4	0
24	2.6	2.0	1.8		1.2	3.6	30	33	46	31	3.2	0
25	2.5	2.0			1.2	3.4	28	43	43	31	2.4	0
26	2.9	2.3			1.2	8.6	26	53	43	29	1.8	0
27	2.9	2.4			.9	10	27	49	40	28	2.1	0
28	2.9	2.4			1.1	7.8	27	46	40	30	2.1	0
29	2.7	2.4			-	8.0	24	43	37	29	.9	0
30	2.0	2.4			-	12	26	43	37	29	1.6	0
31	1.5	-			-	20	-	49	-	28	2.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	84.0	4.0	0.5	2.71	167
November	50.5	2.4	.1	1.68	100
December	58.8	-	-	1.90	117
Calendar year 1936	8,116.4	154	0	22.2	16,100
January	46.5	-	-	1.50	92
February	27.3	1.4	.5	.98	54
March	122.0	20	1.0	3.94	242
April	1,055	56	24	35.2	2,090
May	1,085	53	20	35.0	2,150
June	1,276	49	36	42.5	2,530
July	1,004	37	28	32.4	1,990
August	256.5	26	.9	8.27	509
September	4.1	2.0	0	.14	81
Water year 1936-37	5,069.7	56	0	13.9	10,050

Swan River near Big Fork, Mont.

Location.- Water-stage recorder, lat. 48°01', long. 113°59', in NW¼ sec. 14, T. 26 N., R. 19 W., at outlet of Swan Lake, 7 miles southeast of Big Fork.

Drainage area.- 647 square miles.

Records available.- April 1922 to September 1937. October 1910 to May 1911, at site 2 miles above Swan Lake.

Average discharge.- 15 years (1923-37), 1,157 second-feet.

Extremes.- Maximum discharge during year, 3,380 second-feet May 30 (gage height, 4.71 feet); minimum, 252 second-feet Mar. 1 (gage height, 1.94 feet).
1922-37: Maximum discharge, 8,280 second-feet June 18, 1933 (date as previously published in error; gage height, 7.00 feet); minimum, 85 second-feet Jan. 25-29, 1930 (gage height, 0.04 foot).

Remarks.- Records good. Discharge for Nov. 26 to Dec. 12, Jan. 5 to Mar. 13, June 13 to July 14, Aug. 19-22 computed from once-daily readings of gage. No diversions above station, natural storage in Swan Lake.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	321	284	270	302	267	252	321	1,200	2,810	1,780	570	315
2	321	284	270	284	261	258	356	1,210	2,650	1,760	570	315
3	315	288	270	270	261	258	380	1,280	2,570	1,700	570	310
4	315	292	279	274	267	258	392	1,440	2,650	1,620	563	306
5	333	292	270	315	267	258	411	1,710	2,650	1,540	533	306
6	339	297	264	306	264	255	417	1,980	2,500	1,470	518	306
7	339	302	258	297	264	255	429	2,200	2,340	1,340	510	310
8	327	306	279	274	264	255	429	2,200	2,200	1,230	496	310
9	327	288	306	274	264	255	429	2,270	2,120	1,130	503	306
10	321	284	297	274	264	261	449	2,270	2,050	1,090	503	302
11	310	284	297	279	264	267	469	2,270	2,050	1,050	496	302
12	310	284	297	288	267	270	496	2,270	1,980	997	496	292
13	315	284	302	297	267	264	518	2,200	2,120	960	483	288
14	327	288	306	297	261	284	556	2,050	2,200	923	462	284
15	321	288	297	302	261	288	626	1,980	2,120	914	449	279
16	321	288	302	310	261	284	718	2,050	2,200	896	435	279
17	327	288	302	321	258	288	770	2,050	2,340	869	423	274
18	315	297	310	327	258	297	779	2,120	2,570	833	423	270
19	315	297	310	315	258	297	770	2,200	2,730	788	368	264
20	306	297	321	315	258	297	770	2,270	2,730	743	362	267
21	306	302	315	310	258	292	833	2,420	2,730	718	350	267
22	310	297	321	302	264	288	932	2,340	3,050	692	339	264
23	306	302	315	267	261	284	969	2,270	3,130	658	386	264
24	292	302	362	267	261	292	969	2,200	3,050	642	380	270
25	292	297	368	274	261	292	932	2,270	2,890	678	380	279
26	292	288	368	270	255	292	905	2,420	2,570	602	374	279
27	284	279	362	270	255	288	914	2,810	2,340	586	350	284
28	292	279	356	270	255	284	987	3,130	2,120	578	344	292
29	292	279	327	270	-	284	1,120	3,300	1,980	570	344	302
30	284	270	310	270	-	292	1,200	3,300	1,840	556	327	310
31	284	-	306	270	-	306	-	3,050	-	540	321	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	9,659	339	284	312	0.482	0.56	19,160
November	8,707	306	270	290	.448	.50	17,270
December	9,517	368	258	307	.474	.55	18,880
Calendar year 1936	377,032	5,970	258	1,030	1.59	21.69	747,900
January	8,961	327	267	289	.447	.52	17,770
February	7,326	267	255	262	.405	.42	14,530
March	8,595	306	252	277	.428	.49	17,050
April	20,246	1,200	321	675	1.04	1.16	40,160
May	68,730	3,300	1,200	2,217	3.43	3.95	136,300
June	73,280	3,130	1,840	2,443	3.78	4.22	145,300
July	30,453	1,780	540	982	1.52	1.75	60,400
August	13,628	570	321	440	.680	.78	27,030
September	8,696	315	264	290	.448	.50	17,250
Water year 1936-37	267,798	3,300	252	734	1.13	15.40	531,100

Priest Lake at outlet, near Coolin, Idaho

Location.- Staff gage, lat. 48°29'30", long. 116°54', in W½ sec. 5, T. 59 N., R. 4 W., 400 feet north of lake outlet and 2 miles northwest of Coolin. Zero of gage is 2,435.06 feet (Coast and Geodetic Survey datum) or 2,437.99 feet (Geological Survey datum) above mean sea level.

Drainage area.- 572 square miles.

Records available.- April 1928 to September 1937. June 1911 to September 1913 (fragmentary gage-height records at Coolin) published in connection with records for Priest River at outlet of Priest Lake, at Coolin.

Extremes.- Maximum gage height observed during year, 3.70 feet May 29, 30; minimum, -0.16 foot Nov. 23-25, Dec. 4-6.
1928-37: Maximum gage height observed, 5.94 feet May 23, 1932; minimum, that of Nov. 23-25, Dec. 4-6, 1936.

Remarks.- Records good.

Gage height, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.02	-0.04	-0.14	0.12	0.17	0.34	0.30	1.68	3.65	2.87	1.28	0.56
2	.01	-.03	-.14	.10	.17	.36	.32	1.74	3.60	2.80	1.26	.54
3	.01	-.02	-.14	.10	.18	.34	.32	1.85	3.58	2.76	1.25	.52
4	.00	-.04	-.16	.08	.19	.34	.35	2.00	3.58	2.74	1.20	.50
5	.00	-.06	-.16	.06	.19	.32	.38	2.15	3.56	2.68	1.16	.50
6	.00	-.08	-.16	.06	.19	.32	.40	2.46	3.56	2.50	1.14	.60
7	-.02	-.10	-.14	.08	.19	.32	.42	2.54	3.54	2.44	1.10	.66
8	-.02	-.08	-.12	.08	.20	.32	.44	2.64	3.54	2.34	1.08	.64
9	-.04	-.06	-.12	.10	.20	.30	.46	2.68	3.42	2.30	1.02	.62
10	-.04	-.06	-.12	.14	.22	.28	.48	2.74	3.36	2.26	1.00	.60
11	-.04	-.04	-.10	.14	.22	.28	.52	2.86	3.32	2.18	.98	.58
12	-.02	-.06	-.10	.14	.24	.26	.54	2.90	3.28	2.14	.96	.56
13	+.03	-.08	-.10	.14	.26	.26	.64	2.94	3.24	2.08	.94	.55
14	.04	-.12	-.10	.14	.26	.26	.72	2.98	3.16	2.02	.90	.54
15	.04	-.15	-.08	.14	.28	.26	.84	3.00	3.14	2.04	.88	.53
16	.00	-.12	-.06	.14	.28	.26	.96	3.04	3.12	2.01	.86	.52
17	-.02	-.12	-.04	.10	.30	.26	.98	3.10	3.10	1.96	.84	.51
18	-.02	-.10	-.04	.12	.32	.26	1.04	3.12	3.10	1.90	.82	.50
19	-.02	-.10	-.02	.14	.35	.28	1.12	3.18	3.10	1.82	.80	.48
20	-.04	-.10	-.02	.14	.36	.28	1.19	3.22	3.18	1.78	.76	.46
21	-.04	-.12	-.01	.16	.36	.28	1.26	3.28	3.20	1.72	.74	.43
22	-.04	-.14	+.04	.16	.36	.26	1.30	3.30	3.18	1.66	.72	.40
23	-.04	-.16	.10	.16	.36	.24	1.32	3.36	3.20	1.62	.70	.38
24	-.04	-.16	.12	.16	.34	.24	1.36	3.40	3.22	1.58	.68	.36
25	-.04	-.16	.16	.16	.34	.24	1.38	3.46	3.20	1.54	.66	.34
26	-.04	-.14	.22	.16	.34	.24	1.40	3.54	3.18	1.50	.66	.32
27	-.04	-.14	.20	.16	.32	.24	1.44	3.60	3.16	1.44	.64	.31
28	-.04	-.12	.18	.16	.32	.24	1.48	3.66	3.10	1.42	.62	.31
29	-.04	-.12	.18	.16	-	.24	1.52	3.70	3.00	1.40	.63	.30
30	-.06	-.12	.16	.17	-	.26	1.56	3.70	2.88	1.38	.60	.30
31	-.06	-	.16	.17	-	.28	-	3.68	-	1.30	.58	-

Priest River at outlet of Priest Lake, near Coolin, Idaho

Location.- Water-stage recorder, lat. 48°29', long. 116°54', in SW¼ sec. 5, T. 59 N., R. 4 W., at southwest end of Priest Lake, 2 miles northwest of Coolin. Zero of gage 2,435.06 feet (Coast and Geodetic Survey datum), or 2,437.99 feet (Geological Survey datum) above mean sea level.

Drainage area.- 572 square miles.

Records available.- June 1911 to September 1918 (fragmentary), May 1919 to September 1937.

Average discharge.- 23 years (1913-18, 1919-37), 1,070 second-feet.

Extremes.- Maximum discharge during year, 3,220 second-feet May 29 (gage height, 3.21 feet); minimum discharge, 118 second-feet Nov. 25 (gage height, -0.32 foot).
1911-37: Maximum discharge, 7,290 second-feet May 30, 1917 (gage height, 6.83 feet); minimum discharge, that of Nov. 25, 1936.

Remarks.- Records good except those for Oct. 4 to Dec. 21 and Jan. 5 to Feb. 1, which were based on relation curve between gage at Priest Lake and outside gage at this station and are fair. No diversions above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	162	146	124	180	200	243	233	980	3,070	2,100	707	349
2	162	149	124	180	206	250	237	1,040	3,070	2,040	700	340
3	162	151	124	175	206	250	243	1,150	3,140	1,980	686	336
4	162	146	120	186	215	246	246	1,310	3,070	1,860	673	328
5	159	141	120	172	218	240	253	1,510	3,070	1,800	647	361
6	159	136	120	172	218	230	230	1,680	3,000	1,740	634	374
7	154	134	124	178	218	227	263	1,800	2,920	1,630	615	374
8	154	136	129	178	218	224	266	1,860	2,840	1,580	589	374
9	149	141	129	180	218	224	274	1,920	2,770	1,510	571	370
10	149	141	129	192	218	221	291	1,980	2,700	1,440	560	365
11	149	146	134	192	224	221	302	2,040	2,700	1,400	548	361
12	154	141	134	192	224	227	313	2,040	2,630	1,350	530	357
13	167	136	134	192	227	224	340	2,040	2,560	1,310	502	357
14	167	129	134	192	230	218	387	2,160	2,490	1,290	480	357
15	167	122	136	192	227	218	444	2,230	2,420	1,270	475	353
16	156	129	141	192	237	218	492	2,300	2,360	1,230	460	344
17	151	129	146	180	250	218	519	2,360	2,300	1,190	450	340
18	151	134	146	186	260	218	542	2,420	2,300	1,140	439	344
19	151	134	151	192	256	221	565	2,490	2,420	1,070	429	336
20	146	134	151	192	256	218	595	2,560	2,490	1,040	419	332
21	146	129	154	197	266	221	660	2,630	2,560	996	410	325
22	146	124	159	197	270	218	700	2,630	2,560	964	401	321
23	146	120	175	197	270	218	720	2,700	2,560	932	396	309
24	146	120	192	197	266	218	741	2,770	2,560	910	401	306
25	146	120	200	197	260	218	755	2,840	2,560	880	396	298
26	146	124	203	197	253	218	769	2,920	2,490	842	392	291
27	146	124	203	197	246	218	798	3,070	2,420	812	378	277
28	146	129	197	197	246	215	842	3,140	2,360	790	374	274
29	146	129	194	197	-	212	902	3,140	2,300	776	370	266
30	141	129	192	200	-	218	940	3,140	2,160	741	361	266
31	141	-	194	200	-	227	-	3,140	-	713	357	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	4,727	167	141	152	0.266	0.31	9,380
November	4,003	151	120	133	.233	.26	7,940
December	4,713	203	120	152	.266	.31	9,350
Calendar year 1936	282,659	4,540	120	772	1.35	18.40	560,700
January	5,868	200	172	189	.330	.38	11,640
February	6,603	270	200	236	.413	.43	13,100
March	6,957	250	212	224	.392	.45	13,800
April	14,892	940	233	496	.867	.97	29,540
May	69,990	3,140	980	2,258	3.95	4.55	138,800
June	78,850	3,140	2,160	2,628	4.59	5.12	156,400
July	39,326	2,100	713	1,269	2.22	2.56	78,000
August	15,350	707	357	495	.865	1.00	30,450
September	9,985	374	266	333	.582	.65	19,800
Water year 1936-37	261,264	3,140	120	716	1.25	11.99	518,200

Priest River near Priest River, Idaho

Location.- Water-stage recorder, lat. 48°13', long. 116°55', in NE¼ SE¼ sec. 11, T. 56 N., R. 5 W., 500 feet below Saddler Creek, a quarter of a mile below mouth of Lower West Branch, 2⅛ miles north of Priest River, and 3⅛ miles above mouth.
Drainage area.- 902 square miles.
Records available.- October 1930 to September 1937, June 1903 to April 1905, November 1910 to April 1911, May to December 1923, and February 1929 to September 1930, at site 3 miles downstream.
Extremes.- Maximum discharge during year, 4,000 second-feet May 29 (gage height, 4.99 feet); minimum discharge recorded, 184 second-feet Jan. 7 (gage height, 0.54 foot). 1903-5, 1910-11, 1923, 1929-37: Maximum discharge, 8,890 second-feet May 23, 1932 (gage height, 8.03 feet); minimum discharge recorded, that of Jan. 7, 1937.
Remarks.- Records good except those for period of ice effect, Jan. 8 to Mar. 8 (computed on basis of two discharge measurements, weather records, and record for station near Coolin) and for periods of missing gage heights, April 29 to May 6 and Aug. 25-27 (computed on basis of record for station near Coolin) which are fair. No diversions above station. Some regulation on tributary.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used May 7-30)

Oct. 1 to Jan. 7		Mar. 9 to Sept. 30			
0.5	174	1.0	357	3.4	2,230
.7	227	1.4	577	3.8	2,670
.9	300	1.8	834	4.2	3,130
1.1	391	2.2	1,130	4.6	3,610
1.3	498	2.6	1,460	5.0	4,130
1.5	614	3.0	1,830		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	261	237	212	288	320	400	766	2,200	3,740	2,620	904	473
2	258	234	218	303	330	*399	786	2,300	3,740	2,500	904	457
3	254	230	215	309	*331	410	780	2,400	3,800	2,400	883	451
4	265	230	215	343	340	410	786	2,500	3,800	2,280	848	457
5	258	234	212	339	340	400	820	2,600	3,740	2,180	820	530
6	258	234	215	265	340	400	807	2,700	3,610	2,080	807	571
7	258	230	247	191	330	400	793	2,840	3,490	2,030	786	542
8	258	224	251	200	330	410	800	2,840	3,430	1,930	760	512
9	251	224	244	220	330	413	876	2,840	3,310	1,830	746	507
10	251	224	237	240	340	413	1,110	2,890	3,250	1,760	727	484
11	251	227	234	260	350	419	1,140	3,010	3,310	1,700	714	479
12	247	224	230	280	350	446	1,110	2,950	3,310	1,650	701	473
13	251	224	237	280	360	451	1,350	2,950	3,130	1,600	682	462
14	265	224	241	280	360	446	1,880	2,950	3,010	1,580	651	457
15	277	221	251	280	360	419	2,400	3,130	2,890	1,570	632	451
16	269	221	251	280	370	430	2,030	3,130	2,840	1,520	626	446
17	265	230	254	280	380	462	1,730	3,130	2,840	1,450	614	440
18	261	234	265	270	400	484	1,570	3,190	2,890	1,400	595	430
19	258	234	292	270	390	473	1,490	3,250	3,130	1,360	583	424
20	254	234	284	270	390	446	1,490	3,310	3,250	1,290	571	419
21	251	234	296	280	400	419	1,710	3,370	3,310	1,260	565	413
22	251	227	367	290	420	419	1,670	3,430	3,190	1,190	548	403
23	247	224	555	300	440	424	1,590	3,430	3,250	1,150	577	398
24	251	224	555	310	430	440	1,530	3,490	3,250	1,110	571	393
25	247	224	448	310	420	473	1,490	3,610	3,190	1,060	550	388
26	241	221	391	310	410	479	1,530	3,740	3,070	1,040	530	382
27	247	218	362	310	400	536	1,730	3,800	2,950	1,010	510	382
28	241	221	339	310	400	583	1,830	3,940	2,890	991	507	377
29	237	218	300	310	-	614	1,950	3,940	2,780	998	496	377
30	234	215	336	310	-	626	2,050	3,800	2,670	962	479	377
31	237	-	326	320	-	695	-	3,800	-	918	479	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	7,854	277	234	253	0.280	0.32	15,580
November	6,800	237	215	227	.252	.28	13,490
December	9,080	555	212	293	.325	.37	18,010
Calendar year 1936	373,276	5,570	212	1,036	1.15	15.62	752,200
January	8,814	343	191	284	.315	.36	17,480
February	10,361	440	320	370	.410	.43	20,550
March	14,239	695	399	459	.509	.59	28,240
April	41,594	2,400	766	1,386	1.54	1.72	82,500
May	97,460	3,940	2,200	3,144	3.49	4.02	193,300
June	97,060	3,800	2,670	3,235	3.59	4.00	192,500
July	48,419	2,620	918	1,562	1.73	1.99	96,040
August	20,366	904	479	657	.728	.84	40,400
September	13,355	571	377	445	.493	.55	26,490
Water year 1936-37	375,402	3,940	191	1,028	1.14	15.47	744,600

*Discharge measurement.

Salmon River near Waneta, British Columbia

Location.- Staff gage, lat. 49°01'30", long. 117°22'30", three-quarters of a mile above mouth and 15 miles above Waneta.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge observed during March to September 1936, 7,630 second-feet Apr. 25 (gage height, 12.65 feet); minimum, 134 second-feet Mar. 6, 8 (gage height, 2.28 feet).

Maximum discharge observed during water year 1936-37, 4,840 second-feet May 27 (gage height, 10.25 feet); minimum, 78 second-feet Feb. 19 (result of discharge measurement during period of ice effect); discharge may have been less sometime during period of ice effect.

Remarks.- Records fair except those for period of ice effect, Dec. 30 to Mar. 15, which were computed on basis of one discharge measurement, gage heights, and weather records and are poor. Discharge for Apr. 12, 1937 interpolated. Gage read once daily Mar. 6-15, 1936, and twice daily thereafter. Complete record furnished by Dominion Water and Power Bureau (Canada). Some discharge measurements made by U. S. Geological Survey.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

2.0	91	7.0	2,030
2.5	176	8.0	2,730
3.0	292	9.0	3,580
3.5	436	10.0	4,560
4.0	600	11.0	5,680
5.0	980	12.0	6,850
6.0	1,450		

Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						-	176	4,180	2,300	452	191	145
2						-	172	4,380	2,220	423	189	191
3						-	176	4,620	1,850	423	186	186
4						-	174	5,160	1,460	455	189	172
5						-	176	6,510	1,310	442	182	170
6						134	180	4,870	1,210	392	180	166
7						135	186	4,140	1,130	363	176	158
8						134	204	3,720	1,420	410	176	152
9						158	228	3,810	1,570	401	172	145
10						191	261	4,240	1,420	560	164	145
11						189	380	4,800	1,260	527	160	141
12						184	648	4,940	1,210	471	160	148
13						184	1,200	4,760	1,140	423	158	168
14						186	1,570	5,330	1,040	383	156	193
15						189	1,890	6,000	980	363	154	189
16						174	2,210	4,580	1,080	343	154	172
17						176	3,160	3,720	1,070	329	150	166
18						174	4,860	3,140	948	318	146	164
19						176	5,910	3,200	852	252	178	164
20						182	4,980	2,850	804	287	166	160
21						189	5,310	2,470	768	259	156	156
22						189	5,660	2,190	693	261	152	146
23						191	6,200	2,080	682	252	146	146
24						180	6,350	2,260	614	244	145	145
25						182	7,390	2,420	620	240	145	145
26						184	6,610	3,220	461	235	145	143
27						193	5,110	3,260	550	224	143	143
28						186	4,240	3,390	511	215	152	141
29						178	3,880	3,220	494	210	146	141
30						184	3,780	3,030	488	201	145	141
31						172	-	2,600	-	195	143	-

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Discharge, in second-feet, of Salmon River near Waneta, B. C., 1936-37--Continued.

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	139	127	114	120	80	90	266	1,450	3,420	1,350	321	168
2	139	114	110	120	80	90	271	1,860	3,180	1,260	346	166
3	139	117	123	115	80	90	266	2,620	3,760	1,120	318	160
4	139	125	122	115	80	90	276	3,540	2,950	1,050	297	154
5	146	125	117	110	80	90	287	3,960	2,240	908	233	193
6	145	120	117	110	80	90	284	2,730	2,110	820	259	237
7	141	107	120	110	80	90	287	2,470	2,240	780	271	210
8	139	143	118	105	80	100	287	2,220	2,160	718	252	193
9	137	134	123	105	80	100	313	2,110	2,150	665	256	178
10	135	135	123	105	80	100	357	2,280	1,940	637	247	172
11	135	127	123	100	80	110	426	2,160	1,900	590	247	164
12	132	123	122	100	80	120	474	2,440	1,680	641	237	160
13	132	123	118	100	80	130	521	2,620	1,610	852	221	152
14	130	125	123	100	80	140	740	2,850	1,670	715	215	148
15	128	122	123	100	80	145	796	3,150	1,740	641	206	148
16	127	123	123	90	80	141	788	2,910	1,820	600	193	145
17	123	130	122	90	80	146	675	2,730	2,110	534	189	143
18	123	128	123	90	80	154	690	2,950	2,320	614	186	145
19	141	128	130	90	78	143	718	3,380	2,850	547	184	143
20	135	127	132	90	80	143	722	3,290	2,420	449	189	141
21	135	127	132	90	80	141	776	3,180	2,040	423	180	141
22	135	125	137	80	80	137	682	3,380	2,260	410	170	139
23	135	122	193	80	80	145	648	3,050	3,010	383	199	141
24	134	118	182	80	80	145	603	3,260	2,640	366	274	141
25	134	118	174	80	90	148	577	3,980	2,350	349	217	139
26	134	118	172	80	90	156	690	4,510	2,130	340	199	137
27	134	114	145	80	90	164	900	4,620	1,900	321	193	141
28	134	114	130	80	90	172	1,180	4,260	1,690	318	184	148
29	134	114	127	80	-	189	1,100	3,240	1,580	335	180	152
30	132	117	125	80	-	212	1,040	2,640	1,450	287	176	154
31	130	-	125	80	-	242	-	2,790	-	279	168	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January 1936	-	-	-	-	-
February	-	-	-	-	-
March 6-31	4,594	193	134	177	9,110
April	83,271	7,390	172	2,780	165,000
May	119,090	6,510	2,080	3,840	236,000
June	32,175	2,300	481	1,070	63,800
July	10,573	560	195	341	21,000
August	5,005	191	143	161	9,930
September	4,742	193	141	158	9,410
The period					514,000
October 1936	4,176	146	123	135	8,280
November	3,690	143	107	123	7,320
December	4,068	193	110	131	8,070
Calendar year					
January 1937	2,955	120	80	95	5,860
February	2,278	90	78	81	4,520
March	4,153	242	90	134	8,240
April	17,640	1,180	266	588	35,000
May	92,630	4,620	1,450	2,990	184,000
June	67,320	3,760	1,450	2,240	134,000
July	19,302	1,350	279	623	38,300
August	7,007	346	168	226	13,900
September	4,753	237	137	158	9,430
Water year 1936-37	229,972	4,620	78	630	457,000

Sheep Creek near Northport, Wash.

Location.- Water-stage recorder, lat. 48°56'40", long. 117°46'40", in NE¼NE¼ sec. 25, T. 40 N., R. 39 E., at county highway bridge, 1 mile above mouth and 1½ miles north of Northport. Zero of gage is 1,300 feet above mean sea level (subject to correction for general adjustment of 1929).
Drainage area.- 225 square miles.
Records available.- June 1929 to September 1937.
Extremes.- Maximum discharge during year, 975 second-feet June 25 (gage height, 25.44 feet); minimum occurred during period of ice effect.
1929-37: Maximum discharge, 2,450 second-feet Apr. 29, 1933 (gage height, 27.46 feet); minimum, probably less than 8 second-feet sometime during Dec. 25, 1929, to Apr. 7, 1930.
Remarks.- Records good except those for periods of shifting control or ice effect, Oct. 1 to Mar. 30, which were computed on basis of four discharge measurements, gage heights, and weather records and are poor, and those for period of missing gage heights, July 3-14, which were computed on basis of records for Colville River at Meyers Falls and are fair. Flow partly regulated by flash dam, used for logging operations, 6½ miles upstream. No diversions.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Nov. 1 and Dec. 17-28)

Oct. 1 to June 27				June 28 to Sept. 30			
22.4	10	24.0	275	22.5	13	24.5	460
22.7	29	24.5	460	23.0	56	25.0	700
23.0	61	25.0	700	23.5	140	25.5	1,010
23.5	145	25.5	1,010	24.0	273		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	26					31	486	431	398	78	37
2	25						31	522	410	374	80	35
3	25						31	653	398	350	78	29
4	27						34	765	386	320	76	18
5	27						36	864	360	300	72	33
					15	20						
6	27	25					38	905	324	290	70	37
7	27			15			40	884	291	270	69	34
8	27		20				40	816	272	260	64	22
9	27						42	776	257	240	62	28
10	27						54	760	239	230	60	30
11	27						62	738	254	220	59	30
12	28						61	690	266	210	57	31
13	26						81	658	254	200	54	31
14	26						109	695	237	200	51	31
15	25						139	782	225	189	50	45
		25			15	20						
16	24						163	884	223	184	49	41
17	23		22				172	852	234	169	48	35
18	24		22				181	765	254	153	46	29
19	24		22				194	732	310	142	45	19
20	25		22				217	743	348	132	44	24
				15								
21	25		22				251	749	371	122	43	28
22	24		22				245	727	448	114	42	28
23	25		23				237	711	684	109	43	29
24	24		23				231	684	864	101	45	29
25	23		21		20		225	664	940	96	42	29
		20				25						
26	24		20				239	679	846	91	40	29
27	25		20				285	674	732	84	40	30
28	24		19				345	658	628	86	37	30
29	24			20	-		394	608	522	87	37	30
30	25		20		-		410	550	447	87	37	30
31	25	-			-	28	-	482	-	86	37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	784	28	23	25.3	0.112	0.13	1,560
November	701	-	-	23.4	.104	.12	1,390
December	638	-	-	20.6	.092	.11	1,270
Calendar year 1936	55,090	2,060	10	151	.671	9.11	109,300
January	490	-	-	15.8	.070	.08	972
February	460	-	-	16.4	.073	.08	912
March	678	-	-	21.9	.097	.11	1,340
April	4,618	410	31	154	.684	.76	9,160
May	22,156	905	482	715	3.18	3.67	43,950
June	12,455	940	223	415	1.84	2.05	24,700
July	5,894	398	84	190	.844	.97	11,690
August	1,655	80	37	53.4	.237	.27	3,280
September	911	45	18	30.4	.135	.15	1,810
Water year 1936-37	51,440	940	-	141	.627	8.50	102,000

Kettle River near Ferry, Wash.

(International gaging station)

Location.- Water-stage recorder, lat. 48°58'40", long. 118°46'10", in lot 7, sec. 10, T. 40 N., R. 32 E., 1¼ miles south of international boundary and Ferry. Zero of gage is 1,840.00 feet above mean sea level (subject to correction for general adjustment of 1929).

Drainage area.- 2,220 square miles.

Records available.- August 1928 to September 1937.

Extremes.- Maximum discharge during year, 9,940 second-feet June 3 (gage height, 16.66 feet); minimum, 39 second-feet Nov. 7 (gage height, 8.91 feet).

1928-37: Maximum discharge, 14,000 second-feet June 17, 1933 (gage height, 18.40 feet); minimum, 14 second-feet Jan. 23, 1930, discharge measurement; may have been less during period Jan. 18-23, 1930.

Remarks.- Records excellent except those for period of ice effect, Jan. 2 to Feb. 28, which were computed on basis of two discharge measurements, gage heights, and weather records and are poor. Discharge for Aug. 2-4 interpolated. Numerous small diversions for irrigation above station. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

8.9	38	12.0	1,940
9.2	80	12.5	2,550
9.5	137	13.0	3,250
10.0	313	14.0	4,800
10.5	590	15.0	6,600
11.0	940	16.0	8,500
11.5	1,370	17.0	10,600

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	140	135	97	82	60	99	175	2,000	8,500	2,420	454	163
2	140	123	80	75	60	102	172	2,550	7,740	2,300	444	158
3	137	133	83	70	60	108	175	3,620	8,900	2,060	434	155
4	135	145	92	70	65	113	178	4,800	8,310	1,820	425	158
5	137	130	97	65	70	119	187	4,970	6,410	1,580	415	169
6	137	119	99	65	65	124	193	4,320	5,850	1,470	379	172
7	137	86	102	65	65	122	190	3,850	5,670	1,320	363	172
8	142	89	102	65	60	118	190	3,780	6,030	1,180	333	175
9	142	95	101	65	65	124	200	3,850	5,670	1,100	318	172
10	140	106	99	65	70	126	236	3,850	5,140	1,020	308	169
11	137	122	102	70	80	128	282	3,850	5,140	932	304	158
12	137	126	101	70	80	130	318	3,620	4,970	860	290	147
13	137	133	102	70	85	133	389	3,620	4,640	868	282	140
14	137	114	102	70	85	135	512	4,160	4,320	916	264	135
15	137	120	102	70	85	135	608	4,480	4,160	1,140	252	130
16	137	106	101	65	85	135	638	4,480	4,160	1,140	244	126
17	142	128	102	60	80	133	638	4,320	4,800	988	248	122
18	155	130	108	60	75	142	650	4,320	4,480	884	228	122
19	158	130	113	55	70	135	713	4,800	5,490	811	221	119
20	153	124	111	55	70	124	762	4,970	5,140	818	210	119
21	150	118	113	55	75	119	804	4,800	4,800	762	200	119
22	145	107	122	60	75	117	804	5,140	5,140	692	193	117
23	142	89	122	60	80	122	783	5,310	5,850	632	218	115
24	140	92	117	60	80	122	783	5,490	5,670	596	207	115
25	137	107	119	60	85	124	790	6,410	4,640	554	204	117
26	137	106	117	60	85	126	876	7,550	4,000	524	204	122
27	137	83	117	65	90	130	1,170	8,500	3,480	494	193	126
28	137	85	103	65	90	135	1,470	7,930	3,100	494	181	128
29	142	90	64	60	-	140	1,580	6,980	2,810	464	181	140
30	140	87	69	60	-	153	1,640	5,850	2,550	448	163	150
31	137	-	83	55	-	166	-	5,670	-	442	163	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,361	158	135	141	8,650
November	3,358	145	83	112	6,660
December	3,142	122	64	101	6,230
Calendar year 1936	490,656	11,100	50	1,341	973,200
January	1,992	82	55	64.3	3,950
February	2,095	90	60	74.8	4,160
March	3,937	166	99	127	7,810
April	18,106	1,640	172	604	35,910
May	149,840	8,500	2,000	4,834	297,200
June	157,560	8,900	2,550	5,252	312,500
July	31,729	2,420	442	1,024	62,930
August	8,523	454	163	275	16,910
September	4,230	175	115	141	8,390
Water year 1936-37	388,873	8,900	55	1,065	771,300

Kettle River near Laurier, Wash.

(International gaging station)

Location.- Water-stage recorder, lat. 48°50'50", long. 118°13'00", in SW¼ sec. 11, T. 40 N., R. 36 E., 500 feet below Deep Creek and 1½ miles southeast of Laurier.
Drainage area.- 3,800 square miles.
Records available.- September 1929 to September 1937.
Extremes.- Maximum discharge during year, 15,400 second-feet June 4 (gage height, 11.66 feet); minimum, 88 second-feet Dec. 1 (gage height, 2.20 feet).
1929-37: Maximum discharge, 23,800 second-feet June 17, 1933 (gage height, 14.48 feet); minimum occurred during winter of 1929-30.
Maximum stage known, about 22 feet sometime in 1894.
Remarks.- Records excellent except those for period of ice effect, Dec. 29 to Mar. 8, which were computed on basis of two discharge measurements, gage heights, and weather records and are poor. North Fork regulated by storage at Grand Forks, British Columbia. Numerous small diversions for irrigation and domestic supply. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating tables, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to June 4

2.2	88	5.5	2,350
2.5	160	6.0	3,040
3.0	360	7.0	4,660
3.5	650	8.0	6,600
4.0	990	10.0	10,800
4.5	1,350	12.0	16,320
5.0	1,790		

June 5 to Sept. 30

2.7	190	4.5	1,260	7.0	4,460
3.0	310	5.0	1,680	8.0	6,400
3.5	590	5.5	2,220	9.0	8,570
4.0	910	6.0	2,880		

Note.- Same as preceding table above 9.5 feet.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	283	245	132	160	110	150	330	4,060	9,890	4,640	910	315
2	283	237	157	150	120	160	340	4,840	12,000	4,290	945	301
3	288	229	181	150	120	160	345	6,600	14,000	3,950	910	296
4	278	245	163	140	130	180	350	8,600	14,200	3,550	861	288
5	274	241	166	140	130	190	355	9,890	11,000	3,170	798	320
6	274	249	169	130	130	200	413	9,230	9,670	2,880	770	306
7	265	233	175	130	120	220	787	7,800	9,230	2,670	716	296
8	278	200	175	130	120	210	731	7,400	9,450	2,280	668	296
9	278	213	172	130	120	214	686	7,400	9,670	1,680	626	296
10	274	245	160	130	130	253	680	7,400	8,790	1,590	614	292
11	265	225	166	140	130	261	710	7,400	8,350	1,730	590	292
12	261	233	169	140	140	265	801	6,800	9,350	1,730	614	283
13	257	237	172	140	140	278	906	6,600	7,910	1,680	596	270
14	261	237	175	140	140	283	1,520	7,200	7,470	1,680	548	270
15	257	229	175	140	150	278	1,890	8,200	7,030	1,830	506	265
16	261	200	175	140	150	278	1,740	8,400	6,820	2,100	476	257
17	253	194	175	130	140	278	1,690	8,200	7,250	1,940	432	253
18	265	194	175	120	130	310	1,690	7,800	7,690	1,780	415	241
19	265	200	178	120	120	315	1,740	8,400	8,130	1,640	388	237
20	283	200	181	120	120	310	1,840	9,020	9,230	1,540	371	233
21	270	194	184	120	120	301	1,940	8,600	8,570	1,500	360	233
22	261	178	187	120	130	292	2,060	8,610	8,790	1,420	350	233
23	261	169	194	120	130	296	2,060	9,450	9,670	1,300	345	229
24	261	166	197	120	130	296	2,000	9,230	10,600	1,220	350	225
25	257	166	197	120	130	292	1,940	10,300	9,010	1,190	350	222
26	253	178	197	130	140	292	1,940	11,800	7,690	1,120	340	225
27	249	184	194	130	140	288	2,290	13,400	6,820	1,050	345	225
28	249	169	190	130	150	292	3,120	13,100	6,200	1,050	345	229
29	245	149	170	120	-	292	3,730	12,000	5,600	1,020	335	237
30	249	136	130	120	-	301	3,730	9,890	5,010	980	320	237
31	253	-	140	110	-	315	-	9,020	-	945	320	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	8,211	288	245	265	16,290
November	6,175	249	136	206	12,250
December	5,371	197	130	173	10,650
Calendar year 1936	843,251	18,700	130	2,304	1,673,000
January	4,060	160	110	131	8,050
February	3,660	150	110	131	7,260
March	8,050	315	150	260	15,970
April	44,354	3,730	330	1,478	87,970
May	266,840	13,400	4,060	8,608	529,300
June	264,090	14,200	5,010	8,803	523,800
July	61,145	4,640	945	1,972	121,300
August	16,514	945	320	533	32,760
September	7,902	320	222	263	15,670
Water year 1936-37	696,372	14,200	110	1,908	1,381,000

Myers Creek near Myncaster, British Columbia

(International gaging station)

Location.- Water-stage recorder, lat. 49°00'00", long. 119°01'15", 50 feet north of the international boundary and a quarter of a mile south of Myncaster.

Drainage area.- 80 square miles.

Records available.- October 1929 to September 1937 in water-supply papers of Geological Survey; May 1923 to September 1929 in bulletins of Dominion Water and Power Bureau (Canada).

Extremes.- Maximum discharge recorded during year, 36.1 second-feet June 23 (gage height, 1.12 feet); minimum, 0.9 second-foot Oct. 1, Sept. 16, 21-23.
1923-37: Maximum discharge recorded, 99 second-feet June 14, 1923; no flow July 16-18, 25, 1928.

Remarks.- Records fair except those for Apr. 2 to June 2, which were computed on basis of 24 staff-gage readings and are poor. Discharge for June 20-22 computed on basis of general information; that for June 24, 25, interpolated; that for Oct. 1-31 and Aug. 5 to Sept. 30, when 4-foot Cippoletti weir was in place, computed by weir formula. Diversions above station for irrigation. No record during winter. This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	5.1	*8.0	12.2	3.0	1.3
2							6.0	*5.5	*7.8	11.9	3.4	1.2
3							5.4	6.0	7.7	11.1	2.7	1.1
4							*5.7	*6.1	7.4	10.1	2.3	1.0
5							6.0	*6.1	7.1	9.1	2.0	2.6
6							*6.0	6.2	7.1	8.7	2.1	3.5
7							6.0	*6.6	6.8	8.4	2.4	2.8
8							*6.2	*7.0	6.8	8.0	2.2	2.3
9							6.5	*7.5	6.2	7.4	2.0	1.9
10							7.1	8.0	8.4	6.5	1.9	1.6
11							*6.2	*7.7	13.8	6.0	2.0	1.5
12							5.4	7.4	11.1	6.0	1.8	1.5
13							11.1	*7.8	9.1	6.0	1.5	1.4
14							*9.8	*8.2	9.4	7.1	1.3	1.3
15							8.4	8.7	9.7	7.1	1.4	1.1
16							*7.8	8.7	10.4	6.0	1.5	.9
17							*7.2	*8.5	13.0	5.4	1.3	1.0
18							6.5	8.4	14.1	4.8	1.2	1.0
19							*6.4	*8.2	22.4	4.6	1.2	1.0
20							*6.2	*8.1	25.8	4.3	1.1	1.0
21							6.0	*8.0	29.2	3.9	1.0	.9
22							*5.7	*7.9	34.6	3.6	1.0	.9
23							*5.4	*7.8	36.1	3.4	2.3	.9
24							5.1	7.7	32.1	3.2	3.2	1.1
25							*5.1	*7.8	28.1	3.0	2.2	1.2
26							5.1	*7.9	24.1	2.7	1.7	1.4
27							*5.1	*8.0	20.7	2.7	1.4	1.5
28							*5.1	*8.1	18.2	3.0	1.3	1.6
29							5.1	*8.2	16.1	3.6	1.3	1.9
30							*5.1	8.4	14.5	3.2	1.3	2.0
31							-	*8.2	-	3.0	1.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	41.4	1.6	0.9	1.3	82
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year					
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April 2-30	182.7	11.1	5.1	6.3	362
May	233.8	8.7	5.1	7.5	464
June	465.8	36.1	6.2	15.5	924
July	186.0	12.2	2.7	6.0	369
August	56.3	3.4	1.0	1.8	112
September	44.4	3.5	0.9	1.5	88
The period					

*Estimated.

Colville River at Meyers Falls, Wash.

Location.- Staff gage, lat. 48°36', long. 118°04', in sec. 29, T. 36 N., R. 38 E., 300 feet below Stevens County Light & Power Co.'s plant at foot of Meyers Falls.

Records available.- October 1922 to September 1937.

Average discharge.- 15 years, 221 second-feet.

Extremes.- Maximum discharge observed during year, 703 second-feet Apr. 22 (gage height, 2.88 feet); minimum, 37 second-feet Aug. 31 (gage height, 0.64 foot).
1922-37: Maximum discharge observed, 1,760 second-feet Apr. 27, 1932 (gage height, 5.55 feet, former datum); minimum, 0.5 second-foot Aug. 15, 1930 (gage height, 0.00 foot, former datum).

Remarks.- Records good except those for periods of ice effect, Jan. 2-26, Jan. 30 to Feb. 26 and Mar. 1-7, which were computed on basis of three discharge measurements, gage heights, and weather records and are poor. Several ditches divert water for irrigation above station. Slight regulation by small reservoir above falls. Gage-height record and one discharge measurement furnished by Washington Water Power Co. Gage read twice daily.

Rating tables, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 22				Apr. 23 to Sept. 30			
0.5	28	2.0	297	0.4	23	2.0	277
1.0	77	2.5	503	.7	42	2.5	485
1.5	160	3.0	753	1.0	74	3.0	740
				1.5	149		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	75	70	52	50	100	266	610	190	230	88	40
2	53	75	75	50	55	105	266	610	179	215	94	47
3	57	72	63	50	55	105	282	610	168	202	82	53
4	49	73	72	55	60	110	282	635	158	190	80	54
5	51	71	82	50	60	115	282	660	149	179	78	63
6	53	72	78	45	60	120	282	660	149	168	79	70
7	57	65	86	45	55	125	297	610	124	168	75	86
8	63	57	82	45	55	129	282	635	132	149	75	91
9	60	64	82	45	55	133	297	585	132	140	72	84
10	63	60	82	50	60	138	314	585	140	140	72	78
11	61	70	81	45	65	149	348	535	149	124	70	70
12	62	70	85	45	65	172	348	510	168	108	70	66
13	64	85	85	50	65	184	338	485	179	86	59	68
14	65	77	85	50	60	210	453	460	190	100	58	61
15	62	85	85	55	65	210	528	435	179	94	59	56
16	63	72	85	50	70	210	553	435	168	108	59	59
17	62	85	93	50	70	252	578	412	179	116	54	50
18	61	80	85	50	70	282	578	390	190	108	54	54
19	67	85	87	45	65	314	603	370	202	101	47	53
20	60	84	93	45	60	282	628	370	230	95	49	67
21	66	70	96	50	65	282	653	331	215	90	47	54
22	63	80	104	50	65	282	703	331	260	82	40	56
23	62	70	97	55	70	297	660	312	294	78	39	61
24	65	63	117	60	75	297	660	294	331	75	42	73
25	67	71	131	60	80	297	635	260	312	66	40	67
26	67	85	120	65	85	282	610	260	312	64	46	68
27	80	82	117	67	87	282	585	260	312	64	43	70
28	65	82	104	70	94	282	585	215	294	91	41	61
29	67	75	85	66	-	282	610	202	277	79	51	70
30	72	80	73	55	-	266	610	190	260	70	42	70
31	72	-	62	40	-	252	-	190	-	69	40	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,928	72	49	62.2	3,820
November	2,235	85	57	74.5	4,430
December	2,742	131	62	88.5	5,440
Calendar year 1936	53,812	753	21	147	106,700
January	1,610	70	40	51.9	3,190
February	1,841	94	50	65.8	3,650
March	6,546	314	100	211	12,980
April	14,166	703	266	472	28,100
May	13,447	660	190	434	26,670
June	6,222	331	124	207	12,340
July	3,649	230	64	118	7,240
August	1,845	94	39	59.5	3,660
September	1,920	91	40	64.0	3,810
Water year 1936-37	58,151	703	39	159	115,300

Coeur d'Alene River near Cataldo, Idaho

Location.- Water-stage recorder, lat. 47°34', long. 116°18', in sec. 26, T. 49 N., R. 1 E., 1½ miles above Cataldo and 3 miles below South Fork of Coeur d'Alene River. Zero of gage is 2,100.00 feet above mean sea level.

Drainage area.- 1,220 square miles.

Records available.- April 1911 to Dec. 1912; July 1920 to September 1937.

Average discharge.- 18 years, 2,450 second-feet.

Extremes.- Maximum discharge during year, 17,300 second-feet May 4 (gage height, 47.40 feet); minimum discharge, 195 second-feet Nov. 30 (gage height, 37.63 feet).
1911-12, 1920-37: Maximum discharge, 55,300 second-feet Dec. 22 or 23, 1933 (gage height, 56.9 feet, from high-water mark); minimum, 122 second-feet Dec. 4, 1929; minimum gage height, 37.03 feet Sept. 6, 1931.

Remarks.- Records good except those for period of ice effect, Jan. 4 to Feb. 10, which were computed on basis of one discharge measurement, gage heights, weather records, records for stations on nearby streams, and changes in storage in Coeur d'Alene Lake and are poor. No appreciable diversions or regulation above station. Gage-height record and results of seven discharge measurements furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	280	265	225	366	250	328	3,300	6,200	3,530	1,350	660	372
2	280	265	230	285	260	382	4,070	8,750	3,600	1,300	709	372
3	280	260	235	270	260	440	3,660	13,300	3,820	1,200	674	382
4	285	260	240	250	250	512	3,150	16,600	3,520	1,140	597	360
5	290	275	250	240	230	590	3,010	16,100	3,100	1,080	554	422
6	290	275	275	240	220	688	2,930	12,200	2,750	1,030	530	452
7	290	275	428	*242	220	856	2,760	9,580	2,550	990	506	458
8	285	270	518	250	220	950	2,710	8,640	2,420	950	500	422
9	280	260	482	260	230	1,040	3,000	8,780	2,300	902	530	399
10	280	255	388	270	240	1,270	3,570	9,220	2,370	856	542	394
11	275	255	333	270	245	1,680	3,870	9,370	2,400	828	542	372
12	270	260	311	280	275	1,950	3,780	8,410	2,210	800	548	360
13	275	260	328	280	275	2,270	4,920	8,160	2,010	821	518	355
14	295	255	333	290	285	2,120	9,610	9,270	1,890	926	482	355
15	295	255	366	290	260	1,840	13,700	9,680	1,830	894	482	355
16	306	250	360	280	290	1,670	12,600	8,430	1.820	821	458	338
17	306	260	355	280	285	1,630	8,160	7,360	1,840	786	458	338
18	290	265	366	270	290	1,770	6,480	7,030	1,760	737	434	338
19	290	265	422	260	255	1,690	6,460	7,390	1,970	702	422	338
20	290	265	476	260	306	1,530	6,800	7,180	2,240	681	422	338
21	295	265	446	260	338	1,340	12,100	6,220	2,340	653	404	344
22	290	260	542	270	275	1,240	10,600	5,890	2,300	639	394	328
23	290	255	1,330	270	295	1,190	7,600	5,760	2,390	618	410	333
24	290	245	1,870	270	316	1,140	5,940	5,550	2,230	597	446	333
25	285	230	1,280	280	350	1,200	5,620	5,780	2,040	590	446	328
26	275	225	942	280	344	1,350	7,180	6,130	1,910	572	416	333
27	275	220	772	270	355	1,550	11,000	5,710	1,890	554	394	344
28	275	215	646	260	328	1,790	10,400	5,400	1,680	584	399	338
29	275	210	536	260	-	2,160	7,770	4,840	1,560	604	377	333
30	275	215	440	250	-	2,320	6,360	4,180	1,510	572	372	328
31	270	-	440	250	-	2,700	-	3,670	-	566	382	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	8,827	306	270	285	0.234	0.27	17,510
November	7,590	275	210	253	.207	.23	15,050
December	16,165	1,870	225	521	.427	.49	32,060
Calendar year 1936	733,608	21,000	210	2,004	1.64	22.37	1,455,000
January	8,353	366	240	269	.220	.25	16,570
February	7,747	355	220	277	.227	.24	15,370
March	43,186	2,700	328	1,393	1.14	1.31	85,660
April	193,110	13,700	2,710	6,437	5.28	5.89	383,000
May	250,780	16,600	3,670	8,090	6.63	7.64	497,400
June	69,800	3,820	1,510	2,327	1.91	2.13	138,400
July	25,343	1,350	554	818	.670	.77	50,270
August	15,008	709	372	484	.397	.46	29,770
September	10,862	458	328	362	.297	.33	21,540
Water year 1936-37	656,771	16,600	210	1,799	1.47	20.01	1,303,000

*Discharge measurement.

Coeur d'Alene Lake at Coeur d'Alene, Idaho

Location.- Water-stage recorder, lat. 47°40', long. 116°46', in sec. 24, T. 50 N., R. 4 W., 500 feet southwest of south end of Eleventh Street, Coeur d'Alene. Zero of gage is 2,100.00 feet above mean sea level.

Drainage area.- 3,750 square miles.

Records available.- February 1905 to September 1937, April 1903 to February 1905, from St. Joe Boom Co.'s gage at mouth of St. Joe River.

Extremes.- Maximum gage height during year, 30.86 feet May 8; minimum, 20.47 feet Feb. 20 and Mar. 1.
1903-1937: Maximum gage height, 39.05 feet Dec. 25, 1933; minimum, 19.9 feet Oct. 10-12, 1904, Sept. 24, 25, 1905, Oct. 14 to Nov. 3, 1906.
Maximum stage known prior to 1903, 37.6 feet, from high-water marks, May 31, 1894.

Remarks.- Records excellent. Washington Water Power Co. stores considerable water in lake. Stage regulated by operation of Taintor gates and bear-trap dam at Post Falls. Gage-height record furnished by Washington Water Power Co. Add 2,100.00 feet to gage heights to refer them to originally accepted elevation (2,157.404 feet) of the Geological Survey benchmark in southeast corner of Merriam Building (see Water-Supply Paper 672).

Gage height, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23.58	21.97	21.38	22.11	20.76	20.48	24.17	29.24	28.35	26.51	26.47	25.55
2	23.54	21.96	21.35	22.11	20.73	20.54	24.56	29.15	28.12	26.51	26.48	25.50
3	23.50	21.93	21.30	22.10	20.70	20.58	24.82	29.24	27.89	26.49	26.48	25.45
4	23.46	21.90	21.28	22.09	20.69	20.59	24.92	29.60	27.71	26.49	26.48	25.43
5	23.41	21.87	21.26	22.02	20.67	20.64	24.97	30.05	27.49	26.55	26.48	25.43
6	23.36	21.84	21.28	22.01	20.64	20.70	25.00	30.50	27.27	26.54	26.46	25.38
7	23.30	21.84	21.30	21.97	20.62	20.78	24.99	30.76	27.02	26.53	26.43	25.33
8	23.25	21.83	21.32	21.92	20.59	20.88	24.94	30.84	26.77	26.53	26.41	25.29
9	23.18	21.81	21.33	21.83	20.54	20.99	24.92	30.79	26.55	26.53	26.42	25.23
10	23.12	21.79	21.34	21.78	20.52	21.11	24.99	30.74	26.55	26.53	26.40	25.18
11	23.08	21.77	21.38	21.72	20.53	21.29	25.09	30.73	26.60	26.52	26.40	25.11
12	23.04	21.76	21.35	21.66	20.54	21.54	25.14	30.72	26.51	26.51	26.37	25.06
13	22.98	21.75	21.38	21.58	20.50	21.96	25.27	30.69	26.46	26.53	26.38	25.01
14	22.94	21.73	21.34	21.52	20.52	22.24	25.79	30.64	26.48	26.56	26.34	24.93
15	22.90	21.71	21.32	21.51	20.50	22.47	26.65	30.64	26.54	26.54	26.29	24.88
16	22.87	21.69	21.33	21.48	20.51	22.68	27.54	30.69	26.60	26.52	26.25	24.82
17	22.82	21.68	21.43	21.42	20.51	22.91	28.09	30.66	26.50	26.51	26.23	24.78
18	22.79	21.67	21.45	21.36	20.51	23.16	28.29	30.57	26.47	26.51	26.22	24.71
19	22.75	21.66	21.35	21.29	20.49	23.30	28.32	30.46	26.48	26.50	26.18	24.65
20	22.70	21.63	21.36	21.26	20.48	23.41	28.32	30.34	26.53	26.48	26.12	24.61
21	22.63	21.61	21.40	21.20	20.53	23.42	28.48	30.21	26.58	26.49	26.10	24.54
22	22.58	21.60	21.44	21.16	20.53	23.43	28.92	30.05	26.60	26.49	26.06	24.49
23	22.52	21.57	21.56	21.11	20.52	23.45	29.14	29.84	26.57	26.48	26.05	24.42
24	22.44	21.54	21.77	21.07	20.50	23.44	29.14	29.64	26.47	26.48	25.99	24.37
25	22.38	21.52	21.92	21.04	20.50	23.47	29.00	29.47	26.43	26.48	25.92	24.33
26	22.32	21.50	21.99	21.02	20.50	23.49	28.87	29.35	26.45	26.47	25.85	24.30
27	22.26	21.49	22.05	20.97	20.49	23.53	28.90	29.24	26.50	26.45	25.81	24.26
28	22.20	21.47	22.10	20.95	20.48	23.58	29.15	29.14	26.52	26.45	25.75	24.23
29	22.12	21.45	22.12	20.90	-	23.64	29.33	29.00	26.54	26.47	25.70	24.20
30	22.08	21.41	22.12	20.85	-	23.72	29.36	28.82	26.53	26.48	25.64	24.14
31	22.04	-	22.11	20.80	-	23.90	-	28.59	-	26.45	25.60	-

Spokane River at Post Falls, Idaho

Location.- Water-stage recorder, lat. 47°42', long. 116°58', in sec. 4, T. 50 N., R. 5 W., 1,500 feet below power plant of Washington Water Power Company, 3,300 feet below intake of Spokane Valley Farms Co.'s canal, and 1 mile west of Post Falls. Zero of gage is 2,000 feet above mean sea level.
Drainage area.- 3,880 square miles.
Records available.- January 1913 to September 1937.
Average discharge.- River alone, 24 years (1913-37), 6,040 second-feet; river and Spokane Valley Farms Co.'s Canal, 24 years (1913-37), 6,120 second-feet.
Extremes.- Maximum discharge during year, 23,100 second-feet May 8 (gage height, 75.00 feet); minimum, 470 second-feet Nov. 25 (gage height, 65.40 feet).
1913-37: Maximum discharge, 50,100 second-feet Dec. 25, 1933; minimum, 422 second-feet Nov. 26, 1935 (gage height, 65.32 feet).
Remarks.- Records good. Discharge for Jan. 1-6, Aug. 10-17 computed on basis of records for stations at Spokane and at Liberty Bridge station of Washington Water Power Co. Spokane Valley Farms Co.'s canal diverts 3,300 feet above gage for irrigation. (See records for Spokane Valley Farms Co.'s canal.) Flow partly regulated by storage and release of water at Coeur d'Alene Lake. Table of monthly discharge corrected for diversion. Gage-height record and results of three discharge measurements furnished by Washington Water Power Co.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

65.40	470	67.00	1,650	70.00	6,650	73.00	15,100
65.80	720	67.50	2,160	71.00	8,980	74.00	19,000
66.20	990	68.00	2,830	72.00	11,700	75.00	23,100
66.60	1,300	69.00	4,560				

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,340	1,000	892	820	1,300	1,100	6,000	18,200	15,400	3,220	726	1,220
2	1,340	892	955	820	1,220	1,180	6,650	17,800	14,700	2,680	746	1,220
3	1,340	871	990	850	1,180	1,190	7,550	18,200	14,000	2,160	726	1,260
4	1,340	864	983	1,020	1,100	1,180	7,550	19,000	13,600	1,650	766	1,380
5	1.340	864	990	1,020	1,060	1,260	7,550	20,200	12,900	1,740	746	1,380
6	1,430	766	998	1,070	1,050	1,260	7,780	21,900	12,600	1,700	759	1,380
7	1,470	759	990	1,300	1,060	1,340	7,550	22,700	12,000	1,600	740	1,380
8	1,470	707	998	1,380	1,140	1,430	7,550	23,100	11,100	1,520	726	1,380
9	1,470	714	899	1,470	1,180	1,520	7,550	22,700	8,630	1,520	906	1,430
10	1,430	752	785	1,520	1,220	1,600	7,780	22,700	5,260	1,520	975	1,380
11	1,430	733	759	1,600	1,140	1,650	8,010	22,700	7,780	1,470	975	1,380
12	1,380	726	759	1,650	969	1,700	8,010	22,700	7,550	1,380	975	1,380
13	1,380	740	792	1,650	850	1,790	8,490	22,300	5,480	1,340	925	1,380
14	1,380	726	778	1,700	892	2,160	9,480	22,300	4,280	1,380	875	1,340
15	1,300	726	792	1,560	976	2,100	11,400	22,300	4,180	1,560	875	1,340
16	1,260	772	804	1,470	969	2,100	13,600	22,300	6,210	1,520	850	1,430
17	1,260	844	798	1,430	913	2,410	15,100	22,300	6,870	1,380	800	1,470
18	1,260	844	804	1,470	934	2,680	15,800	21,900	5,260	1,300	906	1,380
19	1,340	850	778	1,380	983	2,680	15,800	21,500	4,860	1,200	1,000	1,380
20	1,380	850	798	1,340	983	2,980	15,800	21,000	4,760	948	1,010	1,380
21	1,470	850	798	1,340	983	3,140	16,200	21,000	5,580	740	1,050	1,300
22	1,470	844	720	1,340	976	3,140	17,400	20,200	6,650	759	1,000	1,300
23	1,470	864	648	1,340	1,090	3,140	18,200	19,800	7,780	733	1,180	1,110
24	1,470	766	662	1,380	1,260	3,220	18,200	19,000	6,430	733	1,260	998
25	1,520	629	668	1,340	1,300	3,640	17,800	18,600	4,960	733	1,260	990
26	1,520	590	655	1,340	1,210	4,000	17,400	18,200	3,470	752	1,300	1,060
27	1,470	584	648	1,340	1,110	4,460	17,400	17,800	3,060	746	1,260	1,110
28	1,470	662	668	1,300	1,060	4,860	17,800	17,800	3,140	752	1,260	1,100
29	1,260	871	740	1,300	-	4,960	18,600	17,000	3,380	740	1,260	1,120
30	1,080	955	785	1,340	-	5,060	18,600	16,600	3,560	740	1,260	1,120
31	1,080	-	798	1,340	-	5,260	-	16,200	-	740	1,260	-

Month	Observed				Diversion through Spokane Valley Farms Co.'s canal (acre-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	1,520	1,080	1,375	84,540	0	84,540	1,375		
November	1,000	584	787	46,840	0	46,840	787		
December	998	648	811	49,850	0	49,850	811		
Calendar year 1936	35,400	584	4,992	3,623,720	69,790	3,694,000	5,088	1.31	17.83
January	1,700	820	1,330	81,760	0	81,760	1,330		
February	1,300	850	1,075	59,720	0	59,720	1,075		
March	5,260	1,100	2,587	159,100	0	159,100	2,587		
April	18,600	6,000	12,420	739,000	0	739,000	12,420		
May	23,100	16,200	20,320	1,250,000	9,340	1,259,000	20,470		
June	15,400	3,060	7,514	447,100	15,820	462,900	7,780		
July	3,220	733	1,321	81,240	16,330	97,570	1,587		
August	1,300	726	979	60,210	15,480	75,690	1,231		
September	1,470	990	1,283	76,320	6,750	83,070	1,396		
Water year 1936-37	23,100	584	4,331	3,135,680	63,720	3,199,000	4,419	1.14	15.47

Note.- Monthly figures showing discharge in second-feet per square mile and run-off in inches are not published, owing to regulation by Coeur d'Alene Lake. The yearly figures represent more nearly the natural discharge and run-off.

Spokane River at Spokane, Wash.

Location.- Water-stage recorder, lat. 47°39'30", long. 117°26'50", in sec. 13, T. 25 N., R. 42 E., at Cochran Street, Spokane. Zero of gage is about 1,700 feet above mean sea level (subject to correction for general adjustment of 1929).
Drainage area.- 4,350 square miles.
Records available.- April 1891 to September 1937.
Average discharge.- 46 years, 6,914 second-feet (based on records corrected for storage in Coeur d'Alene Lake).
Extremes.- Maximum discharge during year, 22,100 second-feet May 8, 9, 10, 11, 12, 13 (gage height, 24.8 feet); minimum, 645 second-feet, regulated, Feb. 19 (gage height, 16.95 feet); minimum daily discharge, 1,160 second-feet, regulated, Nov. 28.
1891-1937: Maximum discharge, 49,000 second-feet May 31, 1894; minimum, 268 second-feet, regulated, Dec. 28, 1935 (gage height, 16.37 feet); minimum daily discharge, 1,040 second-feet, regulated, Nov. 28, 1935.
Remarks.- Records excellent. Discharge for May 16-21 interpolated. Water for irrigation diverted above station by Spokane Valley Farms Co. Flow partly regulated by storage and release of water at Coeur d'Alene Lake and by pondage at Spokane. Storage capacity of Coeur d'Alene Lake between elevation 2,117 and 2,135 feet, 770,000 acre-feet. Gage-height record collected in cooperation with Washington Water Power Co., which furnished many discharge measurements.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

16.5	330	18.0	1,820	19.5	4,360	21.0	7,990	24.0	18,500
17.0	690	18.5	2,540	20.0	5,430	22.0	11,000	25.0	23,000
17.5	1,200	19.0	3,390	20.5	6,640	23.0	14,500		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,930	*1,670	1,440	1,200	1,760	1,580	5,360	18,100	15,600	4,210	*1,330	1,760
2	1,930	1,500	1,430	1,240	1,760	1,660	6,020	*17,700	15,300	3,700	1,310	1,740
3	1,970	1,490	1,480	*1,260	1,750	1,640	6,920	17,700	14,500	3,420	1,330	1,830
4	*1,950	1,490	1,520	1,380	1,730	1,640	*7,220	18,100	14,500	*2,760	1,330	1,810
5	1,950	1,510	1,500	1,360	1,660	1,630	7,390	19,400	13,800	2,630	1,360	*1,920
6	1,960	1,440	*1,520	1,270	1,510	1,640	7,510	20,700	*13,400	2,730	1,340	1,910
7	1,990	1,360	1,510	1,540	*1,530	*1,720	7,550	21,600	12,700	2,450	1,360	1,930
8	2,010	*1,400	1,510	1,600	1,480	1,740	7,440	22,100	12,000	2,380	*1,390	1,950
9	2,000	1,280	1,520	1,740	1,610	1,890	7,400	*22,100	10,600	2,380	1,320	1,930
10	1,970	1,370	1,400	*1,970	1,750	1,900	7,640	22,100	6,420	2,370	1,570	1,940
11	*1,950	1,340	1,320	2,010	1,890	1,970	*7,770	22,100	8,220	*2,320	1,550	1,930
12	1,950	1,340	1,360	2,070	1,690	1,980	7,930	22,100	8,660	2,230	1,780	*1,930
13	1,920	1,320	*1,350	2,180	1,460	2,050	8,210	22,100	*6,720	2,120	1,470	1,950
14	1,920	1,310	1,310	2,190	*1,470	*2,520	9,090	21,600	5,780	2,030	1,560	1,950
15	1,920	*1,320	1,370	2,130	1,390	2,510	10,600	21,600	4,990	2,100	*1,480	1,870
16	1,780	1,330	1,350	1,910	1,470	2,530	12,700	*21,300	6,320	2,280	1,430	1,890
17	1,830	1,420	1,370	*1,850	1,360	2,560	14,100	21,100	7,910	2,180	1,420	2,010
18	*1,800	1,410	1,330	1,920	1,230	2,920	*14,900	20,800	6,090	*2,160	1,380	2,010
19	1,840	1,400	1,350	1,940	1,430	2,940	15,300	20,600	5,840	2,070	1,440	*1,870
20	1,900	1,370	*1,300	1,840	1,440	3,100	15,300	20,300	*5,560	1,710	1,590	1,930
21	1,910	1,320	1,330	1,780	*1,370	*3,240	15,600	20,100	5,890	1,670	1,650	1,920
22	2,000	*1,390	1,300	1,720	1,570	3,250	16,400	19,800	6,670	1,390	*1,510	1,860
23	1,990	1,440	1,310	1,790	1,560	3,370	17,200	*19,400	7,910	1,410	1,460	1,790
24	2,040	1,420	1,240	*1,820	1,550	3,270	17,700	18,900	7,430	1,640	1,760	1,590
25	*2,000	1,280	1,180	1,830	1,780	3,130	*17,200	18,500	5,930	*1,440	1,730	1,630
26	2,060	1,160	1,200	1,800	1,810	3,480	16,800	18,100	4,810	1,460	1,740	*1,580
27	2,050	1,190	*1,250	1,840	1,590	3,820	16,800	17,700	*4,160	1,390	1,740	1,680
28	2,010	1,190	1,190	1,800	*1,500	*4,410	17,200	17,700	4,240	1,410	1,800	1,690
29	2,080	*1,280	1,190	1,760	-	4,510	18,100	17,200	4,190	1,380	*1,730	1,680
30	1,780	1,470	1,240	1,780	-	4,650	18,100	*16,600	4,400	1,400	1,790	1,610
31	1,680	-	1,260	*1,740	-	4,880	-	16,400	-	1,430	1,720	-

Month	Observed				Gain or loss in storage in Coeur d'Alene Lake (acre-feet)	Adjusted for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October	2,080	1,660	1,938	119,100	-43,300	75,800	1,233	0.283	0.33
November	1,670	1,160	1,374	81,740	-17,010	64,730	1,088	.250	.28
December	1,520	1,180	1,353	83,170	+18,900	102,100	1,660	.382	.44
Calendar year 1936	33,700	1,160	5,508	3,998,000	-30,780	3,967,000	5,465	1.26	17.10
January	2,190	1,200	1,750	107,600	-35,270	72,330	1,176	.270	.31
February	1,890	1,230	1,575	87,470	-8,540	78,930	1,421	.327	.34
March	4,880	1,580	2,714	166,900	+92,340	259,200	4,215	.969	1.12
April	18,100	5,360	11,920	709,000	+201,300	910,300	15,300	3.52	3.93
May	22,100	16,400	19,800	1,217,000	-39,060	1,178,000	19,160	4.40	5.07
June	15,600	4,160	8,351	496,900	-88,540	408,400	6,863	1.58	1.76
July	4,210	1,380	2,137	131,400	-2,510	128,900	2,096	.482	.56
August	1,800	1,310	1,528	93,960	-24,650	69,310	1,127	.259	.30
September	2,010	1,580	1,836	109,300	-39,980	69,320	1,165	.268	.30
Water year 1936-37	22,100	1,160	4,702	3,404,000	+13,680	3,417,000	4,720	1.09	14.74

*Sunday.

Spokane River below Little Falls, near Long Lake, Wash.

Location.- Water-stage recorder, lat. 47°50', long. 117°56', in NW¼ sec. 19, T. 27 N., R. 39 E., 1½ miles below Little Falls power plant of Washington Water Power Co. and 5 miles below Long Lake. Zero of gage is 1,200 feet above mean sea level (subject to correction for general adjustment of 1929).
Drainage area.- 6,380 square miles.
Records available.- October 1912 to September 1937.
Average discharge.- 25 years, 7,693 second-feet (based on records corrected for storage in Coeur d'Alene and Long Lakes).
Extremes.- Maximum discharge during year, 25,600 second-feet May 13 (gage height, 86.25 feet); minimum not determined (water below intakes because of regulation); minimum daily discharge, 442 second-feet Aug. 1.
1912-37: Maximum discharge, 48,000 second-feet Dec. 26, 1933 (gage height, 93.10 feet); minimum discharge, 169 second-feet, regulated, Sept. 30, 1931, (discharge measurement); minimum daily discharge, that of Aug. 1, 1937.
Remarks.- Records excellent. Discharge determined from record of plant output Dec. 28 to Jan. 9, Jan. 11-22, Jan. 31 to Feb. 13 and Apr. 27 to May 4. Water diverted for irrigation above station. Flow affected considerably by power regulation and by storage in Coeur d'Alene Lake. Capacity of Coeur d'Alene Lake between elevations 2,117 and 2,135 feet, 770,000 acre-feet. Capacity of Long Lake between elevations 1,512 and 1,531 feet, 79,600 acre-feet. Gage-height record collected in cooperation with Washington Water Power Co., which furnished many discharge measurements.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

72.5	336	74.5	1,440	76.5	3,370	78.5	6,300	84.0	18,900
73.0	550	75.0	1,820	77.0	4,010	79.0	7,150	85.0	21,800
73.5	810	75.5	2,270	77.5	4,720	80.0	9,050	86.0	24,800
74.0	1,110	76.0	2,790	78.0	5,490	82.0	13,550	87.0	27,900

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,920	*927	2,480	1,940	2,150	3,090	5,160	22,400	17,500	4,790	*442	2,700
2	2,920	2,210	2,560	2,860	2,150	4,200	5,430	*21,700	15,700	4,960	1,660	2,750
3	2,620	2,010	2,570	*2,140	2,420	4,240	5,230	22,300	15,600	4,290	2,290	2,690
4	*1,560	2,050	2,200	2,510	2,750	4,010	*4,140	22,100	15,800	*3,540	2,520	2,330
5	2,580	2,180	1,770	2,890	2,540	4,660	7,190	19,400	14,800	3,120	2,420	*1,300
6	2,900	2,230	*1,420	2,900	2,380	4,900	10,700	22,300	*13,100	3,890	2,540	1,010
7	2,700	1,760	1,870	2,830	*1,770	*4,560	9,680	23,700	13,600	3,750	2,520	2,080
8	2,800	*972	1,700	2,990	2,510	4,440	7,790	23,600	11,300	3,850	*1,400	2,410
9	2,600	2,320	1,470	3,050	2,750	4,580	7,800	*23,100	10,100	3,930	2,740	2,350
10	2,280	2,500	1,760	*2,010	2,640	4,690	9,370	23,200	8,910	3,470	2,280	2,600
11	*1,650	1,980	1,810	2,710	2,310	4,450	*9,390	23,200	7,940	*2,560	2,160	2,200
12	2,610	2,380	1,450	3,090	1,780	4,440	10,600	22,800	9,840	3,320	2,470	*1,620
13	2,850	2,310	*1,220	2,590	2,420	4,640	9,220	23,300	*7,720	3,190	2,050	2,410
14	2,610	2,000	2,070	2,340	*1,680	*3,890	11,100	22,300	7,440	3,020	2,090	2,730
15	2,740	*1,050	2,180	1,570	2,600	4,190	13,900	22,500	5,980	3,080	*1,300	3,100
16	2,820	2,120	2,360	1,480	2,390	4,660	15,700	*22,300	6,490	2,710	2,390	2,820
17	2,650	1,910	2,030	*1,080	2,870	4,570	17,100	23,100	9,030	2,750	2,610	2,530
18	*1,870	2,090	2,250	2,090	2,490	4,210	*17,800	22,100	7,420	*1,220	2,700	2,080
19	2,710	2,140	1,730	2,200	2,610	4,010	16,500	22,300	7,070	2,300	2,790	*2,010
20	3,190	2,110	*1,330	2,410	2,500	4,290	17,700	22,300	*6,360	2,820	2,690	2,020
21	3,170	1,710	2,110	2,760	*2,730	*4,300	16,500	21,700	6,870	2,950	2,500	2,260
22	3,120	*1,220	2,280	2,380	4,110	4,490	17,100	20,800	7,730	2,840	*1,380	2,340
23	2,940	2,010	2,260	2,280	3,880	5,090	19,000	*20,900	8,460	3,100	2,690	2,330
24	2,550	2,310	1,950	*1,880	4,290	5,140	19,800	20,400	8,980	2,250	2,660	2,650
25	*1,960	2,550	954	2,440	3,690	4,970	*19,200	18,800	7,130	*1,590	2,420	2,230
26	2,500	1,640	1,730	2,840	2,960	4,940	17,700	20,000	6,160	2,000	2,790	*1,780
27	2,640	2,540	*1,920	2,420	3,030	5,010	21,200	18,000	*4,920	2,690	2,150	2,320
28	2,770	2,300	2,700	2,530	*2,840	*4,930	20,800	18,600	5,770	1,790	2,400	2,680
29	2,760	*1,850	2,730	2,770	-	4,320	20,900	18,600	5,240	2,140	*1,930	2,740
30	2,940	1,990	2,460	2,760	-	4,660	22,900	*17,800	5,200	1,460	2,890	2,300
31	1,960	-	1,560	*1,600	-	5,260	-	17,500	-	1,190	2,730	-

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	Gain or loss in storage in Coeur d'Alene and Long Lakes (acre-feet)	Adjusted for storage: Run-off in acre-feet	Adjusted for storage: Discharge in second-feet: Mean	Adjusted for storage: Discharge in second-feet: Per square mile	Adjusted for storage: Run-off in inches
October	3,190	1,560	2,610	160,500	-44,900	115,600	1,880	0.295	0.34
November	2,550	927	1,979	117,800	-15,810	102,000	1,714	.269	.30
December	2,730	954	1,964	120,800	+19,300	140,100	2,279	.357	.41
Calendar year 1936	33,900	927	6,373	4,626,000	-34,930	4,592,000	6,325	.991	13.49
January	3,090	1,080	2,398	147,500	-44,170	103,300	1,680	.263	.30
February	4,290	1,680	2,687	149,200	-25,390	123,800	2,229	.349	.36
March	5,260	3,090	4,511	277,300	+94,490	371,800	6,047	.948	1.09
April	22,900	4,140	13,550	806,500	+223,300	1,030,000	17,310	2.71	3.02
May	23,700	17,500	21,390	1,315,000	-41,660	1,273,000	20,700	3.24	3.74
June	17,500	4,920	9,273	551,800	-80,940	470,900	7,914	1.24	1.38
July	4,960	1,190	2,921	179,600	-7,710	171,900	2,796	.438	.50
August	2,890	442	2,294	141,000	-32,150	108,800	1,769	.277	.32
September	3,100	1,010	2,312	137,600	-30,680	106,900	1,797	.282	.31
Water year 1936-37	23,700	442	5,670	4,105,000	+13,680	4,118,000	5,688	.892	12.07

*Sunday.

St. Joe River at Calder, Idaho

Location.- Water-stage recorder, lat. 47°16', long. 116°11', in sec. 3, T. 45 N., R. 2 E., 150 feet southwest of Chicago, Milwaukee & St. Paul Railway station at Calder. Zero of gage is about 2,100 feet above mean sea level.

Drainage area.- 1,080 square miles.

Records available.- July 1920 to September 1937, April 1911 to September 1912, at station 2⅛ miles downstream.

Average discharge.- 18 years, 2,320 second-feet.

Extremes.- Maximum discharge during year, 12,700 second-feet May 4 (gage height, 86.68 feet); minimum, 160 second-feet Nov. 3 (gage height, 78.42 feet).
1911-12, 1920-37: Maximum discharge, 53,000 second-feet Dec. 23, 1933 (gage height, 92.5 feet), from slope between stations upstream; minimum, 96 second-feet Dec. 5, 1928 (gage height, 78.43 feet).

Remarks.- Records good except those for periods of ice effect, Nov. 29 to Dec. 14, Jan. 2 to Mar. 12, which were computed on basis of three discharge measurements, gage heights, weather records, records for nearby streams, and study of Coeur d'Alene Lake stages and are poor. No diversions above gage. Operation of splash dam at Marble Creek causes some diurnal fluctuation during log-driving season. Gage-height record and results of seven discharge measurements furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	301	286	270	214	230	300	1,560	3,630	5,100	1,740	747	416
2	304	230	280	210	240	310	1,600	6,270	5,100	1,600	795	408
3	310	198	270	210	240	340	1,270	9,800	5,470	1,520	681	376
4	323	286	270	210	230	380	1,150	11,700	4,750	1,470	640	368
5	348	335	270	210	220	*431	1,120	11,000	4,170	1,390	606	449
6	339	326	280	200	210	480	1,080	8,940	3,860	1,350	618	462
7	323	269	460	200	210	550	1,010	8,140	3,630	1,270	584	400
8	316	210	480	210	210	600	1,080	7,630	3,560	1,230	552	382
9	310	210	350	220	220	700	1,350	7,630	3,480	1,190	584	365
10	304	208	300	240	230	800	1,650	8,400	3,630	1,150	640	362
11	304	281	280	250	240	900	1,560	8,140	3,340	1,080	612	362
12	304	304	270	*259	250	1,000	1,390	7,880	3,140	1,040	574	339
13	301	278	260	260	250	1,190	2,760	8,140	3,000	1,040	562	339
14	329	258	300	270	260	885	4,750	10,100	2,880	1,120	540	335
15	376	258	316	270	260	753	7,390	10,400	2,880	1,010	515	335
16	329	289	295	260	260	741	4,750	9,220	2,820	1,010	505	335
17	313	355	292	260	260	825	3,200	8,400	2,760	945	485	335
18	304	382	323	250	270	885	2,760	8,670	2,640	885	485	342
19	301	301	454	240	270	765	2,820	8,940	2,700	885	472	342
20	295	275	404	240	270	669	3,070	8,670	3,140	855	454	355
21	289	256	355	240	280	584	7,150	7,150	2,880	855	444	355
22	286	240	480	250	280	552	5,100	7,150	2,760	795	444	335
23	284	212	699	250	290	552	3,630	6,700	2,880	765	458	326
24	281	218	717	250	300	562	3,000	6,920	2,520	741	510	329
25	298	210	520	260	320	675	3,140	7,630	2,350	723	476	332
26	307	222	390	260	320	765	4,580	8,140	2,180	711	440	332
27	304	220	355	250	310	855	6,700	7,630	2,080	705	420	332
28	281	222	313	240	300	1,080	5,100	7,630	1,980	723	408	335
29	278	210	313	240	-	1,040	3,930	6,700	1,880	747	404	355
30	278	220	278	230	-	1,080	3,270	5,470	1,830	663	404	358
31	284	-	278	230	-	1,230	-	5,100	-	634	400	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	9,504	376	278	307	0.284	0.33	18,850
November	7,769	382	198	259	.240	.27	15,410
December	11,122	717	260	359	.332	.38	22,060
Calendar year 1936	750,326	17,500	198	2,050	1.90	25.84	1,488,000
January	7,383	270	200	238	.220	.25	14,640
February	7,250	320	210	258	.239	.25	14,340
March	22,479	1,230	300	725	.671	.77	44,590
April	92,920	7,390	1,010	3,097	2.87	3.20	184,300
May	247,920	11,700	3,630	7,997	7.40	8.53	491,700
June	95,390	5,470	1,830	3,180	2.94	3.28	189,200
July	31,842	1,740	634	1,027	.951	1.10	63,160
August	16,459	795	400	531	.492	.57	32,650
September	10,796	462	326	360	.333	.37	21,410
Water year 1936-37	560,814	11,700	198	1,536	1.42	19.30	1,112,000

*Discharge measurement.

St. Maries River at Lotus, Idaho

Location.- Staff gage, lat. 47°14', long. 116°37', in sec. 20, T. 45 N., R. 2 W., just below Lotus. Zero of gage is approximately 2,160 feet above mean sea level.

Drainage area.- 420 square miles.

Records available.- July 1911 to October 1912, July 1920 to September 1937.

Average discharge.- 17 years (1920-37), 501 second-feet.

Extremes.- Maximum discharge observed during year, 6,940 second-feet Apr. 15 (gage height, 8.12 feet); minimum discharge, 21 second-feet Nov. 3 (gage height, 3.34 feet).

1911-12, 1920-37: Maximum discharge observed, 23,800 second-feet Dec. 22, 23, 1933 (gage height, 12.1 feet); minimum, 16 second-feet (estimated) Nov. 21, 1929; minimum gage height, 2.71 feet Nov. 20, 1929.

Remarks.- Records good except those for period of ice effect or variable backwater effect from logs, Nov. 6 to Mar. 13, May 2, June 15, which were computed on basis of three discharge measurements, weather records, gage heights, observer's notes, and records for St. Joe River at Calder and are poor. Gage read once daily. No diversions above gage. Gage-height record and results of seven discharge measurements furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	46	25	40	35	80	1,560	1,500	480	185	73	45
2	42	33	30	40	35	85	2,280	1,800	434	164	84	45
3	41	21	35	35	35	95	1,440	2,050	422	160	81	45
4	44	50	40	35	35	110	1,060	2,200	403	152	73	45
5	52	52	40	30	35	110	1,320	2,050	380	145	68	48
6	52	55	55	30	30	*200	1,100	1,630	345	134	63	98
7	50	50	95	30	30	260	823	1,380	329	127	63	73
8	50	30	95	30	30	310	951	1,260	302	124	61	66
9	46	25	*92	35	30	360	1,260	1,200	302	124	61	59
10	46	45	80	35	35	470	1,380	1,440	345	117	68	56
11	46	65	60	*37	35	640	1,200	1,500	480	101	68	50
12	44	60	45	40	40	780	1,080	1,440	313	98	68	48
13	44	45	55	40	40	1,100	3,360	1,320	302	101	66	48
14	50	35	80	40	40	1,080	3,880	1,440	262	127	66	48
15	52	45	70	40	40	584	6,370	1,320	270	120	61	45
16	50	50	65	40	40	709	3,990	1,200	286	111	59	45
17	50	80	55	40	40	794	2,440	1,030	318	101	56	43
18	48	55	80	35	40	882	1,130	977	281	89	52	43
19	48	45	85	35	40	487	1,500	958	351	86	50	43
20	46	45	90	35	40	429	1,500	865	441	81	50	43
21	44	35	95	35	45	252	6,230	803	453	79	48	45
22	42	30	105	35	45	267	5,430	777	357	73	48	48
23	44	25	205	35	50	272	1,980	718	403	73	48	45
24	42	35	190	40	55	282	1,320	685	380	71	54	43
25	41	40	165	40	65	511	1,320	677	313	68	54	43
26	46	40	110	40	65	610	1,440	677	276	68	52	43
27	46	40	95	40	65	602	1,900	654	252	68	50	48
28	46	30	90	40	70	775	1,120	623	224	68	54	45
29	46	25	80	35	-	804	2,120	607	206	68	50	45
30	46	25	50	35	-	842	1,760	534	197	66	45	45
31	46	-	40	35	-	1,130	-	527	-	66	45	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,429	52	39	46.1	0.110	0.13	2,830
November	1,257	80	21	41.9	.100	.11	2,490
December	2,497	205	25	80.5	.192	.22	4,950
Calendar year 1936	149,016	3,670	21	407	.969	13.21	295,600
January	1,132	40	30	36.5	.087	.10	2,250
February	1,185	70	30	42.3	.101	.11	2,350
March	15,912	1,130	80	513	1.22	1.41	31,560
April	64,244	6,370	823	2,141	5.10	5.69	127,400
May	35,842	2,200	527	1,156	2.75	3.17	71,090
June	10,107	480	197	337	.802	.89	20,050
July	3,215	185	66	104	.248	.29	6,380
August	1,839	84	45	59.3	.141	.16	3,650
September	1,486	98	43	49.5	.118	.13	2,950
Water year 1936-37	140,145	6,370	21	384	.914	12.41	278,000

*Discharge measurement.

Hayden Lake at Hayden Lake, Idaho

Location.- Staff gage, lat. 47°46', long. 116°45', in sec. 18, T. 51 N., R. 3 W., at Avondale and Hayden Lake pumping plants, a quarter of a mile north of Bozanta Tavern. Zero of gage is 2,200.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Records available.- May 1920 to September 1937.

Extremes.- Maximum water-surface elevation observed during year, 2,228.96 feet May 23, 24; minimum, 2,223.06 feet Jan. 14, 15.
1920-37: Maximum water-surface elevation, 2,240.41 feet Apr. 30 to May 18, 1921; minimum, 2,219.38 feet Dec. 16, 1931.

Remarks.- Records good. Gage read once daily. Water is pumped from lake for irrigation and for domestic supply. No observations Jan. 5, 6, Apr. 27, 28, May 22, July 5, Aug. 23.

Gage height, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24.19	23.66	23.14	23.23	23.08	23.16	23.86	27.64	28.67	28.07	26.26	24.58
2	24.17	23.63	23.12	23.22	23.08	23.18	23.96	27.72	28.62	28.04	26.21	24.54
3	24.15	23.61	23.11	23.20	23.08	23.23	24.06	27.84	28.55	27.95	26.16	24.49
4	24.13	23.58	23.10	23.18	23.08	23.24	24.11	28.00	28.52	27.89	26.10	24.45
5	24.11	23.56	23.10	-	23.09	23.24	24.18	28.23	28.46	-	26.04	24.49
6	24.09	23.55	23.10	-	23.10	23.24	24.28	28.32	28.41	27.80	26.00	24.48
7	24.07	23.53	23.14	23.14	23.10	23.24	24.28	28.40	28.35	27.72	25.94	24.46
8	24.05	23.51	23.15	23.12	23.10	23.24	24.32	28.49	28.30	27.66	25.87	24.43
9	24.03	23.49	23.15	23.12	23.10	23.24	24.35	28.52	28.24	27.60	25.80	24.40
10	24.01	23.47	23.14	23.12	23.10	23.24	24.46	28.58	28.20	27.54	25.78	24.38
11	23.99	23.44	23.14	23.10	23.12	23.24	24.60	28.66	28.20	27.49	25.75	24.34
12	23.98	23.43	23.12	23.08	23.12	23.24	24.66	28.74	28.19	27.41	25.70	24.30
13	23.97	23.42	23.11	23.07	23.12	23.26	24.80	28.78	28.18	27.35	25.62	24.26
14	23.97	23.40	23.09	23.06	23.12	23.30	24.95	28.83	28.16	27.32	25.54	24.22
15	23.97	23.38	23.09	23.06	23.12	23.34	25.25	28.86	28.12	27.30	25.48	24.18
16	23.96	23.36	23.09	23.14	23.12	23.39	25.60	28.88	28.09	27.24	25.42	24.13
17	23.95	23.35	23.09	23.18	23.12	23.42	25.80	28.91	28.04	27.18	25.38	24.09
18	23.92	23.35	23.08	23.18	23.12	23.46	25.95	28.92	28.04	27.12	25.32	24.05
19	23.91	23.34	23.08	23.18	23.12	23.52	26.10	28.94	28.14	27.05	25.26	24.00
20	23.89	23.34	23.08	23.18	23.14	23.54	26.25	28.94	28.18	26.98	25.22	23.96
21	23.87	23.32	23.07	23.16	23.14	23.57	26.40	28.95	28.19	26.91	25.16	23.92
22	23.84	23.30	23.10	23.14	23.14	23.58	26.60	-	28.18	26.84	25.10	23.88
23	23.82	23.29	23.18	23.12	23.16	23.58	26.72	28.96	28.20	26.78	-	23.86
24	23.81	23.28	23.26	23.10	23.16	23.60	26.82	28.96	28.21	26.72	25.04	23.83
25	23.80	23.26	23.28	23.10	23.16	23.60	26.90	28.94	28.20	26.68	24.98	23.80
26	23.77	23.24	23.28	23.10	23.16	23.63	26.98	28.91	28.18	26.62	24.93	23.77
27	23.75	23.22	23.28	23.10	23.18	23.64	-	28.88	28.16	26.54	24.87	23.74
28	23.74	23.20	23.28	23.10	23.18	23.67	-	28.85	28.14	26.50	24.80	23.72
29	23.72	23.18	23.28	23.08	-	23.67	27.48	28.81	28.12	26.45	24.73	23.70
30	23.70	23.16	23.26	23.08	-	23.69	27.56	28.77	28.10	26.40	24.68	23.68
31	23.68	-	23.26	23.08	-	23.78	-	28.74	-	26.32	24.64	-

Spokane Valley Farms Co.'s Canal at Post Falls, Idaho

Location.- Staff gage, lat. 47°43', long. 116°57', in NE¼ sec. 4, T. 50 N., R. 5 W., 1,200 feet below head gates and half a mile west of Post Falls.

Records available.- May 1911 to September 1917, September 1919 to September 1937.

Extremes.- Maximum discharge observed during year, 298 second-feet May 22-25; maximum gage height, 4.82 feet July 13; no flow Oct. 1 to May 7 and Sept. 17-30.
1911-17, 1919-37: Maximum discharge observed, 304 second-feet May 28, 1936; maximum gage height, 5.06 feet Aug. 9, 1935; no flow during nonirrigation season.

Remarks.- Records good. Once-daily staff readings and time of gate changes furnished by observer. Canal diverts water for irrigation from Spokane River in SE¼ sec. 3, T. 50 N., R. 5 W. Gage-height record furnished by Spokane Valley Farms Co. Results of three discharge measurements furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	277	262	255	231
2								0	278	271	255	225
3								0	274	273	254	223
4								0	279	273	254	223
5								0	278	272	254	223
6								0	277	274	254	223
7								0	267	273	254	223
8								24	269	273	254	223
9								36	280	272	254	221
10								36	280	272	254	221
11								36	280	271	255	221
12								56	279	273	254	221
13								64	279	279	253	219
14								73	278	273	253	218
15								102	273	266	251	217
16								118	262	262	251	72
17								183	254	261	249	0
18								257	250	262	248	0
19								275	249	262	252	0
20								275	255	262	254	0
21								288	262	262	253	0
22								298	254	261	252	0
23								298	243	259	252	0
24								298	244	260	252	0
25								298	252	260	251	0
26								288	260	260	249	0
27								288	264	258	248	0
28								280	263	258	248	0
29								280	259	258	247	0
30								280	258	256	245	0
31								277	-	256	244	-

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 1936	35,179	299	0	96.1	69,790
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	4,708	298	0	152	9,340
June	7,977	280	243	266	15,820
July	8,234	279	256	266	16,330
August	7,803	255	244	252	15,480
September	3,404	231	0	113	6,750
Water year 1936-37	32,126	298	0	88.0	63,720

Okanogan River at Okanagan Falls, British Columbia

(International gaging station)

Location.- Water-stage recorder, lat. 49°21', long. 119°35', below falls at Okanagan Falls.

Drainage area.- 2,550 square miles.

Records available.- October 1930 to September 1937 in water-supply papers of Geological Survey; March 1915 to September 1930 in bulletins of Dominion Water and Power Bureau (Canada).

Average discharge.- 22 years, 463 second-feet.

Extremes.- Maximum discharge observed during year, 1,080 second-feet June 3 (gage height, 2.63 feet); minimum probably occurred during period of ice effect, Jan. 2 to Feb. 11.

1915-37: Maximum observed discharge, 2,680 second-feet June 10, 1928, minimum, 4.6 second-feet Mar. 14, 1931.

Remarks.- Records good except those for period of ice effect, Jan. 2 to Feb. 11 (computed on basis of records for station at Penticton); and those for Feb. 12 to Mar. 4 (computed on basis of gage readings made either once a day or once every other day), which are poor. Diversions above station for irrigation. Flow regulated by control dam at outlet of Okanagan Lake. This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

0.5	20	1.5	317	2.5	899
1.0	134	2.0	561	2.7	1,177

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	546	566	469	340	148	*176	640	640	968	706	340	281
2	551	551	469	320	155	160	640	651	996	689	345	281
3	551	551	464	300	166	*148	630	673	1,040	662	349	268
4	551	561	464	300	165	165	619	695	955	662	345	252
5	551	561	469	96	163	182	625	706	955	651	354	260
6	551	566	439	500	163	185	635	712	955	640	349	272
7	551	561	434	320	160	195	625	701	941	630	358	272
8	551	561	434	315	160	202	635	695	927	603	354	272
9	551	561	430	310	155	206	635	730	927	603	349	276
10	551	561	430	300	151	214	635	730	899	593	349	281
11	551	556	420	295	157	214	640	746	927	593	363	286
12	551	546	400	285	*134	239	635	753	941	588	363	286
13	551	530	400	280	*146	256	640	760	941	582	363	290
14	551	536	400	280	140	264	630	776	941	561	340	286
15	556	525	400	275	*134	308	630	783	899	536	331	281
16	556	510	410	270	130	345	625	760	927	510	317	281
17	561	500	400	250	*120	382	614	746	913	474	304	276
18	561	495	396	217	140	434	635	768	899	474	299	276
19	561	490	386	180	*163	469	630	783	913	449	290	281
20	561	490	386	150	*151	479	630	798	913	434	268	276
21	551	464	372	150	170	515	630	798	941	415	264	272
22	551	474	372	146	*199	541	630	848	955	400	256	268
23	551	474	372	140	195	566	630	828	968	386	260	282
24	556	469	372	145	*195	582	630	838	941	386	256	256
25	556	464	363	146	195	598	646	848	889	372	256	252
26	556	459	340	155	*195	603	646	879	848	363	264	252
27	556	454	340	163	*182	614	646	927	848	368	260	260
28	561	449	340	150	180	625	640	927	798	363	260	268
29	561	459	345	140	-	625	640	941	746	363	264	260
30	561	464	349	148	-	630	640	955	738	354	272	243
31	572	-	349	148	-	630	-	955	-	349	276	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	17,197	572	546	554	34,100
November	15,408	566	449	514	30,600
December	12,414	469	340	400	24,600
Calendar year 1936	195,274	1,000	178	534	387,000
January	7,214	500	96	233	14,300
February	4,512	199	120	161	8,950
March	11,752	630	148	379	23,300
April	19,006	646	614	634	37,700
May	24,350	955	640	786	48,300
June	27,449	1,040	738	915	54,400
July	15,759	706	349	508	31,300
August	9,618	363	256	310	19,100
September	8,147	290	243	273	16,200
Water year 1936-37	172,826	1,040	96	473	343,000

*Staff gage read.

Osoyoos Lake near Oroville, Wash.

(International gaging station)

Location.- Water-stage recorder, lat. 48°59'15", long. 119°27'15", in lot 1, sec. 8, T. 40 N., R. 27 E., 1 mile south of international boundary and 3 miles north of Oroville. Gage datum is at mean sea level, subject to correction for general adjustment of 1929.

Drainage area.- 3,250 square miles.

Records available.- July 1928 to September 1937.

Extremes.- Maximum water-surface elevation recorded during year, 915.36 feet June 26, 27; minimum, 912.84 feet Feb. 19, 20.
1928-37: Maximum water-surface elevation recorded, 917.23 feet Apr. 28, 1934; minimum, 911.21 feet Oct. 14, 1929.

Remarks.- Records excellent. Stage affected by ice Jan. 2 to Feb. 12, not determined. Diversion in Canada for irrigation. Okanogan River subject to natural regulation in several lakes, and to artificial regulation, as an aid to navigation, in Okanagan Lake. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Gage height, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13.86	13.79	13.82	13.61	-	12.92	13.95	14.31	14.91	15.09	13.30	13.31
2	13.86	13.77	13.81	-	-	12.93	13.99	14.33	14.91	15.00	13.28	13.31
3	13.85	13.77	13.81	-	-	12.93	14.02	14.38	14.90	14.87	13.24	13.32
4	13.83	13.78	13.80	-	-	12.94	14.05	14.46	14.88	14.79	13.23	13.33
5	13.82	13.81	13.81	-	-	12.94	14.08	14.51	14.87	14.68	13.23	13.37
6	13.82	13.82	13.79	-	-	12.94	14.13	14.56	14.84	14.57	13.23	13.40
7	13.81	13.80	13.79	-	-	12.94	14.15	14.58	14.83	14.48	13.24	13.42
8	13.82	13.82	13.79	-	-	12.95	14.16	14.61	14.81	14.40	13.25	13.46
9	13.82	13.83	13.79	-	-	12.97	14.19	14.66	14.79	14.33	13.26	13.48
10	13.81	13.84	13.78	-	-	12.97	14.22	14.69	14.79	14.27	13.27	13.51
11	13.82	13.86	13.77	-	-	12.99	14.24	14.72	14.80	14.20	13.30	13.53
12	13.82	13.88	13.76	-	-	13.01	14.25	14.72	14.83	14.13	13.32	13.57
13	13.83	13.89	13.75	-	12.89	13.01	14.30	14.71	14.84	14.07	13.32	13.59
14	13.84	13.91	13.74	-	12.91	13.02	14.33	14.72	14.83	14.02	13.33	13.61
15	13.85	13.92	13.74	-	12.89	13.03	14.35	14.71	14.82	13.99	13.34	13.61
16	13.85	13.93	13.73	-	12.88	13.04	14.36	14.73	14.84	13.96	13.35	13.64
17	13.84	13.93	13.70	-	12.87	13.09	14.36	14.75	14.85	13.92	13.37	13.66
18	13.84	13.91	13.68	-	12.85	13.15	14.36	14.78	14.89	13.90	13.37	13.69
19	13.85	13.91	13.67	-	12.84	13.19	14.36	14.79	14.92	13.85	13.37	13.73
20	13.84	13.91	13.66	-	12.85	13.23	14.35	14.78	14.98	13.79	13.36	13.76
21	13.81	13.90	13.65	-	12.88	13.28	14.36	14.79	15.01	13.74	13.35	13.77
22	13.81	13.91	13.63	-	12.88	13.33	14.36	14.83	15.06	13.68	13.34	13.76
23	13.80	13.90	13.62	-	12.89	13.42	14.34	14.83	15.17	13.63	13.34	13.75
24	13.81	13.90	13.60	-	12.90	13.50	14.33	14.84	15.25	13.59	13.34	13.75
25	13.80	13.88	13.59	-	12.90	13.57	14.33	14.88	15.32	13.57	13.34	13.76
26	13.80	13.87	13.57	-	12.92	13.62	14.32	14.91	15.35	13.53	13.35	13.78
27	13.80	13.87	13.57	-	12.92	13.69	14.33	14.93	15.34	13.49	13.34	13.80
28	13.81	13.85	13.55	-	12.92	13.75	14.32	14.94	15.31	13.45	13.32	13.81
29	13.81	13.84	13.52	-	-	13.80	14.31	14.94	15.25	13.42	13.31	13.83
30	13.82	13.82	13.51	-	-	13.86	14.30	14.92	15.16	13.40	13.30	13.84
31	13.83	-	13.53	-	-	13.91	-	14.93	-	13.34	13.31	-

Note.- Add 900 feet to obtain mean sea-level elevation.

Okanogan River near Tonasket, Wash.

(International gaging station)

Location.- Water-stage recorder, lat. 48°38'00", long. 119°27'50", in lot 3, sec. 8, T. 36 N., R. 27 E., 1,000 feet above Chewiliken Creek and 5½ miles south of Tonasket.

Drainage area.- 7,250 square miles.

Records available.- April 1929 to September 1937.

Extremes.- Maximum discharge during year, 15,100 second-feet June 5 (gage height, 14.16 feet); minimum, probably less than 450 second-feet sometime during period of ice effect.
1929-37: Maximum discharge, 25,400 second-feet Apr. 27, 1934 (gage height, 18.3 feet); minimum, 126 second-feet Sept. 5, 1931 (gage height, 3.43 feet).

Remarks.- Records excellent except those for period of ice effect, Dec. 31 to Mar. 9, which were computed on basis of two discharge measurements, gage heights, and weather records and are poor. Numerous diversions for irrigation above station. Flow subject to natural regulation in several lakes, and, as an aid to navigation, to artificial regulation in Okanagan Lake. Operation of power plant on Similkameen River affects low-water flow slightly. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

4.2	425	6.0	1,540	8.0	3,550	12.0	10,400
4.5	585	6.5	1,900	9.0	4,950	13.0	12,500
5.0	870	7.0	2,360	10.0	6,600	14.0	14,700
5.5	1,190	7.5	2,950	11.0	8,450	15.0	16,900

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	780	900	810	550	480	560	960	1,610	10,000	7,500	1,330	640
2	780	840	780	450	510	560	990	1,680	11,400	7,140	1,300	624
3	780	900	750	490	530	580	1,020	1,900	13,200	6,600	1,300	602
4	840	840	750	520	540	600	1,020	2,830	14,500	6,080	1,400	602
5	750	810	810	540	530	620	1,050	4,360	14,900	5,580	1,360	690
6	750	870	810	510	520	670	1,080	4,650	14,000	5,260	1,190	662
7	722	900	810	480	500	660	1,050	4,360	13,600	4,800	1,050	684
8	722	930	810	480	470	640	1,050	4,360	13,600	4,500	990	780
9	722	840	780	490	450	630	1,050	4,360	14,000	4,220	1,020	780
10	722	870	810	490	480	634	1,050	4,500	14,000	3,940	1,020	722
11	722	810	840	500	490	646	1,120	4,650	13,800	3,810	990	722
12	722	840	870	500	500	662	1,160	4,500	14,300	3,550	990	722
13	722	930	870	500	510	651	1,220	4,500	14,000	3,310	900	646
14	722	930	810	510	520	640	1,260	4,950	13,200	3,310	900	618
15	780	930	870	520	540	656	1,300	6,600	12,300	3,190	870	546
16	900	960	900	500	560	656	1,300	7,140	12,500	3,070	870	634
17	870	930	810	500	580	662	1,360	7,140	12,300	2,890	840	585
18	960	960	810	500	570	678	1,400	6,780	12,900	2,710	840	524
19	990	900	810	510	550	673	1,400	7,320	12,500	2,530	750	519
20	960	930	810	510	540	684	1,360	7,880	11,700	2,250	646	514
21	960	960	840	510	550	695	1,400	7,500	11,200	2,200	646	519
22	930	990	840	510	560	695	1,400	7,500	11,000	2,100	695	497
23	930	990	904	510	580	722	1,400	8,070	11,200	1,980	563	492
24	930	990	930	520	580	750	1,440	8,070	10,800	1,900	607	514
25	930	930	930	520	570	780	1,440	8,640	9,800	1,780	722	519
26	870	930	900	520	570	810	1,400	10,000	9,020	1,720	722	524
27	930	840	870	520	560	810	1,440	11,200	8,450	1,640	695	524
28	870	840	840	520	560	840	1,470	11,700	8,260	1,580	690	530
29	900	810	840	500	-	870	1,540	11,700	8,070	1,500	662	546
30	900	750	750	480	-	900	1,610	10,800	8,070	1,440	651	563
31	900	-	660	460	-	930	-	9,800	-	1,400	651	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	25,966	990	722	838	51,500
November	26,850	990	750	895	53,260
December	25,624	930	660	827	50,820
Calendar year 1936	812,598	11,600	450	2,220	1,612,000
January	15,620	550	450	504	30,960
February	14,900	580	450	532	29,550
March	21,564	930	560	696	42,770
April	37,740	1,610	960	1,258	74,860
May	201,050	11,700	1,610	6,485	398,800
June	358,570	14,900	8,070	11,950	711,200
July	105,480	7,300	1,400	3,403	209,200
August	27,860	1,400	563	899	55,260
September	18,044	780	492	601	35,790
Water year 1936-37	879,268	14,900	450	2,409	1,744,000

Similkameen River near Nighthawk, Wash.

(International gaging station)

Location.- Water-stage recorder, lat. 48°59'10", long. 119°37'00", in NW¼ sec. 7, T. 40 N., R. 26 E., about 1¼ miles below Nighthawk.
Drainage area.- 3,420 square miles.
Records available.- September 1928 to September 1937. May 1911 to September 1928 (mean monthly discharge including that of Oroville-Tonasket Irrigation District canal), at site near Oroville, records equivalent.
Average discharge.- 26 years, 2,125 second-feet.
Extremes.- Maximum discharge during year, 16,100 second-feet June 4 (gage height, 11.90 feet); minimum, probably less than 200 second-feet, occurred sometime during period of ice effect.
1928-37: Maximum discharge, 27,200 second-feet Apr. 26, 1934 (gage height, 14.96 feet); minimum, 120 second-feet Jan. 6, 1930 (gage height, 2.05 feet).
Remarks.- Records excellent except those for period of ice effect, Jan. 2 to Feb. 28, which were computed on basis of one discharge measurement, gage heights, and weather records and are poor. Some regulation at high stages caused by natural diversion into Palmer Lake. Small irrigation diversions above station. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating tables, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Mar. 1-5)

Oct. 1 to Mar. 5

2.4	196	4.0	930	6.0	3,010	9.0	8,200
2.7	257	4.5	1,340	7.0	4,440	10.0	10,590
3.0	338	5.0	1,840	8.0	6,210	11.0	13,400
3.5	585						

Mar. 6 to Sept. 30

3.0	402	4.5	1,380
3.5	660	5.0	1,870
4.0	970		

Note.- Same as preceding table above 5.5 feet.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	305	305	255	223	210	335	443	900	10,100	6,400	1,040	556
2	300	305	248	240	220	342	453	1,080	12,300	5,830	1,120	550
3	303	289	253	250	240	349	453	1,670	14,300	5,260	1,240	545
4	300	279	262	250	250	368	453	3,060	15,500	4,750	1,160	539
5	297	294	284	240	250	393	458	4,140	13,700	4,440	1,040	572
6	297	323	284	230	250	430	463	3,760	13,100	4,140	1,000	616
7	300	320	279	200	240	425	453	3,620	13,100	3,760	970	714
8	300	297	279	200	220	416	453	3,690	13,700	3,470	935	726
9	300	276	289	200	200	420	463	3,760	13,700	3,270	900	672
10	297	274	329	200	200	420	492	3,840	13,100	3,080	870	627
11	294	286	326	210	240	425	518	3,840	13,700	2,820	870	600
12	292	314	320	210	270	430	534	3,690	14,000	2,700	810	578
13	292	326	326	210	270	425	566	3,990	12,600	2,580	810	550
14	292	329	329	220	280	420	583	5,080	11,700	2,580	768	539
15	294	326	332	220	310	430	616	6,600	11,700	2,460	756	529
16	300	323	308	210	320	430	660	6,600	11,400	2,340	762	513
17	342	323	300	210	340	425	666	6,210	12,300	2,180	738	508
18	368	323	303	210	320	420	660	6,210	12,300	2,070	708	502
19	349	329	314	220	310	420	660	7,000	10,900	1,970	672	497
20	338	360	323	220	300	416	672	7,000	10,300	1,920	654	497
21	332	364	338	220	310	407	672	6,600	10,100	1,820	632	487
22	329	384	371	220	330	398	672	7,200	10,300	1,670	622	477
23	326	364	384	220	340	411	654	7,600	9,800	1,570	622	468
24	320	338	402	220	340	411	638	7,600	9,070	1,470	638	468
25	314	311	384	220	330	407	638	8,620	8,200	1,380	649	468
26	314	286	368	220	330	402	638	10,300	7,400	1,340	632	472
27	311	267	349	220	330	402	690	11,400	7,200	1,240	605	477
28	311	262	342	220	330	407	780	11,400	7,200	1,200	594	468
29	311	262	292	220	-	407	840	10,600	7,000	1,160	583	477
30	308	262	279	210	-	420	870	9,310	6,800	1,120	572	487
31	305	-	248	200	-	434	-	9,070	-	1,080	561	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	9,641	368	292	311	.0.091	0.10	19,120
November	9,301	384	262	310	.091	.10	18,450
December	9,700	402	248	313	.092	.11	19,240
Calendar year 1936	607,486	11,200	230	1,660	.485	6.61	1,205,000
January	6,763	250	200	218	.064	.07	13,410
February	7,900	340	200	282	.082	.09	15,670
March	12,645	434	335	408	.119	.14	25,080
April	17,811	870	443	594	.174	.19	35,330
May	185,440	11,400	900	5,982	1.75	2.02	367,800
June	336,570	15,500	6,800	11,220	3.28	3.66	667,600
July	83,070	6,400	1,080	2,680	.784	.90	164,800
August	24,533	1,240	561	791	.231	.27	48,660
September	16,179	726	468	539	.158	.18	32,090
Water year 1936-37	719,553	15,500	200	1,971	.576	7.83	1,427,000

Methow River at Twisp, Wash.

Location.- Water-stage recorder, lat. 48°21'40", long. 120°06'50", in sec. 17, T. 33 N., R. 22 E., at highway bridge at Twisp, a quarter of a mile below Twisp River.

Drainage area.- 1,330 square miles.

Records available.- June 1919 to September 1929, October 1933 to September 1937.

Average discharge.- 14 years, 1,175 second-feet.

Extremes.- Maximum discharge during year, 12,300 second-feet June 17 (gage height, 8.76 feet); minimum probably occurred during Jan. 6 to Mar. 4, when stage-discharge relation was affected by ice.

1919-29, 1933-37: Maximum discharge observed, 15,200 second-feet Apr. 24, 25, 1934; maximum gage height observed, 10.4 feet June 5, 1921; minimum discharge observed, 134 second-feet Sept. 4, 5, 1926, Sept. 9, 10, 1929 (gage height, 1.42 feet); may have been less sometime during Jan. 6 to Mar. 4, 1937.

Remarks.- Records excellent except those for period of ice effect, Jan. 6 to Mar. 4, which were computed on basis of one discharge measurement, gage heights, and weather records and are poor. Water diverted above station for irrigation by two canals of Methow Valley Irrigation District, Risley Ditch, and other ditches.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

1.3	126	3.0	930	4.5	2,510	7.0	7,550
1.5	169	3.5	1,340	5.0	3,300	8.0	10,100
2.0	329	4.0	1,850	6.0	5,210	9.0	12,800
2.5	580						

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	169	201	231	190	160	190	274	405	5,760	4,490	544	244
2	169	204	219	198	170	200	271	644	7,800	4,010	532	241
3	169	225	219	213	180	200	268	1,400	9,580	3,470	532	235
4	169	244	225	213	180	200	268	2,560	7,550	3,220	486	231
5	172	251	225	207	190	198	264	2,440	6,580	3,050	434	292
6	164	254	231	200	190	195	264	2,030	6,110	2,660	414	382
7	162	247	238	190	180	195	260	1,970	6,580	2,360	410	378
8	162	244	231	180	180	195	264	1,850	7,060	2,160	400	357
9	162	251	222	180	180	195	278	1,850	6,580	2,090	387	337
10	174	247	216	180	180	195	288	1,850	7,550	1,910	369	314
11	169	264	228	180	180	195	285	1,680	7,800	1,850	357	299
12	169	260	226	180	180	195	288	1,580	6,580	1,740	345	285
13	167	257	238	180	180	201	322	1,680	6,110	1,680	337	268
14	179	257	235	180	180	201	341	2,220	6,580	1,580	322	264
15	192	260	219	180	190	204	333	2,660	7,060	1,480	310	254
16	195	257	228	180	190	207	325	2,890	7,760	1,340	303	247
17	192	257	231	170	190	210	322	2,660	10,900	1,250	296	238
18	192	257	225	170	190	213	322	2,740	8,300	1,210	285	238
19	204	254	225	170	190	207	325	3,220	7,060	1,170	292	241
20	213	251	222	170	190	213	329	3,220	6,580	1,090	271	238
21	213	251	222	170	190	210	329	3,300	7,300	1,000	257	235
22	213	251	226	170	190	213	316	3,830	8,050	922	251	228
23	213	247	231	170	190	216	314	3,830	7,550	836	260	228
24	213	244	225	170	190	222	307	4,200	6,110	787	264	225
25	210	244	219	170	190	222	299	5,430	5,320	736	264	241
26	210	231	219	170	190	228	322	6,820	4,900	710	257	257
27	207	225	219	170	190	235	369	6,820	5,000	661	271	241
28	204	222	216	170	190	241	387	6,340	5,210	634	271	241
29	207	225	190	150	-	247	378	5,210	5,320	628	257	296
30	207	225	207	140	-	254	378	4,490	4,900	604	254	310
31	204	-	204	160	-	268	-	4,590	-	562	238	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,845	213	162	189	11,590
November	7,307	264	201	244	14,490
December	6,916	238	190	223	13,720
Calendar year 1936	318,090	9,880	162	869	630,900
January	5,521	213	140	178	10,950
February	5,170	190	160	185	10,250
March	6,565	268	190	212	13,020
April	9,292	387	260	310	18,430
May	96,409	6,820	405	3,110	191,200
June	205,540	10,900	4,900	6,851	407,700
July	51,892	4,490	562	1,674	102,900
August	10,470	544	238	338	20,770
September	8,085	382	225	270	16,040
Water year 1936-37	419,012	10,900	140	1,148	831,100

Stehekin River at Stehekin, Wash.

Location.- Water-stage recorder, lat. 48°19'50", long. 120°41'40", in SE¼ sec. 26, T. 33 N., R. 17 E., 1,200 feet above Boulder Creek and 2 miles above Lake Chelan and Stehekin. Flow of Boulder Creek included in records of discharge.

Drainage area.- 372 square miles.

Records available.- October 1910 to October 1915, January 1927 to September 1937.

Average discharge.- 15 years, 1,360 second-feet.

Extremes.- Maximum discharge during year, 9,150 second-feet June 3 (gage height, 25.56 feet); minimum, 90 second-feet Jan. 8, Feb. 18 (gage height, 18.41 feet).
1910-15, 1927-37: Maximum discharge, 12,900 second-feet June 2, 1933 (gage height, 27.18 feet), from rating curve extended above 8,500 second-feet; minimum, 56 second-feet Jan. 12, 1930.

Remarks.- Records excellent. At very high stages a small percentage of flow is diverted above gage by natural sloughs; quantity diverted included in records of daily discharge. Gage-height record collected in cooperation with Washington Water Power Co., which furnished many discharge measurements.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

18.4	89	21.0	1,410
18.7	128	21.5	1,970
19.0	195	22.0	2,630
19.5	395	23.0	4,200
20.0	650	24.0	5,870
20.5	970	25.0	7,880

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	355	182	134	125	112	128	420	986	5,170	4,840	935	570
2	336	162	134	128	112	126	415	1,440	7,050	4,200	879	595
3	314	172	136	149	111	123	410	2,640	7,460	3,640	921	612
4	495	172	134	151	114	125	425	3,720	5,340	3,960	994	628
5	370	167	136	130	112	126	425	2,930	4,840	3,560	1,050	992
6	332	165	162	105	115	143	430	2,420	5,170	2,860	978	752
7	350	156	213	104	115	138	430	2,280	6,060	2,780	956	662
8	395	151	172	94	112	138	445	2,090	6,250	3,080	893	656
9	375	154	154	100	111	139	480	2,030	5,690	3,080	844	639
10	385	149	141	102	114	141	530	2,030	6,250	3,000	921	590
11	385	151	149	100	112	147	540	1,790	5,340	3,080	1,360	595
12	350	149	145	111	117	156	560	1,680	4,680	3,240	1,220	650
13	350	145	143	117	111	169	692	1,910	4,680	3,000	1,130	617
14	614	145	167	118	115	174	746	2,630	5,170	2,560	935	662
15	533	143	149	118	115	177	716	2,630	5,000	2,350	764	704
16	415	145	151	117	106	185	680	2,560	5,620	2,420	698	680
17	405	182	151	114	107	195	662	2,350	5,450	2,630	740	650
18	410	167	179	114	94	201	650	2,490	4,520	2,700	830	639
19	365	162	236	106	107	204	656	2,780	4,360	2,420	794	628
20	314	204	201	98	115	204	692	2,630	4,520	2,030	794	580
21	284	174	198	104	118	207	740	2,700	6,060	1,850	782	505
22	272	167	228	111	107	207	686	3,160	5,690	1,680	830	440
23	264	158	216	112	118	210	650	3,080	4,680	1,620	800	390
24	256	154	192	114	128	213	634	3,480	3,640	1,730	668	350
25	246	149	187	114	136	213	650	4,520	3,320	1,970	674	345
26	232	145	177	110	130	236	764	5,340	3,560	1,790	644	385
27	222	139	172	115	130	253	879	4,920	4,520	1,620	590	440
28	219	136	167	117	126	288	893	4,360	5,510	1,620	545	355
29	210	134	158	114	-	314	872	3,480	6,060	1,410	515	345
30	201	134	162	114	-	336	879	3,000	5,170	1,220	520	327
31	192	-	151	112	-	390	-	3,480	-	1,020	515	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	10,446	614	192	337	0.906	1.04	20,720
November	4,713	204	134	157	.422	.47	9,350
December	5,195	236	134	168	.452	.52	10,300
Calendar year 1936	430,175	9,150	87	1,175	3.16	43.02	853,200
January	3,538	151	94	114	.306	.35	7,020
February	3,220	136	94	115	.309	.32	6,390
March	6,006	390	123	194	.522	.60	11,910
April	18,651	893	410	622	1.67	1.86	36,990
May	87,536	5,340	986	2,824	7.59	8.75	173,600
June	156,830	7,460	3,320	5,228	14.1	15.73	311,100
July	78,960	4,840	1,020	2,547	6.85	7.90	156,600
August	25,719	1,360	515	830	2.23	2.57	51,010
September	16,983	992	327	566	1.52	1.70	33,690
Water year 1936-37	417,797	7,460	94	1,145	3.08	41.81	828,700

Lake Chelan at Chelan, Wash.

Location.- Water-stage recorder, lat. 47°50'00", long. 120°03'40", in lot 3, sec. 15, T. 27 N., R. 22 E., 2 miles west of Chelan. Zero of gage is at mean sea level (general adjustment of 1912).

Drainage area.- 950 square miles.

Records available.- September 1897 to December 1899, January to June 1905, December 1910 to September 1937.

Extremes.- Maximum water-surface elevation during year, 1,100.00 feet July 19; minimum, 1,079.68 feet Apr. 3, 4.
1897-99, 1905, 1910-37: Maximum water-surface elevation, that of July 19, 1937; minimum, 1,076.78 feet Jan. 27, 28, Dec. 2, 3, 1898.

Remarks.- Records excellent. Level of lake regulated, under stipulation of Federal Power Commission, for power and for scenic effect during tourist season. Gage-height record collected in cooperation with Washington Water Power Co.

Gage height, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94.00	90.55	86.80	84.01	81.59	80.05	79.74	80.16	87.07	99.59	99.77	97.39
2	93.90	90.40	86.68	83.96	81.51	80.03	79.72	80.25	87.57	99.58	99.69	97.30
3	93.81	90.25	86.57	83.89	81.43	79.98	79.69	80.42	88.15	99.55	99.62	97.21
4	93.69	90.14	86.45	83.83	81.39	79.94	79.72	80.73	88.64	99.75	99.58	97.13
5	93.58	90.01	86.33	83.71	81.34	79.91	79.75	80.91	89.15	99.81	99.55	97.10
6	93.46	89.87	86.30	83.62	81.25	79.89	79.76	81.09	89.59	99.70	99.49	97.04
7	93.34	89.74	86.22	83.53	81.17	79.88	79.73	81.26	90.06	99.68	99.42	96.99
8	93.24	89.62	86.09	83.42	81.10	79.87	79.71	81.40	90.57	99.90	99.36	96.92
9	93.12	89.50	85.98	83.33	80.99	79.85	79.72	81.57	91.07	99.94	99.26	96.84
10	93.01	89.36	85.85	83.27	80.90	79.83	79.72	81.70	91.73	99.93	99.18	96.74
11	92.92	89.23	85.74	83.19	80.84	79.82	79.72	81.83	92.25	99.93	99.14	96.65
12	92.81	89.11	85.61	83.09	80.78	79.80	79.74	81.96	92.65	99.94	99.11	96.59
13	92.68	89.00	85.53	82.99	80.71	79.79	79.82	82.07	93.04	99.93	99.09	96.49
14	92.63	88.87	85.43	82.90	80.65	79.81	79.87	82.25	93.56	99.93	99.03	96.39
15	92.51	88.74	85.30	82.82	80.60	79.82	79.90	82.43	94.05	99.93	98.91	96.31
16	92.40	88.64	85.17	82.73	80.57	79.82	79.93	82.64	94.54	99.96	98.80	96.25
17	92.29	88.53	85.08	82.65	80.55	79.82	79.93	82.80	95.13	99.97	98.72	96.14
18	92.18	88.40	84.98	82.58	80.54	79.82	79.95	83.00	95.60	99.97	98.66	96.05
19	92.09	88.28	84.90	82.48	80.47	79.79	79.99	83.21	96.04	99.92	98.57	95.99
20	91.98	88.18	84.82	82.38	80.41	79.79	80.00	83.41	96.48	99.84	98.49	95.94
21	91.86	88.04	84.75	82.30	80.38	79.82	80.02	83.62	97.00	99.90	98.43	95.81
22	91.73	87.92	84.71	82.22	80.34	79.86	80.00	83.88	97.55	99.87	98.35	95.69
23	91.63	87.81	84.65	82.15	80.28	79.85	79.99	84.11	98.01	99.84	98.27	95.53
24	91.52	87.68	84.58	82.11	80.23	79.87	79.99	84.39	98.38	99.85	98.17	95.41
25	91.40	87.55	84.48	82.06	80.18	79.85	80.02	84.70	98.67	99.87	98.08	95.29
26	91.28	87.41	84.39	82.00	80.14	79.84	80.05	85.13	98.95	99.91	97.99	95.19
27	91.17	87.29	84.36	81.95	80.11	79.83	80.11	85.49	99.24	99.91	97.93	95.08
28	91.04	87.16	84.28	81.88	80.07	79.80	80.13	85.87	99.48	99.93	97.81	94.98
29	90.92	87.03	84.18	81.82	-	79.80	80.11	86.22	99.71	99.94	97.67	94.92
30	90.79	86.91	84.12	81.73	-	79.79	80.12	86.47	99.66	99.93	97.58	94.79
31	90.67	-	84.06	81.64	-	79.76	-	86.73	-	99.87	97.49	-

Note.- Add 1,000 feet to obtain elevation above mean sea level.

Chelan River at Chelan, Wash.

Location.- Water-stage recorder, lat. 47°48'40", long. 119°59'20", in NE¼ sec. 30 T. 27 N., R. 23 E., half a mile above mouth and 2 miles southeast of Chelan. Zero of gage is at mean sea level (subject to correction for general adjustment of 1929).

Drainage area.- 950 square miles.

Records available.- October 1903 to September 1937.

Average discharge.- 34 years, 2,057 second-feet.

Extremes.- Maximum daily discharge during year, 10,000 second-feet June 30; minimum, 1 second-foot (regulated) Apr. 4.
1903-37: Maximum daily discharge, 12,800 second-feet June 3, 1936; no flow part of day Jan. 30, 1917, when lake outlet was blocked with ice, and at times during winter, owing to artificial regulation.

Remarks.- Records excellent. Unmeasured quantity diverted for irrigation above station is small proportion of total run-off. Washington Water Power Co. diverts water at Chelan for power and irrigation, which quantity is included in records of daily discharge. Flow regulated by operation of power plant. River record collected in cooperation with Washington Water Power Co. Records of diversion furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,180	1,800	2,050	1,030	1,550	1,080	1,150	531	706	7,280	2,210	2,190
2	2,180	1,990	2,130	1,170	1,520	1,020	954	172	829	6,860	2,230	2,190
3	2,180	2,160	2,080	1,170	1,490	977	756	630	751	3,720	2,200	2,190
4	2,180	2,160	2,050	1,250	1,510	915	1	637	699	2,500	2,230	2,190
5	2,160	2,140	1,970	1,390	1,340	860	883	460	675	7,090	2,210	2,130
6	2,190	2,140	1,410	1,430	1,360	581	1,060	492	485	3,750	2,210	2,120
7	2,170	2,140	1,810	1,470	1,070	202	899	1,060	691	2,020	2,220	2,140
8	2,180	2,040	2,010	1,510	1,500	716	960	830	720	2,510	2,220	2,190
9	2,160	2,100	2,080	1,470	1,560	758	1,070	244	724	4,390	2,220	2,190
10	2,160	2,150	2,090	1,090	1,630	769	832	943	652	4,460	2,210	2,200
11	2,160	2,150	2,090	1,470	1,400	681	591	561	618	3,420	2,220	2,180
12	2,160	2,140	2,120	1,890	1,130	601	1,100	545	551	5,570	2,220	2,180
13	2,150	2,160	2,030	1,700	977	371	977	572	168	3,650	2,160	2,180
14	2,160	2,160	1,970	1,670	672	159	1,190	599	138	3,290	2,210	2,180
15	2,160	2,130	2,110	1,420	1,300	471	1,020	580	428	2,700	2,190	2,190
16	2,150	2,140	2,120	1,380	1,060	532	973	543	615	2,360	2,210	2,190
17	2,150	2,140	2,130	1,320	820	484	761	697	711	3,680	2,190	2,130
18	2,150	2,140	2,050	1,500	1,000	516	341	452	668	4,290	2,190	2,090
19	2,140	2,140	1,570	1,440	1,080	638	998	436	180	4,770	2,210	2,180
20	2,150	2,080	1,490	1,210	1,190	368	1,070	254	190	2,680	2,170	2,170
21	2,060	2,140	1,720	1,350	880	150	1,100	600	385	2,240	2,200	2,170
22	2,160	2,130	1,690	1,240	1,280	679	1,200	220	760	2,220	2,180	2,110
23	2,140	2,120	1,550	1,200	1,350	625	967	134	939	2,200	2,120	2,180
24	2,140	2,130	1,710	592	1,060	817	725	635	409	2,240	2,190	2,180
25	1,980	2,130	1,570	1,270	951	765	249	502	1,070	2,240	2,190	2,160
26	2,150	2,020	1,450	1,220	919	817	1,000	659	871	2,060	2,190	2,160
27	2,140	2,120	1,260	1,270	802	949	1,120	733	2,060	2,090	2,190	2,160
28	2,150	2,040	1,560	1,230	592	498	1,200	679	3,830	2,080	2,140	2,160
29	2,150	2,030	1,750	1,270	-	587	813	537	6,510	2,240	2,190	2,160
30	2,150	2,110	1,440	1,500	-	1,110	1,010	434	10,000	2,160	2,190	2,150
31	2,150	-	1,040	1,360	-	1,250	-	479	-	2,230	2,190	-

Month	Observed				Gain or loss in storage in Lake Chelan (acre-feet)	Adjusted for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October	2,190	1,980	2,150	132,200	-112,010	20,190	328	0.345	0.40
November	2,160	1,800	2,106	125,300	-119,380	5,920	99.5	.105	.12
December	2,130	1,040	1,810	111,300	-91,020	20,280	330	.347	.40
Calendar year 1936	12,800	14	1,707	1,239,000	-67,980	1,171,000	1,614	1.70	23.11
January	1,890	592	1,338	82,300	-78,010	4,290	69.8	.073	.08
February	1,630	592	1,178	65,440	-47,940	17,500	315	.332	.35
March	1,250	150	676	41,550	-10,690	30,860	502	.528	.61
April	1,200	1	899	53,490	+10,690	64,180	1,079	1.14	1.27
May	1,060	134	544	33,420	+210,890	244,300	3,973	4.18	4.82
June	10,000	138	1,268	75,440	+418,240	493,700	8,297	8.73	9.74
July	7,280	2,020	3,387	208,200	+5,250	213,400	3,471	3.65	4.21
August	2,230	2,120	2,197	135,100	-76,750	58,350	949	.999	1.15
September	2,200	2,090	2,166	128,900	-87,430	41,470	697	.734	.82
Water year 1936-37	10,000	1	1,647	1,193,000	+21,840	1,214,000	1,677	1.77	23.97

Railroad Creek at Lucerne, Wash.

Location.- Water-stage recorder, lat. 48°11'40", long. 120°35'50", in sec. 9, T. 31 N., R. 18 E., half a mile above mouth and half a mile southwest of Lucerne.

Drainage area.- 64 square miles.

Records available.- December 1910 to June 1913, January 1927 to September 1937.

Average discharge.- 10 years (1927-37), 195 second-feet.

Extremes.- Maximum discharge during year, 1,380 second-feet June 17; minimum, 14 second-feet Feb. 24 (gage height, 2.51 feet). Discharge may have been less some time during Jan. 1-15 or Feb. 8-21, when stage-discharge relation was affected by ice.
1910-13, 1927-37: Maximum discharge, 1,910 second-feet June 8, 1927 (gage height, 5.3 feet); minimum occurred during Jan. 15-25, 1930, when stage-discharge relation was affected by ice.

Remarks.- Records good except those for periods of ice effect, Jan. 1-15 and Feb. 8-21, which were computed on basis of two discharge measurements, gage heights, and weather records and are poor. No diversion or regulation. Water-stage recorder inspected by employees of Chelan Copper Mining Co. and Washington Water Power Co. Results of many discharge measurements furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	30	24	25	19	21	38	105	599	924	173	79
2	61	27	23	25	19	20	38	148	962	730	155	81
3	56	28	23	25	18	21	37	230	1,070	618	151	81
4	63	28	21	25	18	20	38	350	802	654	164	81
5	63	28	22	25	19	21	37	290	680	645	178	144
6	59	28	25	20	19	22	40	255	690	512	173	114
7	56	27	31	20	18	22	40	250	813	480	168	84
8	61	25	2e	20	20	21	40	240	879	520	155	72
9	59	27	26	20	20	21	43	230	890	544	144	70
10	59	27	30	20	20	22	51	230	1,060	520	144	68
11	59	28	26	20	20	23	51	204	813	528	205	63
12	56	30	24	20	20	24	51	200	626	544	215	63
13	56	28	26	20	20	24	68	225	626	528	200	63
14	79	28	2e	25	20	24	72	310	730	472	173	61
15	90	28	26	25	20	24	6e	315	813	433	140	68
16	71	27	27	23	20	24	63	310	962	419	121	81
17	63	30	25	19	20	24	61	290	1,180	440	121	74
18	56	28	30	19	20	24	61	300	790	456	136	70
19	54	27	36	18	20	24	65	332	672	448	144	79
20	50	28	30	18	20	24	70	326	730	384	132	98
21	47	28	30	18	20	24	72	344	1,160	350	128	86
22	42	28	40	18	21	24	65	398	1,180	324	125	79
23	42	25	35	18	22	24	63	392	912	305	121	70
24	40	24	30	18	22	24	65	410	627	300	105	61
25	38	24	27	18	24	24	70	542	552	344	95	57
26	38	23	26	18	22	26	89	653	568	338	89	57
27	36	23	25	18	22	26	97	617	710	305	86	72
28	36	23	24	19	21	30	97	558	936	294	81	72
29	35	23	27	19	-	33	91	454	1,190	278	77	68
30	35	23	26	19	-	35	91	410	1,070	250	74	63
31	35	-	25	18	-	38	-	434	-	205	79	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	1,658	90	35	53.5	0.836	0.96	3,290
November	801	30	23	26.7	.417	.47	1,590
December	846	40	21	27.3	.427	.49	1,680
Calendar year 1936	60,848	1,320	12	166	2.59	35.38	120,700
January	633	25	18	20.4	.319	.37	1,260
February	564	24	18	20.1	.314	.33	1,120
March	758	38	20	24.5	.383	.44	1,500
April	1,832	97	37	61.1	.955	1.07	3,630
May	10,362	653	105	334	5.22	6.02	20,530
June	25,292	1,190	552	843	13.2	14.73	50,170
July	14,092	924	205	455	7.11	8.20	27,960
August	4,252	215	74	137	2.14	2.47	8,430
September	2,279	144	57	76.0	1.19	1.33	4,520
Water year 1936-37	63,369	1,190	18	174	2.72	36.88	125,700

Wenatchee Lake near Plain, Wash.

Location.- Water-stage recorder, lat. 47°49'50", long. 120°46'30", in sec. 19, T. 27 N., R. 17 E., on north shore of lake, 7⅛ miles northwest of Plain. Zero of gage is at mean sea level (subject to correction for general adjustment of 1929).

Drainage area.- 277 square miles.

Records available.- January 1932 to September 1937.

Extremes.- Maximum water-surface elevation recorded during year, 1,875.35 feet June 3; minimum, 1,869.27 feet Dec. 1.
1932-37: Maximum water-surface elevation recorded, 1,876.57 feet June 16, 1933; minimum, that of Dec. 1, 1936.

Remarks.- Records excellent. Water-surface elevations may have been very slightly affected by ice Jan. 21-27. No diversion or regulation. Gage-height record collected in cooperation with Wenatchee Reclamation District.

Gage height, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69.61	69.37	69.28	69.71	69.52	69.59	70.13	70.85	73.33	74.10	70.41	69.79
2	69.58	69.35	69.29	69.68	69.52	69.59	70.17	71.06	74.29	73.82	70.32	69.80
3	69.54	69.33	69.29	69.71	69.52	69.59	70.19	71.74	75.17	73.43	70.28	69.81
4	69.54	69.32	69.30	69.70	69.52	69.60	70.21	72.79	75.16	73.18	70.27	69.81
5	69.55	69.33	69.33	69.68	69.52	69.61	70.25	73.08	74.67	73.04	70.26	69.82
6	69.54	69.33	69.42	69.68	69.52	69.63	70.27	72.77	74.37	72.69	70.24	69.93
7	69.53	69.33	69.64	69.68	69.52	69.66	70.25	72.52	74.48	72.40	70.22	70.02
8	69.52	69.31	69.82	69.68	69.53	69.68	70.25	72.31	74.88	72.33	70.19	70.00
9	69.53	69.31	69.79	69.68	69.53	69.72	70.27	72.15	74.84	72.38	70.17	69.96
10	69.54	69.29	69.73	69.67	69.52	69.73	70.30	72.12	74.82	72.32	70.14	69.92
11	69.54	69.29	69.67	69.67	69.53	69.74	70.33	72.04	74.58	72.28	70.16	69.88
12	69.52	69.29	69.67	69.67	69.52	69.76	70.36	71.90	74.08	72.25	70.25	69.84
13	69.53	69.30	69.75	69.66	69.52	69.78	70.49	71.90	73.88	72.17	70.25	69.83
14	69.63	69.30	69.78	69.66	69.52	69.82	70.69	72.28	73.98	71.98	70.21	69.83
15	69.77	69.30	69.76	-	69.52	69.86	70.79	72.64	74.38	71.75	70.13	69.83
16	69.77	69.30	69.71	69.60	69.52	69.88	70.79	72.65	74.36	71.63	70.05	69.84
17	69.73	69.33	69.78	69.60	69.51	69.90	70.75	72.52	74.74	71.59	70.01	69.83
18	69.69	69.37	69.90	69.59	69.51	69.90	70.72	72.49	74.37	71.57	69.99	69.82
19	69.65	69.38	70.17	69.56	69.51	69.91	70.68	72.65	74.32	71.52	70.00	69.80
20	69.60	69.39	70.21	69.54	69.51	69.92	70.69	72.61	74.35	71.38	69.99	69.78
21	69.57	69.39	70.20	69.54	69.52	69.93	70.76	72.55	74.66	71.20	69.96	69.74
22	69.53	69.38	70.28	69.53	69.59	69.94	70.75	72.74	74.81	71.10	69.96	69.70
23	69.50	69.37	70.25	69.53	69.61	69.93	70.69	72.79	74.58	71.01	69.96	69.64
24	69.47	69.36	70.18	69.53	69.60	69.91	70.65	72.80	74.06	70.92	69.94	69.60
25	69.45	69.36	70.10	69.53	69.60	69.89	70.62	73.12	73.50	70.92	69.91	69.58
26	69.44	69.34	70.03	69.53	69.60	69.88	70.67	73.52	73.19	70.90	69.88	69.57
27	69.43	69.33	69.99	69.53	69.58	69.89	70.76	73.72	73.26	70.84	69.85	69.58
28	69.41	69.31	69.92	69.53	69.59	69.90	70.81	73.68	73.59	70.76	69.81	69.60
29	69.41	69.30	69.88	69.53	-	69.94	70.81	73.40	74.05	70.70	69.79	69.60
30	69.40	69.29	69.83	69.53	-	69.99	70.81	73.02	74.24	70.60	69.76	69.57
31	69.38	-	69.79	69.53	-	70.06	-	72.93	-	70.50	69.76	-

Note.- Add 1,800 feet to obtain mean sea-level elevation.

Wenatchee River below Wenatchee Lake, Wash.

Location.- Water-stage recorder, lat. 47°49'50", long. 120°46'30", in sec. 19, T. 27 N., R. 17 E., on north shore, 2¾ miles above outlet of Wenatchee Lake and 7½ miles northwest of Plain. Gage heights reduced to mean sea level datum (subject to correction for general adjustment of 1929). Discharge measurements made at highway bridge half a mile below lake outlet.

Drainage area.- 277 square miles.

Records available.- January 1932 to September 1937.

Extremes.- Maximum discharge during year, 6,290 second-feet June 3 (elevation of lake surface, 1,875.35 feet); minimum, 134 second-feet Dec. 1 (elevation of lake surface, 1,869.27 feet).

1932-37: Maximum discharge recorded, 8,310 second-feet June 16, 1933 (elevation of lake surface, 1,876.57 feet); minimum, that of Dec. 1, 1936.

Remarks.- Records excellent except those for period of ice effect, Jan. 21-27, which were computed on basis of one discharge measurement, gage heights, and weather records and are fair. Discharge for Jan. 15 interpolated. No diversions above station. Flow subject to natural regulation in Wenatchee Lake. Gage-height record collected in cooperation with Wenatchee Reclamation District.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

1,869.20	120	1,871.50	1,630	1,874.00	4,500
1,869.50	188	1,872.00	2,160	1,874.50	5,150
1,870.00	391	1,872.50	2,710	1,875.00	5,800
1,870.50	735	1,873.00	3,300	1,875.50	6,500
1,871.00	1,160	1,873.50	3,900		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	222	155	136	257	194	215	468	1,020	3,700	4,630	664	289
2	212	151	138	246	194	215	493	1,210	4,880	4,280	596	293
3	200	147	138	257	194	215	506	1,880	6,040	3,820	567	298
4	200	144	140	253	194	218	519	3,050	6,020	3,520	560	298
5	203	147	147	246	194	222	546	3,400	5,370	3,350	553	302
6	200	147	167	246	194	228	560	3,020	4,980	2,930	540	355
7	197	147	235	246	194	239	546	2,730	5,120	2,600	526	403
8	194	142	302	246	197	246	546	2,500	5,640	2,520	506	391
9	197	142	289	246	197	261	560	2,320	5,590	2,580	493	370
10	200	138	265	242	194	265	581	2,290	5,570	2,510	474	349
11	200	138	242	242	197	269	604	2,200	5,250	2,470	487	330
12	194	138	242	242	194	277	626	2,050	4,600	2,440	546	311
13	197	140	273	239	194	285	727	2,050	4,360	2,350	546	307
14	228	140	285	239	194	302	887	2,470	4,480	2,140	519	307
15	281	140	277	228	194	321	972	2,870	4,990	1,880	468	307
16	281	140	257	218	194	330	972	2,880	4,970	1,760	420	311
17	265	147	285	218	191	339	938	2,730	5,460	1,720	397	307
18	250	155	341	215	191	339	912	2,700	4,980	1,700	386	302
19	236	158	493	206	191	344	879	2,880	4,920	1,650	391	293
20	218	160	519	200	191	349	887	2,830	4,960	1,510	386	285
21	209	160	512	190	194	355	946	2,760	5,360	1,340	370	269
22	197	158	567	191	215	360	938	2,990	5,550	1,250	370	253
23	188	155	546	192	222	355	887	3,050	5,250	1,170	370	232
24	180	153	499	193	218	344	855	3,060	4,580	1,090	360	218
25	175	153	449	194	218	334	831	3,440	3,900	1,090	344	212
26	172	149	408	195	218	330	871	3,920	3,530	1,070	330	209
27	170	147	386	196	212	334	946	4,160	3,610	1,020	316	212
28	165	142	349	197	215	339	989	4,120	4,010	946	298	218
29	165	140	330	197	-	360	989	3,780	4,560	895	289	218
30	162	138	307	197	-	386	989	3,320	4,810	815	277	209
31	158	-	289	197	-	426	-	3,220	-	735	277	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	6,316	281	158	204	0.736	0.85	12,530
November	4,411	160	138	147	.531	.59	8,750
December	9,813	567	136	317	1.14	1.31	19,460
Calendar year 1936	408,247	6,360	136	1,115	4.03	54.81	809,800
January	6,871	257	190	222	.801	.92	13,630
February	5,589	222	191	200	.722	.75	11,090
March	9,402	426	215	303	1.09	1.26	18,650
April	22,970	989	468	766	2.77	3.09	45,560
May	86,900	4,160	1,020	2,803	10.1	11.64	172,400
June	147,040	6,040	3,530	4,901	17.7	19.75	291,600
July	63,781	4,630	735	2,057	7.43	8.57	126,500
August	13,626	664	277	440	1.59	1.83	27,030
September	8,658	403	209	289	1.04	1.16	17,170
Water year 1936-37	385,377	6,040	136	1,056	3.	51.72	764,400

Wenatchee River at Plain, Wash.

Location.- Water-stage recorder, lat. 47°45'50", long. 120°39'30", in lot 8, sec. 12, T. 26 N., R. 17 E., at Plain, a quarter of a mile below Beaver Creek.

Drainage area.- 591 square miles.

Records available.- November 1910 to September 1929 and August 1931 to September 1937 in reports of Geological Survey; August 1904 to September 1933 (monthly discharge) in State Water-Supply Bulletin 5.

Average discharge.- 33 years, 2,224 second-feet.

Extremes.- Maximum discharge during year, 10,600 second-feet June 3 (gage height, 8.58 feet); minimum, 191 second-feet Dec. 1 (gage height, 1.34 feet).
1910-29, 1931-37: Maximum discharge observed, 20,800 second-feet Dec. 13, 1921 (gage height, 11.8 feet, former site and datum); minimum, that of Dec. 1, 1936.

Remarks.- Records excellent except those for period of ice effect, Jan. 4 to Feb. 24 (computed on basis of one discharge measurement, gage-heights, weather records and records for station below Wenatchee Lake), and those for period of missing gage heights, Oct. 1-28 (computed on basis of records for station below Wenatchee Lake), which are poor. Wenatchee Park Land & Irrigation Co. diverts a maximum of about 12 second-feet from Chiwawa River during irrigation seasons. Natural regulation in Wenatchee Lake. Gage-height record collected in cooperation with Wenatchee Reclamation District.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

1.3	178	4.0	2,250
1.5	245	5.0	3,550
2.0	495	6.0	5,170
2.5	850	7.0	7,000
3.0	1,260	8.0	9,120
3.5	1,720	9.0	11,770

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	370	253	207	459	310	396	986	1,830	6,350	7,370	1,220	562
2	360	245	214	418	310	402	1,000	2,230	8,210	6,680	1,110	555
3	340	238	214	418	310	413	1,000	3,510	10,200	5,880	1,070	562
4	340	238	217	400	310	418	1,030	5,170	9,890	5,650	1,060	562
5	340	238	228	390	310	424	1,050	5,240	8,670	5,340	1,040	688
6	340	238	282	390	310	447	1,060	4,660	8,130	4,590	1,030	762
7	330	234	539	390	310	477	1,040	4,300	8,390	4,170	994	710
8	320	231	590	380	310	483	1,050	3,960	9,260	4,150	954	667
9	330	224	513	380	310	483	1,080	3,740	9,050	4,170	922	625
10	330	220	447	380	310	483	1,140	3,730	9,100	4,040	906	590
11	330	224	418	380	310	495	1,160	3,540	8,500	3,980	946	562
12	320	224	402	370	310	519	1,200	3,330	7,490	3,950	994	555
13	320	224	471	370	310	590	1,440	3,420	7,190	3,790	978	549
14	400	224	543	360	310	618	1,650	4,190	7,450	3,420	922	537
15	500	224	489	360	310	625	1,710	4,680	8,250	3,040	834	543
16	470	224	453	340	310	639	1,670	4,660	8,280	2,830	762	549
17	440	242	471	340	310	660	1,600	4,380	9,220	2,760	732	525
18	420	269	580	340	310	667	1,560	4,430	8,060	2,760	725	507
19	390	269	962	330	300	660	1,530	4,780	7,980	2,670	718	507
20	360	265	970	320	300	667	1,530	4,630	8,060	2,410	710	495
21	350	265	914	310	320	660	1,650	4,590	8,860	2,180	695	477
22	340	257	970	310	350	674	1,580	5,050	9,240	2,050	688	447
23	330	249	1,030	310	420	660	1,520	4,980	8,500	1,900	695	413
24	320	242	914	310	400	653	1,480	5,080	7,270	1,820	674	391
25	310	234	826	310	418	646	1,500	5,830	6,320	1,810	646	375
26	300	231	755	310	408	660	1,640	6,640	5,900	1,770	618	370
27	290	224	710	310	402	710	1,750	6,960	6,190	1,690	590	375
28	280	214	660	310	396	740	1,770	6,870	6,890	1,600	549	386
29	269	207	611	310	-	762	1,740	6,190	7,710	1,540	525	413
30	269	204	562	310	-	794	1,720	5,450	7,650	1,440	513	375
31	261	-	531	310	-	906	-	5,410	-	1,300	555	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	10,669	500	261	344	0.582	0.67	21,160
November	7,075	269	204	236	.399	.45	14,030
December	17,693	1,030	207	571	.966	1.11	35,090
Calendar year 1936	675,677	10,600	204	1,846	3.12	42.54	1,340,000
January	10,925	459	310	352	.596	.69	21,670
February	9,294	420	300	332	.562	.59	18,430
March	18,431	906	396	595	1.01	1.16	36,560
April	41,836	1,770	986	1,395	2.36	2.63	82,960
May	143,460	6,960	1,830	4,628	7.83	9.03	284,500
June	242,260	10,200	5,900	8,075	13.7	15.29	480,500
July	102,750	7,370	1,300	3,315	5.61	6.47	203,800
August	25,375	1,220	513	819	1.39	1.60	50,330
September	15,634	762	370	521	.882	.98	31,010
Water year 1936-37	645,402	10,200	204	1,768	2.99	40.67	1,280,000

Wenatchee River at Peshastin, Wash.

Location.- Water-stage recorder, lat. 47°34'50", long. 120°37'00", in SE¼SW¼ sec. 8, T. 24 N., R. 18 E., 1 mile northwest of Peshastin.

Drainage area.- 1,000 square miles.

Records available.- February 1929 to September 1937.

Extremes.- Maximum discharge during year, 14,800 second-feet June 3 (gage height, 10.03 feet); minimum, 238 second-feet Nov. 30 (gage height, 1.42 feet).
1929-37: Maximum discharge, 20,400 second-feet June 16, 1933 (gage height, 11.82 feet); minimum, that of Nov. 30, 1936.

Remarks.- Records excellent except those for period of ice effect, Jan. 4 to Mar. 3 (computed on basis of one discharge measurement, gage heights, weather records, and records for stations below Wenatchee Lake and at Plain), and those for period of missing gage heights, Aug. 3-31 (computed on basis of records for station at Plain), which are poor. Several diversions for irrigation above station. Slight regulation at mill pond at Leavenworth, and natural regulation in Wenatchee Lake.

Rating tables, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to June 1				June 2 to Sept. 30	
1.4	230	4.4	2,930	5.0	3,780
1.7	365	5.2	4,080	6.0	5,420
2.0	525	6.0	5,430	8.0	9,500
2.5	840	7.0	7,550	9.0	12,000
3.0	1,250	8.0	10,040	10.0	14,780
3.7	2,020	9.0	12,800		

Note.- Same as preceding table below 5.9 feet.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	492	345	274	640	440	580	1,320	2,600	9,520	10,500	1,560	738
2	486	330	302	574	440	590	1,350	3,140	12,300	9,270	1,400	698
3	481	335	315	542	440	600	1,350	4,900	14,500	7,970	1,400	679
4	459	345	310	540	440	610	1,350	7,550	13,600	7,760	1,400	672
5	476	350	320	540	440	634	1,400	7,320	12,300	7,350	1,300	750
6	476	355	380	540	440	666	1,400	6,450	11,500	6,370	1,300	930
7	464	350	620	530	440	686	1,400	6,030	12,000	5,800	1,300	848
8	459	330	791	530	440	692	1,400	5,430	13,400	5,610	1,200	798
9	454	315	692	520	440	698	1,450	5,230	12,800	5,610	1,200	744
10	448	306	604	520	440	686	1,500	5,040	12,800	5,420	1,200	718
11	448	335	556	520	440	712	1,560	4,860	11,700	5,230	1,200	679
12	459	335	547	520	440	767	1,560	4,530	10,500	5,230	1,300	653
13	448	330	588	520	440	826	1,960	4,690	9,970	5,040	1,300	646
14	498	330	718	510	440	885	2,340	5,830	10,700	4,530	1,200	634
15	653	325	666	510	440	892	2,530	6,660	12,000	4,080	1,100	628
16	679	330	622	510	440	922	2,400	6,450	12,000	3,780	1,000	640
17	616	350	610	490	440	930	2,270	6,030	12,800	3,700	1,000	622
18	580	400	679	480	430	952	2,140	6,240	11,200	3,700	1,000	604
19	552	405	1,110	470	430	930	2,140	6,660	11,200	3,560	950	598
20	525	395	1,200	450	430	930	2,080	6,660	11,500	3,210	900	610
21	498	390	1,120	440	450	922	2,270	6,660	13,100	2,930	900	592
22	459	380	1,160	440	540	922	2,140	7,320	13,400	2,720	900	564
23	448	365	1,350	440	620	915	2,080	7,100	12,000	2,530	900	530
24	448	350	1,150	440	590	915	2,020	7,320	9,970	2,400	900	520
25	420	335	1,040	440	600	900	2,080	8,500	8,830	2,400	900	503
26	405	320	960	440	600	915	2,270	10,000	8,180	2,340	850	481
27	400	306	892	440	590	975	2,530	10,600	8,610	2,200	800	470
28	395	284	826	440	580	1,020	2,530	10,300	9,500	2,080	750	498
29	375	274	764	440	-	1,050	2,460	9,000	10,700	2,020	700	530
30	360	270	724	440	-	1,100	2,400	7,780	10,700	1,840	700	530
31	355	-	679	440	-	1,200	-	7,780	-	1,720	700	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	14,716	679	355	475	29,190
November	10,170	405	270	339	20,170
December	22,569	1,350	274	728	44,760
Calendar year 1936	974,816	16,000	270	2,663	1,933,000
January	15,296	640	440	493	30,340
February	13,340	620	430	476	26,460
March	26,012	1,200	580	839	51,590
April	57,680	2,530	1,320	1,923	114,400
May	204,660	10,600	2,600	6,602	405,900
June	343,280	14,500	8,180	11,440	680,900
July	138,900	10,500	1,720	4,481	275,500
August	33,210	1,560	700	1,071	65,870
September	19,107	930	470	637	37,900
Water year 1936-37	898,940	14,500	270	2,463	1,783,000

Chiwawa River near Plain, Wash.

Location.- Water-stage recorder, lat. 47°50'30", long. 120°39'40", in SE¼ sec. 13, T. 27 N., R. 17 E., half a mile above Goose Creek, 6 miles north of Plain and 7 miles above mouth.
Drainage area.- 169 square miles.
Records available.- August 1936 to September 1937. May 1911 to October 1914, at site 4 miles downstream, published as Chiwawa Creek near Leavenworth; records equivalent.
Extremes.- Maximum discharge during period, 2,880 second-feet June 3 (gage height, 7.44 feet); minimum, 67 second-feet Nov. 28 (gage height, 3.74 feet), or may have been less sometime during periods of ice effect, Dec. 10-14, Dec. 30 to Mar. 8.
1911-14, 1936-37: Maximum discharge recorded, that of June 3, 1937; minimum, that of Nov. 28, 1936.
Remarks.- Records good for August to September 1936 and excellent for October 1936 to September 1937 except those for period of missing gage heights, Aug. 1-7, 1936, May 7-21, 1937 (computed on basis of records for Wenatchee River below Wenatchee Lake and at Plain), and those for periods of ice effect, Dec. 10-14, Dec. 30 to Mar. 8 (computed on basis of one discharge measurement, gage heights, weather records, and records for Wenatchee River below Wenatchee Lake), which are poor. Staff gage read twice daily during Aug. 8 to Oct. 6, 1936, when water-stage recorder was installed. No diversion or regulation.

Discharge, in second-feet, Aug. 1 to Sept. 30, 1936

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	240	251	6	240	*135	11	194	103	16	*176	96	21	152	109	26	132	96
2	230	187	7	220	132	12	191	100	17	166	96	22	152	106	27	125	*93
3	220	159	8	201	125	13	183	96	18	166	90	23	*150	106	28	125	90
4	220	145	9	*198	113	14	187	100	19	159	86	24	149	100	29	122	90
5	210	138	10	194	106	15	187	96	20	159	116	25	138	100	30	*120	88
															31	119	-

*Interpolated.

Note.- Mean discharge Aug. 1-31, 175 second-feet (run-off 10,760 acre-feet); Sept. 1-30, 115 second-feet (run-off 6,840 acre-feet).

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	78	125	85	70	90	149	359	1,730	1,830	313	157
2	80	80	98	85	70	90	145	469	2,260	1,600	285	145
3	76	74	69	85	70	85	142	724	2,730	1,380	271	139
4	74	74	69	85	70	85	149	1,020	2,380	1,390	271	136
5	74	74	71	85	70	80	149	920	2,050	1,330	266	198
6	88	76	88	85	70	80	145	787	1,990	1,110	262	187
7	86	76	113	85	70	80	145	760	2,130	1,040	253	157
8	80	74	100	85	70	80	152	750	2,390	1,080	241	148
9	83	76	90	85	70	83	162	740	2,230	1,080	232	139
10	83	83	80	85	70	83	176	740	2,260	1,040	228	133
11	83	74	75	85	70	83	183	720	2,050	1,020	241	130
12	86	74	70	85	70	88	191	700	1,780	1,020	241	130
13	88	73	80	85	70	90	235	740	1,770	992	228	130
14	119	73	90	85	70	93	263	1,000	1,920	850	220	127
15	138	73	86	85	70	93	255	1,080	2,120	759	209	124
16	119	73	76	80	70	96	228	1,060	2,160	724	194	124
17	113	78	88	80	70	98	216	1,000	2,510	717	187	121
18	106	78	100	75	70	98	216	1,040	1,960	717	187	124
19	100	78	135	75	70	96	220	1,100	1,820	678	187	121
20	96	78	132	75	70	93	232	1,050	1,990	603	180	119
21	93	78	119	70	80	90	235	1,080	2,300	549	177	116
22	90	76	149	70	90	90	224	1,220	2,450	537	177	111
23	90	74	138	70	100	88	216	1,190	2,120	498	177	108
24	90	74	113	70	100	88	220	1,260	1,690	476	167	103
25	88	74	103	70	95	88	232	1,510	1,500	486	164	98
26	86	76	98	70	90	96	279	1,800	1,450	470	157	98
27	83	71	93	70	90	103	313	1,830	1,600	437	151	103
28	83	73	88	70	90	113	317	1,730	1,850	415	145	101
29	83	106	86	70	-	119	317	1,520	2,120	405	139	106
30	80	116	85	70	-	125	322	1,340	1,930	368	142	98
31	80	-	85	70	-	142	-	1,410	-	333	157	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,804	138	74	90.5	0.536	0.62	5,560
November	2,335	116	71	77.8	.460	.51	4,630
December	2,992	149	69	96.5	.571	.66	5,930
Calendar year							
January	2,430	85	70	78.4	.464	.53	4,820
February	2,135	100	70	76.2	.451	.47	4,230
March	2,906	142	80	93.7	.554	.64	5,760
April	6,428	322	142	214	1.27	1.42	12,750
May	32,649	1,830	359	1,053	6.23	7.18	64,760
June	61,240	2,730	1,450	2,041	12.1	13.50	121,500
July	25,934	1,830	333	837	4.95	5.71	51,440
August	6,449	313	139	208	1.23	1.42	12,790
September	3,831	198	98	128	.757	.84	7,600
Water year 1936-37	152,133	2,730	69	417	2.47	33.50	301,800

Icicle Creek above Snow Creek, near Leavenworth, Wash.

Location.- Water-stage recorder, lat. 47°32'25", long. 120°42'55", in SE¼ sec. 28, T. 24 N., R. 17 E., three-eighths of a mile above Snow Creek and 4½ miles southwest of Leavenworth.
Drainage area.- 193 square miles.
Records available.- September 1936 to September 1937.
Extremes.- Maximum discharge during September 1936 to September 1937, 4,320 second-feet June 3 (gage height, 10.10 feet), from rating curve extended above 3,000 second-feet; minimum, probably less than 45 second-feet, occurred sometime during periods of ice effect.
Remarks.- Records fair except those for periods of ice effect, Nov. 29 to Dec. 2, Jan.2 to Mar. 10, which were computed on basis of two discharge measurements, gage heights, weather records, and records for stations on Wenatchee River at Plain and at Peshastin and are poor. No diversion or regulation.

Discharge, in second-feet, September 1936

Day	Discharge	Day	Discharge	Day	Discharge
Sept. 1	150	Sept. 11	108	Sept. 21	93
2		12	104	22	93
3		13	104	23	96
4		14	105	24	93
5		15	105	25	93
6	132	16	104	26	90
7	128	17	100	27	90
8	120	18	100	28	90
9	116	19	96	29	90
10	112	20	96	30	85
				31	-

Note.- Mean discharge for September, 0.570 second-feet (run-off, 0.64 inch, 6,530 acre-feet).

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85	71	50	89	65	75	219	510	2,360	2,180	299	179
2	84	62	60	80	65	75	212	760	3,410	1,760	282	168
3	83	68	71	75	70	75	212	1,360	3,740	1,470	265	156
4	84	68	69	75	70	80	212	1,790	2,900	1,470	257	156
5	89	70	69	80	70	85	212	1,310	2,630	1,360	257	185
6	85	71	82	75	70	90	212	1,160	2,630	1,140	249	185
7	83	68	173	75	70	95	205	1,110	2,900	1,070	249	173
8	82	62	132	70	70	100	212	1,010	3,200	1,070	241	162
9	80	64	108	70	70	110	226	990	2,720	1,070	234	156
10	75	70	93	70	70	120	241	1,010	2,810	1,010	234	151
11	75	74	93	70	70	132	241	890	2,270	970	241	146
12	80	71	87	70	70	141	257	870	2,140	950	241	141
13	85	70	112	75	70	141	336	1,050	2,220	910	226	141
14	96	70	128	75	70	141	387	1,380	2,540	830	219	136
15	132	70	108	75	70	141	424	1,340	2,720	760	212	136
16	108	70	104	75	70	151	376	1,280	2,720	708	198	136
17	96	82	96	75	70	151	355	1,180	2,540	708	192	132
18	92	90	120	70	70	156	345	1,310	2,180	708	185	132
19	88	80	249	70	70	156	345	1,380	2,360	655	185	131
20	83	77	192	70	70	151	355	1,310	2,720	570	179	133
21	80	75	156	70	70	151	365	1,380	3,300	525	173	128
22	79	73	185	70	70	151	345	1,620	3,000	495	173	128
23	78	69	219	70	70	151	326	1,440	2,540	465	192	124
24	77	65	168	70	75	146	317	1,590	1,940	437	198	124
25	76	64	146	70	75	151	345	2,020	1,720	451	179	119
26	75	59	132	70	75	156	437	2,270	1,760	411	168	118
27	74	50	128	70	75	162	465	2,270	1,980	387	162	116
28	73	47	120	70	75	173	437	2,140	2,360	399	156	114
29	72	45	104	70	-	185	411	1,680	2,540	376	151	117
30	72	45	104	65	-	192	424	1,440	2,270	345	151	116
31	72	-	96	65	-	212	-	1,620	-	326	179	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,593	132	72	83.6	0.433	0.50	5,140
November	2,020	90	45	67.3	.349	.39	4,010
December	3,754	249	50	121	.627	.72	7,450
Calendar year							
January	2,244	89	65	72.4	.375	.43	4,450
February	1,975	75	65	70.5	.365	.38	3,920
March	4,196	212	75	135	.699	.81	8,320
April	9,456	465	205	315	1.63	1.82	18,760
May	42,470	2,270	510	1,370	7.10	8.19	84,240
June	77,120	3,740	1,720	2,571	13.3	14.84	153,000
July	25,986	2,180	326	838	4.34	5.00	51,540
August	6,527	299	151	211	1.09	1.26	12,950
September	4,239	185	114	141	.731	.82	8,410
Water year 1936-37	182,580	3,740	45	500	2.59	35.16	362,200

Yakima River near Martin, Wash.

Location.- Water-stage recorder, lat. 47°19'10", long. 121°20'10", below dam at outlet of Keechelus Lake, 3½ miles northwest of Martin.

Drainage area.- 55 square miles.

Records available.- October 1903 to September 1937.

Average discharge.- 33 years (1904-37), 331 second-feet.

Extremes.- Maximum discharge during year, 1,320 second-feet June 20, 21 (computed from combined flow past gage and lake spillway); minimum, about 1 second-foot Oct. 1, 2. 1903-37: Maximum discharge, 7,370 second-feet Mar. 26, 1915, when temporary crib dam was washed out; practically no flow when gates in Keechelus Lake reservoir dam are closed.

Remarks.- Records excellent except those for extremely low flow, which are poor. Flow over spillway of Keechelus Lake reservoir June 9 to July 7. Records include water diverted over reservoir spillway. Flow partly controlled by storage in Keechelus Lake reservoir (capacity at spillway crest, 152,000 acre-feet). Part of table of monthly discharges corrected for storage. Records furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1	62	28	10	10	10	12	15	272	761	978	441
2	1	106	12	10	10	10	12	15	117	665	918	441
3	2	150	12	10	10	10	12	15	5	536	859	441
4	2	150	12	10	10	10	12	15	5	487	859	441
5	2	150	12	10	10	12	12	16	5	430	859	441
6	2	150	12	10	10	11	12	16	5	485	859	441
7	2	150	12	10	10	11	12	16	5	701	859	380
8	2	150	12	10	10	11	12	16	5	774	859	280
9	2	150	12	10	10	11	12	16	151	774	830	242
10	2	144	12	10	10	11	12	153	583	774	746	242
11	2	139	12	10	10	11	12	370	716	802	718	242
12	2	132	12	10	10	11	12	452	716	859	718	242
13	2	128	12	10	10	11	13	430	716	888	718	242
14	2	128	12	10	10	11	13	250	730	888	718	242
15	2	128	11	10	10	12	14	94	802	888	718	242
16	2	128	10	10	10	12	14	20	952	888	718	242
17	2	121	10	10	10	12	14	123	1,060	918	691	242
18	2	117	10	10	10	12	14	297	1,100	948	664	242
19	2	117	10	10	10	12	14	360	1,300	978	610	242
20	2	117	10	10	10	12	14	360	1,320	978	584	242
21	2	117	10	10	10	12	14	370	1,300	978	584	242
22	2	117	10	10	10	12	14	380	1,170	978	584	242
23	2	117	10	10	10	12	14	380	1,070	978	584	242
24	2	117	10	10	10	12	14	380	922	978	571	242
25	2	73	10	10	10	12	15	294	747	978	558	242
26	2	45	10	10	10	12	15	242	678	978	484	242
27	2	45	10	10	10	12	15	242	651	978	441	242
28	2	50	10	10	10	12	15	242	638	978	441	242
29	2	60	10	10	-	12	15	228	678	978	441	242
30	2	60	10	10	-	12	15	235	651	978	441	235
31	4	-	10	10	-	12	-	264	-	978	441	-

Month	Total second-foot days	Observed Discharge in second-feet Maximum	Minimum	Mean	Run-off in acre-feet	Gain or loss in storage in Lake Keechelus (acre-feet)	Adjusted for storage Run-off in acre-feet	Discharge in second-feet Mean	Per square mile	Run-off in inches
October	62	4	1	2.0	123	+2,990	3,110	50.6	0.920	1.06
November	3,418	150	45	114	6,780	-3,850	2,930	49.2	.895	1.00
December	355	28	10	11.5	704	+21,500	22,200	361	6.56	7.56
Calendar year 1936	112,795	1,590	1	308	223,700	+7,180	230,900	318	5.78	78.66
January	310	10	10	10.0	615	+5,340	5,960	96.9	1.76	2.06
February	280	10	10	10.0	555	+6,540	7,100	128	2.33	2.43
March	355	12	10	11.5	704	+11,250	11,950	194	3.53	4.07
April	400	15	12	13.3	793	+21,590	22,380	376	6.84	7.63
May	6,306	452	15	203	12,510	+32,930	45,440	739	13.4	15.45
June	19,070	1,320	5	636	37,820	+18,590	56,410	948	17.2	19.19
July	26,180	978	430	845	51,930	-37,900	14,030	228	4.15	4.78
August	21,053	978	441	679	41,760	-38,320	3,440	55.9	1.02	1.18
September	8,623	441	235	287	17,100	-14,200	2,900	48.7	.885	.99
Water year 1936-37	86,412	1,320	1	237	171,400	+26,460	197,800	273	4.96	67.37

Yakima River at Cle Elum, Wash.

Location.- Water-stage recorder, lat. 47°11'20", long. 120°56'40", in sec. 27, T. 20 N., R. 15 E., at highway bridge at Cle Elum, just above Roslyn Creek.

Drainage area.- 500 square miles.

Records available.- August 1906 to September 1937.

Average discharge.- 31 years, 1,985 second-feet.

Extremes.- Maximum discharge during water year 1935-36, 8,380 second-feet (revised) May 15; minimum, 115 second-feet Nov. 9 (gage height, 1.85 feet).
Maximum discharge during water year 1936-37, 7,160 second-feet June 22 (gage height, 7.89 feet); minimum, 64 second-feet Dec. 4 (gage height, 2.63 feet).
1906-37: Maximum discharge, about 25,600 second-feet Nov. 14, 1906 (gage height, 12.5 feet, from floodmarks); minimum, 64 second-feet Nov. 16, 17, 1929, Dec. 4, 1936.

Remarks.- Records excellent except those for period of ice effect, Jan. 5 to Feb. 20, 1937, which were computed on basis of gage heights and weather records, and are poor. Shifting-control method used Oct. 1 to Nov. 4, 1935, and May 14 to June 11, 1936. Kittitas High-line Canal diverts water above gage for irrigation. Records of daily discharge do not include water diverted or stored in Keechelus Lake, Kachess Lake, and Cle Elum Lake Reservoirs (combined capacity at gate sills, 731,000 acre-feet). Records furnished by Bureau of Reclamation. Records for 1935-36 revised in this report.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	957	311	132	139	296	561	349	2,520	6,530	2,430	2,010	2,080
2	872	355	133	186	304	680	865	3,100	5,800	2,500	2,010	2,080
3	793	541	186	270	308	889	841	4,820	5,750	2,430	2,060	2,080
4	746	517	180	280	300	905	833	5,940	5,710	2,430	1,940	2,010
5	702	273	186	372	273	772	841	6,920	5,130	2,150	1,880	1,940
6	687	159	186	388	262	687	881	6,920	4,880	2,150	1,820	1,880
7	626	135	186	324	252	622	922	6,060	5,360	2,150	1,880	1,940
8	624	135	192	288	252	628	1,120	5,370	6,420	2,220	1,940	1,620
9	636	125	198	262	266	849	1,130	4,930	6,610	2,150	1,940	1,310
10	708	121	198	266	292	825	1,080	5,040	6,100	2,150	1,940	1,340
11	896	121	192	252	320	758	1,370	5,940	5,840	2,220	1,880	1,340
12	599	121	183	256	304	750	1,640	6,920	5,570	2,150	1,940	1,340
13	611	231	168	256	320	708	1,860	7,430	5,150	2,150	1,940	1,360
14	675	280	156	252	312	528	2,160	8,170	4,550	2,010	2,010	1,380
15	947	204	148	238	304	500	2,340	8,380	4,080	2,080	1,940	1,300
16	1,530	142	145	228	300	427	2,520	8,330	4,360	2,080	1,940	1,310
17	1,360	128	140	224	288	450	2,650	8,280	4,170	2,080	2,010	1,360
18	1,170	125	135	210	320	484	2,790	7,450	3,990	2,150	2,010	1,360
19	1,130	125	132	210	332	511	2,790	7,150	3,490	2,150	2,010	1,250
20	1,220	121	142	220	312	555	2,650	6,850	3,260	2,220	2,010	1,240
21	1,200	119	168	273	336	648	2,860	6,290	3,160	2,220	2,010	1,250
22	1,220	123	171	284	340	597	3,100	5,810	3,100	2,290	2,010	1,230
23	1,200	125	174	273	320	516	3,020	5,770	3,100	2,290	2,010	1,500
24	1,200	119	180	262	332	472	2,790	5,500	3,030	2,220	2,010	1,270
25	1,200	121	183	252	352	445	2,720	5,870	2,980	2,220	2,010	1,230
26	1,190	125	168	252	400	585	2,650	6,810	2,560	2,220	2,010	1,170
27	1,190	130	135	245	500	648	2,520	7,760	2,290	2,150	2,010	1,170
28	1,200	130	138	224	445	555	2,400	8,220	2,430	2,080	2,010	1,160
29	895	140	140	242	445	506	1,980	8,170	2,430	2,080	2,010	1,160
30	1,170	135	145	280	-	478	1,700	7,350	2,360	2,010	2,010	1,130
31	834	-	171	280	-	648	-	7,060	-	2,080	2,010	-

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Yakima River at Cle Elum, Wash.---Continued

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,060	182	120	193	163	271	610	722	3,100	3,840	2,470	1,760
2	1,030	189	110	241	178	302	540	860	3,900	3,750	2,470	1,760
3	1,060	205	85	209	193	344	554	1,370	5,570	3,320	2,330	1,760
4	1,040	225	70	170	217	368	488	1,940	6,010	2,840	2,260	1,760
5	980	229	73	170	250	388	554	1,620	5,360	2,610	2,260	1,760
6	960	225	102	166	241	418	527	1,220	4,850	2,400	2,330	1,640
7	880	225	163	163	233	424	520	1,040	4,650	2,330	2,330	1,450
8	860	225	163	163	209	418	501	930	4,850	2,470	2,400	1,280
9	842	221	166	166	205	403	514	842	4,750	2,400	2,400	1,220
10	842	217	152	170	209	393	527	860	4,850	1,940	2,400	1,180
11	842	209	127	174	225	408	520	1,000	4,850	1,820	2,260	1,150
12	842	205	113	178	241	452	540	1,160	3,820	1,760	2,330	1,140
13	833	197	141	185	250	568	842	1,420	3,650	1,940	2,330	1,130
14	824	201	178	193	258	534	1,240	1,220	3,740	2,070	2,330	1,170
15	842	201	201	201	267	446	1,350	970	3,990	2,070	2,330	1,210
16	797	201	170	213	250	424	1,250	770	4,260	2,000	2,400	1,230
17	758	209	163	213	225	383	1,070	610	4,550	2,000	2,400	1,250
18	690	193	193	201	201	488	788	666	4,360	2,070	2,400	1,270
19	475	185	349	106	193	475	746	797	4,950	2,070	2,470	1,250
20	155	185	368	163	197	418	754	797	6,010	2,070	2,400	1,030
21	134	185	320	159	201	418	870	706	6,690	2,070	2,470	960
22	127	185	349	163	267	424	1,010	779	6,920	2,200	2,470	888
23	134	182	501	170	320	408	788	1,080	6,180	2,200	2,540	888
24	163	185	403	178	330	403	806	1,820	5,310	2,200	2,540	870
25	275	193	339	182	302	398	770	2,580	4,400	2,200	2,540	870
26	388	170	311	185	275	408	815	3,260	3,840	2,260	2,470	879
27	540	144	275	185	271	418	833	3,650	3,480	2,330	2,330	870
28	418	130	241	178	267	435	797	3,820	3,400	2,400	2,260	834
29	201	120	233	170	-	469	738	3,650	3,570	2,330	2,200	748
30	262	134	209	163	-	494	706	3,260	3,750	2,400	2,000	724
31	233	-	197	155	-	561	-	3,030	-	2,400	1,880	-

Month	Observed				*Gain or loss in storage (acre-feet)	Diverted by Kittitas Canal (acre-feet)	Adjusted for storage and 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 1935	1,530	599	967	59,480	-55,480	16,100	20,100	327	0.654	0.75
November	541	119	185	10,980	+16,070	-	27,050	455	.910	1.02
December	198	132	166	10,200	+19,450	-	29,650	482	.964	1.11
Calendar year 1935	7,000	119	1,811	1,311,000	-138,100	202,800	1,376,000	1,901	3.80	51.64
January 1936	388	186	259	15,940	+36,640	-	52,580	855	1.71	1.97
February	500	252	324	18,620	+21,660	-	40,280	700	1.40	1.51
March	905	427	619	38,060	+55,580	-	93,640	1,523	3.05	3.52
April	3,100	833	1,929	114,800	+160,000	-	274,800	4,618	9.24	10.31
May	8,380	2,520	6,488	398,900	+73,310	23,120	495,300	8,055	16.1	18.56
June	6,610	2,290	4,338	258,100	-19,470	29,880	268,500	4,512	9.02	10.06
July	2,500	2,010	2,191	134,700	-127,300	65,070	72,470	1,179	2.36	2.72
August	2,080	1,820	1,975	121,500	-139,600	44,280	26,180	426	.852	.98
September	2,080	1,130	1,460	86,860	-101,600	31,190	16,450	276	.552	.62
Water year 1935-36	8,380	119	1,747	1,268,000	-60,740	209,600	1,417,000	1,952	3.90	53.13
October 1936	1,060	127	628	38,610	-36,120	15,690	18,180	296	.592	.68
November	229	120	192	11,420	+670	-	12,090	203	.406	.45
December	501	70	212	13,060	+57,900	-	70,960	1,154	2.31	2.66
Calendar year 1936	8,380	70	1,723	1,251,000	-18,330	209,230	1,441,000	1,986	3.97	54.04
January 1937	241	106	178	10,960	+19,100	-	30,060	489	.978	1.13
February	330	163	237	13,170	+23,390	-	36,560	658	1.32	1.38
March	568	271	425	26,100	+44,800	-	70,900	1,153	2.31	2.66
April	1,350	488	752	44,760	+90,490	-	135,200	2,272	4.54	5.06
May	3,820	610	1,563	96,100	+189,700	26,900	312,700	5,086	10.2	11.76
June	6,920	3,100	4,654	276,900	+37,550	33,990	348,400	5,855	11.7	13.05
July	3,840	1,760	2,347	144,300	-101,900	57,590	100,900	1,641	3.28	3.78
August	2,540	1,880	2,355	144,800	-161,900	47,010	29,910	486	.972	1.12
September	1,760	724	1,198	71,270	-85,950	30,520	15,840	266	.532	.59
Water year 1936-37	6,920	70	1,231	891,400	+78,630	211,700	,182,000	1,632	3.26	44.32

*Storage in Keechelus Lake, Kachess Lake, and Cle Elum Lake.

Yakima River at Umtanum, Wash.

Location.- Water-stage recorder, lat. 46°51', long. 120°29', in NW¼ sec. 20, T. 16 N., R. 19 E., at Umtanum, half a mile above Umtanum Creek and 10 miles south of Ellensburg. Jan. 1, 1911 to Nov. 23, 1936, zero of gage was 1,326.70 feet above mean sea level; zero of present gage is 1,300 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,620 square miles.

Records available.- August 1906 to September 1921 (fragmentary) and October 1935 to September 1937 in reports of Geological Survey; September 1906 to October 1928 (fragmentary) in State Water-Supply Bulletin 5.

Extremes.- Maximum discharge during year, 10,200 second-feet June 22 (gage height, 34.88 feet); minimum, 290 second-feet Dec. 5 (gage height, 29.90 feet).

1906-21, 1935-37: Maximum discharge, about 41,000 second-feet Nov. 15 or 16, 1906 (from floodmarks at elevation 1,341.1 feet above mean sea level, general adjustment of 1929); minimum, 138 second-feet Oct. 3, 1915 (gage height, 2.86 feet, former datum).

Remarks.- Records excellent except those for period of ice effect, Jan. 8 to Feb. 22, which were computed on basis of gage-heights and weather records and are poor. Flow partly regulated by storage in Lake Keechelus, Lake Kachess, and Lake Cle Elum Reservoirs. Water diverted for irrigation of about 91,000 acres above station. Records furnished by Bureau of Reclamation.

Rating tables, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 22		Nov. 23 to Sept. 30			
3.2	235	29.9	290	33.0	4,510
3.5	370	30.5	615	33.5	5,760
4.0	770	31.0	1,110	34.0	7,220
4.5	1,360	31.5	1,735	34.5	8,840
		32.0	2,500	35.0	10,530
		32.5	3,410		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,330	430	340	405	435	795	1,880	2,020	4,060	4,860	2,580	2,250
2	1,320	382	340	405	435	895	1,740	2,330	4,740	4,860	2,670	2,170
3	1,300	365	332	429	435	1,250	1,630	3,520	6,040	4,280	2,580	2,170
4	1,310	365	320	528	435	1,370	1,510	4,980	7,220	3,620	2,500	2,170
5	1,330	370	311	441	435	1,380	1,540	4,510	6,820	3,310	2,500	2,250
6	1,320	370	324	500	435	1,500	1,520	3,410	5,900	2,930	2,500	2,250
7	1,300	376	340	382	435	1,400	1,430	2,930	5,490	2,580	2,580	2,020
8	1,260	376	382	435	435	1,310	1,400	2,500	5,760	2,670	2,580	1,880
9	1,210	376	396	435	435	1,220	1,400	2,170	5,760	2,670	2,670	1,690
10	1,190	376	396	435	435	1,170	1,550	2,100	5,900	2,250	2,670	1,590
11	1,190	376	374	435	435	1,160	1,950	2,020	6,330	1,950	2,670	1,520
12	1,190	376	352	435	435	1,270	2,100	2,020	5,230	1,950	2,580	1,470
13	1,190	382	340	435	435	1,600	2,420	2,250	4,740	2,020	2,580	1,430
14	1,190	376	364	435	435	1,650	3,120	2,500	4,740	2,100	2,580	1,410
15	1,190	376	405	438	435	1,440	4,280	2,580	5,100	2,020	2,580	1,370
16	1,170	382	405	435	435	1,370	3,520	2,250	5,900	2,020	2,670	1,340
17	1,150	382	382	435	435	1,380	3,020	2,020	7,070	2,020	2,670	1,370
18	1,110	382	378	435	435	1,380	2,670	1,800	6,480	2,020	2,580	1,410
19	1,010	382	423	435	435	1,330	2,330	2,020	6,480	2,020	2,560	1,420
20	792	368	674	435	435	1,310	2,250	2,100	7,850	2,020	2,670	1,330
21	564	394	666	435	435	1,300	2,420	2,020	8,840	2,020	2,580	1,220
22	493	394	591	435	435	1,370	2,420	2,020	9,850	2,100	2,760	1,090
23	486	405	795	435	493	1,360	2,170	2,170	8,840	2,170	2,840	1,090
24	486	396	855	435	599	1,320	1,950	2,670	8,180	2,250	2,930	1,030
25	524	396	738	435	649	1,320	1,950	3,410	6,920	2,170	2,930	1,040
26	580	392	658	435	640	1,310	2,170	4,400	5,900	2,170	2,840	1,100
27	661	378	591	435	700	1,320	2,420	4,980	5,360	2,250	2,760	1,110
28	740	364	551	435	748	1,410	2,420	5,230	4,860	2,330	2,670	1,110
29	720	344	493	435	-	1,520	2,170	5,100	4,740	2,330	2,670	1,070
30	689	352	465	435	-	1,590	2,020	4,620	4,860	2,420	2,420	1,020
31	500	-	435	435	-	1,670	-	4,170	-	2,580	2,420	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	30,395	1,330	466	980	60,290
November	11,403	430	344	380	22,620
December	14,416	855	311	465	28,590
Calendar year 1936	899,317	10,200	311	2,457	1,784,000
January	13,530	528	382	436	26,840
February	13,399	748	435	479	26,580
March	41,670	1,670	795	1,344	82,650
April	65,370	4,280	1,400	2,179	129,700
May	92,820	5,230	1,800	2,994	184,100
June	185,760	9,850	4,060	6,192	368,400
July	78,960	4,860	1,950	2,547	156,600
August	81,810	2,930	2,420	2,639	162,300
September	45,390	2,250	1,020	1,513	90,030
Water year 1936-37	674,923	9,850	311	1,849	1,339,000

Yakima River near Parker, Wash.

Location.- Water-stage recorder, lat. 46°29'40", long. 120°26'10", in sec. 28, T. 12 N., R. 19 E., below Sunnyside diversion dam, 1½ miles east of Parker.

Drainage area.- 3,560 square miles.

Records available.- April 1908 to September 1921, October 1931 to September 1937.

Extremes.- Maximum discharge during year, 16,200 second-feet June 22 (gage height, 9.32 feet); minimum, 20 second-feet Oct. 20 (gage height, 0.80 foot).
1908-21, 1931-37: Maximum discharge, 54,300 second-feet Dec. 23, 1933 (gage height, 15.0 feet, from floodmarks); practically no flow on several days during latter part of irrigation seasons as result of diversions.

Remarks.- Records good except those for period of ice effect, Jan. 3 to Feb. 21, which were computed on basis of gage heights and weather records and are poor. Water diverted above gage for irrigation of a large area. Flow partly regulated by diversions and by storage in Keechelus Lake, Kachess Lake, Cle Elum Lake, Bumping Lake, and Tieton Reservoirs. Records of daily discharge do not include the quantity diverted or stored in reservoirs as mentioned above. Records for river station furnished by Bureau of Reclamation. Records of monthly discharge of canals furnished by Office of Indian Affairs and Bureau of Reclamation or computed from base data furnished by them.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	151	983	829	974	637	1,390	1,860	53	3,200	5,860	280	370
2	168	983	914	829	737	1,430	1,680	374	4,300	5,420	316	136
3	97	957	880	821	863	1,680	1,340	1,980	6,320	4,400	265	180
4	105	974	838	897	923	1,920	1,160	4,500	8,090	3,360	175	188
5	122	1,000	812	974	923	1,920	1,030	4,600	7,300	2,720	96	480
6	122	1,020	812	728	872	2,110	1,060	2,580	6,320	1,980	105	504
7	109	1,010	863	572	745	2,040	891	1,620	5,640	1,190	183	394
8	80	1,010	931	531	695	1,980	726	1,040	5,860	928	194	311
9	116	1,000	983	704	695	1,860	734	467	6,320	909	284	160
10	73	1,040	966	770	687	1,740	882	384	6,320	598	280	31
11	83	1,020	923	812	745	1,740	1,020	422	6,560	222	251	44
12	64	1,000	914	745	770	1,800	994	280	5,640	162	155	143
13	80	1,000	872	770	687	2,040	1,620	374	4,700	183	72	96
14	114	974	863	804	670	2,370	3,540	1,250	4,600	276	48	69
15	160	957	914	948	704	2,180	5,750	1,680	5,320	183	155	105
16	160	948	931	991	728	1,860	5,100	1,220	7,050	81	295	86
17	132	940	914	974	745	1,800	3,810	768	8,930	83	307	96
18	105	931	888	983	762	1,680	3,040	410	8,360	136	136	180
19	43	931	880	940	737	1,620	2,370	695	8,360	202	97	238
20	308	872	1,040	846	728	1,530	2,110	938	10,200	69	168	360
21	478	906	1,240	770	737	1,480	2,180	695	13,200	138	138	288
22	443	897	1,210	787	687	1,520	2,040	687	15,800	175	194	228
23	429	888	1,340	880	919	1,680	1,740	900	14,900	186	379	145
24	411	846	1,610	948	1,090	1,510	1,070	1,030	12,400	202	365	180
25	318	829	1,500	957	1,190	1,270	810	2,110	9,860	345	360	140
26	203	812	1,340	966	1,260	1,340	855	3,900	8,090	498	320	202
27	237	770	1,340	966	1,290	1,410	1,290	5,100	7,300	126	238	251
28	417	829	1,260	940	1,370	1,510	994	5,420	6,560	191	175	208
29	443	863	1,190	888	-	1,620	449	5,210	6,090	126	170	183
30	309	812	1,140	804	-	1,740	550	4,200	5,860	59	197	152
31	614	-	1,120	670	-	1,680	-	3,360	-	165	379	-

Month	Mean discharge in second-feet						Gain or loss by upstream storage (second-feet)	Combined flow of Yakima River and canals adjusted for upstream storage*	
	Yakima River near Parker	Union Gap Canal (estimated)	New Reservation Canal	Old Reservation Canal	Sunnyside Canal	Combined flow, Yakima River and canals		Second-feet	Run-off in acre-feet
October....	216	10	743	2.61	524	1,496	-690	806	49,560
November...	933	-	-	-	-	933	-36.6	896	53,320
December...	1,041	-	-	-	-	1,041	+975	2,016	124,000
Calendar year.....	2,248	-	-	-	-	3,787	-35.0	3,752	2,724,000
January....	845	-	-	-	-	845	+319	1,164	71,570
February...	843	-	-	1.46	-	844	+440	1,284	71,310
March.....	1,724	20	63.0	31.7	203	2,042	+828	2,870	176,500
April.....	1,756	25	836	55.8	898	3,571	+2,107	5,678	337,900
May.....	1,879	45	2,130	148	1,284	5,486	+4,207	9,693	596,000
June.....	7,648	35	1,342	55.9	1,240	10,320	+1,431	11,750	699,200
July.....	1,006	40	1,940	90.6	1,277	4,354	-2,366	1,988	122,200
August.....	219	40	1,746	72.9	1,272	3,350	-3,399	-49	-3,010
September..	205	25	1,095	20.5	1,025	2,370	-2,205	165	9,820
Water-year 1936-37..	1,520	-	-	-	-	3,059	+130	3,189	2,308,000

*Totals are comparable with monthly results previously determined for Yakima River at Union Gap, near Yakima, Wash.

Yakima River at Kiona, Wash.

Location.- Water-stage recorder, lat. 46°15'10", long. 119°28'50", in sec. 19, T. 9 N., R. 27 E., at highway bridge at Kiona, 3½ miles below intake of Kiona Canal and 25 miles above mouth.

Drainage area.- 5,520 square miles.

Records available.- August 1896 to March 1915, February 1933 to September 1937.

Average discharge.- 22 years (1896-1914, 1933-37), 4,491 second-feet.

Extremes.- Maximum discharge during year, 17,100 second-feet June 24 (gage height, 11.76 feet); minimum occurred during period of ice effect.
1896-1915, 1933-37: Maximum discharge, 71,100 second-feet Dec. 23, 1933 (gage height, 21.57 feet); minimum, 105 second-feet Sept. 11, 1906 (gage height, 2.35 feet).

Remarks.- Records excellent except those for period of ice effect, Jan. 8 to Feb. 19, which were computed on basis of gage heights and weather records and are poor. Water diverted above gage for irrigation of large acreage. Flow partly regulated by diversions and by storage in Keechelus Lake, Kachess Lake, Cle Elum Lake, Bumping Lake, and Tieton Reservoirs. Records furnished by Bureau of Reclamation.

Rating table, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)

3.0	900	5.5	3,880	9.0	10,240
3.5	1,270	6.0	4,680	10.0	12,440
4.0	1,800	6.5	5,530	11.0	14,940
4.5	2,430	7.0	6,420	12.0	17,620
5.0	3,120	8.0	8,280		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,320	1,570	1,520	1,620	1,100	2,040	3,200	1,570	5,020	7,900	1,270	1,920
2	1,360	1,920	1,520	1,570	1,180	2,040	3,420	1,410	4,850	7,520	1,580	2,100
3	1,410	2,040	1,520	1,460	1,270	2,170	3,200	1,520	5,880	7,140	1,680	1,980
4	1,410	2,040	1,570	1,410	1,360	2,500	2,960	2,960	7,900	6,060	1,620	1,920
5	1,360	2,040	1,520	1,270	1,460	2,700	2,700	5,360	9,240	5,020	1,570	1,980
6	1,360	2,040	1,570	1,460	1,460	2,770	2,700	5,360	6,850	4,360	1,570	2,240
7	1,360	1,980	1,460	1,620	1,460	2,980	2,560	3,960	8,090	3,570	1,520	2,360
8	1,410	1,920	1,460	1,360	1,360	2,910	2,430	2,980	7,900	2,770	1,460	2,300
9	1,360	1,920	1,520	1,360	1,270	2,770	2,170	2,500	8,090	2,360	1,460	2,170
10	1,360	1,860	1,570	1,270	1,180	2,700	2,100	1,980	8,280	2,240	1,520	2,100
11	1,360	1,860	1,570	1,270	1,180	2,560	2,240	1,740	8,660	2,040	1,520	1,920
12	1,360	1,860	1,520	1,270	1,180	2,560	2,430	1,740	8,660	1,680	1,520	1,860
13	1,360	1,800	1,520	1,360	1,270	2,700	2,500	1,620	7,710	1,520	1,520	1,660
14	1,360	1,800	1,460	1,360	1,360	2,980	2,430	1,570	6,780	1,410	1,410	1,800
15	1,270	1,800	1,460	1,360	1,360	3,270	6,240	2,240	6,780	1,410	1,360	1,740
16	1,320	1,800	1,520	1,270	1,270	3,050	7,710	2,840	7,330	1,410	1,360	1,680
17	1,360	1,800	1,570	1,270	1,270	2,770	6,780	2,560	9,240	1,360	1,520	1,680
18	1,410	1,740	1,520	1,270	1,270	2,770	5,700	2,240	11,100	1,320	1,620	1,620
19	1,360	1,740	1,460	1,180	1,360	2,840	5,190	1,860	10,900	1,320	1,520	1,740
20	1,320	1,740	1,460	1,180	1,360	2,700	4,520	1,980	10,900	1,360	1,460	1,800
21	1,320	1,680	1,520	1,180	1,320	2,560	4,200	2,240	12,000	1,360	1,460	1,860
22	1,570	1,680	1,800	1,180	1,320	2,560	3,960	2,100	13,900	1,270	1,520	1,920
23	1,520	1,660	1,800	1,270	1,460	2,530	3,720	2,040	16,000	1,360	1,570	1,740
24	1,410	1,680	1,920	1,360	1,620	2,770	3,340	2,300	16,800	1,410	1,740	1,660
25	1,360	1,620	2,170	1,460	1,800	2,630	2,770	2,430	15,500	1,520	1,800	1,680
26	1,320	1,570	2,100	1,460	1,860	2,430	2,430	3,420	12,900	1,800	1,800	1,620
27	1,270	1,570	2,040	1,360	1,920	2,630	2,360	5,190	10,900	2,300	1,740	1,620
28	1,270	1,570	1,920	1,360	1,920	2,770	2,560	6,240	9,640	1,570	1,620	1,680
29	1,360	1,570	1,800	1,270	-	2,980	2,430	6,600	8,660	1,460	1,570	1,680
30	1,460	1,620	1,740	1,180	-	3,120	1,920	6,420	8,090	1,360	1,570	1,570
31	1,460	-	1,680	1,100	-	3,120	-	5,700	-	1,320	1,630	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	42,510	1,570	1,270	1,371	84,320
November	53,510	2,040	1,570	1,784	106,100
December	50,780	2,170	1,460	1,638	100,700
Calendar year 1936	1,253,860	13,900	1,100	3,426	2,487,000
January	41,370	1,620	1,100	1,335	82,060
February	39,200	1,920	1,100	1,400	77,750
March	83,880	3,270	2,040	2,706	166,400
April	102,890	7,710	1,920	3,430	204,100
May	94,690	6,600	1,410	3,055	187,800
June	286,550	16,800	4,850	9,552	568,400
July	80,500	7,900	1,270	2,597	159,700
August	48,070	1,800	1,270	1,551	95,350
September	55,820	2,360	1,570	1,861	110,700
Water year 1936-37	979,770	16,800	1,100	2,684	1,943,000

Kachess River near Easton, Wash.

Location.- Water-stage recorder, lat. 47°15'30", long. 121°11'50", in sec. 3 T. 20 N., R. 13 E., three-quarters of a mile below Kachess Lake and 2 miles northwest of Easton.

Drainage area.- 64 square miles.

Records available.- October 1903 to September 1937.

Average discharge.- 34 years, 289 second-feet.

Extremes.- Maximum discharge during year, 1,380 second-feet July 21, 22 (gage height, 5.60 feet); practically no flow Oct. 24, Nov. 3 to Feb. 22.
1903-37: Maximum discharge, 2,240 second-feet (computed from gate opening) Aug. 27, 1920; practically no flow when gates in dam are closed.

Remarks.- Records excellent except those for extremely low flow, which are poor. No diversions. Flow regulated by storage in Kachess Lake Reservoir (capacity at crest of spillway, 221,000 acre-feet). Daily discharges do not include storage in this reservoir. Records furnished by U. S. Bureau of Reclamation.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Feb. 22

0.1	0.4	2.0	55		
.5	1.7	2.5	130		
1.0	8	3.0	255		
1.5	22	4.0	640		

Feb. 23 to Sept. 30

0	0	2.0	55	5.0	1,090
.4	.7	2.5	130	5.9	1,530
.8	3.4	3.0	255		
1.5	22	4.0	640		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	685	1			0	5	2	3	1	510	888	397
2	685	1			0	3	2	3	138	534	842	367
3	685	0			0	1	2	3	1,140	416	752	323
4	685	0			0	1	2	3	1,140	360	752	325
5	662	0			0	1	2	3	932	360	730	302
6	640	0			0	1	2	2	842	405	708	288
7	618	0			0	1	2	2	820	618	706	268
8	597	0			0	1	2	2	820	865	708	237
9	597	0			0	1	2	2	820	652	685	225
10	597	0			0	1	2	2	820	482	640	225
11	597	0			0	1	2	2	380	597	640	225
12	576	0			0	1	2	2	8	775	597	225
13	555	0			0	1	3	2	8	978	576	225
14	454	0			0	2	4	2	8	1,000	555	225
15	255	0			0	2	7	1	8	1,020	555	225
16	121	0			0	2	5	1	8	1,090	534	246
17	130	0			0	2	4	1	8	1,180	514	288
18	130	0			0	2	4	1	9	1,180	534	280
19	130	0			0	2	4	1	469	1,230	555	306
20	130	0			0	1	4	1	1,000	1,280	576	338
21	130	0			0	1	5	1	1,000	1,330	576	367
22	31	0			0	1	5	1	1,000	1,330	597	378
23	2	0			1	1	5	1	888	1,280	597	386
24	0	0			13	1	5	1	618	1,230	597	397
25	1	0			16	1	5	1	435	1,180	534	397
26	1	0			11	1	5	1	353	1,140	451	397
27	1	0			9	1	4	1	323	1,110	412	397
28	1	0			7	1	4	1	323	1,070	397	397
29	1	0			-	1	3	1	367	1,020	397	397
30	1	0			-	1	3	1	397	978	397	405
31	1	-			-	2	-	1	-	932	397	-

Month	Observed				Gain or loss in storage in Lake Kachess (acre-feet)	Adjusted for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October	685	0	313	19,240	-17,720	1,520	24.7	0.386	0.44
November	1	0	.1	4	+1,460	1,460	24.5	.383	.43
December	0	0	0	0	+14,280	14,280	232	3.62	4.17
Calendar year 1936	1,090	0	311	225,700	-11,690	214,000	295	4.61	62.60
January	0	0	0	0	+5,080	5,080	82.6	1.29	1.49
February	16	0	2.0	113	+7,250	7,360	133	2.08	2.17
March	5	1	1.4	87	+11,220	11,310	184	2.88	3.32
April	7	2	3.4	204	+20,760	20,960	352	5.50	6.14
May	3	1	1.6	99	+44,810	44,910	730	11.4	13.14
June	1,140	1	503	29,920	+19,180	49,100	825	12.9	14.39
July	1,330	360	907	55,800	-43,380	12,420	202	3.16	3.64
August	888	397	594	36,600	-32,410	4,090	66.5	1.04	1.20
September	405	225	315	18,760	-17,810	950	16.0	.250	.28
Water year 1936-37	1,330	0	222	160,700	+12,720	173,400	240	3.75	50.81

Cle Elum River near Roslyn, Wash.

Location.- Water-stage recorder, lat. 47°14'00", long. 121°03'30", in SW¼ sec. 11, T. 20 N., R. 14 E., below Cle Elum Lake and 4 miles northwest of Roslyn.

Drainage area.- 202 square miles.

Records available.- October 1903 to September 1937.

Average discharge.- 34 years, 915 second-feet.

Extremes.- Maximum discharge during year, 4,170 second-feet June 3, 4 (gage height, 10.0 feet); no flow Nov. 30 to Jan. 5.
1903-37: Maximum discharge, 18,700 second-feet Nov. 15, 1906 (gage height, 14.05 feet); practically no flow when gates in dam are closed.

Remarks.- Records excellent except those below 100 second-feet, which are fair. No diversions above station. Flow partly controlled by storage in Cle Elum Lake Reservoir (capacity 358,500 acre-feet at crest of spillway). Daily discharges do not include storage in this reservoir. Records furnished by Bureau of Reclamation.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 29

4.0	4	5.5	485
4.5	89	6.0	745
5.0	270	6.5	1,035

Jan. 5 to Sept. 30

4.1	7	6.0	630	8.0	2,070
4.5	75	6.5	910	9.0	3,070
5.0	223	7.0	1,250	10.0	4,170
5.5	400	7.5	1,635		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	885	23		0	26	28	28	32	2,650	2,500	1,520	1,440
2	885	19		0	26	28	28	32	3,290	2,360	1,520	1,440
3	885	19		0	26	28	28	34	4,060	2,120	1,520	1,440
4	855	19		0	26	28	28	34	4,170	1,940	1,520	1,440
5	855	19		2	26	28	28	34	3,840	1,760	1,520	1,440
6	772	19		26	26	28	28	34	3,510	1,600	1,560	1,290
7	745	19		26	26	28	28	34	3,510	1,440	1,600	1,110
8	745	18		26	26	28	28	34	3,620	1,320	1,600	1,010
9	745	18		26	26	28	28	34	3,510	1,250	1,600	1,010
10	745	18		26	26	28	28	34	3,400	1,180	1,640	1,010
11	745	18		26	26	28	28	34	3,180	1,140	1,640	1,010
12	745	18		26	26	28	28	34	2,860	1,140	1,640	1,010
13	745	18		26	26	28	28	34	2,650	1,140	1,640	1,040
14	745	18		26	26	28	29	34	2,650	1,110	1,680	1,080
15	718	18		26	26	28	29	34	2,860	1,040	1,680	1,110
16	718	18		26	26	28	29	36	2,960	975	1,680	1,140
17	679	18		26	26	28	29	36	3,070	910	1,720	1,180
18	646	18		26	26	28	29	36	2,960	880	1,800	1,180
19	294	18		26	26	28	29	36	3,070	850	1,890	1,080
20	23	18		26	26	28	29	36	3,290	790	1,890	910
21	23	18		26	26	28	30	36	3,620	762	1,940	820
22	23	18		26	26	28	32	50	3,840	850	1,980	735
23	23	18		26	26	28	32	440	3,620	910	1,980	735
24	23	19		26	28	28	32	1,140	3,290	975	1,980	735
25	23	19		26	28	28	32	1,400	2,860	1,080	1,980	735
26	23	19		26	28	28	32	2,550	2,600	1,180	1,980	735
27	23	19		26	28	28	32	3,070	2,310	1,290	1,980	735
28	23	19		26	28	28	32	3,180	2,260	1,360	1,980	680
29	23	10		26	-	28	32	3,070	2,400	1,400	1,800	630
30	23	0		26	-	28	32	2,650	2,450	1,440	1,640	600
31	23	-		26	-	28	-	2,450	-	1,480	1,520	-

Month	Observed				Gain or loss in storage in Lake Cle Elum (acre-feet)	Adjusted for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October	885	23	465	28,620	-21,390	7,230	118	0.584	0.67
November	23	0	17.7	1,050	+3,060	4,110	69.1	.342	.38
December	0	0	0	0	+22,120	22,120	360	1.78	2.05
Calendar year 1936	4,970	0	899	652,600	-13,960	638,600	880	4.36	59.25
January	26	0	21.9	1,340	+8,680	10,020	163	.807	.93
February	28	26	26.4	1,460	+9,600	11,060	199	.985	1.03
March	28	28	28.0	1,720	+22,330	24,050	391	1.94	2.24
April	32	28	29.5	1,760	+48,140	49,900	839	4.15	4.63
May	3,180	32	668	41,100	+112,000	153,100	2,490	12.3	14.18
June	4,170	2,280	3,142	187,000	-224	186,800	3,139	15.5	17.29
July	2,500	762	1,296	79,680	+19,680	60,000	976	4.83	5.57
August	1,980	1,520	1,730	106,400	-91,210	15,190	247	1.22	1.41
September	1,440	600	1,017	60,520	-53,940	6,580	111	.550	.61
Water year 1936-37	4,170	0	705	510,600	+39,490	550,200	760	3.76	50.99

Naches River below Tieton River, near Naches, Wash.

Location.- Water-stage recorder, lat. 46°44'40", long. 120°46'00", in SW¼NE¼ sec. 36, T. 15 N., R. 16 E., half a mile below Wapatox Power Canal, three-quarters of a mile below mouth of Tieton River and 3½ miles northwest of Naches. Prior to Sept. 30, 1936, water-stage recorder 500 feet above Wapatox Power Canal. Zero of present gage is 1,550 feet above mean sea level (general adjustment of 1929).

Drainage area.- 943 square miles (revised).

Records available.- August to October 1905, March 1909 to October 1912, May 1915 to September 1928, and October 1935 to September 1937 in reports of Geological Survey; September 1905, October 1908 to September 1912 and June 1915 to September 1929 (mean monthly discharge), in State Water-Supply Bulletin 5.

Average discharge.- 19 years (1908-12, 1916-29, 1935-37), 1,664 second-feet.

Extremes.- Maximum discharge during year, 6,650 second-feet June 22 (gage height, 14.78 feet); minimum, 2 second-feet Jan. 7 (gage height, 9.40 feet).

1905, 1908-12, 1915-29, 1935-37: Maximum discharge, 18,800 second-feet Nov. 24, 1909 (gage height, 8.9 feet, original site and datum); minimum, that of Jan. 7, 1937.

Bureau of Reclamation reports a flow of 32,200 second-feet Dec. 23, 1933 (gage height, 14.33 feet, original site and datum).

Remarks.- Records excellent except those for period of ice effect, Jan. 13 to Feb. 8, which were computed on basis of gage heights and weather records and are poor, and those below 100 second-feet, which are fair. Discharge Oct. 4, 18, 25 interpolated. Staff gage read twice daily Oct. 1-30. Daily discharges do not include storage in Bumping Lake and Tieton Reservoirs (combined capacity at crest of spillways, 232,000 acre-feet) and water diverted by city of Yakima at Oak Flat and Selah Valley, Tieton, and Wapatox Canals. Station is maintained by Bureau of Reclamation in cooperation with Pacific Power & Light Co. Records furnished for publication by Bureau of Reclamation. Information concerning municipal diversion at Oak Flat, October to December, taken from Yakima water superintendent's annual report; that for January to September estimated on basis of diversions for previous years. Total very small in relation to flow past gage.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	7	5	6	10	12	154	1,440	2,700	3,450	766	221
2	34	7	5	5	10	13	106	2,070	3,660	3,060	730	128
3	13	7	5	5	10	14	48	3,160	4,690	2,610	706	164
4	14	6	5	26	10	15	38	3,760	4,330	2,360	674	164
5	14	6	5	62	12	19	34	2,970	3,660	2,130	666	239
6	14	6	5	14	14	40	26	2,220	3,450	1,790	682	224
7	13	6	8	5	15	28	19	1,920	3,350	1,610	682	214
8	13	7	8	6	15	25	19	1,680	3,550	1,620	674	204
9	13	7	7	5	13	25	39	1,520	3,350	1,590	650	154
10	13	8	6	7	7	21	135	1,690	3,260	1,550	598	258
11	13	7	6	7	7	23	140	1,650	2,790	1,520	590	417
12	13	7	6	8	6	53	159	1,610	2,520	1,610	575	547
13	13	7	6	13	15	154	784	2,040	2,440	1,590	540	953
14	14	7	7	14	6	133	1,430	2,700	2,360	1,570	575	1,040
15	17	7	7	14	7	90	2,020	2,700	2,610	1,420	635	1,060
16	17	7	6	14	6	79	1,440	2,270	2,970	1,430	620	706
17	14	7	6	13	7	72	1,050	2,020	3,060	1,460	484	628
18	12	7	6	13	6	27	890	2,070	2,790	1,500	380	620
19	9	7	7	13	7	18	820	2,360	3,260	1,420	380	561
20	7	7	8	12	5	14	775	2,270	4,450	1,420	366	239
21	7	7	8	12	5	12	850	2,100	6,040	1,460	363	188
22	7	7	58	12	7	12	698	2,360	6,340	1,460	357	194
23	6	7	26	12	7	10	575	2,200	5,200	1,340	312	207
24	5	6	22	12	8	12	505	2,200	4,100	1,200	254	179
25	5	6	19	12	8	12	554	2,880	3,260	1,100	197	143
26	5	6	12	11	8	17	793	3,450	2,970	975	164	162
27	6	34	12	11	10	23	880	3,550	2,970	920	148	133
28	7	45	9	11	9	37	880	3,550	3,260	820	204	79
29	7	5	8	10	-	81	1,190	3,060	3,660	775	185	79
30	6	5	7	10	-	91	1,210	2,520	3,660	757	182	74
31	7	-	6	10	-	130	-	2,360	-	775	243	-

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	Gain or loss in storage (acre-feet)	Diverted by Kittitas Canal (acre-feet)	Adjusted for storage and diversion: Run-off in acre-feet	Adjusted for storage and diversion: Discharge in second-feet: Mean	Adjusted for storage and diversion: Discharge in second-feet: Per square mile	Adjusted for storage and diversion: Run-off in inches
October	47	5	12.4	763	-6,280	24,990	19,470	317	0.336	0.39
November	45	5	8.8	526	-2,850	16,920	14,600	245	.260	.29
December	58	5	10.0	617	+2,060	20,370	23,050	375	.398	.46
Calendar year 1936	6,600	5	1,274	924,700	-7,030	204,400	1,122,000	1,546	1.64	22.33
January	62	5	12.4	764	+532	18,390	19,690	320	.339	.39
February	15	5	8.9	496	+1,040	18,270	19,810	357	.379	.39
March	154	10	42.4	2,600	+6,120	29,400	38,120	620	.657	.76
April	2,020	19	609	36,220	+34,890	34,640	105,900	1,776	1.89	2.11
May	3,760	1,440	2,398	147,500	+69,000	53,230	269,700	4,388	4.65	5.36
June	6,340	2,360	3,557	211,700	+47,630	57,940	317,300	5,332	5.66	6.30
July	3,450	757	1,558	95,790	-44,500	62,920	114,200	1,857	1.97	2.27
August	766	148	471	28,960	-47,090	62,120	43,990	715	.758	.87
September	1,060	74	339	20,190	-45,270	52,630	27,550	463	.491	.55
Water year 1936-37	6,340	5	754	546,100	+15,280	451,800	1,013,000	1,400	1.48	20.14

Bumping River near Nile, Wash.

Location.- Water-stage recorder, lat. 46°52', long. 121°18', a quarter of a mile below spillway of Bumping Lake dam and 19 miles west of Nile.

Drainage area.- 68 square miles.

Records available.- June to July 1906, April 1909 to September 1937.

Average discharge.- 28 years (1909-37), 295 second-feet.

Extremes.- Maximum discharge during year, 1,660 second-feet June 21, 22 (gage height, 4.66 feet); minimum, 9 second-feet Apr. 17, 18, 19, 23, 24.
1906, 1909-37: Maximum discharge, 5,180 second-feet Dec. 29, 1917 (gage height, 9.33 feet); practically no flow when gates in outlet conduit are closed.

Remarks.- Records good except those below 50 second-feet, which are fair. No diversions. Flow partly regulated by storage in Bumping Lake Reservoir (capacity at crest of spillway, 33,700 acre-feet). Daily discharges do not include storage in this reservoir. Records furnished by Bureau of Reclamation.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to May 1				May 2 to Sept. 30			
1.1	9	2.0	107	1.4	25	3.0	478
1.4	25	2.5	238	1.7	56	3.5	762
1.7	56	3.0	442	2.0	107	4.0	1,109
				2.5	245	4.7	1,656

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	255	35	27	51	48	49	60	78	895	965	530	107
2	255	34	26	51	48	50	60	285	1,180	895	530	107
3	255	33	26	51	48	51	60	138	1,410	794	530	107
4	255	32	26	51	48	51	60	32	1,410	731	530	107
5	255	32	27	51	48	51	60	31	1,260	670	530	107
6	255	33	37	51	48	52	60	32	1,180	584	530	107
7	255	32	51	49	48	52	57	32	1,180	530	530	107
8	255	32	37	49	48	52	56	32	1,260	557	530	107
9	255	32	39	48	48	52	56	134	1,180	530	530	107
10	255	32	38	48	48	52	57	330	1,110	530	557	116
11	255	32	38	48	48	52	59	378	965	557	530	129
12	255	32	39	48	48	52	59	403	895	557	504	139
13	255	31	40	48	48	52	62	428	895	530	478	169
14	238	31	42	48	48	52	44	428	895	530	478	201
15	238	30	42	48	48	52	14	129	965	530	478	231
16	222	30	42	48	48	54	11	32	1,040	530	378	245
17	193	33	42	48	48	54	9	32	1,110	530	285	245
18	148	34	44	48	48	54	9	107	1,110	530	285	231
19	103	35	34	48	48	54	9	245	1,330	530	285	220
20	82	35	34	48	48	54	10	103	1,490	530	285	169
21	67	34	35	48	48	54	12	32	1,570	530	285	114
22	59	32	43	48	48	54	10	34	1,570	530	285	109
23	54	30	54	48	48	55	9	42	1,410	530	285	107
24	50	31	52	48	49	55	9	330	1,110	530	217	107
25	45	31	52	48	49	56	10	794	965	530	180	105
26	44	31	52	48	49	56	12	965	965	530	180	95
27	43	30	52	48	49	56	13	1,040	965	530	180	80
28	41	29	52	48	49	56	13	1,040	1,040	530	141	70
29	38	28	51	48	-	56	13	965	1,110	530	107	63
30	38	27	51	48	-	57	14	794	1,040	530	107	60
31	37	-	51	48	-	59	-	762	-	530	107	-

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	Gain or loss in storage in Bumping Lake (acre-feet)	Adjusted for storage: Run-off in acre-feet	Adjusted for storage: Discharge in second-feet: Mean	Adjusted for storage: Discharge in second-feet: Per square mile	Adjusted for storage: Run-off in inches
October	255	37	163	10,030	-7,210	2,820	45.9	0.675	0.78
November	35	27	31.8	1,890	-59	1,830	30.8	.453	.51
December	54	26	41.2	2,530	+3,160	5,690	92.5	1.36	1.57
Calendar year 1936	1,570	5	264	191,300	+2,950	194,200	268	3.94	53.58
January	51	46	48.6	2,990	-172	2,820	45.9	.675	.78
February	49	48	48.2	2,680	-76	2,600	46.8	.688	.72
March	59	49	53.4	3,280	+235	3,520	57.2	.841	.97
April	62	9	32.9	1,960	+9,630	11,590	195	2.87	3.20
May	1,040	31	329	20,250	+20,110	40,360	656	9.65	11.12
June	1,570	895	1,150	68,440	+293	68,730	1,155	17.0	18.97
July	965	530	580	35,640	-12,590	23,050	375	5.51	6.35
August	557	107	367	22,590	-15,610	6,980	114	1.68	1.94
September	245	60	132	7,870	-5,000	2,870	48.2	.709	.79
Water year 1936-37	1,570	9	249	180,200	-7,290	172,900	239	3.51	47.70

Tieton River at Tieton Dam, near Naches, Wash.

Location.- Water-stage recorder, lat. 46°39'30", long. 121°07'20", 900 feet above Wild Cat Creek, 1,200 feet below Tieton Dam, and 22 miles southwest of Naches.

Drainage area.- 187 square miles.

Records available.- August 1908 to September 1914 (fragmentary), October 1918 to March 1919, and April 1925 to September 1937 in reports of Geological Survey; September 1908 to December 1913, July 1914 to September 1920, and May 1925 to September 1933 in State Water-Supply Bulletin 5.

Average discharge.- 18 years (1908-12, 1918-20, 1925-37), 476 second-feet.

Extremes.- Maximum discharge during year, 2,210 second-feet June 22 (gage height, 5.90 feet); minimum, 8 second-feet May 4 (gage height, 1.35 feet).
1908-14, 1918-20, 1925-37: Maximum discharge, 8,450 second-feet Dec. 22, 1933 (gage height, 9.24 feet); no flow Apr. 4-6, 10, 1930.

Remarks.- Records good. No diversions. Flow regulated by storage in Tieton Reservoir (capacity at spillway crest, drums up, 198,000 acre-feet). Daily figures not adjusted for storage in this reservoir. Records furnished by Bureau of Reclamation.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used June 20)

Oct. 1 to June 19						June 21 to Sept. 30					
1.2	4	1.8	34	2.6	128	2.5	121	4.0	685	5.5	1,840
1.4	10	2.0	50	3.0	220	3.0	234	4.5	1,020	6.0	2,310
1.6	20	2.3	82	3.5	387	3.5	420	5.0	1,410		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	231	118	116	111	108	110	11	92	210	1,570	950	817
2	162	118	114	111	108	110	11	92	192	1,370	950	797
3	126	118	111	111	108	111	11	57	176	1,170	950	838
4	128	116	111	111	108	111	11	19	189	1,130	950	824
5	126	116	111	111	108	138	10	96	207	1,090	950	631
6	128	116	111	108	108	154	10	113	215	985	985	810
7	128	118	111	106	106	145	10	149	228	1,020	985	810
8	126	118	111	106	106	147	10	162	223	1,090	950	797
9	128	114	111	106	106	147	10	167	223	1,130	880	758
10	126	113	111	106	106	147	10	169	223	1,130	845	915
11	128	113	111	106	108	147	10	167	237	1,170	838	1,020
12	128	113	111	106	108	147	10	184	242	1,290	838	1,090
13	126	113	111	106	108	110	11	194	248	1,330	866	1,090
14	128	113	111	106	108	89	11	167	248	1,330	950	1,130
15	130	113	111	106	108	69	12	147	248	1,250	1,020	1,170
16	130	113	111	110	108	83	12	147	228	1,370	1,020	1,210
17	132	114	111	110	108	37	12	147	212	1,410	915	1,250
18	132	114	111	110	108	10	11	151	207	1,490	880	1,210
19	132	114	111	110	108	10	10	162	286	1,410	915	1,130
20	132	114	111	110	108	10	10	174	1,230	1,490	915	810
21	128	121	111	110	108	10	10	184	2,070	1,570	950	624
22	128	169	111	110	110	10	10	166	2,020	1,530	915	573
23	132	194	111	110	110	33	9	166	1,750	1,450	617	880
24	132	192	111	106	110	64	9	212	1,410	1,330	778	817
25	134	179	111	111	108	64	19	212	1,170	1,250	778	817
26	132	179	111	110	108	64	33	202	1,130	1,170	778	810
27	132	234	111	108	110	52	34	199	1,170	1,090	797	752
28	130	286	111	108	110	42	42	189	1,330	1,020	873	715
29	130	182	111	108	-	24	71	202	1,530	985	880	697
30	130	154	111	108	-	10	80	212	1,570	985	880	691
31	123	-	111	108	-	10	-	210	-	985	880	-

Month	Observed				Gain or loss in storage in Tieton Reservoir (acre-feet)	Adjusted for storage			
	Discharge in second-feet			Run-off in acre-feet		Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean				Mean	Per square mile	
October	231	123	134	8,230	+931	9,160	149	0.797	0.92
November	286	113	140	8,320	-2,790	5,530	92.9	.497	.55
December	116	111	111	6,840	-1,100	5,740	93.4	.499	.58
Calendar year 1936	1,850	8	449	326,200	-9,980	316,200	436	2.33	31.70
January	111	106	109	6,670	+704	7,370	120	.642	.74
February	110	108	108	6,020	+1,120	7,140	129	.690	.72
March	154	10	76.5	4,830	+5,890	10,720	174	.930	1.07
April	80	9	17.7	1,050	+25,260	26,310	442	2.36	2.63
May	212	19	160	9,820	+48,890	58,710	965	5.11	5.89
June	2,070	176	687	40,900	+47,340	88,240	1,483	7.93	8.85
July	1,570	985	1,245	76,540	-31,910	44,630	726	3.88	4.47
August	1,020	778	899	55,300	-31,480	23,820	387	2.07	2.39
September	1,250	691	906	53,920	-40,270	13,650	229	1.22	1.36
Water year 1936-37	2,070	9	385	278,400	+22,580	301,000	416	2.22	30.17

Tieton River at headworks of Tieton Canal, near Naches, Wash.

Location.- Water-stage recorder, lat. 46°40'10", long. 121°00'20", in sec. 30, T. 14 N., R. 15 E. (unsurveyed), below intake of Tieton Canal and 16 miles southwest of Naches.
Drainage area.- 240 square miles.
Records available.- April to September 1906 (fragmentary gage-height records), July 1907 to September 1937.
Average discharge.- 28 years (1907-16, 1918-37), 554 second-feet.
Extremes.- Maximum discharge during year, 2,240 second-feet June 21 (gage height, 4.98 feet); minimum, 6 second-feet Apr. 28 (gage height, 1.27 feet).
1907-37: Maximum discharge, 8,910 second-feet Dec. 22, 1933 (gage height, 9.70 feet); no flow at times in 1926, 1929, 1931, 1932, 1934.
Remarks.- Records good except those for periods of ice effect, Jan. 7-18, 20-26, Jan. 30 to Feb. 4, which were computed on basis of gage heights and weather records and are poor, and those for Apr. 26 to May 26, June 4-20, which are fair. Diversions for irrigation by Tieton Canal. Flow regulated by Tieton Reservoir, 7 miles above gage. Daily discharges do not include storage in Tieton Reservoir or diversion by Tieton Canal. Records furnished by Bureau of Reclamation.

Rating tables, water year 1936-37 except period of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-5, Apr. 26 to May 26, June 4-20)

Oct. 6 to Apr. 12		Apr. 13 to Sept. 30			
1.6	28	1.4	12	3.0	464
1.9	65	1.6	28	3.5	790
2.2	126	1.9	65	4.0	1,220
2.4	184	2.2	127	4.5	1,710
2.6	258	2.5	229	5.0	2,240

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	216	124	126	121	107	119	90	44	50	1,260	659	514
2	165	126	126	124	109	109	77	75	57	1,110	638	481
3	128	126	121	121	112	112	68	84	50	896	626	532
4	127	126	121	153	112	114	67	39	29	814	619	514
5	127	126	119	145	112	124	62	14	30	782	612	532
6	131	112	119	137	112	131	59	28	25	666	632	520
7	131	107	119	131	114	121	57	39	30	701	632	532
8	134	107	121	119	114	119	58	28	29	775	619	526
9	134	104	121	116	116	119	67	29	21	790	556	486
10	134	102	121	114	116	119	72	32	23	790	526	612
11	134	102	121	114	116	119	66	26	14	822	526	738
12	126	102	119	116	114	129	77	43	12	946	520	806
13	126	102	119	116	116	148	191	77	15	989	520	798
14	126	102	119	116	112	131	229	79	20	1,020	586	838
15	126	102	119	121	112	126	206	47	28	921	659	862
16	126	107	119	126	112	116	142	40	47	1,010	666	870
17	126	114	119	129	114	88	114	29	34	1,100	600	912
18	124	112	114	121	114	49	94	35	37	1,130	550	912
19	124	107	116	119	109	44	88	43	98	1,070	586	814
20	126	112	121	114	107	43	79	29	1,100	1,130	600	526
21	119	112	121	112	107	40	68	30	2,080	1,220	619	550
22	112	112	124	109	112	37	50	39	2,080	1,220	586	600
23	121	109	134	109	116	49	38	25	1,710	1,120	509	606
24	124	114	126	112	116	82	27	32	1,360	980	470	562
25	124	114	126	112	119	60	30	51	1,040	921	481	556
26	124	112	126	109	119	86	44	47	980	830	475	568
27	126	176	129	109	119	88	29	49	998	790	475	520
28	126	251	126	109	119	88	13	38	1,090	687	550	486
29	126	114	124	109	-	102	22	18	1,260	645	556	492
30	126	129	121	109	-	90	24	28	1,310	652	544	568
31	124	-	121	107	-	90	-	31	-	687	556	-

Month	Observed				Gain or loss in storage in Tieton Reservoir (acre-feet)	Diverted by Tieton Canal (acre-feet)	Adjusted for storage and 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	216	112	130	8,020	+931	-	8,950	146	0.608	0.70
November	251	102	119	7,070	-2,790	1,350	5,630	94.6	.394	.44
December	134	114	122	7,490	-1,100	-	6,390	104	.433	.50
Calendar year 1936	1,760	14	373	270,400	-9,980	92,020	352,500	486	2.02	27.53
January	153	107	119	7,300	+704	-	8,000	130	.542	.62
February	119	107	113	6,300	+1,120	-	7,420	134	.558	.58
March	148	37	97.2	5,970	+5,890	1,060	12,920	210	.875	1.01
April	229	13	77.0	4,580	+25,260	1,890	31,730	533	2.22	2.48
May	84	14	40.3	2,480	+48,890	15,970	67,340	1,095	4.56	5.26
June	2,080	12	522	31,060	+47,340	15,960	94,360	1,586	6.61	7.38
July	1,260	645	919	56,480	+31,910	19,240	43,810	713	2.97	3.42
August	666	470	573	35,210	+31,480	19,500	23,230	378	1.58	1.82
September	912	481	628	37,350	+40,270	16,110	13,190	222	.925	1.03
Water year 1936-37	2,080	12	289	209,300	+22,680	91,080	323,000	446	1.86	25.24

North Fork of Ahtanum Creek near Tampico, Wash.

Location.- Water-stage recorder, lat. 46°33'40", long. 120°55'10", in NW¼ sec. 2, T. 12 N., R. 15 E., 100 feet below Nasty Creek and 3½ miles northwest of Tampico.

Drainage area.- 69 square miles.

Records available.- August 1907 to September 1924 (incomplete), March 1931 to September 1937.

Extremes.- Maximum discharge during year, 273 second-feet June 3 (gage height, 1.94 feet); minimum probably occurred during period of missing gage heights, Jan. 2 to Feb. 1.

1907-24, 1931-37: Maximum discharge, 755 second-feet Dec. 22, 1933; maximum gage height, 4.6 feet June 18, 1916; minimum discharge, 5.9 second-feet Nov. 22, 1931, or may have been somewhat less during period of ice effect in February 1936.

Remarks.- Records good except those for periods of ice effect or missing gage heights, Dec. 30, 31, Jan. 2 to Feb. 11, Feb. 17-28 and Mar. 7-10, which were computed on basis of weather records and records for South Fork at Conrad Ranch and are poor. No diversions of importance. No regulation. Records collected in cooperation with Indian Service.

Rating table, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.10	4.3	1.00	93
.30	17.5	1.50	178
.50	34.7	2.00	287
.70	54		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	14	16	11	10	14	70	118	208	104	31	28
2	14	9.7	16	11	11	14	60	145	241	93	28	22
3	14	15	16	11	11	14	52	190	241	86	27	21
4	14	18	16	11	12	14	50	213	232	82	26	22
5	14	17	16	10	12	16	47	178	208	76	24	36
6	14	16	18	10	12	18	43	168	196	72	24	25
7	14	15	18	10	12	18	41	159	188	67	23	23
8	13	14	16	10	11	18	44	143	176	62	23	22
9	13	14	15	10	11	19	52	136	172	60	24	20
10	13	14	10	10	11	20	56	134	167	56	25	19
11	13	17	16	10	12	22	54	122	150	54	22	19
12	13	16	16	10	13	24	67	124	139	52	22	19
13	13	15	17	10	12	28	152	161	138	51	22	18
14	14	15	16	10	12	25	178	192	148	50	22	18
15	14	16	15	10	12	24	172	190	154	48	22	17
16	14	16	15	10	12	25	132	184	170	46	22	17
17	14	17	15	10	12	26	113	168	146	44	21	16
18	14	16	15	11	12	24	104	178	145	42	20	16
19	13	15	15	11	12	24	99	192	155	40	20	16
20	13	15	15	11	12	23	100	190	190	39	20	16
21	13	15	17	11	12	21	105	202	200	38	20	16
22	13	15	25	11	12	22	92	215	184	37	21	16
23	13	14	28	11	13	21	86	204	163	36	22	17
24	13	14	17	11	13	20	83	211	145	35	22	18
25	14	14	16	11	13	21	92	230	132	34	22	18
26	14	12	14	11	13	25	108	239	126	32	20	17
27	14	10	14	11	14	29	106	243	121	32	20	17
28	14	10	13	11	14	41	104	239	118	32	19	17
29	14	12	91	10	-	49	99	202	114	29	18	16
30	14	14	11	10	-	58	102	180	110	29	22	17
31	15	-	11	10	-	69	-	188	-	31	37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	423	15	13	13.6	0.197	0.23	839
November	434.7	18	9.7	14.5	.210	.23	862
December	487.1	28	9.1	15.7	.228	.26	966
Calendar year 1936	17,717.9	285	6	48.4	.701	9.54	35,150
January	325	11	10	10.5	.152	.18	645
February	338	14	10	12.1	.175	.18	670
March	786	69	14	25.4	.368	.42	1,560
April	2,663	178	41	88.8	1.29	1.44	5,280
May	5,638	243	118	182	2.64	3.04	11,180
June	4,977	241	110	166	2.41	2.69	9,870
July	1,589	104	29	51.3	.743	.86	3,150
August	711	37	18	22.9	.332	.38	1,410
September	579	36	16	19.3	.280	.31	1,150
Water year 1936-37	18,950.8	243	9.1	51.9	.752	10.22	37,580

South Fork of Ahtanum Creek at Conrad ranch, near Tampico, Wash.

Location.- Staff gage, lat. 46°30'30", long. 120°54'50", in W½ sec. 23, T . 12 N., R. 15 E., at Conrad ranch 2½ miles above North Fork of creek and 2¾ miles southwest of Tampico.

Drainage area.- 26 square miles.

Records available.- March 1915 to September 1924 (fragmentary), March 1931 to September 1937.

Extremes.- Maximum discharge observed during year, 108 second-feet Apr. 14 (gage height, 1.78 feet); minimum, possibly less than 4.0 second-feet sometime during periods of ice effect, Nov. 27 to Dec. 5, Dec. 29 to Feb. 12.
1915-24, 1931-37: Maximum discharge observed, 424 second-feet Dec. 23, 1933 (gage height, 3.10 feet); minimum, 2.6 second-feet Aug. 23, 25, 1931 (gage height, 0.35 foot).

Remarks.- Records good except those for periods of ice effect, Nov. 27 to Dec. 5 and Dec. 29 to Feb. 12, which were computed on basis of gage heights and weather records and are poor. Gage read twice daily. A few diversions for irrigation above gage. Records collected in cooperation with Indian Service.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.7	4.7	4	5	4	4.7	33	37	47	25	8.1	7.3
2	5.3	4.7	4	5	4	5.3	33	43	41	21	8.1	6.1
3	4.7	4.7	4	5	4	5.3	32	47	55	19	8.1	6.5
4	5.3	4.7	4	4	4	6.1	30	52	52	19	7.7	7.7
5	4.7	4.7	4	4	4	7.7	26	46	47	17	7.3	6.5
6	4.7	4.7	5.3	4	4	8.9	20	44	45	17	7.3	6.1
7	4.7	4.7	5.3	4	4	8.5	19	41	42	16	6.9	6.9
8	5.3	4.7	5.3	4	4	9.3	20	37	41	15	6.9	6.1
9	4.7	4.7	5.3	4	4	9.7	21	33	40	15	7.7	6.1
10	5.3	4.7	5.3	4	4	10	23	35	37	14	6.9	6.1
11	4.7	4.7	5.3	4	4	12	25	32	36	14	7.3	6.1
12	4.7	4.7	5.3	4	4	13	29	31	34	14	6.9	6.1
13	4.7	4.7	5.3	4	4.1	14	81	35	33	13	6.9	5.7
14	4.7	4.7	5.3	4	4.1	15	101	43	34	13	6.5	6.1
16	4.7	4.7	5.3	4	4.1	14	91	45	34	12	6.5	6.1
16	4.7	4.7	5.3	4	4.4	12	6e	46	38	12	6.1	5.3
17	4.7	4.7	5.3	4	4.4	12	56	45	33	12	6.1	6.1
18	4.7	4.7	5.7	4	4.4	12	52	45	33	11	6.5	6.1
19	4.7	4.7	5.7	4	4.4	11	46	47	36	10	6.1	6.1
20	4.7	4.7	5.7	4	4.4	11	44	47	38	10	5.7	6.1
21	5.3	4.7	5.7	4	4.4	10	41	50	39	10	5.3	6.1
22	5.3	4.7	8.5	4	4.4	9.7	37	53	37	10	6.1	6.1
23	4.7	4.7	10	4	4.4	8.5	33	53	37	9.7	5.3	5.3
24	5.3	4.7	11	4	4.4	8.5	33	55	35	9.7	6.1	5.3
25	5.3	4.7	9.3	4	4.4	11	35	56	33	9.3	6.5	5.3
26	5.3	4.7	7.7	4	4.7	17	35	60	33	8.5	6.9	5.3
27	5.0	4	6.9	4	4.7	26	34	59	28	8.5	6.9	5.3
28	4.7	4	6.1	4	4.7	37	35	58	26	e.9	6.9	5.3
29	5.0	4	6	4	-	40	33	43	24	8.5	6.1	6.1
30	4.7	4	5	4	-	35	35	51	26	8.9	6.9	6.1
31	4.7	-	5	4	-	34	-	47	-	8.5	8.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	151.7	5.3	4.7	4.89	301
November	138.2	4.7	4	4.61	274
December	181.9	11	4	5.87	361
Calendar year 1936	4,991.2	76	4	13.6	9,900
January	127	5	4	4.1	252
February	118.4	4.7	4	4.23	235
March	438.2	40	4.7	14.1	869
April	1,201	101	19	40.0	2,380
May	1,415	60	31	45.6	2,810
June	1,114	55	24	37.1	2,210
July	399.5	25	8.5	12.9	792
August	210.7	8.1	5.3	6.80	418
September	181.4	7.7	5.3	6.05	360
Water year 1936-37	5,677.0	101	4	15.6	11,260

In addition to the records of stream flow obtained at gaging stations and reported in the preceding pages, measurements of flow were made also at the points in the Pacific slope basins in Washington and upper Columbia River Basin indicated in the following table:

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River basin during the water year October 1936 to September 1937

Lake Washington Basin, Wash.

Date	Stream	Tributary to or diverting from-	Locality	Discharge
				Sec.-ft.
Mar. 3	Rock Creek.....	Cedar River.....	Landsberg-Issaquah road culvert near Landsberg.	109
May 18	....do.....	....do.....	....do.....	15.8

Snohomish River Basin, Wash.

Sept.12	North Fork of Tolt River.	Tolt River.....	In SW¼ sec. 8, T. 26 N., R. 9 E., ½ mile below Dry Creek, near Snoqualmie Falls.	35.4
19	....do.....	....do.....	....do.....	28.5
Aug. 31	....do.....	....do.....	In sec. 23, T. 26 N., R. 8 E., at railroad bridge near Snoqualmie Falls.	64.5
Sept.30	....do.....	....do.....	In NW¼ sec. 32, T. 26 N., R. 8 E., 1,000 feet above junction with South Fork near Tolt.	81.7
19	Unnamed creek, half a mile below Dry Creek.	North Fork of Tolt River.	In SW¼ sec. 8, T. 26 N., R. 8 E., 200 feet above mouth, near Snoqualmie Falls.	12.1

Kootenai River Basin

Oct. 13	Kootenai River...	Columbia River...	Grohman Narrows, 2 miles below Nelson, British Columbia; measurements referred to gage no. 10 at Nelson. Gage is 8 N.J. 9 of the Dominion Water and Power Bureau, Department of Mines and Resources, Canada.	8,260
Nov. 10	....do.....	....do	....do.....	5,580
Dec. 22	....do.....	....do.....	....do.....	4,220
Feb. 18	....do.....	....do.....	....do.....	4,030
Apr. 9	....do.....	....do.....	....do.....	6,600
May 20	....do.....	....do.....	....do.....	36,900
June 3	....do.....	....do.....	....do.....	61,970
16	....do.....	....do.....	....do.....	62,350
29	....do.....	....do.....	....do.....	64,000
July 20	....do.....	....do.....	....do.....	42,260
Aug. 18	....do.....	....do.....	....do.....	21,370
Sept.30	....do.....	....do.....	....do.....	9,460
Oct. 13	....do.....	....do.....	Glade, British Columbia (station of Dominion Water and Power Bureau, Department of Mines and Resources, Canada). Gage is 8 N. J. 1.	9,500
Nov. 10	....do.....	....do.....	....do.....	6,280
Dec. 22	....do.....	....do.....	....do.....	4,830
Feb. 19	....do.....	....do.....	....do.....	4,700
Apr. 9	....do.....	....do.....	....do.....	7,710
May 20	....do.....	....do.....	....do.....	44,200
June 3	....do.....	....do.....	....do.....	75,190
16	....do.....	....do.....	....do.....	74,120
30	....do.....	....do.....	....do.....	73,700
July 20	....do.....	....do.....	....do.....	46,150
Aug. 18	....do.....	....do.....	....do.....	23,230
Sept.30	....do.....	....do.....	....do.....	10,200
Oct. 14	Slocan River.....	Kootenai River...	Near Crescent Valley, British Columbia, (station of Dominion Water and Power Bureau, Department of Mines and Resources). Gage is 8 N. J. 13.	773
Nov. 11	....do.....	....do.....	....do.....	564
Dec. 23	....do.....	....do.....	....do.....	600
Feb. 19	....do.....	....do.....	....do.....	444
Apr. 10	....do.....	....do.....	....do.....	750
May 21	....do.....	....do.....	....do.....	4,940
June 4	....do.....	....do.....	....do.....	9,090
15	....do.....	....do.....	....do.....	8,300
30	....do.....	....do.....	....do.....	8,070
July 21	....do.....	....do.....	....do.....	3,390
Aug. 19	....do.....	....do.....	....do.....	1,650

Kettle River Basin, Wash.

June 9	Deep Creek.....	Kettle River.....	At mouth near Laurier.....	3.8
30	....do.....	....do.....	....do.....	6.7

Coeur d'Alene River Basin, Idaho

Oct. 21*	Coeur d'Alene River.	Coeur d'Alene Lake.	Sec. 25, T. 51 N., R. 3 E.,100 feet above Harvey Creek, 3 miles above Big Creek and 7 miles northwest of Pritchard.	71.1
21*	....do.....	....do.....	Sec. 30, T. 49 N., R. 2 E., above railroad bridge, 1/2 mile below abandoned Geological Survey gage at Enaville.	201

*Erroneously published in Water-Supply Paper 812 as Oct. 21, 1935

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River basin during the water year October 1936 to September 1937--Cont.

Okanogan River Basin, Wash.

Date	Stream	Tributary to or diverting from-	Locality	Discharge
				Sec.-ft.
Feb. 16	Palmer Creek.....	Similkameen River	Highway crossing near Nighthawk....	*18.5
May 31	....do.....	....do.....	....do.....	*216
June 2	....do.....	....do.....	....do.....	†815
July 3	....do.....	....do.....	....do.....	*561

*Flow out of Palmer Lake.
†Flow into Palmer Lake.

Methow River Basin, Wash.

Oct. 27	Methow Valley Irrigation District Canal.	Left side of Methow River.	Half a mile below Methow River gaging station at Twisp.	49.0
May 28	....do.....	....do.....	One mile above Methow River gaging station at Twisp.	69.2
July 7	....do.....	....do.....	A quarter of a mile below Methow River gaging station at Twisp.	65.9
May 29	Porter Irrigation Canal	Left side of Twisp River	At intake near Twisp.	5.2
29	Smith-Hudson Irrigation Ditch	....do.....	....do.....	17.0
29	Methow Valley Irrigation District Canal	Right side of Twisp River	2.8 miles above Twisp.....	49.1
July 7	....do.....	....do.....	....do.....	42.4
May 29	Broils Irrigation Ditch	....do.....	2.7 miles above Twisp.....	3.5
29	Risley Ditch.....	....do.....	200 feet below intake at Twisp.....	10.9
July 7	....do.....	....do.....	Upstream side of culvert in Twisp..	8.4

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